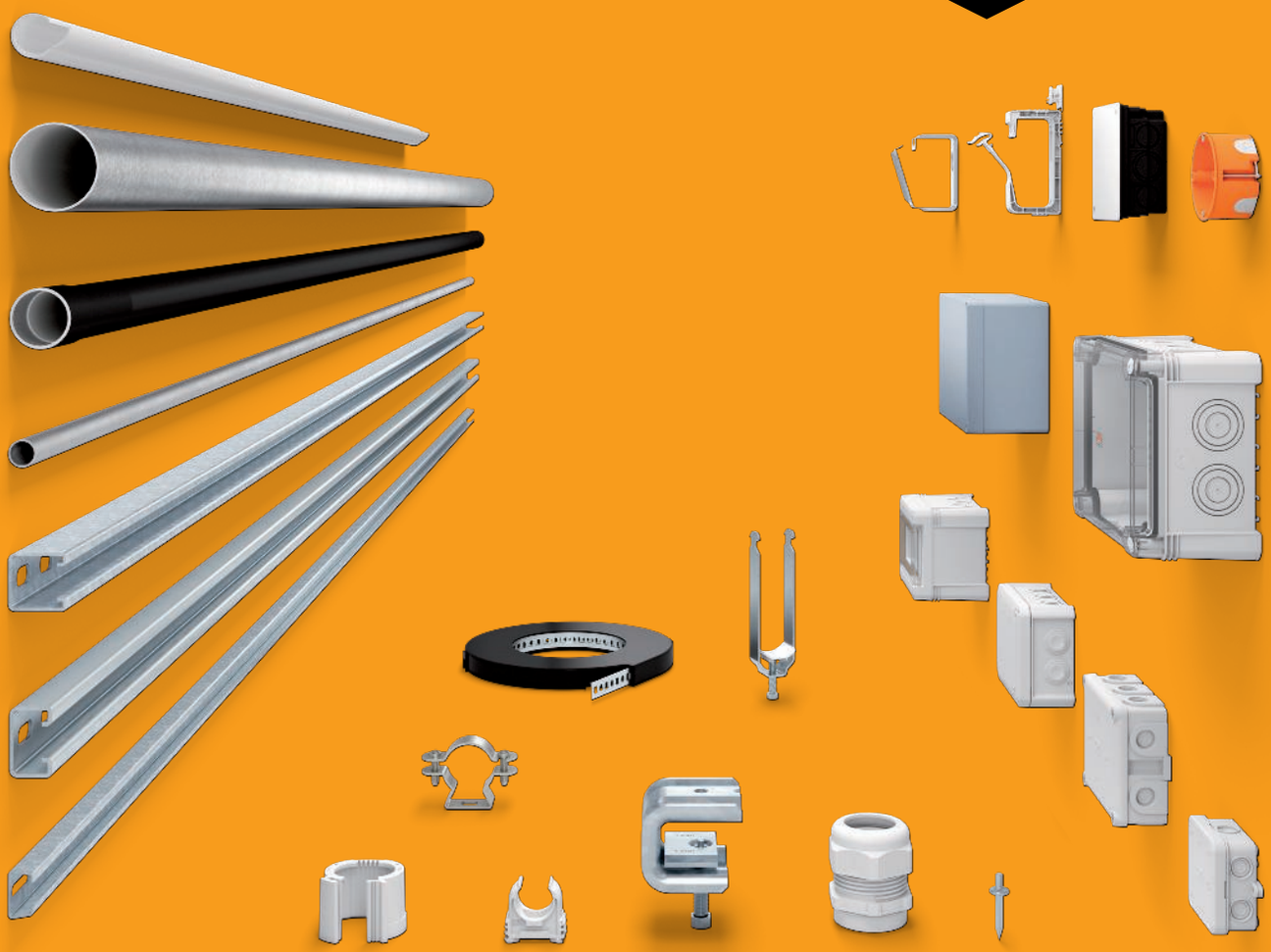
VBS



Connection and fastening systems

Export GmbH & Co KG

2019/2020

Building Connections

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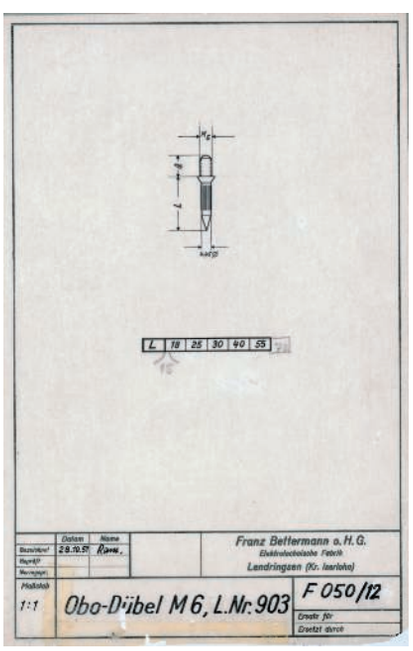
VBS – Connection and fastening systems

VBS is one of a total of seven OBO product units, but of those it is one of the longest-standing and most extensive. Indeed, OBO Bettermann takes part of its name from one of the most successful ever products from the VBS product unit – the OBO anchor, a metal anchor invented in 1952 that offers the advantage that it can be fitted "**O**hne **BO**hren", that is, without the need for any drilling.



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VBS – Connection and fastening systems

Distribution

- Junction box systems
- Concealed and cavity wall systems
- Terminal systems
- Cable gland systems

Fastening

- Beam clamp systems
- Rail systems
- Clamp clip systems
- Screw-in and knock-in systems

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Routing

- Cable and pipe fastening systems
- Pipe systems

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Plastic: materials and properties

Essentially plastics can be of one of three types: thermoplastics, elastomers and Duroplast.

Thermoplastics
are plastics that can be shaped within a specific temperature range. This process is reversible, in other words, thermoplastics can theoretically be cooled and then melted down again any number of times. Another unique advantage of thermoplastics is that they can be welded.

Elastomers
have a fixed shape, but can be elastically deformed. They can elastically deform under tensile and compressive stresses, but afterwards will return to their original shape. Elastomers are used for producing seals and membrane entries.

Duroplast
or thermosetting polymers/plastics, are plastics that can no longer be deformed following curing. Duroplast produce hard, glass-like (brittle) polymeric materials with a high thermo-mechanical strength.

Temperature ranges of plastics

	Material	Max. temperature resistance Permanent	Max. temperature resistance Short-time	Min. temperature resistance Static
ABS/ ASA	**Acrylonitrile butadiene styrene**	70 °C	85 °C	–40 °C
UF	**Duroplast, Amino-plast, type 131.5**	65 °C	90 °C	–40 °C
MF	**Duroplast, melamine resin, type 150**	80 °C	110 °C	–40 °C
EVA	**Ethylene vinyl acetate**	55 °C	70 °C	–50 °C
NBR SBR	**Rubber mixture**	100 °C	110 °C	–40 °C
NBR	**Nitrile rubber**	100 °C	110 °C	–30 °C
PA	**Polyamide**	120 °C	150 °C	–40 °C
PA/ GF	**Polyamide, fibreglass reinforced**	120 °C	160 °C	–20 °C
PBPT	**Polybutylene tereph-thalate**	120 °C	140 °C	–40 °C
PC	**Polycarbonate**	110 °C	125 °C	–35 °C
PE	**Polyethylene**	70 °C	90 °C	–40 °C
PP	**Polypropylene (PP)**	90 °C	110 °C	–30 °C
PS	**Polystyrene**	70 °C	80 °C	–10 °C
PVC	**Polyvinylchloride**	65 °C	80 °C	–30 °C

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Plastic: materials and properties

Risk of stress cracks

Medium	ABS/ ASA	UF	MF	EVA	NBR SBR	NBR	PA	PA/ GF	PBPT	PC	PE	PP	PS	PVC
Risk of stress cracks	✗	✓	✓	✓	✓	✓	✓	○	○	✓	!	✓	✗	○

Danger of tension cracks: ✓ Virtually negligible ○ Low ! High ✗ Very high

Chemical resistance

Medium	ABS/ ASA	UF	MF	EVA	NBR SBR	NBR	PA	PA/ GF	PBPT	PC	PE	PP	PS	PVC
Petroleum	✓	✓	✓	○	✓	○	✓	✓	✓		○	○	○	✓
Fat	✓	✓	✓	✓	✓	○	✓	✓	✓				○	✓
Benzole	!	✓	✓	○	✓	!	✓	✓	○	!	!	○	!	!
Solvents	!						✓	✓	○				!	!
Formic acid	✓	!									!	○		!
Citric acid	✓	!		○							!			
Lactic acid	✓	!		○							!	○	!	!
Hydrochloric acid	○	!									✓			!
Sulphanic acid	○	!									✓			!
Acetone	!	✓					✓	✓	○	!	!	○	!	!
Petrol	!	✓	✓	○	○	!	✓	✓	✓	✓	!	○	!	✓
Butyric acid	!	!		○							!	○		!
Chlorine	!						!	!	!	!	!	!	!	
Acetic acid	!	!		○							!		!	
Nitric acid	!	!									✓		!	
Ester		✓	✓	○	!	!								
Alcohol		✓	✓	○			✓						✓	
Mild alkalis		✓	✓	✓	✓	✓	○	○	!		✓	✓		✓
Mild acids		○	○	✓	✓	✓	!	!	✓	✓	✓			✓
Ether		✓	✓	○									!	
Water		✓	✓	✓	✓	✓								
Strong acids		!	!	○					!	!	!			!
Strong alkalis		!	!	✓					!		✓	✓		✓
Hydrofluoric acid				○							✓			
Paraffin hydrocarbon				○								○		
Haloalkanes				!										
Ketones				!	!								!	
Aldehyde				✓										
Organic acids				○							!	○		
Water Seawater					✓	✓								
Diesel fuel							✓	✓	✓		○	○	!	
Ammoniac									○				!	

Resistance: ✓ Resistant ○ Limited resistance ! Not resistant

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Plastic: material properties

HALOGEN FREE

Halogen freedom

Estimates suggest that around 95% of fire victims die not due to the immediate effects of the fire, but of poisoning from the smoke. In addition, the corrosive fire gases created during fires cause immense damage to property and can permanently damage the structure of a building. Therefore, halogen-free installation systems should or must always be used in public areas (emergency routes, lifts, etc.).
The chemical composition of these halogen-free systems is designed in such a way that, in the case of fire, they produce less hazardous (toxic/corrosive) gases, which could combine with extinguishing agents to form hydrochloric acid. In the sense of the standard DIN VDE 0472, this means that materials are considered halogen-free when "the proportions of the halogens chlorine, bromine and iodine are ≤ 0.2% for chlorine and ≤ 0.1% for fluorine".
OBO Bettermann offers a wide range of halogen-free products that reduce the risk of harm to people and property to a minimum in case of fire.

UV Resistant

UV resistance

Outdoor installations should always be viewed particularly critically with regard to the mounting locations and the selection of the installation materials.
UV radiation is damaging to many plastics, causing them to turn yellow and/or brittle or lose their elasticity. However, plastics can be protected against UV damage through the addition of UV stabilisers. Products made from UV-resistant materials are specially marked. In general, besides UV radiation, installations outdoors must also take other environmental influences into account. Factors such as maximum temperatures, regularity of (extreme) temperature changes, humidity and the location of use/mounting (housing, industry, town, region, continent) all have an important role to play here.

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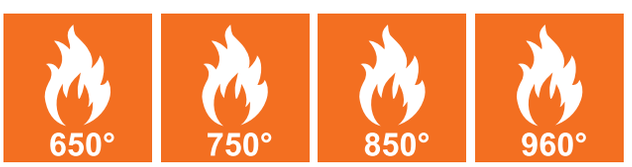
Flame resistance/fire resistance

Materials are described as “flame-resistant” if they prevent the spread of fire or are sufficiently fire-resistant. According to DIN EN 60695-2-11 (VDE 0471 Part 2–11), electrical connection materials must be subjected to a glow wire test, in order to evaluate the fire risk of the end product. When the glow wire test is being carried out, a glowing wire (for temperature see table below) is inserted into the component to be tested for a period of 30 seconds and then removed. After 30 seconds at the latest, the object, if it has caught light, must have extinguished again, in order to specify the flame resistances.



Types of installation systems

Types of samples Test temperatures in °C	Surface-mounted	Concealed	Flush-mounted	Cavity wall/furniture	Concrete structure	Installation duct
Connection sockets	650	650	750	850	650	750
Accessory sockets and device connection sockets	750	650	-	850	650	750
Ceiling lights, connection sockets	750	650	-	850	650	750
Wall light connection sockets	750	650	-	850	650	750
Device connection sockets	750	650	-	850	650	750
Connection sleeves	750	-	-	-	-	750
Insulation sections, which support active parts	960	-	-	-	-	-
Cover for installation sockets	750	-	-	-	-	-
Cover for installation sockets	750	-	-	-	-	-

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Metal: corrosion and corrosion protection

A large number of VBS products are made from metal. Metals are much tougher than many other materials, and metal components are less sensitive to mechanical loading.

Corrosion
(from the Latin corrodere, "to eat or gnaw to pieces")
in a technical context is a reaction between a material (generally a metal) and its surroundings leading to a measurable change in the material and potentially impairing the functionality of a component or system.

Corrosion protection
Corrosion protection means all steps taken to prevent corrosion damage to metallic components. It is impossible to prevent corrosion permanently, so corrosion protection measures generally aim to reduce the speed of corrosion so that the component is not damaged by corrosion for the duration of its service life.
The term "passive corrosion protection" refers to all measures designed to shield products from corrosive media. Coatings are one way of achieving passive corrosion protection. At OBO, most steel products are protected from corrosion by a layer of zinc. Zinc coatings can be applied to components using a variety of methods.

Zinc slat surface
Zinc slat coverings are coatings applied in a non-electrolytic manner. The cathodic protection means that the zinc slat coverings offer very good corrosion protection. This excludes the risk of a break induced by hydrogen, which is caused through the surface coating process.
The main advantage of this coating is the very high level of corrosion protection, which corresponds to the corrosion protection of a hot galvanised coating. This coating achieves a resistance of 480 hrs in the salt spray test for the connection elements. The low layer thickness of the zinc slat covering allows a thin, homogeneous coating, which is particularly important for maintaining the accuracy of threads.

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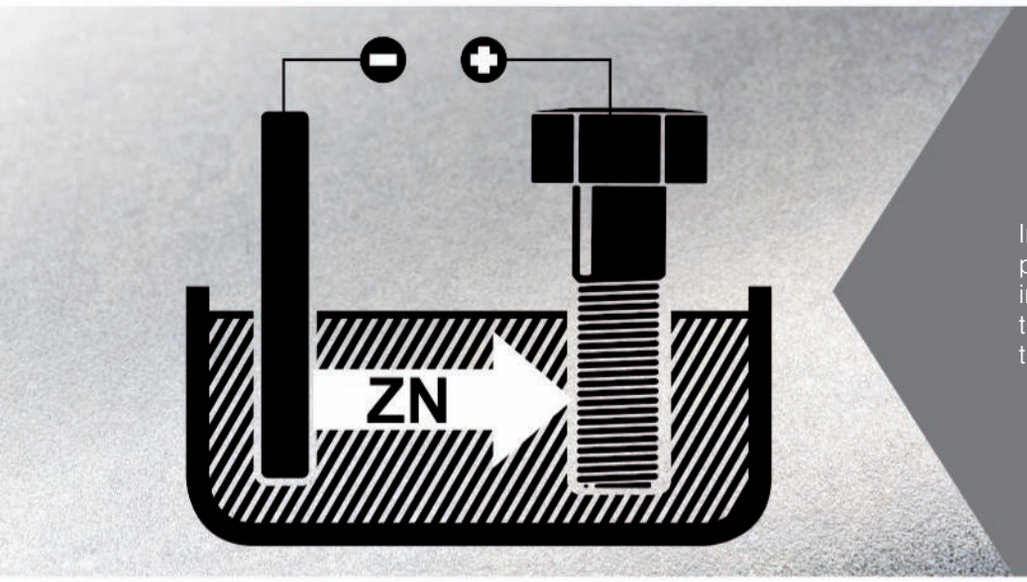
Galvanisation types

Electrogalvanisation

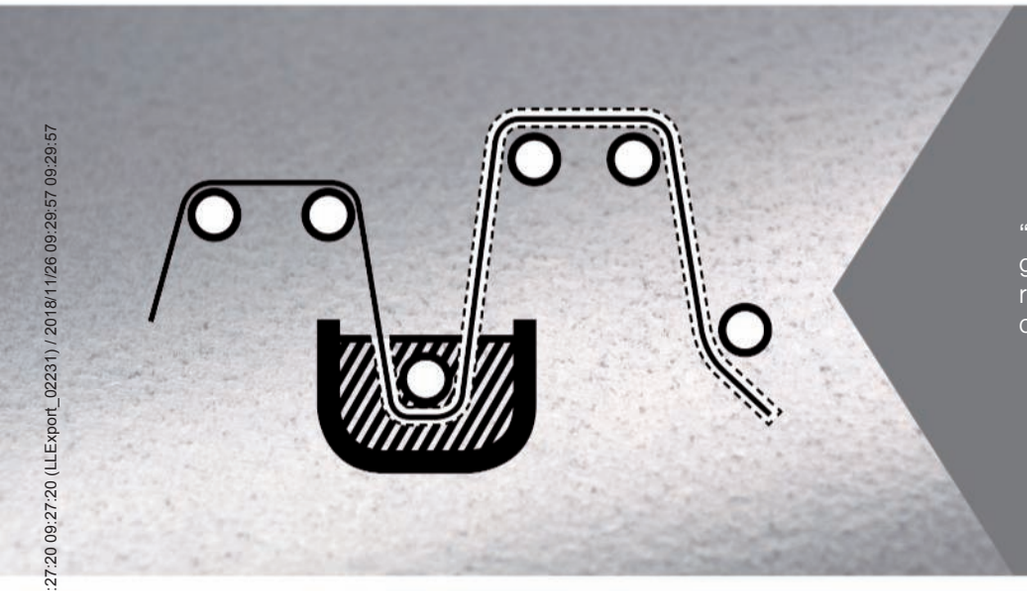


G

In electrogalvanisation, the component is coated by dipping it not in molten zinc, but in a zinc electrolyte, through which a direct electric current is passed.

Hot-dip galvanising

In hot-dip galvanisation, steel is coated by dipping it in molten zinc at a temperature of around 450 °C.



FS

“Continuous galvanising” or “strip galvanising” is where a continuous ribbon of steel is galvanised in a continuous line.

FT

“Batch galvanisation” is mainly used for galvanising prefabricated steel parts.

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Installation locations

Whether indoors or outdoors, in aggressive atmospheres or under special hygienic conditions: OBO can offer the perfect surface and materials for your installation, no matter what the requirements may be. OBO products are machined from high-quality sheet steel or steel wire and are available with various surfaces. Different hardening and coating methods ensure tailor-made corrosion protection, specially tailored to the appropriate application:

Application	Material	Surface protection
Indoors	St Steel	L Painted/ powder-coated
	St Steel	FS Strip-galvanised (ca. 20 µm) DIN EN 10346
	St Steel	G Electrogalvanised (ca. 2,5 - 10 µm) DIN EN 12329
Outdoors	St Steel	FT Hot galvanised (ca. 40 - 60 µm) DIN EN ISO 1461
	VA Stainless steel A2	
	VA Stainless steel A4	
Especially corrosive areas	VA Stainless steel A2	
	VA Stainless steel A4	

Contact corrosion

Contact corrosion between two different metals poses a considerable risk to the load capacity and lifespan of the components used.

The level of contact corrosion is primarily determined by the level of the potential difference between the contact partners. Contact corrosion occurs at potential differences of 100 mV or greater and the anodic (electrically negative) partner is at risk of corrosion. Therefore, strongly non-precious metals should never be brought into contact with precious metals.

Additional contact corrosion criteria:

- Level of electrical resistance between the contact partners. The higher the resistance, the lower the contact corrosion. Positive on Al and Ti.
- Occurrence of an electrolyte. An electrolyte, such as perspiration or condensate, attacks the protective layers, increasing conductivity. Dirt increases this effect through released ions.
- Length of the impact of the electrolyte. The longer the electrolyte is at work, the greater the corrosion will be.
- The surface ratios of the contact partners influence the current density. The best thing to have is a small surface ratio of the "precious" to the "less precious" contact partner.

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Land climate

Component (large)	Component (small)					
	FT	VA	Alu	Cu	CuZn 37	Zn
Steel, galvanised St FS FT G DD	✓	✓	✓	!	○	✓
Stainless steel VA V2A V4A V5A	✓	✓	○	○	○	✓
Aluminium Alu	✓	✓	✓	!	○	✓
Copper Cu	○	○	○	✓	○	!
Brass CuZn 37	✓	!	○	○	✓	!
Die-cast zinc Zn	○	○	✓	✗	○	✓

Industrial atmosphere

Component (large)	Component (small)					
	FT	VA	Alu	Cu	CuZn 37	Zn
Steel, galvanised St FS FT G DD	✓	✓	○	✗	!	✓
Stainless steel VA V2A V4A V5A	✓	✓	○	○	○	✓
Aluminium Alu	○	○	✓	!	!	✓
Copper Cu	!	!	✗	✓	○	!
Brass CuZn 37	○	○	✗	○	✓	○
Die-cast zinc Zn	✓	✓	✓	✗	!	✓

Sea climate

Component (large)	Component (small)					
	FT	VA	Alu	Cu	CuZn 37	Zn
Steel, galvanised St FS FT G DD	✓	○	✗	✗	!	○
Stainless steel VA V2A V4A V5A	○	✓	✗	○	○	✓
Aluminium Alu	✗	○	✓	!	!	✓
Copper Cu	!	!	✗	✓	○	!
Brass CuZn 37	○	○	✗	○	✓	○
Die-cast zinc Zn	✓	✓	✓	✗	!	✓

✓ No risk of contact corrosion

✗ High risk of contact corrosion

○ Low risk of contact corrosion

! Risk in case of small area ratio (area of non-precious metal/area of precious metal)

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Maintenance of electrical function

Safety in case of fire

To ensure that emergency and escape routes and important technical equipment such as emergency lighting, fire alarm systems and smoke exhaust systems remain usable in case of fire, it is absolutely essential to provide special protection for the power supply for these systems. The use of special cables and laying systems means that it is possible to maintain the power supply, even in the case of fire, thus guaranteeing the maintenance of electrical function.

You can find detailed information on the subject of fire protection in the OBO BSS fire protection catalogue.

The maintenance of electrical function is particularly important in buildings regularly frequented by large numbers of people. These include public buildings such as schools, hospitals, meeting places, civic buildings and underground stations, but also industrial plants, high-rise buildings, shopping centres and large car parks.

Fire loads of installation systems
According to rules governing wiring systems in the individual German federal states, no fire loads may be installed in emergency and escape routes. OBO's fire-tested steel fastenings fulfil these requirements.

Junction boxes which have the capability to maintain electrical function ensure the fireproof connection of the safety cables. The boxes in the FireBox series are tested and approved to maintain electrical function for 30 to 90 minutes in accordance with DIN 4102-12.

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E30

30 minutes:
Maintaining electrical function for an evacuation.

The first 30 minutes after the start of a fire are decisive when clearing the affected building.

During this time, the maintenance of electrical function must be guaranteed for the following units:

- Safety lighting systems
- Lifts with fire control
- Fire alarm systems
- Alarm systems and systems to issue instructions to visitors and employees
- Smoke extraction systems

E90

90 minutes:
Maintaining electrical function for better firefighting.

To support firefighting operations, it is imperative that certain technical equipment is supplied with sufficient power even up to 90 minutes after a fire breaks out in a building. This equipment includes:

- Systems to increase the pressure of the water for fighting the fire
- Mechanical smoke extraction and smoke protection pressure systems
- Fire brigade lifts, bed lifts in hospitals

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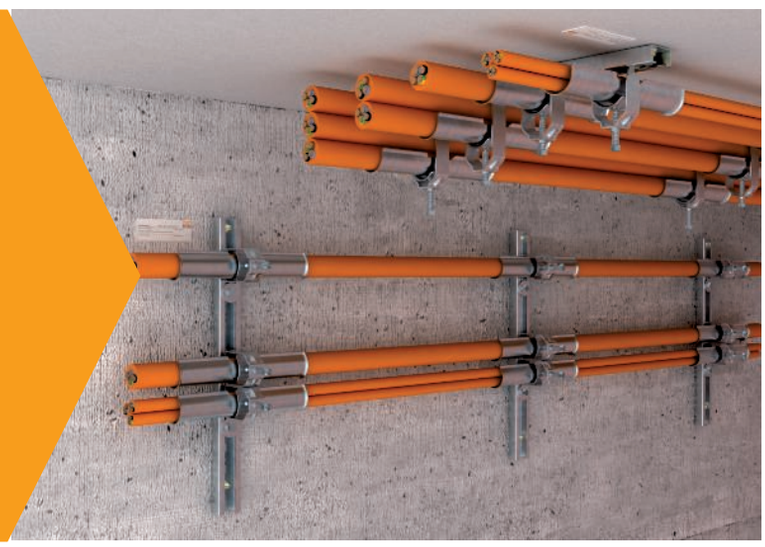
Individual routing systems

With the individual laying systems, OBO Bettermann can offer a range of practical, flexible mounting options to maintain function of electrical installations. The systems are suited to vertical and horizontal installation and are approved for the fire protection classes E30 to E90. Standardised supporting constructions as defined in the testing standard, DIN 4102 Part 12, include: The laying of cables with individual clips and the laying of cables with profile rail, clamp clip and a long trough.

Clamp clip

Standard support construction consisting of clamp clip without long trough for individual laying or bundling cables.



Standard routing type, clamp clip
Type 2056

- Wall or ceiling mounting
- Horizontal installation
- Rail mounting: max. 0.3 m
- Anchor spacing in the rail: max. 0.25 m
- Individual cable assignment: diameters of up to 100 mm possible
- Assignment with bunched cables: Max. 3 cables with max. diameter 25 mm

Cable tidy

Cable-specific laying type with cable tidies for individual laying, horizontal/vertical mounting on wall or ceiling.

Type 2031/M 15
- Fastening distance: max. 0.5 m
- Cable assignment: max. 1.1 kg/m

Type 2031/M 30
- Fastening distance: max. 0.5 m
- Cable assignment: max. 2.5 kg/m

Type 2031/M 70
- Fastening distance: max. 0.8 m
- Cable assignment: max. 6.0 kg/m

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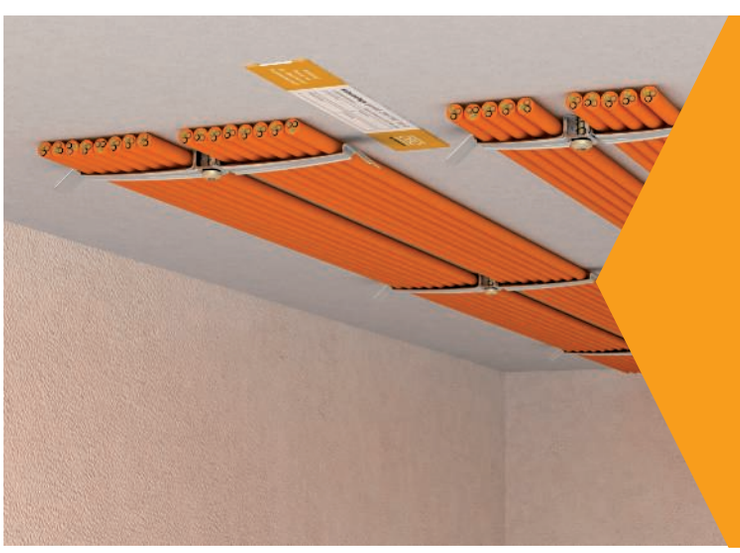
Spacer clips

Standard support construction consisting of spacer clips for individual laying or bundling cables.

Standard routing type, single clip
Type 732/733

- Wall or ceiling mounting
- Vertical or horizontal mounting
- Mounting spacing: max. 0.3 m
- Individual cable assignment: diameters of up to 50 mm possible
- Assignment with bunched cables: Max. three cables with max. diameter 25 mm



Pressure clip

Cable-specific laying type with pressure clips for individual laying, mounting on the ceiling.

Type 2033 M
- Fastening distance: max. 0.5 m

Type 2034 M
- Fastening distance: max. 0.5 m

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Protection ratings

IP protection rating
The IP protection rating specifies how far a component is protected against contact and foreign bodies and the ingress of water. The IP protection ratings are controlled by the standard DIN EN 60529 (VDE 0470 Part 1). The IP is always made up of two digits.

The first digit
designates the contact and foreign body protection. On the one hand, it specifies how far a housing prevents access to dangerous parts, by preventing or limiting the ingress of body parts or objects held by a person. On the other hand, it specifies how far the housing protects the installed resources against the ingress of solid foreign bodies.

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The second digit
specifies the protection against water. It specifies how far the resource is protected against incoming water and the resulting damage.

Protection rating against the entry of water with a damaging impact

Second code digit	Short description	Definition
0	Not protected	-
1	Protected against water droplets	Droplets falling vertically may have no damaging impact.
2	Protected against water droplets when the housing is tilted to up to 15°	Droplets falling vertically may not have a damaging impact, if the housing is tilted to angle of 15° on either side of the vertical.
3	Protected against spray water	Water being sprayed at an angle of 60° on both sides of the vertical may not have any damaging impact.
4	Protected against spray water	Water spraying the housing from any direction may not have any damaging impact.
5	Protected against water jets	Jets of water pointing at the housing from any direction may not have any damaging impact.
6	Protected against strong water jets	Strong jets of water pointing at the housing from any direction may not have any damaging impact.
7	Protected against the effects of being temporarily immersed in water	If the housing is sometimes underwater under standard pressure and time conditions, then water may not enter in such volumes as would have a damaging impact.
8	Protected against the effects of being continuously immersed in water	If the housing is continuously underwater, then water may not enter in such volumes as would have a damaging impact and this shall be subject to conditions to be agreed between the manufacturer and the user. However, the conditions are more difficult to fulfil than for number 7.

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IK code

The IK code to DIN EN 50102 indicates the protection rating of housings against external mechanical loads. It is made up of the code letters IK and a two-digit number from 00 to 10. Each group of numbers standards for a load energy value in Joules (J). The IK code always applies to the complete housing, which guarantees the protection of resources against the damaging effects of mechanical loads. The housings are tested by knocking them with different testing hammers.

IK code	00	01	02	03	04	05	06	07	08	09	10
Stress energy value [J]	-	0.15	0.20	0.35	0.50	0.70	1	2	5	10	20

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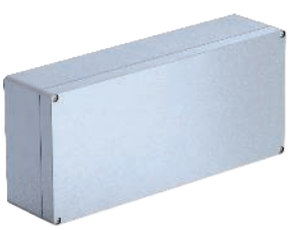
Protection classes of electrical resources in accordance with VDE 0140

Protection class	
I	Resources with protective conduction connection (protection measure through protective conductor connection on housing)
II	Resources with protective insulation (protection measure through insulation)
III	Resource with protective low voltage (SELV-PELV, protection through measured voltages max. 25/50 V AC and max. 60/120 V DC)



Empty plastic housings correspond to protection class II, housings made of metal/metal plating must be intended for the connection of a protection conductor and thus meet protection class I.

Electrical designations

When using junction boxes, connection sockets and connection terminals, the resources are assigned nominal values, as defined in VDE 0100 Part 200. In the designation, a distinction is made between the maximum approved voltage (nominal voltage), the maximum approved current (nominal current) and the maximum approved cross-section (nominal cross-section of the cables to be connected).

Nominal cross-section
Largest tested-approved cross-section of the cable to be connected.

Nominal current
Largest approved current at the connection point.

Nominal voltage
Greatest approved voltage at the connection point.

No. of poles
Number of connection points of the clamp connector.

Number of entries
Number of entries in an electrical connection box or connection socket.

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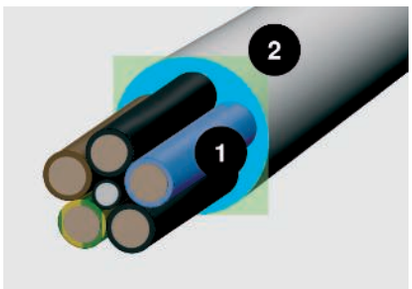
Cable sizes

The term "cable" means a jacketed electrical cable for the transmission of electrical energy and data. Cables are given according to their nominal cross-section. The external diameter and usable cross-section depend on their nominal cross-section and the number of individual wires contained in the cable. Fastening clips are given with their maximum span distance as a nominal size in mm. To determine the correct fastening clip for the component to be fastened, you can find the interplay between the PG sizes and the metric data in the table.



Cable diameter in mm (1) and space required in cm² (2)

Calculation with the formula $(2r)^2$

The diameter says little about the actual space required by a cable. Calculate: **$(2r)^2$**

This value reflects the realistic space requirements, including the compartments.

$$(2r)^2$$

Overview of PG and metric sizes

External diameter in mm	PG sizes	External diameter in mm	Metric sizes
12	PG 7	12.5	M 12
13	PG 7	12.5	M 12
15	PG 9	15.2	M 16
16	-	-	M 16
18	PG 11	18.6	M 16/M 20
19	PG 11	18.6	M 16/M 20
20	PG 13.5	20.4	M 20
21	PG 13.5	20.4	M 20/M 25
22	PG 16	22.5	M 20/M 25
23	PG 16	22.5	M 20/M 25
24	-	-	M 20/M 25
25	-	-	M 25
28	PG 21	28.3	M 25/M 32
32	-	-	M 32
37	PG 29	37	M 32/ M 40
40	-	-	M 40
47	PG 36	47	M 40/M 50
50	-	-	M 50
54	PG 42	54	M 50/M 63
59	PG 48	59.3	M 50/M 63
63	-	-	M 63

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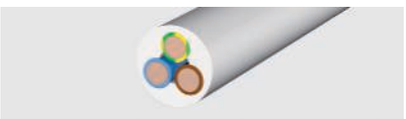
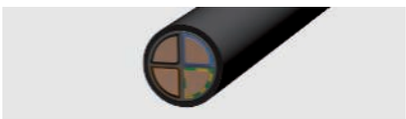
How can I work out the volume of cables?



Insulated power cables

Type	Diameter mm	Usable cross-section cm²
1 x 4	6.5	0.42
1 x 6	7	0.49
1 x 10	8	0.64
1 x 16	9.5	0.9
1 x 25	12.5	1.56
3 x 1.5	8.5	0.72
3 x 2.5	9.5	0.9
3 x 4	11	1.21
4 x 1.5	9	0.81
4 x 2.5	10.5	1.1
4 x 4	12.5	1.56
4 x 6	13.5	1.82
4 x 10	16.5	2.72
4 x 16	19	3.61
4 x 25	23.5	5.52
4 x 35	26	6.76
5 x 1.5	9.5	0.9
5 x 2.5	11	1.21
5 x 4	13.5	1.82
5 x 6	14.5	2.1
5 x 10	18	3.24
5 x 16	21.5	4.62
5 x 25	26	6.76
7 x 1.5	10.5	1.1
7 x 2.5	13	1.69



Insulated power cables

Type	Diameter mm	Usable cross-section cm²
1 x 10	10.5	1.1
1 x 16	11.5	1.32
1 x 25	12.5	1.56
1 x 35	13.5	1.82
1 x 50	15.5	2.4
1 x 70	16.5	2.72
1 x 95	18.5	3.42
1 x 120	20.5	4.2
1 x 150	22.5	5.06
1 x 185	25	6.25
1 x 240	28	7.84
1 x 300	30	9
3 x 1.5	11.5	1.32
3 x 2.5	12.5	1.56
3 x 10	17.5	3.06
3 x 16	19.5	3.8
3 x 50	26	6.76
3 x 70	30	9
3 x 120	36	12.96
4 x 1.5	12.5	1.56
4 x 2.5	13.5	1.82
4 x 6	16.5	2.72
4 x 10	18.5	3.42
4 x 16	21.5	4.62
4 x 25	25.5	6.5
4 x 35	28	7.84
4 x 50	30	9
4 x 70	34	11.56
4 x 95	39	15.21
4 x 120	42	17.64
4 x 150	47	22
4 x 185	52	27
4 x 240	58	33.6
5 x 1.5	13.5	1.82
5 x 2.5	14.5	2.1
5 x 6	18.5	3.42
5 x 10	20.5	4.2
5 x 16	22.5	5.06
5 x 25	27.5	7.56
5 x 35	34	11.56
5 x 50	40	16

Telecommunications cables

Type	Diameter mm	Usable cross-section cm²
2 x 2 x 0.6	5	0.25
4 x 2 x 0.6	5.5	0.3
6 x 2 x 0.6	6.5	0.42
10 x 2 x 0.6	7.5	0.56
20 x 2 x 0.6	9	0.81
40 x 2 x 0.6	11	1.12
60 x 2 x 0.6	13	1.69
100 x 2 x 0.6	17	2.89
200 x 2 x 0.6	23	5.29
2 x 2 x 0.8	6	0.36
4 x 2 x 0.8	7	0.49
6 x 2 x 0.8	8.5	0.72
10 x 2 x 0.8	9.5	0.9
20 x 2 x 0.8	13	1.69
40 x 2 x 0.8	16.5	2.72
60 x 2 x 0.8	20	4
100 x 2 x 0.8	25.5	6.5
200 x 2 x 0.8	32	10.24

IT cables type Cat...

Type	Diameter mm	Usable cross-section cm²
Cat. 5	8	0.64
Cat. 6	8	0.64

Coax cable (Standard)

Type	Diameter mm	Usable cross-section cm²
SAT/BK cable	6.8	0.48

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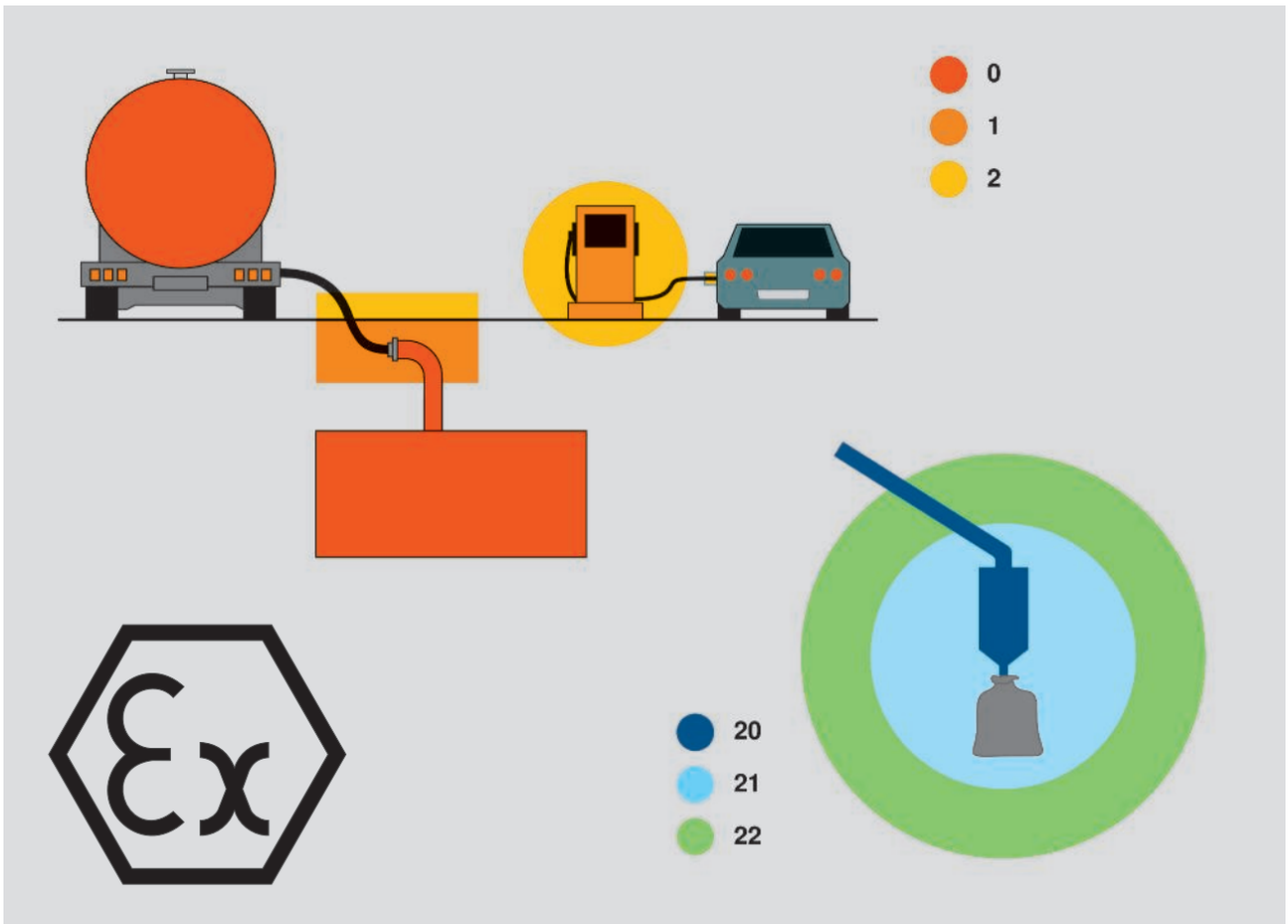
Zone division for explosive areas



The ATEX workplace directive 1999/92/EC (also known unofficially as “ATEX 137”, a reference to Article 137 of the EC Treaty), sets out the minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres. The directive divides areas with dangerous, potentially explosive atmosphere into zones:

Zone allocation of device group II (applied)

Gas	Dust
Explosive gas atmosphere, zone division to DIN EN 60079-10	**Explosive dust-air mixtures, zone division to DIN EN 61214-10**
Zone 0	Zone 20
An area in which it can be expected that, under normal conditions, an explosive atmosphere of gas occurs continuously or for long periods of time.	An area in which it can be expected that, under normal conditions, an explosive atmosphere of dust/air occurs continuously or for long periods of time.
Zone 1	Zone 21
An area in which it can be expected that, under normal conditions, an explosive atmosphere of gas occasionally occurs.	An area in which it can be expected that, under normal conditions, an explosive atmosphere of dust/air occasionally occurs.
Zone 2	Zone 22
Area, in which it can be expected that, under normal conditions, an explosive atmosphere of gas seldom or only briefly occurs.	Area, in which it can be expected that, under normal conditions, an explosive atmosphere of dust/air seldom or only briefly occurs.

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Certificates and test marks

VDE
VDE is the Association for Electrical, Electronic and Information Technologies, their study and the technologies and applications based upon them. The VDE mark on electrical equipment is proof that the equipment complies with VDE regulations and/or European or international harmonised standards, and meets the safety requirements of the applicable directives. The VDE mark indicates that a product is safe in relation to electrical, mechanical, thermal, toxic, radiological and other hazards.

CE symbol
Technical resources included in a legal ordinance, i.e. electrical resources, machines and safety components, must have a CD symbol, with which the manufacturer confirms that the safety requirements of the ordinances are fulfilled. In addition, there must also be a declaration of conformity and technical documentation. The CE symbol is not a quality mark, but simply a declaration by the manufacturer that they have complied with the legal requirements and the codes of practice.

UL
Underwriters Laboratories (UL) is an independent organisation that tests and certifies product safety. UL certification is generally required if a product is to be sold on the US market.
UL offers various certification options: the “UL Listed” test mark indicates that UL has tested representative samples of a product and that it conforms to UL’s safety requirements. The “UL Recognized” component test mark entitles a product to be used in a product or system bearing the “UL Listed” test mark.

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Junction box systems

	A series	37
	T series	42
	X series	85
	Mx series	110
	B series	114
	FireBox	120

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Variety

Small or large, classic or modern, for standard or special applications – variety is at home in the field of OBO junction boxes. There's something for everyone. Learn more at www.obo.com

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Always indicate the item number when ordering.

Staying young
A series

Universal
T series

Extremely high load capacity
X series

Real hard cases
Mx series

The reliable ones
B series

Maintaining functionality
Firebox series

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A series

- Polyethylene (PE)
- Light grey, pure white, red
- Halogen-free

T series with plug-in seal

- Polypropylene (PP)
- Light grey, pure white, red
- EVA perforation membrane

T series with plug-in seal, flame resistant

- Polypropylene (PP)
- Light grey
- EVA perforation membrane

T series with plug-in seal and terminal strip

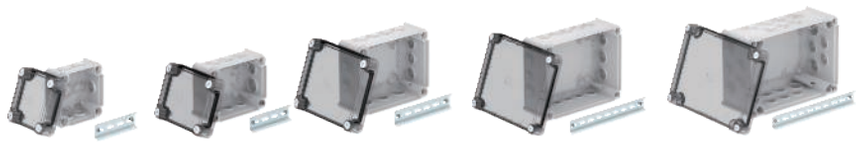
- Polypropylene (PP)
- Light grey
- With terminal strip

T series, closed, with terminal strip

- Polypropylene (PP)
- Light grey
- With terminal strip

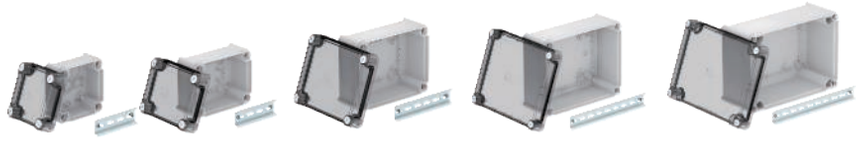
T series with plug-in seal and elevated transparent cover

- Polypropylene (PP)
- Light grey, light grey-transparent
- EVA perforation membrane
- With hat profile rail



T series, closed with elevated transparent cover

- Polypropylene (PP)
- Light grey, light grey-transparent
- With hat profile rail



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Always indicate the item number when ordering.

T series with strain relief entries

- Polypropylene (PP)
- Light grey

T series with knock-out entries

- Polypropylene (PP)
- Light grey

T series with Wieland connectors

- Polypropylene (PP)
- Light grey

X series with knock-out entries, junction boxes

- Polycarbonate (PC)
- Extremely impact-resistant
- 7 sizes
- 4 colour variations

X series with knock-out entries and terminal strip

- Polycarbonate (PC)
- Extremely impact-resistant
- With supplied terminal strips

X series with knock-out entries and cable glands

- Polycarbonate (PC)
- Extremely impact-resistant
- Including cable glands and locknuts

X series with knock-out entries, cable glands and terminal strip

- Polycarbonate (PC)
- Extremely impact-resistant
- Including cable glands, locknuts and terminal strip

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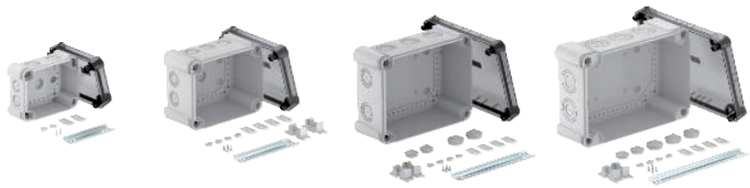
X series with knock-out entries, cable glands and screwless terminals

- Polycarbonate (PC)
- Extremely impact-resistant
- Including cable glands, locknuts and universal screwless terminal

X series with knock-out entries and hat profile rail

- Polycarbonate (PC)
- Extremely impact-resistant
- With hat profile rail and fastening set



X series with knock-out entries and main cable junction terminal

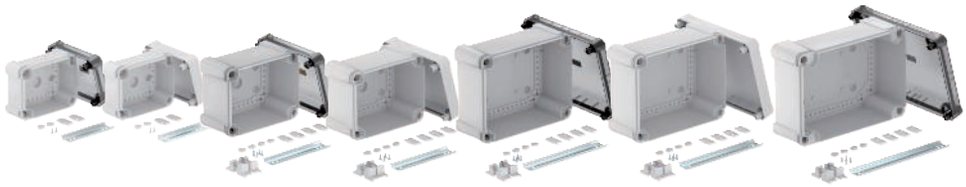
- Polycarbonate (PC)
- Extremely impact-resistant
- Including pre-mounted main cable junction terminal

X series without entries, empty housing

- Polycarbonate (PC)
- Extremely impact-resistant
- 7 sizes
- 3 colour variants

X series without entries, with hat profile rail

- Polycarbonate (PC)
- Extremely impact-resistant
- With hat profile rails and fastenings



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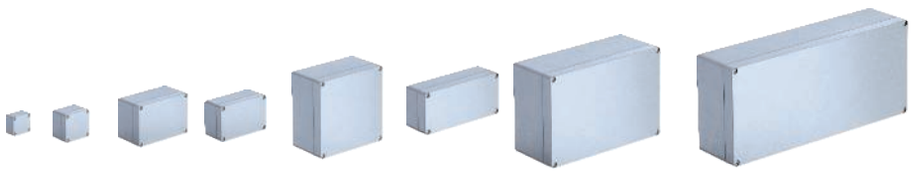
Always indicate the item number when ordering.

Mx series

- Die-cast aluminium
- Sandblasted or grey



B series

- Thermoset
- Light grey

FireBox

- Polypropylene (PP)
- Pastel orange

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A series

- Halogen-free thermoplastic
- Sturdy external fastenings
- Quick mounting with snug-fitting clamshell
- Suitable for wet rooms, IP55

Classic and still youthful

Pre-marked cable entry
The pre-marked cable entries can be opened with a knife or using the cut-out tool supplied.

Classic and still youthful: The well-known junction boxes of the A series have had a makeover. Halogen-free thermoplastic is just as much of a hallmark of the A series as a tight-fitting clamshell and pre-marked cable entries. A protection rating of IP55 and practical external fastenings round off the profile of the classic item.

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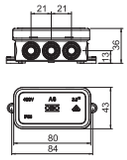
Always indicate the item number when ordering.

Junction box A 6

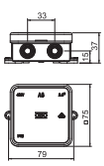


Type	A 6	A 6 HF RW	A 6 HF RO
Colour	Light grey	Pure white	Red
Dimension LxWxH mm	80x43x36	80x43x36	80x43x36
Clear internal dimensions mm	69x32x30	69x32x30	69x32x30
Pack. pcs	10	10	10
Weight kg/100 pcs.	2.560	2.560	2.560
Item No.	**2000001**	**2000005**	**2000003**

PE Polyethylene

Protection rating IP55, nominal voltage 400 V, nominal cross-section 2,5 mm², 6 entries for cable diameter 5-14 mm
4 entries for cable diameter 5-9 mm.
Clamshell.
Dimensions: 80 x 43 x 36 mm
Clear internal dimensions: 69x32x30 mm
1 cut-out tool for every 10 boxes

Junction box A 8 with terminal strip



Type	A 8 5	A 8	A 8 HF RW	A 8 HF RO
Accessories	1 terminal strip	without terminal strip	without terminal strip	without terminal strip
Colour	Light grey	Light grey	Pure white	Red
Dimension LxWxH mm	75x75x36,2	75x75x36,2	75x75x36,2	75x75x36,2
Clear internal dimensions mm	65x65x32	65x65x32	65x65x32	65x65x32
Pack. pcs	10	10	10	10
Weight kg/100 pcs.	6.500	3.813	5.140	5.140
Item No.	**2000024**	**2000016**	**2000075**	**2000059**

PE Polyethylene

Protection rating IP55, nominal voltage 400 V, nominal cross-section 2,5 mm², 7 entries for cable diameter 5–14 mm.
Clamshell.
Dimensions: 75 x 75 x 36,2 mm
Clear internal dimensions: 65x65x32 mm
1 cut-out tool for every 10 boxes

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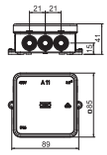
Always indicate the item number when ordering.

Junction box A 11 with terminal strip

IP 55 | 2,5 mm² | 400 V | 12 | 650° | IK 07



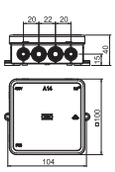
Type	A 11 5	A 11	A 11 HF RW	A 11 HF RO
Accessories	1 terminal strip	without terminal strip	without terminal strip	without terminal strip
Colour	Light grey	Light grey	Pure white	Red
Dimension LxWxH mm	85x85x40	85x85x40	85x85x40	85x85x40
Clear internal dimensions mm	75x75x35	75x75x35	75x75x35	75x75x35
Pack. pcs	10	10	10	10
Weight kg/100 pcs.	7.640	6.200	6.200	4.530
Item No.	**2000326**	**2000342**	**2000180**	**2000164**

PE Polyethylene

Protection rating IP55, nominal voltage 400 V, nominal cross-section 2,5 mm², 12 entries for cable diameter 5–14 mm.
Clamshell.
Dimensions: 85 x 85 x 40 mm
Clear internal dimensions: 75x75x35 mm
1 cut-out tool for every 10 boxes

Junction box A 14 with terminal strip

IP 55 | 2,5 mm² | 400 V | 14 | 650° | IK 07



Type	A 14 5	A 14	A 14 HF RW	A 14 HF RO
Accessories	1 terminal strip	without terminal strip	without terminal strip	without terminal strip
Colour	Light grey	Light grey	Pure white	Red
Dimension LxWxH mm	100x100x40	100x100x40	100x100x40	100x100x40
Clear internal dimensions mm	90x90x35	90x90x35	90x90x35	90x90x35
Pack. pcs	10	10	10	10
Weight kg/100 pcs.	5.855	5.855	5.855	5.855
Item No.	**2000382**	**2000378**	**2000390**	**2000386**

PE Polyethylene

Protection rating IP55, nominal voltage 400 V, nominal cross-section 2,5 mm², 8 entries for cable diameter 5–14 mm
8 entries for cable diameter 5–11 mm.
Clamshell.
Dimensions: 100 x 100 x 40 mm
Clear internal dimensions: 90x90x35 mm
1 cut-out tool for every 10 boxes

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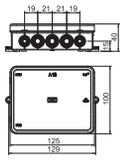
Always indicate the item number when ordering.

Junction box A 18 with terminal strip



Type	A 18 5	A 18	A 18 HF RW	A 18 HF RO
Accessories	1 terminal strip	without terminal strip	without terminal strip	without terminal strip
Colour	Light grey	Light grey	Pure white	Red
Dimension LxWxH mm	125x100x40	125x100x40	125x100x40	125x100x40
Clear internal dimensions mm	115x90x35	115x90x35	115x90x35	115x90x35
Pack. pcs	10	10	10	10
Weight kg/100 pcs.	6.957	6.957	6.957	6.957
Item No.	**2000414**	**2000410**	**2000422**	**2000418**

PE Polyethylene

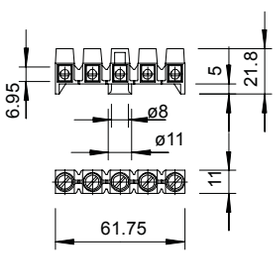
Protection rating IP55, nominal voltage 400 V, nominal cross-section 2,5 mm², 10 entries for cable diameter 5-14 mm
8 entries for cable diameter 5-11 mm.
Clamshell.
Dimensions: 125 x 100 x 40 mm
Clear internal dimensions: 115x90x35 mm
1 cut-out tool for every 10 boxes

Terminal strip 2.5 mm²

Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
689	Light grey	5	0.8 - 2.5	660	50	1.502	**2017342**

PA Polyamide

Terminal strip, nickel-plated brass, steel screws, galvanised and transparently passivated, nominal cross-section 0,8 - 2,5 mm², nominal voltage 660 V, 5-pole, with terminal sockets, max. connectable cross-sections per terminal: 4 x 2.5 mm², 5 x 1.5 mm² or
6 x 1 mm², unnecessary poles can be cut off and used as individual terminals.



Always indicate the item number when ordering.

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The success of the T series has a solid basis

Intelligence is the natural characteristic of the T series: Our developers have used high-quality materials, sensible wall thicknesses and a stable construction to ensure that the T series can stand up to even the hardest conditions. All the boxes are made of halogen-free polypropylene and do not contain fluorine, chlorine or bromine.

Condensation water opening
There is a condensation water opening on each side, which can be pushed in as necessary.

Alignment markings
There are markings on all sides of the junction box for alignment with a chalk line.

Mounting points
Thanks to cleverly arrayed mounting points, versatile installation options are created for the internal space.

Cover captivity
The cover captivity ensures that the lid cannot go missing or drop down – a benefit that one comes to appreciate quickly in many assembly situations.

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Screw cover flaps
When fixed through the back wall the included screw cover flaps will cover the openings again.

UV resistance
The material of all junction boxes is UV-resistant and is therefore suitable for the use outside.

Corner dome
The corner dome separates the fixation of the junction box from the internal room and ensures a particularly torsion-resistant box. The good impact characteristics have been tested to DIN EN 50102 and classified according to the universally accepted IK code.

Knock-out entries
Knock-out entries in the bottom allow the insertion of cables from below.

Screw-on covers
Screw-on covers provide fast and secure fastening of the cover. The junction box can be sealed.

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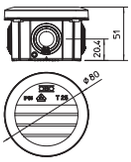
Always indicate the item number when ordering.

Junction box, T series with plug-in seal

- High impermeability of IP66. Plug-in seals made of thermoplastic elastomer (TPE). Alternatively, cable glands or pipe entries can be mounted
- Universally deployable: UV-resistant for use outdoors, halogen-free for the use indoors

Junction box T 25, plug-in seal



Type	T 25	T 25 RW
Colour	Light grey	Pure white
Entries	4 x M25	4 x M25
Dimension mm	Ø80x51	Ø80x51
Clear internal dimensions mm	Ø63x45	Ø63x45
Pack. pcs	5	5
Weight kg/100 pcs.	4.190	4.190
Item No.	**2007029**	**2007509**

PP Polypropylene

The junction boxes are made of a thermoplastic polypropylene polymer with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables either directly through the 4 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. In addition, cable glands can be inserted through the openings instead of the seals and locked with a locknut from inside.
The cable junction boxes can be screwed onto an M6 thread or mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: Ø63x45 mm.
Cover with labelling panel.

Always indicate the item number when ordering.

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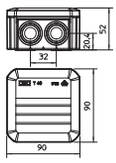
Junction box T 40, plug-in seal

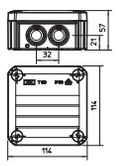


Type	T 40	T 40 RW	T 40 RO-LGR
Colour	Light grey	Pure white	Grey / red
Entries	7 x M25	7 x M25	7 x M25
Dimension LxWxH mm	90x90x52	90x90x52	90x90x52
Clear internal dimensions mm	77x77x46	77x77x46	77x77x46
Pack. pcs	5	5	5
Weight kg/100 pcs.	6.700	6.700	6.700
Item No.	**2007045**	**2007517**	**2007630**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 7 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using self-tapping screws 3.5 x 9.5.
Clear internal dimensions: 77x77x46 mm

Junction box T 60, plug-in seal



Type	T 60	T 60 RW	T 60 RO-LGR
Colour	Light grey	Pure white	Grey / red
Entries	7 x M25	7 x M25	7 x M25
Dimension LxWxH mm	114x114x57	114x114x57	114x114x57
Clear internal dimensions mm	100x100x48	100x100x48	100x100x48
Pack. pcs	5	5	5
Weight kg/100 pcs.	12.300	12.300	12.300
Item No.	**2007061**	**2007525**	**2007638**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 7 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 100x100x48 mm
Cover with labelling panel and lead-sealed.

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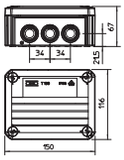
Always indicate the item number when ordering.

Junction box, T series with plug-in seal

Junction box T 100, plug-in seal

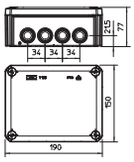


Type	T 100	T 100 RW	T 100 RO-LGR	T 100 M25-M32
Colour	Light grey	Pure white	Grey / red	Light grey
Entries	10 x M25	10 x M25	10 x M25	8 x M25 2 x M32
Dimension LxWxH mm	150x116x67	150x116x67	150x116x67	150x116x67
Clear internal dimensions mm	136x102x57	136x102x57	136x102x57	136x102x57
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	16.270	16.270	16.270	16.300
Item No.	**2007077**	**2007533**	**2007644**	**2007081**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 10 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 136x102x57 mm
Cover with labelling panel and lead-sealed.

Junction box T 160, plug-in seal



Type	T 160	T 160 RW	T 160 RO-LGR	T 160 M32
Colour	Light grey	Pure white	Grey / red	Light grey
Entries	7 x M25 5 x M32	7 x M25 5 x M32	7 x M25 5 x M32	10 x M32
Dimension LxWxH mm	190x150x77	190x150x77	190x150x77	190x150x77
Clear internal dimensions mm	176x135x67	176x135x67	176x135x67	176x135x67
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	30.000	30.000	30.000	30.000
Item No.	**2007093**	**2007541**	**2007649**	**2007097**

PP/GF Polypropylene, Glass-fibre reinforced

The junction boxes are made of a thermoplastic polypropylene polymer with plug-in seals made of ethylene vinyl acetate (EVA). This allows installation of cables either directly through the 7x M25 + 5x M32 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, cable glands can be pushed through the openings instead of the seals and locked with a locknut from the inside.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel screws 3.5 x 9.5.
Clear internal dimensions: 176x135x67 mm
Cover with labelling panel and lead-sealed.

Always indicate the item number when ordering.

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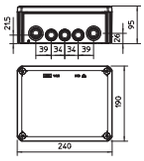
Junction box T 250, plug-in seal

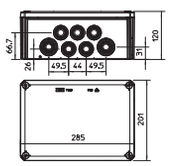


Type	T 250	T 250 RW	T 250 RO-LGR
Colour	Light grey	Pure white	Grey / red
Entries	9 x M25 7 x M32	9 x M25 7 x M32	9 x M25 7 x M32
Dimension LxWxH mm	240x190x95	240x190x95	240x190x95
Clear internal dimensions mm	225x173x86	225x173x86	225x173x86
Pack. pcs	1	1	1
Weight kg/100 pcs.	50.000	50.000	50.000
Item No.	**2007109**	**2007554**	**2007657**

PP/GF Polypropylene, Glass-fibre reinforced

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 9x M25 + 7x M32 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 225x173x86 mm
Cover with labelling panel and lead-sealed.

Junction box T 350, plug-in seal



Type	T 350	T 350 RW
Colour	Light grey	Pure white
Entries	16 x M32 8 x M40	16 x M32 8 x M40
Dimension LxWxH mm	285x201x120	285x201x120
Clear internal dimensions mm	267x182x110	267x182x110
Pack. pcs	1	1
Weight kg/100 pcs.	63.000	63.000
Item No.	**2007125**	**2007568**

PP/GF Polypropylene, Glass-fibre reinforced

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 16x M32 + 8x M40 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 267x182x110 mm
Cover with labelling panel and lead-sealed.

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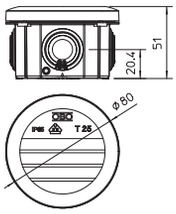
Junction box, T series with plug-in seal, flame-resistant

- Flame-resistant type (F) to DIN EN 60695-2-11 made from special polypropylene (960 °C)
- High impermeability of IP66. Plug-in seals made of thermoplastic elastomer (TPE). Alternatively, cable glands or pipe entries can be mounted
- Universally deployable: UV-resistant for use outdoors, halogen-free for the use indoors

Junction box T 25, plug-in seal, flame-resistant



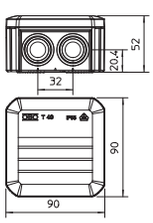
IP 65 | M25 | 2,5 mm² | 4 | 500 V | UV RESISTANT | IK 07 | 960°

Type	Colour	Entries	Dimension mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 25 F	Light grey	4 x M25	Ø80x51	Ø63x45	5	4.190	**2007312**

PP Polypropylene

The junction boxes are made of a thermoplastic polypropylene polymer with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables either directly through the 4 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. In addition, cable glands can be inserted through the openings instead of the seals and locked with a locknut from inside.
The cable junction boxes can be screwed onto an M6 thread or mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: Ø63x45 mm.
Cover with labelling panel.

Junction box T 60, plug-in seal, flame-resistant



IP 55 | M25 | 4 mm² | 7 | 500 V | IK 07 | UV RESISTANT | 960°

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 40 F	Light grey	7 x M25	90x90x52	77x77x46	5	6.700	**2007320**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 7 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using self-tapping screws 3.5 x 9.5.
Clear internal dimensions: 77x77x46 mm

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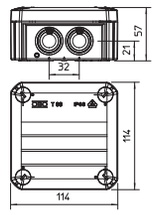
Junction box T 60, plug-in seal, flame-resistant

IP 66 | M25 | 6 mm² | 7 | 500 V | UV RESISTANT | IK 07 | Fluor Chlorine Brom HALOGENFREE | 960° | VDE | KEMA KEUR



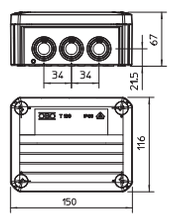
Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 60 F	Light grey	7 x M25	114x114x57	100x100x48	5	12.300	**2007339**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 7 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 100x100x48 mm
Cover with labelling panel and lead-sealed.

Junction box T 100, plug-in seal, flame-resistant

IP 66 | M25 | 10 mm² | 10 | 500 V | UV RESISTANT | IK 07 | Fluor Chlorine Brom HALOGENFREE | 960° | VDE | KEMA KEUR



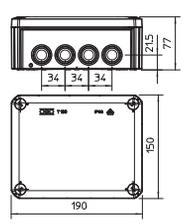
Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 F	Light grey	10 x M25	150x116x67	136x102x57	1	16.270	**2007347**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 10 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 136x102x57 mm
Cover with labelling panel and lead-sealed.

Junction box T 160, plug-in seal, flame-resistant

IP 66 | M25 | M32 | 16 mm² | 12 | 500 V | IK 05 | UV RESISTANT | Fluor Chlorine Brom HALOGENFREE | 960° | VDE | KEMA KEUR



Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 F	Light grey	7 x M25 5 x M32	190x150x77	176x135x67	1	30.000	**2007355**

PP/GF Polypropylene, Glass-fibre reinforced

The junction boxes are made of a thermoplastic polypropylene polymer with plug-in seals made of ethylene vinyl acetate (EVA). This allows installation of cables either directly through the 7x M25 + 5x M32 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, cable glands can be pushed through the openings instead of the seals and locked with a locknut from the inside.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel screws 3.5 x 9.5.
Clear internal dimensions: 176x135x67 mm
Cover with labelling panel and lead-sealed.

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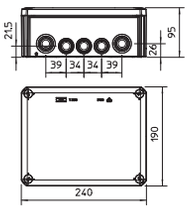
Always indicate the item number when ordering.

Junction box, T series with plug-in seal, flame-resistant

Junction box T 250, plug-in seal, flame-resistant



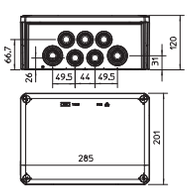
IP 66 · M25 · M32 · 25 mm² · 16 · 500 V · UV resistant · IK 05 · halogen-free · 960° · VDE · KEMA KEUR

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 250 F	Light grey	9 x M25 7 x M32	240x190x95	225x173x86	1	50.000	**2007363**

PP/GF Polypropylene, Glass-fibre reinforced

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 9x M25 + 7x M32 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 225x173x86 mm
Cover with labelling panel and lead-sealed.

Junction box T 350, plug-in seal, flame-resistant



IP 66 · M32 · M40 · 35 mm² · 24 · 500 V · UV resistant · IK 05 · halogen-free · 960° · VDE · KEMA KEUR

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 350 F	Light grey	16 x M32 8 x M40	285x201x120	267x182x110	1	63.000	**2007371**

PP/GF Polypropylene, Glass-fibre reinforced

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 16x M32 + 8x M40 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 267x182x110 mm
Cover with labelling panel and lead-sealed.

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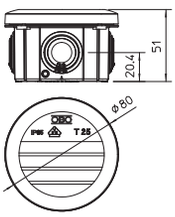
Always indicate the item number when ordering.

Junction box, T series with plug-in seal and terminal strip

- Neat and clean wiring thanks to pre-mounted terminal strips
- If the cable cross-section is large, the connection terminals are arranged at the top edge. The installation will therefore become significantly easier
- High impermeability of IP66. Plug-in seals made of thermoplastic elastomer (TPE). Alternatively, cable glands or pipe entries can be mounted.
- Universally deployable: UV-resistant for use outdoors, halogen-free for the use indoors

Junction box T 25, plug-in seal, terminal strip

IP 65 | M25 | 2,5 mm² | 4 | 500 V | UV RESISTANT | IK 07 | 650°



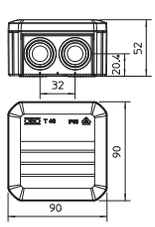
Type	Colour	Entries	Dimension mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 25 KL	Light grey	4 x M25	Ø80x51	Ø63x45	5	6.400	**2007430**

PP Polypropylene

The junction boxes are made of a thermoplastic polypropylene polymer with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables either directly through the 4 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. In addition, cable glands can be inserted through the openings instead of the seals and locked with a locknut from inside.
The cable junction boxes can be screwed onto an M6 thread or mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: Ø63x45 mm.
Cover with labelling panel.

Junction box T 40, plug-in seal, terminal strip

IP 55 | M25 | 4 mm² | 7 | 500 V | IK 07 | UV RESISTANT | 650°



Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 40 KL	Light grey	7 x M25	90x90x52	77x77x46	5	8.900	**2007432**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 7 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using self-tapping screws 3.5 x 9.5.
Clear internal dimensions: 77x77x46 mm

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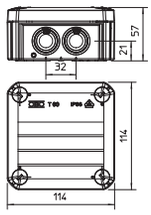
Junction box, T series with plug-in seal and terminal strip

Junction box T 60, plug-in seal, terminal strip



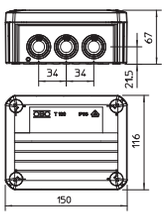
IP 66 | M25 | 6 mm² | 7 | 500 V | UV RESISTANT | IK 07 | Fluor Chlor Brom HALOGENFREE | 650° | VDE | KEMA KEUR

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 60 KL	Light grey	7 x M25	114x114x57	100x100x48	5	16.700	**2007434**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 7 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 100x100x48 mm
Cover with labelling panel and lead-sealed.

Junction box T 100, plug-in seal, terminal strip



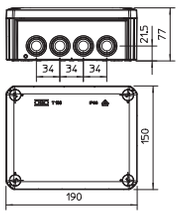
IP 66 | M25 | 10 mm² | 10 | 500 V | UV RESISTANT | IK 07 | Fluor Chlor Brom HALOGENFREE | 650° | VDE | KEMA KEUR

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 KL	Light grey	10 x M25	150x116x67	136x102x57	1	40.000	**2007436**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 10 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 136x102x57 mm
Cover with labelling panel and lead-sealed.

Junction box T 160, plug-in seal



IP 66 | M25 | M32 | 16 mm² | 12 | 500 V | IK 05 | UV RESISTANT | Fluor Chlor Brom HALOGENFREE | 650° | VDE | KEMA KEUR

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 KL	Light grey	7 x M25 5 x M32	190x150x77	176x135x67	1	64.200	**2007440**

PP/GF Polypropylene, Glass-fibre reinforced

The junction boxes are made of a thermoplastic polypropylene polymer with plug-in seals made of ethylene vinyl acetate (EVA). This allows installation of cables either directly through the 7x M25 + 5x M32 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, cable glands can be pushed through the openings instead of the seals and locked with a locknut from the inside.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel screws 3.5 x 9.5.
Clear internal dimensions: 176x135x67 mm
Cover with labelling panel and lead-sealed.

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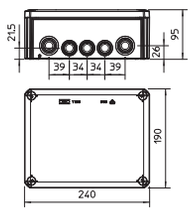
Always indicate the item number when ordering.

Junction box T 250, plug-in seal, terminal strip

IP 66 | M25 | M32 | 25 mm² | 16 | 500 V | UV resistant | IK 05 T | Fluor Chlorine Bromine free | 650° | VDE | KEMA KEUR



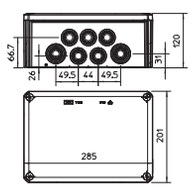
Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 250 KL	Light grey	9 x M25 7 x M32	240x190x95	225x173x86	1	79.500	**2007444**

PP/GF Polypropylene, Glass-fibre reinforced

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 9x M25 + 7x M32 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 225x173x86 mm
Cover with labelling panel and lead-sealed.

Junction box T 350, plug-in seal, terminal strip

IP 66 | M32 | M40 | 35 mm² | 24 | 500 V | UV resistant | IK 05 T | Fluor Chlorine Bromine free | 650° | VDE | KEMA KEUR



Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 350 KL	Light grey	16 x M32 8 x M40	285x201x120	267x182x110	1	95.700	**2007448**

PP/GF Polypropylene, Glass-fibre reinforced

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 16x M32 + 8x M40 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 267x182x110 mm
Cover with labelling panel and lead-sealed.

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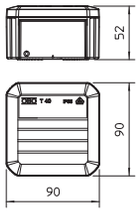
Always indicate the item number when ordering.

Junction box, T series, closed

- In the closed side walls, entries can be created in any required number and size
- Universally deployable: UV-resistant for use outdoors, halogen-free for the use indoors

Junction box T 40, closed



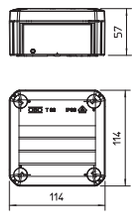
CE | IP 55 | 4 mm² | 500 V | UV RESISTANT | IK 07 | Fluor CFC free | 650° | DVE

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 40 OE	Light grey	90x90x52	77x77x46	5	6.300	**2007223**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made from polypropylene (a thermoplastic material) and have closed side walls. This means that the required openings can be made wherever they are required. EDK plug-in seals or cable glands with locknuts can be inserted in these openings, to allow cable insertion.
The junction boxes can be mounted on mounting plates in the openings on the floor using self-tapping screws 3.5 x 9.5.
Clear internal dimensions: 77x77x46 mm

Junction box T 60, closed



CE | IP 66 | 6 mm² | 500 V | IK 08 | UV RESISTANT | Fluor CFC free | 650° | DVE

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 60 OE	Light grey	114x114x57	100x100x46	5	12.000	**2007239**

PP Polypropylene

The junction boxes are made of a thermoplastic polypropylene polymer with closed side walls. This means that the required openings can be made wherever they are required. EDK plug-in seals or cable glands with locknuts can be inserted in these openings, to allow cable insertion.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel screws 3.5 x 9.5.
Clear internal dimensions: 100x100x46 mm
Cover with labelling panel and lead-sealed.

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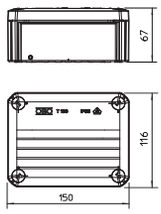
Always indicate the item number when ordering.

Junction box T 100, closed

IP 66 | 10 mm² | 500 V | IK 07 | UV resistant | Fluor Chlorine halogen-free | 650° | VDE



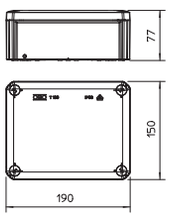
Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 OE	Light grey	150x116x67	136x102x57	1	16.200	**2007255**

PP Polypropylene

The junction boxes are made of a thermoplastic polypropylene polymer with closed side walls. This means that the required openings can be made wherever they are required. EDK plug-in seals or cable glands with locknuts can be inserted in these openings, to allow cable insertion. The junction boxes can be mounted on mounting plates in the openings on the floor using steel screws 3.5 x 9.5.
Clear internal dimensions: 136x102x57 mm
Cover with labelling panel and lead-sealed.

Junction box T 160, closed

IP 66 | 16 mm² | 500 V | UV resistant | IK 04 | Fluor Chlorine halogen-free | 650° | VDE



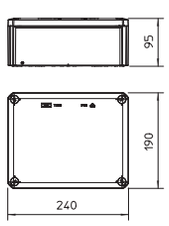
Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 OE	Light grey	190x150x77	176x135x67	1	30.000	**2007271**

PP/GF Polypropylene, Glass-fibre reinforced

The junction boxes are made of a thermoplastic polypropylene polymer with closed side walls. This means that the required openings can be made wherever they are required. EDK plug-in seals or cable glands with locknuts can be inserted in these openings, to allow cable insertion. The junction boxes can be mounted on mounting plates in the openings on the floor using steel screws 3.5 x 9.5.
Clear internal dimensions: 176x135x67 mm
Cover with labelling panel and lead-sealed.

Junction box T 250, closed

IP 66 | 25 mm² | 500 V | UV resistant | IK 05 | Fluor Chlorine halogen-free | 650° | VDE



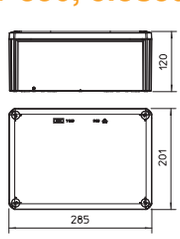
Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 250 OE	Light grey	240x190x95	225x173x86	1	48.300	**2007287**

PP/GF Polypropylene, Glass-fibre reinforced

The junction boxes are made of a thermoplastic polypropylene polymer with closed side walls. This means that the required openings can be made wherever they are required. EDK plug-in seals or cable glands with locknuts can be inserted in these openings, to allow cable insertion. The junction boxes can be mounted on mounting plates in the openings on the floor using steel screws 3.5 x 9.5.
Clear internal dimensions: 225x173x86 mm
Cover with labelling panel and lead-sealed.

Junction box T 350, closed

IP 66 | 35 mm² | 500 V | UV resistant | IK 05 | Fluor Chlorine halogen-free | 650° | VDE



Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 350 OE	Light grey	285x201x120	267x182x110	1	58.800	**2007303**

PP/GF Polypropylene, Glass-fibre reinforced

The junction boxes are made of a thermoplastic polypropylene polymer with closed side walls. This means that the required openings can be made wherever they are required. EDK plug-in seals or cable glands with locknuts can be inserted in these openings, to allow cable insertion. The junction boxes can be mounted on mounting plates in the openings on the floor using steel screws 3.5 x 9.5.
Clear internal dimensions: 267x182x110 mm
Cover with labelling panel and lead-sealed.

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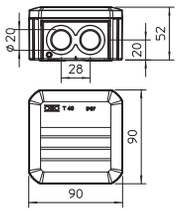
Junction box, T series, with knock-out entries

- The junction boxes have seven pre-marked cable entries with a diameter of 20 mm. These can be knocked out when required and can, for instance, be equipped with plug-in seals or cable glands
- Universally deployable: UV-resistant for use outdoors, halogen-free for the use indoors
- Colour: Light grey

Junction box T40 with pre-marking, closed



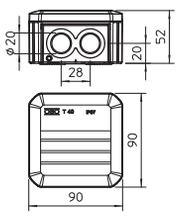
500 V | IP 67 | M20 | IK 07 | 4 mm² | UV RESISTANT | 7 | Fluor Chlor Brom HALOGENFREI | 650°

Type	Entries	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 40 M20	7x020	Light grey	90x90x52	77x77x46	5	6.100	**2007900**

PP Polypropylene

The junction boxes are made from polypropylene (a thermoplastic material) and the plug-in seals are made from ethylene vinyl acetate (EVA). This allows installation of cables either directly through the 7x020 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted in openings in the base onto mounting plates with self-tapping screws 3.5 x 9.5.
Clear internal dimensions: 77x77x46 mm

Junction box T40 with pre-marking, with terminal strip



500 V | IP 67 | M20 | IK 07 | 4 mm² | UV RESISTANT | 7 | Fluor Chlor Brom HALOGENFREI | 650°

Type	Entries	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 40 M20 KL	7x020	Light grey	90x90x52	77x77x46	5	8.200	**2007904**

PP Polypropylene

The junction boxes are made from polypropylene (a thermoplastic material) and the plug-in seals are made from ethylene vinyl acetate (EVA). This allows installation of cables either directly through the 7x020 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted in openings in the base onto mounting plates with self-tapping screws 3.5 x 9.5.
Clear internal dimensions: 77x77x46 mm

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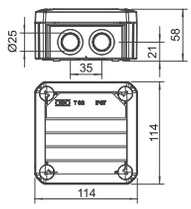
Always indicate the item number when ordering.

Junction box T60 with pre-marking, closed

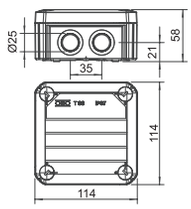


Type	Entries	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 60 M20	7x020	Light grey	114x114x57	100x100x48	5	12.100	**2007910**
T 60 M25	7 x Ø25	Light grey	114x114x57	100x100x48	5	12.300	**2007926**
T 60 M25 RO-LGR	7 x Ø25	Grey / red	114x114x57	100x100x48	5	12.300	**2007927**

PP Polypropylene

The junction boxes are made of polypropylene. Cables can be inserted through the seven break-out openings with the diameter 25 mm.
After knocking-out the break-out openings, we recommend using cable glands, in order to run the cables into the housing and to maintain the protection rating.
The junction boxes can be mounted on mounting plates using self-tapping screws 3.5x9.5 mm.
The box lid contains a labelling panel and can also be lead-sealed.

Junction box T60 with pre-marking, with terminal strip



Type	Entries	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 60 M20 KL	7x020	Light grey	114x114x57	100x100x48	5	16.500	**2007914**

PP Polypropylene

The junction boxes are made of polypropylene. Cables can be inserted through the seven break-out openings with the diameter 25 mm.
After knocking-out the break-out openings, we recommend using cable glands, in order to run the cables into the housing and to maintain the protection rating.
The junction boxes can be mounted on mounting plates using self-tapping screws 3.5x9.5 mm.
The box lid contains a labelling panel and can also be lead-sealed.

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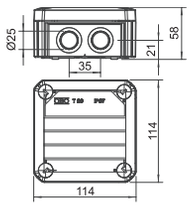
Always indicate the item number when ordering.

Junction box, T series, with V-TEC cable glands

- Set with junction box and V-TEC screw connection
- The junction boxes have seven pre-marked cable entries with a diameter of 20 mm. These can be knocked out when required and can, for instance, be equipped with plug-in seals or cable glands
- Universally deployable: UV-resistant for use outdoors, halogen-free for the use indoors
- Colour: Light grey

Cable junction box T 60 pre-embossed and 3 cable glands

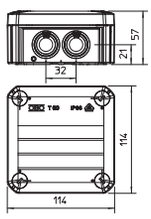


Type	Entries	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 60 M20 NL	7x020	Light grey	114x114x57	100x100x48	5	15.100	**2007918**

PP Polypropylene

The junction boxes are made of polypropylene. Cables can be inserted through the seven break-out openings with the diameter 25 mm.
After knocking-out the break-out openings, we recommend using cable glands, in order to run the cables into the housing and to maintain the protection rating.
The junction boxes can be mounted on mounting plates using self-tapping screws 3.5x9.5 mm.
The box lid contains a labelling panel and can also be lead-sealed.

Junction box T 60 with plug-in seals and 3 cable glands



Type	Entries	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 60 M25 NL	7 x M25	Light grey	114x114x57	100x100x48	5	14.010	**2007922**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of a thermoplastic polypropylene plastic with plug-in seals made of ethylene vinyl acetate (EVA). This plastic is soft, which means that it is malleable. This allows installation of cables through the 7 x M25 seals, or the seals can be cut with a knife at the pre-marked points, in order to create an insertion opening for cables or pipes. Alternatively, instead of seals, cable glands can be inserted through the openings and be countered internally with a locknut.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5.
Clear internal dimensions: 100x100x48 mm
Cover with labelling panel and lead-sealed.

Always indicate the item number when ordering.

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Junction box, T series, with elevated cover and plug-in seals

- Large wiring space due to elevated cover. The scope of delivery includes hat profile rail for the mounting of electronic components
- High impermeability of IP66. Plug-in seals made of thermoplastic elastomer (TPE). Alternatively, cable glands or pipe entries can be mounted
- Universally deployable: UV-resistant for use outdoors, halogen-free for the use indoors

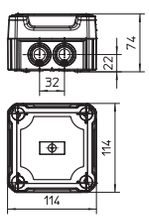
Junction box T60, plug-in seal, elevated cover

IP 66 | M25 | 7 | 500 V | 6 mm² | UV RESISTANT | IK 07 T | 650°

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 60 HD LGR	7xM25	114x114x74	100x100x65	1	17.180	**2007710**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.



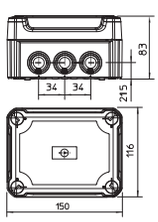
Junction box T100, plug-in seal, elevated cover

IP 66 | M25 | 10 | 500 V | 10 mm² | UV RESISTANT | IK 07 T | 650°

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 HD LGR	10xM25	150x116x83	136x102x74	1	22.550	**2007712**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.



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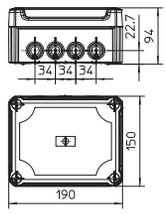
Always indicate the item number when ordering.

Junction box T160, plug-in seal, elevated cover



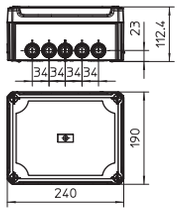
IP 66 · M25 · M32 · 16 mm² · 12 · 500 V · IK 05 · UV RESISTANT · Fluor Chlor Brom HALOGENFREIES · 650° · VDE

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 HD LGR	7xM25 5xM32	190x150x94	176x135x84	1	34.180	**2007714**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

Junction box T250, plug-in seal, elevated cover



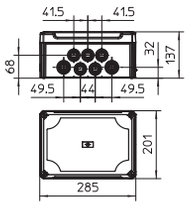
IP 66 · M25 · M32 · 16 · 500 V · 25 mm² · UV RESISTANT · IK 05 · Fluor Chlor Brom HALOGENFREIES · 650° · VDE

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 250 HD LGR	9xM25 7xM32	240x190x112	225x173x103	1	52.010	**2007716**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

Junction box T350, plug-in seal, elevated cover



IP 66 · M32 · M40 · 24 · 500 V · 35 mm² · UV RESISTANT · IK 05 · Fluor Chlor Brom HALOGENFREIES · 650° · VDE

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 350 HD LGR	16xM32 8xM40	285x201x137	267x182x127	1	72.760	**2007718**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

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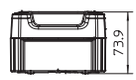
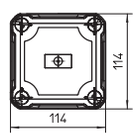
Junction box, T series with elevated cover, closed

- Large wiring space due to elevated cover. The scope of delivery includes hat profile rail for the mounting of electrical components. In the closed side walls, entries can be created in any required number and size
- In the closed side walls, entries can be created in any required number and size
- Universally deployable: UV-resistant for use outdoors, halogen-free for the use indoors

Junction box T60, closed, elevated cover



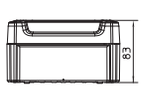


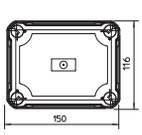
Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 60 OE HD LGR	None	114x114x74	100x100x63	1	16.600	**2007730**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

Junction box T100, closed, elevated cover





Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 OE HD LGR	None	150x116x83	136x102x74	1	23.650	**2007732**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

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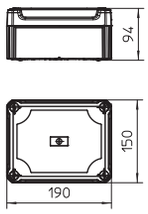
Always indicate the item number when ordering.

Junction box T160, closed, elevated cover

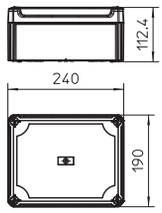


Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 OE HD LGR	None	190x150x94	176x135x84	1	33.920	**2007734**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

Junction box T250, closed, elevated cover

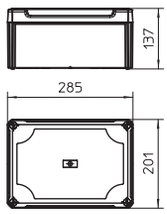


Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 250 OE HD LGR	None	240x190x112	225x173x102	1	100.000	**2007736**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

Junction box T350, closed, elevated cover



Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 350 OE HD LGR	None	285x201x137	267x182x127	1	68.660	**2007738**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

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Always indicate the item number when ordering.

Junction box, T series with elevated transparent cover and plug-in seal

- Large wiring space due to elevated transparent cover. Operating states of electronic components are visible without dismantling the cover. The scope of delivery includes hat profile rail for the mounting of electronic components
- High impermeability of IP66. Plug-in seals made of thermoplastic elastomer (TPE). Alternatively, cable glands or pipe entries can be mounted
- Universally deployable: UV-resistant for use outdoors, halogen-free for the use indoors

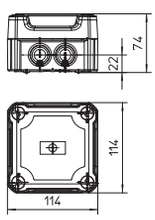
Junction box T60, with plug-in seal, transparent elevated cover

IP 66 | M25 | 7 | 500 V | 6 mm² | UV RESISTANT | IK 07 | HALOGENFREE | 650°

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 60 HD TR	7xM25	114x114x74	100x100x65	1	17.180	**2007750**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.



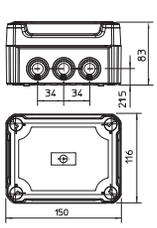
Junction box T100, with plug-in seal, transparent elevated cover

IP 66 | M25 | 10 | 500 V | 10 mm² | UV RESISTANT | IK 07 | HALOGENFREE | 650°

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 HD TR	10xM25	150x116x83	136x102x74	1	22.550	**2007752**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.



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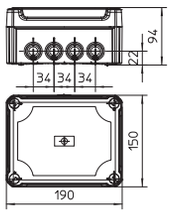
Junction box T160, with plug-in seal, transparent elevated cover



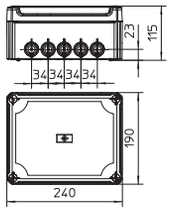
IP 66 | M25 | M32 | 12 | 500 V | 16 mm² | UV RESISTANT | IK 05 | 650°

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 HD TR	7xM25 5xM32	190x150x94	176x135x84	1	34.180	**2007754**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

Junction box T250, with plug-in seal, transparent elevated cover



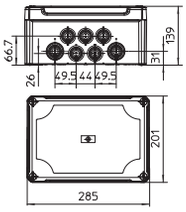
IP 66 | M25 | M32 | 16 | 500 V | 25 mm² | UV RESISTANT | IK 05 | 650°

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 250 HD TR	9xM25 7xM32	240x190x112	225x173x103	1	52.010	**2007756**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

Junction box T350, with plug-in seal, transparent elevated cover



IP 66 | M32 | M40 | 24 | 500 V | 35 mm² | UV RESISTANT | IK 05 | 650°

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 350 HD TR	16xM32 8xM40	285x201x137	267x182x127	1	72.760	**2007758**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

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Always indicate the item number when ordering.

Junction box, T series with elevated transparent cover, closed

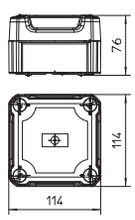
- Large wiring space due to elevated transparent cover. Operating states of electronic components are visible without dismantling the cover. The scope of delivery includes hat profile rail for the mounting of electrical components. In the closed side walls, entries can be created in any required number and size
- In the closed side walls, entries can be created in any required number and size
- Universally deployable: UV-resistant for use outdoors, halogen-free for the use indoors

Junction box T60, closed, transparent elevated cover

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 60 OE HD TR	None	114x114x74	100x100x63	1	16.600	**2007770**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

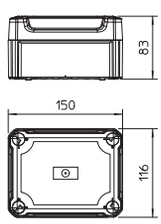


Junction box T100, closed, transparent elevated cover

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 OE HD TR	None	150x116x83	136x102x74	1	23.650	**2007772**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.



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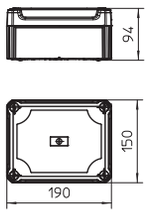
Junction box, T series with elevated transparent cover, closed

Junction box T160, closed, transparent elevated cover

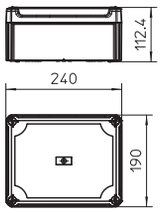


Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 OE HD TR	None	190x150x94	176x135x84	1	33.920	**2007774**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

Junction box T250, closed, transparent elevated cover

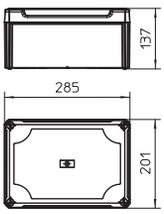


Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 250 OE HD TR	None	240x190x112	225x173x102	1	100.000	**2007776**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

Junction box T350, closed, transparent elevated cover



Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 350 OE HD TR	None	285x201x137	267x182x127	1	68.660	**2007778**

PP/PC Polypropylene / polycarbonate

The junction boxes consist of thermoplastic material. The bottom parts are made from impact-resistant polypropylene, the box cover is made from extremely hard-wearing, impact-resistant polycarbonate. The high IK 10 impact resistance at –5 °C shows this also.
Thanks to the elevated cover, OBO creates significantly more wiring space, therefore offering the facility to install and protect pushbuttons and series terminals, as well as the option to accommodate control sensors, switches and electronic equipment from the housing and installation technology area. Together with the fastening plate, it is an ideal partner in visible installations.

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Always indicate the item number when ordering.

Junction box, T series with strain relief and Modul 45 sockets

- Quick mounting thanks to pre-wired Modul 45 protective contact sockets in the cover
- Cables and wires with a diameter of 7 to 21 mm can be inserted directly. The strain relief entries prevent the accidental extraction of the cables
- Note: Installation to VDE 0620-1 only by persons with appropriate electrotechnical knowledge and experience. There is danger to life if installed incorrectly

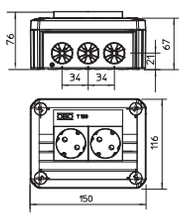
T 100 NL S, 2 Modul 45 sockets in cover, 1-pole

IP 20 | 500 V | 750°

Type	Entries	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 2MSD WS	10	Light grey	1	25.850	**2007821**

PP Polypropylene

The junction boxes are made of a thermoplastic polypropylene polymer and are equipped with strain relief entries. These entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
Depending on the type, the cover contains two or four Modul 45 protective contact sockets in red or white.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel screws 3.5 x 9.5.
Cover can be lead-sealed, with labelling panel for double sockets.



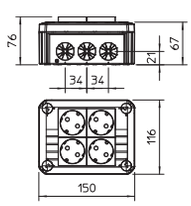
T 100 NL S, 4 Modul 45 sockets in cover, 2-pole

IP 20 | 500 V | 750°

Type	Entries	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 4MSD WS	10	Light grey	1	35.200	**2007825**

PP Polypropylene

The junction boxes are made of a thermoplastic polypropylene polymer and are equipped with strain relief entries. These entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
Depending on the type, the cover contains two or four Modul 45 protective contact sockets in red or white.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel screws 3.5 x 9.5.
Cover can be lead-sealed, with labelling panel for double sockets.



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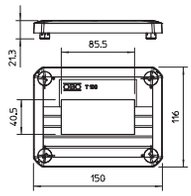
Always indicate the item number when ordering.

Cover for junction box T 100, perforated without Schuko sockets



IP 20 · 500 V · 750°

Type	Version	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 D MSD2A	For 2 Modul 45 accessories	Light grey	1	6.200	**2007826**

PP Polypropylene

Cover for T 100 propylene junction boxes. Depending on the type, opening for Modul 45 devices or with two or four Modul 45 protective contact sockets in white.
Cover can be lead-sealed, with labelling panel for double sockets.

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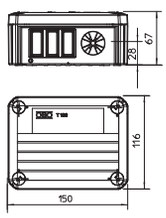
Always indicate the item number when ordering.

Junction box, T series with 3-pole Wieland socket, single-phase

- Quick mounting thanks to pre-terminated Wieland connection sockets (type GST18-i3, single-phase connection)
- Cables and wires with a diameter of 7 to 21 mm can be inserted directly. The strain relief entries prevent the accidental extraction of the cables
- Note: Installation to VDE 0620-1 only by persons with appropriate electrotechnical knowledge and experience. There is danger to life if installed incorrectly

Junction box T 100, without Wieland socket

CE IP 20 500 V Fluor Chlorum HALOGENFREE 650° KEMA KEUR



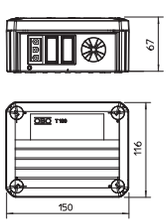
Type	Version	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB3	Empty	4	136x102x57	1	15.500	**2007807**
T 100 WB3-10	Empty	4	136x102x57	1	15.300	**2007808**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

Junction box T 100, with Wieland socket 2s

CE IP 20 500 V Fluor Chlorum HALOGENFREE 650° KEMA KEUR



Type	Version	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB 2S3	W socket 2s	4	136x102x57	1	20.500	**2007809**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

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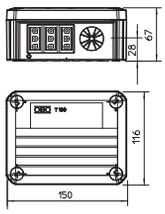
Junction box, T series with 3-pole Wieland socket, single-phase

Junction box T 100, with Wieland socket 3s

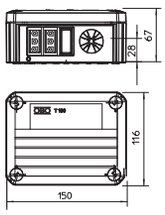


Type	Version	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB 3S3	W socket 3s	4	136x102x57	1	22.300	**2007813**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

Junction box T 100, with Wieland socket 4s

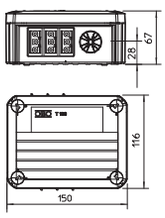


Type	Version	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB 4S3	W socket 4s	4	136x102x57	1	25.400	**2007811**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

Junction box T 100 WB, with Wieland socket 6s



Type	Version	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB 6S3	W socket 6s	4	136x102x57	1	29.400	**2007822**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
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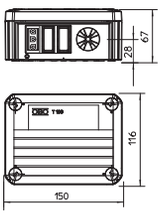
Always indicate the item number when ordering.

Junction box, T series with 3-pole Wieland socket, two-phase

- Quick mounting thanks to pre-terminated Wieland connection sockets (type GST18-i3, two-phase connection)
- Cables and wires with a diameter of 7 to 21 mm can be inserted directly. The strain relief entries prevent the accidental extraction of the cables
- Note: Installation to VDE 0620-1 only by persons with appropriate electrotechnical knowledge and experience. There is danger to life if installed incorrectly

Junction box T100, with Wieland socket 1w3p+1s3p

IP 20 | 500 V | 650°



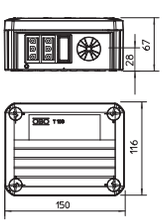
Type	Version	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB 1W3 1S3	W socket 1w+1s	4	136x102x57	1	21.600	**2007815**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

Junction box T100, with Wieland socket 1w3p+2s3p

IP 20 | 500 V | 650°



Type	Version	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB 1W3 2S3	W socket 1w+2s	4	136x102x57	1	23.600	**2007817**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

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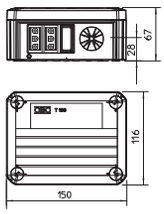
Always indicate the item number when ordering.

Junction box T100, with Wieland socket 2w3p+2s3p



IP 20 | 500 V | 650°

Type	Version	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB 2W3 2S3	W socket 2w+2s	4	136x102x57	1	25.500	**2007819**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

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Always indicate the item number when ordering.

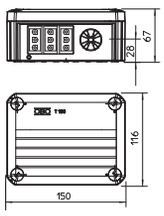
Junction box, T series with 3-pole Wieland socket, three-phase

- Quick mounting thanks to pre-terminated three-pole Wieland connection sockets (type GST18-i3, three-phase connection)
- Cables and wires with a diameter of 7 to 21 mm can be inserted directly. The strain relief entries prevent the accidental extraction of the cables
- Note: Installation to VDE 0620-1 only by persons with appropriate electrotechnical knowledge and experience. There is danger to life if installed incorrectly

Junction box T 100 6S 3x2, with Wieland socket

IP 20 | 500 V | 650°

Type	Version	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB 6S 3x2	W socket 3x2 (white; black; red)	4	136x102x57	1	29.500	**2007814**



PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

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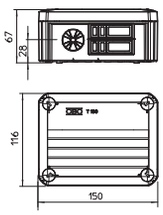
Junction box, T series, with 4-pole Wieland socket, two-phase and strain relief

- Quick mounting thanks to pre-terminated 5-pole Wieland connection sockets (on each socket line 1 and line 2 are connected)
- Cables and wires with a diameter of 7 to 21 mm can be inserted directly. The strain relief entries prevent the accidental extraction of the cables
- Note: Installation to VDE 0620-1 only by persons with appropriate electrotechnical knowledge and experience. There is danger to life if installed incorrectly

Junction box T 100, with Wieland socket 3-5 pole

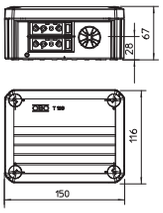


Type	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB5	4	136x102x57	1	14.600	**2007840**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

Junction box T 100, with Wieland socket 2s4p



Type	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB 2s4	4	136x102x57	1	24.000	**2007848**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
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Junction box, T series, with 5-pole Wieland socket, three-phase and strain relief

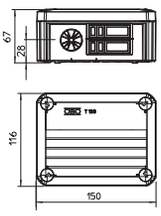
- Quick mounting thanks to pre-terminated 5-pole Wieland connection sockets (on each socket line 1 and line 2 are connected)
- Cables and wires with a diameter of 7 to 21 mm can be inserted directly. The strain relief entries prevent the accidental extraction of the cables
- Note: Installation to VDE 0620-1 only by persons with appropriate electrotechnical knowledge and experience. There is danger to life if installed incorrectly

Junction box T 100, with Wieland socket 3-5 pole

IP 20 | 500 V | 650°

Type	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB5	4	136x102x57	1	14.600	**2007840**

PP Polypropylene



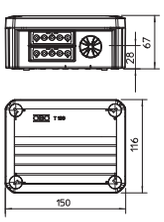
All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

Junction box T 100, with Wieland socket 2s5p

IP 20 | 500 V | 650°

Type	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB 2s5	4	136x102x57	1	25.000	**2007852**

PP Polypropylene



All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

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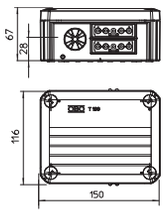
Junction box, T series, with 5-pole Wieland socket, three-phase and strain relief

Junction box T 100, with Wieland socket 4s5p



IP 20 | 500 V | 650°

Type	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 WB 4s5	4	136x102x57	1	28.000	**2007856**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

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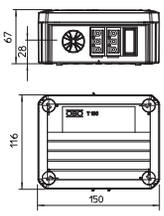
Always indicate the item number when ordering.

Junction box, T series with strain relief, Wieland connector/socket

- Quick mounting thanks to pre-terminated 5-pole Wieland connection sockets (on each socket line 1, line 2 and line 3 are connected)
- Cables and wires with a diameter of 7 to 21 mm can be inserted directly. The strain relief entries prevent the accidental extraction of the cables
- Note: Installation to VDE 0620-1 only by persons with appropriate electrotechnical knowledge and experience. There is danger to life if installed incorrectly

Junction box T 100, with Wieland connector and socket 1S3+2B3

IP 20 | 500 V | 650°



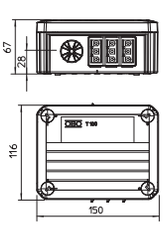
Type	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T100 WS 1S3 2S3D	4	136x102x57	1	20.700	**2007876**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
According to standard VDE 0620-1: Installation only by people with the relevant electrical knowledge and experience. There is danger to life if installed incorrectly.

Junction box T 100, with Wieland connector and socket 1S4+3B3

IP 20 | 500 V | 650°



Type	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T100 WS 1S3 3S3A	4	136x102x57	1	22.600	**2007870**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
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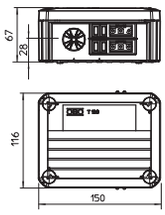
Junction box T 100, with Wieland connector and socket 1S4+1B4+2B3



IP 20 | 500 V | 650°

Type	Entries	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
T100 WS 1S4 2S3C	4	136x102x57	1	24.500	**2007874**

PP Polypropylene

All the T series junction boxes are UV-resistant. They are made of polypropylene (a thermoplastic polymer) and are equipped with strain relief entries and pre-terminated Wieland connection sockets, type GST-18-i3 (s = black, w = white, r = red). The strain relief entries can be penetrated directly with the cables. The special structure of the opening means that the cables cannot be removed unintentionally. Suitable for cable diameters of between 7 and 21 mm.
The junction boxes can be mounted on mounting plates in the openings on the floor using steel bolts 3.5 x 9.5. Cover with labelling panel and lead seal.
Caution:
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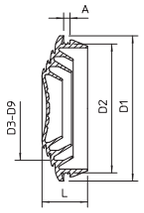
Plug-in seal EDK light grey

M25 M32 M40 IP 66

Type	Size	For Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
EDK 25 LGR	M25	0 - 22	Light grey	100	0.165	**2011638**
EDK 32 LGR	M32	0 - 27	Light grey	50	0.260	**2011646**
EDK 40 LGR	M40	0 - 34	Light grey	25	0.425	**2011654**
EDK 25 RW	M25	0 - 22	Pure white	100	0.175	**2011689**
EDK 32 RW	M32	0 - 27	Pure white	50	0.260	**2011697**
EDK 40 RW	M40	0 - 34	Pure white	25	0.425	**2011700**

EVA Ethylene vinyl acetate

The plug-in seal can be cut back to suit the relevant cable diameter.



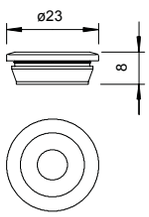
Nipple 89

IP 54

Type	Size	For Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
89	PG 11	7 - 13	Light grey	100	0.111	**2012030**
89 RW	PG 11	7 - 13	Pure white	100	0.113	**2012103**
89 SW	PG 11	7 - 13	Black	100	0.112	**2012146**
89 LoG	PG 11	7 - 13	Light grey	5000	0.111	**2012065**
89 3MM NUT	PG 11	7 - 13	Light grey	2000	0.106	**2012081**

PE Polyethylene

Closed entry nipple with perforation membrane for cable diameters 7–13 mm. Ideal for simple cable routing in housings or through thin sheet metal.
Required hole diameter 18.5–19 mm, wall thickness max. 1.8 mm.



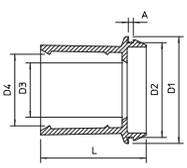
Plug-in seal for pipes, T-series junction box, light grey

IP 55 M25 M32 M40

Type	Size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
EDR 25 16-20 LGR	M25	Light grey	50	0.520	**2011506**
EDR 25 20-25 LGR	M25	Light grey	50	0.680	**2011514**
EDR 32 25-32 LGR	M32	Light grey	50	1.170	**2011530**
EDR 40 32-40 LGR	M40	Light grey	25	2.200	**2011546**

PVC Polyvinylchloride

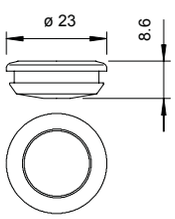
Plug-in seal for junction boxes for direct insertion of metric pipes



Nipple 89/RK

Type	Size	For Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
89 ROE 12-16	PG 13,5	12 - 16	Light grey	100	0.102	**2012049**

PE Polyethylene



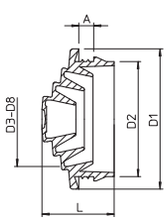
Plug-in seal EDVS

IP 54 M

Type	Size	For Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
EDVS M20 LGR	M20	0 - 17	Light grey	100	0.117	**2012375**
EDVS M25 LGR	M25	0 - 22	Light grey	100	0.179	**2012383**
EDVS M32 LGR	M32	0 - 28	Light grey	50	0.295	**2012391**

PE Polyethylene

The push-in nipple can be cut back to suit the relevant cable diameter.



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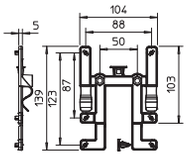
Always indicate the item number when ordering.

Fastening element for cable tray

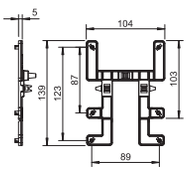


Type	Pack. pcs	Weight kg/100 pcs.	Item No.
BE TS KR	10	2.800	**2007835**

PC Polycarbonate

The fastening element BE TS KR can be used to attach OBO junction boxes, type T60 and T100, to all standard cable trays in a few actions, quickly and without tools.
This keeps the junction box securely in position. However, it can be quickly dismantled as necessary. This is all done without using tools.

Fastening element for mesh cable tray

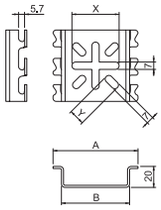


Type	Pack. pcs	Weight kg/100 pcs.	Item No.
BE TS GR	10	2.300	**2007833**

PC Polycarbonate

The fastening element BE TS GR can be used to attach OBO junction boxes, type T60 and T100, to mesh cable trays quickly and in a few actions.
This keeps the junction box securely in position. However, it can be quickly dismantled as necessary.

Mounting plate for mesh cable tray

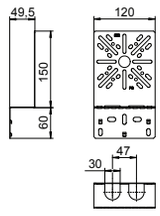


Type	Dimension A mm	Dimension B mm	Dimension x mm	Dimension y mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MPG 65 FT	81	65	45	15	30	9.200	**6006486**

St Steel
FT Hot-dip galvanised

Mounting plate for screwless wall fastening of mesh cable trays.

Mounting plate, angled

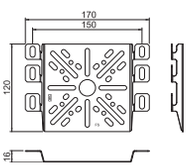


Type	Height mm	Width mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MP WI KL. FS	210	120	20	20.200	**7084765**
MP WI KL. DD	210	120	20	20.200	**7085111**

St Steel
FS Strip-galvanised DD Strip galvanised zinc/aluminium,double dip

Curved mounting plate, for fixing on the side rail of the cable tray.

Mounting plate



Type	Height mm	Width mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MP UNI FS	115	170	40	13.300	**7084773**

St Steel
FS Strip-galvanised

Mounting plate, for fastening on the side rail of cable support systems.

Always indicate the item number when ordering.

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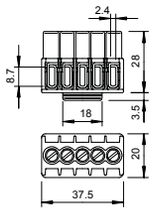
Terminal strip 1–4 mm², junction box, T series

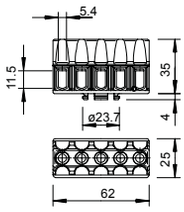


Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 01-04	Light grey	5	1 - 4	400	10	2.100	**2016180**

PA Polyamide

Steel terminal block and bolts, galvanised and transparently passivated, nominal 1 - 4 mm², nominal voltage 400 V, 5-pole, with terminal sockets, Max. connectable cross-sections per terminal max. 4 x 2.5 mm², 5 x 1.5 mm² or 6 x 1 mm² .

Terminal strip 1.5–6 mm², junction box, T series

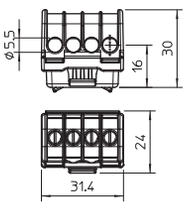


Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 02-06	Light grey	5	1.5 - 6	400	10	4.380	**2016185**

PA Polyamide

Steel terminal block and bolts, galvanised and transparently passivated, nominal 1,5 - 6 mm², nominal voltage 400 V, 5-pole, with terminal sockets, Max. connectable cross-sections per terminal: 3 x 6 mm², 4 x 4 mm² or 6 x 2.5 mm² .

Terminal strip 6–16 mm², junction box, T series

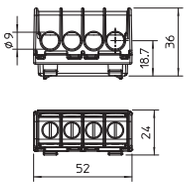


Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 06-16	Light grey	4	6 - 16	400	10	1.970	**2016190**

PA Polyamide

Brass terminals, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 - 16 mm², nominal voltage 400 V, 1-pole, with terminal sockets, Max. connectable conductors per terminal max. 4 x 16 mm², 4 x 10 mm², 8x6 mm² or 12 x 4 mm².

Terminal strip 16–35 mm², junction box, T series



Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 16-35	Light grey	4	16 - 35	400	10	5.630	**2016195**

PA Polyamide

Brass terminals, steel screws, electrogalvanised and transparently passivated, nominal cross-section 16 - 35 mm², nominal voltage 400 V, 1-pole, with terminal sockets, Max. connectable conductors per terminal max. 4 x 35 mm², 4 x 25 mm², 8x16 mm² or 12 x 10 mm².

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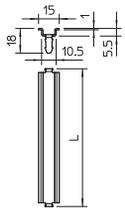
Always indicate the item number when ordering.

Hat profile rail 15 x 5 mm



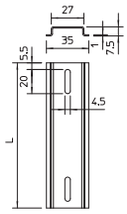
Type	Version	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
46277 T160 Q GTP	For T160 crosswise + T100 lengthwise	99	10	9.641	**1115270**
46277 T250 Q GTP	For T250 crosswise + T160 lengthwise	139	10	13.520	**1115274**
46277 T250 L GTP	For T 250 lengthwise	189	10	17.900	**1115278**
46277 T350 Q GTP	For T 350 crosswise	161	10	15.670	**1115282**
46277 T350 L GTP	For T 350 lengthwise	168	10	16.370	**1115286**

St Steel

GTP Electrogalvanised, transparently passivated

Hat profile rail 15 x 5 mm to DIN EN 60715 (formerly DIN EN 50045).

Hat profile rail 35 x 7.5 mm



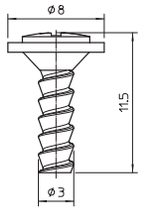
Type	Version	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2069 T60 GTP	For T60 lengthwise + T00 crosswise	89	10	3.070	**1115380**
2069 T100 GTP	For T100 lengthwise + T160 crosswise	118	10	4.140	**1115382**
2069 T160 GTP	For T160 lengthwise + T250, T350 crosswise	157	10	5.520	**1115384**
2069 T250 GTP	For T 250 lengthwise	206	10	7.107	**1115386**
2069 T350 GTP	For T 350 lengthwise	245	10	8.450	**1115388**

St Steel

FS Strip-galvanised

Hat profile rail 35 x 7.5 mm to DIN EN 60715 (formerly DIN EN 50022).

Fastening pin for mounting plates



Type	Pack. pcs	Weight kg/100 pcs.	Item No.
T-S MST	100	0.090	**2007831**

St Steel

G Electrogalvanised

Metal fastening pin for fastening the T series onto mounting plates or other thin-walled supporting structures. Mounted by simply pressing the bolt into the fastening holes in the T series. Easy removal with a screw thread.

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Always indicate the item number when ordering.

The X series

Impact-resistant

The use of special plastics based on high-quality polycarbonate allows the X series junction boxes and empty housings with the protection rating of IK09 to offer particularly high impact resistance. All the boxes of the X series are tested according to DIN EN 60670 Part 1 and 22.

Adaptable

The junction boxes have been tested in practical applications and have certainly not been found wanting: Thus the X series offers high wiring space and simple and particularly flexible fastening. The junction boxes can be mounted using internal, external or corner fastenings, as required.

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Always indicate the item number when ordering.

Equipment

The X series is available in different equipment versions. For example, completely pre-installed versions with main cable junction terminals, cable glands, screwless terminals and hat rails are available.

Accessories

Screw covers, plug-in seals and external fastening elements are contained in the scope of delivery of the X series junction boxes. In addition, the X series offers a comprehensive range of accessories.

When used in unprotected external areas, we recommend protecting the junction box against direct weathering influences (e.g. through snow, wind, rain or sun).

Always indicate the item number when ordering.

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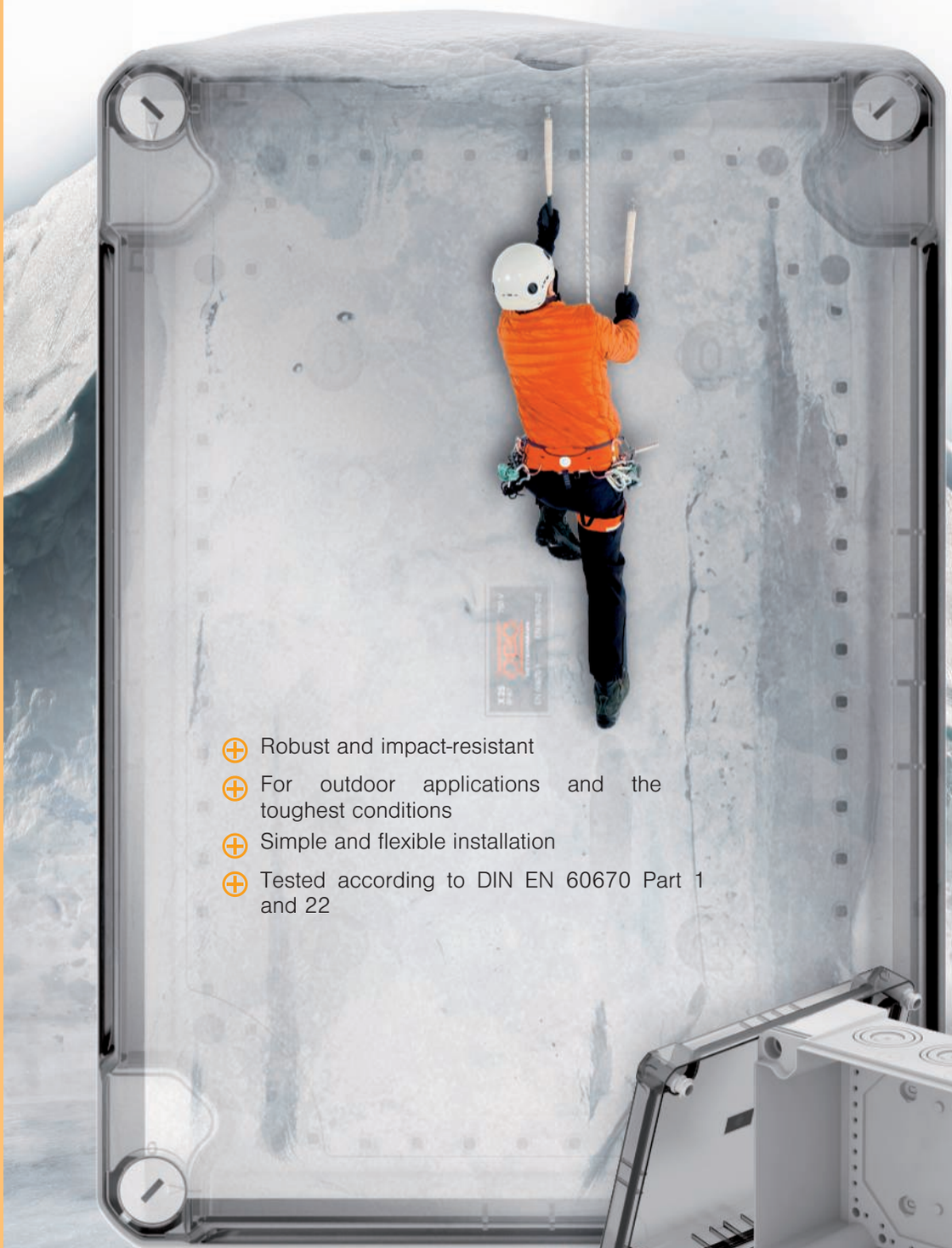
X-TREME

The X series of the junction boxes

With the new X series, OBO Bettermann can offer a range of junction boxes and empty housings that can withstand even the toughest impacts. The use of special plastics based on high-quality polycarbonate allows the X series to meet the requirements for the highest level of impact resistance, achieving the protection rating of IK09.



- Robust and impact-resistant
- For outdoor applications and the toughest conditions
- Simple and flexible installation
- Tested according to DIN EN 60670 Part 1 and 22

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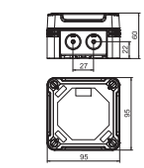
Always indicate the item number when ordering.

Junction box, X series, with knock-out entries and plug-in seals

- Junction boxes with impact resistance IK09 and protection class IP67 can withstand even strong mechanical stress
- Made of high-quality, halogen-free and UV-resistant polycarbonate
- Tested to DIN EN 60670 Part 1 and 22
- The scope of delivery contains screw cover caps, external fastening elements and plug-in seals

Junction box X 01



Type	X01 LGR	X01 LGR-TR	X01 SW	X01 SW-RO
Colour	Light grey	Grey / transparent	Graphite black	Black / red
Entries	7 x Ø20	7 x Ø20	7 x Ø20	7 x Ø20
Dimension LxWxH mm	95x95x60	95x95x60	95x95x60	95x95x60
Clear internal dimensions mm	85x85x45	85x85x45	85x85x45	85x85x45
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	16.000	16.000	16.000	16.000
Item No.	**2005000**	**2005050**	**2005110**	**2005140**

PC Polycarbonate

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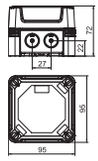
Always indicate the item number when ordering.

Junction box, X series, with knock-out entries and plug-in seals

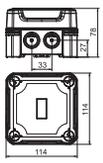
Junction box X 02



Type	X02 LGR	X02 LGR-TR	X02 SW	X02 SW-RO
Colour	Light grey	Grey / transparent	Graphite black	Black / red
Entries	7 x Ø20	7 x Ø20	7 x Ø20	7 x Ø20
Dimension LxWxH mm	95x95x72	95x95x72	95x95x72	95x95x72
Clear internal dimensions mm	85x85x57	85x85x57	85x85x57	85x85x57
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	17.800	17.800	17.800	17.800
Item No.	**2005004**	**2005054**	**2005114**	**2005144**

PC Polycarbonate

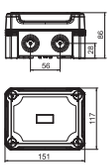
Junction box X 04



Type	X04 LGR	X04 LGR-TR	X04 SW	X04 SW-RO
Colour	Light grey	Grey / transparent	Graphite black	Black / red
Entries	7 x Ø20/25	7 x Ø20/25	7 x Ø20/25	7 x Ø20/25
Dimension LxWxH mm	114x114x78	114x114x78	114x114x78	114x114x78
Clear internal dimensions mm	102x102x60	102x102x60	102x102x60	102x102x60
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	26.600	26.600	26.600	26.600
Item No.	**2005008**	**2005058**	**2005118**	**2005148**

PC Polycarbonate

Junction box X 06



Type	X06 LGR	X06 LGR-TR	X06 SW	X06 SW-RO
Colour	Light grey	Grey / transparent	Graphite black	Black / red
Entries	8 x Ø20/25	8 x Ø20/25	8 x Ø20/25	8 x Ø20/25
Dimension LxWxH mm	151x167x87	151x167x87	151x167x87	151x167x87
Clear internal dimensions mm	137x105x68	137x105x68	137x105x68	137x105x68
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	33.500	33.500	33.500	33.500
Item No.	**2005012**	**2005062**	**2005122**	**2005152**

PC Polycarbonate

Always indicate the item number when ordering.

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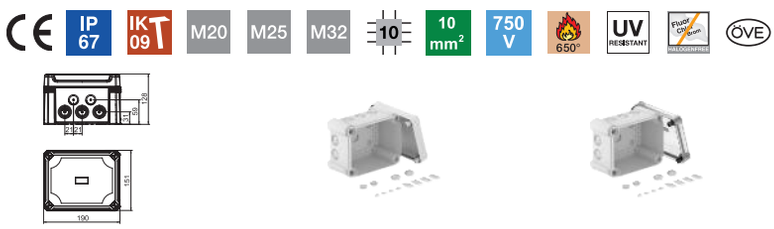
Junction box X 10



Type	X10 LGR	X10 LGR-TR	X10 SW	X10 SW-RO
Colour	Light grey	Grey / transparent	Graphite black	Black / red
Entries	10 x Ø20/25/32	10 x Ø20/25/32	10 x Ø20/25/32	10 x Ø20/25/32
Dimension LxWxH mm	191x151x126	191x151x126	191x151x126	191x151x126
Clear internal dimensions mm	177x137x110	177x137x110	177x137x110	177x137x110
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	59.200	59.200	59.200	59.200
Item No.	**2005016**	**2005066**	**2005126**	**2005156**

PC Polycarbonate

Junction box X 16

Type	X16 LGR	X16 LGR-TR	X16 SW	X16 SW-RO
Colour	Light grey	Grey / transparent	Graphite black	Black / red
Entries	10 x Ø25/32/40	10 x Ø25/32/40	10 x Ø25/32/40	10 x Ø25/32/40
Dimension LxWxH mm	241x191x126	241x191x126	241x191x126	241x191x126
Clear internal dimensions mm	227x177x110	227x177x110	227x177x110	227x177x110
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	79.300	79.300	79.300	79.300
Item No.	**2005020**	**2005070**	**2005130**	**2005160**

PC Polycarbonate

Junction box X 25

Type	X25 LGR	X25 LGR-TR	X25 SW	X25 SW-RO
Colour	Light grey	Grey / transparent	Graphite black	Black / red
Entries	10 x Ø25/32/40	10 x Ø25/32/40	10 x Ø25/32/40	10 x Ø25/32/40
Dimension LxWxH mm	286x202x126	286x202x126	286x202x126	286x202x126
Clear internal dimensions mm	271x187x110	271x187x110	271x187x110	271x187x110
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	96.500	96.500	96.500	96.500
Item No.	**2005024**	**2005074**	**2005134**	**2005164**

PC Polycarbonate

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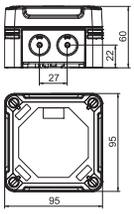
Always indicate the item number when ordering.

Junction box X series with knock-out entries and cable glands

- Junction boxes with impact resistance IK09 and protection class IP67 can withstand even strong mechanical stress
- Made of high-quality, halogen-free, UV-resistant polycarbonate
- Tested to DIN EN 60670 Part 1 and 22
- Besides screw cover caps, external fastening elements and plug-in seals, the scope of delivery also contains three V-TEC M20 cable glands with matching locknuts

Junction box X 01 with cable gland



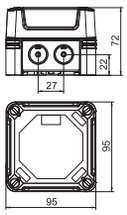
Dimensions

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X01 G M20 LGR	Light grey	7 x Ø20	1	19.000	**2005030**

PC Polycarbonate

Type	Dimension LxWxH mm	Clear internal dimensions mm
X01 G M20 LGR	95x95x60	85x85x45

Junction box X 02 with cable gland



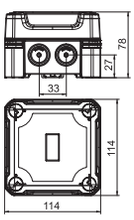
Dimensions

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X02 G M20 LGR	Light grey	7 x Ø20	1	21.500	**2005032**

PC Polycarbonate

Type	Dimension LxWxH mm	Clear internal dimensions mm
X02 G M20 LGR	95x95x72	85x85x57

Junction box X 04 with cable glands



Dimensions

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X04 G M20 LGR	Light grey	7 x Ø20/25	1	31.400	**2005034**

PC Polycarbonate

Type	Dimension LxWxH mm	Clear internal dimensions mm
X04 G M20 LGR	114x114x78	102x102x60

Always indicate the item number when ordering.

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Junction box X series with knock-out entries and terminal strip

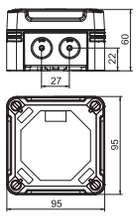
- Junction boxes with impact resistance IK09 and protection class IP67 can withstand even strong mechanical stress
- Made of high-quality, halogen-free, UV-resistant polycarbonate
- Tested to DIN EN 60670 Part 1 and 22
- Besides screw cover caps, external fastening elements and plug-in seals, the scope of delivery also contains a terminal strip matched to the cross-section

Junction box X 01 with terminal strip

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X01 T LGR	Light grey	7 x Ø20	1	17.500	**2005190**

PC Polycarbonate

The scope of delivery contains a 5-pole terminal strip.



Dimensions

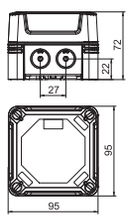
Type	Dimension LxWxH mm	Clear internal dimensions mm
X01 T LGR	95x95x60	85x85x45

Junction box X 02 with terminal strip

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X02 T LGR	Light grey	7 x Ø20	1	19.300	**2005194**

PC Polycarbonate

The scope of delivery contains a 5-pole terminal strip.



Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X02 T LGR	95x95x72	85x85x57

Always indicate the item number when ordering.

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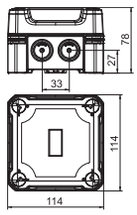
Junction box, X series, with knock-out entries and terminal strip

Junction box X 04 with terminal strip



CE | IP 67 | IK 09 | M20 | M25 | 7 | 4 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlorine Free HALOGENFREE | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X04 T LGR	Light grey	7 x Ø20/25	1	31.600	**2005198**

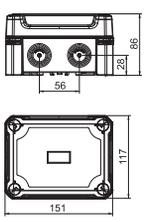
PC Polycarbonate

The scope of delivery contains a 5-pole terminal strip.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X04 T LGR	114x114x78	102x102x60

Junction box X 06 with terminal strip



CE | IP 67 | IK 09 | M20 | M25 | 8 | 6 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlorine Free HALOGENFREE | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X06 T LGR	Light grey	8 x Ø20/25	1	38.000	**2005202**

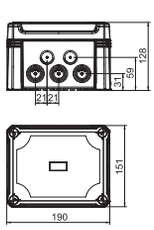
PC Polycarbonate

The scope of delivery contains a 5-pole terminal strip.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X06 T LGR	151x167x87	137x105x68

Junction box X 10 with terminal strip



CE | IP 67 | IK 09 | M20 | M25 | M32 | 10 | 10 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlorine Free HALOGENFREE | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X10 T LGR	Light grey	10 x Ø20/25/32	1	72.000	**2005206**

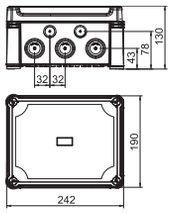
PC Polycarbonate

The scope of delivery contains 5 terminal strips, each with 4 terminals.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X10 T LGR	191x151x126	177x137x110

Junction box X 16 with terminal strip



CE | IP 67 | IK 09 | M25 | M32 | M40 | 10 | 16 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlorine Free HALOGENFREE | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X16 T LGR	Light grey	10 x Ø25/32/40	1	97.500	**2005210**

PC Polycarbonate

The scope of delivery contains 5 terminal strips, each with 4 terminals.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X16 T LGR	241x191x126	227x177x110

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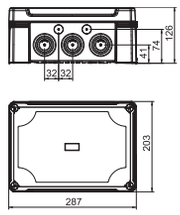
Always indicate the item number when ordering.

Junction box X 25 with terminal strip

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X25 T LGR	Light grey	10 x Ø25/32/40	1	130.000	**2005214**

PC Polycarbonate

The scope of delivery contains 5 terminal strips, each with 4 terminals.



Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X25 T LGR	286x202x126	271x187x110

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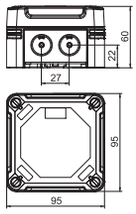
Always indicate the item number when ordering.

Junction box X series with knock-out entries, cable glands and terminal strip

- Junction boxes with impact resistance IK09 and protection class IP67 can withstand even strong mechanical stress
- Made of high-quality, halogen-free, UV-resistant polycarbonate
- Tested to DIN EN 60670 Part 1 and 22
- Besides screw cover caps, external fastening elements and plug-in seals, the scope of delivery also contains a terminal strip matched to the cross-section and three V-TEC M20/M25 cable glands with matching locknuts

Junction box X 01 with cable gland and terminal strip



IP 67 | IK 09 | M20 | 7 | 1,5 mm² | 750 V | 650° | UV RESISTANT | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X01 T G M20 LGR	Light grey	7 x Ø20	1	20.500	**2005220**

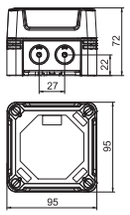
PC Polycarbonate

A terminal strip, three V-TEC M20 cable glands and three matching locknuts are included.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X01 T G M20 LGR	95x95x60	85x85x45

Junction box X 02 with cable gland and terminal strip



IP 67 | IK 09 | M20 | 7 | 2,5 mm² | 750 V | 650° | UV RESISTANT | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X02 T G M20 LGR	Light grey	7 x Ø20	1	23.000	**2005222**

PC Polycarbonate

A terminal strip, three V-TEC M20 cable glands and three matching locknuts are included.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X02 T G M20 LGR	95x95x72	85x85x57

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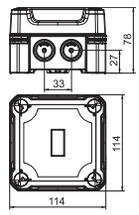
Always indicate the item number when ordering.

Junction box X 04 with cable glands and terminal strip

IP 67 | IK 09 | M20 | M25 | 7 | 4 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlor frei HALOGENFREE | ÖVE



Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X04 T G M25 LGR	Light grey	7 x Ø20/25	1	36.700	**2005224**

PC Polycarbonate

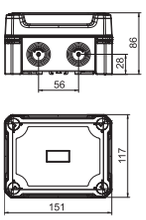
A terminal strip, three V-TEC M25 cable glands and three matching locknuts are included.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X04 T G M25 LGR	114x114x78	102x102x60

Junction box X 06 with cable glands and terminal strip

IP 67 | IK 09 | M20 | M25 | 8 | 6 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlor frei HALOGENFREE | ÖVE



Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X06 T G M25 LGR	Light grey	8 x Ø20/25	1	38.000	**2005226**

PC Polycarbonate

A terminal strip, three V-TEC M25 cable glands and three matching locknuts are included.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X06 T G M25 LGR	151x167x87	137x105x68

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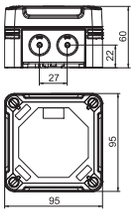
Always indicate the item number when ordering.

Junction box X series with knock-out entries, cable glands and screwless terminals

- Junction boxes with impact resistance IK09 and protection class IP67 can withstand even strong mechanical stress
- Made of high-quality, halogen-free, UV-resistant polycarbonate
- Tested to DIN EN 60670 Part 1 and 22
- The scope of delivery contains screw cover caps, external fastening elements and plug-in seals. In addition, these junction boxes include three V-TEC cable glands and three screwless terminals

Junction box X 01 with cable gland and plug-in terminals



CE | IP 67 | IK 09 | M20 | 7 | 1,5 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlorine HALOGENFREE | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X01 UT G LGR	Light grey	7 x Ø20	1	20.000	**2005240**

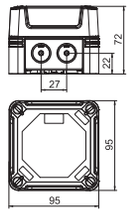
PC Polycarbonate

Three universal clamps (with 5 clamping points), three V-TEC M20 cable glands and three matching locknuts are included.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X01 UT G LGR	95x95x60	85x85x45

Junction box X 02 with cable gland and plug-in terminals



CE | IP 67 | IK 09 | M20 | 7 | 2,5 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlorine HALOGENFREE | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X02 UT G LGR	Light grey	7 x Ø20	1	23.000	**2005244**

PC Polycarbonate

Three universal clamps (with 5 clamping points), three V-TEC M20 cable glands and three matching locknuts are included.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X02 UT G LGR	95x95x72	85x85x57

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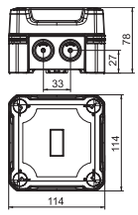
Always indicate the item number when ordering.

Junction box X 04 with cable glands and plug-in terminals



Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X04 UT G LGR	Light grey	7 x Ø20/25	1	33.500	**2005248**

PC Polycarbonate

Three universal clamps (with 5 clamping points), three V-TEC M25 cable glands and three matching locknuts are included.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X04 UT G LGR	114x114x78	102x102x60

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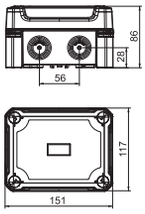
Always indicate the item number when ordering.

Junction box, X series, with knock-out entries and hat profile rail

- Junction boxes with impact resistance IK09 and protection class IP67 can withstand even strong mechanical stress
- Made of high-quality, halogen-free, UV-resistant polycarbonate
- Tested to DIN EN 60670 Part 1 and 22
- Besides screw cover caps, external fastening elements and plug-in seals, the scope of delivery also contains a hat rail set consisting of a hat rail, type 2069, and matching fastening elements

Junction box X 06 with hat profile rail



IP 67 | IK 09 | M20 | M25 | 8 | 6 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlorine HALOGENFREE | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X06 R LGR-TR	Grey / transparent	8 x Ø20/25	1	37.600	**2005092**

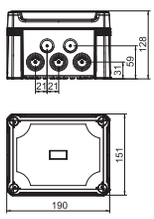
PC Polycarbonate

With transparent cover and hat profile rail, type 2069, with fastening set.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X06 R LGR-TR	151x167x87	137x105x68

Junction box X 10 with hat profile rail



IP 67 | IK 09 | M20 | M25 | M32 | 10 | 10 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlorine HALOGENFREE | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X10 R LGR-TR	Grey / transparent	10 x Ø20/25/32	1	65.600	**2005096**

PC Polycarbonate

With transparent cover and hat profile rail, type 2069, with fastening set.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X10 R LGR-TR	191x151x126	177x137x110

Always indicate the item number when ordering.

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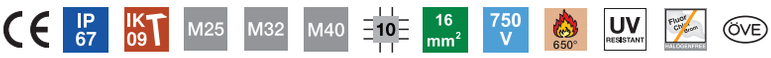
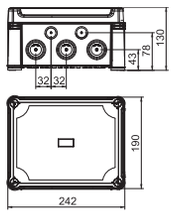
Junction box X 16 with hat profile rail





Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X16 R LGR-TR	Grey / transparent	10 x Ø25/32/40	1	87.300	**2005100**

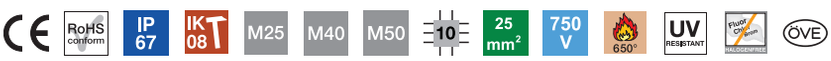
PC Polycarbonate

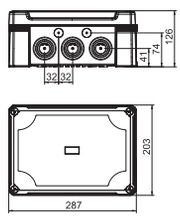
With transparent cover and hat profile rail, type 2069, with fastening set.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X16 R LGR-TR	241x191x126	227x177x110

Junction box X 25 with hat profile rai





Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X25 R LGR-TR	Grey / transparent	10 x Ø25/32/40	1	107.000	**2005104**

PC Polycarbonate

With transparent cover and hat profile rail, type 2069, with fastening set.

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X25 R LGR-TR	286x202x126	271x187x110

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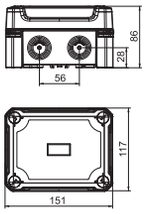
Always indicate the item number when ordering.

Junction box X series with cut-out entries and main cable junction terminal

- Junction boxes with impact resistance IK09 and protection class IP67 can withstand even strong mechanical stress
- Made of high-quality, halogen-free, UV-resistant polycarbonate
- Tested to DIN EN 60670 Part 1 and 22
- Besides screw cover caps, external fastening elements and plug-in seals, the scope of delivery also contains a pre-mounted hat rail and the main cable junction terminal for the appropriate cross-section

Junction box X 06 with main branch terminal



CE | IP 67 | IK 09 | M20 | M25 | 8 | 6 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlor Brom HALOGENFREI | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X06 H25 GP4 LGR	Light grey	8 x Ø20/25	1	56.800	**2005304**

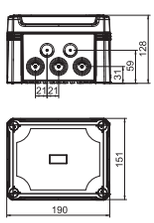
PC Polycarbonate

A 4-pole main terminal block is included with 16 clamping points.
For 25 mm² cable cross-section

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X06 H25 GP4 LGR	151x167x87	137x105x68

Junction box X 10 with main branch terminal



CE | IP 67 | IK 09 | M20 | M25 | M32 | 10 | 10 mm² | 750 V | 650° | UV RESISTANT | Fluor Chlor Brom HALOGENFREI | ÖVE

Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X10 H25 GNP5 LGR	Light grey	10 x Ø20/25/32	1	104.000	**2005308**

PC Polycarbonate

A 5-pole main terminal block is included with 20 clamping points.
For 25 mm² cable cross-section

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X10 H25 GNP5 LGR	191x151x126	177x137x110

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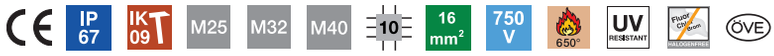
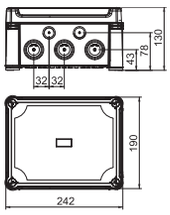
Always indicate the item number when ordering.

Junction box X 16 with main branch terminal





Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X16 H25 GNP5 LGR	Light grey	10 x Ø25/32/40	1	111.000	**2005312**
X16 H35 GNP5 LGR	Light grey	10 x Ø25/32/40	1	125.000	**2005316**

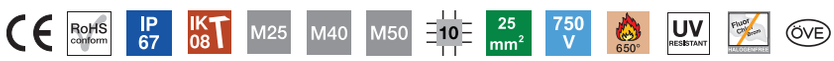
PC Polycarbonate

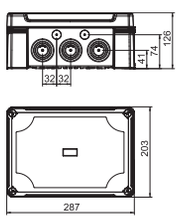
A 5-pole main terminal block is included with 20 clamping points.
X16 H25 GNP5 LGR: for 25 mm² conductor cross-section
X16 H35 GNP5 LGR: for 35 mm² conductor cross-section

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X16 H25 GNP5 LGR	241x191x126	227x177x110
X16 H35 GNP5 LGR	241x191x126	227x177x110

Junction box X 25 with main branch terminal





Type	Colour	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
X25 H35 GNP5 LGR	Light grey	10 x Ø25/32/40	1	145.000	**2005320**
X25 H50 GNP5 LGR	Light grey	10 x Ø25/32/40	1	165.000	**2005324**

PC Polycarbonate

A 5-pole main terminal block is included with 20 clamping points.
X25 H35 GNP5 LGR: for 35 mm² conductor cross-section
X25 H50 GNP5 LGR: for 50 mm² conductor cross-section

Dimensions

Type	Dimension LxWxH mm	Clear internal dimensions mm
X25 H35 GNP5 LGR	286x202x126	271x187x110
X25 H50 GNP5 LGR	286x202x126	271x187x110

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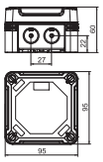
Always indicate the item number when ordering.

Empty housing, X series without entries

- In comparison to junction boxes, empty housings do not have any entry openings. They can be drilled individually for the application
- Tested to DIN EN 60670 Part 1 and 22
- The scope of delivery contains screw cover caps and external fastening elements

Empty housing X 01



Type	X01C LGR	X01C LGR-TR	X01C SW
Colour	Light grey	Grey / transparent	Graphite black
Dimension LxWxH mm	95x95x60	95x95x60	95x95x60
Clear internal dimensions mm	85x85x45	85x85x45	85x85x45
Pack. pcs	1	1	1
Weight kg/100 pcs.	15.600	15.600	15.600
Item No.	**2005450**	**2005520**	**2005590**

PC Polycarbonate

Always indicate the item number when ordering.

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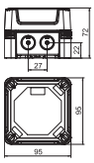
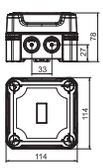
Empty housing X 02



Type	X02C LGR	X02C LGR-TR	X02C SW
Colour	Light grey	Grey / transparent	Graphite black
Dimension LxWxH mm	95x95x72	95x95x72	95x95x72
Clear internal dimensions mm	85x85x57	85x85x57	85x85x57
Pack. pcs	1	1	1
Weight kg/100 pcs.	17.500	17.500	17.500
Item No.	**2005454**	**2005524**	**2005594**

PC Polycarbonate

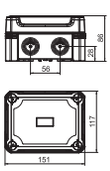
Empty housing X 04



Type	X04C LGR	X04C LGR-TR	X04C SW
Colour	Light grey	Grey / transparent	Graphite black
Dimension LxWxH mm	114x114x78	114x114x78	114x114x78
Clear internal dimensions mm	102x102x60	102x102x60	102x102x60
Pack. pcs	1	1	1
Weight kg/100 pcs.	26.300	26.300	26.300
Item No.	**2005458**	**2005528**	**2005598**

PC Polycarbonate

Empty housing X 06



Type	X06C LGR	X06C LGR-TR	X06C SW
Colour	Light grey	Grey / transparent	Graphite black
Dimension LxWxH mm	151x167x87	151x167x87	151x167x87
Clear internal dimensions mm	137x105x68	137x105x68	137x105x68
Pack. pcs	1	1	1
Weight kg/100 pcs.	33.100	33.100	33.500
Item No.	**2005462**	**2005532**	**2005602**

PC Polycarbonate

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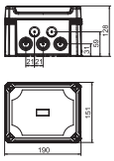
Always indicate the item number when ordering.

Empty housing, X series without entries

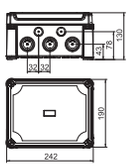
Empty housing X 10



Type	X10C LGR	X10C LGR-TR	X10C SW
Colour	Light grey	Grey / transparent	Graphite black
Dimension LxWxH mm	191x151x126	191x151x126	191x151x126
Clear internal dimensions mm	177x137x110	177x137x110	177x137x110
Pack. pcs	1	1	1
Weight kg/100 pcs.	58.500	85.500	58.500
Item No.	**2005466**	**2005536**	**2005606**

PC Polycarbonate

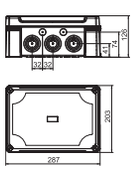
Empty housing X 16



Type	X16C LGR	X16C LGR-TR	X16C SW
Colour	Light grey	Grey / transparent	Graphite black
Dimension LxWxH mm	241x191x126	241x191x126	241x191x126
Clear internal dimensions mm	227x177x110	227x177x110	227x177x110
Pack. pcs	1	1	1
Weight kg/100 pcs.	78.400	78.400	78.400
Item No.	**2005470**	**2005540**	**2005610**

PC Polycarbonate

Empty housing X 25



Type	X25C LGR	X25C LGR-TR	X25C SW
Colour	Light grey	Grey / transparent	Graphite black
Dimension LxWxH mm	286x202x126	286x202x126	286x202x126
Clear internal dimensions mm	271x187x110	271x187x110	271x187x110
Pack. pcs	1	1	1
Weight kg/100 pcs.	95.000	95.000	95.000
Item No.	**2005474**	**2005544**	**2005614**

PC Polycarbonate

Always indicate the item number when ordering.

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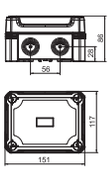
Empty housing, X series without entries with hat profile rail

- In comparison to junction boxes, empty housings do not have any entry openings. They can be drilled individually for the application
- Tested to DIN EN 60670 Part 1 and 22
- Besides screw cover caps and external fastening elements, the scope of delivery also contains a hat rail set consisting of a hat rail, type 2069, and matching fastening elements

Empty housing X 06 with hat profile rail



Type	X06C R LGR	X06C R LGR-TR
Colour	Light grey	Grey / transparent
Dimension LxWxH mm	151x167x87	151x167x87
Clear internal dimensions mm	137x105x68	137x105x68
Pack. pcs	1	1
Weight kg/100 pcs.	37.600	37.600
Item No.	**2005490**	**2005560**

PC Polycarbonate

With hat profile rail, type 2069, and fastening set.

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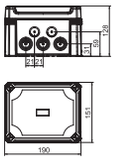
Always indicate the item number when ordering.

Empty housing, X series without entries with hat profile rail

Empty housing X 10 with hat profile rail

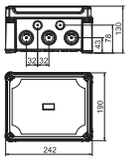


Type	X10C R LGR	X10C R LGR-TR
Colour	Light grey	Grey / transparent
Dimension LxWxH mm	191x151x126	191x151x126
Clear internal dimensions mm	177x137x110	177x137x110
Pack. pcs	1	1
Weight kg/100 pcs.	65.600	65.600
Item No.	**2005494**	**2005564**

PC Polycarbonate

With hat profile rail, type 2069, and fastening set.

Empty housing X 16 with hat profile rail



Type	X16C R LGR	X16C R LGR-TR
Colour	Light grey	Grey / transparent
Dimension LxWxH mm	241x191x126	241x191x126
Clear internal dimensions mm	227x177x110	227x177x110
Pack. pcs	1	1
Weight kg/100 pcs.	87.300	87.300
Item No.	**2005498**	**2005568**

PC Polycarbonate

With hat profile rail, type 2069, and fastening set.

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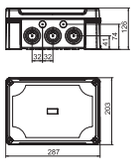
Always indicate the item number when ordering.

Empty housing X 25 with hat profile rail



Type	X25C R LGR	X25C R LGR-TR
Colour	Light grey	Grey / transparent
Dimension LxWxH mm	286x202x126	286x202x126
Clear internal dimensions mm	271x187x110	271x187x110
Pack. pcs	1	1
Weight kg/100 pcs.	107.000	107.000
Item No.	**2005502**	**2005572**

PC Polycarbonate

With hat profile rail, type 2069, and fastening set.

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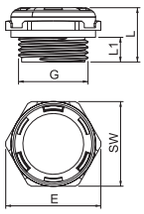
Always indicate the item number when ordering.

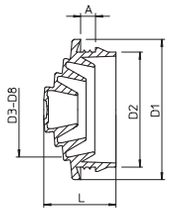
Pressure balance plug 109



Type	Thread	Protection rating	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
109 M20 LGR	M20x1,5	IP68	Light grey	5	0.538	**2034680**

The pressure compensation element is surrounded by an ePTFE membrane, which is permeable in both directions to air. The air throughput at a pressure difference of 70 mbar is 110 L/h. At the same time, moisture cannot enter the housing from outside.

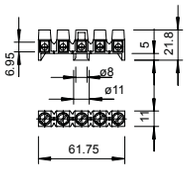
EDS plug-in seal, light grey



Type	Size	For Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
EDS M20 LGR	M20	0 - 17	Light grey	100	0.125	**2012350**
EDS M25 LGR	M25	0 - 22	Light grey	100	0.185	**2012354**
EDS M32 LGR	M32	0 - 28	Light grey	50	0.295	**2012358**

PE Polyethylene

Terminal strip 2.5 mm²



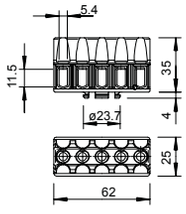
960°

Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
689	Light grey	5	0.8 - 2.5	660	50	1.502	**2017342**

PA Polyamide

Terminal strip, nickel-plated brass, steel screws, galvanised and transparently passivated, nominal cross-section 0,8 - 2,5 mm², nominal voltage 660 V, 5-pole, with terminal sockets, max. connectable cross-sections per terminal: 4 x 2.5 mm², 5 x 1.5 mm² or
6 x 1 mm², unnecessary poles can be cut off and used as individual terminals.

Terminal strip 1.5–6 mm², junction box, T series



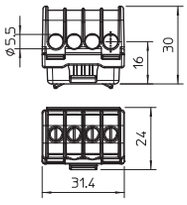
960°

Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 02-06	Light grey	5	1.5 - 6	400	10	4.380	**2016185**

PA Polyamide

Steel terminal block and bolts, galvanised and transparently passivated, nominal 1,5 - 6 mm², nominal voltage 400 V, 5-pole, with terminal sockets, Max. connectable cross-sections per terminal: 3 x 6 mm², 4 x 4 mm² or 6 x 2.5 mm² .

Terminal strip 6–16 mm², junction box, T series



960°

Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 06-16	Light grey	4	6 - 16	400	10	1.970	**2016190**

PA Polyamide

Brass terminals, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 - 16 mm², nominal voltage 400 V, 1-pole, with terminal sockets, Max. connectable conductors per terminal max. 4 x 16 mm², 4 x 10 mm², 8x6 mm² or 12 x 4 mm².

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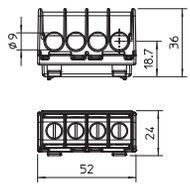
Terminal strip 16–35 mm², junction box, T series

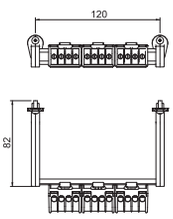


Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 16-35	Light grey	4	16 - 35	400	10	5.630	**2016195**

PA Polyamide

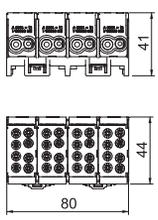
Brass terminals, steel screws, electrogalvanised and transparently passivated, nominal cross-section 16 - 35 mm², nominal voltage 400 V, 1-pole, with terminal sockets, Max. connectable conductors per terminal max. 4 x 35 mm², 4 x 25 mm², 8x16 mm² or 12 x 10 mm².

Terminal strip set for X series



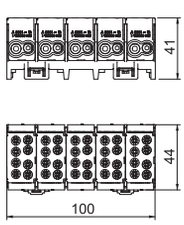
Type	Nominal cross-section mm²	Pole number	Number of screwless terminals per pole	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-X10 06-16	6 - 16	5	4	1	17.600	**2008931**
KL-X16 06-16	6 - 16	5	4	1	14.500	**2008935**
KL-X25 16-35	16 - 35	5	4	1	37.500	**2008939**

Main branch terminal, 4-pole



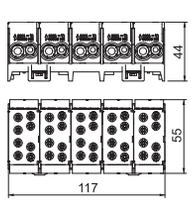
Type	Max. conductor cross-section mm²	Number of screwless terminals per pole	Pole number	Pack. pcs	Weight kg/100 pcs.	Item No.
HLAK 4-8x16	25	4	4	1	19.200	**2009032**

Main branch terminal, 5-pole



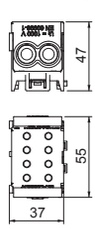
Type	Max. conductor cross-section mm²	Number of screwless terminals per pole	Pole number	Pack. pcs	Weight kg/100 pcs.	Item No.
HLAK 5-10x16	25	4	5	1	23.100	**2009036**

Main branch terminal, 5-pole



Type	Max. conductor cross-section mm²	Number of screwless terminals per pole	Pole number	Pack. pcs	Weight kg/100 pcs.	Item No.
HLAK 5-10x25	35	4	5	1	38.100	**2009038**

Main branch terminal, 1-pole



Type	Max. conductor cross-section mm²	Number of screwless terminals per pole	Pole number	Pack. pcs	Weight kg/100 pcs.	Item No.
HLAK 1-2x35 GR	70	4	1	1	11.600	**2009042**
HLAK 1-2x35 GRGN	70	4	1	1	11.600	**2009044**
HLAK 1-2x35 GRBL	70	4	1	1	11.600	**2009046**

Always indicate the item number when ordering.

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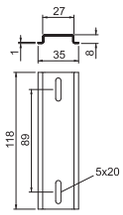
Hat rail set



Type	Length mm	Width mm	Height mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2069 X06 FS	118	35	8	1	4.300	**1115876**
2069 X10 FS	161	62	23	1	7.400	**1115879**
2069 X16 FS	211	62	23	1	9.200	**1115882**
2069 X25 FS	252	62	23	1	10.700	**1115887**

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Always indicate the item number when ordering.

Mx series

- High impact resistance
- High temperature resistance
- Optimum EMV protection
- 8 sizes
- 2 surface variants
- Temperature range: –40 to 125 °C

Real hard cases

Our aluminium empty housings were designed for use under the toughest conditions and provide optimum protection of the installation. The metal housing of the Mx series withstands extremely high and low temperatures, as well as large temperature differences. High impact loads in an industrial surrounding, vandalism or rock falls are not able to harm the housing. Furthermore, the Mx series offers perfect EMC protection and is ideally secured against the entry of dust and water in line with protection rating IP66.

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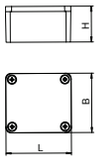
Aluminium empty housing Mx06-Mx15, powder-coated



Type	**Mx 060503 SGR**	**Mx 080705 SGR**	**Mx 120805 SGR**	**Mx 161008 SGR**
Version	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws
Colour	Silver grey	Silver grey	Silver grey	Silver grey
Dimension LxWxH mm	64 x58 x34	80 x75 x57	125 x80 x57	160 x100 x81
Clear internal dimensions mm	56.5x50.5x31.5	71x65.6x52.5	115.5x70.5x51	117x90x74.5
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	19.200	36.400	50.000	90.000
Item No.	**2011304**	**2011308**	**2011312**	**2011316**

AIG Cast aluminium

P Powder-coated

Robust aluminium empty housing for mechanical engineering and automation technology.
The OBO Mx series' excellent mechanical and thermal features make it most suitable for extreme demands in many different areas. It is therefore also best suited for applications in industry, ports and shipbuilding, as well as in the agricultural sector.
The products protect the electrical installation against high-grade strains. They withstand both extreme cold and heat as well as vandalism and impact on roads, railways or in tunnels. With an IP66 protection class, they are optimally protected against the intrusion of dust and water. The aluminium housings are plastic coated (RAL 7035) and are delivered with a cover including stainless steel screws, a seal and two or four earthing screws.
Temperature: -40 °C to +125 °C

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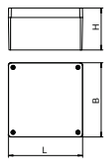
Aluminium empty housing Mx06-Mx15, powder-coated



Type	Mx 161609 SGR	Mx 170805 SGR	Mx 261609 SGR	Mx 361609 SGR
Version	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws
Colour	Silver grey	Silver grey	Silver grey	Silver grey
Dimension LxWxH mm	160 x160 x90	175 x80 x57	260 x160 x90	360x 160x 91
Clear internal dimensions mm	149x149x84.5	165x70x75	229.5x149x94.5	317.5 x 149 x92
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	170.000	66.000	230.000	320.000
Item No.	**2011320**	**2011324**	**2011328**	**2011332**

AIG Cast aluminium

P Powder-coated

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Temperature: -40°C to +125°C

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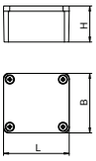
Aluminium empty housing Mx06-Mx15, paintable



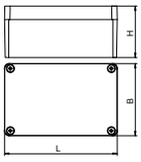
Type	Mx 060503 CR3	Mx 080705 CR3	Mx 090603 CR3	Mx 120805 CR3
Version	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws
Dimension LxWxH mm	64x58x34	80x75x57	98x64x34	125x80x57
Clear internal dimensions mm	56,5x50,5x31,5	71x65,5x52,5	91x54x29	115,5x70,5x51
Pack. pcs	1	1	1	1
Weight kg/100 pcs.	19.200	36.400	25.000	50.000
Item No.	**2011378**	**2011381**	**2011384**	**2011386**

AIG Cast aluminium

Cr3 Chrome III coating

Robust aluminium empty housing for mechanical engineering and automation technology.
The OBO Mx series' excellent features make it most suitable for extreme demands in all different areas. It is therefore also best suited for applications in industry, ports and shipbuilding, as well as in the agricultural sector.
The series' properties protect the electrical installation when under extreme strain. The products withstand both great cold and heat as well as impacts or kicks on roads, railways or in tunnels.
With a protection class of up to IP66, they are optimally protected against the intrusion of water. The aluminium is of course UV-resistant and halogen-free. The lid seal is made from polyurethane.
The aluminium housings are chrome 3-coated and are delivered with a lid including stainless steel screws, a seal and 2 or 4 earthing screws.
The Chrome 3 surface provides a good contact when using metal fittings and can easily be painted or powder-coated.
Temperature: -40 °C to +125 °C

Aluminium empty housing Mx06-Mx15, paintable



Type	Mx 161008 CR3	Mx 161609 CR3	Mx 221209 CR3	Mx 261609 CR3	Mx 361609 CR3
Version	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws
Dimension LxWxH mm	160x100x81	150x100x91	220x120x90	260x160x90	360x160x91
Clear internal dimensions mm	140,5x90x74,5	140,5x90x74,5	210x109x81	249x149x82	317,5x149x82
Pack. pcs	1	1	1	1	1
Weight kg/100 pcs.	90.000	170.000	168.000	230.000	320.000
Item No.	**2011389**	**2011392**	**2011394**	**2011396**	**2011398**

AIG Cast aluminium

Cr3 Chrome III coating

Robust aluminium empty housing for mechanical engineering and automation technology.
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Always indicate the item number when ordering.

B series

- With pre-moulded threaded entries for insertion of cable glands without locknut
- Cable openings are easily broken open with a screwdriver
- Supplied with flexible cable glands
- Cover fastening with metal screws

The reliable ones

A classic amongst the OBO thermoset junction boxes is the B series with and without a thread. The material is Aminoplast. This plastic is hard and is highly resistant, meaning that the junction boxes are very stable. This means that the required openings can be broken-out at the marked points using a screwdriver. Cables can be perfectly installed with cable glands, either directly in a housing thread or in a penetration hole with a cable gland and a locknut in the interior.

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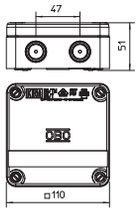
Junction box B 9/T, with perforation membrane

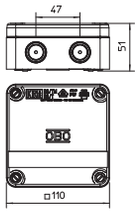


Type	Colour	Dimension LxWxH mm	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
B 9 T M 5	Light grey	110x110x51	With terminal strip	5	17.500	**2001845**
B 9 T M	Light grey	110x110x51	Empty	5	13.100	**2001853**
B 9 T M NL	Light grey	110x110x51	With 3 cable glands	5	17.100	**2001861**

PP Polypropylene

The wet-room junction box B9/T...: comprises two halogen-free plastic components, 2 additional entries in base with push-through membrane
(for cable diameter up to 15 mm)
with perforation membrane (for cable diameter up to 15 mm) in the floor area.
Where cable glands are used (giving additional strain relief), there is no need to remove the membrane (this saves time). Protection rating IP 67 with perforation membrane and with cable gland without removal of the perforation membrane.
Rated voltage 400 V; nominal cross-section 4 - 6 mm².
The lid is secured with 4 pre-fitted, captured quick lid fastenings (180°) and can be sealed.
The fastening holes are additionally moulded with a soft plastic component for bolt ø 5 mm (spacing 75 mm). Clear internal dimensions 98x98x40

Junction box B 9/T, with perforation membrane and terminal strip

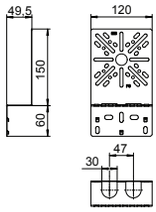


Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
B 9 T 5	Light grey	110x110x51	98x98x40	With terminal strip	5	17.500	**2001802**

PP Polypropylene

B9/T...: Comprises 2 halogen-free plastics components, 8 threaded entries (PG16) with push-through membrane (for cable diameter up to 15 mm)
including one in base. Where cable glands are used (giving additional strain
relief) there is no need to remove the membrane (this saves time).
Protection IP67. Rated voltage 400 V; Nominal cross section 4 - 6 mm². The lid is secured with 4 pre-fitted rapid fixings (180°). The fixing holes are additionally moulded with a soft plastics component for screw ø 5 mm (spacing 75 mm).
Clear internal dimensions: 98x98x40

Mounting plate, angled



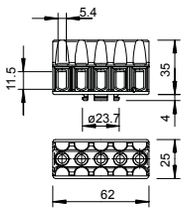
Type	Height mm	Width mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MP WI KL. FS	210	120	20	20.200	**7084765**
MP WI KL. DD	210	120	20	20.200	**7085111**

St Steel

FS Strip-galvanised DD Strip galvanised zinc/aluminium,double dip

Curved mounting plate, for fixing on the side rail of the cable tray.

Terminal strip 1.5–6 mm², junction box, T series



Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 02-06	Light grey	5	1.5 - 6	400	10	4.380	**2016185**

PA Polyamide

Steel terminal block and bolts, galvanised and transparently passivated, nominal 1,5 - 6 mm², nominal voltage 400 V, 5-pole, with terminal sockets, Max. connectable cross-sections per terminal: 3 x 6 mm², 4 x 4 mm² or 6 x 2.5 mm² .

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Always indicate the item number when ordering.

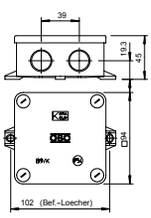
Junction boxes, B series with thread

- Sturdy thermoset plastic
- Screw-on cover
- Insertion openings with threaded entries for cable gland

Junction box, B 9/K M empty, with thread

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
B 9 K M	Light grey	94x94x45	84x84x34	5	13.500	**2001942**

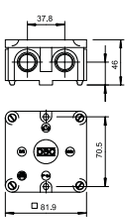
UF Duroplast, Aminoplast, type 131.5



Junction box, B 9/B M, with thread

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
B 9 B M	Light grey	81,9x81,9x46	73x73x35	5	9.960	**2001632**

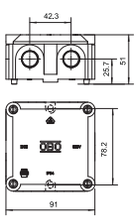
UF Duroplast, Aminoplast, type 131.5



Junction box, B 10 M, with thread

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
B 10 M 5	Light grey	91x91x51	80x80x39	5	22.480	**2002140**
B 10 M	Light grey	91x91x51	80x80x39	5	17.360	**2002167**

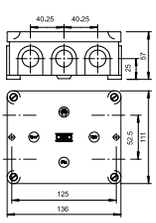
UF Duroplast, Aminoplast, type 131.5



Junction box, B 11 M, with thread

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
B 11 M 5	Light grey	111x136x57	125x100x44	1	39.700	**2002329**
B 11 M	Light grey	111x136x57	125x100x44	1	32.200	**2002345**

UF Duroplast, Aminoplast, type 131.5



Always indicate the item number when ordering.

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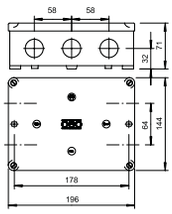
Junction box, B 12 M, with thread

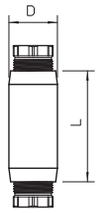


IP 54 | M25 | 16 mm² | 10 | 660 V

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack. pcs	Weight kg/100 pcs.	Item No.
B 12 M 5	Light grey	144x196x71	178x126x57	1	96.700	**2002507**
B 12 M	Light grey	144x196x71	178x126x57	1	65.500	**2002523**

UF Duroplast, Aminoplast, type 131.5

Cable connection sleeve



IP 54 | 2,5 mm² | 6 mm² | Pg | 660 V | 5

Type	Entries	Dimension D mm	Dimension L mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
117 5x2.5	Pg 16	28	64	Light grey	10	4.891	**2022028**
117 5x6	Pg 21	33.5	82	Light grey	5	8.306	**2022060**

PS Polystyrene

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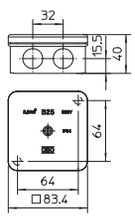
Always indicate the item number when ordering.

Junction boxes, B series without thread

- Sturdy thermoset plastic
- Screw-on cover
- Insertion openings for breaking open
- Cable entry via push-through mounting, plug-in seal or cable gland with locknut

Junction box, B 25 M, without thread

IP 54 | M20 | 2,5 mm² | 7 | 660 V | Fluor Chlorine Bromine HALOGENFREE | D | M



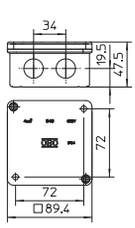
Type	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
B 25 M	Light grey	83,4x83,4x40	5	10.400	**2001136**

UF Duroplast, Aminoplast, type 131.5

Protection rating IP54, rated voltage 660 V, nominal cross-section 2,5 mm², two fastening holes for screws of up to 4.5 mm Ø in the interior of the box (seals and covers included), M6 fastening thread and adhesive area under the base, 1 cover screw,
7 break-out entries Ø 21 mm (M 20), with 4 cable entries EDVS 20 for cable diameters 7.5–14 mm.
Clear internal dimensions: 73x73x35 mm.

Junction box, B 40 M, without thread

IP 54 | M20 | 4 mm² | 7 | 660 V | Fluor Chlorine Bromine HALOGENFREE | D | M



Type	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
B 40 M	Light grey	89,4x89,4x47,5	5	12.000	**2001179**

UF Duroplast, Aminoplast, type 131.5

Protection rating IP54, nominal voltage 660 V, nominal cross-section 4 mm², two fastening holes for screws up to 4.5 mm Ø on the inside of the box, but outside the terminals. M6 fastening thread and adhesive area under the base. Two cover screws,
7 break-out entries Ø 20 mm (M20), with 4 cable entries EDVS 20 for cable diameters 20–15 mm.
Clear internal dimensions: 78x78x43 mm.

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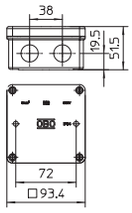
Always indicate the item number when ordering.

Junction box, B 60 M, without thread



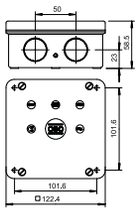
CE | IP 54 | M20 | 6 mm² | 7 | 660 V | Fluor Chlorine Brom HALOGENFREE | D | M

Type	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
B 60 M	Light grey	93,4x93,4x51	5	14.700	**2001217**

UF Duroplast, Aminoplast, type 131.5

Protection rating IP54, rated voltage 660 V, nominal cross-section 6 mm², two fastening holes for screws of up to 4.5 mm Ø in the interior of the box (seals and covers included), M6 fastening thread and adhesive area under the base, four cover screws,
7 break-out entries Ø 20.5 mm (M 20), with 4 cable entries EDVS 20 for cable diameters 7.5–15 mm.
Clear internal dimensions: 83x83x47 mm.

Junction box, B 100 M, without thread



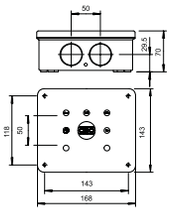
CE | IP 54 | M25 | 10 mm² | 6 | 660 V | IK 04 | Fluor Chlorine Brom HALOGENFREE | M

Type	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
B 100 M	Light grey	122,4x122,4x58,5	5	31.000	**2001268**

UF Duroplast, Aminoplast, type 131.5

Protection rating IP54, nominal voltage 660 V, nominal cross-section 10 mm², four fastening holes for screws up to 5 mm Ø on the inside of the box, but outside the terminals. Four cover screws, sealable with sealing caps supplied,
6 break-out entries Ø 25.5 mm (M25), with 4 push-in seals EDVS 25 for cable diameters 7.5–22 mm.
Clear internal dimensions: 108x108x51 mm.

Junction box, B 160 M, without thread



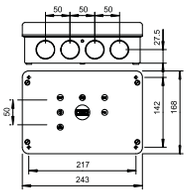
CE | IP 54 | M32 | 16 mm² | 8 | 660 V | IK 05 | Fluor Chlorine Brom HALOGENFREE | M

Type	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
B 160 M	Light grey	168x143x70	1	55.000	**2001306**

UF Duroplast, Aminoplast, type 131.5

Protection rating IP54, nominal voltage 660 V, nominal cross-section 16 mm², four fastening holes for screws up to 5.5 mm Ø on the inside of the box, but outside the terminals.
Four cover screws, sealable with sealing caps supplied,
8 break-out entries Ø 32.5 mm (M 32), with 4 cable entries EDVS 32 for cable diameters 12–30 mm.
Clear internal dimensions: 150x125x61 mm.

Junction box, B 250 M, without thread



CE | IP 54 | M32 | 25 mm² | 12 | 660 V | IK 05 | Fluor Chlorine Brom HALOGENFREE | M

Type	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
B 250 M	Light grey	243x168x82,5	1	85.000	**2001349**

UF Duroplast, Aminoplast, type 131.5

Protection rating IP54, nominal voltage 660 V, nominal cross-section 25 mm², four fastening holes for screws up to 5.5 mm Ø on the inside of the box, but outside the terminals.
Four cover screws, sealable with sealing caps supplied,
12 break-out entries Ø 32.5 mm (M 32), with 4 push-in seals EDVS 32 for cable diameters 12–30 mm.
Clear internal dimensions: 224x149x75 mm.

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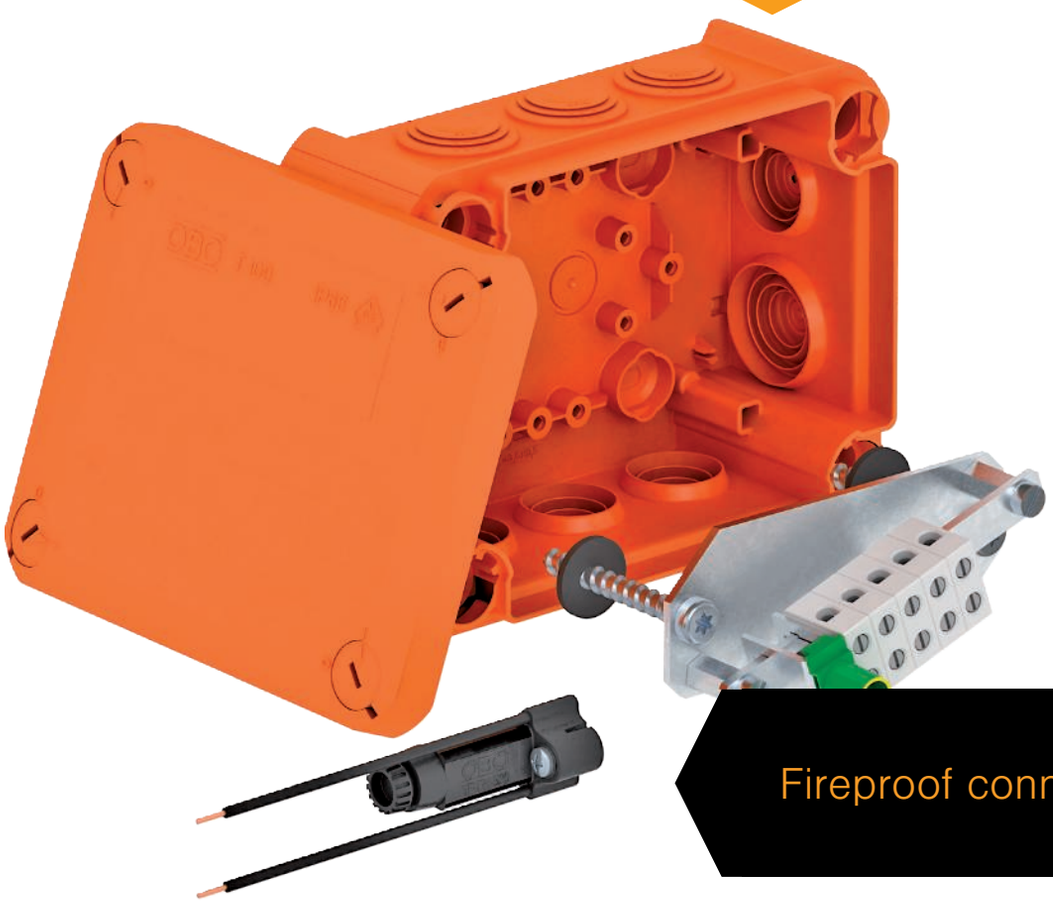
Always indicate the item number when ordering.

FireBox T series

- Tested for the maintenance of electrical functionality according to DIN 4102-12 E30-E90
- Box made of elastic, yet impact-resistant, thermoplastic
- Various wire cross-sections for power and data cables
- Complete scope of delivery with equipped connection unit and fire protection bolt ties
- Optionally with fuse holder for secured branches
- All the advantages of the T series



Fireproof connection

The T-series FireBoxes offer all the benefits of normal cable junction boxes and are made of a thermoplastic polymer. These benefits include resistance to breakages, resistance to knocks and high IP protection rating. The FireBox is tested and approved as a connection socket for maintaining electrical functionality to DIN 4102 Part 12 with the classes E30 to E90. The high temperature-resistant terminals to connect the individual cable wires are pre-mounted to form a connection unit. The protective conductor terminal is connected to the beam clamp, meaning that covers of the metal parts are not required.

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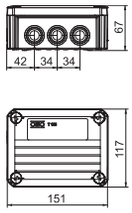
FireBox T, with plug-in seals and internal fastening

- Halogen-free
- With soft push-in seals
- Pre-mounted connection unit made from high temperature-resistant special ceramic
- Labelled protective conductor terminal
- Supplied with two MMS 6x50 fire protection screw ties
- Protection rating IP65
- Impact resistance class T100ED... IK08; T160ED... IK05.
- Nominal cross-section 6/10/16 mm²
- Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute MPA NRW, Erwitte

FireBox T100ED with plug-in seal and internal fastening



E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 ED 4-5	4	5	8 x M25 2 x M32	1	34.600	**7205529**
T 100 ED 6-5	6	5	8 x M25 2 x M32	1	34.000	**7205530**
T 100 ED 10-5	10	5	8 x M25 2 x M32	1	35.900	**7205533**

PP Polypropylene

Halogen-free junction box with pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12.
Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Including pre-mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with 2 MMS 6x50 fire protection screw ties for anchorless fastening.
Power cable nominal cross-sections: 1.5 to 10 mm² depending on the type, data cables with 0.8 mm wire Ø. Several rigid copper wires with smaller cross-sections per terminal possible.
High protection rating IP66, impact resistance class IK08.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

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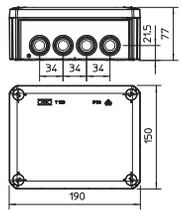
Always indicate the item number when ordering.

FireBox T160ED with internal fastening

E30 E90 IP 66



Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 ED 16-5	16	5	7 x M25 5 x M32	1	62.500	**7205536**

PP Polypropylene

Halogen-free junction box with pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12.
Maintenance of electrical function classes E30 to E90.

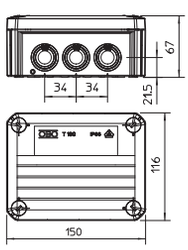
Colour: Pastel orange.

Including pre-mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with 2 MMS 6x50 fire protection screw ties for anchorless fastening.
Power cable nominal cross-sections: Up to 16 mm². Several rigid copper wires with smaller cross-sections per terminal possible.
High protection rating IP66, impact resistance class IK05.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

FireBox T100ED with internal fastening and fuse holder

E30 E90 IP 66



Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 ED 6-6 F	6	6	8 x M25 2 x M32	1	38.650	**7205550**
T 100 ED 10-6 F	10	6	8 x M25 2 x M32	1	38.650	**7205553**

PP Polypropylene

Halogen-free junction box with pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Including pre-mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with fuse holder TE-FH 520 for VDE-conformant, reaction-free protection of consumers and 2 fire protection screw ties MMS 6x50 for anchorless fastening.
Power cable nominal cross-sections: 1.5 to 10 mm² depending on the type, data cables with 0.8 mm wire Ø. Several rigid copper wires with smaller cross-sections per terminal possible.
High protection rating IP66, impact resistance class IK08.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

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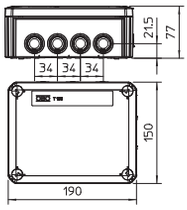
Always indicate the item number when ordering.

FireBox T160ED with internal fastening and fuse holder



E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 ED 16-6 F	16	6	7 x M25 5 x M32	1	64.000	**7205556**

PP Polypropylene

Halogen-free junction box with pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Including pre-mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with fuse holder TE-FH 520 for VDE-conformant, reaction-free protection of consumers and 2 fire protection screw ties MMS 6x50 for anchorless fastening.
Power cable nominal cross-sections: Up to 16 mm². Several rigid copper wires with smaller cross-sections per terminal possible.
High protection rating IP66, impact resistance class IK05.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

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Always indicate the item number when ordering.

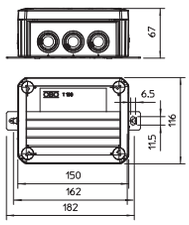
FireBox T, with plug-in seals and external fastening

- Fully mounted connection unit made from high temperature-resistant special ceramic
- Labelled protective conductor terminal
- External fastening
- Supplied with two MMS 6x50 fire protection screw ties
- Protection rating IP65
- Impact resistance class T100ED... IK08; T160ED... IK05
- Nominal cross-section 6/10/16 mm²
- Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute MPA NRW, Erwitte

FireBox T100ED with external fastening

E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 ED 6-5 A	6	5	8 x M25 2 x M32	1	38.500	**7205540**
T 100 ED 10-5 A	10	5	8 x M25 2 x M32	1	40.600	**7205543**



PP Polypropylene

Halogen-free junction box with pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with 2 MMS 6x50 fire protection screw ties for anchorless fastening on the external straps.
Power cable nominal cross-sections: 1.5 to 10 mm² depending on the type, data cables with 0.8 mm wire Ø. Several rigid copper wires with smaller cross-sections per terminal possible.
High protection rating IP66, impact resistance class IK08.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

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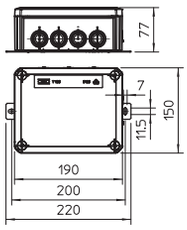
Always indicate the item number when ordering.

FireBox T160ED with external fastening



E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 ED 16-5 A	16	5	7 x M25 5 x M32	1	60.000	**7205546**

PP Polypropylene

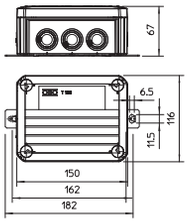
Halogen-free junction box with pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with 2 MMS 6x50 fire protection screw ties for anchorless fastening on the external straps.
Power cable nominal cross-sections: Up to 16 mm². Several rigid copper wires with smaller cross-sections per terminal possible.
High protection rating IP66, impact resistance class IK05.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

FireBox T100ED external fastening with fuse holder



E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 ED 6-6 AF	6	6	8 x M25 2 x M32	1	43.330	**7205560**
T 100 ED 10-6 AF	10	6	8 x M25 2 x M32	1	43.340	**7205563**

PP Polypropylene

Halogen-free junction box with pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with fuse holder TE-FH 520 for VDE-conformant, reaction-free protection of consumers and 2 fire protection screw ties MMS 6x50 for anchorless fastening on the external shackles.
Power cable nominal cross-sections: 1.5 to 10 mm² depending on the type, data cables with 0.8 mm wire Ø. Several rigid copper wires with smaller cross-sections per terminal possible.
High protection rating IP66, impact resistance class IK08.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

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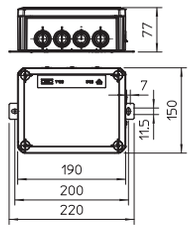
FireBox T160ED with external fastening and fuse holder

E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 ED 16-6 AF	16	6	7 x M25 5 x M32	1	60.000	**7205566**



PP Polypropylene

Halogen-free junction box with pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

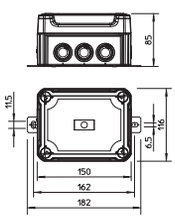
Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with fuse holder TE-FH 520 for VDE-conformant, reaction-free protection of consumers and 2 fire protection screw ties MMS 6x50 for anchorless fastening on the external shackles.
Power cable nominal cross-sections: Up to 16 mm². Several rigid copper wires with smaller cross-sections per terminal possible.
High protection rating IP66, impact resistance class IK05.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

FireBox T100ED with external fastening and impact-proof cover

E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T100ED 6-5 AS	6	5	8 x M25 2 x M32	1	44.500	**7205620**
T100ED 10-5 AS	10	5	8 x M25 2 x M32	1	46.600	**7205623**



PP/PC Polypropylene / polycarbonate

Halogen-free junction box with impact-proof cover and pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with 2 MMS 6x50 fire protection screw ties for anchorless fastening on the external straps.
Power cable nominal cross-sections: 1.5 to 10 mm² depending on the type, data cables with 0.8 mm wire Ø. Several rigid copper wires with smaller cross-sections per terminal possible.
High protection rating IP66, impact resistance class IK09.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

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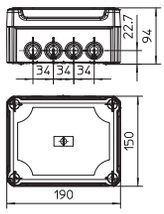
Always indicate the item number when ordering.

FireBox T160ED with external fastening and impact-proof cover



E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T160ED 16-5 AS	16	5	7 x M25 5 x M32	1	65.000	**7205626**

PP/PC Polypropylene / polycarbonate

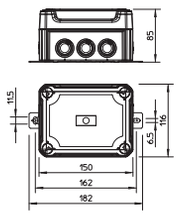
Halogen-free junction box with impact-proof cover and pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with 2 MMS 6x50 fire protection screw ties for anchorless fastening on the external straps.
Power cable nominal cross-sections: Up to 16 mm². Several rigid copper wires with smaller cross-sections per terminal possible.
High protection rating IP66, impact resistance class IK10.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

FireBox T100ED with external fastening, fuse holder and impact-proof cover



E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T100ED 6-6 AFS	6	6	8 x M25 2 x M32	1	49.200	**7205630**
T100ED 10-6 AFS	10	6	8 x M25 2 x M32	1	49.300	**7205633**

PP/PC Polypropylene / polycarbonate

Halogen-free junction box with impact-proof cover and pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with fuse holder TE-FH 520 for VDE-conformant, reaction-free protection of consumers and 2 fire protection screw ties MMS 6x50 for anchorless fastening on the external shackles.
Power cable nominal cross-sections: 1.5 to 10 mm² depending on the type, data cables with 0.8 mm wire Ø. Several rigid copper wires with smaller cross-sections per terminal possible.
High protection rating IP66, impact resistance class IK09.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

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FireBox T, with plug-in seals for data technology

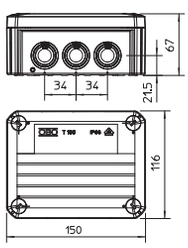
- Connection unit made from high temperature-resistant special ceramic
- Labelled protective conductor terminal
- Internal and external fastening
- Supplied with two MMS 6x50 fire protection screw ties
- Protection rating IP65
- Impact resistance class T100ED... IK08; T350ED... IK06
- Nominal cross-section 4 mm²
- For multi-wire data cables with a wire diameter of 0.8 mm (0.5 mm²)
- Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute MPA NRW, Erwitte

FireBox T100ED for data technology with internal fastening

E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 ED 4-10 D	4	10	8 x M25 2 x M32	1	38.300	**7205580**

PP Polypropylene



Halogen-free junction box with pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminals. Supplied with 2 MMS 6x50 fire protection screw ties for anchorless fastening on the external straps.
For data cables with wire Ø 0.8 mm. Up to 6 rigid copper wires (0.5 mm²) possible on each terminal. High protection rating IP66, impact resistance class IK08.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

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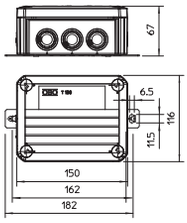
Always indicate the item number when ordering.

FireBox T100ED for data technology with external fastening



E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 ED 4-10 AD	4	10	8 x M25 2 x M32	1	45.600	**7205583**

PP Polypropylene

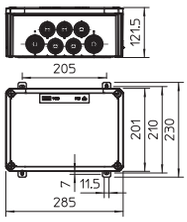
Halogen-free junction box with pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminals. Supplied with 2 MMS 6x50 fire protection screw ties for anchorless fastening on the external straps.
For data cables with wire Ø 0.8 mm. Up to 6 rigid copper wires (0.5 mm²) possible on each terminal. High protection rating IP66, impact resistance class IK06.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

FireBox T350ED for data technology with external fastening



E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T 350 ED 4-28 AD	4	28	16 x M32 8 x M40	1	163.000	**7205590**

PP Polypropylene

Halogen-free junction box as small data distributor with pre-mounted, soft plug-in seals, approved for Maintenance of electrical functionality according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminals. Supplied with 4 MMS 6x50 fire protection screw ties for anchorless fastening on the external straps.
For data cables with wire Ø 0.8 mm. Up to 6 rigid copper wires (0.5 mm²) possible on each terminal. High protection rating IP66, impact resistance class IK06.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

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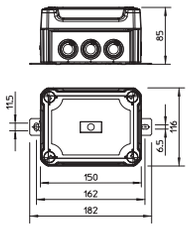
FireBox T100ED for data equipment, external fastening and impact-proof cover

E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Entries	Pack. pcs	Weight kg/100 pcs.	Item No.
T100ED 4-10 ADS	4	10	8 x M25 2 x M32	1	51.600	**7205640**



PP/PC Polypropylene / polycarbonate

Halogen-free junction box with impact-proof cover and pre-mounted, soft plug-in seals, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Fully mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminals. Supplied with 2 MMS 6x50 fire protection screw ties for anchorless fastening on the external straps.
For data cables with wire Ø 0.8 mm. Up to 6 rigid copper wires (0.5 mm²) possible on each terminal. High protection rating IP66, impact resistance class IK09.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

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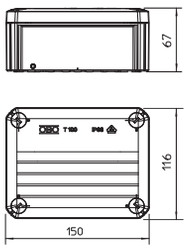
Always indicate the item number when ordering.

FireBox T, closed version

- Pre-mounted connection unit made from high temperature-resistant special ceramic
- Labelled protective conductor terminal
- Supplied with two MMS 6x50 fire protection screw ties
- Protection rating IP65
- Impact resistance class T100ED... IK08; T160ED... IK05
- Cable outlets with V-TEC glands
- Nominal cross-section 6/10/16 mm²
- Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute MPA NRW, Erwitte

FireBox T100E with internal fastening



E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
T 100 E 4-5	4	5	Pastel orange	17	1	27.400	**7205510**

PP Polypropylene

Halogen-free junction box, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Including pre-mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with fire protection screw ties for anchorless fastening.
Power cable nominal cross-sections: 1.5 to 4 mm², data cables with 0.8 mm wire Ø. Maximum of two 1.5 mm² rigid copper cables per terminal (remove wire protection).
High protection rating IP66, impact resistance class IK07.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

Always indicate the item number when ordering.

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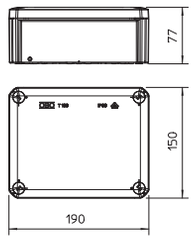
FireBox T160E with internal fastening

E30 E90 IP 66

Type	Nominal cross-section mm²	Number of terminals	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 E 10-5	10	5	Pastel orange	5	1	48.700	**7205524**
T 160 E 16-5	16	5	Pastel orange	5	1	53.800	**7205528**



PP Polypropylene

Halogen-free junction box, approved for the maintenance of electrical function according to DIN 4102 Part 12.
Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

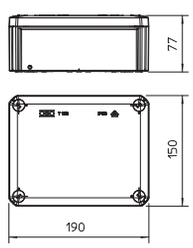
Including pre-mounted connection unit made of high temperature-resistant special ceramic and labelled protective conductor terminal. Supplied with fire protection screw ties for anchorless fastening.
Nominal cross-sections of the power cable: 10 or 16 mm²
A maximum of 2 rigid copper cables of 2.5 mm² or 4 mm² per terminal (remove wire protection).
High protection rating IP66, impact resistance class IK06.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

FireBox T160E for data technology with internal fastening

E30 E90 IP 66

Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
T 160 E 4-8D	Pastel orange	5	1	46.500	**7205520**



PP Polypropylene

Halogen-free junction box, approved for the maintenance of electrical function according to DIN 4102 Part 12. Maintenance of electrical function classes E30 to E90.

Colour: Pastel orange.

Including pre-mounted connection unit made of high temperature-resistant special ceramic with fire protection screw ties for anchorless fastening.
Nominal cross-section: data cables with 0.8 mm wire Ø.
High protection rating IP66, impact resistance class IK06.

Details on the cable types and manufacturers can be found in the general construction test certificate of the material testing institute NRW, Erwitte.

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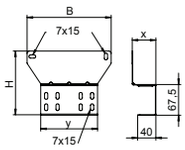
Always indicate the item number when ordering.

Mounting plate for FireBox T series



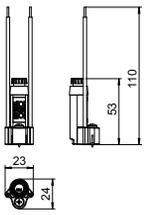
Type	Dimension H mm	Dimension B mm	Dimension x mm	Dimension y mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MP T610	141	185	52	125	1	23.600	**7205480**
MP T616	159	220	63	165	1	34.500	**7205484**

St Steel

DD Strip galvanised zinc/aluminium,double dip

Mounting plate for the fastening of junction boxes of the FireBox T series (with external fastening) onto cable trays or cable ladders with a side height of 60 mm. The angled construction from sheet steel reinforced through crimps enables the secure mounting of cables that maintain electrical function, without having to bend the cable over the side rail.
Including fastening material.

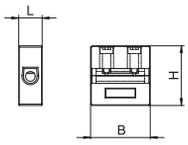
Fuse holder for FireBox T series



Type	Pack. pcs	Weight kg/100 pcs.	Item No.
TE-FH 520	1	1.800	**7205570**

Fuse holder with bayonet lock for fine-wire fuse for dimensions Ø 5 x 20 mm. Connection wires to maintain electrical function with nominal cross-section 2.5 mm², ready-stripped. For mounting on one of the exposed domes in the junction box of the FireBox T series using the supplied screw.

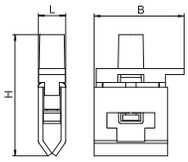
Ceramic terminal



Type	Nominal cross-section mm²	Pack. pcs	Weight kg/100 pcs.	Item No.
TK 04	0.5 - 4	5	0.880	**7205700**
TK 06	6	5	0.880	**7205702**
TK 10	10	5	1.840	**7205704**
TK 16	16	5	3.160	**7205706**

High temperature-resistant ceramic terminal for refitting of the FireBox T series.

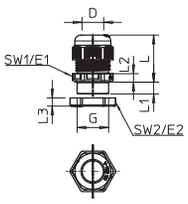
Protective conductor terminal



Type	Nominal cross-section mm²	Pack. pcs	Weight kg/100 pcs.	Item No.
TPE 04	4	5	0.400	**7205708**
TPE 25	25	5	1.440	**7205710**

Productive conductor terminal for retro-fitting the FireBox T series with green-yellow identification.

Cable gland with locknut as a set



Type	Thread	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM20+ OR	M20 x 1,5	100	10	1.106	**7205660**
V-TEC VM25+ OR	M25 x 1,5	100	10	1.710	**7205663**
V-TEC VM32+ OR	M32 x 1,5	100	10	2.840	**7205666**
V-TEC VM40+ OR	M40 x 1,5	120	10	5.150	**7205669**

PA Polyamide

Robust cap nut cable gland with metric connecting thread to IEC 423, including pre-mounted locknut.
For high tightness requirements. Strain relief, wringing protection and tightness over the whole clamping area. Sealing ring made of polychloroprene/acrylonitrile butadiene rubber. Moulded shaped sealing lip on intermediate support, no connection thread sealing ring required.
VDE-tested according to DIN EN 50262, protection rating IP68 at 5 bar for 1 hr.
For the maintenance of electrical function according to DIN 4102 Part 12 in connection with the junction boxes of the FireBox T series.
Colour: Pastel orange.

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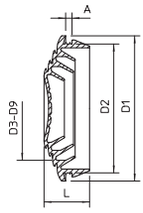
Plug-in seal for FireBox T series

Type	Size	For Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
EDK 25 OR	M25	0 - 22	10	0.165	**7205675**
EDK 32 OR	M32	0 - 27	10	0.274	**7205677**
EDK 40 OR	M40	0 - 34	10	0.420	**7205679**

EVA Ethylene vinyl acetate

The soft plug-in seal can be cut back step by step to suit the relevant cable diameter.
Colour: Pastel orange.

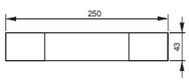


Identification plate for function maintenance

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KS-E DE	10	0.600	**7205423**
KS-E EN	10	0.600	**7205432**
KS-E HU	10	0.600	**7205434**
KS-E PL	10	0.600	**7205436**

PVC Polyvinylchloride

Self-adhesive identification plate for approved cable system labelling for the maintenance of electrical function as required by DIN 4102 part 12.



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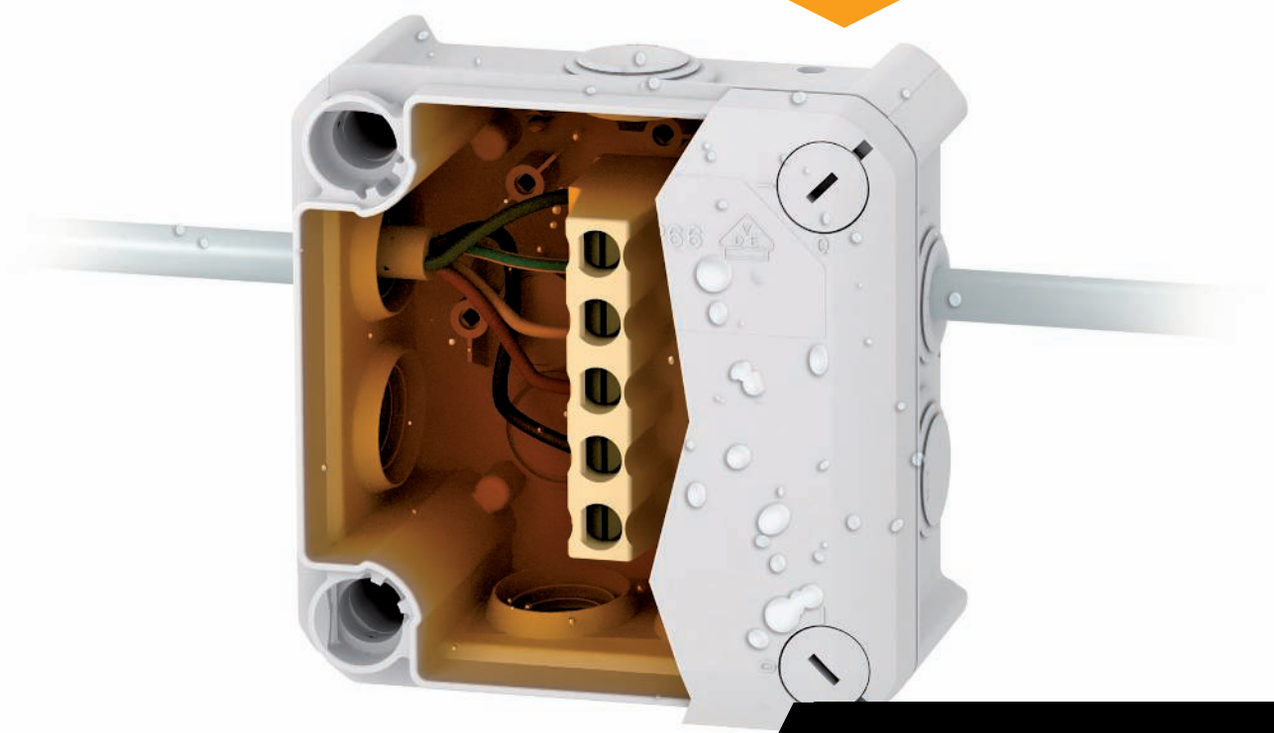
Always indicate the item number when ordering.

Aquasit cold casting compound

- Protection rating: IP68 at 1.8 bar/1,000 h
- Rated voltage: 400 V
- Penetration resistance: >20 kV/mm according to VDE 0291 Part 2
- Operational temperature: –40 to +90 °C
- Processing temperature: 0 to +40 °C
- Halogen-free, silicone-free, isocyanate-free
- Environmentally friendly and without a labelling requirement



Protection rating IP68

OBO Aquasit cold casting compound is the solution for electrical installations in particularly damp environments. Whether for connections in the garden, by waterways, in laundries or in a pump well – Aquasit ensures a safe electrical installation anywhere. The application is simple: Aquasit is cast simply and tidily using a standard cartridge pistol. The transparent, amber-coloured cold casting compound, based on carbon resins, then sets to a soft elastic. Aquasit is "self-healing" and can also be removed easily.

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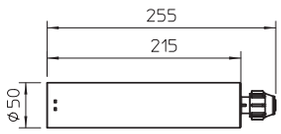
Always indicate the item number when ordering.

Aquasit cold casting compound, cartridge

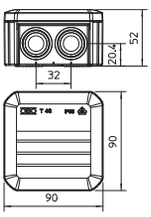
IP 68 | 400 V

Type	Contents ml	Pack. pcs	Weight kg/100 pcs.	Item No.
KVM 250	250	1	42.000	**2363010**

Aquasit is a two-component casting compound in a cartridge, for applications in areas with continuous and extremely high levels of moisture. It can also be used against mechanical shock and vibrations.
The cartridge is suitable for use in standard cartridge pistols. At room temperature, the unopened aluminium packaging can be stored for up to 18 months. When the cartridge is opened, the material should be used within 24 hours.
Practical experience, tests and approvals valid only in conjunction with OBO junction boxes.
Aquasit properties:
Protection rating with appropriate junction box: IP68 at 1.8 bar/1,000 hrs
Rated voltage: 400 V
Penetration resistance: >20 kv/mm to VDE 0291 Part 2
Operating temperature: -40 to +90 °C
Processing temperature: 0 to +40 °C
Halogen-free, silicon-free, isocyanite-free
Environmentally friendly and without the need to be labelled



Aquasit cold casting compound with cable box T40



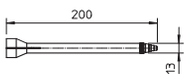
Type	Version	Entries	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
T 40 KVM	With terminal strip	7 x M25	1	1	48.700	**2363012**

PP Polypropylene

Aquasit is a two-component casting compound in a cartridge, for applications in areas with continuous and extremely high levels of moisture. It can also be used against mechanical shock and vibrations.
The cartridge is suitable for use in standard cartridge pistols. At room temperature, the unopened aluminium packaging can be stored for up to 18 months. When the cartridge is opened, the material should be used within 24 hours.
Practical experience, tests and approvals valid only in conjunction with OBO junction boxes.
Aquasit properties:
Protection rating with appropriate junction box: IP68 at 1.8 bar/1,000 hrs
Rated voltage: 400 V
Penetration resistance: >20 kv/mm to VDE 0291 Part 2
Operating temperature: -40 to +90 °C
Processing temperature: 0 to +40 °C
Halogen-free, silicon-free, isocyanate-free
Environmentally friendly and without the need to be labelled

AQUASIT mixer pipe

Type	Pack. PU	Weight kg/100 PUs	Item No.
KVM-M	1	17.000	**2363015**



10 mixer pipes in the set.
Simple, automatic mixing of OBO AQUASIT when pressing out the compound from the cartridge.

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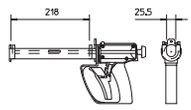
Aquasit cartridge pistol



CE

Type	Contents ml	Pack. pcs	Weight kg/100 pcs.	Item No.
KVM-P	–	1	100.000	**2363019**

High-quality one-component cartridge pistol for use with the AQUASIT cold casting compound. The cartridge pistol can also be used with normal 300 ml cartridges.

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Always indicate the item number when ordering.

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Distribution box

Distribution box, 3 division units 144

Distribution box, 5 division units 145

Distribution box, 9 division units 146

Distribution box, 12 division units 147

Terminal sets 149

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Sturdy and safe

These high-quality polycarbonate distribution boxes protect electrical installations even when under extreme strain. They can withstand harsh cleaning agents, cold and heat, and knocks and impacts in industrial settings and public places. In short, this distribution box series can handle any application – even in uncovered outdoor locations.

Shock-resistant – in any position

The SDB distribution boxes from OBO Bettermann are tough customers. OBO has only just added the versatile plastic housing to its range of products. This is characterised by its robustness and reliability. In the tough environment of industrial production, they ensure that power is available at any time.

OBO BETTERMANN

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Always indicate the item number when ordering.

Protection rating IP66

With a protection rating of IP66, the small distributors additionally provide protection against powerful water jets and dust.

2 materials

The small distributors are available in two different materials to suit different installation locations. The professional quality housing is made from robust polystyrene. This quality is suitable for use primarily in indoor and covered outdoor environments. For even greater stability and safety, opt for the polycarbonate distributors.

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Simple and particularly flexible installation

Thanks to the use of high-quality special plastics, the new OBO SDB series can satisfy all the requirements for modern small distributors. In addition, it allows simple and particularly flexible installation.

Flexible fastening

The housing can be attached using internal, external or corner fastenings, as required.

Simply plugged-in

Innovative PE/N terminal with
- 1x 25 mm² screw terminal
- 1x 16 mm² screw terminal
- 2x 4 mm² screwless terminals
- 12x 2.5 mm² screwless terminals

Shock-resistant – in any position

The SDB small distributors from OBO Bettermann are tough customers. OBO has only just added the versatile plastic housing to its range of products. This is characterised by its robustness and reliability. In the tough environment of industrial production, they ensure that power is available at any time.

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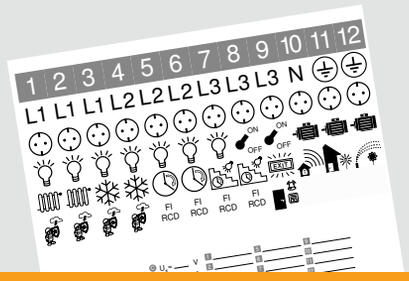

Practical details

The practical adhesive labelling sheets with self-adhesive pictograms ensure tidy, simple labelling of the installation.

Four sizes

The four sizes with three, five, nine or twelve division units offer flexible installation space for devices on hat rails.

Perfect handling

The robust locking contour can be opened and closed easily – perfect for daily use in tough industrial environments.

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Distribution box, 3 division units, with screwless terminal

IP 66 | IK 07 | M20 | M25 | M | 400 V | UV RESISTANT | 850° | VDE

Type	Terminals	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 03 PC	Connector	Light grey	150x190x125	1	75.540	**2008840**

PC Polycarbonate

Surface-mounted distribution box, with protective insulation for max. 3 division units. There are 3 break-out openings (2x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and exterior mounting
VDE-tested to DIN EN 61439
Accessories:
· Terminal strip set consisting of: One PE/N terminal (1x25² and 1x16² screw terminal points, 2x4² and 12x2.5² screwless terminals), mini hat profile rail, mounting instructions and fastening set
· Self-adhesive pictograms for installation labelling
· Two elastic cable entries Ø20 mm for cable diameters 0–17 mm
· One elastic cable entry Ø25 mm for cable diameter 0–22 mm
· Two stainless steel external fastenings
· Cover strip for closing off unused separation units

Distribution box, 3 division units, with screw terminal

IP 66 | IK 06 | M20 | M25 | M | 400 V | 650°

Type	Terminals	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 03 PS	Screw	Light grey	150x190x125	1	81.000	**2008800**

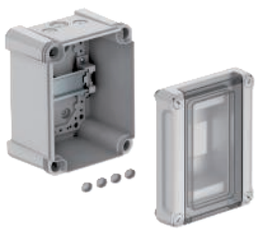
PS Polystyrene

Surface-mounted distribution box, with protective insulation for max. 3 division units. There are 3 break-out openings (2x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and protected exterior mounting
Accessories:
· Terminal strip set consisting of: One PE/N terminals with 4x 16 mm² screw terminal points, mini hat profile rail, mounting instructions and fastening set
· Self-adhesive pictograms for installation labelling and labelling of the connected consumers
· Two elastic cable entries Ø20 mm for cable diameters 0–17 mm
· One elastic cable entry Ø25 mm for cable diameter 0–22 mm

Distribution box, 3 division units, empty

IP 66 | IK 07 | M20 | M25 | M | 400 V | UV RESISTANT | 850° | VDE



Type	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 03L PC	Light grey	150x190x125	1	78.000	**2008860**
SDB 03L PS	Light grey	150x190x125	1	69.000	**2008820**

PS Polystyrene PC Polycarbonate

Surface-mounted distribution box, with protective insulation for max. 3 division units. There are 3 break-out openings (2x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

The PC distribution boxes are suitable for mounting for interior and exterior use.

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Distribution box, 5 division units, with screwless terminal

IP 66 | IK 07 | M20 | M25 | M | 400 V | UV RESISTANT | 850° | VDE

Type	Terminals	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 05 PC	Connector	Light grey	190x150x125	1	76.040	**2008844**

PC Polycarbonate

Surface-mounteddistribution box, with protective insulation for max. 5 division units. There are 5 break-out openings (4x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and exterior mounting
VDE-tested to DIN EN 61439
Accessories:
· Terminal strip set consisting of: One PE/N terminal (1x25² and 1x16² screw terminal points, 2x4² and 12x2.5² screwless terminals), mini hat profile rail, mounting instructions and fastening set
· Self-adhesive pictograms for installation labelling
· Four elastic cable entries Ø20 mm for cable diameters 0–17 mm
· One elastic cable entry Ø25 mm for cable diameter 0–22 mm
· Two stainless steel external fastenings
· Cover strip for closing off unused separation units

Distribution box, 5 division units, with screw terminal

IP 66 | IK 06 | M20 | M25 | M | 400 V | 650°

Type	Terminals	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 05 PS	Screw	Light grey	190x150x125	1	81.500	**2008804**

PS Polystyrene

Surface-mounteddistribution box, with protective insulation for max. 5 division units. There are 5 break-out openings (4x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and protected exterior mounting;
Accessories:
· Terminal strip set consisting of: One PE/N terminals with 4x 16 mm² screw terminal points, mini hat profile rail, mounting instructions and fastening set
· Self-adhesive pictograms for installation labelling and labelling of the connected consumers
· Four elastic cable entries Ø20 mm for cable diameters 0–17 mm
· One elastic cable entry Ø25 mm for cable diameter 0–22 mm

Distribution box, 5 division units, empty

IP 66 | IK 07 | M20 | M25 | M | 400 V | UV RESISTANT | 850° | VDE

Type	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 05L PC	Light grey	190x150x125	1	78.500	**2008864**
SDB 05L PS	Light grey	190x150x125	1	69.500	**2008824**

PS Polystyrene PC Polycarbonate

Surface-mounteddistribution box, with protective insulation for max. 5 division units. There are 5 break-out openings (4x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

The PC distribution boxes are suitable for mounting for interior and exterior use.

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Distribution box, 9 division units, with screwless terminal

IP 66 | IK 07 | M20 | M25 | M32 | M | 400 V | UV RESISTANT | 850° | VDE

Type	Terminals	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 09 PC	Connector	Light grey	240x191x125	1	103.840	**2008848**

PC Polycarbonate

Surface-mounted distribution box, with protective insulation for max. 9 division units. There are 9 break-out openings (8x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and exterior mounting
VDE-tested to DIN EN 61439
Accessories:
· Terminal strip set consisting of: One PE/N terminal (1x25² and 1x16² screw terminal points, 2x4² and 12x2.5² screwless terminals), mini hat profile rail, mounting instructions and fastening set
· Self-adhesive pictograms for installation labelling
· Six elastic cable entries Ø20 mm for cable diameters 0–17 mm
· One elastic cable entry Ø25 mm for cable diameter 0–22 mm
· One elastic cable entry Ø32 mm for cable diameter 0–28 mm
· Two stainless steel external fastenings
· Cover strip for closing off unused separation units

Distribution box, 9 division units, with screw terminal

IP 66 | IK 06 | M20 | M25 | M32 | M | 400 V | 650°

Type	Terminals	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 09 PS	Screw	Light grey	240x191x125	1	110.000	**2008808**

PS Polystyrene

Surface-mounted distribution box, with protective insulation for max. 9 division units. There are 9 break-out openings (8x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and protected exterior mounting
Accessories:
·Terminal strip set consisting of: Two PE/N terminals each with 4x 16 mm² screw terminal points, mini hat profile rail, mounting instructions and fastening set
· Self-adhesive pictograms for installation labelling and labelling of the connected consumers;
· Six elastic cable entries Ø20 mm for cable diameters 0–17 mm
· One elastic cable entry Ø25 mm for cable diameter 0–22 mm
· One elastic cable entry Ø32 mm for cable diameter 0–28 mm

Distribution box, 9 division units, empty

IP 66 | IK 06 | M20 | M25 | M32 | M | 400 V | 650°

Type	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 09L PS	Light grey	240x191x125	1	96.000	**2008828**
SDB 09L PC	Light grey	240x191x125	1	108.000	**2008868**

PS Polystyrene PC Polycarbonate

Surface-mounted distribution box, with protective insulation for max. 9 division units. There are 9 break-out openings (8x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

The PS distribution boxes are suitable for mounting in interiors and in protected exteriors.

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Distribution box, 12 division units, with screwless terminal

IP 66 | IK 06 | M20 | M25 | M32 | M | 400 V | UV RESISTANT | 850° | VDE

Type	Terminals	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 12 PC	Connector	Light grey	286x202x125	1	150.000	**2008852**

PC Polycarbonate

Surface-mounted distribution box, with protective insulation for max. 12 division units. There are 11 break-out openings (10x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and exterior mounting
VDE-tested to DIN EN 61439
Accessories:
· Terminal strip set consisting of: One PE/N terminal (1x25² and 1x16² screw terminal points, 2x4² and 12x2.5² screwless terminals), mini hat profile rail, mounting instructions and fastening set
· Self-adhesive pictograms for installation labelling
· Eight elastic cable entries Ø20 mm for cable diameters 0–17 mm
· One elastic cable entry Ø25 mm for cable diameter 0–22 mm
· One elastic cable entry Ø32 mm for cable diameter 0–28 mm
· Two stainless steel external fastenings
· Cover strip for closing off unused separation units

Distribution box, 12 division units, with screw terminal

IP 66 | IK 06 | IK 07 | M20 | M25 | M32 | M | 400 V | 650°

Type	Terminals	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 12 PS	Screw	Light grey	286x202x125	1	141.000	**2008812**

PS Polystyrene

Surface-mounted distribution box, with protective insulation for max. 12 division units. There are 11 break-out openings (10x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and protected exterior mounting
Accessories:
·Terminal strip set consisting of: Three PE/N terminals each with 4x 16 mm² screw terminal points, mini hat profile rail, mounting instructions and fastening set
· Self-adhesive pictograms for installation labelling and labelling of the connected consumers
· Eight elastic cable entries Ø20 mm for cable diameters 0–17 mm
· One elastic cable entry Ø25 mm for cable diameter 0–22 mm
· One elastic cable entry Ø32 mm for cable diameter 0–28 mm

Distribution box, 12 division units, empty

IP 66 | IK 06 | M20 | M25 | M32 | M | 400 V | 650°

Type	Colour	Dimension LxWxH mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SDB 12L PS	Light grey	286x202x125	1	120.000	**2008832**
SDB 12L PC	Light grey	286x202x125	1	134.000	**2008872**

PS Polystyrene PC Polycarbonate

Surface-mounted distribution box, with protective insulation for max. 12 division units. There are 11 break-out openings (10x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

The PS distribution boxes are suitable for mounting in interiors and in protected exteriors.

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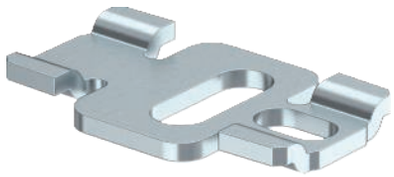
Always indicate the item number when ordering.

External fastening or connection



Type	Pack. pcs	Weight kg/100 pcs.	Item No.
AV-S	20	0.900	**2007990**

V2A Stainless steel, A2

The junction box is tested according to DIN EN 60670-1, VDE 0606-1:2014 (EN 60670-1:2005 + Cor.:2007 + Cor.:2010 + A1:2013) and DIN EN 60670-22, VDE 0606-22:2007 (EN 60670-22:2006)

The junction box fulfils the protection type test requirements to IP 67 according to DIN EN 60529, VDE0470-1:2014 (EN 60529/AC:2016)

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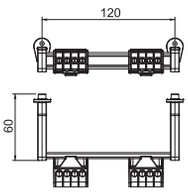
Always indicate the item number when ordering.

Terminal strip set with screw terminals for SDB 03

Type	Number of screwless terminals per pole	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 03	4	1	7.990	**2008880**



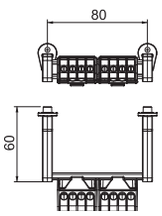
Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 03... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm² protective conductor terminal; 16 mm² neutral conductor terminal

Terminal strip set with screw terminals for SDB 05

Type	Number of screwless terminals per pole	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 05	4	1	7.290	**2008884**



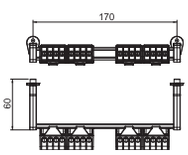
Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 05... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm² protective conductor terminal; 16 mm² neutral conductor terminal

Terminal strip set with screw terminals for SDB 09

Type	Number of screwless terminals per pole	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 09	8	1	8.890	**2008888**



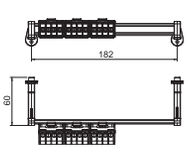
Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 09... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm² protective conductor terminal; 16 mm² neutral conductor terminal

Terminal strip set with screw terminals for SDB 12

Type	Number of screwless terminals per pole	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 12	12	1	9.090	**2008892**



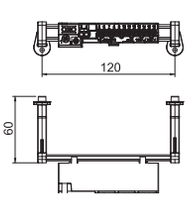
Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 12... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm² protective conductor terminal; 16 mm² neutral conductor terminal

Terminal strip set with screwless terminals for SDB 03

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 03S	1	13.830	**2008910**



Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 03... type series.

The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm² screw terminals and 2x 4 mm² and 12x 2.5 mm² screwless terminals

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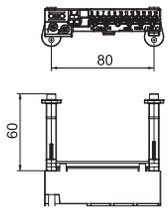
Always indicate the item number when ordering.

Terminal strip set with screwless terminals for SDB 05



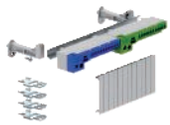
Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 05S	1	13.130	**2008914**

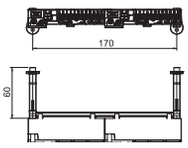
Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 05... type series.

The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm² screw terminals and 2x 4 mm² and 12x 2.5 mm² screwless terminals

Terminal strip set with screwless terminals for SDB 09





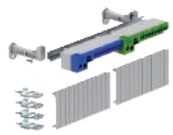
Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 09S	1	14.730	**2008918**

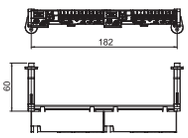
Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 09... type series.

The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm² screw terminals and 2x 4 mm² and 12x 2.5 mm² screwless terminals

Terminal strip set with screwless terminals for SDB 12





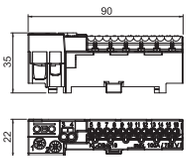
Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 12S	1	14.180	**2008922**

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 12... type series.

The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm² screw terminals and 2x 4 mm² and 12x 2.5 mm² screwless terminals

Protective conductor terminal, with screwless contacts, 12 terminals



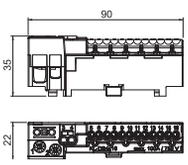
960°

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-DBS12x02GRGN	Grey / green	10	4.500	**2016260**

PA Polyamide

Protective conductor connection terminal with 12 2.5 mm² screwless terminal points; two 4 mm² screwless terminal points and two 16/25 mm² screw connection terminal points.
For snapping onto 15 mm hat rails to DIN EN 60715 (formerly DIN EN 50022).

Neutral conductor terminal, with screwless contacts, 12 terminals



960°

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-DBN12x02GRBL	Grey / blue	10	4.500	**2016265**

PA Polyamide

Protective conductor connection terminal with 12 2.5 mm² screwless terminal points; two 4 mm² screwless terminal points and two 16/25 mm² screw connection terminal points.
For snapping onto 15 mm hat rails to DIN EN 60715 (formerly DIN EN 50022).

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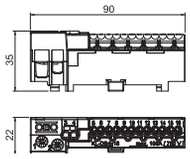
Phase terminal, with screwless contacts, 12 terminals

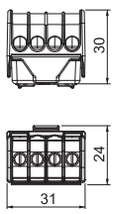


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-DBP12x02GR	Grey	10	4.500	**2016270**

PA Polyamide

Phase connection terminal with 12 2.5 mm² screwless terminal points; two 4 mm² screwless terminal points and two 16/25 mm² screw connection terminal points.
For snapping onto 15 mm hat rails to DIN EN 50022.

Protective conductor terminal, with screw contacts, 4 terminals

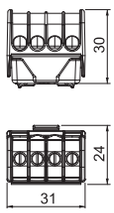


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-DBS4x16GN	Green	10	1.980	**2016250**

PA Polyamide

Protective conductor brass connection terminal strip, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 - 16 mm², nominal voltage 400 V, 1-pole, with terminal sockets, max. connectable conductors per terminal max. 4 x 16 mm², 4 x 10 mm², 8x6 mm² or 12 x 4 mm².

Neutral conductor terminal, with screw contacts, 4 terminals



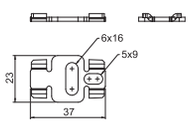
Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-DBN4x16BL	Blue	10	1.980	**2016255**

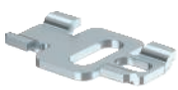
PA Polyamide

Neutral conductor brass connection terminal, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 - 16 mm², nominal voltage 400 V, 1-pole, with terminal sockets, max. connectable conductors per terminal max. 4 x 16 mm², 4 x 10 mm², 8x6 mm² or 12 x 4 mm².

External fastening or connection

IP 67 · IK 09 · M20 · M25 · M32 · M40 · 7 · 750 V · 650° · UV RESISTANT





Type	Pack. pcs	Weight kg/100 pcs.	Item No.
AV-S	20	0.900	**2007990**

V2A Stainless steel, A2

The convenient external fastening/connection means the cable boxes and distribution boxes of the S and SDB series can be fastened easily to a wall. Because they fasten outside the cable box, the possibility of voltage carry over is ruled out.
These metal connectors can also be used for lining up several boxes together.

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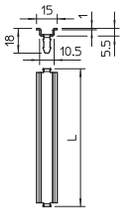
Hat profile rail 15 x 5 mm



Type	Version	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
46277 T160 Q GTP	For T160 crosswise + T100 lengthwise	99	10	9.641	**1115270**
46277 T250 Q GTP	For T250 crosswise + T160 lengthwise	139	10	13.520	**1115274**
46277 T250 L GTP	For T 250 lengthwise	189	10	17.900	**1115278**
46277 T350 Q GTP	For T 350 crosswise	161	10	15.670	**1115282**
46277 T350 L GTP	For T 350 lengthwise	168	10	16.370	**1115286**

St Steel

GTP Electrogalvanised, transparently passivated

Hat profile rail 15 x 5 mm to DIN EN 60715 (formerly DIN EN 50045).

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Always indicate the item number when ordering.

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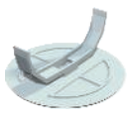
Concealed and cavity wall systems

	Concealed	156
	Connection box	156
	Wall light connection socket	157
	Cover and sprung cover	158
	Cavity wall accessory and connection sockets	161

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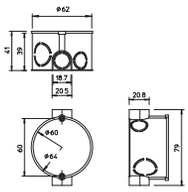
Concealed systems

Accessory/connection socket with torsion-resistant guaranteed standard combination spacing of 71 mm (to DIN 49 073-1) through snap-lock coupling. Combinable for spreading and screw fastening, low-lying plaster brackets, device bolt spacing 60 mm, for screw fastening with 3.2 mm self-tapping screws, with 2 screw bosses without screws, protection rating IP20.

Concealed accessory box



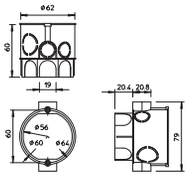
Ø 60

Type	Colour	No. of entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
UG 60 D	Black	7	20/25 mm	25	1.319	**2003015**

PS Polystyrene

Device socket with torsion-resistant guaranteed standard combination spacing of 71 mm (to DIN 49 073-1) through snap–lock coupling. 7 break-out openings for cables and pipes Ø 20 mm and Ø 25 mm. Combinable for spreading and screw fastening, low-lying plaster brackets, device bolt spacing 60 mm, for screw fastening with 3.2 mm self-tapping screws, with 2 screw bosses without screws, protection rating IP20.

Concealed accessory/connection socket



Ø 60

Type	Colour	No. of entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
UG 60 VD	Black	13	20/25 mm	25	1.790	**2003019**

PS Polystyrene

Device/connection socket with torsion-resistant guaranteed standard combination spacing of 71 mm (to DIN 49 073-1) through snap–lock coupling. 13 break-out openings for cables and pipes Ø 20 mm and Ø 25 mm. Combinable for spreading and screw fastening, low-lying plaster brackets, device bolt spacing 60 mm, for screw fastening with 3.2 mm self-tapping screws, with 2 screw bosses without screws, protection rating IP20.

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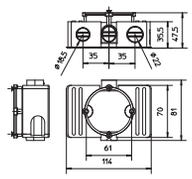
Always indicate the item number when ordering.

Concealed accessory/connection box

Ø 60



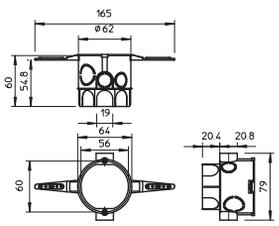
Type	Colour	No. of entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
UG 60 VK	Black	8	20 mm	10	4.600	**2003023**

PS Polystyrene

Device/connection socket with increased socket volume on both sides of device installation opening to accept connection terminals. Torsion-resistant guaranteed standard combination spacing of 71 mm (to DIN 49 073-1) through snap–lock coupling. 8 break-out openings for cables and pipes to Ø 21 mm, low-lying plaster brackets,
device bolt spacing 60 mm, for screw fastening with 3.2 mm self-tapping screws,
with 4 screw bosses and 2 device screws, protection rating IP20.

Concealed accessory/connection socket with nail strap

Ø 60

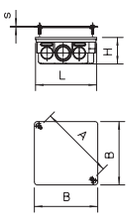


Type	Colour	No. of entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
UG 60 VD NL	Black	13	20/25 mm	100	2.040	**2003035**

PS Polystyrene

Device/connection socket with nail straps. These are used as a mounting aid to prefix the sockets. Nail diameter max. 3 mm, plaster thickness min. 8 mm, with increased socket volume to accept connection terminals. Torsion-resistant guaranteed standard combination spacing of 71 mm (to DIN 49 073-1) through snap–lock coupling. 13 break-out openings for cables and pipes Ø 20 mm and Ø 25 mm. Combinable for spreading and screw fastening, low-lying plaster brackets, device bolt spacing 60 mm, for screw fastening with 3.2 mm self-tapping screws, with 2 screw bosses without screws, protection rating IP20.

Concealed connection box

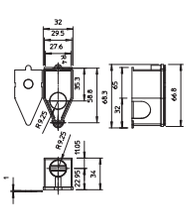


Type	Colour	No. of entries	Pack. pcs	Weight kg/100 pcs.	Item No.
UV 80 K	Black	12	50	4.500	**2003112**
UV 100 K	Black	12	50	5.836	**2003118**
UV 150 K	Black	12	16	15.667	**2003124**
UV 200 K	Black	12	10	35.714	**2003130**
UV 250 K	Black	12	10	52.000	**2003136**

PS Polystyrene

Connection box for clamping terminals, with lid and lid screw (15 mm), lid edge is flat, surface is roughened, in conjunction with the lid and lid screws, the connection sockets achieve the VDE test mark to VDE 0606 and are flame-resistant to VDE 0471/DIN 695 Part 2-1, testing temperature 750 °C, protection rating IP20.

Wall light connection socket



Type	Colour	No. of entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
UWA	Cream	3	Other	25	0.892	**2003082**

PS Polystyrene

Wall luminaire connection socket with internal lid, space for 3 connection terminals, use according to VDE 0100, 3 break-out openings for cables and pipes Ø 18.7 mm, not to be used as a connection socket, protection rating IP20.

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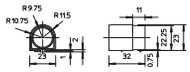
Expansion support for concealed accessory sockets

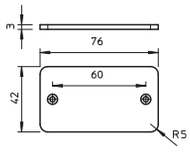


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
UG AS	Black	25	0.290	**2003212**

PS Polystyrene

Expansion support suitable for all sockets with tunnel support. Suitable for the combination of heavy and weak current devices and telecommunications equipment using separated covers, combination spacing 90 mm.

Wall light socket cover

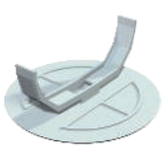


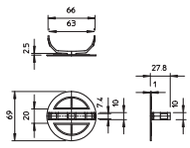
Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UW AD	White	250	10	0.600	**2003218**

PS Polystyrene

Wall light socket cover for flush closure of the wall outlet socket, surface is roughened, cover bolts can be lowered. Delivery including two 15 mm bolts.

Sprung cover, 60 mm





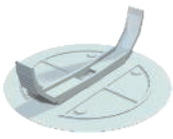
Ø 60

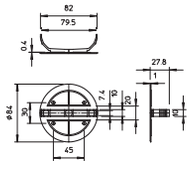
Type	Colour	Ø max.	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UG 60 FD	White	69	500	25	0.810	**2003223**

PS Polystyrene

Sprung cover with centrally moulded, elastic spreading spring, for sockets with Ø 60 mm, cover edge is flush, surface is roughened.

Sprung cover, 70 mm





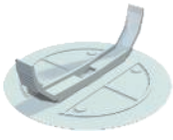
Ø 70

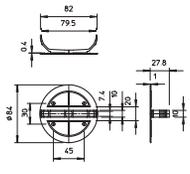
Type	Colour	Ø max.	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UV 70 FD	White	84	500	25	1.200	**2003227**

PS Polystyrene

Sprung cover with centrally moulded, elastic spreading spring, for sockets with Ø 70 mm, cover edge is flush, surface is roughened.

Sprung cover, 80 mm





Ø 74

Type	Colour	Ø max.	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UV 80 FD	White	95	500	25	1.500	**2004634**

PS Polystyrene

Sprung cover with centrally moulded, elastic spreading spring, for sockets with Ø 80 mm, cover edge is flush, surface is roughened.

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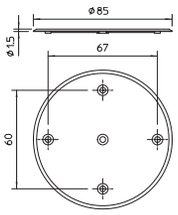
Always indicate the item number when ordering.

Universal cover

Type	Colour	Ø max.	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UG UD	White	84	400	20	1.070	**2003236**

PS Polystyrene

Universal cover for all socket types, cover with central fastening for connection sockets, bolt hole spacing 60 mm for accessory sockets and device connection sockets, bolt hole spacing 67 mm for connection sockets, cover edge is flush, surface is roughened, lowerable cover bolts.

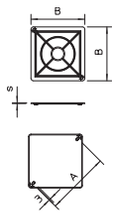


Box lid

Type	Dimension A mm	Dimension B mm	Dimension s mm	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UV 80 D	102	97	1.5	White	250	10	1.275	**2003240**
UV 100 D	130	114	1.5	White	240	10	2.004	**2003244**
UV 150 D	200	170	1.75	White	150	5	4.850	**2003248**
UV 200 D	260	210	2	White	50	5	9.500	**2003252**
UV 250 D	328	260	2.5	White	25	5	17.190	**2003256**

PS Polystyrene

Box cover suitable for the connection sockets, type UV...K, cover edge is flush, surface is roughened, cover bolts can be lowered.



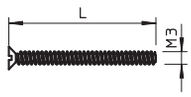
Device screw

Type	Dimension L mm	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
U 15 GS	15	3000	100	0.060	**2003265**
U 20 GS	20	2500	100	0.090	**2004676**
U 25 GS	25	2000	100	0.092	**2003269**
U 30 GS	30	2000	100	0.108	**2004680**
U 35 GS	35	1500	100	0.124	**2003273**
U 40 GS	40	1000	100	0.140	**2003277**

St Steel

G Electrogalvanised

Screws suitable for different types of device and lid fastening, with self-tapping thread Ø 3.2 mm.



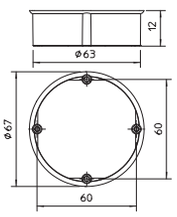
Surface equalisation ring, 12 mm, accessory sockets

Ø 60

Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UG 60 PA 12	– Red	250	25	0.700	**2003287**

PS Polystyrene

Compensation ring to screw onto deeply concealed accessory sockets and accessory connection sockets, can be combined, when they are screwed on at a 90° offset. Compensation heights selectable by combining the different types, with two device/cover screws 15 mm and two fastening screws, protection rating <%AID23613%>.



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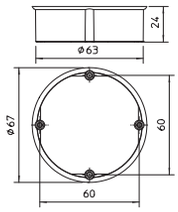
Surface equalisation ring, 24 mm, accessory sockets



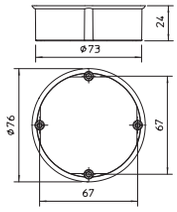
Ø 60

Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UG 60 PA 24	– Red	250	25	1.100	**2003295**

PS Polystyrene

Compensation ring to screw onto deeply concealed accessory sockets and accessory connection sockets, can be combined, when they are screwed on at a 90° offset. Compensation heights selectable by combining the different types, with two device/cover screws 15 mm and two fastening screws, protection rating.

Surface equalisation ring, 24 mm, connection sockets



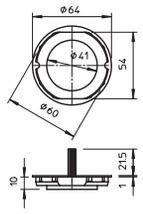
Ø 70

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
UV 70 PA 24	Red	25	1.850	**2003299**

PS Polystyrene

Compensation ring to screw onto deeply concealed connection sockets, can be combined, when they are screwed on at a 90° offset. Compensation heights selectable through combination of the various types, with 2 device/cover screws 15 mm and 2 fastening screws, protection rating.

Signal cover 60 mm, accessory sockets



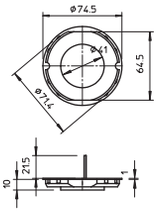
Ø 60

Type	Installation type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UG 60 SD	Concealed	Red	500	50	0.437	**2003317**

PE Polyethylene

Signal covers protect the interior, the screw domes and screw heads on plastering. The marking bristles allow simple location of the sockets and boxes after plastering. The signal covers can be used several times. After plastering, simply push the cover into the socket and remove the signal cover.

Signal cover, 70 mm, connection sockets



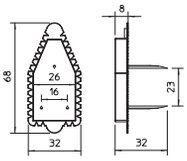
Ø 70

Type	Installation type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UV 70 SD	Concealed	Red	250	25	0.680	**2003321**

PE Polyethylene

Signal covers protect the interior, the screw domes and screw heads on plastering. The marking bristles allow simple location of the sockets and boxes after plastering. The signal covers can be used several times. After plastering, simply push the cover into the socket and remove the signal cover.

Signal cover, wall luminaire socket



Type	Installation type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UW ASD	Concealed	Red	100	100	0.200	**2003325**

PE Polyethylene

Signal covers protect the interior, the screw domes and screw heads on plastering. The marking bristles allow simple location of the sockets and boxes after plastering. The signal covers can be used several times. After plastering, simply push the cover into the socket and remove the signal cover.

Always indicate the item number when ordering.

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Cavity wall systems

Cavity wall accessory socket, wind-tight version through soft entry membrane. Dimensions to DIN 49073-1, for plate thickness 7–35 mm. Standard combination spacing 71 mm, option of through-wiring using connection supports when combining accessory sockets and accessory connection sockets, break-out openings/entry membranes for NYM cables, data cables and pipes of Ø 20 mm. Accessory sockets can also be used as connection sockets in accordance with VDE 0606-1 with double screw fastening and screw-on lid, protection rating IP 20, wind-tight version IP 40.

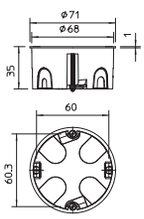
Cavity wall accessory socket, wind-proof

CE RoHS conform

Type	Milling hole Ø mm	Height mm	Ø max.	Entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
HG 60-35 MW	68	35	68	8	20 mm	25	1.275	**2003603**

PP Polypropylene

Cavity wall device socket, wind-proof version through soft entry membrane. Dimensions to DIN 49073-1, for plate thickness 7–35 mm. Standard combination spacing 71 mm, option for continuous wiring using connection support for combinations between device sockets and device connection sockets, 8 wind-proof insertion membranes for NYM cables, data cables and pipes Ø 20 mm., device sockets can also be used as connection sockets to VDE 0606-1 with double screw fastening and screw-on lid, protection rating IP40.



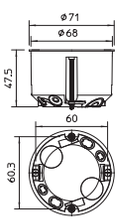
Cavity wall accessory socket, wind-proof

CE RoHS conform

Type	Milling hole Ø mm	Height mm	Ø max.	Entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
HG 60 MW	68	47	68	8	20 mm	25	2.160	**2003611**

PP Polypropylene

Cavity wall device socket, wind-proof version through soft entry membrane. Dimensions to DIN 49073-1, for plate thickness 7–35 mm. Standard combination spacing 71 mm, option for continuous wiring using connection support for combinations between device sockets and device connection sockets, 8 soft insertion membrane for NYM cables, data cables and pipes Ø 20 mm, device sockets can also be used as connection sockets to VDE 0606-1 with double screw fastening and screw-on lid, protection rating IP40.



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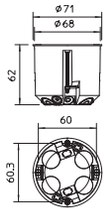
Cavity wall accessory/connection socket, wind-proof



Type	Milling hole Ø mm	Height mm	Ø max.	Entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
HV 60 MW	68	61	68	8	20 mm	25	2.600	**2003619**

PP Polypropylene

Cavity wall device/connection socket, wind-tight version through soft entry membrane. Dimensions to DIN 49073-1, for plate thickness 7–35 mm. Standard combination spacing 71 mm, option for continuous wiring using connection support for combinations between device sockets and device connection sockets,
8 wind-proof insertion membranes for NYM cables, data cables and pipes Ø 20 mm., device sockets can also be used as connection sockets to VDE 0606-1 with double screw fastening and screw-on lid, protection rating IP40.

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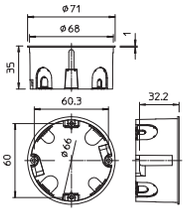
Cavity wall accessory socket

Ø 68 | IP 20 | 850° | Fluor Chlor Brom Halogenfrei | VDE

Type	Milling hole Ø mm	Height mm	Ø max.	Entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
HG 60-35	68	35	68	8	20 mm	25	1.811	**2003426**

PP Polypropylene

Cavity wall device socket. Dimensions to DIN 49073-1, for plate thickness 7–35 mm. Standard combination spacing 71 mm, option for continuous wiring using connection support for combinations between device sockets and device connection sockets, 8 break-out openings for NYM cables, data cables and pipes Ø 20 mm, device sockets can also be used as connection sockets to VDE 0606-1 with double screw fastening and screw-on lid, protection rating IP20.



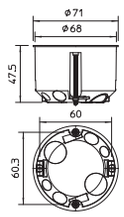
Cavity wall accessory socket

Ø 68 | IP 20 | 850° | Fluor Chlor Brom Halogenfrei | VDE

Type	Milling hole Ø mm	Height mm	Ø max.	Entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
HG 60	68	47	68	8	20 mm	25	2.180	**2003414**

PP Polypropylene

Cavity wall device socket. Dimensions to DIN 49073-1, for plate thickness 7–35 mm. Standard combination spacing 71 mm, option for continuous wiring using connection support for combinations between device sockets and device connection sockets, 8 break-out openings for NYM cables, data cables and pipes Ø 20 mm, device sockets can also be used as connection sockets to VDE 0606-1 with double screw fastening and screw-on lid, protection rating IP30.



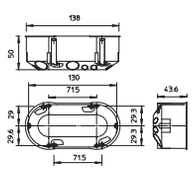
Cavity wall, double accessory socket

Ø 68 | IP 20 | 850° | Fluor Chlor Brom Halogenfrei | VDE

Type	Milling hole Ø mm	Height mm	Ø max.	Entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
HG 60 2	68	50	–	14	20 mm	10	4.850	**2003422**

PP Polypropylene

Double device socket, for two service units or one double service units, with four device screws. Dimensions to DIN 49073-1, for plate thickness 7–35 mm. Standard combination spacing 71 mm, 14 break-out openings for NYM cables, data cables and pipes Ø 20 mm, protection rating IP30.



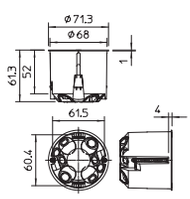
Cavity wall accessory/connection socket

Ø 68 | IP 20 | 850° | Fluor Chlor Brom Halogenfrei | VDE

Type	Milling hole Ø mm	Height mm	Ø max.	Entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
HV 60	68	61	68	8	20 mm	25	2.740	**2003442**

PP Polypropylene

Cavity wall device/connection socket Dimensions to DIN 49073-1, for plate thickness 7–35 mm. Standard combination spacing 71 mm, option for continuous wiring using connection support for combinations between accessory sockets and accessory connection sockets,
8 break-out openings for NYM cables, data cables and pipes Ø 20 mm, accessory sockets can also be used as connection sockets to VDE 0606-1 with double screw fastening and screw-on lid, protection rating IP30.



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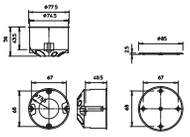
Always indicate the item number when ordering.

Cavity wall connection socket with cover



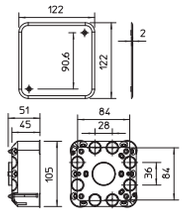
Ø 74

Type	Milling hole Ø mm	Height mm	Ø max.	Entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
HV 70 D	74	50	74	8	20 mm	10	3.650	**2003430**

PP Polypropylene

Cavity wall connection box with lid, dimensions to DIN 49073-1, for plate thickness 7–35 mm. 8 break-out openings for NYM cables, data cables and pipes Ø 20 mm, protection rating IP30.

Cavity wall connection box

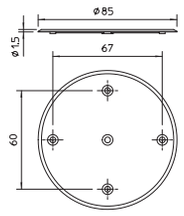


Type	Milling hole Ø mm	Height mm	Ø max.	Entries	Pipe Ø	Pack. pcs	Weight kg/100 pcs.	Item No.
HV 100 KD	–	50	–	20	20 mm	25	6.300	**2003449**

PP Polypropylene

Cavity wall connection box, 20 break-out openings for NYM cables, data cables and pipes Ø 20 mm, with lid and lid screws, with white lid and lid screws (flame-resistant to VDE 0471/DIN 695 Part 2-1, testing temperature 750 °C), for plate thickness 7-35 mm. Suitable for installation of standard rails (hat and support rails) for series terminals, protection rating IP30.

Universal cover



Type	Colour	Ø max.	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
UG UD	White	84	400	20	1.070	**2003236**

PS Polystyrene

Universal cover for all socket types, cover with central fastening for connection sockets, bolt hole spacing 60 mm for accessory sockets and device connection sockets, bolt hole spacing 67 mm for connection sockets, cover edge is flush, surface is roughened, lowerable cover bolts.

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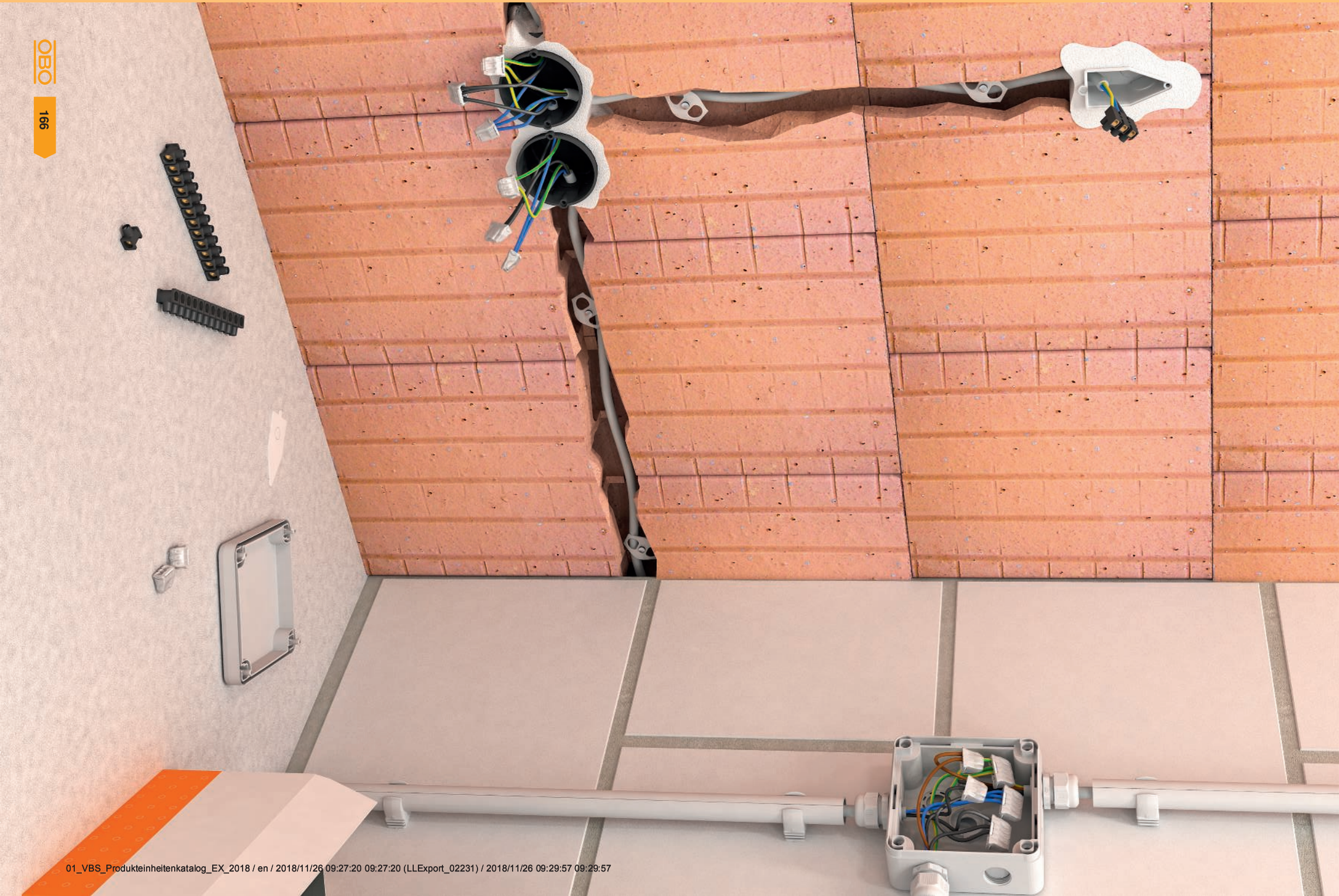
Always indicate the item number when ordering.



Terminal systems

Individual connection terminals, plug-in 170

Individual connection terminals, screw-in 175

Connection and housing terminals 175

Neutral and protective conductor terminal 184

Main cable junction terminals 185

Terminal sets 186

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Individual connection terminals, plug-in

- Screwless terminal, universal
- Screwless terminals
- Luminaire connection terminals

Individual connection terminals, screw-in

- Dolü terminals
- Terminal strips

Connection/housing terminals

- Phase terminals

Connection/housing terminals

- Neutral and protective conductors
- Hat profile rail, T series

Main cable junction terminals

- Multi-pin terminal blocks
- Quick fastening for hat profile rails

Connection/housing terminals

- Set for small distributors

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Always indicate the item number when ordering.

Screwless universal terminal

- Simple connection and disconnection
- Test opening
- Simple checking of the stripping length
- For flexible and rigid conductors
- Rigid conductors can be inserted without even handling the release lever
- Connection cross-sections of 0.2 to 2.5 mm²
- Tested to EN 60998

Simply plugged-in

This is the easiest way to connect or disconnect rigid cables and strands: OBO's new screwless connection terminals for flexible and rigid cables.

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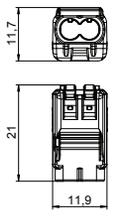
Universal plug-in terminal, 2-pole

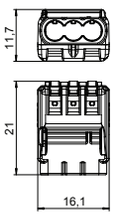


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
61 225 FL	Transparent	100	0.200	**2054450**

PC Polycarbonate

Tested according to EN 60998
Screwless terminal to connect electrical conductors. The type of conductor can either be flexible, multi-wire or rigid.
If rigid conductors are used, an opening of the release lever is not necessary. The conductor can be plugged into the terminal directly.
To extract the conductors, simply open the release lever. The strand can then be easily pulled-out.
Nominal cross-section:
2 x 0.2 - 2.5 mm² multi-wire cables / single-wire conductors
Rated voltage V
Rated current A
Stripping length: 9 mm (+1 mm)
Inspection opening: Phase tester and testing pin (max. Ø 2 mm), very easily accessible on the top side of the terminal
Max. approved ambient temperature according to EN 60998: 85 °C.

Universal plug-in terminal, 3-pole

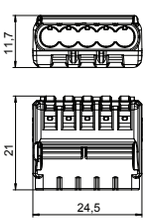


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
61 325 FL	Transparent	75	0.270	**2054454**

PC Polycarbonate

Tested according to EN 60998
Screwless terminal to connect electrical conductors. The type of conductor can either be flexible, multi-wire or rigid.
If rigid conductors are used, an opening of the release lever is not necessary. The conductor can be plugged into the terminal directly.
To extract the conductors, simply open the release lever. The strand can then be easily pulled-out.
Nominal cross-section:
3 x 0.2 - 2.5 mm² multi-wire cables / single-wire conductors
Rated voltage V
Rated current A
Stripping length: 9 mm (+1 mm)
Inspection opening: Phase tester and testing pin (max. Ø 2 mm), very easily accessible on the top side of the terminal
Max. approved ambient temperature according to EN 60998: 85 °C.

Universal plug-in terminal, 5-pole



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
61 525 FL	Transparent	50	0.410	**2054458**

PC Polycarbonate

Tested according to EN 60998
Screwless terminal to connect electrical conductors. The type of conductor can either be flexible, multi-wire or rigid.
If rigid conductors are used, an opening of the release lever is not necessary. The conductor can be plugged into the terminal directly.
To extract the conductors, simply open the release lever. The strand can then be easily pulled-out.
Nominal cross-section:
5 x 0.2 - 2.5 mm² multi-wire cables / single-wire conductors
Rated voltage V
Rated current A
Stripping length: 9 mm (+1 mm)
Inspection opening: Phase tester and testing pin (max. Ø 2 mm), very easily accessible on the top side of the terminal
Max. approved ambient temperature according to EN 60998: 85 °C.

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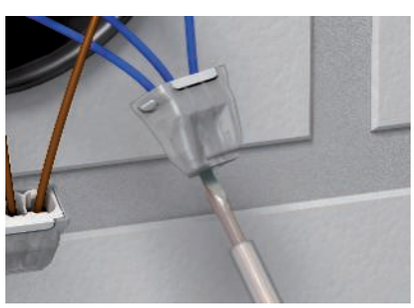
Always indicate the item number when ordering.

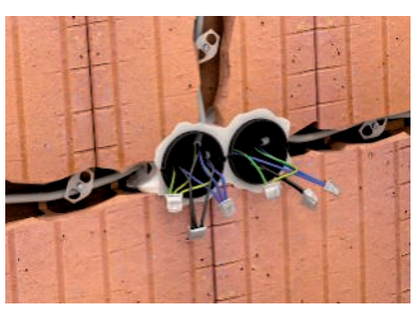
Screwless terminals 61 ... LGR

- Tested to EN 60998
- Nominal cross-section:
- 3, 5 or 8 x 0.5 mm²–2.5 mm² single-strand conductors
  3, 5 or 8 x 1.5 mm²–2.5 mm² rigid,
  multi-wire conductors
- Nominal voltage 450 V
- Nominal current 24 A
- Stripped length: 8–9 mm
- Inspection opening: Phase tester and testing pin (max. Ø 2 mm)
- Max. approved ambient temperature to EN 60998: 90 °C

For 3, 5 and 8 conductors

Screwless terminals for quick and easy connection of single-strand or rigid multi-wire cables.





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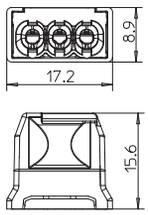
Screwless terminals, 3-pole

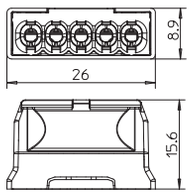


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
61 325 LGR	Light grey	100	0.135	**2054485**

PA Polyamide

Screwless terminal to connect single-strand cables.
Nominal cross-section:
5 x 0.5 mm² to 2.5 mm² single-wire cable
5 x 1.5 mm² to 2.5 mm² rigid, multi-wire cable
Rated voltage V.
Rated current A.
Stripping length: 8–9 mm.
Inspection opening: phase tester and testing pin (max. Ø 2 mm).

Screwless terminals, 5-pole

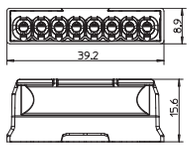


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
61 525 LGR	Light grey	100	0.300	**2054507**

PA Polyamide

Screwless terminal to connect single-strand cables.
Nominal cross-section:
5 x 0.5 mm² to 2.5 mm² single-wire cable
5 x 1.5 mm² to 2.5 mm² rigid, multi-wire cable
Rated voltage V.
Rated current A.
Stripping length: 8–9 mm.
Inspection opening: phase tester and testing pin (max. Ø 2 mm).

Screwless terminals, 8-pole



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
61 825 LGR	Light grey	50	0.490	**2054523**

PA Polyamide

Screwless terminal to connect single-strand cables.
Nominal cross-section:
8 x 0.5 mm² to 2.5 mm² single-wire cable.
8 x 1.5 mm² to 2.5 mm² rigid, multi-wire cable.
Rated voltage V.
Rated current A.
Stripping length: 8–9 mm.
Inspection opening: phase tester and testing pin (max. Ø 2 mm).

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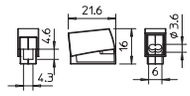
Always indicate the item number when ordering.

Luminaire connection terminal with 3 connections



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
61 2/1 25 WS	White	100	0.225	**2054755**

PA Polyamide

Luminaire connection terminal for toolless connection of remote cables. Tested according to EN 60998
Screwless terminal to connect single-wire cables to multi-wire cables.
Nominal cross-section:
0,5 - 2,5
Rated voltage V
Rated current A
Stripping length: 8–9 mm
Inspection opening: Phase tester and testing pin (max. Ø 2 mm)
Max. approved ambient temperature according to EN 60998: T 110°C

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Dolü branch terminal

- “Dolü” is an OBO trademark that stands for cutting-edge quality
- Proven technology for more than 50 years
- 12-pin, individual terminals detachable
- Various colours

70/S VDE

The branch terminal/terminal strip consists of an insulating plastic housing that serves as electric shock protection for the steel/brass terminal insert. Thus no voltage-carrying parts can be touched if the component is used correctly. The ends of the wire strands must be inserted using ferrules. These ensure no mechanical damage can occur and rule out the risk of damage to individual strands from the clamping screw as it turns. When using lustre terminals, it must be ensured in each individual case that the installation conforms to the applicable VDE standards.

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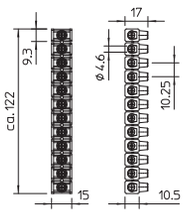
Always indicate the item number when ordering.

Dolü branch terminals, open on both sides 12 pole

2,5 mm² | 12 | Fluor Chlor Brom HALOGENFREI | 850°

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
70 VDE	(sorted)	10	2.500	**2055023**

PA Polyamide



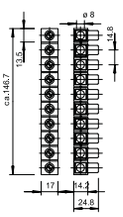
* Sorted in colours black, brown, blue and yellow-green.
Terminals made of brass, screws of steel, galvanised and transparently passivated, 12-pole, strip separable into individual terminals, open on both sides.
Captive upwards screw.
Nominal cross-section 2,5 mm².
Nominal voltage 380 V.
Nominal current 16 A.
Max. connectable cross-sections per terminal: 4 x 2.5 mm², 5 x 1.5 mm² or 6 x 1 mm².

Dolü branch terminals, open on both sides 10 pole

Fluor Chlor Brom HALOGENFREI | 850°

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
71	Black	10	7.030	**2055503**

PP Polypropylene



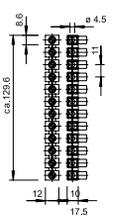
Terminals made of brass, screws of steel, galvanised and transparently passivated, 10-pole, strip separable into individual terminals, open on both sides.
Captive upwards screw.
Nominal cross-section 10 mm².
Nominal voltage 380 V.
Max. connectable cross-sections per terminal: 3 x 10 mm², 4 x 6 mm².

Dolü branch terminals, open on one side

Fluor Chlor Brom HALOGENFREI | 850°

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
70 S	(sorted)	10	2.852	**2055201**

PA Polyamide



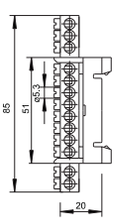
Terminals made of brass, screws of steel, galvanised and transparently passivated, 12-pole, strip separable into individual terminals, only open on one side.
Closed on one side, captive upwards screw.
Nominal cross-section 2,5 mm².
Nominal voltage 250 V.
Nominal current 24 A.
Max. connectable cross-sections per terminal: 4 x 2.5 mm², 5 x 1.5 mm² or 6 x 1 mm².
Delivery sorted by colour: 3 black, 2 blue, 3 yellow-green, 1 brown and 1 grey strip in each packaging unit.

Protection conductor terminals, with screw contacts, 12 terminals

Fluor Chlor Brom HALOGENFREI | 960°

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
60 S 12x16 GN	Green	10	4.200	**2054094**

PA Polyamide



Protective conductor connection terminal with 7 terminals up to 16 mm².
Clamping rail, brass, steel screws, electrogalvanised and transparently passivated, for snapping onto 35 x 7.5 mm hat profile rails to DIN EN 60715 (previously DIN EN 50022) (transverse) or flat rails 10 x 2-2.5 mm (lengthwise).

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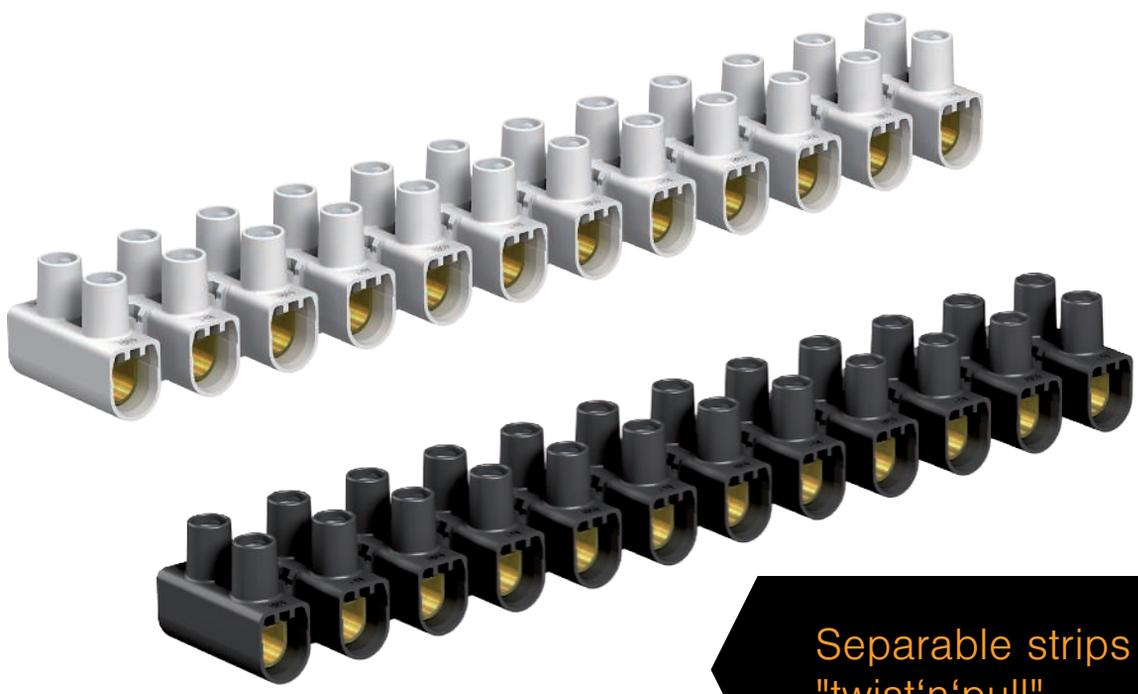
Terminal strips

- Tested to EN 60998
- Brass terminals, bolts made of electrogalvanised steel
- 12-pin strips, separable into individual terminals through "twist‘n‘pull"
- Captive upwards screw
- Max. approved ambient temperature to EN 60998: –5 to +80 °C
- Nominal cross-section 4–35 mm²



Separable strips through "twist‘n‘pull"

The branch terminal/terminal strip consists of an insulating plastic housing that serves as electric shock protection for the steel/brass terminal insert. Thus no voltage-carrying parts can be touched if the component is used correctly. The ends of wire strands must be inserted with wire end sleeves to ensure no mechanical damage can occur and rule out the risk of damage to individual strands from the clamping screw as it turns.

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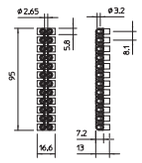
Always indicate the item number when ordering.

4 mm² series connectors, polypropylene

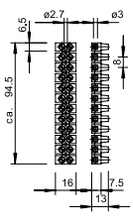


Type	72 CE WS/EKL 0 S	72 CE SW/EKL 0 S
Colour	White	Black
Box quantity pcs	500	500
Pack. pcs	10	10
Weight kg/100 pcs.	1.800	1.800
Item No.	**2056070**	**2056089**

PP Polypropylene

Tested to EN 60998.
Steel terminals, steel screws, electrogalvanised, 12-pole, individual terminals detachable from strips using "twist'n'pull".
Captive upwards screw.
Max. approved ambient temperature to EN 60998: –5 to +80 °C.
Nominal cross-section mm².
Nominal voltage 450 V.
Nominal current A.
Max. attachment each side: 4 mm² single-wire or 2.5 mm² multi-wire/flexible.

4 mm² series connector, polyamide

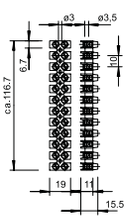


Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
72 VDE/EKL 0E PA	Transparent	500	10	2.000	**2055929**

PA Polyamide

Brass terminals, steel screws, galvanised and blue passivated, 12-pole, individual terminals detachable.
Captive upwards screw.
Nominal cross-section mm².
Nominal voltage V.
Nominal current A.
Max. attachment each side: 4 mm² single-wire or 2.5 mm² multi-wire.
Maximum approved ambient temperature to EN 60998: -5 to +85 °C.

Series connectors, 4 mm², polyamide wire protection clamp



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
74 D/EKL 1BEF2 D	Transparent	10	3.680	**2056178**

PA Polyamide

With wire protection clamp.
Tested to EN 60998.
Brass terminals, nickel-plated, steel screws, electrogalvanised and blue passivated, 12-pole, individual terminals detachable.
Captive upwards screw.
Nominal cross-section 4 mm²
Nominal voltage 450 V
Nominal current 32 A Max. attachment each side: 4 mm² single-wire or 4 mm² fine-wire.
Maximum approved ambient temperature to EN 60998: –5 to +85 °C.

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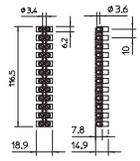
6 mm² series connectors, polypropylene

6 mm²



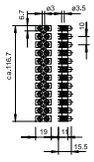
Type	74 CE WS/EKL 1 S	74 CE SW/EKL 1 S
Colour	White	Black
Box quantity pcs	200	200
Pack. pcs	10	10
Weight kg/100 pcs.	2.600	2.600
Item No.	**2056224**	**2056232**

PP Polypropylene

Tested to EN 60998.
Steel terminals, steel screws, electrogalvanised, 12-pole, individual terminals detachable from strips using "twist'n'pull".
Captive upwards screw.
Max. approved ambient temperature to EN 60998: –5 to +80 °C.
Nominal cross-section mm².
Nominal voltage 450 V.
Nominal current 41 A.
Max. attachment each side: 6 mm² single-wire or 4 mm² fine-wire.

6 mm² series connectors, polyamide

6 mm²



Type	74 VDE/EKL 1BEF2
Colour	Transparent
Pack. pcs	10
Weight kg/100 pcs.	3.580
Item No.	**2056143**

PA Polyamide

Tested to EN 60998.
Brass terminals, nickel-plated, steel screws, electrogalvanised and blue passivated, 12-pole, individual terminals detachable.
Captive upwards screw.
Nominal cross-section 6 mm²
Nominal voltage 450 V
Nominal current 41 A
Max. attachment each side: 6 mm² single-wire or 4 mm² fine-wire.
Maximum approved ambient temperature to EN 60998: –5 to +85 °C.

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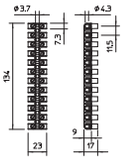
Always indicate the item number when ordering.

10 mm² series connectors, polypropylene

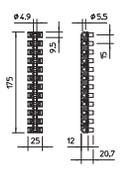


Type	76 CE WS/EKL 2 S	76 CE SW/EKL 2 S
Colour	White	Black
Pack. pcs	10	10
Weight kg/100 pcs.	4.300	4.300
Item No.	**2056372**	**2056380**

PP Polypropylene

Tested to EN 60998.
Steel terminals, steel screws, electrogalvanised, 12-pole, individual terminals detachable from strips using "twist'n'pull".
Captive upwards screw.
Max. approved ambient temperature to EN 60998: –5 to +80 °C.
Nominal cross-section 10 mm².
Nominal voltage 450 V.
Nominal current 57 A.
Max. attachment each side: 10 mm² single-wire or 6 mm² multi-wire/flexible.

16 mm² series connectors, polypropylene



Type	78 CE WS/EKL 3 S	78 CE SW/EKL 3 S
Colour	White	Black
Pack. pcs	10	10
Weight kg/100 pcs.	7.500	7.500
Item No.	**2056550**	**2056569**

PP Polypropylene

Tested to EN 60998.
Steel terminals, steel screws, electrogalvanised, 12-pole, individual terminals detachable from strips using "twist'n'pull".
Captive upwards screw.
Max. approved ambient temperature to EN 60998: –5 to +80 °C.
Nominal cross-section 16 mm².
Nominal voltage 450 V.
Nominal current 76 A.
Max. attachment each side: 16 mm² single-wire or 10 mm² multi-wire or 6 mm² flexible.

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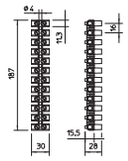
25 mm² series connectors, polypropylene

25 mm²



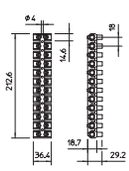
Type	79 CE WS/EKL 4BE	79 CE SW/EKL 4BE
Colour	White	Black
Pack. pcs	10	10
Weight kg/100 pcs.	11.200	11.200
Item No.	**2056577**	**2056585**

PP Polypropylene

Tested to EN 60998.
Brass terminals, steel screws, electrogalvanised and transparently passivated, 12-pole, individual terminals detachable from strips.
Captive upwards screw.
Max. approved ambient temperature to EN 60998: –5 to +80 °C.
Nominal cross-section 25 mm².
Nominal voltage 750 V.
Nominal current 101 A.
Max. attachment each side: 25 mm² multi-wire or 16 mm² fine-wire.

35 mm² series connectors, polypropylene

35 mm²



Type	80 CE WS/EKL 5E	80 CE SW/EKL 5E
Colour	White	Black
Pack. pcs	10	10
Weight kg/100 pcs.	17.400	17.400
Item No.	**2056590**	**2056593**

PP Polypropylene

Tested to EN 60998.
Brass terminals, steel screws, electrogalvanised, 12-pole, individual terminals detachable from strips.
Captive upwards screw.
Max. approved ambient temperature to EN 60998: –5 to +80 °C.
Nominal cross-section 35 mm².
Nominal voltage 750 V.
Nominal current 125 A.
Max. attachment each side: 35 mm² multi-wire or 25 mm² fine-wire.

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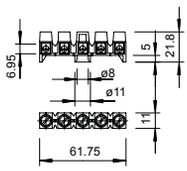
Always indicate the item number when ordering.

Terminal strip 2.5 mm²

Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
689	Light grey	5	0.8 - 2.5	660	50	1.502	**2017342**

PA Polyamide

Terminal strip, nickel-plated brass, steel screws, galvanised and transparently passivated, nominal cross-section 0,8 - 2,5 mm², nominal voltage 660 V, 5-pole, with terminal sockets, max. connectable cross-sections per terminal: 4 x 2.5 mm², 5 x 1.5 mm² or
6 x 1 mm², unnecessary poles can be cut off and used as individual terminals.

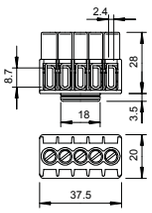


Terminal strip 1–4 mm², junction box, T series

Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 01-04	Light grey	5	1 - 4	400	10	2.100	**2016180**

PA Polyamide

Steel terminal block and bolts, galvanised and transparently passivated, nominal 1 - 4 mm², nominal voltage 400 V, 5-pole, with terminal sockets, Max. connectable cross-sections per terminal max. 4 x 2.5 mm², 5 x 1.5 mm² or 6 x 1 mm² .

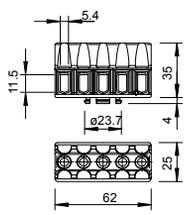


Terminal strip 1.5–6 mm², junction box, T series

Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 02-06	Light grey	5	1.5 - 6	400	10	4.380	**2016185**

PA Polyamide

Steel terminal block and bolts, galvanised and transparently passivated, nominal 1,5 - 6 mm², nominal voltage 400 V, 5-pole, with terminal sockets, Max. connectable cross-sections per terminal: 3 x 6 mm², 4 x 4 mm² or 6 x 2.5 mm² .

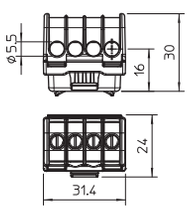


Terminal strip 6–16 mm², junction box, T series

Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 06-16	Light grey	4	6 - 16	400	10	1.970	**2016190**

PA Polyamide

Brass terminals, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 - 16 mm², nominal voltage 400 V, 1-pole, with terminal sockets, Max. connectable conductors per terminal max. 4 x 16 mm², 4 x 10 mm², 8x6 mm² or 12 x 4 mm².



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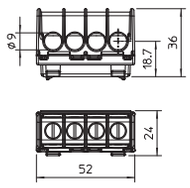
Terminal strip 16–35 mm², junction box, T series

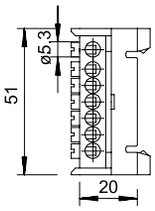


Type	Colour	No. of terminals	Nominal cross-section mm²	Nom. voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-T 16-35	Light grey	4	16 - 35	400	10	5.630	**2016195**

PA Polyamide

Brass terminals, steel screws, electrogalvanised and transparently passivated, nominal cross-section 16 - 35 mm², nominal voltage 400 V, 1-pole, with terminal sockets, Max. connectable conductors per terminal max. 4 x 35 mm², 4 x 25 mm², 8x16 mm² or 12 x 10 mm².

Protection conductor terminals, with screw contacts, 7 terminals

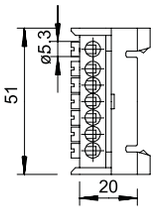


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
60 S 7x16 GN	Green	10	2.900	**2054019**

PA Polyamide

Protective conductor connection terminal with 7 terminals up to 16 mm².
Clamping rail, brass, steel screws, electrogalvanised and transparently passivated, for snapping onto 35 x 7.5 mm hat profile rails to DIN EN 60715 (previously DIN EN 50022) (transverse) or flat rails 10 x 2-2.5 mm (lengthwise).

Neutral conductor terminals, with screw contacts, 7 terminals

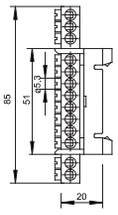


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
60 N 7x16 BL	Blue	10	2.900	**2054000**

PA Polyamide

Neutral conductor connection terminal with 7 terminals up to 16 mm².
Clamping rail, brass, steel screws, electrogalvanised and transparently passivated, for snapping onto 35 mm hat rails to DIN EN 60715 - previously DIN EN 50022 - (transverse) or flat rails 10 x 2-2.5 mm (lengthwise).

Protection conductor terminals, with screw contacts, 12 terminals



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
60 S 12x16 GN	Green	10	4.200	**2054094**

PA Polyamide

Protective conductor connection terminal with 7 terminals up to 16 mm².
Clamping rail, brass, steel screws, electrogalvanised and transparently passivated, for snapping onto 35 x 7.5 mm hat profile rails to DIN EN 60715 (previously DIN EN 50022) (transverse) or flat rails 10 x 2-2.5 mm (lengthwise).

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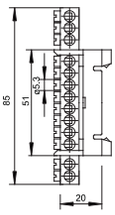
Neutral conductor terminals, with screw contacts, 12 terminals



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
60 N 12x16 BL	Blue	10	4.200	**2054086**

PA Polyamide

Neutral conductor connection terminal with 12 terminals up to 16 mm².
Clamping rail, brass, steel screws, electrogalvanised and transparently passivated, for snapping onto 35 mm hat rails to DIN EN 60715 - previously DIN EN 50022 - (transverse) or flat rails 10 x 2-2.5 mm (lengthwise).

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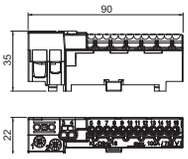
Protective conductor terminal, with screwless contacts, 12 terminals

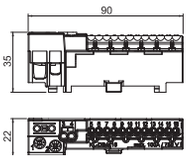


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-DBS12x02GRGN	Grey / green	10	4.500	**2016260**

PA Polyamide

Protective conductor connection terminal with 12 2.5 mm² screwless terminal points; two 4 mm² screwless terminal points and two 16/25 mm² screw connection terminal points.
For snapping onto 15 mm hat rails to DIN EN 60715 (formerly DIN EN 50022).

Neutral conductor terminal, with screwless contacts, 12 terminals

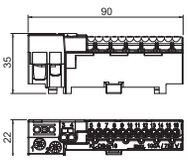


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-DBN12x02GRBL	Grey / blue	10	4.500	**2016265**

PA Polyamide

Neutral conductor connection terminal with twelve 2.5 mm² screwless terminal points; two 4 mm² screwless terminal points and two 16/25 mm² screw connection terminal points.
For snapping onto 15 mm hat rails to DIN EN 60715 (formerly DIN EN 50022).

Phase terminal, with screwless contacts, 12 terminals

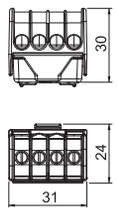


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-DBP12x02GR	Grey	10	4.500	**2016270**

PA Polyamide

Phase connection terminal with 12 2.5 mm² screwless terminal points; two 4 mm² screwless terminal points and two 16/25 mm² screw connection terminal points.
For snapping onto 15 mm hat rails to DIN EN 50022.

Protective conductor terminal, with screw contacts, 4 terminals

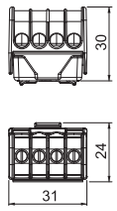


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-DBS4x16GN	Green	10	1.980	**2016250**

PA Polyamide

Protective conductor brass connection terminal strip, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 - 16 mm², nominal voltage 400 V, 1-pole, with terminal sockets, max. connectable conductors per terminal max. 4 x 16 mm², 4 x 10 mm², 8x6 mm² or 12 x 4 mm².

Neutral conductor terminal, with screw contacts, 4 terminals



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-DBN4x16BL	Blue	10	1.980	**2016255**

PA Polyamide

Neutral conductor brass connection terminal, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 - 16 mm², nominal voltage 400 V, 1-pole, with terminal sockets, max. connectable conductors per terminal max. 4 x 16 mm², 4 x 10 mm², 8x6 mm² or 12 x 4 mm².

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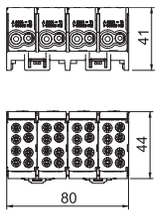
Always indicate the item number when ordering.

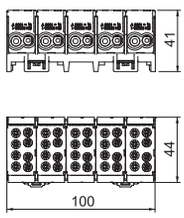
Main branch terminal, 4-pole

Type	Max. conductor cross-section mm²	Number of screwless terminals per pole	Pole number	Pack. pcs	Weight kg/100 pcs.	Item No.
HLAK 4-8x16	25	4	4	1	19.200	**2009032**



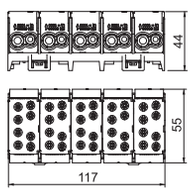
Main branch terminal, 5-pole

Type	Max. conductor cross-section mm²	Number of screwless terminals per pole	Pole number	Pack. pcs	Weight kg/100 pcs.	Item No.
HLAK 5-10x16	25	4	5	1	23.100	**2009036**



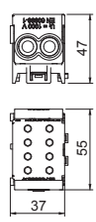
Main branch terminal, 5-pole

Type	Max. conductor cross-section mm²	Number of screwless terminals per pole	Pole number	Pack. pcs	Weight kg/100 pcs.	Item No.
HLAK 5-10x25	35	4	5	1	38.100	**2009038**



Main branch terminal, 1-pole

Type	Max. conductor cross-section mm²	Number of screwless terminals per pole	Pole number	Pack. pcs	Weight kg/100 pcs.	Item No.
HLAK 1-2x35 GR	70	4	1	1	11.600	**2009042**
HLAK 1-2x35 GRGN	70	4	1	1	11.600	**2009044**
HLAK 1-2x35 GRBL	70	4	1	1	11.600	**2009046**



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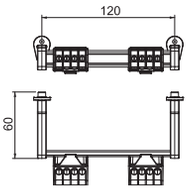
Always indicate the item number when ordering.

Terminal strip set with screw terminals for SDB 03



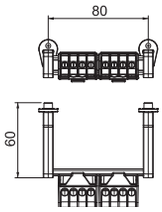
Type	Number of screwless terminals per pole	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 03	4	1	7.990	**2008880**

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 03... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm² protective conductor terminal; 16 mm² neutral conductor terminal

Terminal strip set with screw terminals for SDB 05



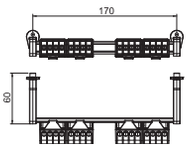
Type	Number of screwless terminals per pole	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 05	4	1	7.290	**2008884**

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 05... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm² protective conductor terminal; 16 mm² neutral conductor terminal

Terminal strip set with screw terminals for SDB 09



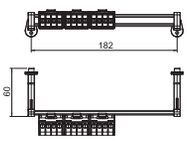
Type	Number of screwless terminals per pole	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 09	8	1	8.890	**2008888**

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 09... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm² protective conductor terminal; 16 mm² neutral conductor terminal

Terminal strip set with screw terminals for SDB 12



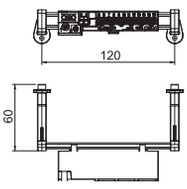
Type	Number of screwless terminals per pole	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 12	12	1	9.090	**2008892**

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 12... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm² protective conductor terminal; 16 mm² neutral conductor terminal

Terminal strip set with screwless terminals for SDB 03



Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 03S	1	13.830	**2008910**

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 03... type series.

The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm² screw terminals and 2x 4 mm² and 12x 2.5 mm² screwless terminals

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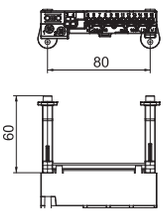
Terminal strip set with screwless terminals for SDB 05

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 05S	1	13.130	**2008914**



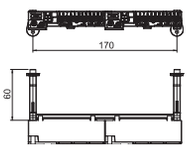
Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 05... type series.

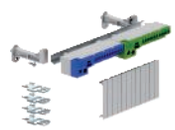
The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm² screw terminals and 2x 4 mm² and 12x 2.5 mm² screwless terminals

Terminal strip set with screwless terminals for SDB 09

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 09S	1	14.730	**2008918**





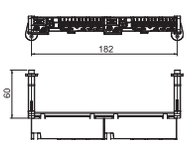
Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 09... type series.

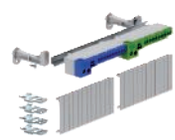
The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm² screw terminals and 2x 4 mm² and 12x 2.5 mm² screwless terminals

Terminal strip set with screwless terminals for SDB 12

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KLS-SDB 12S	1	14.180	**2008922**





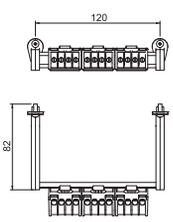
Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 12... type series.

The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm² screw terminals and 2x 4 mm² and 12x 2.5 mm² screwless terminals

Terminal strip set for X series

Type	Nominal cross-section mm²	Pole number	Number of screwless terminals per pole	Pack. pcs	Weight kg/100 pcs.	Item No.
KL-X10 06-16	6 - 16	5	4	1	17.600	**2008931**
KL-X16 06-16	6 - 16	5	4	1	14.500	**2008935**
KL-X25 16-35	16 - 35	5	4	1	37.500	**2008939**



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Cable gland systems, plastic

	Cap nut cable gland	195
	Accessories, plastic cap nut gland	213
	Cone cable gland	216
	Special cable glands	217
	Cable gland system accessories	222
	Cable entry	231

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Overview of PG and metric sizes

Metric sizes

PG sizes

Comparison of diameters : PG vs. metric

PG sizes	PG Ø	Metric external diameter in mm	Metric Ø
PG 7	12.5	M 12	12
PG 7	12.5	M 12	13
PG 9	15.2	M 16	15
-	-	M 16	16
PG 11	18.6	M 16/M 20	18
PG 11	18.6	M 16/M 20	19
PG 13.5	20.4	M 20	20
PG 13.5	20.4	M 20/M 25	21
PG 16	22.5	M 20/M 25	22
PG 16	22.5	M 20/M 25	23
-	-	M 20/M 25	24
-	-	M 25	25
PG 21	28.3	M 25/M 32	28
-	-	M 32	32
PG 29	37	M 32/ M 40	37
-	-	M 40	40
PG 36	47	M 40/M 50	47
-	-	M 50	50
PG 42	54	M 50/M 63	54
PG 48	59.3	M 50/M 63	59
-	-	M 63	63

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Always indicate the item number when ordering.

Cable glands and DIN EN 50262

Cable glands are manufactured and tested according to DIN EN 62444. Amongst other things, this standard controls the retaining ability and strain relief of cables. The V-TEC cable glands from OBO Bettermann correspond to version "A". Table 2A of the standard specifies which withdrawal forces these cable glands must withstand. The V-TEC cable glands also fulfil the requirements of DIN EN 62444 with regard to the twist protection of cables (see Table 3). To ensure the tested dust and moisture protection of the cable glands, continuous perforations should correspond to the mounting openings specified in the standard DIN EN 62444 according to Table 1. The on-site specialist must ensure that these parameters are complied with in order to hand over a functioning system.

Table 1

Size of the penetration hole	**mm**	6	8	10	12	16	20	25	32	40	50	63	75
Thread of the cable gland	**M**	M6	M8	M10	M12	M16	M20	M25	M32	M40	M50	M63	M75
Diameter of the mounting hole (+0.2/–0.4)	**mm**	6.5	8.5	10.5	12.5	16.5	20.5	25.5	32.5	40.5	50.5	63.5	75.5

Table 2 A

Cable diameter	**Retaining capacity**	**Strain relief, version A**
mm	**N**	**N**
to 4	5	–
>4 to 8	10	30
>8 to 11	15	42
>11 to 16	20	55
>16 to 23	25	70
>23 to 31	30	80
>31 to 43	45	90
>43 to 55	55	100
>55	70	115

Table 3

Cable diameter	**Torque Version A and B**
mm	**Nm**
>4 to 8	0.10
>8 to 11	0.15
>11 to 16	0.35
>16 to 23	0.60
>23 to 31	0.80
>31 to 43	0.90
>43 to 55	1.00
>55	1.20

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Cable gland systems, plastic

Long live variety!

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings.

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V-TEC VM plastic cap nut cable gland, metric

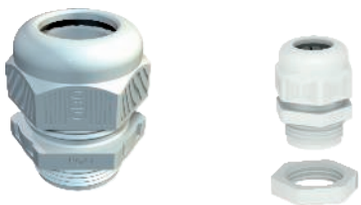
- Very large number of versions
- Light grey, silver grey, black, orange, etc.
- Polyamide (PA)
- With normal, short, long and extra-long connection thread

V-TEC TB.. Plastic cap nut cable gland, separable

- M20, M25 and M32 connection thread
- High protection rating
- For various diameters
- Multiple sealing inserts

V-TEC plastic cap nut cable gland; PG

- Silver grey, light grey
- Polyamide (PA)
- Various versions
- With normal, short and long connection thread

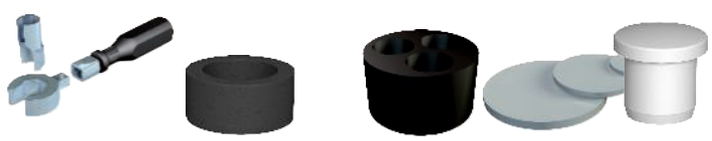


V-TEC EX plastic cap nut gland for EX areas

- Metric and PG connection thread
- With normal and long connection thread

Accessories for the V-TEC and V-TEC VM series

- Ratchets
- Multiple sealing inserts
- Reducing sealing inserts
- Dust protection plates
- Screw plugs

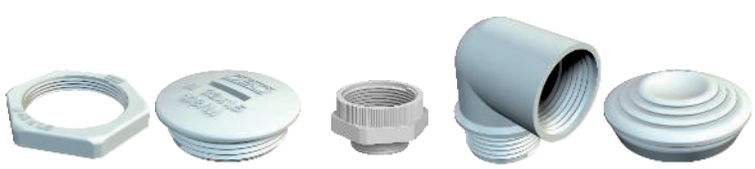


Cone cable gland/flat cable threaded connection

- Various versions
- Various materials
- With metric and PG thread

Accessories

- Locknuts
- Pressure screws
- Seals
- Cable entries



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Cable gland V-TEC VM and V-TEC VM L

- Fast and convenient means of cable entry for junction boxes and housings
- With the integrated sealing lip and the special OBO lamella technology, protection class IP68 is achieved
- Strain relief and tightness have been tested to DIN EN 62444
- The connecting threads are metric and are therefore suitable for universal use
- Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet
- Temperature range: –20 °C to +65 °C

Protection rating IP 68

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO.

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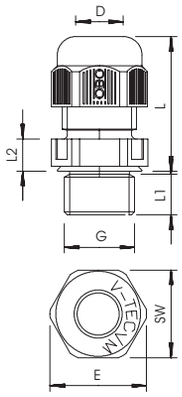
Always indicate the item number when ordering.

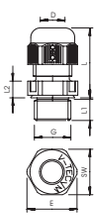
V-TEC VM



- Fast, convenient means of cable entry for junction boxes and housings
- With the integrated sealing lip and the special OBO lamella technology, protection class IP68 is achieved
- Strain relief and tightness have been tested to DIN EN 62444
- The connecting threads are metric and are therefore suitable for universal use
- Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet
- Temperature range: –20 °C to +65 °C

G	D	SW	E	L min.	L max.	L1	L2
	mm	mm	mm	mm	mm	mm	mm
M12 x 1.5	3.5–7	15	16.5	18.5	23.5	8	5
M16 x 1.5	4.5–10	20	22	21.5	29	8	5
M20 x 1.5	6–13	24	27	23.5	30.5	10	6
M25 x 1.5	9–17	29	32	26	35	10	6
M32 x 1.5	15–21	36	41	29	40	11	6
M40 x 1.5	16–28	44	50	36	46	11	7
M50 x 1.5	23–35	54	60	43	52	12	8
M63 x 1.5	36–48	67	75	48	60	12	9

Cable gland, metric thread, light grey



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM12 LGR	Light grey	50	0.318	**2022862**
V-TEC VM16 LGR	Light grey	50	0.638	**2022864**
V-TEC VM20 LGR	Light grey	50	0.856	**2022866**
V-TEC VM25 LGR	Light grey	25	1.360	**2022868**
V-TEC VM32 LGR	Light grey	20	2.235	**2022870**
V-TEC VM40 LGR	Light grey	10	3.467	**2022872**
V-TEC VM50 LGR	Light grey	5	5.466	**2022874**
V-TEC VM63 LGR	Light grey	5	8.306	**2022876**

PA Polyamide

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO slat technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444.
The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet. Temperature range: –20 °C to +65 °C.

Dimensions

Type	Thread	Sealing range D mm	SW mm	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm	Installation torque Nm
V-TEC VM12 LGR	M12 x 1,5	3.5 - 7	15	16.5	18.5	23.5	8	5	2
V-TEC VM16 LGR	M16 x 1,5	4.5 - 10	20	22	21.5	23.5	8	5	2
V-TEC VM20 LGR	M20 x 1,5	6 - 13	24	27	23.5	30.5	9	5	3.8
V-TEC VM25 LGR	M25 x 1,5	9 - 17	29	32	26	35	10	6	5
V-TEC VM32 LGR	M32 x 1,5	15 - 21	36	41	29	40	11	6	7.5
V-TEC VM40 LGR	M40 x 1,5	16 - 28	44	50	36	46	11	7	10
V-TEC VM50 LGR	M50 x 1,5	23 - 35	54	60	43	52	12	8	12
V-TEC VM63 LGR	M63 x 1,5	36 - 48	67	75	48	60	12	9	15

Always indicate the item number when ordering.

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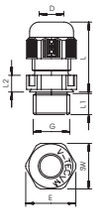
Cable gland, metric thread, silver grey



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM12 SGR	Silver grey	50	0.318	**2022843**
V-TEC VM16 SGR	Silver grey	50	0.638	**2022845**
V-TEC VM20 SGR	Silver grey	50	0.856	**2022847**
V-TEC VM25 SGR	Silver grey	25	1.360	**2022849**
V-TEC VM32 SGR	Silver grey	20	2.230	**2022851**
V-TEC VM40 SGR	Silver grey	10	3.467	**2022853**
V-TEC VM50 SGR	Silver grey	5	5.466	**2022855**
V-TEC VM63 SGR	Silver grey	5	8.306	**2022857**

PA Polyamide

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO slat technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444.
The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.
Temperature range: –20 °C to +65 °C.

Dimensions

Type	Thread	Sealing range D mm	SW mm	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm	Installation torque Nm
V-TEC VM12 SGR	M12 x 1,5	3.5 - 7	15	16.5	18.5	23.5	8	5	2
V-TEC VM16 SGR	M16 x 1,5	4.5 - 10	20	22	21.5	29	8	5	2.5
V-TEC VM20 SGR	M20 x 1,5	6 - 13	24	27	23.5	30.5	10	6	3.8
V-TEC VM25 SGR	M25 x 1,5	9 - 17	29	32	26	35	10	6	5
V-TEC VM32 SGR	M32 x 1,5	15 - 21	36	41	29	40	11	6	7.5
V-TEC VM40 SGR	M40 x 1,5	16 - 28	44	50	36	46	11	7	10
V-TEC VM50 SGR	M50 x 1,5	23 - 35	54	60	43	52	12	8	12
V-TEC VM63 SGR	M63 x 1,5	36 - 48	67	75	48	60	12	9	15

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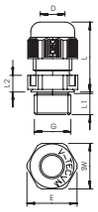
Always indicate the item number when ordering.

Cable gland, metric thread, black



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM12 SW	Black	50	0.318	**2022883**
V-TEC VM16 SW	Black	50	0.638	**2022885**
V-TEC VM20 SW	Black	50	0.856	**2022887**
V-TEC VM25 SW	Black	25	1.360	**2022889**
V-TEC VM32 SW	Black	20	2.230	**2022891**
V-TEC VM40 SW	Black	10	3.467	**2022893**
V-TEC VM50 SW	Black	5	5.466	**2022895**
V-TEC VM63 SW	Black	5	8.306	**2022897**

PA Polyamide

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The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.
Temperature range: –20 °C to +65 °C.

Dimensions

Type	Thread	Sealing range D mm	SW mm	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm	Installation torque Nm
V-TEC VM12 SW	M12 x 1,5	3.5 - 7	15	16.5	18.5	23.5	8	5	2
V-TEC VM16 SW	M16 x 1,5	4.5 - 10	20	22	21.5	29	8	5	2
V-TEC VM20 SW	M20 x 1,5	6 - 13	24	27	23.5	30.5	9	5	3.8
V-TEC VM25 SW	M25 x 1,5	9 - 17	29	32	26	35	10	6	5
V-TEC VM32 SW	M32 x 1,5	15 - 21	36	41	29	40	11	6	7.5
V-TEC VM40 SW	M40 x 1,5	16 - 28	44	50	36	46	11	7	10
V-TEC VM50 SW	M50 x 1,5	23 - 35	54	60	43	52	12	8	12
V-TEC VM63 SW	M63 x 1,5	36 - 48	67	75	48	60	12	9	15

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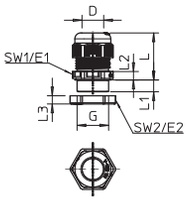
Cable gland, metric thread, set with locknut, light grey



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM12+ LGR	Light grey	50	0.337	**2022762**
V-TEC VM16+ LGR	Light grey	50	0.795	**2022764**
V-TEC VM20+ LGR	Light grey	50	1.106	**2022766**
V-TEC VM25+ LGR	Light grey	25	1.710	**2022768**
V-TEC VM32+ LGR	Light grey	20	2.840	**2022770**
V-TEC VM40+ LGR	Light grey	10	5.150	**2022772**
V-TEC VM50+ LGR	Light grey	5	6.356	**2022774**
V-TEC VM63+ LGR	Light grey	5	10.136	**2022776**

PA Polyamide

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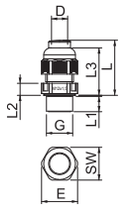
The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor or cabinet.
Temperature range: –20 °C to +65 °C.

Dimensions

Type	Thread	Sealing range D mm	SW 1 mm	Dimension E1 mm	Dimension E2 mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm	Dimension L3 mm	Installation torque Nm
V-TEC VM12+ LGR	M12 x 1,5	3.5 - 7	15	16.5	19	18.5	23.5	8	5	5	2
V-TEC VM16+ LGR	M16 x 1,5	4.5 - 10	20	22	25	21.5	23.5	8	5	5	2
V-TEC VM20+ LGR	M20 x 1,5	6 - 13	24	27	27	23.5	30.5	9	5	6	3.8
V-TEC VM25+ LGR	M25 x 1,5	9 - 17	29	32	36	26	35	10	6	6.5	5
V-TEC VM32+ LGR	M32 x 1,5	15 - 21	36	41	46	29	40	11	6	7	7.5
V-TEC VM40+ LGR	M40 x 1,5	16 - 28	44	50	56	36	46	11	7	7.5	10
V-TEC VM50+ LGR	M50 x 1,5	23 - 35	54	60	68	43	52	12	8	8	12
V-TEC VM63+ LGR	M63 x 1,5	36 - 48	68	75	83	48	60	12	9	8.5	15

Plastic cap nut cable glands with screw plug, light grey



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM12VS LGR	Light grey	50	0.360	**2023040**
V-TEC VM16VS LGR	Light grey	50	0.730	**2023042**
V-TEC VM20VS LGR	Light grey	50	0.990	**2023044**
V-TEC VM25VS LGR	Light grey	25	1.550	**2023046**
V-TEC VM32VS LGR	Light grey	20	2.480	**2023048**

PA Polyamide

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Applications: From private housing with junction boxes up to industrial applications in the distributor or cabinet.
Temperature range: –20 °C to +65 °C.

Dimensions

Type	Thread	Sealing range D mm	SW mm	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm
V-TEC VM12VS LGR	M12 x 1,5	3.5 - 7	15	16.5	21.5	23.5	8	5
V-TEC VM16VS LGR	M16 x 1,5	—	20	22	25.5	23.5	8	5
V-TEC VM20VS LGR	M20 x 1,5	6 - 13	24	27	28	30.5	9	5
V-TEC VM25VS LGR	M25 x 1,5	9 - 17	29	32	30.5	35	10	6
V-TEC VM32VS LGR	M32 x 1,5	15 - 21	36	41	29	40	11	6

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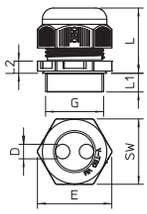
Always indicate the item number when ordering.

Cable gland, metric thread with multi-way seal insert, light grey



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM20 2x4	Light grey	50	0.860	**2022110**
V-TEC VM20 4x5	Light grey	50	0.860	**2022112**
V-TEC VM20 2x6	Light grey	50	0.860	**2022114**
V-TEC VM25 5x4	Light grey	25	1.360	**2022120**
V-TEC VM25 3x6	Light grey	25	1.360	**2022122**
V-TEC VM25 2x6	Light grey	25	1.360	**2022124**
V-TEC VM25 3x7	Light grey	25	1.360	**2022126**
V-TEC VM25 2x8	Light grey	25	1.360	**2022128**
V-TEC VM32 2x8	Light grey	20	2.240	**2022136**
V-TEC VM32 4x8	Light grey	20	2.240	**2022138**

PA Polyamide

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Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.
Temperature range: –20 °C to +65 °C.

Dimensions

Type	Thread	SW mm	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm
V-TEC VM20 2x4	M20 x 1,5	24	27	23.5	30.5	10	6
V-TEC VM20 4x5	M20 x 1,5	24	27	23.5	30.5	10	6
V-TEC VM20 2x6	M20 x 1,5	24	27	23.5	30.5	10	6
V-TEC VM25 5x4	M25 x 1,5	29	32	26	35	10	6
V-TEC VM25 3x6	M25 x 1,5	29	32	26	35	10	6
V-TEC VM25 2x6	M25 x 1,5	29	32	26	35	10	6
V-TEC VM25 3x7	M25 x 1,5	29	32	26	35	10	6
V-TEC VM25 2x8	M25 x 1,5	29	32	26	35	10	6
V-TEC VM32 2x8	M32 x 1,5	36	41	29	40	11	6
V-TEC VM32 4x8	M32 x 1,5	36	41	29	40	11	6

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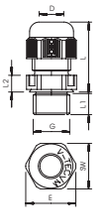
Always indicate the item number when ordering.

Cable gland, metric thread, UV-resistant, light grey



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM12UV LGR	Light grey	50	0.319	**2022900**
V-TEC VM16UV LGR	Light grey	50	0.590	**2022901**
V-TEC VM20UV LGR	Light grey	50	0.590	**2022902**
V-TEC VM25UV LGR	Light grey	25	1.360	**2022903**
V-TEC VM32UV LGR	Light grey	20	2.235	**2022904**
V-TEC VM40UV LGR	Light grey	10	3.496	**2022905**
V-TEC VM50UV LGR	Light grey	5	5.480	**2022906**
V-TEC VM63UV LGR	Light grey	5	8.328	**2022907**

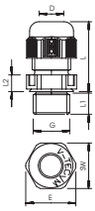
PA Polyamide

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO slat technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444.
The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor or cabinet.
Temperature range: –20 °C to +65 °C.

Dimensions

Type	Sealing range D mm	SW mm	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm
V-TEC VM12UV LGR	3.5 - 7	15	16.5	18.5	23.5	8	5
V-TEC VM16UV LGR	4.5 - 10	20	22	21.5	23.5	8	5
V-TEC VM20UV LGR	6 - 13	24	27	23.5	30.5	9	5
V-TEC VM25UV LGR	9 - 17	29	32	26	35	10	6
V-TEC VM32UV LGR	15 - 21	36	41	29	40	11	6
V-TEC VM40UV LGR	16 - 28	44	50	36	46	11	7
V-TEC VM50UV LGR	23 - 35	54	54	43	52	12	8
V-TEC VM63UV LGR	36 - 48	67	75	48	60	12	9

Cap nut cable glands V-TEC M, ligh tgrey



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC M KA M20NL	Light grey	50	1.380	**2024880**

PA Polyamide

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO slat technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444.
The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor or cabinet.
Temperature range: –20 °C to +65 °C.

Dimensions

Type	Thread	Sealing range D mm	SW mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm	Dimension L3 mm
V-TEC M KA M20NL	M20 x 1,5	7 - 14	27	25	33	7	6	19

Always indicate the item number when ordering.

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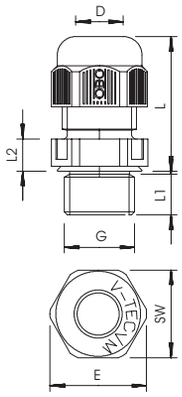
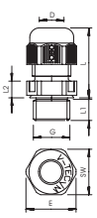
V-TEC VM L



- Long connection thread (up to 33 mm) for thick-walled housing penetrations
- With the integrated sealing lip and the special OBO lamella technology, protection class IP68 is achieved
- Strain relief and tightness have been tested to DIN EN 62444
- The connecting threads are metric and are therefore suitable for universal use
- Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet
- Temperature range: –20 °C to +65 °C

G	D	SW	E	L min.	L max.	L1	L2
	mm	mm	mm	mm	mm	mm	mm
M12 x 1.5	3.5–7	15	16.5	17.5	24	15	12
M16 x 1.5	4.5–10	20	22	20.5	29.5	15	15.5
M20 x 1.5	6–13	24	27	22.5	32.5	15	17.5
M25 x 1.5	9–17	29	32	25.5	36	15	19.5
M32 x 1.5	15–21	36	41	28	40	15	22
M40 x 1.5	16–28	44	50	32	46	18	25
M50 x 1.5	23–35	54	60	37.5	54.3	18	29.5
M63 x 1.5	36–48	68	75	41.5	60.3	18	32.5

Cable gland, long metric thread



Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM L12 LGR	Light grey	500	50	0.392	**2022943**
V-TEC VM L16 LGR	Light grey	500	50	0.727	**2022945**
V-TEC VM L20 LGR	Light grey	600	50	0.883	**2022947**
V-TEC VM L25 LGR	Light grey	300	25	1.597	**2022949**
V-TEC VM L32 LGR	Light grey	240	20	2.047	**2022951**
V-TEC VM L40 LGR	Light grey	120	10	3.168	**2022953**
V-TEC VM L50 LGR	Light grey	60	5	5.010	**2022955**
V-TEC VM L63 LGR	Light grey	60	5	7.390	**2022957**

PA Polyamide

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO slat technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444.
The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet. Temperature range: –20 °C to +65 °C.

Dimensions

Type	Thread	Sealing range D mm	SW mm	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm	Installation torque Nm
V-TEC VM L12 LGR	M12x1,5	3.5 - 7	15	16.5	17.5	24	15	12	2
V-TEC VM L16 LGR	M16x1,5	4.5 - 10	20	22	20.5	29.5	15	15.5	2.5
V-TEC VM L20 LGR	M20x1,5	6 - 13	24	27	22.5	32.5	15	17.5	3.75
V-TEC VM L25 LGR	M25x1,5	9 - 17	29	32	25.5	36	15	19.5	5
V-TEC VM L32 LGR	M32x1,5	15 - 21	36	41	28	40	15	22	7.5
V-TEC VM L40 LGR	M40x1,5	16 - 28	44	50	32	46	18	25	10
V-TEC VM L50 LGR	M50x1,5	23 - 35	54	60	37.5	54.3	18	29.5	12
V-TEC VM L63 LGR	M63x1,5	36 - 48	68	75	41.5	60.3	18	32.5	12

Always indicate the item number when ordering.

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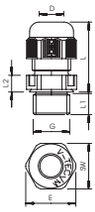
Cable gland, long metric thread, silver grey



Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM L12 SGR	Silver grey	500	50	0.392	**2022921**
V-TEC VM L16 SGR	Silver grey	500	50	0.727	**2022924**
V-TEC VM L20 SGR	Silver grey	600	50	0.883	**2022926**
V-TEC VM L25 SGR	Silver grey	300	25	1.597	**2022928**
V-TEC VM L32 SGR	Silver grey	240	20	2.047	**2022930**
V-TEC VM L40 SGR	Silver grey	120	10	3.168	**2022933**
V-TEC VM L50 SGR	Silver grey	60	5	5.010	**2022935**
V-TEC VM L63 SGR	Silver grey	60	5	7.390	**2022937**

PA Polyamide

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO slat technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444.
The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.
Temperature range: –20 °C to +65 °C.

Dimensions

Type	Thread	Sealing range D mm	SW mm	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm	Installation torque Nm
V-TEC VM L12 SGR	M12 x 1,5	3.5 - 7	15	16.5	17.5	24	15	5	2
V-TEC VM L16 SGR	M16 x 1,5	4.5 - 10	20	22	20.5	29.5	15	5	2.5
V-TEC VM L20 SGR	M20 x 1,5	6 - 13	24	27	22.5	32.5	15	5	3.75
V-TEC VM L25 SGR	M25 x 1,5	9 - 17	29	32	25.5	36	15	6	5
V-TEC VM L32 SGR	M32 x 1,5	15 - 21	36	41	28	40	15	6	7.5
V-TEC VM L40 SGR	M40x1,5	16 - 28	44	50	32	46	18	7	10
V-TEC VM L50 SGR	M50x1,5	23 - 35	54	60	37.5	54.3	18	8	12
V-TEC VM L63 SGR	M63x1,5	36 - 48	68	75	41.5	60.3	18	9	12

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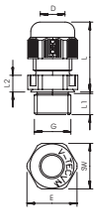
Always indicate the item number when ordering.

Cable gland, long metric thread, black



Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM L12 SW	Black	500	50	0.392	**2022964**
V-TEC VM L16 SW	Black	500	50	0.727	**2022966**
V-TEC VM L20 SW	Black	600	50	0.883	**2022968**
V-TEC VM L25 SW	Black	300	25	1.597	**2022970**
V-TEC VM L32 SW	Black	240	20	2.047	**2022972**
V-TEC VM L40 SW	Black	120	10	3.168	**2022974**
V-TEC VM L50 SW	Black	60	5	5.010	**2022976**
V-TEC VM L63 SW	Black	60	5	7.390	**2022978**

PA Polyamide

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO slat technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444.
The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.
Temperature range: –20 °C to +65 °C.

Dimensions

Type	Thread	Sealing range D mm	SW mm	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm	Installation torque Nm
V-TEC VM L12 SW	M12x1,5	3.5 - 7	15	16.5	17.5	24	15	12	2
V-TEC VM L16 SW	M16x1,5	4.5 - 10	20	22	20.5	29.5	15	15.5	2.5
V-TEC VM L20 SW	M20x1,5	6 - 13	24	27	22.5	32.5	15	17.5	3.75
V-TEC VM L25 SW	M25x1,5	9 - 17	29	32	25.5	36	15	19.5	5
V-TEC VM L32 SW	M32x1,5	15 - 21	36	41	28	40	15	22	7.5
V-TEC VM L40 SW	M40x1,5	16 - 28	44	50	32	46	18	25	10
V-TEC VM L50 SW	M50x1,5	23 - 35	54	60	37.5	54.3	18	29.5	12
V-TEC VM L63 SW	M63x1,5	36 - 48	68	75	41.5	60.3	18	32.5	12

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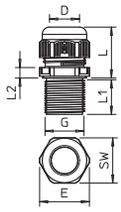
Always indicate the item number when ordering.

Cable gland, metric thread, extra long, black



Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM LL16 SW	Black	500	50	0.800	**2022985**
V-TEC VM LL20 SW	Black	600	50	1.000	**2022987**
V-TEC VM LL25 SW	Black	300	25	1.700	**2022989**
V-TEC VM LL32 SW	Black	240	20	2.200	**2022991**
V-TEC VM LL40 SW	Black	120	10	2.200	**2022993**
V-TEC VM LL50 SW	Black	60	5	5.500	**2022995**
V-TEC VM LL63 SW	Black	60	5	7.500	**2022997**

PA Polyamide

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO slat technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444.
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Applications: From private housing with junction boxes up to industrial applications in the distributor or cabinet.
Temperature range: –20 °C to +65 °C.

Dimensions

Type	Thread	Sealing range D mm	SW mm	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm	Installation torque Nm
V-TEC VM LL16 SW	M16x1,5	4.5 - 10	20	22	20.5	29.5	24	5	2.5
V-TEC VM LL20 SW	M20x1,5	6 - 13	24	27	22.5	32.5	24	5	3.75
V-TEC VM LL25 SW	M25x1,5	9 - 17	29	32	25.5	36	24	6	5
V-TEC VM LL32 SW	M32x1,5	15 - 21	36	41	28	40	24	6	7.5
V-TEC VM LL40 SW	M40x1,5	16 - 28	44	50	36	46	24	7	10
V-TEC VM LL50 SW	M50x1,5	23 - 35	54	60	37.5	54.3	24	8	12
V-TEC VM LL63 SW	M63x1,5	36 - 48	68	75	41.5	60.3	24	9	12

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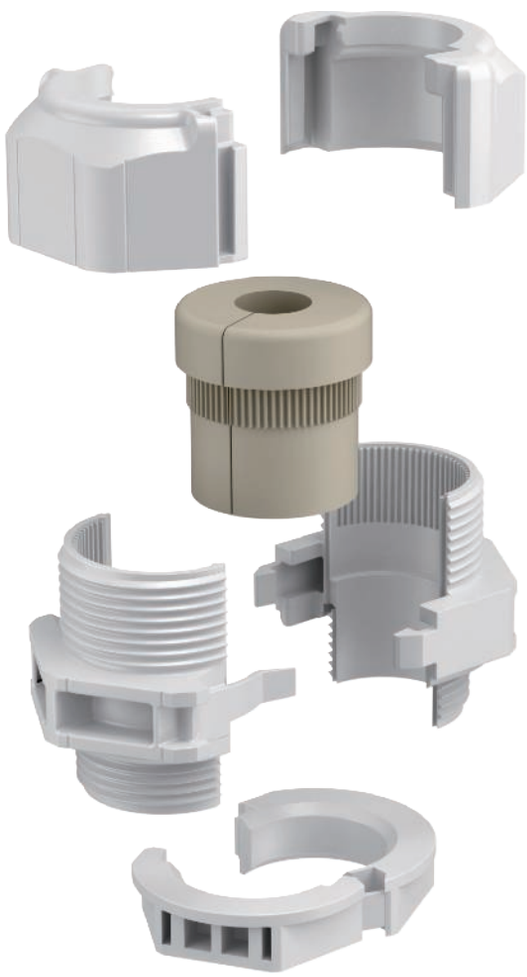
Always indicate the item number when ordering.

Separable cable glands

- For repairs, retroinstallation or pre-terminated cables
- High sealability
- Connection thread size M20, M25 and M32
- Sealing inserts: Closed, for single cables or multiple cables

IP 67



Easy to separate

The separable cable gland allows easy and quick installation, for example, of pre-terminated cables with connectors. In an existing installation, a missing or defective cable gland can be replaced or supplemented without dismantling and interruption.

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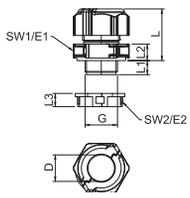
Divisible cable gland, seal insert enclosed, light grey



IP 67 | M | M20 | Fluor Chlor 0mm HALOGENFREE | 650° | UV RESISTANT

Type	Thread	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC TB20	M20x1,5	Light grey	50	5	2.236	**2024940**
V-TEC TB25	M25x1,5	Light grey	50	5	3.440	**2024910**
V-TEC TB32	M32x1,5	Light grey	60	5	7.756	**2024970**

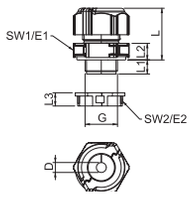
PC Polycarbonate

The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland.
The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.

Dimensions

Type	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm
V-TEC TB20	33.5	24.5	30.5	10	8.5

Divisible cable gland, seal insert, 1 cable, light grey



IP 67 | M | M20 | Fluor Chlor 0mm HALOGENFREE | 650° | UV RESISTANT

Type	Thread	Colour	Sealing range D mm	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC TB20 06-08	M20x1,5	Light grey	6 - 8	50	5	2.133	**2024942**
V-TEC TB20 08-10	M20x1,5	Light grey	8 - 10.5	50	5	2.063	**2024944**
V-TEC TB20 09-13	M20x1,5	Light grey	9 - 13	50	5	1.973	**2024946**
V-TEC TB20 11-14	M20x1,5	Light grey	11.5 - 14.5	50	5	1.853	**2024948**
V-TEC TB25 06-09	M25x1,5	Light grey	6 - 7.5	50	5	2.900	**2024912**
V-TEC TB25 09-11	M25x1,5	Light grey	9 - 11	50	5	2.900	**2024913**
V-TEC TB25 11-13	M25x1,5	Light grey	11 - 13	50	5	3.110	**2024916**
V-TEC TB25 12-15	M25x1,5	Light grey	12 - 15	50	5	2.980	**2024919**
V-TEC TB25 14-18	M25x1,5	Light grey	14 - 18	50	5	2.510	**2024922**
V-TEC TB25 18-20	M25x1,5	Light grey	18 - 20	50	5	2.290	**2024925**
V-TEC TB32 09-13	M32x1,5	Light grey	9 - 13	60	5	7.416	**2024972**
V-TEC TB32 11-15	M32x1,5	Light grey	11.5 - 15.5	60	5	7.246	**2024974**
V-TEC TB32 14-18	M32x1,5	Light grey	14 - 18	60	5	7.069	**2024976**
V-TEC TB32 17-20	M32x1,5	Light grey	17 - 20.5	60	5	7.156	**2024978**
V-TEC TB32 20-25	M32x1,5	Light grey	20 - 25	60	5	6.396	**2024980**
V-TEC TB32 24-26	M32x1,5	Light grey	24 - 26.5	60	5	6.026	**2024982**

PC Polycarbonate

The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland.
The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.

Dimensions

Type	Sealing range D mm	SW 1 mm	SW 2 mm	Dimension L1 mm	Dimension L2 mm	Dimension L mm
V-TEC TB20 06-08	6 - 8	30	27	10	8.5	30
V-TEC TB20 08-10	8 - 10.5	30	27	10	8.5	30
V-TEC TB20 09-13	9 - 13	30	27	10	8.5	30
V-TEC TB20 11-14	11.5 - 14.5	30	27	10	8.5	30

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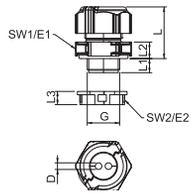
Always indicate the item number when ordering.

Separable cable gland, sealing insert, multiple, light grey

IP 67 | M | M20 | Flight Class Green HALOGENFREI | 650° | UV RESISTANT



Type	Thread	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC TB20 2x4	M20x1,5	Light grey	50	5	2.187	**2024950**
V-TEC TB20 2x5	M20x1,5	Light grey	50	5	2.153	**2024952**
V-TEC TB20 2x6	M20x1,5	Light grey	50	5	2.113	**2024954**
V-TEC TB20 4x4	M20x1,5	Light grey	50	5	2.123	**2024956**
V-TEC TB20 6x4	M20x1,5	Light grey	50	5	2.083	**2024958**
V-TEC TB25 3x7	M25x1,5	Light grey	50	5	2.449	**2024927**
V-TEC TB25 3x9	M25x1,5	Light grey	50	5	2.640	**2024928**
V-TEC TB25 4x5	M25x1,5	Light grey	50	5	2.539	**2024929**
V-TEC TB25 4x6	M25x1,5	Light grey	50	5	2.439	**2024930**
V-TEC TB25 4x8	M25x1,5	Light grey	50	5	2.950	**2024931**
V-TEC TB32 2x11	M32x1,5	Light grey	60	5	7.196	**2024984**
V-TEC TB32 3x9	M32x1,5	Light grey	60	5	7.196	**2024986**
V-TEC TB32 3x11	M32x1,5	Light grey	60	5	7.196	**2024988**
V-TEC TB32 4x8	M32x1,5	Light grey	60	5	7.211	**2024990**
V-TEC TB32 6x6	M32x1,5	Light grey	60	5	7.284	**2024992**

PC Polycarbonate

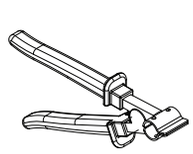
The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland.
The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.

Dimensions

Type	Dimension D mm	SW mm	Dimension E mm	Dimension L min. mm	Dimension L max. mm	Dimension L1 mm	Dimension L2 mm
V-TEC TB20 2x4	4	30	33.5	24.5	30.5	10	8.5
V-TEC TB20 2x5	5	30	33.5	24.5	30.5	10	8.5
V-TEC TB20 2x6	6	30	33.5	24.5	30.5	10	8.5
V-TEC TB20 4x4	4	30	33.5	24.5	30.5	10	8.5
V-TEC TB20 6x4	4	30	33.5	24.5	30.5	10	8.5

Parting pliers for divisible cable gland seal insert

M25



Type	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC TBZ	1	26.000	**2024900**

The ideal aids are the spreading pliers which can be used to open the sealing insert. With this tool, inserting the individual cables is easy and quick.
Place the cable into the spreading pliers, insert the spreading pliers into the sealing separation and then open them. Now the cable can easily be placed into the seal.

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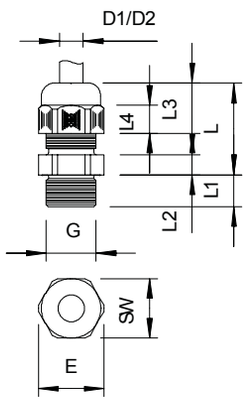
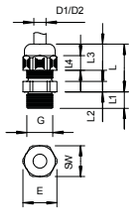
Cable gland, PG thread



- PG connection thread
- With the integrated sealing lip, protection class IP68 is achieved
- Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet
- Temperature range: –20 °C to +65 °C

G	D1	D2	SW	E	L min.	L max.	L1	L2	L3
	mm	mm	mm	mm	mm	mm	mm	mm	mm
Pg 7	2.5–6.5	3–6.5	15	16.5	18	23	8	5	12.6
Pg 9	2.5–8	3.5–8	19	21	21	27	8	5	15.5
PG 11	3.5–10	4.5–10	22	25	22	29	8	5	17
Pg 13.5	5–12	6–12	24	27	23	30	9	5	18
Pg 16	7–14	7–14	27	30	25	33	10	6	19
Pg 21	9–18	12–18	33	37.5	28	38	11	6	22
Pg 29	14–25	17–25	42	47.5	32	43	11	7	24.5
Pg 36	18–32	20–32	53	60	39	54	13	8	31
Pg 42	24–38	26–38	60	68.5	42	57	13	9	32.5
Pg 48	30–44	30–44	65	74	42	58	14	9	33

Cable gland, PG thread, silver grey



Type	Thread	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC PG7 SGR	Pg 7	Silver grey	500	50	0.410	**2022605**
V-TEC PG9 SGR	Pg 9	Silver grey	500	50	0.630	**2022613**
V-TEC PG11 SGR	Pg 11	Silver grey	500	50	0.890	**2022621**
V-TEC PG13.5 SGR	Pg 13,5	Silver grey	400	50	1.020	**2022648**
V-TEC PG16 SGR	Pg 16	Silver grey	250	25	1.380	**2022656**
V-TEC PG21 SGR	Pg 21	Silver grey	300	25	2.290	**2022664**
V-TEC PG29 SGR	Pg 29	Silver grey	240	20	4.020	**2022672**
V-TEC PG36 SGR	Pg 36	Silver grey	120	10	6.040	**2022680**
V-TEC PG42 SGR	Pg 42	Silver grey	60	5	7.650	**2022699**
V-TEC PG48 SGR	Pg 48	Silver grey	60	5	9.460	**2022702**

PA Polyamide

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO slat technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444.
The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.
Temperature range: –20 °C to +65 °C.

Always indicate the item number when ordering.

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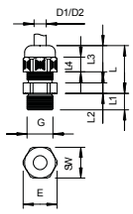
Cable gland, PG thread, light grey

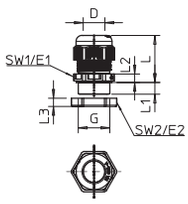


Type	Thread	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC PG7 LGR	Pg 7	Light grey	500	50	0.410	**2024705**
V-TEC PG9 LGR	Pg 9	Light grey	500	50	0.630	**2024713**
V-TEC PG11 LGR	Pg 11	Light grey	500	50	0.890	**2024721**
V-TEC PG13 LGR	Pg 13,5	Light grey	400	50	1.020	**2024748**
V-TEC PG16 LGR	Pg 16	Light grey	250	25	1.380	**2024756**
V-TEC PG21 LGR	Pg 21	Light grey	300	25	2.290	**2024764**
V-TEC PG29 LGR	Pg 29	Light grey	240	20	4.020	**2024772**
V-TEC PG36 LGR	Pg 36	Light grey	120	10	6.030	**2024780**
V-TEC PG42 LGR	Pg 42	Light grey	60	5	7.650	**2024799**
V-TEC PG48 LGR	Pg 48	Light grey	60	5	9.460	**2024802**

PA Polyamide

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO slat technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444.
The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.
Temperature range: –20 °C to +65 °C.

Cable gland, PG thread, set with locknut, light grey



Type	Thread	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC PG7+ LGR	Pg 7	Light grey	600	50	0.503	**2024655**
V-TEC PG9+ LGR	Pg 9	Light grey	500	50	0.799	**2024657**
V-TEC PG11+ LGR	Pg 11	Light grey	500	50	1.074	**2024659**
V-TEC PG13,5+LGR	Pg 13,5	Light grey	400	50	1.276	**2024661**
V-TEC PG16+ LGR	Pg 16	Light grey	250	25	1.705	**2024663**
V-TEC PG21+ LGR	Pg 21	Light grey	300	25	2.756	**2024665**
V-TEC PG29+ LGR	Pg 29	Light grey	240	20	5.120	**2024667**
V-TEC PG36+ LGR	Pg 36	Light grey	120	10	7.713	**2024669**
V-TEC PG42+ LGR	Pg 42	Light grey	60	5	9.406	**2024671**
V-TEC PG48+ LGR	Pg 48	Light grey	60	5	11.290	**2024673**

PA Polyamide

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO slat technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444.
The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.
Temperature range: –20 °C to +65 °C.

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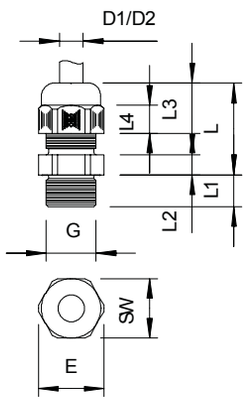
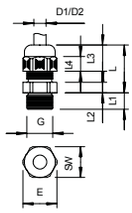
Cable gland, long thread



- Long PG connection thread – 15–18 mm
- With the integrated sealing lip, protection class IP68 is achieved
- Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet
- Temperature range: –20 °C to +65 °C

G	D1	D2	SW	E	L min.	L max.	L1	L2	L3
	mm	mm	mm	mm	mm	mm	mm	mm	mm
Pg 7	2.5–6.5	3–6.5	15		18	23	15	5	12.6
Pg 9	2.5–8	3.5–8	19	21	21	27	15	5	15.5
PG 11	3.5–10	4.5–10	22	25	22	29	15	5	17
Pg 13.5	5–12	6–12	24	27	23	30	15	5	18
Pg 16	7–14	7–14	27	30	25	33	15	6	19
Pg 21	9–18	12–18	33	37.5	28	38	15	6	22
Pg 29	14–25	17–25	42	47.5	32	43	15	7	24.5
Pg 36	18–32	20–32	53	60	39	54	18	8	31
Pg 42	24–38	26–38	60		42	57	18	9	32.5

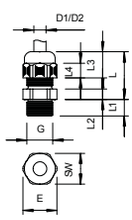
Cable gland, long PG thread, silver grey



Type	Thread	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC L PG9 SGR	Pg 9	Silver grey	500	50	0.670	**2024187**
V-TEC L PG11 SGR	Pg 11	Silver grey	500	50	0.930	**2024195**
V-TEC L PG13 SGR	Pg 13,5	Silver grey	600	50	1.090	**2024209**
V-TEC L PG16 SGR	Pg 16	Silver grey	250	25	1.490	**2024217**
V-TEC L PG21 SGR	Pg 21	Silver grey	300	25	2.330	**2024225**
V-TEC L PG29 SGR	Pg 29	Silver grey	240	20	3.860	**2024233**
V-TEC L PG36 SGR	Pg 36	Silver grey	120	10	7.750	**2024241**

PA Polyamide

Cable gland, long PG thread, light grey



Type	Thread	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC L PG7 LGR	Pg 7	Light grey	500	50	0.410	**2024284**
V-TEC L PG9 LGR	Pg 9	Light grey	500	50	0.670	**2024292**
V-TEC L PG11 LGR	Pg 11	Light grey	500	50	0.930	**2024306**
V-TEC L PG13 LGR	Pg 13,5	Light grey	600	50	1.090	**2024314**
V-TEC L PG16 LGR	Pg 16	Light grey	250	25	1.490	**2024322**
V-TEC L PG21 LGR	Pg 21	Light grey	300	25	2.330	**2024330**
V-TEC L PG29 LGR	Pg 29	Light grey	240	20	3.860	**2024349**
V-TEC L PG36 LGR	Pg 36	Light grey	120	10	7.750	**2024357**
V-TEC L PG42 LGR	Pg 42	Light grey	60	5	10.070	**2024365**

PA Polyamide

Always indicate the item number when ordering.

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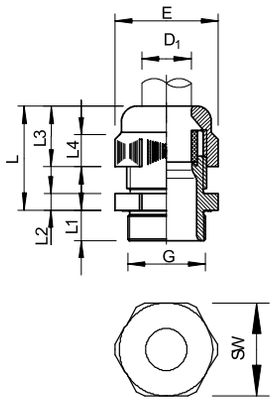
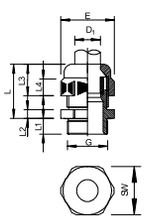
Cable gland, EX area



- Cable gland with EC design type approval certificate for products and protection systems for use in accordance with the regulations in explosion-hazard areas in accordance with directive 94/9/EC
- EC design type approval certificate number: PTB 99 ATEX 3112X and ... 3113X
- With metric and PG connection thread
- Robust cap-nut cable gland with wide sealing range, as well as strain relief and twist protection for high sealing demands
- Sealing ring of chloroprene/nitrile rubber
- Moulded sealing lips, so no connection thread sealing ring required
- Protection rating IP68 at 5 bar

Cable gland, EX area, metric thread



Type	Thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
VTEC EX M12 SW	M12 x 1,5	Black	50	0.360	**2050307**
VTEC EX M16 SW	M16 x 1,5	Black	50	0.630	**2050315**
VTEC EX M20 SW	M20 x 1,5	Black	50	1.000	**2050323**
VTEC EX M25 SW	M25 x 1,5	Black	25	2.350	**2050331**
VTEC EX M32 SW	M32 x 1,5	Black	20	3.900	**2050358**
VTEC EX M40 SW	M40 x 1,5	Black	10	7.500	**2050366**
VTEC EX M50 SW	M50 x 1,5	Black	5	9.200	**2050374**
VTEC EX M63 SW	M63 x 1,5	Black	5	9.460	**2050382**

PA Polyamide

Dimensions

G	D1	WAF	E	L min.	L max.	L1	L2	L3
	mm	mm	mm	mm	mm	mm	mm	mm
M12 x 1.5	3.5–6.5	15	16.5	18	23	8	5	12.6
M16 x 1.5	5–8	19	21	21	27	8	5	15.5
M20 x 1.5	7–12	24	27	23	30	9	5	18
M25 x 1.5	12–18	33	37.5	28	38	11	6	22
M32 x 1.5	17–25	42	47.5	32	43	11	7	24.5
M40 x 1.5	21–32	53	60	39	54	13	8	31
M50 x 1.5	24–37	60	68.5	42	57	13	9	32.5
M63 x 1.5	30–44	65	74	42	58	14	9	33

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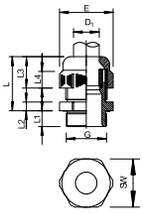
Always indicate the item number when ordering.

Cable gland, EX area, PG thread



IP 68 | Pg

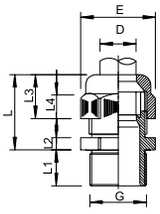
Type	Thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
VTEC EX PG7 SW	Pg 7	Black	50	0.410	**2050005**
VTEC EX PG9 SW	Pg 9	Black	50	0.630	**2050013**
VTEC EX PG11 SW	Pg 11	Black	50	0.890	**2050021**
VTEC EX PG13.5SW	Pg 13,5	Black	50	1.020	**2050048**
VTEC EX PG16 SW	Pg 16	Black	25	1.380	**2050056**
VTEC EX PG21 SW	Pg 21	Black	25	2.290	**2050064**
VTEC EX PG29 SW	Pg 29	Black	20	4.020	**2050072**
VTEC EX PG36 SW	Pg 36	Black	10	6.030	**2050080**
VTEC EX PG42 SW	Pg 42	Black	5	7.650	**2050099**
VTEC EX PG48 SW	Pg 48	Black	5	9.460	**2050102**

PA Polyamide

Dimensions

G	D1 mm	WAF mm	E mm	L min. mm	L max. mm	L1 mm	L2 mm	L3 mm
Pg 7	3.5–6.5	15	16.5	18	23	8	5	12.6
Pg 9	5–8	19	21	21	27	8	5	17
Pg 11	4.5–10	22	25	22	29	8	5	17
Pg 13.5	6.5–12	24	27	23	30	9	5	18
Pg 16	7–14	27	30	25	33	10	6	19
Pg 21	12–18	33	37.5	28	38	11	6	22
Pg 29	17–25	42	47.5	32	43	11	7	24.5
Pg 36	21–32	53	60	39	54	13	8	31
Pg 42	24–38	60	68.5	42	57	13	9	32.5
Pg 48	30–44	65	74	42	58	14	9	33

Cable gland, EX area, long PG thread



IP 68 | Pg

Type	Thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
VTEC EXL PG9 SW	Pg 9	Black	50	0.670	**2050145**
VTEC EXL PG11 SW	Pg 11	Black	50	0.930	**2050153**
VTEC EXL PG13 SW	Pg 13,5	Black	50	1.090	**2050161**
VTEC EXL PG16 SW	Pg 16	Black	25	1.490	**2050188**
VTEC EXL PG21 SW	Pg 21	Black	25	2.330	**2050196**

PA Polyamide

Dimensions

G	D1 mm	WAF mm	E mm	L min. mm	L max. mm	L1 mm	L2 mm	L3 mm
Pg 9	5–8	19	21	21	27	15	5	15.5
Pg 11	4.5–10	22	25	22	29	15	5	17
Pg 13.5	6.5–12	24	27	23	30	15	5	18
Pg 16	7–14	27	30	25	33	15	6	19
Pg 21	12–18	33	37.5	28	38	15	6	22

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Always indicate the item number when ordering.

Socket spanner attachment

Type	Size	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC ST15	M12	15	1	3.500	**3010236**
V-TEC ST20	M16	20	1	3.700	**3010244**
V-TEC ST29	M25	29	1	8.500	**3010260**

Socket spanner attachment opened at the side with side for ground ratchet, V-TEC GR.

Ratchet set

Type	Accessories	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC RA SET	1 ground ratchet 1 grip for ground ratchet 4 socket spanner attachments	1	71.600	**3010275**

Set consisting of a ground ratchet, type V-TEC RA, a grip for ground ratchet, type V-TEC GR, and four socket spanner attachments in sizes WAF 15, WAF 20, WAF 24 and WAF 29.

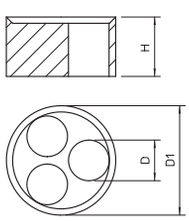
Special tongs for cable glands

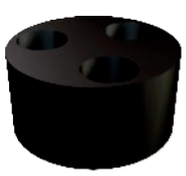
Type	Pack. pcs	Weight kg/100 pcs.	Item No.
186	1	47.000	**3010104**

Universal tool for easy tightening of all glands up to size PG 21 or M25 x 1.5, also usable with glands very close to one another.
Small opening PG 7–PG 11.
Large opening PG 13.5–PG 21.

Multiple sealing insert, metric

M





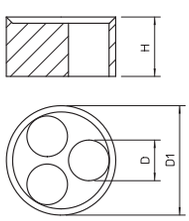
Type	Size mm	Dimension D mm	Dimension H mm	Dimension D1 mm	Number of drill holes	Pack. pcs	Weight kg/100 pcs.	Item No.
107 C VM 20 2x4	M20	4	8.1	15.1	2	50	0.130	**2029672**
107 C VM 20 4x5	M20	5	8.1	15.1	4	50	0.080	**2029675**
107 C VM 20 2x6	M20	6	8.1	15.1	2	50	0.100	**2029677**
107 C VM 25 5x4	M25	4	10	19.8	5	50	0.180	**2029679**
107 C VM 25 3x6	M25	6	10	19.8	3	50	0.210	**2029682**
107 C VM 25 2x6	M25	6	10	19.8	2	50	0.260	**2029685**
107 C VM 25 3x7	M25	7	10	19.8	3	50	0.180	**2029688**
107 C VM 25 2x8	M25	8	10	19.8	2	50	0.200	**2029690**
107 C VM 32 2x8	M32	8	13.4	25.1	2	25	0.530	**2029693**
107 C VM 32 4x8	M32	8	13.4	25.1	4	25	0.400	**2029696**

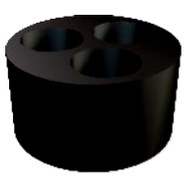
NBR-SBR Rubber mixture

Use to insert multiple thin cables in the V-TEC VM cable glands, is replaced with the simple sealing ring of the cable gland.

Multiple sealing insert, PG

Pg





Type	Size mm	Dimension D mm	Dimension H mm	Dimension D1 mm	Number of drill holes	Pack. pcs	Weight kg/100 pcs.	Item No.
107 C V 16 5x4	Pg 16	4	9.5	17.5	5	50	0.205	**2029618**
107 C V 16 3x5	Pg 16	5	9.5	17.5	3	50	0.210	**2029626**
107 C V 16 2x6	Pg 16	6	9.5	17.5	2	50	0.210	**2029634**
107 C V 16 3x6	Pg 16	6.5	9.5	17.5	3	50	0.155	**2029642**
107 C V 21 3x7	Pg 21	7	12	23	3	25	0.450	**2029650**
107 C V 21 2x8	Pg 21	8	12	23	2	25	0.340	**2029669**

NBR-SBR Rubber mixture

Use to insert multiple thin cables in the V-TEC cable glands, is replaced with the simple sealing ring of the cable gland.

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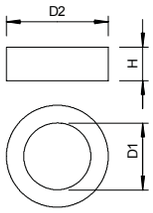
Reducing sealing insert, metric



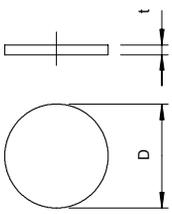
M

Type	Size mm	Sealing range D mm	Dimension D1 mm	Dimension D2 mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107CR VM 12	M12	2 - 5	5	8.9	7.2	50	0.050	**2029560**
107CR VM 16	M16	2.5 - 7	7	12.7	8.1	50	0.115	**2029563**
107CR VM 20	M20	4 - 9	9	16	9.3	50	0.205	**2029566**
107CR VM 25	M25	6 - 13	13	20.7	10.5	50	0.340	**2029569**
107CR VM 32	M32	11 - 16	16	25.7	12.3	25	0.625	**2029572**
107CR VM 40	M40	12 - 23	23	33.7	15	25	1.140	**2029575**
107CR VM 50	M50	18 - 29	29	41.7	18.5	25	2.080	**2029578**
107CR VM 63	M63	29 - 40	40	54.8	20.2	25	3.560	**2029581**

NBR-SBR Rubber mixture

Reduces the sealing area D of the cable gland V-TEC VM and V-TEC VM L.

Dust protection plate, metric



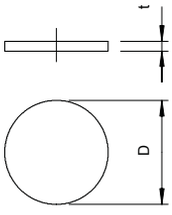
M

Type	Size mm	Dimension D mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 S VTEC M12	M12	12	1.5	100	0.001	**2028870**
107 S VTEC M16	M16	16	1.5	100	0.002	**2028873**
107 S VTEC M20	M20	20	1.5	100	0.004	**2028875**
107 S VTEC M25	M25	25	1.5	100	0.008	**2028877**
107 S VTEC M32	M32	32	1.5	100	0.012	**2028880**
107 S VTEC M40	M40	40	1.5	100	0.022	**2028883**
107 S VTEC M50	M50	50	1.5	100	0.040	**2028885**

ZPE Cellular polyethylene

Cellular polyethylene.
Small protective disc to protect the V-TEC VM and V-TEC VM MS cable glands against dust before the cable is installed.
Application: the discs are pre-mounted between the cap nut and the seal. They do not need to be removed when the cable is installed, but are simply passed through to the interior with the cable.
Note: the discs do not provide any mechanical protection.

Dust protection plate, PG



Pg

Type	Size mm	Dimension D mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 S VTEC PG7	Pg 7	11	2	100	0.001	**2028891**
107 S VTEC PG9	Pg 9	14	2	100	0.002	**2028905**
107 S VTEC PG11	Pg 11	16.5	2	100	0.003	**2028913**
107 S VTEC PG13	Pg 13,5	18.5	2	100	0.004	**2028921**
107 S VTEC PG16	Pg 16	21	2	100	0.006	**2028948**
107 S VTEC PG21	Pg 21	26.5	2	100	0.010	**2028956**
107 S VTEC PG29	Pg 29	34.5	2	100	0.015	**2028964**
107 S VTEC PG36	Pg 36	44	3	100	0.035	**2028972**
107 S VTEC PG42	Pg 42	50	3	100	0.050	**2028980**
107 S VTEC PG48	Pg 48	56	3	100	0.060	**2028999**

ZPE Cellular polyethylene

Cellular polyethylene.
Small protective disc to protect the V-TEC and V-TEC MS cable glands against dust before the cable is installed.
Application: the discs are pre-mounted between the cap nut and the seal. They do not need to be removed when the cable is installed, but are simply passed through to the interior with the cable.
Note: the discs do not provide any mechanical protection.

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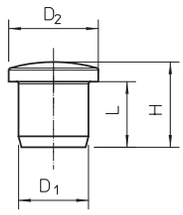
Always indicate the item number when ordering.

Screw plug, metric and PG

Type	Size	Dimension D1 mm	Dimension L mm	Dimension D2 mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107VS VM 5 PA	für M12 / Pg9	5.5	9	10	12.5	50	0.041	**2029511**
107VS VM 9 PA	für M16 / Pg13,5	9.5	12	13.5	16	50	0.090	**2029514**
107VS VM 12 PA	für M20 / Pg16	12	12	16.5	16.5	50	0.130	**2029517**
107VS VM 16 PA	für M25 / Pg21	16	15	20.5	19.5	50	0.190	**2029520**
107VS VM 20 PA	für M32 / Pg29	20	17	24.5	21.5	25	0.250	**2029523**
107VS VM 27 PA	für M40 / Pg36	27	20	32	24	10	0.353	**2029529**
107VS VM 35 PA	für M50 / Pg42	35	25	39	29	5	0.500	**2029533**



PA Polyamide

Screw plug in for dust-proof and waterproof closure of installed but (as yet) unfilled V-TEC... cable glands.

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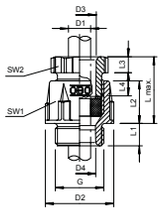
Always indicate the item number when ordering.

Cable gland, metric thread, Polystyrene



IP 54 | IP 65 | M | Fluor Chrom HALOGENFREI

Type	Thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
106 M12 PS	M12 x 1,5	Light grey	50	0.400	**2035316**
106 M16 PS	M16 x 1,5	Light grey	50	0.560	**2035324**
106 M 20 PS	M20 x 1,5	Light grey	50	0.753	**2035332**
106 M 25 PS	M25 x 1,5	Light grey	50	1.018	**2035340**
106 M 32 PS	M32 x 1,5	Light grey	10	2.891	**2035359**
106 M 40 PS	M40 x 1,5	Light grey	10	4.973	**2035367**
106 M 50 PS	M50 x 1,5	Light grey	5	6.594	**2035375**
106 M 63 PS	M63 x 1,5	Light grey	5	9.630	**2035383**

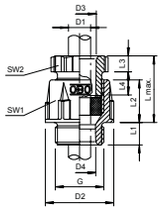
PS Polystyrene

Standard cable gland, shape A, to DIN 46320 with simple NR/SBR sealing ring with metric connection thread to IEC 423.
Protection rating: with connection thread sealing ring IP 65, without connection thread sealing ring IP 54.
Note: only tighten polystyrene cable glands lightly on account of the risk of stress crack formation.

Dimensions

G	D1 mm	D2 mm	D3 mm	D4 mm	SW1 mm	SW2 mm	L1 mm	L2 mm	L3 mm	L4 mm	L max. mm
M12 x 1.5	3.5–6.5	16.5	7	7	15	13	8	13	5	8.5	23
M16 x 1.5	4.5–7	21.5	10.2	10	19	16	8	14	5	9	25
M20 x 1.5	9–13	27	13.4	13.5	24	21	9	16	5	10.8	28
M25 x 1.5	10–14	30	15.8	16	27	23	10	16.5	6	12	30
M32 x 1.5	18–25	47.5	30.3	26	42	40	11	20.5	8	18	42
M40 x 1.5	25–33	58	38.4	33	53	50	12	24	8	17	43
M50 x 1.5	30–38	65	44.5	40.5	60	55	13	27	9	18.5	48
M63 x 1.5	37–44	70	50	45.5	65	60	14	27	9	18.5	48

Cable gland, PG thread



IP 54 | IP 65 | Pg | Fluor Chrom HALOGENFREI

Type	Thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
106 PG7	Pg 7	Light grey	50	0.325	**2036061**
106 PG9	Pg 9	Light grey	50	0.560	**2036096**
106 PG11	Pg 11	Light grey	50	0.800	**2036118**
106 PG13.5	Pg 13,5	Light grey	50	0.794	**2036134**
106 PG16	Pg 16	Light grey	50	1.003	**2036169**
106 PG21	Pg 21	Light grey	50	1.760	**2036215**
106 PG29	Pg 29	Light grey	10	3.004	**2036290**
106 PG36	Pg 36	Light grey	10	6.240	**2036363**
106 PG42	Pg 42	Light grey	5	6.698	**2036428**
106 PG48	Pg 48	Light grey	5	7.336	**2036487**

PS Polystyrene

Standard cable gland, shape A, to DIN 46320 with simple NR/SBR sealing ring.
PG connection thread in accordance with DIN 40430.
Protection rating: with connection thread sealing ring IP65, without connection thread sealing ring IP54.
Note: only tighten polystyrene cable glands lightly on account of the risk of stress crack formation.

Dimensions

G	D1 mm	D2 mm	D3 mm	D4 mm	SW1 mm	SW2 mm	L1 mm	L2 mm	L3 mm	L4 mm	L max. mm
Pg 7	3.5–6.5	16.5	7	7	15	13	8	13	5	8.5	23
Pg 9	4.5–7	21.5	10.2	10.2	19	16	8	14	5	9	25
Pg 11	5.5–10	25	11.3	11.5	22	19	8	15	5	10	27
Pg 13.5	9–13	27	13.4	13.5	24	21	9	16	5	10.8	28
Pg 16	10–14	30	15.8	16.5	27	23	10	16.5	6	12	30
Pg 21	14–18	37.5	21.2	21	33	30	11	19	7	17	38
Pg 29	18–25	47.5	30	27.5	42	40	11	20.5	8	18	42
Pg 36	25–33	58	38	34.5	53	50	12	24	8	17	43
Pg 42	30–38	65	44.5	40.5	60	55	13	27	9	18.5	48
Pg 48	37–44	70	50	45.5	65	60	14	27	9	18.5	48

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Always indicate the item number when ordering.

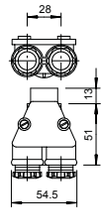
Twin gland, PG thread

IP 54 | Pg | Fluor Chlor Brom HALOGENFREI

Type	Thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
113 PG13.5 LGR	Pg 13,5	Light grey	5	3.752	**2024136**
113 PG16 LGR	Pg 16	Light grey	5	4.360	**2024160**

UF Duroplast, Aminoplast, type 131.5

Protection rating, with removable polystyrene cover, as well as two polyethylene connection thread sealing rings.



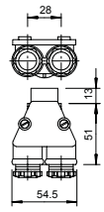
Twin gland, metric thread

IP 54 | M | Fluor Chlor Brom HALOGENFREI

Type	Thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
113 M20 LGR	M 20 x 1,5	Light grey	5	3.701	**2024063**

UF Duroplast, Aminoplast, type 131.5

Protection rating, with removable polystyrene cover, as well as two polyethylene connection thread sealing rings.
With connection thread M20 x 1.5, two half glands PG 13.5 for cable diameters 6.5–10.5 mm.



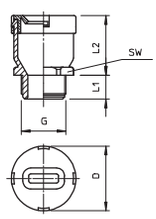
Flat cable threaded connection, metric thread M20

IP 31 | M | 650° | Fluor Chlor Brom HALOGENFREI

Type	Thread	Flat cables/ thickness mm	Flat cables/ width mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
106 FL M20 8 19	M20	6 - 8	17 - 19	Stone grey	50	1.350	**2013002**

PE Polyethylene

Flat-cable entry, choke-nipple design with metric connecting thread to IEC 432, protection rating IP 31, with pre-mounted support sealing ring 107/F.



Dimensions

G	D mm	L1 mm	L2 mm	SW mm
M20	32.5	12	30	27

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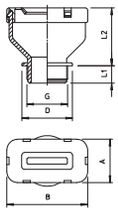
Always indicate the item number when ordering.

Flat cable threaded connection, metric thread M25



IP 31 | M | 650° | Fluor Chlor 0mm HALOGENFREI

Type	Thread	Flat cables/ thickness mm	Flat cables/ width mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
106 FL M25 6 30	M25	4 - 6	27 - 30	Stone grey	25	2.630	**2013006**
106 FL M25 8 33	M25	6 - 8	30 - 33	Stone grey	25	2.630	**2013007**
106 FL M25 9 22	M25	7 - 9	19 - 22	Stone grey	25	2.630	**2013008**
106 FL M25 9 39	M25	7 - 9	36 - 39	Stone grey	25	2.630	**2013009**
106 FL M25 10 29	M25	8 - 10	26 - 29	Stone grey	25	2.630	**2013010**
106 FL M25 10 31	M25	8.5 - 10.5	28.5 - 31.5	Stone grey	25	2.630	**2013011**
106 FL M25 12 35	M25	9 - 12	31 - 35	Stone grey	25	2.630	**2013012**
106 FL M25 14 40	M25	11 - 14	37 - 40	Stone grey	25	2.680	**2013013**
106 FL M32 6 30	M32	4 - 6	27 - 30	Stone grey	15	3.450	**2013015**
106 FL M32 8 33	M32	6 - 8	30 - 33	Stone grey	15	3.450	**2013016**
106 FL M32 9 22	M32	7 - 9	19 - 22	Stone grey	15	3.450	**2013017**
106 FL M32 9 39	M32	7 - 9	36 - 39	Stone grey	15	3.450	**2013018**
106 FL M32 10 29	M32	8 - 10	26 - 29	Stone grey	15	3.450	**2013019**
106 FL M32 10 31	M32	8.5 - 10.5	28.5 - 31.5	Stone grey	15	3.450	**2013020**
106 FL M32 12 35	M32	9 - 12	31 - 35	Stone grey	15	3.450	**2013021**
106 FL M32 14 40	M32	11 - 14	37 - 40	Stone grey	15	3.500	**2013022**

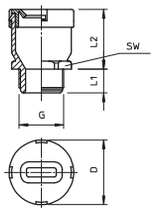
PE Polyethylene

Flat-cable entry, choke-nipple design with metric connecting thread to IEC 432, protection rating IP31, with pre-mounted support sealing ring 107/F.

Dimensions

G	D mm	L1 mm	L2 mm	A mm	B mm
M25	35	12	40	30	56

Flat cable threaded connection, PG thread Pg16



IP 31 | Pg | 650° | Fluor Chlor 0mm HALOGENFREI

Type	Thread	Flat cables/ thickness mm	Flat cables/ width mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
106 FL 16 8 19	Pg 16	6 - 8	17 - 19	Stone grey	50	1.006	**2012758**

PE Polyethylene

Flat-cable entry, choke-nipple design with PG connecting thread to DIN 40430, protection rating IP31, with pre-mounted support sealing ring 107/F.

Dimensions

G	D mm	L1 mm	L2 mm	SW mm
PG16	32.5	12	30	27

Always indicate the item number when ordering.

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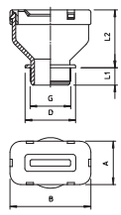
Flat cable threaded connection, PG thread

IP 31 | Pg | 650° | Fluor Chlor frei HALOGENFREI



Type	Thread	Flat cables/ thickness mm	Flat cables/ width mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
106 FL 21 6 30	Pg 21	4 - 6	27 - 30	Stone grey	25	2.006	**2012855**
106 FL 21 8 33	Pg 21	6 - 8	30 - 33	Stone grey	25	1.977	**2012782**
106 FL 21 9 22	Pg 21	7 - 9	19 - 22	Stone grey	25	1.996	**2012820**
106 FL 21 9 39	Pg 21	7 - 9	36 - 39	Stone grey	25	1.975	**2012804**
106 FL 21 10 29	Pg 21	8 - 10	26 - 29	Stone grey	25	1.989	**2012839**
106 FL 21 10 31	Pg 21	8.5 - 10.5	28.5 - 31.5	Stone grey	25	1.999	**2012871**
106 FL 21 12 35	Pg 21	9 - 12	31 - 35	Stone grey	25	1.965	**2012847**
106 FL 21 14 40	Pg 21	11 - 14	37 - 40	Stone grey	25	2.015	**2012928**
106 FL 29 14 40	Pg 29	11 - 14	37 - 40	Stone grey	15	3.500	**2012774**

PE Polyethylene

Flat-cable entry, choke-nipple design with PG connecting thread to DIN 40430, protection rating IP31, with pre-mounted support sealing ring 107/F.

Dimensions

G	D mm	L1 mm	L2 mm	A mm	B mm
PG21	35	12	40	30	56
PG 29	46	13	46	30	56

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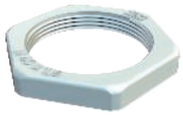
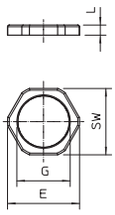
Always indicate the item number when ordering.

Locknut, metric thread



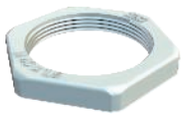


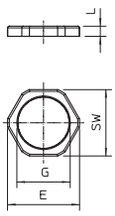
M

Type	Thread	Colour	SW mm	Dimension E mm	Dimension L mm	Pack. pcs	Item No.
116 M12 LGR PA	M12x1,5	Light grey	17	19	5	100	**2048906**
116 M16 LGR PA	M16x1,5	Light grey	22	25	5	100	**2048914**
116 M20 LGR PA	M20x1,5	Light grey	26	29	6	100	**2048922**
116 M25 LGR PA	M25x1,5	Light grey	32	36	6.5	100	**2048930**
116 M32 LGR PA	M32x1,5	Light grey	41	46	7	50	**2048949**
116 M40 LGR PA	M40x1,5	Light grey	50	56	7	25	**2048957**
116 M50 LGR PA	M50x1,5	Light grey	60	68	8	25	**2048965**
116 M63 LGR PA	M63x1,5	Light grey	75	83	8	25	**2048973**

PA Polyamide

Cable outlet, plastic locknut



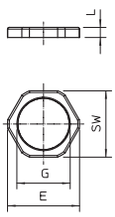


M

Type	Thread	Colour	SW mm	Dimension E mm	Dimension L mm	Pack. pcs	Item No.
116 M12 SGR PA	M12x1,5	Silver grey	17	19	5	100	**2048752**
116 M16 SGR PA	M16x1,5	Silver grey	22	25	5	100	**2048760**
116 M20 SGR PA	M20x1,5	Silver grey	26	29	6	100	**2048779**
116 M25 SGR PA	M25x1,5	Silver grey	32	36	6.5	100	**2048787**
116 M32 SGR PA	M32x1,5	Silver grey	41	46	7	50	**2048795**
116 M40 SGR PA	M40x1,5	Silver grey	50	56	7	25	**2048809**
116 M50 SGR PA	M50x1,5	Silver grey	60	68	8	25	**2048817**
116 M63 SGR PA	M63x1,5	Silver grey	75	83	8	25	**2048825**

PA Polyamide

Locknut, metric thread

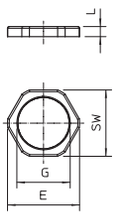


M

Type	Thread	Colour	SW mm	Dimension E mm	Dimension L mm	Pack. pcs	Item No.
116 M12 SW PA	M12x1,5	Black	17	19	5	100	**2049066**
116 M16 SW PA	M16x1,5	Black	22	25	5	100	**2049074**
116 M20 SW PA	M20x1,5	Black	26	29	6	100	**2049082**
116 M25 SW PA	M25x1,5	Black	32	36	6.5	100	**2049090**
116 M32 SW PA	M32x1,5	Black	41	46	7	50	**2049104**
116 M40 SW PA	M40x1,5	Black	50	56	7	25	**2049112**
116 M50 SW PA	M50x1,5	Black	60	68	8	25	**2049120**
116 M63 SW PA	M63x1,5	Black	75	83	8	25	**2049139**

PA Polyamide

Locknut, PG thread



Pg

Type	Thread	Colour	SW mm	Dimension E mm	Dimension L mm	Pack. pcs	Item No.
116 VDE PG7 PA	Pg 7	Light grey	19	21	5	100	**2048078**
116 VDE PG 9 PA	Pg 9	Light grey	22	24	5	100	**2048094**
116 VDE PG11 PA	Pg 11	Light grey	24	26	5	100	**2048116**
116 VDE PG13.5PA	Pg 13,5	Light grey	27	29	6	100	**2048132**
116 VDE PG16 PA	Pg 16	Light grey	30	33	6	100	**2048167**
116 VDE PG21 PA	Pg 21	Light grey	36	39	7	100	**2048221**
116 VDE PG29 PA	Pg 29	Light grey	46	50	7	50	**2048299**
116 VDE PG36 PA	Pg 36	Light grey	60	66	8	25	**2048361**
116 VDE PG42 PA	Pg 42	Light grey	65	73	8	25	**2048426**
116 VDE PG48 PA	Pg 48	Light grey	70	78	8	25	**2048485**

PA Polyamide

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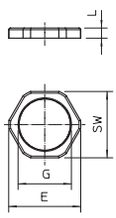
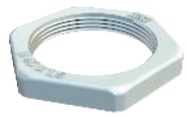
Always indicate the item number when ordering.

Locknut, metric thread

M





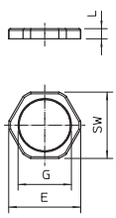
Type	Thread	Colour	SW mm	Dimension E mm	Dimension L mm	Pack. pcs	Item No.
116 M12 LGR PS	M12 x 1,5	Light grey	17	19	5	100	**2049503**
116 M16 LGR PS	M16 x 1,5	Light grey	22	25	5	100	**2049511**
116 M20 LGR PS	M20 x 1,5	Light grey	26	29	6	100	**2049538**
116 M25 LGR PS	M25 x 1,5	Light grey	32	36	6.5	100	**2049546**
116 M32 LGR PS	M32 x 1,5	Light grey	41	46	7	50	**2049554**
116 M40 LGR PS	M40 x 1,5	Light grey	50	56	7	25	**2049562**
116 M50 LGR PS	M50 x 1,5	Light grey	60	68	8	25	**2049570**
116 M63 LGR PS	M63 x 1,5	Light grey	75	83	8	25	**2049589**

PS Polystyrene

Locknut DIN 46319, with metric thread IEC 423.

Locknut, PG thread

Pg



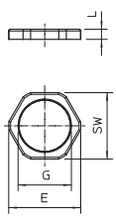
Type	Thread	Colour	SW mm	Dimension E mm	Dimension L mm	Pack. pcs	Item No.
116 PG 7	Pg 7	Light grey	19	21	5	100	**2043076**
116 PG 9	Pg 9	Light grey	22	24	5	100	**2043092**
116 PG11	Pg 11	Light grey	24	26	5	100	**2043114**
116 PG13.5	Pg 13,5	Light grey	27	29	6	100	**2043130**
116 PG16	Pg 16	Light grey	30	33	6	100	**2043165**
116 PG21	Pg 21	Light grey	36	39	7	100	**2043211**
116 PG29	Pg 29	Light grey	46	50	7	50	**2043297**
116 PG36	Pg 36	Light grey	60	66	8	25	**2043351**
116 PG42	Pg 42	Light grey	65	73	8	25	**2043424**
116 PG48	Pg 48	Light grey	70	78	8	25	**2043483**

PS Polystyrene

Locknut DIN 46320, with PG thread DIN 40430.

Locknut, PG thread

Pg



Type	Thread	Colour	SW mm	Dimension E mm	Dimension L mm	Pack. pcs	Item No.
116 VDE PG7 PA	Pg 7	Light grey	19	21	5	100	**2048078**
116 VDE PG 9 PA	Pg 9	Light grey	22	24	5	100	**2048094**
116 VDE PG11 PA	Pg 11	Light grey	24	26	5	100	**2048116**
116 VDE PG13.5PA	Pg 13,5	Light grey	27	29	6	100	**2048132**
116 VDE PG16 PA	Pg 16	Light grey	30	33	6	100	**2048167**
116 VDE PG21 PA	Pg 21	Light grey	36	39	7	100	**2048221**
116 VDE PG29 PA	Pg 29	Light grey	46	50	7	50	**2048299**
116 VDE PG36 PA	Pg 36	Light grey	60	66	8	25	**2048361**
116 VDE PG42 PA	Pg 42	Light grey	65	73	8	25	**2048426**
116 VDE PG48 PA	Pg 48	Light grey	70	78	8	25	**2048485**

PA Polyamide

Locknut DIN 46320, with PG thread DIN 40430.

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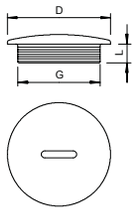
Screw plug, metric thread



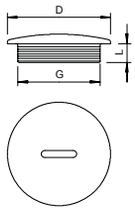
M

Type	Thread	Dimension D mm	Dimension L mm	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
108 M12 PS	M12 x 1,5	15	6	Light grey	3000	100	0.047	**2033003**
108 M16 PS	M16 x 1,5	20	6	Light grey	1800	100	0.085	**2033007**
108 M20 PS	M20 x 1,5	24	6	Light grey	1200	100	0.128	**2033011**
108 M25 PS	M25 x 1,5	30	8	Light grey	1000	100	0.210	**2033016**
108 M32 PS	M32 x 1,5	37	8	Light grey	500	50	0.339	**2033021**
108 M40 PS	M40 x 1,5	46	8	Light grey	300	25	0.564	**2033026**
108 M50 PS	M50 x 1,5	56	10	Light grey	300	25	0.939	**2033032**
108 M63 PS	M63 x 1,5	70	12	Light grey	300	25	1.492	**2033038**

PS Polystyrene

Screw plug in accordance with DIN 46320, with metric thread to IEC 423.

Screw plug, PG thread



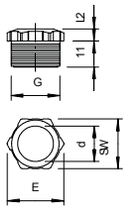
Pg

Type	Thread	Dimension D mm	Dimension L mm	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
108 PG 7	Pg 7	14	6	Light grey	2400	100	0.056	**2033070**
108 PG 9	Pg 9	19	6	Light grey	1800	100	0.096	**2033097**
108 PG11	Pg 11	22	6	Light grey	2000	100	0.128	**2033119**
108 PG13.5	Pg 13,5	25	6.5	Light grey	1200	100	0.164	**2033135**
108 PG16	Pg 16	27	6.5	Light grey	1000	100	0.184	**2033151**
108 PG21	Pg 21	34	8	Light grey	1200	100	0.345	**2033216**
108 PG29	Pg 29	44	8	Light grey	600	50	0.646	**2033291**
108 PG36	Pg 36	58	10	Light grey	200	25	1.057	**2033364**
108 PG42	Pg 42	67	10	Light grey	300	25	1.479	**2033429**
108 PG48	Pg 48	73	12	Light grey	300	25	1.832	**2033488**

PS Polystyrene

Screw plug in accordance with DIN 46320, with PG thread to DIN 40430.

Pressure screw, PG thread



Pg

Type	Thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
107 E PG7 PS	Pg 7	Light grey	100	0.102	**2025078**
107 E PG9 PS	Pg 9	Light grey	100	0.134	**2025094**
107 E PG11 PS	Pg 11	Light grey	100	0.215	**2025116**
107 E PG13.5 PS	Pg 13,5	Light grey	100	0.244	**2025132**
107 E PG16 PS	Pg 16	Light grey	100	0.319	**2025167**
107 E PG21 PS	Pg 21	Light grey	50	0.700	**2025213**
107 E PG29 PS	Pg 29	Light grey	25	1.047	**2025299**
107 E PG36 PS	Pg 36	Light grey	25	1.612	**2025361**
107 E PG42 PS	Pg 42	Light grey	10	1.966	**2025426**
107 E PG48 PS	Pg 48	Light grey	10	5.580	**2025485**

PS Polystyrene

Pressure screw (Part 1) to DIN 46320, with Pg thread DIN 40430.

Dimensions

G	D mm	SW mm	E mm	L1 mm	L2 mm
Pg 7	7	13	14.7	8.5	5
Pg 9	10.2	16	18	9	5
Pg 11	11.3	19	21.5	10	5
Pg 13.5	13.4	21	23.8	10.5	5
Pg 16	15.8	23	26	12	6
Pg 21	21.2	30	34	17	7
Pg 29	30	40	45	18	8
Pg 36	38.2	50	56.5	17	8
Pg 42	44.5	55	62	18.5	9
Pg 48	50	60	68	18.5	9

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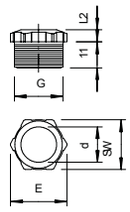
Always indicate the item number when ordering.

Pressure screw, PG thread

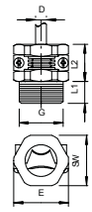


Type	Thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
107 E PG11 PA	Pg 11	Light grey	100	0.306	**2025531**
107 E PG13.5 PA	Pg 13,5	Light grey	100	0.342	**2025566**
107 E PG21 PA	Pg 21	Light grey	50	0.780	**2025604**
107 E PG36 PA	Pg 36	Light grey	25	2.256	**2025647**

PA Polyamide

Pressure screw, Part 1, to DIN 46320, fibreglass reinforced.

Pressure screw, PG strain relief



Type	Thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
107 Z PG 9 PA	Pg 9	Light grey	100	0.400	**2023091**
107 Z PG11 PA	Pg 11	Light grey	100	0.600	**2023113**
107 Z PG13.5 PA	Pg 13,5	Light grey	100	0.680	**2023121**
107 Z PG16 PA	Pg 16	Light grey	50	0.900	**2023164**
107 Z PG21 PA	Pg 21	Light grey	25	1.800	**2023210**
107 Z PG29 PA	Pg 29	Light grey	25	3.000	**2023296**

PA Polyamide

Pressure screw with transverse clip strain relief, electrogalvanised steel screws,
PG thread to DIN 40430.

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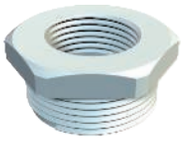
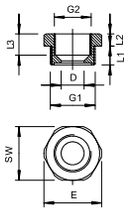
Always indicate the item number when ordering.

Reduction, metric thread





M

Type	External thread	Internal thread	Colour	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 R M20-12 PA	M20	M12	Light grey	24	100	0.500	**2030616**
107 R M20-16 PA	M20	M16	Light grey	24	100	0.700	**2030619**
107 R M25-12 PA	M25	M12	Light grey	32	100	0.850	**2030624**
107 R M25-16 PA	M25	M16	Light grey	32	100	0.850	**2030626**
107 R M25-20 PA	M25	M20	Light grey	32	100	0.650	**2030628**
107 R M32-12 PA	M32	M12	Light grey	36	50	1.200	**2030632**
107 R M32-16 PA	M32	M16	Light grey	36	50	1.100	**2030634**
107 R M32-20 PA	M32	M20	Light grey	36	50	1.050	**2030637**
107 R M32-25 PA	M32	M25	Light grey	36	50	1.000	**2030640**
107 R M40-16 PA	M40	M16	Light grey	46	50	2.000	**2030643**
107 R M40-20 PA	M40	M20	Light grey	46	50	1.850	**2030646**
107 R M40-25 PA	M40	M25	Light grey	46	50	1.950	**2030649**
107 R M40-32 PA	M40	M32	Light grey	46	50	1.400	**2030652**
107 R M50-20 PA	M50	M20	Light grey	55	25	2.300	**2030655**
107 R M50-25 PA	M50	M25	Light grey	55	25	2.250	**2030659**
107 R M50-32 PA	M50	M32	Light grey	55	25	2.200	**2030661**
107 R M50-40 PA	M50	M40	Light grey	55	25	2.050	**2030664**
107 R M63-25 PA	M63	M25	Light grey	68	25	3.050	**2030667**
107 R M63-32 PA	M63	M32	Light grey	68	25	3.070	**2030670**
107 R M63-40 PA	M63	M40	Light grey	68	25	3.100	**2030673**
107 R M63-50 PA	M63	M50	Light grey	68	25	3.000	**2030675**

PA Polyamide

Reduction, with metric internal and external thread.

Dimensions

G1	G2	SW mm	E mm	L1 mm	L3 mm
M20	M12	24	26.6	8	12
M20	M16	24	26.6	8	12
M25	M12	32	32	8	14
M25	M16	32	32	8	14
M25	M20	32	32	8	14
M32	M12	36	40	10	16
M32	M16	36	40	10	16
M32	M20	36	40	10	16
M32	M25	36	40	10	16
M40	M16	46	50.5	10	16
M40	M20	46	50.5	10	16
M40	M25	46	50.5	10	16
M40	M32	46	50.5	10	16
M50	M20	55	60	12	18
M50	M25	55	60	12	18
M50	M32	55	60	12	18
M50	M40	55	60	12	18
M63	M25	68	75	12	18
M63	M32	68	75	12	18
M63	M40	68	75	12	18
M63	M50	68	75	12	18

Always indicate the item number when ordering.

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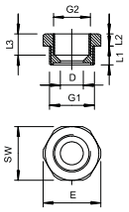
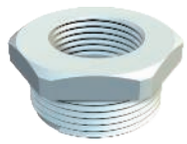
Reduction, PG thread

Pg





Type	External thread	Internal thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
107 R PG11- 7 PA	Pg 11	Pg 7	Light grey	50	0.400	**2030705**
107 R PG13- 9 PA	Pg 13,5	Pg 9	Light grey	50	0.450	**2030713**
107 R PG16- 9 PA	Pg 16	Pg 9	Light grey	50	0.600	**2030748**
107 R PG16-11 PA	Pg 16	Pg 11	Light grey	50	0.480	**2030756**
107 R PG21-11 PA	Pg 21	Pg 11	Light grey	50	0.910	**2030764**
107 R PG21-13 PA	Pg 21	Pg 13,5	Light grey	50	0.800	**2030772**
107 R PG21-16 PA	Pg 21	Pg 16	Light grey	50	0.650	**2030780**
107 R PG29-16 PA	Pg 29	Pg 16	Light grey	50	1.460	**2030799**
107 R PG29-21 PA	Pg 29	Pg 21	Light grey	25	1.500	**2030802**
107 R PG36-21 PA	Pg 36	Pg 21	Light grey	25	2.350	**2030829**
107 R PG36-29 PA	Pg 36	Pg 29	Light grey	25	2.200	**2030810**
107 R PG42-29 PA	Pg 42	Pg 29	Light grey	25	2.350	**2030837**

PA Polyamide

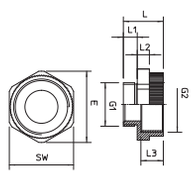
Reduction, Pg internal and external thread to DIN 40430.

Dimensions

G1	G2	D mm	SW mm	E mm	L1 mm	L2 mm	L3 mm
Pg 11	Pg 7	7.5	22	24	8	6	9.5
Pg 13.5	Pg 9	9.5	24	26	8.5	6	9.5
Pg 16	Pg 9	9.5	27	29	9.5	6	11.5
Pg 16	Pg 11	11.5	27	29	9.5	6	11
Pg 21	Pg 11	11.5	32	35.5	10.5	5	11
Pg 21	Pg 13.5	13.5	32	35.5	10.5	5	11
Pg 21	Pg 16	16.5	32	35.5	10.5	5	11
Pg 29	Pg 16	16.5	40	43	12	6	12.5
Pg 29	Pg 21	21.5	39	43	12.5	6	13.5
Pg 36	Pg 21	21	50	54	13	6	13.5
Pg 36	Pg 29	28.5	50	54	18	6	18
Pg 42	Pg 29	27.5	55	59	16	6	17

Intermediate expansion connector, metric thread

M



Type	External thread	Internal thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
107 E M 12-16 PA	M12	M16	Light grey	50	0.300	**2031450**
107 E M 16-20 PA	M16	M20	Light grey	50	0.380	**2031451**
107 E M 20-25 PA	M20	M25	Light grey	50	0.630	**2031452**
107 E M 25-32 PA	M25	M32	Light grey	50	0.970	**2031453**
107 E M 32-40 PA	M32	M40	Light grey	25	1.300	**2031454**

PA Polyamide

Intermediate expansion connector, metric internal and external thread.

Dimensions

G1	G2	SW mm	E mm	L mm	L1 mm	L2 mm	L3 mm	D mm
M12	M16	20	22	20.6	8	5	11.2	7.2
M16	M20	24	26.6	20.6	8	5	11	11.3
M20	M25	30	33	21	8	6	10.8	15
M25	M32	37	41	22.7	8	7	12.5	19
M32	M40	45	49.5	25	10	7	12.5	26.4

Always indicate the item number when ordering.

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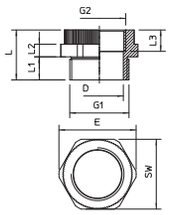
Adapter PG-M



M Pg

Type	External thread	Internal thread	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
107 ADA PG7-M12	PG7	M12	Light grey	20	0.194	**2031465**
107 ADA PG9-M12	PG9	M12	Light grey	20	0.370	**2031466**
107 ADA PG11-M16	PG11	M16	Light grey	20	0.410	**2031467**
107 ADA PG13-M20	PG13,5	M20	Light grey	20	0.416	**2031468**
107 ADA PG16-M20	PG16	M20	Light grey	20	0.630	**2031469**
107 ADA PG21-M25	PG21	M25	Light grey	10	0.940	**2031470**
107 ADA PG29-M32	PG29	M32	Light grey	10	1.610	**2031471**

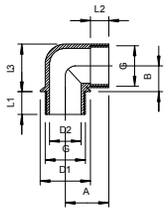
PA Polyamide

Adapter for converting a Pg threaded drill hole to a metric threaded drill hole.

Dimensions

G1	G2	SW mm	E mm	L mm	L1 mm	L2 mm	L3 mm	D mm
PG 7	M12	15	16.5	20.3	7.9	5	10.4	7.7
PG 9	M12	19	21	20		5	10	10.5
PG11	M16	22	24.5	20.3	8	5	10	13.6
PG13.5	M20	24	26.7	21.3	9.1	5	10	15.2
PG16	M20	27	30	22	10	6	10	17.6
PG21	M25	33	36.5	23.6	10.9	6	10	22.7
PG29	M32	42	46.7	25.5	11.2	7	10.4	30.8

90° elbow socket, PG thread



Pg

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
107 W PG 9 PA	Light grey	10	0.390	**2029901**
107 W PG11 PA	Light grey	10	0.620	**2029928**
107 W PG13.5 PA	Light grey	10	0.750	**2029936**
107 W PG16 PA	Light grey	10	0.950	**2029944**
107 W PG21 PA	Light grey	10	1.470	**2029952**

PA Polyamide

Elbow socket with PG internal and external thread to DIN 40430.
The elbow socket can be turned into an angular gland with two steel pressure rings 107/D, a sealing ring 107/A or 107/B and a pressure screw 107/E.

Dimensions

G	D1 mm	D2 mm	A mm	B mm	L1 mm	L2 mm	L3 mm
Pg 9	19.5	11.5	18.5	10.5	11	9	19
Pg 11	23.5	15	20	12	11	9.5	22
Pg 13.5	25.5	16	22	13	11.5	10	24
Pg 16	27.5	18.5	24	15	11.5	11	27
Pg 21	34	24	28	18	13	13	33

Always indicate the item number when ordering.

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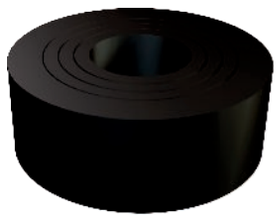
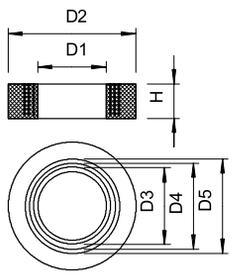
Cutting ring

Pg

Type	Size mm	Size	Dimension D1 mm	Dimension D2 mm	Dim. D3 mm	Dim. D4 mm	Dim. D5 mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 B PG9	Pg 9	M16	5	13.3	7.5	10	0	5.5	100	0.240	**2029103**
107 B PG11	Pg 11	–	7.5	16.5	10	12.5	0	6	100	0.230	**2029111**
107 B PG13.5	Pg 13,5	M20	7.5	18.3	10	12.5	0	6	100	0.230	**2029138**
107 B PG16	Pg 16	M25	7.5	20.4	10	12.5	15	7	100	0.320	**2029162**
107 B PG21	Pg 21	–	10	25.9	13	16	19	8	100	0.590	**2029219**
107 B PG29	Pg 29	M32	18	34.7	21	24	27	9.5	100	1.160	**2029294**
107 B PG36	Pg 36	M40	24	44.7	27	30	33	12	50	1.940	**2029367**
107 B PG42	Pg 42	M50	30	51.7	33	36	39	14	50	2.710	**2029421**
107 B PG48	Pg 48	M63	36	56.9	39	42	45	14	50	3.490	**2029480**





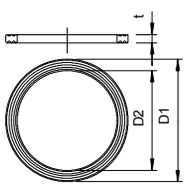
NBR-SBR Rubber mixture

Rubber cutting ring (cuttable sealing ring) to DIN 46320 for cone cable gland.

Connection thread sealing ring, metric

M

Type	Size mm	Dimension D1 mm	Dimension D2 mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 F M12 PE	M12	16.3	12	1	100	0.017	**2030004**
107 F M16 PE	M16	20.9	16	1.1	100	0.018	**2030008**
107 F M20 PE	M20	25.1	20	1.1	100	0.030	**2030012**
107 F M25 PE	M25	31.3	25	1.4	100	0.038	**2030016**
107 F M32 PE	M32	37.6	32	1.7	100	0.105	**2030020**
107 F M40 PE	M40	49.1	40	1.7	100	0.200	**2030024**
107 F M50 PE	M50	60.1	50	2	100	0.250	**2030028**
107 F M63 PE	M63	73.8	63	2	100	0.290	**2030032**



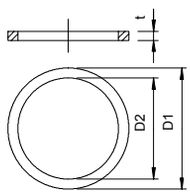
PE Polyethylene

Connection thread sealing ring, suitable for all plastic cable glands with metric connection thread to DIN EN 60423 or ISO 68. The internal diameters of the sealing rings are designed in such a way that they can be pre-mounted in a captive manner.

Connection thread sealing ring, metric

M

Type	Size mm	Dimension D1 mm	Dimension D2 mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
170 M16	M16	19.9	16	2	100	0.040	**2088428**
170 M20	M20	24	20	2	100	0.066	**2088436**
170 M25	M25	30	25	3	100	0.170	**2088444**
170 M32	M32	38	32	3	100	0.270	**2088452**
170 M40	M40	47	40	3	50	0.330	**2088460**
170 M50	M50	57	50	3	50	0.440	**2088479**



FA Fibre-proof material DIN 28091

Asbestos-free material.
Connection thread sealing ring, Part 9, to DIN 46320, suitable for all brass cable glands with metric connection thread to DIN EN 60423 or ISO 68.
Colour: green, graphited on one side.

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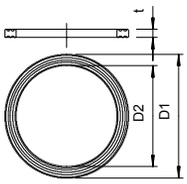
Connection thread sealing ring, PG



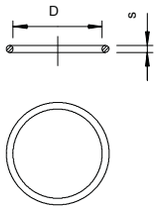
Pg

Type	Size mm	Dimension D1 mm	Dimension D2 mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 F PG7 PE	Pg 7	16.5	12.1	1.6	100	0.010	**2030071**
107 F PG9 PE	Pg 9	19	14.7	1.6	100	0.013	**2030098**
107 F PG11 PE	Pg 11	23	18	1.8	100	0.022	**2030101**
107 F PG13.5 PE	Pg 13,5	25	19.8	1.8	100	0.030	**2030136**
107 F PG16 PE	Pg 16	27	21.8	1.8	100	0.038	**2030160**
107 F PG21 PE	Pg 21	34	27.5	2.2	100	0.049	**2030217**
107 F PG29 PE	Pg 29	44	36.2	2.2	100	0.105	**2030292**
107 F PG36 PE	Pg 36	55.5	46.2	2.7	100	0.200	**2030365**
107 F PG48 PE	Pg 48	69.5	58.5	3.2	100	0.290	**2030489**

PE Polyethylene

Connection thread sealing ring, in accordance with Part 9 to DIN 46320, however, dimensions may, according to material or function, deviate, suitable for all plastic cable glands with PG connection thread to DIN EN 40430, the internal diameter of the sealing rings are designed so that they can be captively pre-mounted.

O sealing ring for metric connection thread



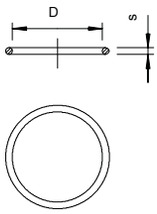
M

Type	Size mm	Dimension D mm	Dim. S mm	Pack. pcs	Weight kg/100 pcs.	Item No.
171 M12	M12	10	1.5	100	0.007	**2088703**
171 M16	M16	13	1.5	100	0.008	**2088711**
171 M20	M20	18	1.5	100	0.011	**2088738**
171 M25	M25	22	1.5	100	0.012	**2088746**
171 M32	M32	29	2	100	0.035	**2088754**
171 M40	M40	36	2	50	0.045	**2088762**
171 M50	M50	46	2	50	0.052	**2088770**
171 M63	M63	59	2	25	0.056	**2088789**

NBR Nitrile rubber

O sealing rings, suitable as connection thread sealing rings for all plastic and brass cable glands with metric connection thread to DIN EN 60423 or ISO 68. The rings can be captively pre-mounted.

O sealing ring for PG connection thread



Pg

Type	Size mm	Dimension D mm	Dim. S mm	Pack. pcs	Weight kg/100 pcs.	Item No.
171 PG 9	Pg 9	13	1.5	100	0.008	**2088819**
171 PG11	Pg 11	16	1.5	100	0.010	**2088827**
171 PG13.5	Pg 13,5	18	1.5	100	0.011	**2088835**
171 PG16	Pg 16	20	1.5	100	0.012	**2088843**
171 PG21	Pg 21	25	2	100	0.027	**2088851**
171 PG29	Pg 29	33	2	100	0.035	**2088878**
171 PG36	Pg 36	43	2	50	0.045	**2088886**
171 PG42	Pg 42	50	2	50	0.052	**2088894**

NBR Nitrile rubber

O sealing rings, suitable as connection thread sealing rings for all plastic and brass cable glands with Pg connection thread to DIN EN 60423 or ISO 68. The rings can be captively pre-mounted.

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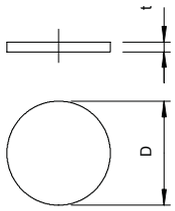
Always indicate the item number when ordering.

Dust protection plate, metric

M



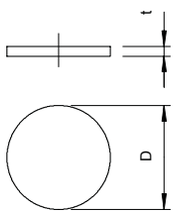
Type	Size mm	Dimension D mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 S VTEC M12	M12	12	1.5	100	0.001	**2028870**
107 S VTEC M16	M16	16	1.5	100	0.002	**2028873**
107 S VTEC M20	M20	20	1.5	100	0.004	**2028875**
107 S VTEC M25	M25	25	1.5	100	0.008	**2028877**
107 S VTEC M32	M32	32	1.5	100	0.012	**2028880**
107 S VTEC M40	M40	40	1.5	100	0.022	**2028883**
107 S VTEC M50	M50	50	1.5	100	0.040	**2028885**

ZPE Cellular polyethylene

Cellular polyethylene.
Small protective disc to protect the V-TEC VM and V-TEC VM MS cable glands against dust before the cable is installed.
Application: the discs are pre-mounted between the cap nut and the seal. They do not need to be removed when the cable is installed, but are simply passed through to the interior with the cable.
Note: the discs do not provide any mechanical protection.

Dust protection plate, PG

Pg



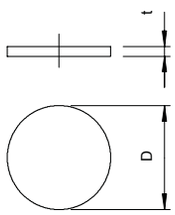
Type	Size mm	Dimension D mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 S VTEC PG7	Pg 7	11	2	100	0.001	**2028891**
107 S VTEC PG9	Pg 9	14	2	100	0.002	**2028905**
107 S VTEC PG11	Pg 11	16.5	2	100	0.003	**2028913**
107 S VTEC PG13	Pg 13,5	18.5	2	100	0.004	**2028921**
107 S VTEC PG16	Pg 16	21	2	100	0.006	**2028948**
107 S VTEC PG21	Pg 21	26.5	2	100	0.010	**2028956**
107 S VTEC PG29	Pg 29	34.5	2	100	0.015	**2028964**
107 S VTEC PG36	Pg 36	44	3	100	0.035	**2028972**
107 S VTEC PG42	Pg 42	50	3	100	0.050	**2028980**
107 S VTEC PG48	Pg 48	56	3	100	0.060	**2028999**

ZPE Cellular polyethylene

Cellular polyethylene.
Small protective disc to protect the V-TEC and V-TEC MS cable glands against dust before the cable is installed.
Application: the discs are pre-mounted between the cap nut and the seal. They do not need to be removed when the cable is installed, but are simply passed through to the interior with the cable.
Note: the discs do not provide any mechanical protection.

Sealing plate, PG

Pg



Type	Size mm	Dimension D mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 V PG 7 PVC	Pg 7	11	0.5	100	0.013	**2029707**
107 V PG 9 PVC	Pg 9	13.5	0.5	100	0.020	**2029715**
107 V PG11 PVC	Pg 11	16.5	0.5	100	0.030	**2029723**
107 V PG13.5 PVC	Pg 13,5	18.5	0.5	100	0.038	**2029731**
107 V PG16 PVC	Pg 16	20.5	0.5	100	0.048	**2029758**
107 V PG21 PVC	Pg 21	26	0.5	100	0.075	**2029766**
107 V PG29 PVC	Pg 29	35	1	100	0.135	**2029774**

PVC Polyvinylchloride

The sealing plate offers both mechanical protection and the maintenance of the protection rating of plastic and metal cable glands to DIN 46320 before cable installation.
Application: the discs are placed between the pressure screw and the pressure ring. If the safe maintenance of IP65 is required, we recommend placing the discs between the pressure ring and the sealing ring. To mount the cable, remove the discs – they can be reused.

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Electrical insulating and sealing compound

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
115 GR-GN	Natural	10	11.020	**2340038**

In rods.
Permanently elastic, fibre-free sealing kit on a polymer and a mineral basis to fill cavities in installations, e.g. cable glands or similar components, to prevent the entry of dirt and water,
Colour: Natural
Characteristics of the sealing kit:
- Halogen-, acid- and silicone-free
- Can also be processed at low temperatures
- Permanent heat resistance to +80 °C
- Corrosion-resistant
- Low water consumption
- Good insulation properties
- Puncture strength 16 kV/mm to VDE 0291 Part 2
- Can be stored almost indefinitely

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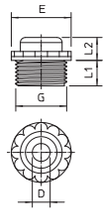
Always indicate the item number when ordering.

Screw-in nipple, metric thread

IP 54 | M | Fluor Chlor Brom MALOGENFREI



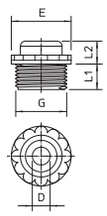
Type	Thread	Colour	Dimension D mm	SW mm	Dimension E mm	Dimension L1 mm	Dimension L2 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
90 M12 OF	M12 x 1,5	Light grey	3.5	13	17	8	6	100	0.170	**2032007**
90 M16 OF	M16 x 1,5	Light grey	5	16	20	8	6	100	0.192	**2032011**
90 M20 OF	M20 x 1,5	Light grey	7	21	24	10	6	100	0.268	**2032015**
90 M25 OF	M25 x 1,5	Light grey	8.5	30	32	12	6	50	0.513	**2032019**
90 M32 OF	M32 x 1,5	Light grey	13	34	39	14	8	25	0.694	**2032023**
90 M40 OF	M40 x 1,5	Light grey	22	44	48	16	8	10	0.875	**2032031**

PE Polyethylene

With open cable entry.
Grip seal to screw into metric thread end to IEC 423.
With self-sealing cone at the end of the thread, therefore no connection thread sealing ring required.
Protection rating achievable with careful mounting: IP54.

Screw-in nipple, metric thread

IP 54 | M | Fluor Chlor Brom MALOGENFREI



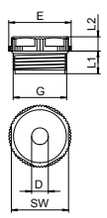
Type	Thread	Colour	Dimension D mm	SW mm	Dimension E mm	Dimension L1 mm	Dimension L2 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
90 M12 GE	M12 x 1,5	Light grey	3.5	13	17	8	6	100	0.170	**2032378**
90 M16 GE	M16 x 1,5	Light grey	5	16	20	8	6	100	0.192	**2032380**
90 M20 GE	M20 x 1,5	Light grey	7	21	24	10	6	100	0.268	**2032382**
90 M25 GE	M25 x 1,5	Light grey	8.5	30	32	12	6	50	0.513	**2032384**
90 M32 GE	M32 x 1,5	Light grey	13	34	39	14	8	25	0.694	**2032386**
90 M40 GE	M40 x 1,5	Light grey	16	44	48	16	8	10	0.875	**2032388**

PE Polyethylene

With perforation membranes, the opening D is pre-marked, but closed.
Grip seal to screw into metric thread to IEC 423.
With self-sealing cone at the end of the thread, therefore no connection thread sealing ring required.
Protection rating achievable with careful mounting: IP54.

Screw-in nipple, PG thread with opening

IP 54 | Pg | Fluor Chlor Brom MALOGENFREI



Type	Thread	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
90 PG11 OF	Pg 11	Light grey	1200	100	0.161	**2032112**
90 PG13.5 OF	Pg 13,5	Light grey	1000	100	0.268	**2032139**
90 PG16 OF	Pg 16	Light grey	1000	100	0.251	**2032163**
90 PG21 OF	Pg 21	Light grey	500	50	0.409	**2032201**

PE Polyethylene

With open cable entry.
Grip seal to screw into PG thread end to DIN 40430.
With self-sealing cone at the end of the thread, therefore no connection thread sealing ring required.
Protection rating achievable with careful mounting: IP54.

Dimensions

G	D mm	SW mm	E mm	L1 mm	L2 mm
Pg 11	5	19	21	9.5	6
Pg 13.5	7	22	24	9.5	6
Pg 16	7	24	26	9.5	6
Pg 21	9	30	33	11.5	6

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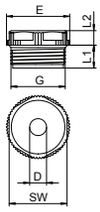
Screw-in nipple, PG thread with perforation membrane



IP 54 | Pg | Fluor Chlor Brom HALOGENFREE

Type	Thread	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
90 PG 9 DSMB	Pg 9	Light grey	2400	100	0.156	**2032503**
90 PG11 DSMB	Pg 11	Light grey	1200	100	0.156	**2032511**
90 PG13.5 DSMB	Pg 13,5	Light grey	1000	100	0.216	**2032538**
90 PG16 DSMB	Pg 16	Light grey	1000	100	0.249	**2032546**
90 PG21 DSMB	Pg 21	Light grey	500	50	0.422	**2032554**
90 PG29 DSMB	Pg 29	Light grey	300	25	0.563	**2032562**

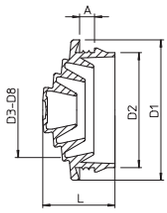
PE Polyethylene

With perforation membrane, the opening D is pre-marked, but closed.
Grip seal to screw into PG thread to DIN 40430.
With self-sealing cone at the end of the thread, therefore no connection thread sealing ring required. Protection rating achievable with careful mounting: IP54.

Dimensions

G	D mm	SW mm	E mm	L1 mm	L2 mm
Pg 9	4	17	19	9.5	6
Pg 11	5	19	21	9.5	6
Pg 13.5	7	22	24	9.5	6
Pg 16	7	24	26	9.5	6
Pg 21	9	30	33	11.5	6
Pg 29	15	37	40	11.5	6

Plug-in seal EDVS



IP 54 | M | Fluor Chlor Brom HALOGENFREE | Ⓜ

Type	Size	For Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
EDVS M20 LGR	M20	0 - 17	Light grey	100	0.117	**2012375**
EDS M20 LGR	M20	0 - 17	Light grey	100	0.125	**2012350**
EDVS M25 LGR	M25	0 - 22	Light grey	100	0.179	**2012383**
EDS M25 LGR	M25	0 - 22	Light grey	100	0.185	**2012354**
EDVS M32 LGR	M32	0 - 28	Light grey	50	0.295	**2012391**
EDS M32 LGR	M32	0 - 28	Light grey	50	0.295	**2012358**

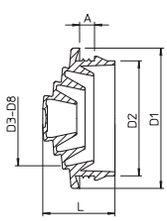
PE Polyethylene

The push-in nipple can be cut back to suit the relevant cable diameter.

Dimensions

G	L mm	A mm	D1 mm	D2 mm	D3 mm	D4 mm	D5 mm	D6 mm	D7 mm	D8 mm
M20	12.8	3.4	24.8	20.3	0–6	5–10	9–15	14–17	-	-
M20	12.8	3.1	24.8	20.3	0–6	5–10	9–15	14–17	-	-
M25	14.5	4.3	29.5	25.3	0–6	5–10	9–15	14–20	19–22	-
M25	14.5	3.1	29.5	25.3	0–6	5–10	9–15	14–20	19–22	-
M32	17.8	4.4	36.3	32.3	0–6	5–10	9–15	14–20	19–25	24–28
M32	17.8	3.1	36.3	32.3	0–6	5–10	9–15	14–20	19–25	24–28

EDS plug-in seal, light grey



Type	Size	For Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
EDS M20 LGR	M20	0 - 17	Light grey	100	0.125	**2012350**
EDS M25 LGR	M25	0 - 22	Light grey	100	0.185	**2012354**
EDS M32 LGR	M32	0 - 28	Light grey	50	0.295	**2012358**

PE Polyethylene

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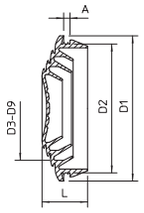
Always indicate the item number when ordering.

Plug-in seal EDK light grey

M25 M32 M40 IP 66



Type	Size	For Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
EDK 25 LGR	M25	0 - 22	Light grey	100	0.165	**2011638**
EDK 32 LGR	M32	0 - 27	Light grey	50	0.260	**2011646**
EDK 40 LGR	M40	0 - 34	Light grey	25	0.425	**2011654**
EDK 25 RW	M25	0 - 22	Pure white	100	0.175	**2011689**
EDK 32 RW	M32	0 - 27	Pure white	50	0.260	**2011697**
EDK 40 RW	M40	0 - 34	Pure white	25	0.425	**2011700**

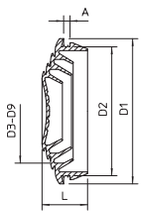
EVA Ethylene vinyl acetate

The plug-in seal can be cut back to suit the relevant cable diameter.

Dimensions

G	L mm	A mm	D1 mm	D2 mm	D3 mm	D4 mm	D5 mm	D6 mm	D7 mm	D8 mm	D9 mm
M25	10.1	2.2	29.5	25.4	0–5	4–10	9–15	14.5–18	18.5–22		
M32	11.4	2.2	36.4	32.3	0–5	4–10	9–15	14.5–18	18.5–22	24–27	
M40	13.4	2.2	44.1	40.2	0–5	4–10	9–15	14.5–18	18.5–22	24–27	31–34

Plug-in seal for FireBox T series



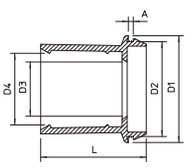
Type	Size	For Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
EDK 25 OR	M25	0 - 22	10	0.165	**7205675**
EDK 32 OR	M32	0 - 27	10	0.274	**7205677**
EDK 40 OR	M40	0 - 34	10	0.420	**7205679**

EVA Ethylene vinyl acetate

The soft plug-in seal can be cut back step by step to suit the relevant cable diameter.
Colour: Pastel orange.

Plug-in seal for pipes, T-series junction box, light grey

IP 55 M25 M32 M40



Type	Size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
EDR 25 16-20 LGR	M25	Light grey	50	0.520	**2011506**
EDR 25 20-25 LGR	M25	Light grey	50	0.680	**2011514**
EDR 32 25-32 LGR	M32	Light grey	50	1.170	**2011530**
EDR 40 32-40 LGR	M40	Light grey	25	2.200	**2011546**

PVC Polyvinylchloride

Plug-in seal for junction boxes for direct insertion of metric pipes

Dimensions

G	L mm	A mm	D1 mm	D2 mm	D3 mm	D4 mm
M25	30	2.2	29.5	25.3	15.0	18.4
M25	30	2.2	29.5	25.3	18.5	24.2
M32	36	2.2	37	32.3	24	31.2
M40	49	2.2	46	42.3	31	39.2

Always indicate the item number when ordering.

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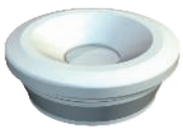
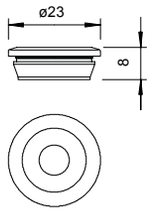
Nipple 89





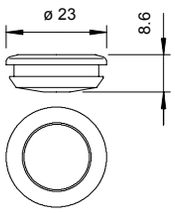
IP 54

Type	Size	For Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
89	PG 11	7 - 13	Light grey	100	0.111	**2012030**
89 RW	PG 11	7 - 13	Pure white	100	0.113	**2012103**
89 SW	PG 11	7 - 13	Black	100	0.112	**2012146**
89 LoG	PG 11	7 - 13	Light grey	5000	0.111	**2012065**
89 3MM NUT	PG 11	7 - 13	Light grey	2000	0.106	**2012081**

PE Polyethylene

Closed entry nipple with perforation membrane for cable diameters 7–13 mm. Ideal for simple cable routing in housings or through thin sheet metal.
Required hole diameter 18.5–19 mm, wall thickness max. 1.8 mm.

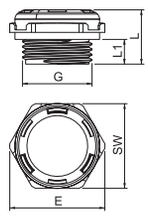
Nipple 89/RK



Type	Size	For Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
89 ROE 12-16	PG 13,5	12 - 16	Light grey	100	0.102	**2012049**

PE Polyethylene

Pressure balance plug 109



Type	Thread	Protection rating	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
109 M20 LGR	M20x1,5	IP68	Light grey	5	0.538	**2034680**

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Cable gland systems, brass

Cap nut cable gland 239

Locknuts 248

Cable gland system accessories 249

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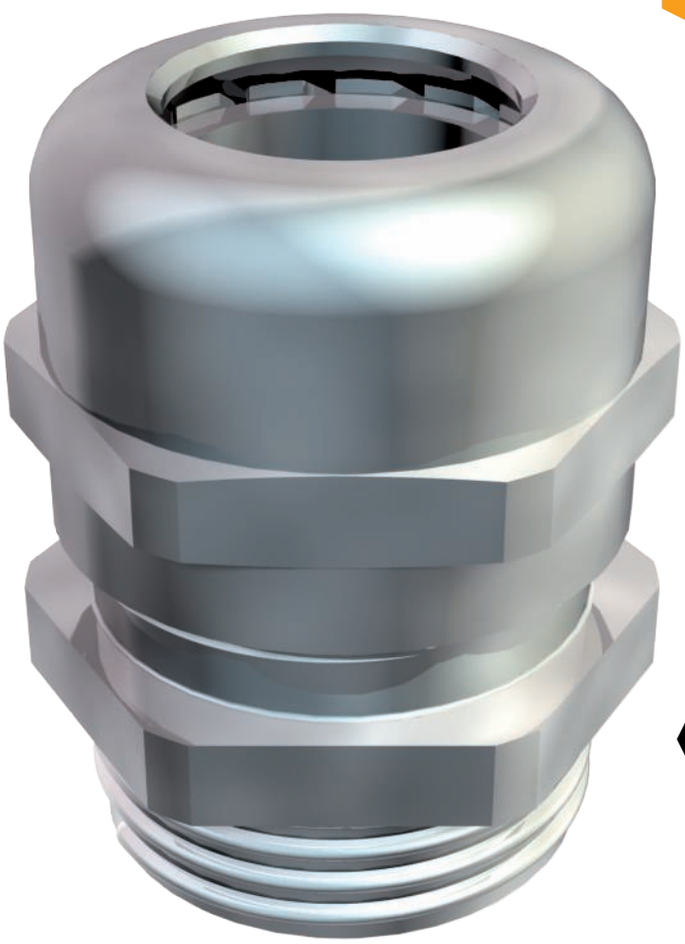
Cable gland systems, brass

- Robust
- With long and short connection
- Excellent protection
- VDE-tested



V-TEC VM MS

Tough conditions are no problem for the brass V-TEC VM. Here too, the well-known V-TEC cap nut design of the cable glands ensures a secure hold of the cables. The protection class IP68 is achieved using separate sealing rings and their special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connecting threads are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation will stay secure for a long time to come. The optimum thread adjustment with the right pitch ensures permanent resistance to shaking.
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

Always indicate the item number when ordering.

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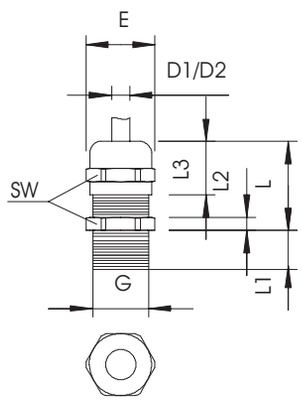
Cap nut cable gland



- Sturdy cable gland to withstand mechanical loads
- The proven V-TEC cap nut design ensures a secure hold of the cables
- The protection class IP68 is achieved using separate sealing rings and their special OBO slat technology
- With metric connecting thread to IEC 423
- Neoprene/NBR sealing ring, polyamide terminal insert
- With pre-mounted sealing ring on the connection thread
- Optimum thread adjustment with the right pitch ensures lasting resistance to shaking
- Applications: from private housing with junction boxes up to industrial applications in the distributor cabinet
- Temperature range: –20 °C to +100 °C
- *Prices according to DEL notation

G	D1	SW	E	L max.
	mm	mm	mm	mm
M12 x 1.5	3–6	14	15.5	20
M16 x 1.5	5–9	17	19	24
M20 x 1.5	9–13	22	24	27
M25 x 1.5	11–16	27	30	29.5
M32 x 1.5	14–21	34	36	30
M40 x 1.5	19–27	43	46	33
M50 x 1.5	24–35	55	60	38.5
M63 x 1.5	32–42	65	70	44.5

Cable gland, metric thread

Type	Thread	Dimension L1 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM12 MS	M12 x 1,5	5	50	1.200	**2086018**
V-TEC VM16 MS	M16 x 1,5	5	50	1.640	**2086024**
V-TEC VM20 MS	M20 x 1,5	6	25	3.140	**2086030**
V-TEC VM25 MS	M25 x 1,5	7	25	4.260	**2086036**
V-TEC VM32 MS	M32 x 1,5	8	20	7.160	**2086042**
V-TEC VM40 MS	M40 x 1,5	8	5	12.240	**2086048**
V-TEC VM50 MS	M50 x 1,5	9	5	22.700	**2086054**
V-TEC VM63 MS	M63 x 1,5	10	5	30.300	**2086060**

CuZn Brass

N Nickel-plated

With metric connecting thread to IEC 423, robust cap-nut cable gland with large sealing area. Strain relief, wringing protection and tightness over the whole clamping area. Neoprene sealing ring. Polyamide terminal insert. With pre-mounted O sealing ring on connection thread, VDE-tested to DIN EN 50262, protection rating IP68 at 5 bar for 1 hr, max. permitted ambient temperature -20 - 100°C.
* Prices according to DEL notation.

Dimensions

G	D1	SW	E	L max.	L1	L2	L3
	mm	mm	mm	mm	mm	mm	mm
M12 x 1.5	3–6	14	15.5	20	5	11.5	3
M16 x 1.5	5–9	17	19	24	5	15	3
M20 x 1.5	9–13	22	24	27	6	16.5	3.5
M25 x 1.5	11–16	27	30	29.5	7		
M32 x 1.5	14–21	34	36	30	8	18.5	4.5
M40 x 1.5	19–27	43	46	33	8	21	4.5
M50 x 1.5	24–35	55	60	38.5	9	25	4.5
M63 x 1.5	32–42	65	70	44.5	10	31	5

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Always indicate the item number when ordering.

Cable gland, long metric thread

IP 68 M

Type	Thread	Dimension L1 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM LM12 MS	M12 x 1,5	10	50	1.300	**2086111**
V-TEC VM LM16 MS	M16 x 1,5	10	50	1.940	**2086117**
V-TEC VM LM20 MS	M20 x 1,5	10	25	3.360	**2086123**
V-TEC VM LM25 MS	M25 x 1,5	11	25	4.800	**2086129**
V-TEC VM LM32 MS	M32 x 1,5	13	10	7.840	**2086135**
V-TEC VM LM40 MS	M40 x 1,5	13	5	13.400	**2086141**
V-TEC VM LM50 MS	M50 x 1,5	14	5	24.000	**2086147**
V-TEC VM LM63 MS	M63 x 1,5	14	5	32.100	**2086153**
V-TEC VM LM75MS1	M75 x 1,5	18	3	112.300	**2086156**
V-TEC VM LM75MS2	M75 x 1,5	18	3	98.200	**2086159**

CuZn Brass

N Nickel-plated

With metric connecting thread to IEC 423 robust cap-nut cable gland with large sealing area. Strain relief, wringing protection and tightness over the whole clamping area. For thicker housing wall thicknesses in conjunction with locknuts. Neoprene sealing ring. Polyamide terminal insert. With pre-mounted sealing ring on connection thread, VDE-tested to DIN EN 50262, protection rating IP 68 at 5 bar for 1 hr.
With long connection thread.
* Prices according to DEL notation.

Dimensions

G	D1 mm	SW mm	E mm	L max. mm	L1 mm
M12 x 1.5	3–6	14	15.5	20	10
M16 x 1.5	5–9	17	19	24	10
M20 x 1.5	9–13	22	24	27	10
M25 x 1.5	11–16	27	30	29.5	11
M32 x 1.5	14–21	34	36	30	13
M40 x 1.5	19–27	43	46	33	13
M50 x 1.5	24–35	55	60	38.5	14
M63 x 1.5	32–42	65	65	44.5	14
M75 x 1.5	48 - 55	90	97	42	18
M75 x 1.5	53 - 60	90	97	42	18

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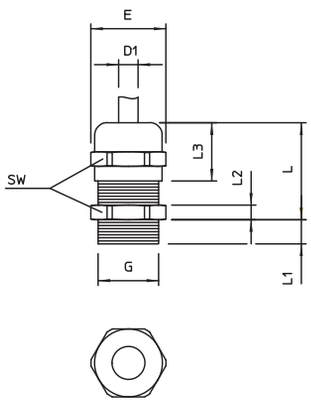
Always indicate the item number when ordering.

Cable gland, PG thread

IP 68 M

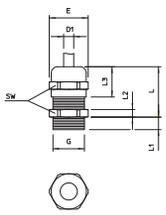


- Even tough conditions are no problem
- With PG connection thread
- Once screwed in place, the installation will stay secure for a long time to come
- Temperature range: –20 °C to +100 °C
- *Prices according to DEL notation

G	D1	D2	SW	E	L max.	L2	L3
	mm	mm	mm	mm	mm	mm	mm
Pg 7	2.5–6.5	3–6.5	14	15.5	20	3	12
Pg 9	2.5–8	3.5–8	17	18.9	22	3	14
PG 11	3.5–10	4.5–10	20	22.2	24	3	15
Pg 13.5	5–12	6–12	22	24.4	25	3.5	15
Pg 16	7–14	7–14	24	26.7	27	4	17
Pg 21	9–18	12–18	30	33.5	33	4.5	20
Pg 29	14–25	17–25	40	43.5	39	5	23.5
Pg 36	18–32	20–32	50	54	49	5.5	29
Pg 42	24–38	26–38	57	61	52	6	31
Pg 48	30–44	30–44	64	69	52.5	6.5	31

Cable gland, PG thread

IP 68 Pg



Type	Thread	Dimension L1 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC PG7 MS	Pg 7	5	50	1.000	**2085607**
V-TEC PG9 MS	Pg 9	6	50	1.600	**2085615**
V-TEC PG11 MS	Pg 11	6	50	2.300	**2085623**
V-TEC PG13 MS	Pg 13,5	6.5	50	2.800	**2085631**
V-TEC PG16 MS	Pg 16	6.5	25	3.400	**2085658**
V-TEC PG21 MS	Pg 21	7	25	6.000	**2085666**
V-TEC PG29 MS	Pg 29	8	20	13.000	**2085674**
V-TEC PG36 MS	Pg 36	9	10	21.000	**2085682**
V-TEC PG42 MS	Pg 42	10	5	23.500	**2085690**
V-TEC PG48 MS	Pg 48	10	5	31.500	**2085704**

CuZn Brass

N Nickel-plated

Dimensions

G	D1	D2	SW	E	L max.	L1	L2	L3
	mm	mm	mm	mm	mm	mm	mm	mm
Pg 7	2.5–6.5	3–6.5	14	15.5	20	5	3	12
Pg 9	2.5–8	3.5–8	17	18.9	22	6	3	14
Pg 11	3.5–10	4.5–10	20	22.2	24	6	3	15
Pg 13.5	5–12	6–12	22	24.4	25	6.5	3.5	15
Pg 16	7–14	7–14	24	26.7	27	6.5	4	17
Pg 21	9–18	12–18	30	33.5	33	7	4.5	20
Pg 29	14–25	17–25	40	43.5	39	8	5	23.5
Pg 36	18–32	20–32	50	54	49	9	5.5	29
Pg 42	24–38	26–38	57	61	52	10	6	31
Pg 48	30–44	30–44	64	69	52.5	10	6.5	31

Always indicate the item number when ordering.

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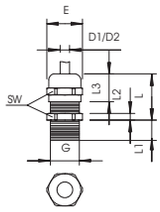
Cable gland, long PG thread



IP 68 Pg

Type	Thread	Dimension L1 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC L PG9 MS	Pg 9	10	50	1.740	**2085739**
V-TEC L PG11 MS	Pg 11	10	50	2.550	**2085747**
V-TEC L PG13 MS	Pg 13,5	10	50	3.030	**2085755**
V-TEC L PG16 MS	Pg 16	10	25	3.660	**2085763**
V-TEC L PG21 MS	Pg 21	12	25	6.580	**2085771**
V-TEC L PG29 MS	Pg 29	12	10	13.660	**2085798**
V-TEC L PG48 MS	Pg 48	15	5	37.900	**2085836**

CuZn Brass

N Nickel-plated

Dimensions

G	D1 mm	D2 mm	SW mm	E mm	L max. mm	L1 mm	L2 mm	L3 mm
Pg 9	2.5–8	3.5–8	17	18.9	22	10	3	14
Pg 11	3.5–10	4.5–10	20	22.2	24	10	3	15
Pg 13.5	5–12	6–12	22	24.4	25	10	3.5	16
Pg 16	7–14	7–14	24	26.7	27	10	4	17
Pg 21	9–18	12–18	30	33.5	33	12	4.5	20
Pg 29	14–25	17–25	40	43.5	39	12	5	23
Pg 48	30–44	30–44	64	69	52.5	15	6.5	31

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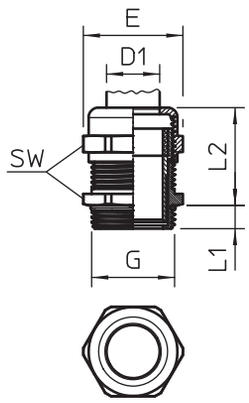
Always indicate the item number when ordering.

Cable gland, EMC

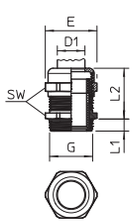


- Robust EMC cap-nut cable gland
- With metric connecting thread to IEC 423
- Satisfies high tightness requirements: protection rating IP68 at 5 bar/1 hr
- Neoprene/natural rubber sealing ring, polyamide terminal insert
- With pre-mounted O sealing ring on the connection thread
- * Prices according to DEL notation

G	D1	SW	E	L max.	L1
	mm	mm	mm	mm	mm
M12 x 1.5	3–6	14	15.5	25	5
M16 x 1.5	5–9	17	19	30	5
M20 x 1.5	9–13	22	24	33.5	6
M25 x 1.5	11–16	27	30	36.5	7
M32 x 1.5	14–21	34	36	38	8
M40 x 1.5	19–27	43	46	49.5	8
M50 x 1.5	24–35	55	60	49.5	9
M63 x 1.5	32–42	65	70	52.5	10

Cable gland, EMC, metric

Type	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM12 EMV	M12 x 1,5	50	1.362	**2086203**
V-TEC VM16 EMV	M16 x 1,5	50	1.849	**2086207**
V-TEC VM20 EMV	M20 x 1,5	25	3.473	**2086211**
V-TEC VM25 EMV	M25 x 1,5	25	5.280	**2086215**
V-TEC VM32 EMV	M32 x1,5	20	7.470	**2086219**
V-TEC VM40 EMV	M40 x 1,5	5	12.880	**2086223**
V-TEC VM50 EMV	M50 x 1,5	5	26.165	**2086227**
V-TEC VM63 EMV	M63 x 1,5	5	33.990	**2086231**



CuZn Brass

N Nickel-plated

Dimensions

G	D1	SW	E	L max.	L1
	mm	mm	mm	mm	mm
M12 x 1.5	3–6	14	15.5	25	5
M16 x 1.5	5–9	17	19	30	5
M20 x 1.5	9–13	22	24	33.5	6
M25 x 1.5	11–16	27	30	36.5	7
M32 x 1.5	14–21	34	36	38	8
M40 x 1.5	19–27	43	46	49.5	8
M50 x 1.5	24–35	55	60	49.5	9
M63 x 1.5	32–42	65	70	52.5	10

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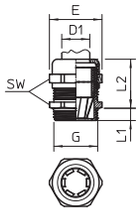
Always indicate the item number when ordering.

Cable gland, EMC spring contact, metric



Type	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
V-TEC VM16 EMV-K	M16x1,5	50	2.044	**2086165**
V-TEC VM20 EMV-K	M20x1,5	25	3.564	**2086169**
V-TEC VM25 EMV-K	M25x1,5	25	5.918	**2086173**
V-TEC VM32 EMV-K	M32x1,5	20	9.880	**2086177**
V-TEC VM40 EMV-K	M40x1,5	5	17.200	**2086181**
V-TEC VM50 EMV-K	M50x1,5	5	13.735	**2086185**
V-TEC VM63 EMV-K	M63x1,5	5	16.780	**2086189**

CuZn Brass

N Nickel-plated

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Always indicate the item number when ordering.

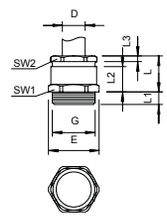
Cone cable gland

IP 54 IP 65

- Robust EMC cap-nut cable gland
- With metric connecting thread to IEC 423 for meeting high tightness requirements

Cable gland, M cutting ring

IP 54 IP 65 M



Type	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
162 MS M16	M16 x 1,5	50	1.814	**2083712**
162 MS M20	M20 x 1,5	25	2.520	**2083716**
162 MS M25	M25 x 1,5	25	3.388	**2083720**
162 MS M32	M32 x 1,5	10	5.004	**2083724**
162 MS M40	M40 x 1,5	10	8.720	**2083728**
162 MS M50	M50 x 1,5	5	15.800	**2083732**
162 MS M63	M63 x 1,5	5	21.600	**2083736**

CuZn Brass

N Nickel-plated

Dimensions

G	D mm	SW1 mm	SW2 mm	E mm	L1 mm	L2 mm
M16 x 1.5	5–9.5	17	15	18.9	7	16
M20 x 1.5	7.5–13.5	22	20	24.4	7	18
M25 x 1.5	10–20.5	32	28	35.5	8	22
M32 x 1.5	18–29	40	37	43.5	8.5	24
M40 x 1.5	24–31	50	47	54	8.5	29
M50 x 1.5	30–42	58	54	62.1	9.5	33
M63 x 1.5	36–47	65	60	69	10	10

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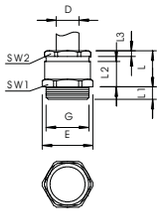
Always indicate the item number when ordering.

Cable gland, PG cutting ring



IP 54 IP 65 Pg

Type	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
162 MS PG 9	Pg 9	50	1.250	**2082519**
162 MS PG11	Pg 11	50	1.960	**2082500**
162 MS PG13.5	Pg 13,5	50	2.630	**2082527**
162 MS PG16	Pg 16	25	3.190	**2082543**
162 MS PG21	Pg 21	25	5.240	**2082578**
162 MS PG29	Pg 29	10	9.260	**2082594**
162 MS PG36	Pg 36	10	16.490	**2082616**

CuZn Brass

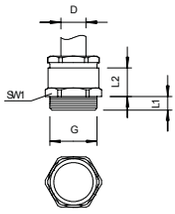
N Nickel-plated

Cable gland with hexagonal intermediate connector, shape C4, to DIN 46320 with Pg connection thread to DIN 40430.
Pressure rings made of electrogalvanised and transparently passivated steel.
NR/SBR sealing ring.
Protection rating: with connection thread sealing ring IP 65, without connection thread sealing ring IP 54.
With cutting ring.
* Prices according to DEL notation.

Dimensions

G	D mm	SW1 mm	SW2 mm	E mm	L max. mm	L1 mm	L2 mm	L3 mm
Pg 9	5–9.5	17	15	18.9	16	6	10.5	2.5
Pg 11	7.5–11.5	20	18	22.2	17	6	11	3
Pg 13.5	7.5–13.5	22	20	24.4	18	6.5	12.5	3
Pg 16	7.5–15.5	24	22	26.7	19	6.5	13.5	3
Pg 21	10–20.5	30	28	33.5	22	7	15	3.5
Pg 29	18–29	40	37	43.5	24	8	16.5	4
Pg 36	24–37	50	47	54	29	9	19.5	4.5

Cable gland, small sealing ring, M



IP 54 IP 65 M

Type	Thread	Surface finish	Pack. pcs	Weight kg/100 pcs.	Item No.
163 MS M12	M12 x 1,5	Nickel-plated	50	0.850	**2083612**
163 MS M16	M16 x 1,5	Nickel-plated	50	1.160	**2083620**
163 MS M20	M20 x 1,5	Nickel-plated	25	2.210	**2083639**
163 MS M25	M25 x 1,5	Nickel-plated	25	4.550	**2083647**
163 MS M32	M32 x 1,5	Nickel-plated	10	8.210	**2083655**
163 MS M40	M40 x 1,5	Nickel-plated	10	14.230	**2083663**
163 MS M50	M50 x 1,5	Nickel-plated	5	20.540	**2083671**
163 MS M63	M63 x 1,5	Nickel-plated	5	30.000	**2083698**

CuZn Brass

N Nickel-plated

Dimensions

G	D mm	SW1 mm	SW2 mm	E mm	L1 mm	L2 mm
M12 x 1.5	5–7	14	13	15.5	7	10
M16 x 1.5	6–8	17	15	18.9	7	10.5
M20 x 1.5	8–10	22	20	24.4	7	12.5
M25 x 1.5	17–19	34	28	35.5	8	15
M32 x 1.5	24–26	42	37	43.5	8.5	16.5
M40 x 1.5	31–33	52	47	54	8.5	19.5
M50 x 1.5	37–39	57	54	62.1	10.5	23
M63 x 1.5	43–45	65	60	69	10.5	23

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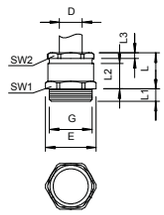
Always indicate the item number when ordering.

Cable gland, small sealing ring, PG

IP 54 IP 65 Pg



Type	Thread	Surface finish	Pack. pcs	Weight kg/100 pcs.	Item No.
163 MS PG 7	Pg 7	Nickel-plated	50	0.850	**2082071**
163 MS PG 9	Pg 9	Nickel-plated	50	1.160	**2082098**
163 MS PG11	Pg 11	Nickel-plated	25	1.690	**2082101**
163 MS PG13.5	Pg 13,5	Nickel-plated	25	2.210	**2082136**
163 MS PG16	Pg 16	Nickel-plated	25	2.960	**2082160**
163 MS PG21	Pg 21	Nickel-plated	25	4.550	**2082217**
163 MS PG29	Pg 29	Nickel-plated	10	8.210	**2082292**
163 MS PG36	Pg 36	Nickel-plated	10	14.230	**2082365**
163 MS PG42	Pg 42	Nickel-plated	5	20.540	**2082411**
163 MS PG48	Pg 48	Nickel-plated	5	30.050	**2082489**

CuZn Brass

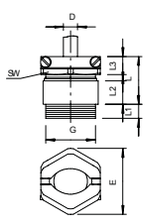
N Nickel-plated

Dimensions

G	D	SW1	SW2	E	L max.	L1	L2	L3
	mm	mm	mm	mm	mm	mm	mm	mm
Pg 7	5–7	14	13	15.5	15	5	10	2.5
Pg 9	6–8	17	15	18.9	16	6	10.5	2.5
Pg 11	8–10	20	18	22.2	17	6	11	3
Pg 13.5	8–10	22	20	24.4	18	6.5	12	3
Pg 16	8–10	24	22	26.7	19	6.5	13.5	3
Pg 21	17–19	30	28	33.5	22	7	15	3.5
Pg 29	24–26	40	37	43.5	24	8	16.5	4
Pg 36	31–33	50	47	54	29	9	19.5	4.5
Pg 42	37–39	57	54	61	33	10	22	6
Pg 48	43–45	64	60	69	34	10	23	6

Cable gland, PG strain relief

IP 54 IP 65 Pg



Type	Thread	Surface finish	Pack. pcs	Weight kg/100 pcs.	Item No.
159 MS PG 7	Pg 7	Nickel-plated	50	1.960	**2046075**
159 MS PG 9	Pg 9	Nickel-plated	50	2.460	**2046091**
159 MS PG11	Pg 11	Nickel-plated	50	3.250	**2046113**
159 MS PG13.5	Pg 13,5	Nickel-plated	50	3.830	**2046121**
159 MS PG16	Pg 16	Nickel-plated	25	5.700	**2046164**
159 MS PG21	Pg 21	Nickel-plated	25	7.590	**2046210**
159 MS PG29	Pg 29	Nickel-plated	10	14.970	**2046296**
159 MS PG36	Pg 36	Nickel-plated	5	22.030	**2046369**
159 MS PG42	Pg 42	Nickel-plated	5	41.070	**2046423**
159 MS PG48	Pg 48	Nickel-plated	4	46.250	**2046482**

CuZn Brass

N Nickel-plated

Dimensions

G	D	SW1	SW2	E	L max.	L1	L2	L3
	mm	mm	mm	mm	mm	mm	mm	mm
Pg 7	5–7	14	16	17.5	22	5	10	9.3
Pg 9	6–8	17	19	20.5	24	6	10.5	10.6
Pg 11	8–10	20	22	24.5	25	6	11	11.3
Pg 13.5	8–10	22	24	27	26	6.5	12.5	11.3
Pg 16	8–10	24	26	29	28	6.5	13.5	11.8
Pg 21	17–19	30	33	37	32	7	15	13.3
Pg 29	24–26	40	42	46.5	34	8	16.5	13.8
Pg 36	31–33	50	52	57	40	9	19.5	15.8
Pg 42	37–39	57	59	65	43	10	22	16.3
Pg 48	43–45	64	64	70	44	10	23	16.3

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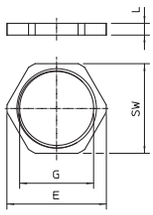
Always indicate the item number when ordering.

Locknut, metric thread



M

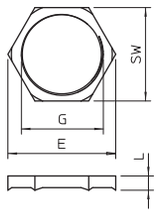
Type	Thread	SW mm	Dimension E mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
169 MS M12	M12 x 1,5	15	16.6	3	100	0.220	**2091607**
169 MS M16	M16 x 1,5	20	22.1	2.8	100	0.310	**2091615**
169 MS M20	M20 x 1,5	24	25.6	3	100	0.580	**2091623**
169 MS M25	M25 x 1,5	30	33.2	3.5	100	0.880	**2091631**
169 MS M32	M32 x 1,5	35	38.7	4	100	1.120	**2091658**
169 MS M40	M40 x 1,5	45	49.8	4.5	50	1.920	**2091666**
169 MS M50	M50 x 1,5	55	60.4	5.5	50	3.070	**2091674**
169 MS M63	M63 x 1,5	70	77.6	6	25	5.720	**2091682**
169 MS M75	M75 x 1,5	90	100	8	3	16.800	**2091685**

CuZn Brass

N Nickel-plated

Locknuts DIN 46319 with metric thread IEC 423.
* Prices according to DEL notation.

Locknut, metric thread with cutting teeth



M

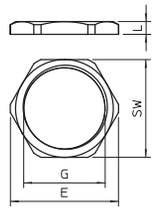
Type	Thread	SW mm	Dimension E mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
169 MSS M12	M12x1,5	15	17.3	4.5	50	0.360	**2091705**
169 MSS M16	M16x1,5	19	21.9	4.5	50	0.490	**2091709**
169 MSS M20	M20x1,5	24	27.7	4.5	50	0.760	**2091713**
169 MSS M25	M25x1,5	30	34.6	4.5	50	1.190	**2091717**
169 MSS M32	M32x1,5	36	41.5	4.5	50	1.230	**2091721**
169 MSS M40	M40x1,5	46	53.1	5	25	2.590	**2091725**
169 MSS M50	M50x1,5	60	69.2	5	25	5.070	**2091729**
169 MSS M63	M63x1,5	70	80.8	6	25	5.910	**2091733**

CuZn Brass

N Nickel-plated

Locknuts DIN 46319 with metric thread IEC 423.
* Prices according to DEL notation.

Locknut, PG thread



Pg

Type	Thread	SW mm	Dimension E mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
169 MS PG 7	Pg 7	15	16.6	2.8	100	0.180	**2091070**
169 MS PG 9	Pg 9	18	20	2.8	100	0.260	**2091097**
169 MS PG11	Pg 11	21	23.5	3	100	0.290	**2091119**
169 MS PG13.5	Pg 13,5	23	25.5	3	100	0.364	**2091135**
169 MS PG16	Pg 16	26	29	3	100	0.460	**2091151**
169 MS PG21	Pg 21	32	35.5	3.5	100	0.720	**2091216**
169 MS PG29	Pg 29	41	45	4	100	1.320	**2091291**
169 MS PG36	Pg 36	51	56	5	50	2.100	**2091364**
169 MS PG42	Pg 42	60	65	5	50	3.260	**2091429**
169 MS PG48	Pg 48	64	69	5.5	25	3.270	**2091488**

CuZn Brass

N Nickel-plated

Locknuts, part M to DIN 46320 with Pg thread to DIN 40430. * Price according to DEL notation.

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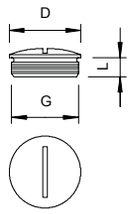
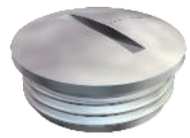
Always indicate the item number when ordering.

Screw plug, metric thread

M





Type	Thread	Dimension D mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
168 MS M12	M12 x 1,5	16	5	100	0.390	**2090511**
168 MS M16	M16 x 1,5	20	6	100	0.640	**2090538**
168 MS M20	M20 x 1,5	22	6.5	100	0.930	**2090546**
168 MS M25	M25 x 1,5	28	7	50	1.850	**2090554**
168 MS M32	M32 x 1,5	35	8	50	2.810	**2090562**
168 MS M40	M40 x 1,5	45	8	50	5.290	**2090570**
168 MS M50	M50 x 1,5	55	9	25	6.310	**2090589**
168 MS M63	M63 x 1,5	68	10	25	12.570	**2090597**

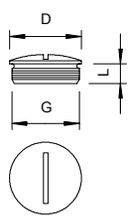
CuZn Brass

N Nickel-plated

Screw plug in accordance with DIN 46320, with metric thread to DIN EN 60423 or ISO 68.
* Prices according to DEL notation.

Screw plug, PG thread

Pg



Type	Thread	Dimension D mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
168 MS PG 7	Pg 7	14	5	100	0.410	**2090074**
168 MS PG 9	Pg 9	17	6	100	0.530	**2090090**
168 MS PG11	Pg 11	20	6	100	0.840	**2090112**
168 MS PG13	Pg 13,5	22	6.5	100	0.930	**2090139**
168 MS PG16	Pg 16	24	6.5	100	1.300	**2090163**
168 MS PG21	Pg 21	30	7	50	2.420	**2090201**
168 MS PG29	Pg 29	39	8	50	4.310	**2090295**
168 MS PG36	Pg 36	50	9	50	7.800	**2090368**
168 MS PG42	Pg 42	57	10	25	11.710	**2090422**
168 MS PG48	Pg 48	64	10	25	15.260	**2090481**

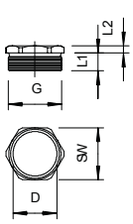
CuZn Brass

N Nickel-plated

Screw plug in accordance with DIN 46320, with Pg thread to DIN EN 40430.
* Prices according to DEL notation.

Pressure screw, PG thread

Pg



Type	Thread	Dimension D mm	SW mm	Dimension E mm	Dimension L1 mm	Dimension L2 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
164 MS PG11	Pg 11	15	18	20	6	3	100	0.590	**2084112**
164 MS PG16	Pg 16	18.5	22	24.4	7.5	3	100	0.910	**2084163**
164 MS PG21	Pg 21	24	28	31.2	8	3.5	50	1.560	**2084201**

CuZn Brass

N Nickel-plated

Pressure screw (Part 3) in accordance with DIN 46320, with Pg thread to DIN EN 40430.
* Prices according to DEL notation.

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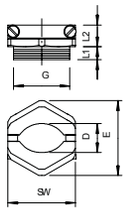
Always indicate the item number when ordering.

Pressure screw, PG strain relief



Pg

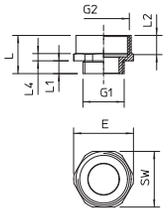
Type	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
157 MS PG 7	Pg 7	100	1.200	**2013061**
157 MS PG 9	Pg 9	100	1.500	**2013096**
157 MS PG11	Pg 11	100	2.100	**2013118**
157 MS PG13.5	Pg 13,5	100	2.200	**2013134**
157 MS PG16	Pg 16	50	3.400	**2013169**
157 MS PG21	Pg 21	50	4.500	**2013215**
157 MS PG29	Pg 29	25	6.800	**2013290**

CuZn Brass

N Nickel-plated

Pressure screw with centrically acting transverse clip strain relief, rust-proof stainless steel screws. With bend protection and strain relief.
* Prices according to DEL notation.

Expansion piece, metric thread



M

Type	External thread	Internal thread	Pack. pcs	Weight kg/100 pcs.	Item No.
165 ADA M12-16	M12	M16	50	1.030	**2088280**
165 ADA M16-20	M16	M20	50	1.430	**2088281**
165 ADA M20-25	M20	M25	50	2.090	**2088282**
165 ADA M25-32	M25	M32	50	2.710	**2088283**
165 ADA M32-40	M32	M40	25	5.180	**2088284**
165 ADA M40-50	M40	M50	10	10.150	**2088285**
165 ADA M 50-63	M50	M63	5	13.060	**2088286**

CuZn Brass

N Nickel-plated

The areas of application for brass cable glands range from junction boxes as a distribution/connection box up to large industrial applications for safe floor routing to switchgear cabinets with a control and distribution function. For high mechanical requirements, OBO can offer the entire family of extensions (Part K) to DIN 46320.
* Prices according to DEL notation.

Dimensions

Type	External thread	Internal thread	SW mm	Dimension E mm	Dimension L mm	Dimension L1 mm	Dimension L2 mm	Dimension D mm
165 ADA M12-16	M12	M16	18	20	16	5	7	8
165 ADA M16-20	M16	M20	22	24.5	16.7	5	8	12
165 ADA M20-25	M20	M25	27	29	18.5	6.4	9	15
165 ADA M25-32	M25	M32	34	35.8	20.7	7.4	8	20.8
165 ADA M32-40	M32	M40	42	45.5	23.8	8	10	26
165 ADA M40-50	M40	M50	52	58	30.5	8.2	12.5	33.8
165 ADA M 50-63	M50	M63	65	69.9	33	9.2	16	43.4

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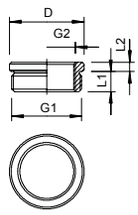
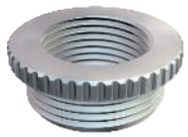
Always indicate the item number when ordering.

Reduction, metric thread

M





Type	External thread	Internal thread	Dimension D mm	Thread length mm	Dimension L2 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
167 R MS M16-12	M16	M12	20	6	2.5	50	0.880	**2089505**
167 R MS M20-12	M20	M12	24	6.5	3.5	50	1.340	**2089513**
167 R MS M20-16	M20	M16	24	6.5	3.5	50	1.480	**2089521**
167 R MS M25-16	M25	M16	30	7	3	50	3.220	**2089548**
167 R MS M25-20	M25	M20	30	7	3	50	2.700	**2089556**
167 R MS M32-20	M32	M20	39	8	3.5	50	6.120	**2089564**
167 R MS M32-25	M32	M25	39	8	3.5	50	4.500	**2089572**
167 R MS M40-25	M40	M25	50	6	3.5	25	9.960	**2089580**
167 R MS M40-32	M40	M32	50	9	3.5	25	6.840	**2089599**
167 R MS M50-32	M50	M32	57	10	4	25	16.300	**2089602**
167 R MS M50-40	M50	M40	57	10	4	25	10.250	**2089610**
167 R MS M63-40	M63	M40	64	10	4	10	30.080	**2089629**
167 R MS M63-50	M63	M50	64	10	4	10	10.090	**2089637**

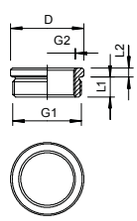
CuZn Brass

N Nickel-plated

Reduction (Part H) in accordance with DIN 46320, with metric thread to DIN EN 60423 or ISO 68.
* Prices according to DEL notation.

Reduction, PG thread

Pg



Type	External thread	Internal thread	Dimension D mm	Thread length mm	Dimension L2 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
167 R MS PG9-7	Pg 9	Pg 7	17	6	2.5	50	0.430	**2089025**
167 R MS PG11-7	Pg 11	Pg 7	20	6	2.5	50	1.030	**2089041**
167 R MS PG11-9	Pg 11	Pg 9	20	6	2.5	50	0.650	**2089076**
167 R MS PG13-7	Pg 13,5	Pg 7	22	6.5	2.5	50	1.520	**2089092**
167 R MS PG13-9	Pg 13,5	Pg 9	22	6.5	2.5	50	1.120	**2089114**
167 R MS PG13-11	Pg 13,5	Pg 11	22	6.5	2.5	50	0.470	**2089130**
167 R MS PG16-9	Pg 16	Pg 9	24	6.5	3	50	1.730	**2089157**
167 R MS PG16-11	Pg 16	Pg 11	24	6.5	3	50	1.050	**2089173**
167 R MS PG16-13	Pg 16	Pg 13,5	24	6.5	3	50	0.656	**2089203**
167 R MS PG21-11	Pg 21	Pg 11	30	7	3	50	2.960	**2089238**
167 R MS PG21-13	Pg 21	Pg 13,5	30	7	3	50	2.520	**2089254**
167 R MS PG21-16	Pg 21	Pg 16	30	7	3	50	1.964	**2089270**
167 R MS PG29-16	Pg 29	Pg 16	39	8	3.5	50	6.560	**2089297**
167 R MS PG29-21	Pg 29	Pg 21	39	8	3.5	50	4.273	**2089319**
167 R MS PG36-21	Pg 36	Pg 21	50	9	3.5	25	11.660	**2089335**
167 R MS PG36-29	Pg 36	Pg 29	50	9	3.5	25	6.980	**2089351**
167 R MS PG42-36	Pg 42	Pg 36	57	10	4	25	6.750	**2089408**
167 R MS PG48-36	Pg 48	Pg 36	64	10	4	25	12.840	**2089424**
167 R MS PG48-42	Pg 48	Pg 42	64	10	4	25	6.230	**2089440**

CuZn Brass

N Nickel-plated

Reduction (Part H) to DIN 46320, with Pg thread to DIN 40430, as a transition from a PG thread hole to a smaller cable gland.
* Prices according to DEL notation.

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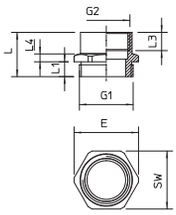
Adapter expansion M - PG



M Pg

Type	External thread	Internal thread	Pack. pcs	Weight kg/100 pcs.	Item No.
165 ADA M12-PG7	M12	PG7	20	0.590	**2088301**
165 ADA M16-PG9	M16	PG9	20	9.110	**2088312**
165 ADA M16-PG11	M16	PG11	20	2.220	**2088302**
165 ADA M20-PG11	M20	PG11	20	1.760	**2088316**
165 ADA M20-PG13	M20	PG13,5	20	1.320	**2088303**
165 ADA M20-PG16	M20	PG16	20	1.650	**2088318**
165 ADA M25-PG16	M25	PG16	20	2.540	**2088304**
165 ADA M25-PG21	M25	PG21	20	2.330	**2088324**
165 ADA M32-PG29	M32	PG29	10	4.850	**2088330**
165 ADA M40-PG29	M40	PG29	10	7.150	**2088306**
165 ADA M50-PG42	M50	PG42	10	10.110	**2088307**
165 ADA M63-PG48	M63	PG48	4	20.080	**2088348**

CuZn Brass

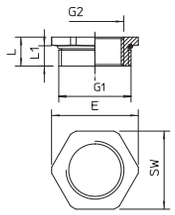
N Nickel-plated

Adapter for converting a metric threaded drill hole to a Pg threaded drill hole.

Dimensions

Type	External thread	Internal thread	SW mm	Dimension E mm	Dimension L mm	Dimension L1 mm	Dimension L3 mm	Dimension D mm
165 ADA M12-PG7	M12	PG7	14	15.5	16	6	9	8
165 ADA M16-PG9	M16	PG9	17	19	16.5	5	7	12
165 ADA M16-PG11	M16	PG11	22	24.5	16	6	7.9	12.5
165 ADA M20-PG11	M20	PG11	22	24.5	17.6	6.5	10.2	15
165 ADA M20-PG13	M20	PG13,5	22	24.5	19	6.5	11.5	16
165 ADA M20-PG16	M20	PG16	14.9	23.9	19.6	6	9	11.5
165 ADA M25-PG16	M25	PG16	27	30	20.5	7	12.5	18.3
165 ADA M25-PG21	M25	PG21	30	33.5	22.2	7	13.5	20.5
165 ADA M32-PG29	M32	PG29	40	44	24.4	8	15	27.5
165 ADA M40-PG29	M40	PG29	43	46.2	24.4	8	15	31.8
165 ADA M50-PG42	M50	PG42	57	60.8	31	9	20	44
165 ADA M63-PG48	M63	PG48	65	69.8	33	10	21	52.2

Adapter reduction M - PG



M Pg

Type	External thread	Internal thread	Pack. pcs	Weight kg/100 pcs.	Item No.
165 ADA M16-PG7	M16	PG7	20	5.130	**2088310**
165 ADA M20-PG9	M20	PG9	20	1.100	**2088314**
165 ADA M25-PG11	M25	PG11	20	1.940	**2088320**
165 ADA M25-PG13	M25	PG13,5	20	1.610	**2088322**
165 ADA M32-PG16	M32	PG16	10	3.790	**2088328**
165 ADA M32-PG21	M32	PG21	10	1.730	**2088305**
165 ADA M40-PG21	M40	PG21	10	6.980	**2088334**
165 ADA M50-PG29	M50	PG29	5	11.220	**2088340**
165 ADA M63-PG36	M63	PG36	5	16.950	**2088344**
165 ADA M63-PG42	M63	PG42	5	10.460	**2088346**

CuZn Brass

N Nickel-plated

Adapter for reducing a metric threaded drill hole to a smaller Pg threaded drill hole.

Dimensions

Type	External thread	Internal thread	SW mm	Dimension E mm	Dimension L mm	Dimension L1 mm
165 ADA M16-PG7	M16	PG7	17	19	8	5
165 ADA M20-PG9	M20	PG9	22	24.5	9	6
165 ADA M25-PG11	M25	PG11	27	30	10	7
165 ADA M25-PG13	M25	PG13,5	27	30	10	7
165 ADA M32-PG16	M32	PG16	34	36	11	8
165 ADA M32-PG21	M32	PG21	34	36	11	8
165 ADA M40-PG21	M40	PG21	43	46	12	8
165 ADA M50-PG29	M50	PG29	55	60	13	9
165 ADA M63-PG36	M63	PG36	65	69	14.2	10
165 ADA M63-PG42	M63	PG42	65	70	14.2	10

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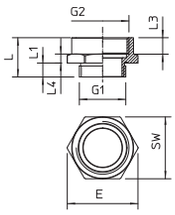
Always indicate the item number when ordering.

Adapter expansion PG - M

M Pg



Type	External thread	Internal thread	Pack. pcs	Weight kg/100 pcs.	Item No.
165 ADA PG9-M16	PG9	M16	20	1.160	**2088291**
165 ADA PG11-M16	PG11	M16	20	1.000	**2088292**
165 ADA PG13-M20	PG13,5	M20	20	2.040	**2088293**
165 ADA PG16-M20	PG16	M20	20	3.080	**2088294**
165 ADA PG16-M25	PG16	M25	20	3.320	**2088295**
165 ADA PG21-M25	PG21	M25	10	4.490	**2088296**
165 ADA PG21-M32	PG21	M32	10	4.310	**2088297**
165 ADA PG29-M40	PG29	M40	10	4.830	**2088298**
165 ADA PG36-M50	PG36	M50	5	9.250	**2088299**

CuZn Brass

N Nickel-plated

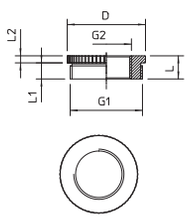
Adapter for converting a Pg threaded drill hole to a larger metric threaded drill hole.

Dimensions

Type	External thread	Internal thread	SW mm	Dimension E mm	Dimension L mm	Dimension L1 mm	Dimension L3 mm	Dimension D mm
165 ADA PG9-M16	PG9	M16	19	21	16	6	7.5	12
165 ADA PG11-M16	PG11	M16	20	22	17	6	10	12
165 ADA PG13-M20	PG13,5	M20	24	26	17.5	6.5	8.5	16
165 ADA PG16-M20	PG16	M20	27	29	17.5	6.5	8.3	18.4
165 ADA PG16-M25	PG16	M25	30	33.5	18.5	6.6	9.5	18.4
165 ADA PG21-M25	PG21	M25	32	33.5	19	7	10	23
165 ADA PG21-M32	PG21	M32	36	39	20	7	10.5	22.7
165 ADA PG29-M40	PG29	M40	43	46	21	8	10.8	32
165 ADA PG36-M50	PG36	M50	55	60	23	9	10.5	42

Adapter reduction PG - M

M Pg



Type	External thread	Internal thread	Pack. pcs	Weight kg/100 pcs.	Item No.
165 ADA PG29-M25	PG29	M25	20	5.730	**2088289**

CuZn Brass

N Nickel-plated

Adapter for converting a Pg threaded drill hole to a metric threaded drill hole.

Dimensions

Type	External thread	Internal thread	Dimension D mm	Dimension L mm	Dimension L1 mm
165 ADA PG29-M25	PG29	M25	39	11.5	8

Always indicate the item number when ordering.

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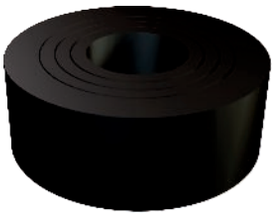
Cutting ring

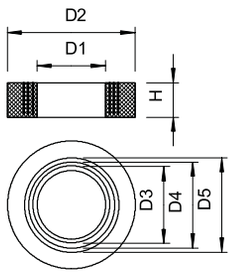


Pg

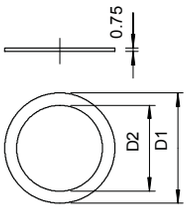
Type	Size mm	Size	Dimension D1 mm	Dimension D2 mm	Dim. D3 mm	Dim. D4 mm	Dim. D5 mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 B PG9	Pg 9	M16	5	13.3	7.5	10	0	5.5	100	0.240	**2029103**
107 B PG11	Pg 11	–	7.5	16.5	10	12.5	0	6	100	0.230	**2029111**
107 B PG13.5	Pg 13,5	M20	7.5	18.3	10	12.5	0	6	100	0.230	**2029138**
107 B PG16	Pg 16	M25	7.5	20.4	10	12.5	15	7	100	0.320	**2029162**
107 B PG21	Pg 21	–	10	25.9	13	16	19	8	100	0.590	**2029219**
107 B PG29	Pg 29	M32	18	34.7	21	24	27	9.5	100	1.160	**2029294**
107 B PG36	Pg 36	M40	24	44.7	27	30	33	12	50	1.940	**2029367**
107 B PG42	Pg 42	M50	30	51.7	33	36	39	14	50	2.710	**2029421**
107 B PG48	Pg 48	M63	36	56.9	39	42	45	14	50	3.490	**2029480**

NBR-SBR Rubber mixture

Rubber cutting ring (cuttable sealing ring) to DIN 46320 for cone cable gland.



Pressure ring, PG thread



Pg

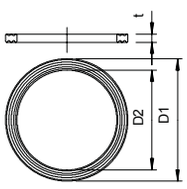
Type	Size mm	Dimension D1 mm	Dimension D2 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 D PG7 GTP	Pg 7	11	8	100	0.020	**2027070**
107 D PG9 GTP	Pg 9	13.5	10	100	0.038	**2027097**
107 D PG11 GTP	Pg 11	16.5	12	100	0.061	**2027119**
107 D PG13.5 GTP	Pg 13,5	18.5	14	100	0.066	**2027135**
107 D PG16 GTP	Pg 16	20.5	16	100	0.074	**2027151**
107 D PG21 GTP	Pg 21	26	21	50	0.100	**2027216**

St Steel

GTP Electrogalvanised, transparently passivated

Pressure ring, Part 7, to DIN 46320, suitable for plastic and brass glands to DIN 46320.

Connection thread sealing ring, metric



M

Type	Size mm	Dimension D1 mm	Dimension D2 mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 F M12 PE	M12	16.3	12	1	100	0.017	**2030004**
107 F M16 PE	M16	20.9	16	1.1	100	0.018	**2030008**
107 F M20 PE	M20	25.1	20	1.1	100	0.030	**2030012**
107 F M25 PE	M25	31.3	25	1.4	100	0.038	**2030016**
107 F M32 PE	M32	37.6	32	1.7	100	0.105	**2030020**
107 F M40 PE	M40	49.1	40	1.7	100	0.200	**2030024**
107 F M50 PE	M50	60.1	50	2	100	0.250	**2030028**
107 F M63 PE	M63	73.8	63	2	100	0.290	**2030032**

PE Polyethylene

Connection thread sealing ring, suitable for all plastic cable glands with metric connection thread to DIN EN 60423 or ISO 68. The internal diameters of the sealing rings are designed in such a way that they can be pre-mounted in a captive manner.

Always indicate the item number when ordering.

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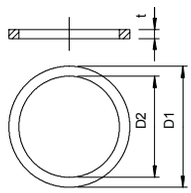
Connection thread sealing ring, metric

M



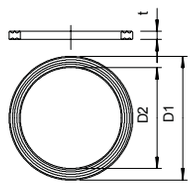
Type	Size mm	Dimension D1 mm	Dimension D2 mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
170 M16	M16	19.9	16	2	100	0.040	**2088428**
170 M20	M20	24	20	2	100	0.066	**2088436**
170 M25	M25	30	25	3	100	0.170	**2088444**
170 M32	M32	38	32	3	100	0.270	**2088452**
170 M40	M40	47	40	3	50	0.330	**2088460**
170 M50	M50	57	50	3	50	0.440	**2088479**

FA Fibre-proof material DIN 28091

Asbestos-free material.
Connection thread sealing ring, Part 9, to DIN 46320, suitable for all brass cable glands with metric connection thread to DIN EN 60423 or ISO 68.
Colour: green, graphited on one side.

Connection thread sealing ring, PG

Pg



Type	Size mm	Dimension D1 mm	Dimension D2 mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 F PG7 PE	Pg 7	16.5	12.1	1.6	100	0.010	**2030071**
107 F PG9 PE	Pg 9	19	14.7	1.6	100	0.013	**2030098**
107 F PG11 PE	Pg 11	23	18	1.8	100	0.022	**2030101**
107 F PG13.5 PE	Pg 13,5	25	19.8	1.8	100	0.030	**2030136**
107 F PG16 PE	Pg 16	27	21.8	1.8	100	0.038	**2030160**
107 F PG21 PE	Pg 21	34	27.5	2.2	100	0.049	**2030217**
107 F PG29 PE	Pg 29	44	36.2	2.2	100	0.105	**2030292**
107 F PG36 PE	Pg 36	55.5	46.2	2.7	100	0.200	**2030365**
107 F PG48 PE	Pg 48	69.5	58.5	3.2	100	0.290	**2030489**

PE Polyethylene

Connection thread sealing ring, in accordance with Part 9 to DIN 46320, however, dimensions may, according to material or function, deviate, suitable for all plastic cable glands with PG connection thread to DIN EN 40430, the internal diameter of the sealing rings are designed so that they can be captively pre-mounted.

O sealing ring for metric connection thread

M

Type	Size mm	Dimension D mm	Dim. S mm	Pack. pcs	Weight kg/100 pcs.	Item No.
171 M12	M12	10	1.5	100	0.007	**2088703**
171 M16	M16	13	1.5	100	0.008	**2088711**
171 M20	M20	18	1.5	100	0.011	**2088738**
171 M25	M25	22	1.5	100	0.012	**2088746**
171 M32	M32	29	2	100	0.035	**2088754**
171 M40	M40	36	2	50	0.045	**2088762**
171 M50	M50	46	2	50	0.052	**2088770**
171 M63	M63	59	2	25	0.056	**2088789**

NBR Nitrile rubber

O sealing rings, suitable as connection thread sealing rings for all plastic and brass cable glands with metric connection thread to DIN EN 60423 or ISO 68. The rings can be captively pre-mounted.

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O sealing ring for PG connection thread

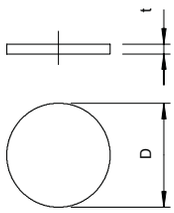
Pg

Type	Size mm	Dimension D mm	Dim. S mm	Pack. pcs	Weight kg/100 pcs.	Item No.
171 PG 9	Pg 9	13	1.5	100	0.008	**2088819**
171 PG11	Pg 11	16	1.5	100	0.010	**2088827**
171 PG13.5	Pg 13,5	18	1.5	100	0.011	**2088835**
171 PG16	Pg 16	20	1.5	100	0.012	**2088843**
171 PG21	Pg 21	25	2	100	0.027	**2088851**
171 PG29	Pg 29	33	2	100	0.035	**2088878**
171 PG36	Pg 36	43	2	50	0.045	**2088886**
171 PG42	Pg 42	50	2	50	0.052	**2088894**

NBR Nitrile rubber

O sealing rings, suitable as connection thread sealing rings for all plastic and brass cable glands with Pg connection thread to DIN EN 60423 or ISO 68. The rings can be captively pre-mounted.

Dust protection plate, metric



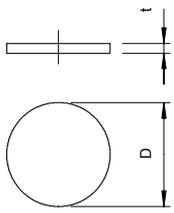
M

Type	Size mm	Dimension D mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 S VTEC M12	M12	12	1.5	100	0.001	**2028870**
107 S VTEC M16	M16	16	1.5	100	0.002	**2028873**
107 S VTEC M20	M20	20	1.5	100	0.004	**2028875**
107 S VTEC M25	M25	25	1.5	100	0.008	**2028877**
107 S VTEC M32	M32	32	1.5	100	0.012	**2028880**
107 S VTEC M40	M40	40	1.5	100	0.022	**2028883**
107 S VTEC M50	M50	50	1.5	100	0.040	**2028885**

ZPE Cellular polyethylene

Cellular polyethylene.
Small protective disc to protect the V-TEC VM and V-TEC VM MS cable glands against dust before the cable is installed.
Application: the discs are pre-mounted between the cap nut and the seal. They do not need to be removed when the cable is installed, but are simply passed through to the interior with the cable.
Note: the discs do not provide any mechanical protection.

Dust protection plate, PG



Pg

Type	Size mm	Dimension D mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 S VTEC PG7	Pg 7	11	2	100	0.001	**2028891**
107 S VTEC PG9	Pg 9	14	2	100	0.002	**2028905**
107 S VTEC PG11	Pg 11	16.5	2	100	0.003	**2028913**
107 S VTEC PG13	Pg 13,5	18.5	2	100	0.004	**2028921**
107 S VTEC PG16	Pg 16	21	2	100	0.006	**2028948**
107 S VTEC PG21	Pg 21	26.5	2	100	0.010	**2028956**
107 S VTEC PG29	Pg 29	34.5	2	100	0.015	**2028964**
107 S VTEC PG36	Pg 36	44	3	100	0.035	**2028972**
107 S VTEC PG42	Pg 42	50	3	100	0.050	**2028980**
107 S VTEC PG48	Pg 48	56	3	100	0.060	**2028999**

ZPE Cellular polyethylene

Cellular polyethylene.
Small protective disc to protect the V-TEC and V-TEC MS cable glands against dust before the cable is installed.
Application: the discs are pre-mounted between the cap nut and the seal. They do not need to be removed when the cable is installed, but are simply passed through to the interior with the cable.
Note: the discs do not provide any mechanical protection.

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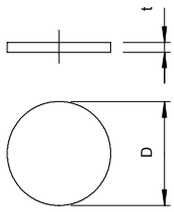
Always indicate the item number when ordering.

Sealing plate, PG

Pg



Type	Size mm	Dimension D mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
107 V PG 7 PVC	Pg 7	11	0.5	100	0.013	**2029707**
107 V PG 9 PVC	Pg 9	13.5	0.5	100	0.020	**2029715**
107 V PG11 PVC	Pg 11	16.5	0.5	100	0.030	**2029723**
107 V PG13.5 PVC	Pg 13,5	18.5	0.5	100	0.038	**2029731**
107 V PG16 PVC	Pg 16	20.5	0.5	100	0.048	**2029758**
107 V PG21 PVC	Pg 21	26	0.5	100	0.075	**2029766**
107 V PG29 PVC	Pg 29	35	1	100	0.135	**2029774**

PVC Polyvinylchloride

The sealing plate offers both mechanical protection and the maintenance of the protection rating of plastic and metal cable glands to DIN 46320 before cable installation.
Application: the discs are placed between the pressure screw and the pressure ring. If the safe maintenance of IP65 is required, we recommend placing the discs between the pressure ring and the sealing ring. To mount the cable, remove the discs – they can be reused.

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Cable/pipe fastening systems, plastic

	Quick clip	264
	Push-fit anchors	271
	cable tidy	274
	Pressure clip	276
	Fastening clip	279
	Nail clip	287

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Installation – the professional way

Fastening systems for day-to-day use

Always indicate the item number when ordering.

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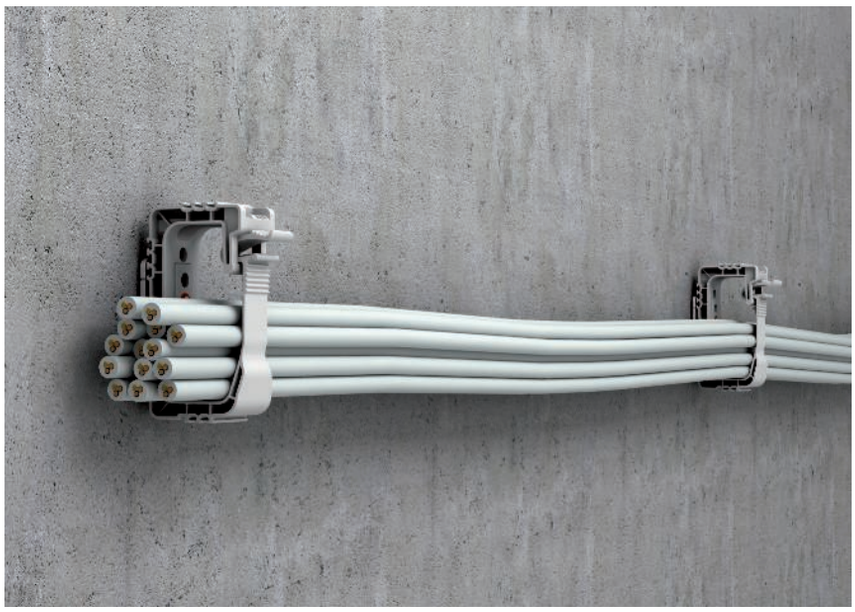
Information on cable fastening



Cable fastening
The standard DIN EN 61914 "Cable holders for electrical installations" specifies that cable holders "must be able to accept cables or cable bundles of the diameter specified by the manufacturer or responsible retailer, without tearing or breaking or shearing off the threads of bolts".
During the installation of cables, the current national and international standard must be taken into account, such as DIN VDE 0100 520. "Suitable agents and methods, which prevent damage or changes to the shape", must be used for fastening.
In addition, with masses of cables, DIN VDE 0298 requires the appropriate "load capacities of cables for fixed laying in and on buildings..." to be taken into account when selecting the fastening systems.
Besides these standardising aspects, the end customer/client can/must take specific laying specifications into account.
The fastening spacing for cables is given in DIN VDE 0100-520, June 2003. For example, cables laid horizontally require a spacing of 20x the cable diameter. However, a spacing of 80 cm should not be exceeded. With vertical laying, the clip spacings may be increased but should not exceed 1.5 m.
The table below shows the maximum fastening spacings for cables according to the cable diameter. The laying spacings given in the catalogue, e.g. for cable tidies or Quick clips, are guide values and can only be treated as such.

External diameter of the cables	Maximum spacing for horizontal fastening	Maximum spacing for vertical fastening
mm	mm	mm
D ≤ 9	250	400
9 < D ≤ 15	300	400
15 < D ≤ 20	350	450
20 < D ≤ 40	400	550

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Quick clip

- For metric and PG
- Suitable for lining up
- Insertion slopes

Multi-Quick clip

- Suitable for lining up
- PG and metric
- Universally usable

starQuick clip

- High breaking load
- UV-resistant
- Large clamping range

Push-fit anchor

- Versatile
- Resilient
- For solid substrates

Clamp clip

- Wall and ceiling mounting
- For multiple cables
- Can be lined up

Pressure clip

- Specially adapted corrugation
- Tidy, well-organised cable routing

Fastening clamp

- Large selection
- Various types
- High loading

Nail clamp

- Easy cable fastening
- Various sizes
- With and without pre-mounted nail

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Always indicate the item number when ordering.

Quick clip

- Extreme loading capacity
- Maximum stability
- Extremely easy mounting
- Insertion slopes
- Slot fastening
- Suitable for lining up
- Latch-in hole/middle stopper

The high-speed clip

With its unique design and the modified halogen-free material from which it is built, the Quick clip is exceptionally robust. Maximum pipe extraction values: up to 230 N. Rounded retaining arms on the exterior provide the highest level of stability. The roundness means that the clip is extremely torsion-resistant. The bull horns ensure automatic alignment of the clip. At clip inclines of up to 15°, the clips align themselves automatically upon insertion of the pipe. Insertion slopes, specially adapted to the pipe dimensions, simplify the insertion of the pipe in the clip. The slots enable alignment of the clip during installation. OBO's patented system for lining up clips can withstand 25% higher loads than conventional systems. Clips can additionally be placed on either side of each other. The combination of latch-in hole and middle stopper means the clips are always arrested and fixed in the centre position when lined up.

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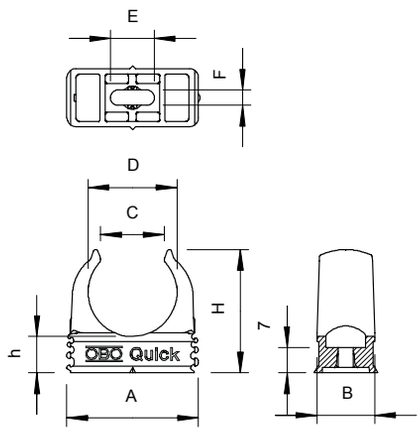
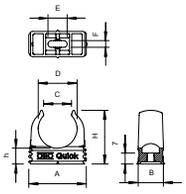
OBO Quick



- OBO Quick clip for all metric steel armoured pipes, and light-duty and heavy-duty insulation pipes
- Suitable for OBO Quick pipe
- Pipe centring aids allow optimal attachment of the pipe and automatically turn the clip into the correct position
- Patented
- Universal fastening option; can be arranged with the OBO Multi-quick and starQuick clip
- Slot for side alignment during mounting with wood screw or knock-in anchor
- Recommended fastening spacing 50–60 cm
- For max. extraction values (F) at a room temperature of 20 °C, see table.

G	A	B	C	D	E	F	H	H	F (20 °C)
	mm	mm	mm	mm	mm	mm	mm	mm	N
M16	25.3	16	11.5	15.5	7	4.2	25	10	75
M20	30.3	16	14	19.4	9	4.2	29.5	10	90
M25	36.3	16	17.5	24.3	12	4.2	34	10	100
M32	46.3	16	22.4	31.4	12	4.2	42	11	120
M40	57.3	16	26	39.2	11	4.6	51	12	140
M50	70.3	18	32	49	12	6	63	14	165
M63	87.3	20	43	61.5	12	6	74.5	15	230

Quick clip



Type	Nominal size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2955 M16	M16	Light grey	100	0.252	**2149004**
2955 M20	M20	Light grey	100	0.325	**2149010**
2955 M25	M25	Light grey	100	0.433	**2149016**
2955 M32	M32	Light grey	50	0.630	**2149022**
2955 M40	M40	Light grey	50	0.835	**2149028**
2955 M50	M50	Light grey	25	1.454	**2149034**
2955 M63	M63	Light grey	20	2.203	**2149040**

PP Polypropylene

OBO Quick clip, type 2955/...: for all metric steel armoured pipes, as well as light-duty and heavy-duty metric insulation pipes. Suitable for mounting the OBO Quick pipe.
Pipe centring aids allow optimal attachment of the pipe and automatically turn the clip into the correct position.
Universal fastening option; can be arranged with the OBO Multi-quick and starQuick clip.
Slot for side alignment during mounting with wood screw or knock-in anchor.
Size M16-M32 can be screwed onto an M6 thread.
Recommended fastening spacing 50–60 cm, for max. extraction values F at a room temperature of 20 °C, see the table.

Always indicate the item number when ordering.

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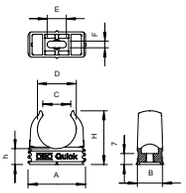
Quick clip, black

M

Type	Nominal size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2955 M16 SW	M16	Jet black	100	0.252	**2149559**
2955 M20 SW	M20	Jet black	100	0.325	**2149563**
2955 M25 SW	M25	Jet black	100	0.433	**2149567**
2955 M32 SW	M32	Jet black	50	0.630	**2149571**
2955 M40 SW	M40	Jet black	50	0.835	**2149575**
2955 M50 SW	M50	Jet black	25	1.454	**2149579**
2955 M63 SW	M63	Jet black	20	2.203	**2149583**



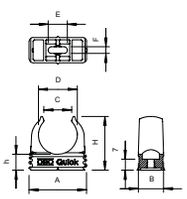
PP Polypropylene

OBO Quick clip, type 2955/...: for all metric steel armoured pipes, as well as light-duty and heavy-duty metric insulation pipes. Suitable for mounting the OBO Quick pipe.
Pipe centring aids allow optimal attachment of the pipe and automatically turn the clip into the correct position.
Universal fastening option; can be arranged with the OBO Multi-quick and starQuick clip.
Slot for side alignment during mounting with wood screw or knock-in anchor.
Size M16-M32 can be screwed onto an M6 thread.
Recommended fastening spacing 50–60 cm, for max. extraction values F at a room temperature of 20 °C, see the table.

Quick clip, flame-resistant

M Fluor Chlorum HALOGENFREE 750° M

Type	Nominal size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2955 F M16 STGR	M16	Stone grey	100	0.252	**2149303**
2955 F M20 STGR	M20	Stone grey	100	0.325	**2149309**
2955 F M25 STGR	M25	Stone grey	100	0.433	**2149315**
2955 F M32 STGR	M32	Stone grey	50	0.630	**2149321**
2955 F M40 STGR	M40	Stone grey	50	0.835	**2149327**
2955 F M50 STGR	M50	Stone grey	25	1.454	**2149333**
2955 F M63 STGR	M63	Stone grey	20	2.203	**2149339**



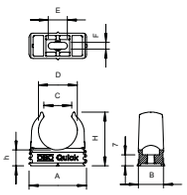
PP Polypropylene

OBO Quick clip, type 2955F/...: flame-resistant version for all metric steel armoured pipes, as well as light-duty and heavy-duty metric insulation pipes. Suitable for mounting the OBO Quick pipe.
Pipe centring aids allow optimal attachment of the pipe and automatically turn the clip into the correct position.
Universal fastening option; can be arranged with the OBO Multi-quick and starQuick clip.
Slot for side alignment during mounting with wood screw or knock-in anchor.
Size M16-M32 can be screwed onto an M6 thread.
Recommended fastening spacing 50–60 cm,
for max. extraction values F at a room temperature of 20 °C, see the table.

Quick clip, flame-resistant

M Fluor Chlorum HALOGENFREE 750° M

Type	Nominal size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2955 F M16 RW	M16	Pure white	100	0.252	**2149351**
2955 F M20 RW	M20	Pure white	100	0.325	**2149357**
2955 F M25 RW	M25	Pure white	100	0.433	**2149363**
2955 F M32 RW	M32	Pure white	50	0.630	**2149369**
2955 F M40 RW	M40	Pure white	50	0.835	**2149375**



PP Polypropylene

OBO Quick clip, type 2955F/...: flame-resistant version for all metric steel armoured pipes, as well as light-duty and heavy-duty metric insulation pipes. Suitable for mounting the OBO Quick pipe.
Pipe centring aids allow optimum attachment of the pipe and automatically turn the clip into the correct position.
Universal fastening option; can be arranged with the OBO Multi-quick and starQuick clip.
Slot for side alignment during mounting with wood screw or knock-in anchor.
Size M16-M32 can be screwed onto M6 thread.
Recommended fastening spacing 50–60 cm
For max. extraction values F at a room temperature of 20 °C, see the table.

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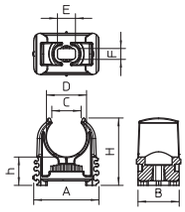
Always indicate the item number when ordering.

Quick clip, for push-fit anchor



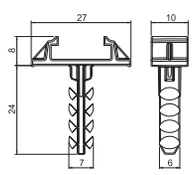
M

Type	Nominal size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2957 M16	M16	Light grey	100	0.315	**2149701**
2957 M19-20	M19-20	Light grey	100	0.403	**2149710**

ABS/ASA Acrylonitrile butadiene styrene

OBO Quick clip, type 2957/...: for metric steel armoured pipes, M16 and M19-20 as well as light-duty and heavy-duty metric insulation pipes. Suitable for mounting the OBO Quick pipe.
Pipe centring aids allow optimal attachment of the pipe in the clip.
Universal fastening option; can be arranged with the OBO Multi-quick and starQuick clip.
Slot for side alignment during mounting with wood screw or knock-in anchor.
Size M16-M19-20 can be screwed onto an M6 thread.
Recommended fastening spacing 50–60 cm,
for max. extraction values F at a room temperature of 20 °C, see the table.

Push-fit anchor for Quick clip for type 2957



Ø6

Type	Dowel Ø mm	Length mm	Bore hole depth mm	Pack. pcs	Weight kg/100 pcs.	Item No.
910 STQS 6x26	6	26	30	100	0.110	**2351650**

PA Polyamide

Push-fit anchor suitable for Quick clip, type 2957. The anchor is fixed to the Quick clip by a locking mechanism. Suitable for rapid mounting in concrete walls and masonry.
The anchor is pushed into the hole until the clip makes contact with the surface.

Always indicate the item number when ordering.

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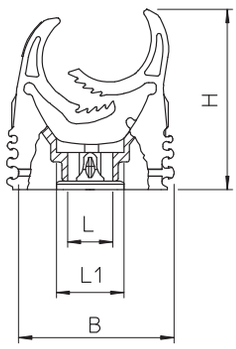
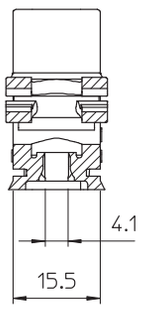
Multi-Quick clip





- PG and metric
- Easy fastening
- Secure locking
- Radial arrangement
- Simplified storage
- Clamping ranges from 15–37 mm
- Universal application
- Fastening in rails types 2060 and 2061

D	B	H	L	L1
mm	**mm**	**mm**	**mm**	**mm**
15–19	27.5	32	8	12
18.5–22.5	33	37	9	13
25–28.5	43	46	12	16
31–37	55	58	14	18

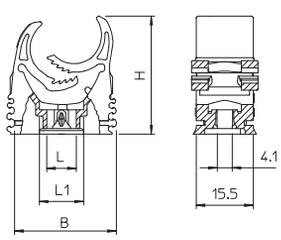
Multi-Quick clip

Pg

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
M-Quick 15-19LGR	15 - 19	Light grey	100	0.545	**2153106**
M-Quick 18-22LGR	18.5 - 22.5	Light grey	100	0.760	**2153114**
M-Quick 25-28LGR	25 - 28.5	Light grey	50	1.170	**2153130**
M-Quick 31-37LGR	31 - 37	Light grey	25	1.780	**2153157**

PA Polyamide

PG and metric
Simple fastening
Secure locking
Radial arrangement
Simplified storage
Clamping ranges from 15-37 mm
Universally applicable
Fastening in rail type CL2008



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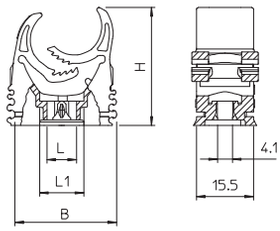
Always indicate the item number when ordering.

Multi-Quick clip, metric



Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
M-Quick M20 LGR	16 - 20	Light grey	100	0.600	**2153718**
M-Quick M25 LGR	20 - 25	Light grey	50	0.930	**2153726**
M-Quick M32 LGR	25 - 32	Light grey	50	1.390	**2153734**

PA Polyamide

- Multi-quick metric
- Simple fastening
- Secure locking
- Radial arrangement
- Simplified storage
- Universally applicable

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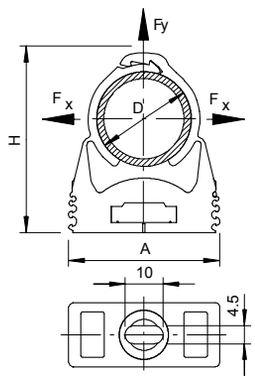
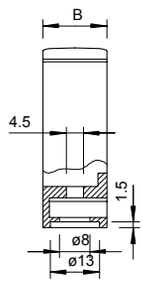
Always indicate the item number when ordering.

starQuick clip





- All sizes clip together, up to size SQ28
- Breaking load with bolt DIN96, diameter 4.5 mm, min. at 20 °C
- For use outdoors and in public spaces
- UV- and weatherproof polyamide
- Clamping range 10–65 mm
- Wall and ceiling mounting
- Patented safety system

G	A	B	D	H	Fx	Fy
mm	mm	mm	mm	mm	N	N
10	29	17	9.5–12	31.6	500	500
12–14	29	17	11.5–15	34.5	550	550
15–16	29	17	14–16.5	35.7	600	600
17–19	29	17	16–20	39.8	700	700
20–23	29	17	19.5–23.5	49.5	800	800
25–28	40	17	24–28	49.5	850	850
28–32	40	17	27.5–32	52.8	900	900
32–35	43	17	31.2–35.8	65.8	1,000	1,000
35–40	47	17	35–40.1	65.8	1,100	1,100
40–44	52	17	39.3–44.5	69.5	1,200	1,200
45–50	57	17	44–50	75.5	1,200	1,200
50–54	63	17	48–55	81	1,400	1,400
59–65	74	20	58.5–65	94.3	1,500	1,500

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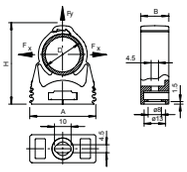
Always indicate the item number when ordering.

starQuick clip

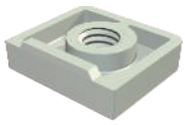


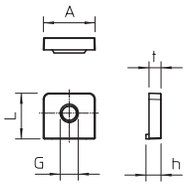
Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
SQ-10 LGR	9.5 - 12	Light grey	100	0.568	**2146053**
SQ-12 LGR	11.5 - 15	Light grey	100	0.540	**2146061**
SQ-15 LGR	14 - 16.5	Light grey	100	0.584	**2146096**
SQ-17 LGR	16 - 20	Light grey	100	0.640	**2146118**
SQ-20 LGR	19.5 - 23.5	Light grey	50	0.670	**2146134**
SQ-25 LGR	24 - 28	Light grey	50	0.970	**2146207**
SQ-28 LGR	27.5 - 32	Light grey	50	1.070	**2146215**
SQ-32 LGR	31.2 - 35.8	Light grey	50	1.230	**2146258**
SQ-36 LGR	35 - 40.1	Light grey	25	1.510	**2146290**
SQ-40 LGR	39.3 - 44.5	Light grey	25	1.710	**2146320**
SQ-47 LGR	44 - 50	Light grey	25	1.980	**2146363**
SQ-51 LGR	48 - 55	Light grey	15	2.250	**2146444**
SQ-59 LGR	58.5 - 65	Light grey	15	3.300	**2146487**

PA Polyamide

Can be arranged next to each other to size SQ-28.
Break load: with bolt DIN 96; diameter 4.5 mm, minimum break load at 20°.
starQuick clip Type SQ... a comprehensive programme of quality clips ideal for the use in outside areas such as parking garages, under bridges and on the exterior of steel structures. Climate conditions have no chance: the starQuick clips are made from UV weather-resistant polyamide.
The starQuick clips are available in 13 different sizes with a clamping range of 10–65 mm, allowing a problem-free installation on different pipe systems. starQuick is suitable for plastic and metal pipes, as well as electrical and sanitary installations. The clips can be installed on the wall and ceiling. Mounting is amazingly fast and uncomplicated, without the use of tools. Mounting of multiple pipes is also really easy:
- By arranging the single clips.
- By using the double bracket, allowing a firm hold and spacing by heavy loads.
- A rail system allows for an open spacing and numbering of the clips.
starQuick is reliable and can support heavy loads. A patented safety system guarantees that the pipes stay where they are. The pipe is secure in the all around closed clip.

starQuick nut





Type	Nominal size	Dimension L mm	Dimension h mm	Dimension t mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
SQ M6	M6	15	5	4	Light grey	100	0.070	**2146509**

PC Polycarbonate

The starQuick nut was developed especially for the starQuick clip. Simply push into the intended opening of the clip. The nut is captive in the clip. Suitable for M6 threads.

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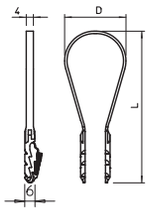
Always indicate the item number when ordering.

BKS clamp clip

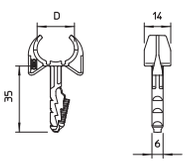


Type	Clamping range D mm	Dimension L mm	Dimension D mm	Pull-out value N	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
1973 3-13 LGR	3 - 13	52	13	500	Light grey	100	0.089	**2148803**
1973 8-28 LGR	8 - 28	70	27	500	Light grey	100	0.116	**2148846**
1973 20-40 LGR	20 - 40	89	36	500	Light grey	100	0.150	**2148862**

PA Polyamide

For cables, flexible pipes and all kinds of insulating and armoured steel pipes, suitable for concrete, calcareous limestone and full brick. Use in gas concrete masonry is possible, but reduced load capacities must be expected.

Snap clip

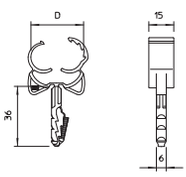


Type	Clamping range D mm	Bore hole depth mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
1975 12-15	12 - 15	40	Light grey	100	0.251	**2148021**
1975 16-19	16 - 19	40	Light grey	100	0.372	**2148048**
1975 19-22	19 - 22.5	40	Light grey	100	0.533	**2148056**

PA Polyamide

With moulded-on push-fit plug for rapid mounting in concrete walls and masonry.
Push plug into hole until the clip makes contact with the surface. When the pipe is pressed into the clip, the arms of the clip grip it.

Click-snap clip

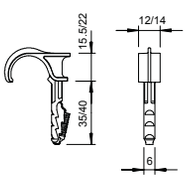


Type	Clamping range D mm	Breaking load for concrete B25	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
1976 12-15	12 - 15.5	190 N	Light grey	100	0.245	**2148501**
1976 16-21	16 - 21.5	500 N	Light grey	100	0.443	**2148528**
1976 22-28	22.5 - 28.5	500 N	Light grey	100	0.781	**2148536**

PA Polyamide

With moulded-on push-fit plug for rapid mounting in concrete walls and masonry.
Push plug into hole until the clip makes contact with the surface. When the pipe is pressed into the clip, the arms of the clip grip it.

Single push-fit clip



Type	Clamping range D mm	Bore hole Ø mm	Bore hole depth mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
1974 16-23	16 - 23	6	40	Light grey	100	0.263	**2197804**
1974 22-30	22 - 30	6	40	Light grey	100	0.446	**2197812**

PA Polyamide

These push-fit clips are used when installing cables and pipes on walls and ceilings and when running flexible pipes on concrete and in the screed. The single push-fit clips can be used instead of nail clips in concrete and aerated concrete. The advantage of the push-fit clips is that they only have to be pushed into the drilled hole. Anchors and bolts are not needed.

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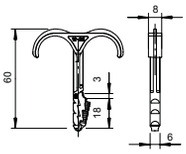
Always indicate the item number when ordering.

Double push-fit clip

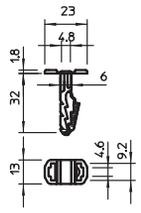


Type	Clamping range D mm	Bore hole Ø mm	Bore hole depth mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
1974 2X4-12	4 - 12	6	40	Light grey	100	0.128	**2197855**
1974 2X12-25	12 - 25	6	40	Light grey	100	0.282	**2197863**

PA Polyamide

These push-fit clips are used when installing cables and pipes on walls and ceilings and when running flexible pipes on concrete and in the screed. The single push-fit clips can be used instead of nail clips in concrete and aerated concrete. The advantage of the push-fit clips is that they only have to be pushed into the drilled hole. Anchors and bolts are not needed.

Push-fit anchors for cable ties

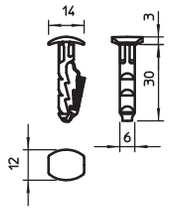


Type	Bore hole depth mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
910 STK 6x30	35	Light grey	100	0.108	**2351609**

PA Polyamide

The push-fit anchor can accept a cable tie (type 550 or 555) up to 9 mm wide, which can be used to install several cables and pipes.
Suitable for concrete, lime sand and brickwork as solid brick. Use in gas concrete masonry is possible, but reduced load capacities must be expected.

Push-fit anchor with mushroom head

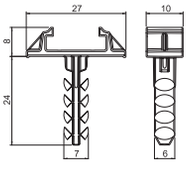


Type	Dowel Ø mm	Length mm	Bore hole depth mm	Pack. pcs	Weight kg/100 pcs.	Item No.
910 STP 6x30	6	30	35	100	0.101	**2351412**

PA Polyamide

The push-fit anchor allows simple mounting, e.g. of labelling panels or small WDK ducts.
Suitable for concrete, lime sandstone and brickwork as solid brick. Use in gas concrete masonry is possible, but reduced load capacities must be expected.

Push-fit anchor for Quick clip for type 2957



Ø6

Type	Dowel Ø mm	Length mm	Bore hole depth mm	Pack. pcs	Weight kg/100 pcs.	Item No.
910 STQS 6x26	6	26	30	100	0.110	**2351650**

PA Polyamide

Push-fit anchor suitable for Quick clip, type 2957. The anchor is fixed to the Quick clip by a locking mechanism. Suitable for rapid mounting in concrete walls and masonry.
The anchor is pushed into the hole until the clip makes contact with the surface.

Always indicate the item number when ordering.

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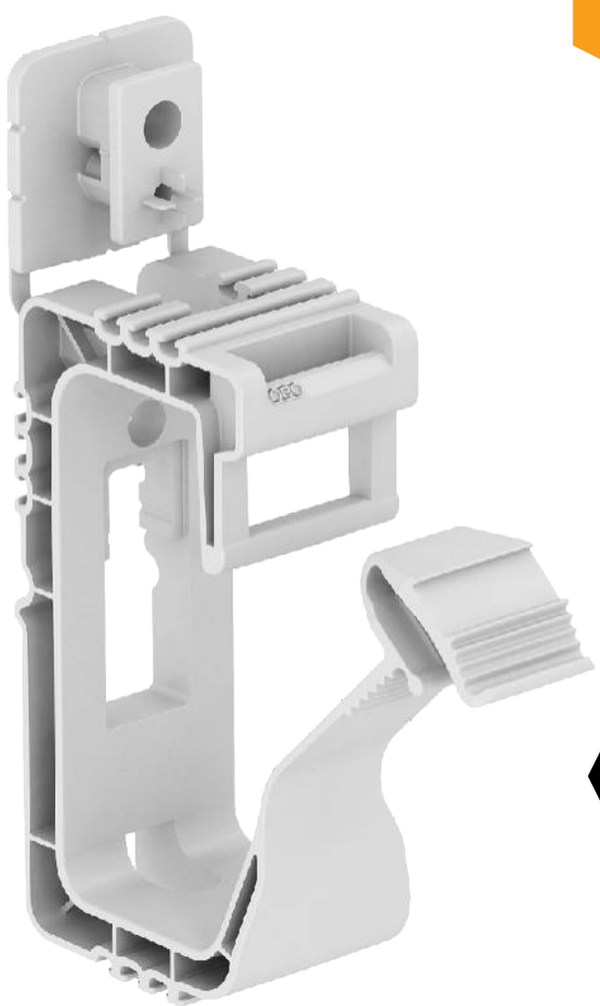
Grip, cable tidy

- Wall and ceiling mounting
- Can be joined together “back to back”
- For multiple cables
- Rapid installation using the fastening element
- Ideal for retroinstallation
- Flame-resistant version, stone grey, to DIN EN 0471 / DIN IEC 695 Part 2-1, test temperature 960 °C



Wall
and ceiling mounting

Cable tidy for general use, suitable for wall and ceiling mounting. The moulded fastening element can be fastened using knock-in anchors or a gas pressure nail gun.

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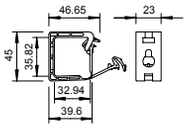
GRIP 10

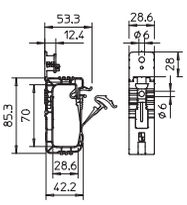


Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 10	10	Light grey	50	0.765	**2205398**
2031 F 10	10	Stone grey	50	0.798	**2205400**

PP Polypropylene

The new GRIP plastic grouped supports are suitable for mounting installation cables. Besides the known advantages of grouped supports, they have special features which considerably simplify mounting:
In addition, the Grip grouped supports are available in a hardly flammable version.
The Grip grouped supports will support you in a proper and safe installation of installation cables, even under difficult circumstances.

GRIP 20

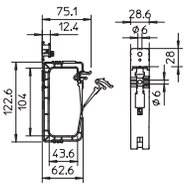


Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 20	20	Light grey	50	1.920	**2205404**
2031 20 SP	20	Light grey	100	1.920	**2205408**
2031 F 20	20	Stone grey	50	1.920	**2205412**

PP Polypropylene

Cable tidy for general use, suitable for wall and ceiling mounting. The moulded fastening element can be fastened using knock-in anchors or a gas pressure nail gun.

GRIP 40



Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 40	40	Light grey	25	3.610	**2205416**
2031 40 SP	40	Light grey	50	3.280	**2205420**
2031 F 40	40	Stone grey	25	3.610	**2205423**

PP Polypropylene

Cable tidy for general use, suitable for wall and ceiling mounting. The moulded fastening element can be fastened using knock-in anchors or a gas pressure nail gun.

Always indicate the item number when ordering.

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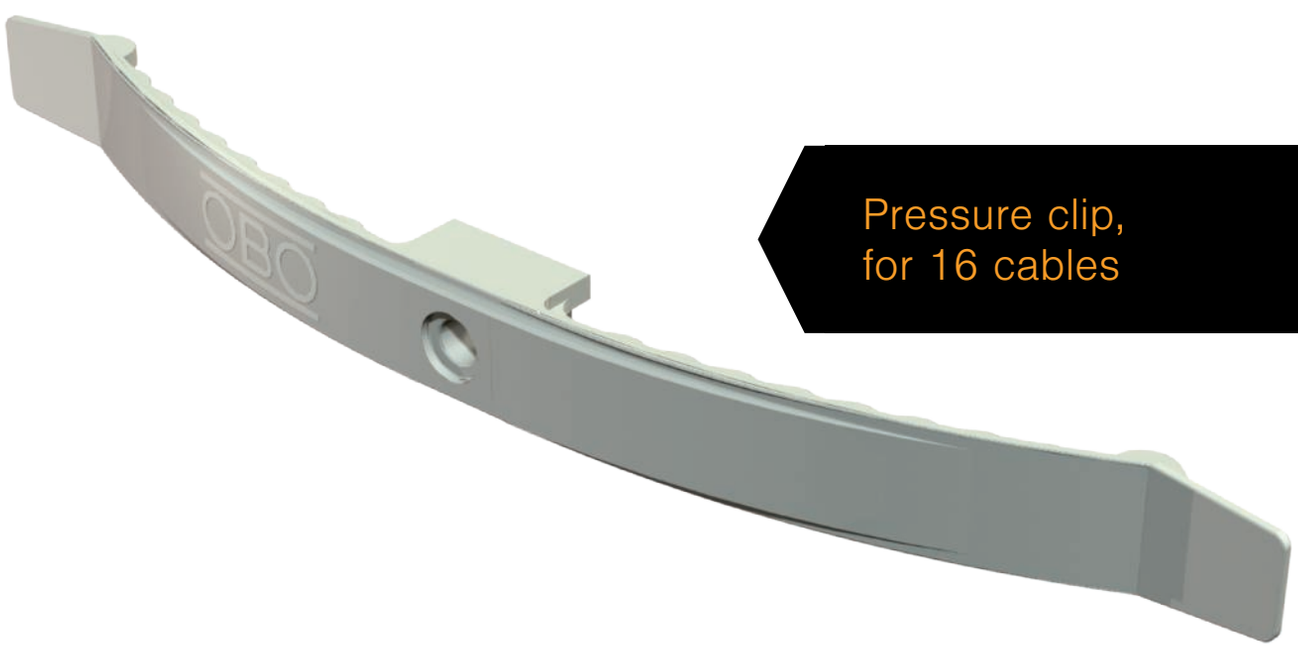
Pressure clip

- Striking surface on top
- Specially adapted corrugation
- Spacer for larger cable diameters
- Connectable
- With knock-in anchor



Pressure clip,
for 16 cables

The quicker, the better – this also applies to installations in false ceilings. The pressure clips from OBO Bettermann are made of high-quality polyamide and simplify the routing of cables under the ceiling. The pressure clip is an ideal solution for areas in which every centimetre counts. Mounting is very simple using an M6 knock-in anchor. The top impact surface simplifies contact with the impact bolt on knocking in. After mounting the cables are passed under the clips in a "lasso technique" hand movement – and that's all there is to it!

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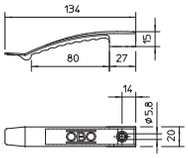
Pressure clip for 8 cables

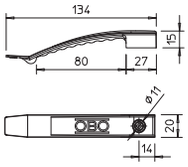


Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2032	8	Light grey	50	1.371	**2205017**
2032 SP	8	Light grey	100	1.371	**2204975**
2032 F	8	Stone grey	50	1.412	**2204908**

PA Polyamide PBPT Polybutylene terephthalate

Standard version for general use, e.g. on intermediate ceilings and partition walls.
Clamping height 9 mm – with spacer 13 mm.
Fastening hole: 6 mm Ø.

Pressure clip for 8 cables, connectable

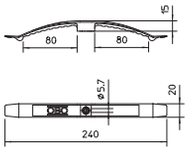


Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2032 AS	8	Light grey	50	1.300	**2205052**

PA Polyamide

Version suitable for fixing with gas pressure nail gun (i.e. by SPIT), for example for use on intermediate ceilings and partition walls.
Clamping height: 9 mm, with spacer 13 mm.
Fastening hole: 7 mm Ø.

Pressure clip for 16 cables

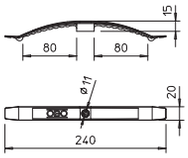


Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2033	16	Light grey	25	2.077	**2205033**
2033 SP	16	Light grey	100	2.077	**2204983**
2033 F	16	Stone grey	25	2.588	**2204916**

PA Polyamide PBPT Polybutylene terephthalate

Standard version for general use, e.g. on intermediate ceilings and partition walls.
Clamping height 9 mm – with spacer 13 mm.
Fastening hole: 6 mm Ø.

Pressure clip for 16 cables, connectable



Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2033 AS	16	Light grey	25	2.100	**2205053**

PA Polyamide

Version suitable for fixing with gas pressure nail gun (i.e. by SPIT), for example for use on intermediate ceilings and partition walls.
Clamping height: 9 mm, with spacer 13 mm.
Fastening hole: 7 mm Ø.

Always indicate the item number when ordering.

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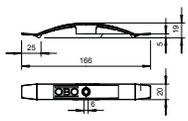
Pressure clip for 10 cables

Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2034	10	Light grey	50	1.169	**2205041**
2034 SP	10	Light grey	100	1.169	**2204991**
2034 F	10	Stone grey	50	0.808	**2204924**

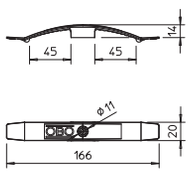


PA Polyamide PBPT Polybutylene terephthalate

Standard version for general use, e.g. on intermediate ceilings and partition walls.
Clamping height 9 mm – with spacer 13 mm.
Fastening hole: 6 mm Ø.

Pressure clip for 10 cables, connectable

Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2034 AS	10	Light grey	50	1.130	**2205054**

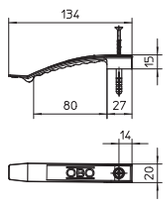


PA Polyamide

Version suitable for fixing with gas pressure nail gun (i.e. by SPIT), for example for use on intermediate ceilings and partition walls.
Clamping height: 9 mm, with spacer 13 mm.
Fastening hole: 7 mm Ø.

Pressure clip with knock-in anchor, for 8 cables

Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2032 SD	8	Light grey	50	1.791	**2204800**
2032 SD SP	8	Light grey	100	1.791	**2204851**

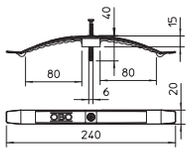


PA Polyamide

With pre-mounted knock-in anchor, 6 mm Ø.
Required drill hole depth 50 mm.
Clamping height 9 mm – with spacer 13 mm.
Fastening hole 6 mm Ø.

Pressure clip with knock-in anchor, for 16 cables

Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2033 SD	16	Light grey	25	2.515	**2204819**
2033 SD SP	16	Light grey	100	2.515	**2204878**



PA Polyamide

With pre-mounted knock-in anchor, 6 mm Ø.
Required drill hole depth 50 mm.
Clamping height 9 mm – with spacer 13 mm.
Fastening hole 6 mm Ø.

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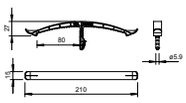
Pressure clip with push-fit anchor

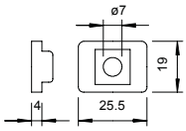


Type	No. of conductors NYM 3 x 1.5	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2033 STD	16	Light grey	25	1.037	**2204541**

PA Polyamide

With moulded push fit plug, 6 mm Ø.

Spacer

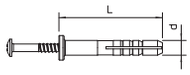


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2033 D 25x19	Light grey	100	0.173	**2205092**

PS Polystyrene

To increase the clamping height of pressure clips from 10 to 13 mm for thicker cables, impact-resistant polystyrene.

Knock-in anchor



Type	Dowel Ø mm	Length mm	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
910 SD 6X35	6	35	1200	100	0.310	**2351056**
910 SD 6X40	6	40	1000	100	0.555	**2351064**

PA Polyamide

Knock-in anchor: steel, electrogalvanised and transparently passivated.

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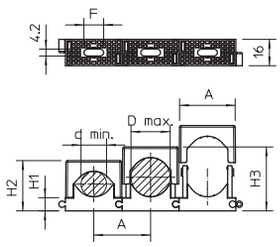
Always indicate the item number when ordering.

Series pressure clip, light grey

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2037 3-7 LGR	3 - 7	Light grey	100	0.260	**2250071**
2037 6-13 LGR	6 - 13	Light grey	100	0.359	**2250136**
2037 12-20 LGR	12 - 20	Light grey	50	0.572	**2250209**
2037 16-24 LGR	16 - 24	Light grey	50	0.838	**2250241**
2037 18-30 LGR	18 - 30	Light grey	25	0.997	**2250306**
2037 27-43 LGR	27 - 43	Light grey	25	1.615	**2250438**

PA Polyamide

Universal clip for the single fastening of cables and pipes, all sizes can be seamlessly expanded among each other, with adhesive foot, slot and for screwing to M6 thread.
To stick the polyamide clips to masonry and concrete, use Impu-Fix ribbon conductor quick adhesive, type 509.
*Sizes 3–7 are not suitable for nail guns.



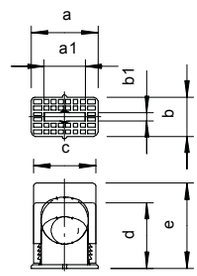
Type	Clamping range D mm	Dimension A mm	Dimension H1 mm	Dimension H2 mm	Dimension H3 mm	Dimension d min. mm	Dimension d max. mm	Dimension F mm
2037 3-7 LGR	3 - 7	14.5	7.5	15.5	19.5	3	7	6
2037 6-13 LGR	6 - 13	20	8.5	20	27	6	13	13
2037 12-20 LGR	12 - 20	28	8.5	26	34	12	20	14
2037 16-24 LGR	16 - 24	34.5	8.5	31	39	16	24	12
2037 18-30 LGR	18 - 30	40	9	34	46	18	30	12
2037 27-43 LGR	27 - 43	55	10.5	46	62	27	43	15

Pressure ISO clip 3050, single

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
3050 LGR	6 - 16	Light grey	100	0.400	**2101017**
3051 LGR	14 - 24	Light grey	50	0.720	**2101033**
3052 LGR	24 - 34	Light grey	25	1.290	**2101068**

PS Polystyrene

With adhesive base, slot and for screwing to M6 thread.
Use the Impu-Fix ribbon conductor quick adhesive, type 509, to stick the polystyrene clips to masonry and concrete.



Type	Clamping range D mm	Dimension a1 mm	Dimension b1 mm	Dimension a mm	Dimension b mm	Dimension c mm	Dimension d mm	Dimension e mm
3050 LGR	6 - 16	13	4	28	18	22.5	25	34
3051 LGR	14 - 24	21	4.2	34	20	32	33	43
3052 LGR	24 - 34	16	4.2	45	24	43	43	57

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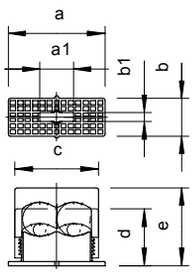
Always indicate the item number when ordering.

Pressure ISO clip, double

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
3050 2 6-16	6 - 16	Light grey	25	1.044	**2115018**

PS Polystyrene

For two cables, with adhesive base, slot and for screwing to M6 thread.
Use the Impu-Fix ribbon conductor quick adhesive, type 509, to stick the polystyrene clips to masonry and concrete.



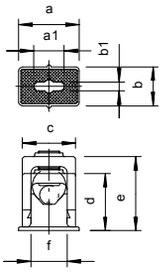
Type	Clamping range D mm	Dimension a1 mm	Dimension b1 mm	Dimension a mm	Dimension b mm	Dimension c mm	Dimension d mm	Dimension e mm
3050 2 6-16	6 - 16	26	3.8	46	18	40	26	35

Grip ISO clip, single

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
3040 LGR	6 - 16	Light grey	100	0.532	**2105012**
3041 LGR	16 - 24	Light grey	50	1.168	**2105039**
3042 LGR	24 - 34	Light grey	25	2.488	**2105055**

PS Polystyrene

Solid cable fastening through clamping screws, with adhesive base, slot and for screwing to M6 thread.
Use the Impu-Fix ribbon conductor quick adhesive, type 509, to stick the polystyrene clips to masonry and concrete.



Type	Clamping range D mm	Dimension a1 mm	Dimension b1 mm	Dimension a mm	Dimension b mm	Dimension c mm	Dimension d mm	Dimension e mm	Dimension f mm
3040 LGR	6 - 16	13.5	4	28	18	24.5	28	35	20
3041 LGR	16 - 24	20	4.2	35	22	37	36	44	31
3042 LGR	24 - 34	14	4.2	50	22	48	49	59	40

Always indicate the item number when ordering.

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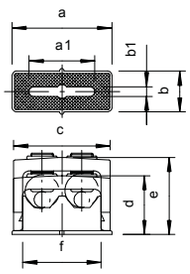
Grip ISO clip, double

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
3040 2	6 - 16	Light grey	25	1.184	**2107015**
3041 2	16 - 24	Light grey	25	1.948	**2107031**

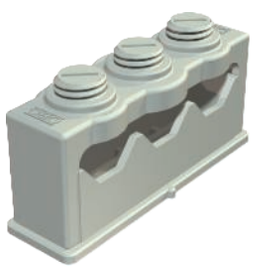
PS Polystyrene

Solid cable fastening through clamping screws, with adhesive base, slot and for screwing to M6 thread.
Use the Impu-Fix ribbon conductor quick adhesive, type 509, to stick the polystyrene clips to masonry and concrete.



Type	Clamping range D mm	Dimension a1 mm	Dimension b1 mm	Dimension a mm	Dimension b mm	Dimension c mm	Dimension d mm	Dimension e mm	Dimension f mm
3040 2	6 - 16	16	4.2	44	18	43	28	35	38
3041 2	16 - 24	46	4.5	63	22	61	37	46	55

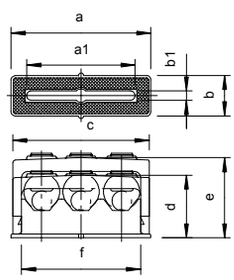
Grip ISO clip, triple



Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
3040 3	6 - 16	Light grey	25	1.508	**2109018**

PS Polystyrene

Solid cable fastening through clamping screws, with adhesive base, slot and for screwing to M6 thread.
Use the Impu-Fix ribbon conductor quick adhesive, type 509, to stick the polystyrene clips to masonry and concrete.



Type	Clamping range D mm	Dimension a1 mm	Dimension b1 mm	Dimension a mm	Dimension b mm	Dimension c mm	Dimension d mm	Dimension e mm	Dimension f mm
3040 3	6 - 16	48	4	62	18	61	31	38	55

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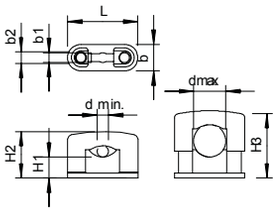
SOM clip, single

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
3079 LGR	5 - 14	Light grey	50	0.431	**2124149**
3080 LGR	6 - 17	Light grey	50	0.926	**2124173**
3081 LGR	15 - 25	Light grey	25	1.860	**2124254**
3082 LGR	22 - 34	Light grey	25	2.055	**2124343**

PS Polystyrene

With plastic screws, so corrosion-protected, with slot for fastening with wood screws or 5 mm knock-in anchors.



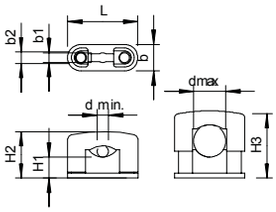
Type	Clamping range D mm	Dimension L mm	Dimension d min. mm	Dimension d max. mm	Dimension H1 mm	Dimension H2 mm	Dimension H3 mm	Dimension b mm	Dimension b1 mm	Bolt
3079 LGR	5 - 14	31	5	13	10.5	20	29	12	4.2	M5 x 14
3080 LGR	6 - 17	37	6	17	11	24.5	35.5	14	4	M6 x 18
3081 LGR	15 - 25	51	14	25	11.5	33	44	17	5	M8 x 23
3082 LGR	22 - 34	62	22	34	11	40	52	18	5.2	M8 x 23

SOM clip, hardly flammable

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
3083 LGR	32 - 45	Light grey	20	5.840	**2124459**

UF Duroplast, Aminoplast, type 131.5

With plastic screws, so corrosion-protected, with slot for fastening with wood screws or 5 mm knock-in anchors. Hardly inflammable.



Always indicate the item number when ordering.

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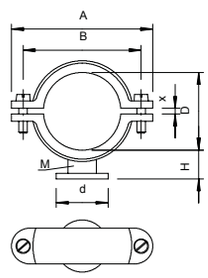
ISO base clip

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2960 11 M6 LGR	9 - 11	Light grey	50	0.549	**2130114**
2960 12 M6 LGR	12 - 13	Light grey	50	0.480	**2130122**
2960 15 M6 LGR	15 - 17	Light grey	50	0.510	**2130157**
2960 18 M6 LGR	16.5 - 18	Light grey	50	0.791	**2130181**
2960 22 M6 LGR	20.5 - 22	Light grey	50	0.951	**2130211**
2960 25 M6 LGR	22.5 - 25	Light grey	25	1.221	**2130254**
2960 28 M6 LGR	25.5 - 28	Light grey	25	1.341	**2130289**
2960 35 M6 LGR	31.5 - 35	Light grey	25	1.761	**2130351**
2960 40 M6 LGR	36.5 - 40	Light grey	20	3.017	**2130408**
2960 43 M6 LGR	40.5 - 43	Light grey	20	3.098	**2130432**
2960 47 M6 LGR	45.5 - 47	Light grey	15	4.235	**2130475**
2960 54 M6 LGR	50.5 - 54	Light grey	15	4.524	**2130548**

PS Polystyrene

Can be screwed onto M6 thread.



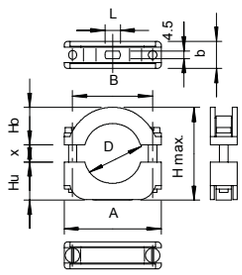
Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension x mm	Dimension H mm	Dimension d mm	Thread
2960 11 M6 LGR	9 - 11	35	25	2.2	11.6	17	M6
2960 12 M6 LGR	12 - 13	35	25	1	10	17	M6
2960 15 M6 LGR	15 - 17	38	28	0	11.5	18	M6
2960 18 M6 LGR	16.5 - 18	46	34	2	12	20	M6
2960 22 M6 LGR	20.5 - 22	50	38	2	14	21	M6
2960 25 M6 LGR	22.5 - 25	55	43	3	16	23	M6
2960 28 M6 LGR	25.5 - 28	58	46	3	17.5	24	M6
2960 35 M6 LGR	31.5 - 35	66	54	4	18.5	28	M6
2960 40 M6 LGR	36.5 - 40	80	66	4	23	34	M6
2960 43 M6 LGR	40.5 - 43	80	66	3	21	34	M6
2960 47 M6 LGR	45.5 - 47	98	82	2	22.5	36	M6
2960 54 M6 LGR	50.5 - 54	98	82	4	20	36	M6

Lightning ISO clip

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
3015 12 LGR	6 - 12	Light grey	50	1.600	**2157128**
3015 17 LGR	10 - 17	Light grey	50	1.742	**2157179**
3015 24 LGR	17 - 24	Light grey	50	2.542	**2157241**
3015 34 LGR	24 - 34	Light grey	25	3.620	**2157349**

PS Polystyrene

Lightning ISO clips: plastic clip with metal insert, therefore also suitable for heavy-duty applications; metal parts made of electrogalvanised steel.
3015 with 4.5 mm slot.
*Sizes 6–12 and 10–17 not suitable for bolt-firing device.



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension H mm	Dimension Ho mm	Dimension Hu mm	Dimension L mm	Dimension b mm	Bolt
3015 12 LGR	6 - 12	34	24	30	9.5	13.5	7.5	14	M4 x 22
3015 17 LGR	10 - 17	38	28	36.5	12	14	7.5	14	M4 x 25
3015 24 LGR	17 - 24	47.5	37	43	16	18	10	15	M4 x 30
3015 34 LGR	24 - 34	57	47	54.4	22	22	9	16	M5 x 35

Always indicate the item number when ordering.

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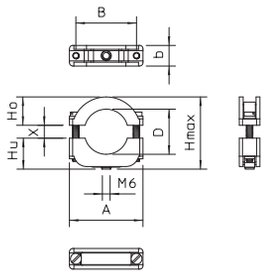
Lightning ISO clip, screw-on

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
3019 M6 LGR	6 - 12	Light grey	50	1.564	**2158124**
3020 LGR	10 - 17	Light grey	50	1.588	**2158175**
3021 LGR	17 - 24	Light grey	25	2.632	**2158248**
3022 LGR	24 - 34	Light grey	25	3.623	**2158345**

PS Polystyrene

Lightning ISO clips: plastic clip with metal insert, therefore also suitable for heavy-duty applications; metal parts made of electrogalvanised steel.
Can be screwed onto M6 thread.
*Sizes 6–12 and 10–17 not suitable for bolt-firing device.



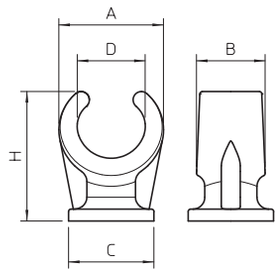
Type	Clamping range D mm	Dimension A mm	Dimension b mm	Dimension B mm	Dimension H mm	Dimension Ho mm	Dimension Hu mm	Dimension x mm	Bolt
3019 M6 LGR	6 - 12	34	14	24	32.5	9.5	13.5	6	M4 x 22
3020 LGR	10 - 17	38	14	28	36	12	14	7	M4 x 25
3021 LGR	17 - 24	47.5	15	37	44	16	18	8	M4 x 30
3022 LGR	24 - 34	57	16	47	56	22	22	10	M5 x 35

Base clamp clip, single

Type	Size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2962 6 LGR	6	Light grey	100	0.080	**2140063**
2962 8 LGR	8	Light grey	100	0.106	**2140071**
2962 10 LGR	10	Light grey	100	0.136	**2140101**
2962 12 LGR	12	Light grey	100	0.182	**2140128**
2962 15 LGR	14-15	Light grey	100	0.277	**2140152**
2962 18 LGR	16-18	Light grey	100	0.377	**2140187**
2962 22 LGR	19-22	Light grey	50	0.514	**2140233**
2962 28 LGR	25-28	Light grey	25	0.948	**2140284**
2962 35 LGR	32-35	Light grey	25	1.295	**2140357**
2962 42 LGR	40-42	Light grey	25	1.709	**2140411**

PP Polypropylene

Can be screwed onto M6 thread.



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension H mm
2962 6 LGR	6	11.5	10	13.5	17
2962 8 LGR	8	14	11	14	19
2962 10 LGR	10	16.5	12	15	20.5
2962 12 LGR	12	19	13	16	23
2962 15 LGR	14 - 15	22	14.5	18	28
2962 18 LGR	16 - 18	24.5	15.5	20	30
2962 22 LGR	19 - 22	29.2	17	22	34
2962 28 LGR	25 - 28	38.8	20	25	41
2962 35 LGR	32 - 35	47	22	29	51
2962 42 LGR	40 - 42	54	23	32	58

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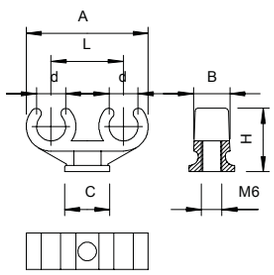
Always indicate the item number when ordering.

Base clamp clip, double

Type	Size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2962 2X10	10 + 10	Light grey	100	0.283	**2140608**
2962 2x16	15/16 + 15/16	Light grey	50	0.809	**2140683**
2962 2x22	18/22 + 18/22	Light grey	25	1.064	**2140721**

PP Polypropylene

Can be screwed onto M6 thread.



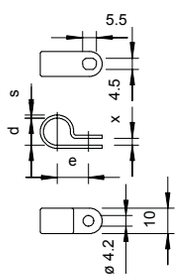
Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension L mm	Dimension H mm
2962 2X10	10	40.5	12	Ø 15	24	21
2962 2x16	15 - 16	57.5	15.5	20 x 33	33	30
2962 2x22	18 - 22	67	17	22 x 38	38	34

Fastening clip

Type	For cable Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
255 3.2 LGR	3.2	Light grey	100	0.031	**2222035**
255 5.2 LGR	5.2	Light grey	100	0.038	**2222051**
255 6.5 LGR	6.5	Light grey	100	0.045	**2222078**
255 8 LGR	8	Light grey	100	0.054	**2222086**
255 9.5 LGR	9.5	Light grey	100	0.063	**2222094**
255 11 LGR	11	Light grey	100	0.073	**2222116**
255 12.5 LGR	12.5	Light grey	100	0.078	**2222124**
255 14 LGR	14	Light grey	100	0.103	**2222140**
255 16 LGR	16	Light grey	100	0.126	**2222167**
255 17.5 LGR	17.5	Light grey	100	0.123	**2222175**

PA Polyamide

Fastening clip for secure all-round fixing of cables.



Type	For cable Ø mm	Dimension d mm	Dimension e mm	Dimension s mm	Dimension x mm
255 3.2 LGR	3.2	3	8.5	1	1.8
255 5.2 LGR	5.2	5	9.5	1	1.8
255 6.5 LGR	6.5	6.3	10	1	2.2
255 8 LGR	8	7.8	10	1.2	2.2
255 9.5 LGR	9.5	9.3	11	1.2	2.2
255 11 LGR	11	10.8	13	1.2	2.8
255 12.5 LGR	12.5	12.3	14	1.2	2.8
255 14 LGR	14	13.8	15	1.5	3.2
255 16 LGR	16	15.8	16	1.5	3.2
255 17.5 LGR	17.5	17.2	17	1.5	3.2

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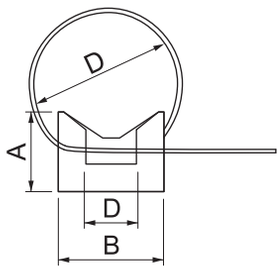
Always indicate the item number when ordering.

CTC cable tie clip

Type	Dimension mm	Max. bundle Ø mm	Minimum breaking load kN	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
CTC 7,5x180 LGR	16 - 32	32	0.36	Light grey	100	0.600	**2332790**
CTC 7,5x280 LGR	40 - 63	63	0.36	Light grey	100	0.900	**2332794**

PA Polyamide

With the cable tie clip from OBO Bettermann, you can profit from faster and more reliable fastening of cables and pipes. The internally toothed cable tie ensures a secure hold and can be adapted to up to 4 pipe sizes. The CTC cable tie clip is made of halogen-free polyamide and can thus be used easily in interiors and protected external areas.



Type	Length mm	Width mm	Height mm
CTC 7,5x180 LGR	180	7.5	1.5
CTC 7,5x280 LGR	281	7.5	1.5

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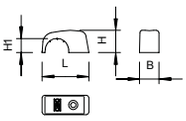
Always indicate the item number when ordering.

ISO nail clamp 4028 2-4

Type	For cable Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
4028	2 - 4	Light grey	100	0.025	**2215047**
4029	4 - 7	Light grey	100	0.028	**2215071**
4030	7 - 11	Light grey	100	0.053	**2215101**
4031 10-14	10 - 14	Light grey	100	0.104	**2215144**
4031 14-17	14 - 17	Light grey	100	0.155	**2215179**
4032	16 - 20	Light grey	100	0.214	**2215209**



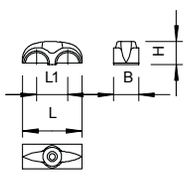
PP Polypropylene

OBO makes various fastening systems available for fastening cables securely on different substrates. Starting with the adhesive clip or ISO nail clips for fastening, e.g. on wooden beams, up to the Nail-Fix for fixing in masonry slits, OBO can offer a wide range of clips for nail fastening, suitable for steel nails 2 mm.

Dimensions

Type	For cable Ø mm	Dimension B mm	Dimension L mm	Dimension H mm	Dimension H1 mm
4028	2 - 4	7	14.5	4.5	1.5

Double ISO nail clip



Type	For cable Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
3030 2	7 - 11	Light grey	100	0.084	**2213117**

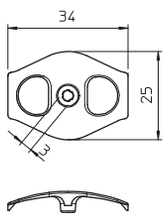
PS Polystyrene

Nail clips to fasten two cables.

Dimensions

Type	For cable Ø mm	Dimension B mm	Dimension L mm	Dimension H mm
3030 2	7 - 11	9	27	10.5

Nail-Fix, without nail

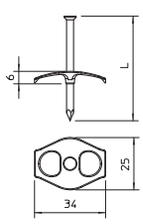


Type	For nail Ø x l mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
1996 O	3,0 - 3,5	Transparent	100	0.053	**2222809**

PP Polypropylene

Without nails for refitting Ø 3 mm and 3.5 mm steel nails to fix cables in masonry slots and on masonry for one or two cables NYM 3 x 1.5/2.5 mm² or one or two cables NYM 5 x 1.5/2.5 mm².

Nail-Fix, with nail



Type	For nail Ø x l mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
1996 40	3 x 40	Transparent	100	0.267	**2222833**
1996 50	3,5 x 50	Transparent	100	0.380	**2222841**
1996 60	3,5 x 60	Transparent	100	0.443	**2222868**
1996 70	3,5 x 70	Transparent	100	0.773	**2222876**

PP Polypropylene

With pre-mounted, galvanised steel nail Ø 3 mm or 3.5 mm to fix cables in masonry slots and on masonry for one or two cables NYM 3 x 1.5/2.5 mm² or one or two cables NYM 5 x 1.5/2.5 mm².

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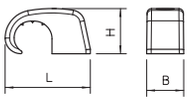
Adhesive clip 4039, no nail

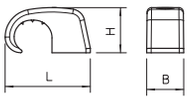


Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4039	2	4 - 7	Light grey	14.5	7.2	7.1	100	0.028	**2215306**
4039 SP	2	4 - 7	Light grey	14.5	7.2	7.1	200	0.028	**2214873**

PP Polypropylene

Adhesive clip, for clamping to the cable, suitable for steel nails 2 mm.

Adhesive clip 4040, without nail

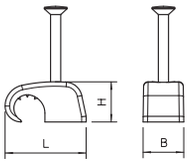


Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4040	2	7 - 12	Light grey	19.1	8.3	10.1	100	0.053	**2215314**
4040 SP	2	7 - 12	Light grey	19.1	8.3	10.1	200	0.053	**2214881**

PP Polypropylene

Adhesive clip, for clamping to the cable, suitable for steel nails 2 mm.

Adhesive clip 2026, pure white

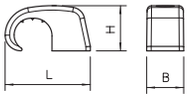


Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2026 25 RW	2,0 x 25	7 - 12	Pure white	19.1	8.3	10.1	100	0.111	**2228422**
2026 18 RW	2,0 x 18	7 - 12	Pure white	19.1	8.3	10.1	100	0.097	**2228420**

PP Polypropylene

Adhesive clip, for clamping to the cable.

Adhesive clip, without nail

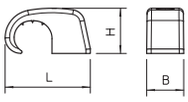


Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4041	2	10 - 14	Light grey	28	10	13.3	100	0.106	**2215349**

PP Polypropylene

Adhesive clip, for clamping to the cable, suitable for steel nails 2 mm.

Adhesive clip 4042, without nail



Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4042	2	14 - 17	Light grey	32	12	17.8	100	0.181	**2215322**

PP Polypropylene

Adhesive clip, for clamping to the cable, suitable for steel nails 2 mm.

Always indicate the item number when ordering.

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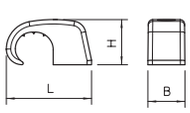
Adhesive clip 4043, without nail

Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4043	2	17 - 21	Light grey	38	12	21.6	100	0.268	**2215330**

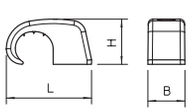


PP Polypropylene

Adhesive clip, for clamping to the cable, suitable for steel nails 2 mm.

Adhesive clip 4044, without nail

Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4044	2	21 - 25	Light grey	45	15	26.7	50	0.399	**2215357**



PP Polypropylene

Adhesive clip, for clamping to the cable, suitable for steel nails 2 mm.

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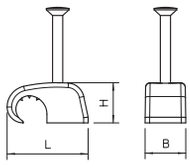
Adhesive clip 2025, light grey



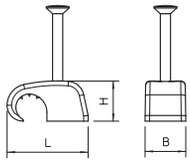
Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2025 18 LGR	2 x 18	4 - 7	Light grey	14.5	7.2	7.1	100	0.072	**2228610**
2025 25 LGR	2 x 25	4 - 7	Light grey	14.5	7.2	7.1	100	0.086	**2228629**

PP Polypropylene

Adhesive clip, for clamping to the cable.

Dimensions

Adhesive clip, pure white



Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2025 18 RW	2,0 x 18	4 - 7	Pure white	14.5	7.2	7.1	100	0.072	**2228686**
2025 25 RW	2,0 x 25	4 - 7	Pure white	14.5	7.2	7.1	100	0.086	**2228688**

PP Polypropylene

Adhesive clip, for clamping to the cable.

Dimensions

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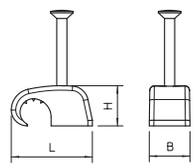
Always indicate the item number when ordering.

Adhesive clip 2026, light grey

Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2026 18 LGR	2 x 18	7 - 12	Light grey	19.1	8.3	10.1	100	0.097	**2228718**
2026 25 LGR	2 x 25	7 - 12	Light grey	19.1	8.3	10.1	100	0.110	**2228726**
2026 25 LGR SP	2 x 25	7 - 12	Light grey	19.1	8.3	10.1	200	0.111	**2228432**
2026 35 LGR	2 x 35	7 - 12	Light grey	19.1	8.3	10.1	100	0.135	**2228734**
2026 35 LGR SP	2 x 35	7 - 12	Light grey	19.1	8.3	10.1	200	0.135	**2228440**
2026 45 LGR	2 x 45	7 - 12	Light grey	19.1	8.3	10.1	100	0.156	**2228750**

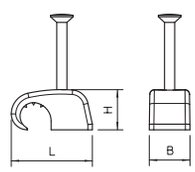


PP Polypropylene

Adhesive clip, for clamping to the cable.

Adhesive clip 2027, light grey

Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2027 25 LGR	2,0 x 25	10 - 14	Light grey	28	10	13.3	100	0.161	**2228823**
2027 30 LGR	2,0 x 30	10 - 14	Light grey	28	10	13.3	100	0.172	**2228831**
2027 40 LGR	2,0 x 40	10 - 14	Light grey	28	10	13.3	100	0.196	**2228858**

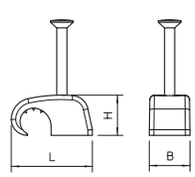


PP Polypropylene

Adhesive clip, for clamping to the cable.

Adhesive clip 2028, light grey

Type	For nail Ø x l mm	For cable Ø mm	Colour	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2028 40 LGR	2,0 x 40	14 - 17	Light grey	32	15	17.8	100	0.270	**2228904**



PP Polypropylene

Adhesive clip, for clamping to the cable.

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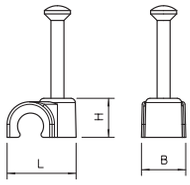
Always indicate the item number when ordering.

ISO nail clip 2007, black

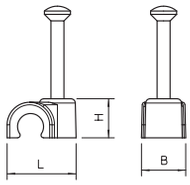


Type	For cable Ø mm	For nail Ø x l mm	Dimension L mm	Dimension B mm	Dimension H mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2007 25 SW	7	2,0x25	13.7	8	9.4	Jet black	100	0.097	**2232146**
2008 25 SW	8	2,0x25	15	8	10.6	Jet black	100	0.104	**2232170**
2009 25 SW	9	2,0x25	16.1	8	11.6	Jet black	100	0.109	**2232219**
2010 25 SW	10	2,0x25	17.7	8	12.7	Jet black	100	0.123	**2232235**
2012 35 SW	12	2,0x35	19.8	9	14.8	Jet black	100	0.169	**2232316**

PP Polypropylene

ISO nail clip, short design

ISO nail clip 2004, light grey



Type	For cable Ø mm	For nail Ø x l mm	Dimension L mm	Dimension B mm	Dimension H mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2004 18 LGR	4	2,0x18	9.6	6	6.1	Light grey	200	0.057	**2227223**
2004 25 LGR	4	2,0x25	9.6	6	6.1	Light grey	200	0.071	**2227231**
2005 18 LGR	5	2,0x18	10.8	7.1	7.1	Light grey	100	0.063	**2227347**
2005 25 LGR	5	2,0x25	10.8	7.1	7.1	Light grey	100	0.077	**2227339**
2006 25 LGR	6	2,0x25	12.5	8	8.1	Light grey	100	0.089	**2227428**
2006 35 LGR	6	2,0x35	12.5	8	8.1	Light grey	100	0.113	**2227436**
2007 25 LGR	7	2,0x25	13.7	8	9.4	Light grey	100	0.083	**2227517**
2007 35 LGR	7	2,0x35	13.7	8	9.4	Light grey	100	0.121	**2227525**
2008 25 LGR	8	2,0x25	15	8	10.6	Light grey	100	0.103	**2227614**
2008 35 LGR	8	2,0x35	15	8	10.6	Light grey	100	0.127	**2227622**
2008 45 LGR	8	2,0x45	15	8	10.6	Light grey	100	0.148	**2227630**
2009 25 LGR	9	2,0x25	16.1	8	11.6	Light grey	100	0.109	**2227711**
2009 35 LGR	9	2,0x35	16.1	8	11.6	Light grey	100	0.134	**2227738**
2009 35 LGR SP	9	2,0x35	16.1	8	11.6	Light grey	200	0.132	**2227762**
2009 45 LGR	9	2,0x45	16.1	8	11.6	Light grey	100	0.153	**2227746**
2009 45 LGR SP	9	2,0x45	16.1	8	11.6	Light grey	200	0.155	**2227797**
2010 25 LGR	10	2,0x25	17.7	8	12.7	Light grey	100	0.122	**2227800**
2010 35 LGR	10	2,0x35	17.7	8	12.7	Light grey	100	0.146	**2227819**
2010 45 LGR	10	2,0x45	17.7	8	12.7	Light grey	100	0.167	**2227827**
2011 35 LGR	11	2,0x35	19	9	14	Light grey	100	0.162	**2227916**
2011 45 LGR	11	2,0x45	19	9	14	Light grey	100	0.183	**2227924**
2012 35 LGR	12	2,0x35	19.8	9	14.8	Light grey	100	0.165	**2228025**
2012 45 LGR	12	2,0x45	19.8	9	14.8	Light grey	100	0.189	**2228033**
2014 40 LGR	14	2,0x40	24	11	18	Light grey	50	0.466	**2228114**
2014 50 LGR	14	2,0x50	24	11	18	Light grey	50	0.336	**2228122**
2016 40 LGR	16	2,0x40	26	12	20	Light grey	50	0.402	**2228211**
2016 50 LGR	16	2,0x50	26	12	20	Light grey	50	0.361	**2228238**
2018 40 LGR	18	2,0x40	28	13	22	Light grey	25	0.548	**2228300**
2018 50 LGR	18	2,0x50	28	13	22	Light grey	25	0.700	**2228319**
2020 40 LGR	20	2,0x40	31	14	24.5	Light grey	25	0.418	**2228408**
2020 50 LGR	20	2,0x50	31	14	24.5	Light grey	25	0.463	**2228416**

PP Polypropylene

ISO nail clip, short design

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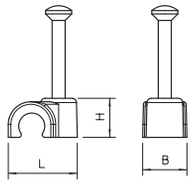
ISO nail clip 2004, white



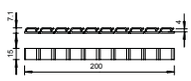
Type	For cable Ø mm	For nail Ø x l mm	Dimension L mm	Dimension B mm	Dimension H mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2004 18 RW	4	2,0x18	9.6	6	6.1	Pure white	200	0.057	**2225220**
2004 25 RW	4	2,0x25	9.6	6	6.1	Pure white	200	0.071	**2225239**
2005 18 RW	5	2,0x18	10.8	7.1	7.1	Pure white	100	0.064	**2225379**
2005 25 RW	5	2,0x28	10.8	7.1	7.1	Pure white	100	0.078	**2225344**
2006 18 RW	6	2,0x18	12.5	8	8.1	Pure white	100	0.075	**2225409**
2006 25 RW	6	2,0x25	12.5	8	8.1	Pure white	100	0.089	**2225417**
2006 35 RW	6	2,0x35	12.5	8	8.1	Pure white	100	0.113	**2225425**
2007 18 RW	7	2,0x18	13.7	8	9.4	Pure white	100	0.083	**2225506**
2007 25 RW	7	2,0x25	13.7	8	9.4	Pure white	100	0.097	**2225514**
2007 35 RW	7	2,0x35	13.7	8	9.4	Pure white	100	0.121	**2225522**
2008 25 RW	8	2,0x25	15	8	10.6	Pure white	100	0.104	**2225611**
2008 35 RW	8	2,0x35	15	8	10.6	Pure white	100	0.128	**2225638**
2009 25 RW	9	2,0x25	16.1	8	11.6	Pure white	100	0.107	**2225719**
2009 35 RW	9	2,0x35	16.1	8	11.6	Pure white	100	0.131	**2225727**
2010 25 RW	10	2,0x25	17.7	8	12.7	Pure white	100	0.123	**2225808**
2010 35 RW	10	2,0x35	17.7	8	12.7	Pure white	100	0.147	**2225816**
2011 25 RW	11	2,0x25	19	9	14	Pure white	100	0.138	**2225905**
2011 35 RW	11	2,0x35	19	9	14	Pure white	100	0.162	**2225913**
2012 25 RW	12	2,0x25	19.8	9	14.8	Pure white	100	0.145	**2226014**
2012 35 RW	12	2,0x35	19.8	9	14.8	Pure white	100	0.169	**2226022**
2014 30 RW	14	2,0x30	24	11	18	Pure white	50	0.432	**2226103**
2014 40 RW	14	2,0x40	24	11	18	Pure white	50	0.303	**2226111**
2016 40 RW	16	2,0x40	26	12	20	Pure white	50	0.320	**2226219**
2018 40 RW	18	2,0x40	28	13	22	Pure white	25	0.548	**2226308**
2020 40 RW	20	2,0x40	31	14	24.5	Pure white	25	0.419	**2226405**

PP Polypropylene

ISO nail clip, short design

Cable clip

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
507	Light grey	100	1.200	**2327104**



PS Polystyrene

Self-adhesive

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Cable/pipe fastening systems, metal

Quick Clip, aluminium 301

Cable tidy 303

Pressure clip 305

Cable and pipe spacer clip 307

Fastening clip 315

Strain relief clip 327

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Be on the safe side.

OBO's metal clip range for pipe and cable fastening offers users a wide range of fastening and routing options. Users are completely free in the design of their systems. The metal clips from OBO Bettermann are impressively sturdy and are available in a very wide range of materials and finishes.

Corrosive environments present little problem, for example, for clips made from A4 quality stainless steel. In addition, many products are approved for installations tested for the maintenance of electrical functionality, so fulfil very tough requirements regarding stability, service life and, above all, resistance to fire loads.

The metal clips protect cables optimally during both installation and subsequent operation.

- Unique product range
- Wide range of application options
- Diverse materials from aluminium to steel and stainless steel
- Products tested for maintenance of electrical function

Always indicate the item number when ordering.

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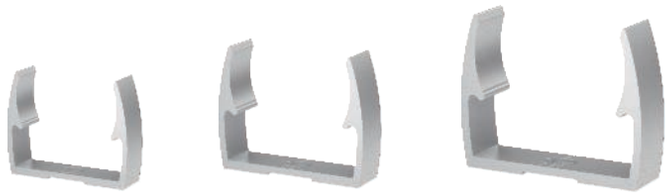
Quick clip, aluminium

- Modern design
- High holding forces



Grip M cable tidy

- Practical handling
- Tested for maintenance of electrical function
- Wall and ceiling mounting

Pressure clip

- Tested for maintenance of electrical function
- Retroinstallation possible

Cable and pipe spacer clip

- Sturdy
- Can be used individually
- Tested for maintenance of electrical function

Cable and pipe spacer clip

- Sturdy
- Can be used individually
- Tested for maintenance of electrical function

Fastening clip, light-duty, single-lobe

- Light-duty version
- Wide variety of sizes

Fastening clip, medium-duty, single-lobe

- Medium-duty version
- Wide variety of sizes

Always indicate the item number when ordering.

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Fastening clip, heavy-duty, single-lobe

- Heavy-duty design
- Wide variety of sizes

Fastening clip, medium-duty, double-lobe

- Medium-duty version
- Wide variety of sizes

Fastening clip, heavy-duty, double-lobe

- Heavy-duty design
- Wide variety of sizes

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Quick clip, aluminium

- Strong clip holding forces thanks to optimised geometry
- Centre mark around slot for easy alignment
- Pipe centring aids for easy insertion of the pipe
- Modern, attractive design

The perfect match for the aluminium pipe range

OBO's aluminium Quick clip offers installers a high-quality means of fastening electrical installation pipes. The ingenious design of this product allows fast, easy installation on walls and ceilings. The clip boasts impressively high holding forces.

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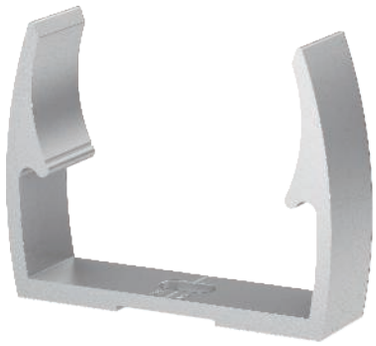
Always indicate the item number when ordering.

Quick clip, aluminium

Type	Nominal size	Pack. pcs	Weight kg/100 pcs.	Item No.
ALQ M16	16	100	0.780	**2149916**
ALQ M20	20	100	0.900	**2149920**
ALQ M25	25	100	1.110	**2149925**
ALQ M32	32	50	1.600	**2149932**
ALQ M40	40	50	2.400	**2149940**
ALQ M50	50	25	2.730	**2149950**
ALQ M63	63	20	3.340	**2149963**

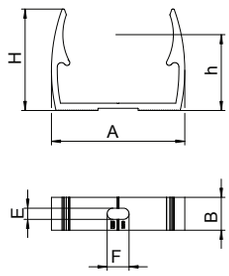
Alu Aluminium

OBO Quick clip, type ALQ M, for all metric ALU pipe systems, as well as light-duty and heavy-duty insulation pipes. Suitable for mounting the OBO pipe system, material: aluminium. Pipe centring aids allow optimal attachment of the pipe and automatically turn the clip into the correct position. Slot for side alignment during mounting with wood screw or knock-in anchor. Recommended fastening spacing 50–60 cm.



Dimensions

Type	Dimension A mm	Dimension B mm	Dimension E mm	Dimension F mm	Dimension H mm	Dimension h mm
ALQ M16	22	18	5.1	9.5	25	18.5
ALQ M20	25	18	5.1	9.5	27.5	20
ALQ M25	31	18	5.1	9.5	30	22
ALQ M32	39	18	5.1	9.5	35	26
ALQ M40	50	18	6.1	12	42	30.5
ALQ M50	60	18	6.1	12	46.5	33.5
ALQ M63	73	18	6.1	12	55.5	41.5



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Always indicate the item number when ordering.

Grip cable tidy, metal

- Ingenious design means both wall and ceiling mounting are possible
- Easy cable insertion
- Extremely sturdy click-in connector means retroinstalling cables is no problem
- UL-tested quality
- Also available in stainless steel qualities A2 and A4
- Tested for the maintenance of electrical functionality
- Halogen and fire load-free

E30 E90

GRIP M 30

The movable closing strap means that the Grip cable tidy can be opened and closed again and again with just the application of light pressure. This means that you can remove a cable easily and at any time from fixed wall and ceiling installations, or also install a new cable at a later date.

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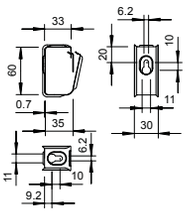
Always indicate the item number when ordering.

GRIP "M" 15



E30 E90

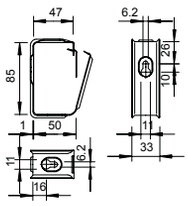
Type	No. of conductors NYM 3 x 1.5	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 M 15 FS	15	50	50	3.700	**2207028**
2031 M 15 A2	15	50	50	3.000	**2207080**
2031 M 15 A4	15	50	50	3.000	**2207132**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FS Strip-galvanised

Metal cable tidy for high mechanical stability, even in case of fire. Suitable for safe mounting above fire protection ceilings. Also approved as a cable-specific variant for the maintenance of electrical function to DIN 4102 part 12. For wall and ceiling mounting. Lock can be opened without tools. Detailed information on the approved routing variants can be found in the appropriate testing documentation.

GRIP "M" 30



E30 E90

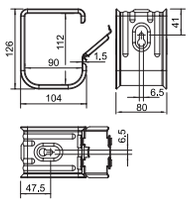
Type	No. of conductors NYM 3 x 1.5	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 M 30 FS	30	25	25	6.200	**2207036**
2031 M 30 A2	30	25	25	6.500	**2207088**
2031 M 30 A4	30	25	25	6.500	**2207140**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FS Strip-galvanised

Metal cable tidy for high mechanical stability, even in case of fire. Suitable for safe mounting above fire protection ceilings. Also approved as a cable-specific variant for the maintenance of electrical function to DIN 4102 part 12. For wall and ceiling mounting. Lock can be opened without tools. Detailed information on the approved routing variants can be found in the appropriate testing documentation.

GRIP "M" 70



E30 E90

Type	No. of conductors NYM 3 x 1.5	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 M 70 FS	70	10	10	34.500	**2207060**
2031 M 70 A2	70	10	10	37.000	**2207112**
2031 M 70 A4	70	10	10	37.000	**2207164**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FS Strip-galvanised

Metal cable tidy for high mechanical stability, even in case of fire. Suitable for safe mounting above fire protection ceilings. Also approved as a cable-specific variant for the maintenance of electrical function to DIN 4102 part 12. For wall and ceiling mounting. Lock can be opened without tools. Detailed information on the approved routing variants can be found in the appropriate testing documentation.

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Always indicate the item number when ordering.

Metal pressure clip

- Easy ceiling installation, tested for the maintenance of electrical functionality
- Simple retroinstallation of cables
- 3 sizes to fit either 8, 10 or 16 cables (NYM 3x1.5 mm²)
- Halogen and fire load-free

Tested to DIN 4102

E30 E90

The German fire protection regulations governing public areas have been tightened once again, and now no plastic products can be used when installing cables above suspended fire protection ceilings in emergency and escape routes. Thanks to OBO, you are fully equipped to accommodate this change without needing to make any major adjustments. That is because we now offer our proven pressure clips in metal, too – in the sizes 2033 M (2 x 8 NYM cables 3 x 1.5 mm²) and 2034 M (2 x 5 NYM cables 3 x 1.5 mm²). Both of these pressure clips comply with the latest fire protection standard for this installation location. The mechanical load capacity in case of fire was successfully confirmed by a test to DIN 4102. The new metal pressure clip series is absolutely the state of the art – as you will have come to expect from OBO, the leading manufacturer of fastening products.

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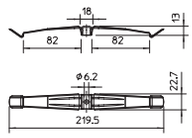
Always indicate the item number when ordering.

Pressure clip for 16 cables

E30

Type	No. of conductors NYM 3 x 1.5	Pack. pcs	Weight kg/100 pcs.	Item No.
2033 M A2	16	25	2.310	**2204000**



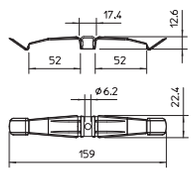
V2A Stainless steel, A2

The metal pressure clip is halogen- and fire load-free, and maintains a good mechanical stability even in fires. The pressure clip is also approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. In pressure clips with larger cross-sections, the spacer 2033 D 15 x 3 G (must be ordered separately) increases the clamping height from 10 to 13 mm. The pressure clips are suitable for fireproof mounting above suspended fire protection ceilings in accordance with DIN 4102.

Pressure clip for 10 cables

E30

Type	No. of conductors NYM 3 x 1.5	Pack. pcs	Weight kg/100 pcs.	Item No.
2034 M A2	10	50	1.860	**2204010**

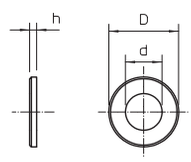


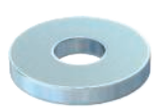
V2A Stainless steel, A2

The metal pressure clip is halogen- and fire load-free, and maintains a good mechanical stability even in fires. The pressure clip is also approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. In pressure clips with larger cross-sections, the spacer 2033 D 15 x 3 G (must be ordered separately) increases the clamping height from 10 to 13 mm. The pressure clips are suitable for fireproof mounting above suspended fire protection ceilings in accordance with DIN 4102.

Spacer

Type	Dimension D mm	Dimension d mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2033 D 15x3 G	15	6.4	3	50	0.340	**2205097**





St Steel

G Electrogalvanised

To increase the clamping height of pressure clips from 10 to 13 mm for large cable cross-sections.

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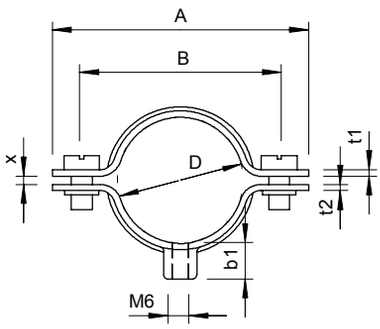
Cable and pipe spacer clip 732 with M6 threaded connection

- Safe fastening of cables and pipe systems on walls, on floors and on ceilings
- The distance from the fastening substrate can be adjusted variably using the thread on the screw or a custom-length threaded rod
- M6 bolt ties, angler anchors or Sprint screws (to be ordered separately) are required for fastening
- Tested and approved in systems for maintaining electrical functionality of classes E30 to E90 according to DIN 4102 Part 12

E30 **E90**

With M6 thread



D	A	P	x	b1	t1	t2	M
mm	mm	mm	mm	mm	mm	mm	
5–6	35	23	1	8	1	1.25	M5 x 10
7–8	34	22	1	8	1	1.25	M5 x 10
9–10	36	24	1	8	1	1.25	M5 x 12
10.5–12	38	26	1.5	8	1	1.25	M5 x 12
12.5–14	40	28	1.5	8	1	1.25	M5 x 12
13.5–15	41	29	1.5	8	1	1.25	M5 x 12
14.5–16	42	30	1.5	8	1	1.25	M5 x 12
16.5–18	44	22	1	8	1	1.25	M5 x 12
18.5–20	46	34	1.5	8	1	1.25	M5 x 12
20–22	48	36	2	8	1	1.25	M5 x 12
22–24	50	38	2	8	1	1.25	M5 x 12
24–26	52	40	2	8	1	1.25	M5 x 12

D	A	P	x	b1	t1	t2	M
mm	mm	mm	mm	mm	mm	mm	
26–28	59	45	2	8.5	1.5	1.5	M5 x 12
28–30	61	47	2	8.5	1.5	1.5	M5 x 12
31–33	64	50	2	8.5	1.5	1.5	M5 x 12
33–35	66	52	2	8.5	1.5	1.5	M5 x 12
36–38	69	55	2	8.5	1.5	1.5	M5 x 12
38–40	71	57	2	8.5	1.5	1.5	M5 x 12
40–42	73	59	2	8.5	1.5	1.5	M5 x 12
43–45	76	62	2	8.5	1.5	1.5	M5 x 12
46–48	79	65	2	8.5	1.5	1.5	M5 x 12
48–50	81	67	2	8.5	1.5	1.5	M5 x 14
58–60	91	77	2	8.5	1.5	1.5	M5 x 14
61–63	94	80	2	9.2	1.5	1.5	M5 x 14

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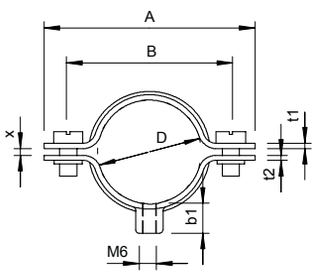
Always indicate the item number when ordering.

Cable and pipe spacer clip 732 with threaded connection

E30 E90

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
732 6 GTP	5 - 6	100	1.160	**1360051**
732 8 GTP	7 - 8	100	1.310	**1360086**
732 10 GTP	9 - 10	100	1.360	**1360108**
732 12 GTP	10.5 - 12	100	1.460	**1360124**
732 14 GTP	12.5 - 14	100	1.480	**1360140**
732 15 GTP	13.5 - 15	100	1.530	**1360159**
732 16 GTP	14.5 - 16	100	1.590	**1360167**
732 18 GTP	16.5 - 18	100	1.620	**1360183**
732 20 GTP	18.5 - 20	50	1.730	**1360205**
732 22 GTP	20 - 22	50	1.780	**1360221**
732 24 GTP	22 - 24	50	1.840	**1360248**
732 26 GTP	24 - 26	50	1.920	**1360264**
732 28 GTP	26 - 28	50	2.840	**1360280**
732 30 GTP	28 - 30	50	3.040	**1360302**
732 33 GTP	31 - 33	25	3.120	**1360337**
732 35 GTP	33 - 35	25	3.280	**1360353**
732 38 GTP	36 - 38	25	3.490	**1360388**
732 40 GTP	38 - 40	25	3.600	**1360396**
732 42 GTP	40 - 42	25	3.840	**1360426**
732 45 GTP	43 - 45	25	3.990	**1360450**
732 48 GTP	46 - 48	25	4.040	**1360485**
732 50 GTP	48 - 50	25	4.160	**1360507**
732 60 GTP	58 - 60	25	4.960	**1360604**
732 63 GTP	61 - 63	25	5.000	**1360639**

Dimensions



St Steel

GTP Electrogalvanised, transparently passivated

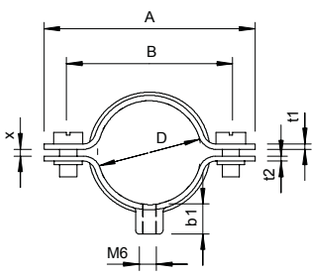
Mounting with screw-in spacer clips. Spacer clips and screw-in spacer clips are available in various materials: in V2A stainless steel, in electrogalvanised, hot-dip galvanised steel or in aluminium. Fastening can take place with bolt ties or angler anchors and Sprint screws. Depending on the design, the clips can be "shot" using a bolt-firing tool or nail device.

Cable and pipe spacer clip 732 with threaded connection V4A

E30 E90

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
732 6 A4	5 - 6	100	1.364	**1360644**
732 8 A4	7 - 8	100	1.376	**1360646**
732 10 A4	9 - 10	100	1.467	**1360648**
732 12 A4	10.5 - 12	100	1.622	**1360650**
732 14 A4	12.5 - 14	100	1.710	**1360652**
732 15 A4	13.5 - 15	100	1.791	**1360654**
732 16 A4	14.5 - 16	100	1.845	**1360656**
732 18 A4	16.5 - 18	100	1.889	**1360658**
732 20 A4	18.5 - 20	50	1.960	**1360660**
732 22 A4	20 - 22	50	1.999	**1360662**
732 24 A4	22 - 24	50	2.062	**1360664**
732 26 A4	24 - 26	50	2.083	**1360666**
732 28 A4	26 - 28	50	2.923	**1360668**
732 30 A4	28 - 30	50	3.047	**1360670**
732 33 A4	31 - 33	25	3.186	**1360672**
732 38 A4	36 - 38	25	3.453	**1360676**
732 40 A4	38 - 40	25	3.554	**1360678**
732 42 A4	40 - 42	25	3.650	**1360680**
732 45 A4	43 - 45	25	3.810	**1360682**
732 48 A4	46 - 48	25	3.972	**1360684**
732 50 A4	48 - 50	25	4.045	**1360686**
732 60 A4	58 - 60	25	4.582	**1360688**
732 63 A4	61 - 63	25	4.712	**1360690**

Dimensions



V4A Stainless steel, A4

Mounting with screw-in spacer clips. Spacer clips and screw-in spacer clips are available in various materials: in V2A stainless steel, in electrogalvanised, hot-dip galvanised steel or in aluminium. Fastening can be take place with bolt ties or Angler anchors and Sprint screws. Depending on the design, the clips can be "shot" using a bolt-firing tool or nail device.

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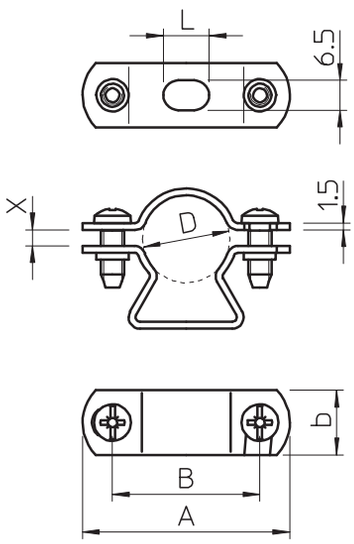
Always indicate the item number when ordering.

Cable and pipe spacer clip 733

- Closed cable and pipe spacer clip 733 with slot
- Safe fastening of cables and pipe systems on walls, on floors and on ceilings
- Tested and approved in systems for maintaining electrical functionality of classes E30 to E90 according to DIN 4102 Part 12

E30 **E90**

With slot



D	A	B	L	b	x
mm	mm	mm	mm	mm	mm
11 - 13	39	26	10	14	2,5
14 - 16	43	30	10	14	3
17 - 19	45	32	10	14	3,5
19-21	50	37	10	14	2
21- 23	52	39	10	14	2,5
24 - 29	58	42	10	16	7
30 - 38	70	54	10	16	10
39 - 48	80	64	14	16	12,5
48 - 54	86	68	14	18	7,5
53 - 61	96	78	14	18	10
63	101	83	18	16	3

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Always indicate the item number when ordering.

Cable and pipe spacer clip 733

E30 E90

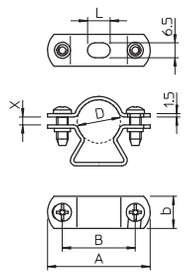
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
733 13 G	11 - 13	50	2.310	**1361139**
733 16 G	14 - 16	50	2.430	**1361163**
733 19 G	17 - 19	50	2.500	**1361198**
733 21 G	19 - 21	50	2.730	**1361201**
733 23 G	21 - 23	50	2.870	**1361236**
733 29 G	24 - 29	50	3.480	**1361295**
733 38 G	30 - 38	25	4.040	**1361384**
733 48 G	39 - 48	25	4.810	**1361481**
733 54 G	48 - 54	25	5.800	**1361511**
733 61 G	53 - 61	20	6.370	**1361619**
733 63 G	63	20	6.940	**1361635**

St Steel

G Electrogalvanised

* Size M16 is not suitable for nail device
* Sizes M16 - PG16 are not suitable for bolt-firing tool

Dimensions



Cable and pipe spacer clip 733

E30 E90

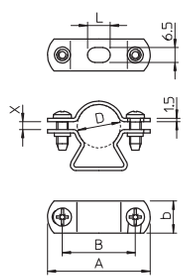
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
733 13 FT	11 - 13	50	2.310	**1361091**
733 16 FT	14 - 16	50	2.430	**1361094**
733 19 FT	17 - 19	50	2.500	**1361097**
733 21 FT	19 - 21	50	2.730	**1361100**
733 23 FT	21 - 23	50	2.870	**1361103**
733 29 FT	24 - 29	50	3.480	**1361106**
733 38 FT	30 - 38	25	4.040	**1361109**
733 48 FT	39 - 48	25	4.810	**1361112**
733 54 FT	48 - 54	25	5.400	**1361117**
733 61 FT	53 - 61	20	6.100	**1361115**
733 63 FT	63	20	7.250	**1361118**

St Steel

FT Hot-dip galvanised

* Size M16 is not suitable for nail device.
* Sizes M16 to PG16 not suitable for bolt-firing tool.

Dimensions



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Always indicate the item number when ordering.

Cable and pipe spacer clip 733 V2A

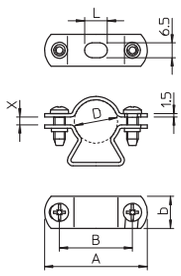
E30 E90

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
733 16 A2	14 - 16	50	2.430	**1362011**
733 19 A2	17 - 19	50	2.800	**1362038**
733 21 A2	19 - 21	50	2.740	**1362046**
733 23 A2	21 - 23	50	2.800	**1362054**
733 29 A2	24 - 29	50	3.475	**1362062**
733 38 A2	30 - 38	25	4.500	**1362070**
733 48 A2	39 - 48	25	5.200	**1362089**
733 54 A2	48 - 54	25	5.800	**1362097**
733 61 A2	53 - 61	20	6.800	**1362100**
733 63 A2	63	20	6.940	**1362127**

V2A Stainless steel, A2

* Size M16 is not suitable for nail device
* Sizes M16 - PG16 are not suitable for bolt-firing tool

Dimensions



Cable and pipe spacer clip 733 V4A

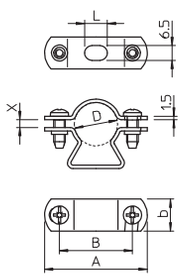
E30 E90

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
733 13 A4	11 - 13	50	2.310	**1361643**
733 16 A4	14 - 16	50	2.430	**1361647**
733 19 A4	17 - 19	50	2.500	**1361651**
733 21 A4	19 - 21	50	2.730	**1361655**
733 23 A4	21 - 23	50	2.710	**1361659**
733 29 A4	24 - 29	50	3.420	**1361663**
733 38 A4	30 - 38	25	4.040	**1361667**
733 48 A4	39 - 48	25	4.810	**1361671**
733 54 A4	48 - 54	25	5.800	**1361675**
733 61 A4	53 - 61	20	6.370	**1361679**
733 63 A4	63	20	6.940	**1361683**

V4A Stainless steel, A4

* Size M16 is not suitable for nail device.
* Sizes M16 to PG16 not suitable for bolt-firing tool.

Dimensions



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Always indicate the item number when ordering.

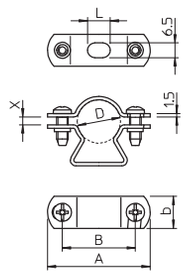
Cable and pipe spacer clip 733 aluminium

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
733 16 ALU	14 - 16	50	0.980	**1362526**
733 19 ALU	17 - 19	50	1.020	**1362534**
733 21 ALU	19 - 21	50	1.100	**1362542**
733 29 ALU	24 - 29	50	1.390	**1362569**
733 38 ALU	30 - 38	25	1.620	**1362577**
733 48 ALU	39 - 48	25	1.950	**1362585**
733 54 ALU	48 - 54	25	2.320	**1362593**
733 63 ALU	63	20	2.990	**1362615**

Alu Aluminium

* Size M16 is not suitable for nail device.
* Sizes M16 to PG16 not suitable for bolt-firing tool.

Dimensions



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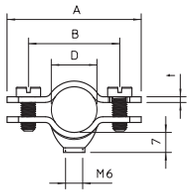
Always indicate the item number when ordering.

Screw-in spacer clip



Type	Clamping range D mm	Bolt	Pack. pcs	Weight kg/100 pcs.	Item No.
731 W 12 G	8 - 12	M5 x 12	50	2.470	**1366122**
731 W 16 G	12 - 16	M5 x 12	50	2.816	**1366165**
731 W 20 G	16 - 20	M5 x 14	50	3.124	**1366203**
731 W 25 G	20 - 25	M5 x 14	50	3.480	**1366254**
731 W 30 G	25 - 30	M5 x 14	25	4.060	**1366300**
731 W 35 G	30 - 35	M5 x 18	25	4.344	**1366351**

St Steel

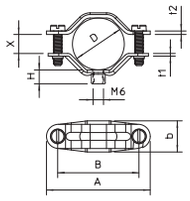
G Electrogalvanised

With M6 thread.

Dimensions

D mm	A mm	B mm	t mm
8–12	43	28	2
12–16	47	32	2
16–20	51	36	2
20–25	58	43	2
25–30	64	49	2
30–35	65	50	18

Screw-in spacer clip, universal



Type	Clamping range D mm	Bolt	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2070 M6 G	12 - 20	M5 x 14	500	50	2.300	**1380028**
2071 M6 G	20 - 30	M5 x 20	600	50	3.310	**1380222**
2072 M6 G	30 - 44	M5 x 22	300	25	5.990	**1380427**
2073 M6 G	44 - 60	M6 x 25	240	20	9.660	**1380729**

St Steel

G Electrogalvanised

With M6 thread.
Universal clip with large tensioning area.

Dimensions

D mm	A mm	B mm	b mm	t1 mm	t2 mm	H mm	x mm	M
12–20	48	35	14	1.5	1.5	9	9	M5 x 14
20–30	60	47	14	1.5	2	7.5	11	M5 x 20
30–44	79	64	16	2	2	8	15	M5 x 22
44–60	102	86	18	2	2	8	18	M6 x 25

Always indicate the item number when ordering.

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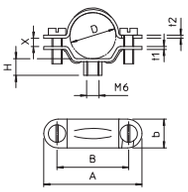
Screw-in spacer clip, universal

Type	Clamping range D mm	Size	Bolt	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2900 M6 13-16 G	13.5 - 16	M16	M5 x 14	500	50	2.280	**1383094**
2900 M6 16-19 G	16.5 - 19	Pg 11	M5 x 14	500	50	2.320	**1383116**
2900 M6 18-21 G	18 - 21	M20	M5 x 14	500	50	2.340	**1383132**
2900 M6 19-23 G	19 - 23	Pg 16	M5 x 14	500	50	2.400	**1383167**
2900 M6 24-29 G	24 - 29	M25	M5 x 14	400	50	3.320	**1383213**
2900 M6 33-38 G	33 - 38	Pg 29	M5 x 14	250	25	5.830	**1383310**
2900 M6 30-34 G	30 - 34	M32	M5 x 14	50	50	4.950	**1383299**
2900 M6 39-42 G	39 - 42	M40	M5 x 16	300	25	5.490	**1383418**
2900 M6 43-48 G	43 - 48	Pg 36	M5 x 14	240	20	6.330	**1383361**
2900 M6 49-55 G	49 - 55	M50	M6 x 15	240	20	9.300	**1383426**
2900 M6 54-60 G	54 - 60	Pg 48	M6 x 15	240	20	8.970	**1383485**
2900 M6 61-64 G	61 - 64	M63	M6 x 16	240	20	8.090	**1383507**



St Steel

G Electrogalvanised

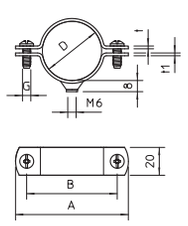
With M6 thread.

Dimensions

G	D mm	A mm	B mm	b mm	t1 mm	t2 mm	H mm	x mm	M
M16	13.5–16	48	35	14	1.5	1.5	9	2.2	M5 x 14
Pg 11	16.5–19	48	35	14	1.5	1.5	9	2.6	M5 x 14
M20	18–21	48	35	14	1.5	1.5	9	2.9	M5 x 14
Pg 16	19–23	48	35	14	1.5	1.5	9	4	M5 x 14
M25	24–29	60	47	14	1.5	2	7.5	4.6	M5 x 14
M32	30–34	68	54	16	2	2	8	5	M5 x 14
Pg 29	33–38	79	64	16	2	2	8	5	M5 x 14
M40	39–42	79	64	16	2	2	8	5	M5 x 16
Pg 36	43–48	79	64	16	2	2	8	5	M5 x 14
M50	49–55	102	86	18	2	2	8	5.5	M6 x 15
Pg 48	54–60	102	86	18	2	2	8	6.3	M6 x 15
M63	61–64	106.5	90.5	18	2	2	6.5	6	M6 x 16

Screw-in spacer clip, heavy-duty version M6

Type	Clamping range D mm	Size	For pipe Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2900WM6 13.5 FT	12.5 - 13.5	1/4"	—	25	2.860	**1385003**
2900WM6 17 FT	16 - 17	3/8"	M16	25	4.912	**1385011**
2900WM6 21.5 FT	19 - 21.5	1/2"	M20	25	5.104	**1385038**
2900WM6 27 FT	24.5 - 27	3/4"	M25	25	5.600	**1385054**
2900WM6 33.5 FT	30.5 - 33.5	1"	M32	25	6.144	**1385062**
2900WM6 42.5 FT	39.5 - 42.5	1 1/4"	M40	25	7.644	**1385089**
2900WM6 48.5 FT	45.5 - 48.5	1 1/2"	M50	25	8.872	**1385119**
2900WM6 54 FT	51 - 54	1 3/4"	—	20	10.400	**1385127**
2900WM6 60 FT	56 - 60	2"	M63	15	11.720	**1385135**



St Steel

FT Hot-dip galvanised

Can be screwed onto M6 thread. Size 27 FT is suitable for M25. Size 42.5 FT is suitable for M40. Size 48.5 FT is suitable for M50. Size 60 FT is suitable for M63.

Dimensions

D mm	A mm	B mm	t mm	t1 mm	x mm	G
12.5–13.5	48	32	2	2	1	M6 x 16
16.0–17.0	52	36	2	2	1	M6 x 16
19.0–21.5	56	40	2	2	2.5	M6 x 16
24.5–27.0	62	46	2	2	2.5	M6 x 16
30.5–33.5	70	54	2	2	3	M6 x 16
39.5–42.5	83	67	2	2	3	M6 x 18
45.5–48.5	88	72	2	2.5	3	M6 x 18
51.0–54.0	96	80	2.5	2.5	3	M6 x 18
56.0–60.0	105	89	2.5	2.5	4	M6 x 18

Always indicate the item number when ordering.

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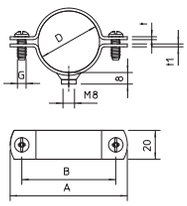
Screw-in spacer clip, heavy-duty version M8



Type	Clamping range D mm	Size	For pipe Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2900WM8 17 FT	16 - 17	3/8"	M16	25	5.040	**1387014**
2900WM8 21.5 FT	19 - 21.5	1/2"	M20	25	5.768	**1387030**
2900WM8 27 FT	24.5 - 27	3/4"	M25	25	6.144	**1387057**
2900WM8 33.5 FT	30.5 - 33.5	1"	M32	25	6.864	**1387065**
2900WM8 42.5 FT	39.5 - 42.5	1 1/4"	M40	25	9.000	**1387081**
2900WM8 48.5 FT	45.5 - 48.5	1 1/2"	M50	25	9.284	**1387111**
2900WM8 60 FT	56 - 60	2"	M63	15	11.346	**1387138**
2900WM8 75.5 FT	71.5 - 75.5	2 1/2"	—	50	21.000	**1387154**
2900WM8 88 FT	83 - 88	3"	—	50	23.800	**1387170**

St Steel

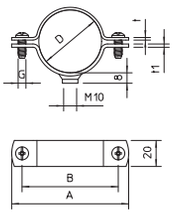
FT Hot-dip galvanised

Can be screwed onto M8 thread. Size 27 FT is suitable for M25. Size 42.5 FT is suitable for M40. Size 48.5 FT is suitable for M50. Size 60 FT is suitable for M63.

Dimensions

D mm	A mm	B mm	t mm	t1 mm	x mm	M
16.0–17.0	52	36	2	2.5	1	M6 x 16
19.0–21.5	56	40	2	2.5	2.5	M6 x 16
24.5–27.0	62	46	2	2.5	2.5	M6 x 16
30.5–33.5	70	54	2	2.5	3	M6 x 16
39.5–42.5	81	65	2	2.5	3	M6 x 18
45.5–48.5	88	72	2	2.5	3	M6 x 18
56.0–60.0	105	89	2.5	2.5	4	M6 x 18
71.5–75.5	125	105	3	3	4	M6 x 20
83.0–88.0	138	118	3	3	5	M6 x 20

Screw-in spacer clip, heavy-duty version M10



Type	Clamping range D mm	Size	For pipe Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2900WM10 21.5 FT	19 - 21.5	1/2"	M20	25	5.768	**1388037**
2900WM10 27 FT	24.5 - 27	3/4"	M25	25	6.144	**1388053**
2900WM10 33.5 FT	30.5 - 33.5	1"	M32	25	6.864	**1388061**
2900WM10 48.5 FT	45.5 - 48.5	1 1/2"	M50	25	9.284	**1388118**
2900WM10 60 FT	56 - 60	2"	M63	15	11.346	**1388134**

St Steel

FT Hot-dip galvanised

Can be screwed onto M10 thread. Size 27 FT is suitable for M25. Size 48.5 FT is suitable for M50. Size 60 FT is suitable for M63.

Dimensions

D mm	A mm	B mm	t mm	t1 mm	x mm	G
19.0–21.5	56	40	2	2.5	2.5	M6 x 16
24.5–27.0	62	46	2	2.5	2.5	M6 x 16
30.5–33.5	70	54	2	2.5	3	M6 x 16
45.5–48.5	88	72	2	2.5	3	M6 x 18
56.0–60.0	105	89	2.5	2.5	4	M6 x 18

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Always indicate the item number when ordering.

Fastening clip 604, light-duty

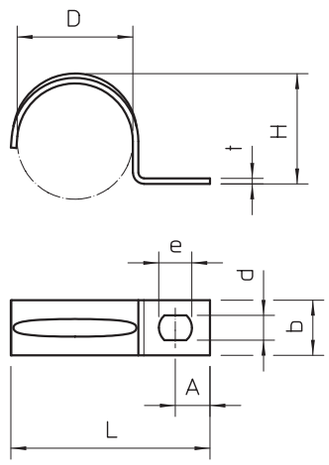
Type	For Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
604 3 G	3	4,5 x 6	0.7	100	0.052	**1003038**
604 4 G	4	4,5 x 6	0.7	100	0.067	**1003046**
604 5 G	5	4,5 x 6	0.7	100	0.084	**1003054**
604 6 G	6	4,5 x 6	0.7	100	0.099	**1003062**
604 7 G	7	4,5 x 6	0.7	100	0.120	**1003070**
604 8 G	8	4,5 x 6	0.7	100	0.123	**1003089**
604 9 G	9	4,5 x 6	0.7	100	0.139	**1003097**
604 10 G	10	4,5 x 6	0.7	100	0.150	**1003100**
604 11 G	11	4,5 x 6	1	100	0.270	**1003119**
604 12 G	12	4,5 x 6	0.7	100	0.240	**1003127**
604 13 G	13	4,5 x 6	1	100	0.280	**1003135**
604 16 G	16	4,5 x 6	1	100	0.348	**1003178**
604 19 G	19	4,5 x 6	1	100	0.411	**1003194**
604 20 G	20	4,5 x 6	1	100	0.431	**1003208**
604 21 G	21	4,5 x 6	1	100	0.447	**1003216**
604 23 G	23	4,5 x 6	1	100	0.490	**1003232**
604 25 G	25	4,5 x 6	1	100	0.900	**1003259**
604 28 G	28	4,5 x 6	1	100	0.874	**1003283**
604 32 G	32	4,5 x 6	1	100	1.462	**1003321**
604 35 G	35	5,5 x 7	1.5	100	1.355	**1003356**
604 37 G	37	5,5 x 7	1.5	100	1.567	**1003372**
604 40 G	40	5,5 x 7	1.5	100	1.860	**1003402**
604 47 G	47	5,5 x 7	1.5	50	2.484	**1003461**

St Steel

G Electrogalvanised

Single-lobe fastening clip for cables and pipes.
* Sizes 3 and 4 are not suitable for nail device
* Sizes 3 to 21 are not suitable for bolt-firing tool

Dimensions



D mm	L mm	H mm	b mm	t mm	d mm	e mm	A mm
3	12	2.4	7	0.7	4.5	6	4
4	14	3.3	7	0.7	4.5	6	4
5	16.5	4.5	7	0.7	4.5	6	5
6	17.5	5.2	8	0.7	4.5	6	5
7	19.5	6.5	8	0.7	4.5	6	5
8	21	7	8	0.7	4.5	6	5.5
9	21.5	8	8	0.7	4.5	6	5.75
10	22	9	8	0.7	4.5	6	5
11	24	10	10	1	4.5	6	5.5
12	27	11	10	0.7	4.5	6	6.5
13	27	11.5	10	1	4.5	6	6
16	31	14.5	10	1	4.5	6	6.5
19	33	17	10	1	4.5	6	6.5
20	35	18	10	1	4.5	6	6.3
21	36	19	10	1	4.5	6	6.3
23	39	21.5	10	1	4.5	6	7
25	41.3	23	15	1	4.5	6	7
28	45	24.8	15	1	4.5	6	7
32	48.8	30	15	1.5	5.5	7	8
35	54	30	14	1.5	5.5	7	8.75
37	56	34	14	1.5	5.5	7	7.5
40	63	38	14	1.5	5.5	7	10.5
47	69	43.8	14	1.5	5.5	7	10

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Always indicate the item number when ordering.

Fastening clip 1015, medium-duty

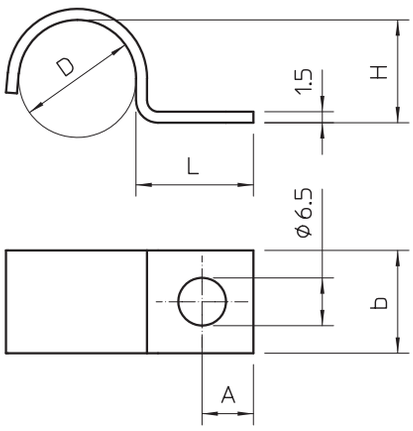
Type	For Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
1015 5 G	5	6,5	1.5	100	0.325	**1009028**
1015 6 G	6	6,5	1.5	100	0.385	**1009036**
1015 7 G	7	6,5	1.5	100	0.418	**1009044**
1015 8 G	8	6,5	1.5	100	0.428	**1009052**
1015 9 G	9	6,5	1.5	100	0.468	**1009060**
1015 10 G	10	6,5	1.5	100	0.560	**1009079**
1015 11 G	11	6,5	1.5	100	0.632	**1009087**
1015 12 G	12	6,5	1.5	100	0.672	**1009109**
1015 13 G	13	6,5	1.5	100	0.683	**1009117**
1015 14 G	14	6,5	1.5	100	0.710	**1009168**
1015 15 G	15	6,5	1.5	100	0.744	**1009184**
1015 16 G	16	6,5	1.5	100	0.753	**1009192**
1015 17 G	17	6,5	1.5	100	0.764	**1009206**
1015 18 G	18	6,5	1.5	100	0.835	**1009214**
1015 20 G	20	6,5	1.5	100	0.921	**1009230**
1015 25 G	25	6,5	1.5	100	1.150	**1009427**
1015 28 G	28	6,5	1.5	100	1.250	**1009362**

St Steel

G Electrogalvanised

Single-lobe fastening clip for cables and pipes with

Dimensions



D mm	L mm	H mm	b mm	A mm
5	16	4	12	7
6	16	5	12	7
7	16	6	12	7
8	16	7	12	7
9	16	8	12	7
10	16	9	12	7
11	16	10	14	7
12	16	11	14	7
13	16	12	14	7
14	16	12.5	14	7
15	16	13.5	14	7
16	16	14	14	7
17	16	15	14	7
18	16	16	14	7

Always indicate the item number when ordering.

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Fastening clip 822, heavy-duty

Type	For Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
822 6 FT	6	6,5 x 10	2	100	0.885	**1014005**
822 10 FT	10	6,5 x 10	2	100	1.075	**1014013**
822 12 FT	12	6,5 x 10	2	100	1.450	**1014021**
822 14 FT	14	6,5 x 10	2	100	1.600	**1014048**
822 16 FT	15,2	6,5 x 10	2	100	1.733	**1014099**
822 18 FT	18.6	6,5 x 10	2	100	1.946	**1014110**
822 20 FT	20	6,5 x 10	2	100	2.125	**1014137**
822 22.5 FT	22.5	6,5 x 10	2	50	2.338	**1014161**
822 25 FT	25	6,5 x 10	2	50	2.400	**1014501**
822 28.3 FT	28.3	6,5 x 10	2	50	4.420	**1014218**
822 32 FT	32	6,5 x 10	2	100	5.490	**1014528**
822 37 FT	37	6,5 x 10	2	100	7.100	**1014293**
822 40 FT	40	6,5 x 10	2	100	6.590	**1014536**
822 47 FT	47	6,5 x 10	3	100	8.500	**1014366**
822 50 FT	50	6,5 x 10	3	100	7.690	**1014544**
822 63 FT	63	6,5 x 10	3	100	9.260	**1014552**

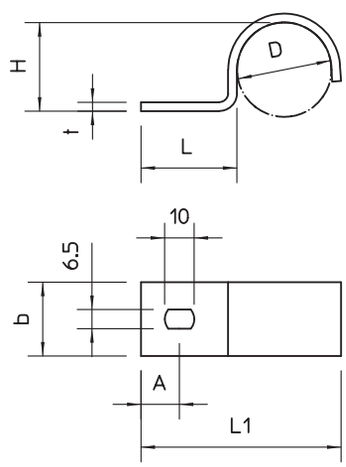
St Steel

FT Hot-dip galvanised

Single-lobe fastening clip for cables and pipes.

Dimensions

D mm	L mm	L1 mm	H mm	b mm	t mm	A mm
6	23.5	32	5	20	2	10
10	23.5	36	9	20	2	10
12	23.5	38.5	11	20	2	10
14	23.5	40.5	13	20	2	10
15.2	23.5	42	14	20	2	10
18.6	23.5	45	17	20	2	10
20	23.5	48	19.5	20	2	10
22.5	23.5	49	21	20	2	11
25	25.5	53	23.5	20	2	11
28.3	27	60	26.5	20	3	11
32	32.5	68	30	25	3	13
37	30	70	35	25	3	13
40	32.5	76	38	25	3	13
47	30	81	45	25	3	13
50	32.5	86	47	25	3	15
63	33.5	100	60	25	3	15



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Always indicate the item number when ordering.

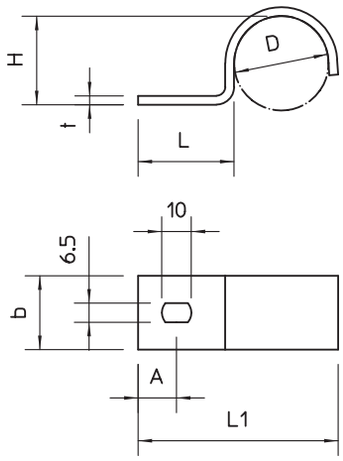
Fastening clip 822, heavy-duty, V4A

Type	For Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
822 6 A4	6	6,5 x 10	2	100	0.885	**1013861**
822 10 A4	10	6,5 x 10	2	100	1.075	**1013865**
822 12 A4	12	6,5 x 10	2	100	1.450	**1013869**
822 14 A4	14	6,5 x 10	2	100	1.600	**1013873**
822 16 A4	15,2	6,5 x 10	2	100	1.733	**1013877**
822 18 A4	18.6	6,5 x 10	2	100	1.946	**1013881**
822 20 A4	20	6,5 x 10	2	100	2.125	**1013885**
822 22.5 A4	22.5	6,5 x 10	2	50	2.338	**1013889**
822 25 A4	25	6,5 x 10	2	50	2.400	**1013893**
822 32 A4	32	6,5 x 10	2	100	5.490	**1013903**
822 40 A4	40	6,5 x 10	2	100	6.590	**1013911**
822 50 A4	50	6,5 x 10	3	100	7.690	**1013921**
822 63 A4	63	6,5 x 10	3	100	9.260	**1013925**

V4A Stainless steel, A4

Single-lobe fastening clip for cables and pipes.

Dimensions



D mm	L mm	L1 mm	H mm	b mm	t mm	A mm
6	23.5	32	5	20	2	10
10	23.5	36	9	20	2	10
12	23.5	38.5	11	20	2	10
14	23.5	40.5	13	20	2	10
15.2	23.5	42	14	20	2	10
18.6	23.5	45	17	20	2	10
20	23.5	48	19.5	20	2	10
22.5	23.5	49	21	20	2	11
25	25.5	53	23.5	20	2	11
32	32.5	68	30	25	3	13
40	32.5	76	38	25	3	13
50	32.5	86	47	25	3	15
63	33.5	100	60	25	3	15

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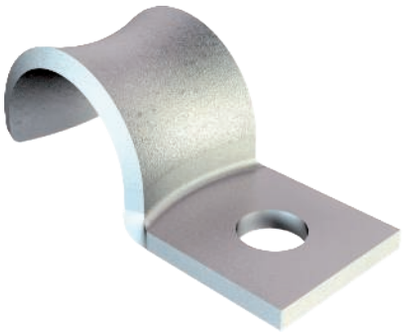
Always indicate the item number when ordering.

Fastening clip, plant standard 7855, single-lobe



Type	For Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
WN 7855 A 2	2	3,2	0.8	100	0.039	**1043013**
WN 7855 A 2.5	2.5	3,2	0.8	100	0.041	**1043021**
WN 7855 A 4	4	3,2	1	100	0.062	**1043064**
WN 7855 A 4.5	4.5	3,2	1	100	0.079	**1043072**
WN 7855 A 5	5	3,2	1	100	0.090	**1043080**
WN 7855 A 6	6	3,2	1	100	0.097	**1043102**
WN 7855 A 7	7	3,2	1	100	0.120	**1043129**
WN 7855 A 8	8	3,2	1	100	0.159	**1043145**
WN 7855 A 9	9	3,2	1.5	100	0.168	**1043161**
WN 7855 A 10	10	3,2	1.5	100	0.170	**1043196**
WN 7855 A 12	12	4,3	1.5	100	0.530	**1043226**
WN 7855 A 14	14	4,3	1.5	100	0.579	**1043242**

St Steel

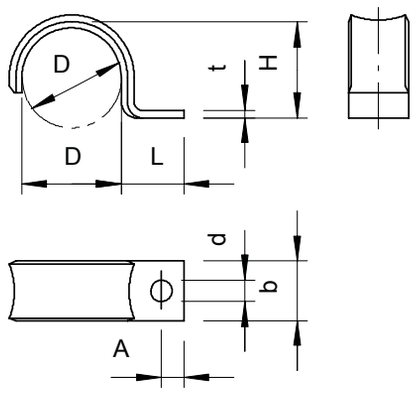
GTP Electrogalvanised, transparently passivated

Dimensions to Siemens standard SN 78550, shape A, with strongly rounded edges, thus particularly suitable for sensitive cables.

* Sizes 2 to 10 not suitable for bolt-firing tool and nail device.

Dimensions

D mm	L mm	H mm	b mm	t mm	d mm	A mm
2	8.5	1.5	6	0.8	3.2	3
2.5	5.25	2	6	0.8	3.2	3
4	7.5	3.5	6	0.8	3.2	3
4.5	8.25	4	6	1	3.2	3
5	8	4.5	6	1	3.2	3
6	7.5	5.5	6	1	3.2	3
7	10	6	8	1	3.2	4
8	9.5	7	8	1	3.2	4
9	9	8	8	1	3.2	4
10	8.5	9	8	1	3.2	4
12	13.5	10	12	1.5	4.3	4.5
14	12.5	12	12	1.5	4.3	4.5



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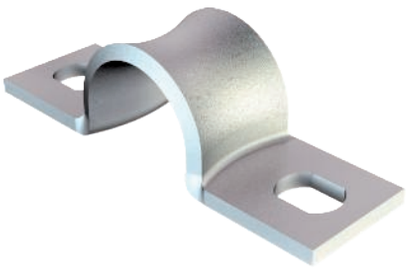
Always indicate the item number when ordering.

Fastening clip, plant standard 7855, double-lobe



Type	For Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
WN 7855 B 3	3	3,2 x 4	0.8	100	0.080	**1044044**
WN 7855 B 4	4	3,2 x 4	0.8	100	0.082	**1044060**
WN 7855 B 4.5	4.5	3,2 x 4	1	100	0.097	**1044079**
WN 7855 B 5	5	3,2 x 4	1	100	0.118	**1044087**
WN 7855 B 6	6	3,2 x 4	1	100	0.128	**1044109**
WN 7855 B 7	7	3,2 x 4	1	100	0.200	**1044125**
WN 7855 B 8	8	3,2 x 4	1	100	0.218	**1044141**
WN 7855 B 9	9	3,2 x 4	1.5	100	0.222	**1044176**
WN 7855 B 10	10	3,2 x 4	1.5	100	0.223	**1044192**
WN 7855 B 12	12	4,3 x 5	1.5	100	0.675	**1044214**
WN 7855 B 14	14	4,3 x 5	1.5	100	0.733	**1044230**
WN 7855 B 16	16	4,3 x 5	1.5	100	0.742	**1044257**

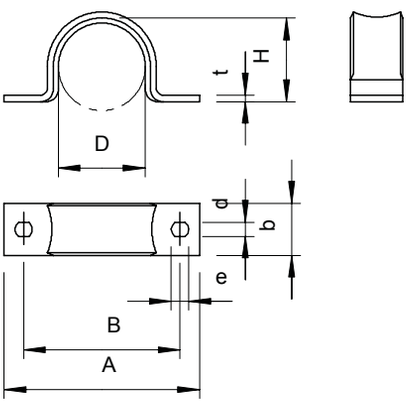
St Steel

GTP Electrogalvanised, transparently passivated

Dimensions to Siemens standard SN 78550, shape B, with strongly rounded edges, thus particularly suitable for sensitive cables.

* Sizes 3 to 10 not suitable for nail device.

Dimensions



D mm	A mm	B mm	H mm	b mm	t mm	d mm	e mm
3	21	14	2.5	6	0.8	3.2	4
4	21	14	3.5	6	1	3.2	4
4.5	24	16	4	6	1	3.2	4
5	24	16	4.5	6	1	3.2	4
6	24	16	5.5	6	1	3.2	4
7	28	20	6	8	1	3.2	4
8	28	20	7	8	1	3.2	4
9	28	20	8	8	1	3.2	4
10	28	20	9	8	1	3.2	4
12	39	30	10	12	1.5	4.3	5
14	39	30	12	12	1.5	4.3	5
16	39	30	14	12	1.5	4.3	5

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Always indicate the item number when ordering.

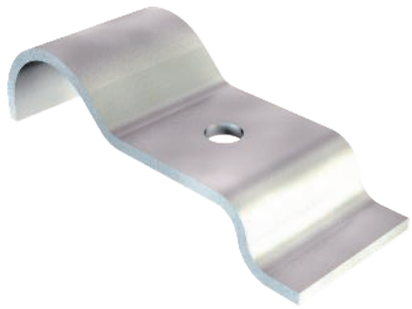
Heavy-duty cable clip

Type	For cable Ø mm	Hole size mm	Material thickness mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
1594 22 G	22	6	2	Stone grey	100	3.300	**1310925**

St Steel

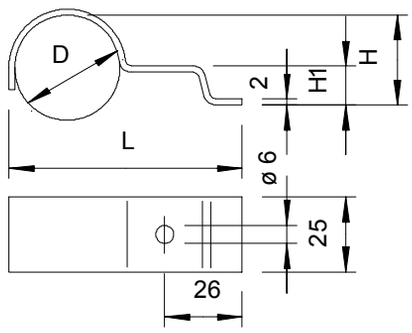
G Electrogalvanised

For earthing cable fastening to house connection boxes.
Levanisit coated.



Dimensions

D mm	L mm	H mm	H1 mm
22	65	18	11



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Always indicate the item number when ordering.

Fastening clip 605, medium-duty

Type	For Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
605 7 G	7	4,5 x 6	1	100	0.183	**1018078**
605 8 G	8	4,5 x 6	1	100	0.203	**1018086**
605 9 G	9	4,5 x 6	1	100	0.246	**1018094**
605 10 G	10	4,5 x 6	1	100	0.432	**1018108**
605 11 G	11	4,5 x 6	1	100	0.462	**1018116**
605 12 G	12	4,5 x 6	1	100	0.485	**1018124**
605 13 G	13	4,5 x 6	1	100	0.532	**1018132**
605 14 G	14	4,5 x 6	1	100	0.560	**1018140**
605 15 G	15	4,5 x 6	1	100	0.584	**1018159**
605 16 G	16	4,5 x 6	1	100	0.585	**1018167**
605 17 G	17	4,5 x 6	1	100	0.604	**1018175**
605 18 G	18	4,5 x 6	1	100	0.640	**1018183**
605 19 G	19	4,5 x 6	1	100	0.671	**1018191**
605 20 G	20	4,5 x 6	1	100	0.664	**1018205**
605 21 G	21	4,5 x 6	1	100	0.678	**1018213**
605 23 G	23	4,5 x 6	1	100	0.826	**1018221**
605 25 G	25	4,5 x 6	1	100	0.960	**1018256**
605 26 G	26	4,5 x 6	1	100	0.975	**1018264**
605 28 G	28	4,5 x 6	1	100	1.067	**1018280**
605 30 G	30	4,5 x 6	1	100	1.150	**1018302**
605 32 G	32	4,5 x 6	1	100	1.260	**1018337**
605 35 G	35	5,5 x 7	1.5	100	1.921	**1018353**
605 37 G	37	5,5 x 7	1.5	100	2.007	**1018361**

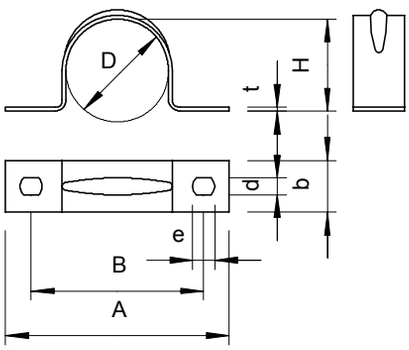
St Steel

G Electrogalvanised

Two lobe fastening clips for cables and pipes.

* Sizes 7 to 12 not suitable for bolt-firing tool.

Dimensions



D mm	A mm	B mm	H mm	b mm	t mm	d mm	e mm
7	32	21	6	10	1	4.5	6
8	33	22	7	10	1	4.5	6
9	34	23	8	10	1	4.5	6
10	37	25	9	12	1	4.5	6
11	38	26	10	12	1	4.5	6
12	39	27	11	12	1	4.5	6
13	41	29	12	12	1	4.5	6
14	42	30	13	12	1	4.5	6
15	43	31	13.5	12	1	4.5	6
16	44	32	14.5	12	1	4.5	6
17	45	33	15.5	12	1	4.5	6
18	46	34	16.5	12	1	4.5	5
19	47	35	17.5	12	1	4.5	6
20	49	37	18.5	12	1	4.5	6
21	50	38	19.5	12	1	4.5	6
23	52	40	21	12	1	4.5	6
25	58	44	23	14	1	4.5	6
26	59	45	24	14	1	4.5	6
28	61	47	26	14	1	4.5	6
30	63	49	28	14	1	4.5	6
33	66	52	30	14	1	4.5	6
35	70	56	32	14	1.5	5.5	7
37	72	58	34	14	1.5	5.5	7

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Always indicate the item number when ordering.

Fastening clip 605, medium-duty

Type	For Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
605 40 G	40	5,5 x 7	1.5	50	1.900	**1018396**
605 43 G	43	5,5 x 7	1.5	50	2.324	**1018434**
605 47 G	47	5,5 x 7	1.5	50	2.366	**1018477**
605 50 G	50	5,5 x 7	1.5	25	2.770	**1018507**
605 55 G	55	5,5 x 7	1.5	25	3.840	**1018558**
605 60 G	60	5,5 x 7	1.5	25	3.800	**1018604**
605 63 G	63	5,5 x 7	1.5	25	3.670	**1018639**

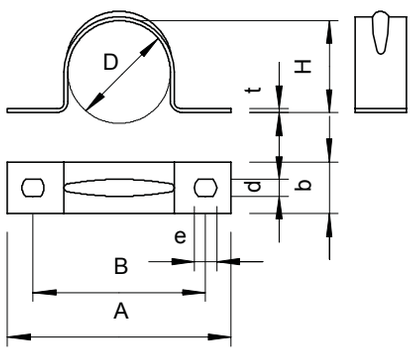
St Steel

G Electrogalvanised

Two lobe fastening clips for cables and pipes.
* Sizes 7 to 12 not suitable for bolt-firing tool.

Dimensions

D mm	A mm	B mm	H mm	b mm	t mm	d mm	e mm
40	75	61	37	14	1.5	5.5	7
43	78	64	40	14	1.5	5.5	7
47	82	68	44	14	1.5	5.5	7
50	88	74	46	16	1.5	5.5	7
55	94	78	51	16	1.5	5.5	7
60	99	83	56	16	1.5	5.5	7
63	112	98	59	16	1.5	5.5	7



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Always indicate the item number when ordering.

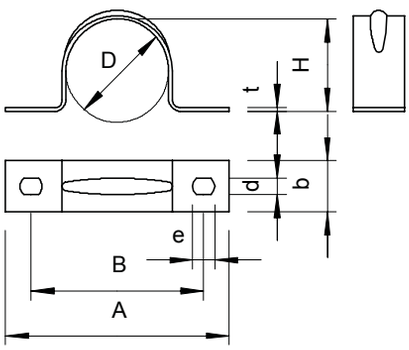
Fastening clip 605, medium-duty

Type	For Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
605 16 ALU	16	4,5 x 6	1	100	0.218	**1017799**
605 20 ALU	20	4,5 x 6	1	100	0.228	**1017837**
605 25 ALU	25	4,5 x 6	1	100	0.330	**1017861**
605 32 ALU	32	4,5 x 6	1	100	0.433	**1017926**
605 40 ALU	40	5,5 x 7	1	50	0.650	**1017950**
605 50 ALU	50	5,5 x 7	1.5	25	0.952	**1017980**
605 63 ALU	63	5,5 x 7	1.5	25	1.260	**1017997**

Alu Aluminium

Two lobe fastening clips for cables and pipes.

Dimensions



D mm	A mm	B mm	H mm	b mm	t mm	d mm	e mm
16	44	32	14.5	12	1	4.5	6
20	49	37	18.5	12	1	4.5	6
25	58	44	23	14	1	4.5	6
32	95	71	29	25	1	4.5	6
40	75	61	37	14	1.5	5.5	7
50	110	86	46	25	1.5	5.5	7
63	120	96	59	25	1.5	5.5	7

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Always indicate the item number when ordering.

Fastening clip 605, medium-duty, V4A

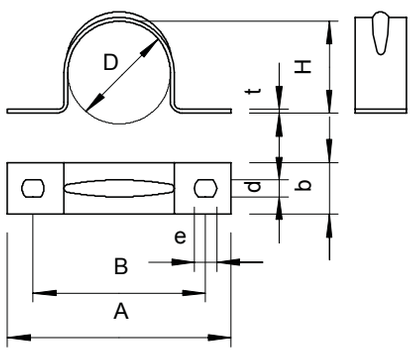
Type	For Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
605 12 A4	12	4,5 x 6	1	100	0.485	**1018653**
605 16 A4	16	4,5 x 6	1	100	0.585	**1018661**
605 20 A4	20	4,5 x 6	1	100	0.664	**1018669**
605 25 A4	25	4,5 x 6	1	100	0.992	**1018679**
605 32 A4	32	4,5 x 6	1	100	1.260	**1018693**
605 40 A4	40	5,5 x 7	1.5	50	1.900	**1018705**
605 50 A4	50	5,5 x 7	1.5	25	2.770	**1018717**
605 63 A4	63	5,5 x 7	1.5	25	3.670	**1018729**

V4A Stainless steel, A4

Two lobe fastening clips for cables and pipes.

Dimensions

D mm	A mm	B mm	H mm	b mm	t mm	d mm	e mm
12	39	27	11	12	1	4.5	6
16	44	32	14.5	12	1	4.5	6
20	49	37	18.5	12	1	4.5	6
25	58	44	23	14	1	4.5	6
32	66	52	30	14	1	4.5	6
40	75	61	37	14	1.5	5.5	7
50	88	74	46	16	1.5	5.5	7
63	112	98	59	16	1.5	5.5	7



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Always indicate the item number when ordering.

Fastening clip 823, heavy-duty

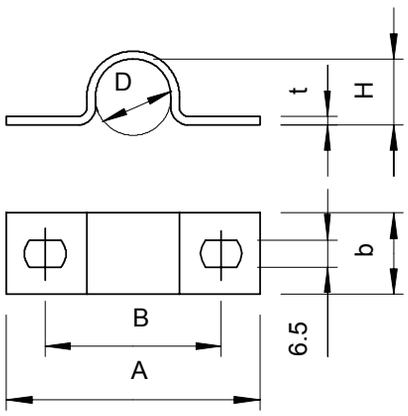
Type	For Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
823 16 FT	16	6,5 x 10	2	50	2.260	**1015095**
823 18.3 FT	18.6	6,5 x 10	2	50	2.446	**1015117**
823 20 FT	20	6,5 x 10	2	50	2.662	**1015133**
823 22.5 FT	22.5	6,5 x 10	2	50	2.988	**1015168**
823 25 FT	25	6,5 x 10	3	25	6.770	**1015494**
823 28.3 FT	28.3	6,5 x 10	3	25	5.208	**1015214**
823 32 FT	32	6,5 x 10	3	100	7.469	**1015496**
823 37 FT	37	6,5 x 10	3	100	8.700	**1015303**
823 40 FT	40	6,5 x 10	3	100	8.460	**1015498**
823 47 FT	47	6,5 x 10	3	100	10.120	**1015362**
823 54 FT	54	6,5 x 10	3	100	10.760	**1015427**
823 59.3 FT	59.3	6,5 x 10	3	100	11.800	**1015486**
823 50 FT	50	6,5 x 10	3	100	9.050	**1015500**
823 63 FT	63	6,5 x 10	3	100	10.700	**1015508**

St Steel

FT Hot-dip galvanised

Two lobe fastening clips for cables and pipes.

Dimensions



D mm	A mm	B mm	H mm	b mm	t mm	e mm
15.2	59	40	13	20	2	10
18.6	62	43	16	20	2	10
20.4	64	45	18	20	2	10
22.5	67	48	20	20	2	10
25	79	60	23.5	25	3	10
28.3	75	56	25.5	20	3	10
32	95	71	29	25	3	10
37	93	69	34	25	3	10
40	100	76	36	25	3	10
47	103	79	43	25	3	10
54	110	86	50	25	3	10
59.3	116	92	55	25	3	10
50	110	86	46	25	3	10
63	120	96	59	25	3	10

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Always indicate the item number when ordering.

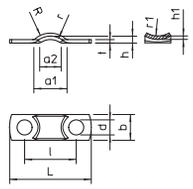
Strain relief clip 7901

Type	For cable Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
7901 5 G	5	3,5	0.8	100	0.063	**1435019**
7901 6.5 G	6.5	3,2	1	100	0.115	**1435027**

St Steel

G Electrogalvanised

Fastening clip for strain relief of cables.



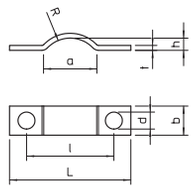
Strain relief clip 7902

Type	For cable Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
7902 6 G	6.5	3,5	1	100	0.096	**1436015**
7902 8 G	8	4	1	100	0.159	**1436023**

St Steel

G Electrogalvanised

Fastening clip for strain relief of cables.



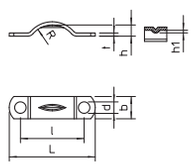
Strain relief clip 7903

Type	For cable Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
7903 6 G	6	2,5	0.5	100	0.105	**1437003**
7903 8 G	8	3,6	0.8	100	0.130	**1437011**
7903 9 G	9	4,5	1	100	0.274	**1437038**

St Steel

G Electrogalvanised

Fastening clip for strain relief of cables.



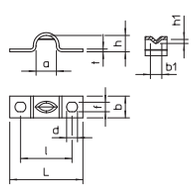
Strain relief clip 7904

Type	For cable Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
7904 6 G	6	3,5x4	1	100	0.185	**1438018**

St Steel

G Electrogalvanised

Fastening clip for strain relief of cables.



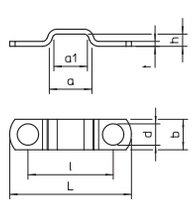
Strain relief clip 7905

Type	For cable Ø mm	Hole size mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
7905 5 G	5	3,5	0.8	100	0.054	**1439014**

St Steel

G Electrogalvanised

Fastening clip for strain relief of cables.



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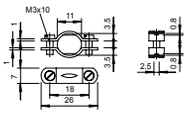
Always indicate the item number when ordering.

Strain relief clip 7908



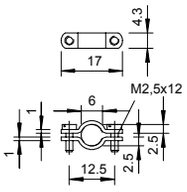
Type	For cable Ø mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
7908 11 G	11	1	100	0.433	**1442015**

St Steel

G Electrogalvanised

Fastening clip for strain relief of cables.

Strain relief clip 7909



Type	For cable Ø mm	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
7909 6 G	6	1	100	0.198	**1443011**

St Steel

G Electrogalvanised

Fastening clip for strain relief of cables.

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Cable routing and mounting systems

Cable tie 334

Tightening strap 336

Slotted steel strap 340

Ribbon conductor bonding agent 341

Tensioning wire 342

Installation strip 346

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Jack of all trades

Bundling cables

Suspend and secure

Mounting and fastening

Always indicate the item number when ordering.

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Cable tie

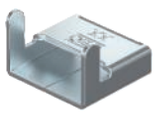
- Large variety
- UV-resistant

Ribbon clips

- UV-resistant
- Single and double lock
- Stainless steel version

Tightening straps

- High load capacity
- Coils and fixed lengths
- Special tool available

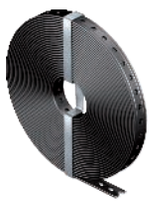


Tensioning wire

- High loading capacity
- Diverse range

Installation strip

- Wide range of application options
- Convenient packaging
- Various materials



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Cable tie, white

Type	Dimension B mm	Dimension L mm	Dimension t mm	Tensile strength N	Max. bundle Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
565 2.5x75 WS	2.5	75	1	80	15	White	100	0.020	**2331800**
565 2.5x100 WS	2.5	100	1	80	22	White	100	0.025	**2331810**
565 2.5x150 WS	2.5	150	1.3	80	39	White	100	0.047	**2331816**
565 2.5x200 WS	2.5	200	1.3	80	55	White	100	0.062	**2331822**
565 3.6x150 WS	3.6	150	1.4	180	36	White	100	0.070	**2331830**
565 3.6x200 WS	3.6	200	1.4	180	52	White	100	0.104	**2331836**
565 3.6x290 WS	3.6	290	1.4	180	82	White	100	0.140	**2331842**
565 3.6x365 WS	3.6	365	1.4	180	105	White	100	0.183	**2331848**
565 4.8x120 WS	4.8	120	1.5	220	27	White	100	0.089	**2331860**
565 4.8x160 WS	4.8	160	1.6	220	39	White	100	0.120	**2331866**
565 4.8x200 WS	4.8	200	1.6	220	52	White	100	0.149	**2331872**
565 4.8x300 WS	4.8	300	1.5	220	83	White	100	0.201	**2331878**
565 4.8x365 WS	4.8	365	1.5	220	105	White	100	0.251	**2331884**
565 4.8x430 WS	4.8	430	1.5	220	125	White	100	0.288	**2331890**
565 7.6x200 WS	7.6	200	1.8	530	52	White	100	0.287	**2331910**
565 7.6x300 WS	7.6	300	1.6	530	80	White	100	0.334	**2331916**
565 7.6x380 WS	7.6	380	1.8	530	105	White	100	0.533	**2331922**
565 7.6x450 WS	7.6	450	2	530	128	White	100	0.717	**2331934**
565 9x760 WS	9	760	2	800	227	White	100	1.311	**2331944**

PA Polyamide

Cable ties are used for quick, uncomplicated fixing or bundling of cables and pipes to cable support systems or other mounting structures.

Cable tie, black, UV and weather-resistant

UV RESISTANT

Type	Dimension B mm	Dimension L mm	Dimension t mm	Tensile strength N	Max. bundle Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
565 2.5x75 SWUV	2.5	75	1	80	15	Black	100	0.020	**2331802**
565 2.5x100 SWUV	2.5	100	1	80	22	Black	100	0.025	**2331812**
565 2.5x150 SWUV	2.5	150	1.3	80	39	Black	100	0.047	**2331818**
565 2.5x200 SWUV	2.5	200	1.3	80	55	Black	100	0.062	**2331824**
565 3.6x150 SWUV	3.6	150	1.4	180	36	Black	100	0.070	**2331832**
565 3.6x200 SWUV	3.6	200	1.4	180	52	Black	100	0.104	**2331838**
565 3.6x290 SWUV	3.6	290	1.4	180	82	Black	100	0.140	**2331844**
565 3.6x365 SWUV	3.6	365	1.4	180	105	Black	100	0.183	**2331850**
565 4.8x120 SWUV	4.8	120	1.5	220	27	Black	100	0.089	**2331862**
565 4.8x160 SWUV	4.8	160	1.6	220	39	Black	100	0.120	**2331868**
565 4.8x200 SWUV	4.8	200	1.6	220	52	Black	100	0.149	**2331874**
565 4.8x300 SWUV	4.8	300	1.5	220	83	Black	100	0.201	**2331880**
565 4.8x365 SWUV	4.8	365	1.5	220	105	Black	100	0.251	**2331886**
565 4.8x430 SWUV	4.8	430	1.5	220	125	Black	100	0.288	**2331892**
565 7.6x200 SWUV	7.6	200	1.8	530	52	Black	100	0.287	**2331912**
565 7.6x300 SWUV	7.6	300	1.6	530	80	Black	100	0.334	**2331918**
565 7.6x380 SWUV	7.6	380	1.8	530	105	Black	100	0.533	**2331924**
565 7.6x450 SWUV	7.6	450	2	530	128	Black	100	0.717	**2331936**
565 9x760 SWUV	9	760	2	800	227	Black	100	1.311	**2331946**

PA Polyamide

Cable ties are used for quick, uncomplicated fixing or bundling of cables and pipes to cable support systems or other mounting structures.

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Always indicate the item number when ordering.

Metal strip clips, narrow

Type	Length mm	Width mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MBS 015	150	7	100	0.230	**7203100**
MBS 030	300	7	100	0.399	**7203102**
MBS 045	450	7	50	0.602	**7203104**
MBS 061	610	7	50	0.806	**7203106**

V2A Stainless steel, grade 304

Metal strip clip in ladder form with single lock. For high-temperature and weatherproof fixing.

Metal strip clips, wide

Type	Length mm	Width mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MBS 075	750	12	25	2.300	**7203108**
MBS 100	1000	12	25	3.000	**7203110**
MBS 120	1200	12	25	3.600	**7203112**
MBS 150	1500	12	25	4.400	**7203114**

V2A Stainless steel, grade 304

Metal strip clip in ladder form with single lock. For high-temperature and weatherproof fixing.

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Always indicate the item number when ordering.

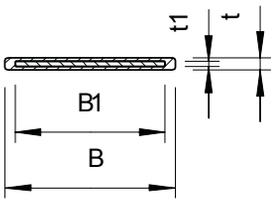
Tightening strap

Type	Ø breaking load kN	Colour	Pack. m	Weight kg/100 m	Item No.
SBR 8 A2K	1.16	Jet black	50	2.840	**6490192**
SBR 8 A4K	1.09	Chestnut brown	50	2.840	**6490194**

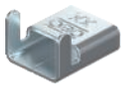
V2A Stainless steel, A2 V4A Stainless steel, A4

K Plastic-coated

Tightening strap made of rustproof steel with plastic jacketing to fasten cables on cable support systems.



Tightening strap lock



Type	Pack. pcs	Weight kg/100 pcs.	Item No.
SBV 8 FS	100	0.250	**6490940**
SBV 8 A2	100	0.250	**6490942**
SBV 8 A4	100	0.250	**6490944**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FS Strip-galvanised

Tightening strap lock made of strip-galvanised steel, suitable for portfolio with 8 mm width.

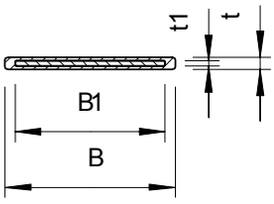
Tightening strap

Type	Ø breaking load kN	Colour	Pack. m	Weight kg/100 m	Item No.
SBR 15 FSK	2.5	Stone grey	25	7.628	**6490280**
SBR 15 A2K	4.19	Jet black	25	7.628	**6490282**
SBR 15 A4K	3.93	Chestnut brown	25	7.628	**6490284**

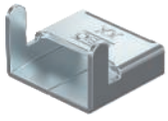
St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FSK Strip galvanised/plastic-coated K Plastic-coated

Tightening strap made of strip-galvanised steel with plastic jacketing to fasten cables on cable support systems.



Tightening strap lock



Type	Pack. pcs	Weight kg/100 pcs.	Item No.
SBV 15 FS	100	0.560	**6490950**
SBV 15 A2	100	0.560	**6490964**
SBV 15 A4	100	0.560	**6490972**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FS Strip-galvanised

Tightening strap lock made of strip-galvanised steel, suitable for portfolio with 15 mm width.

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Always indicate the item number when ordering.

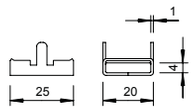
Tightening strap lock

Type	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
192 DD	1200	100	0.900	**6490905**

St Steel

DD Strip galvanised zinc/aluminium,double dip

Tightening strap lock for mounting under deck.

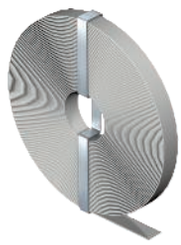


Tightening strap

Type	Dimension mm	Minimum breaking load kN	Colour	Pack. m	Weight kg/100 m	Item No.
574 03 LBL	17 x 1,2	2.25	Light blue	25	5.680	**6490034**
574 05 PGN	17 x 1,2	3.5	Patina green	25	7.120	**6490050**

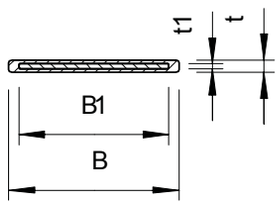
V2A Stainless steel, A2

Tightening strap made of Stainless steel and with plastic covering for fastening on cable trays and ladders.



Dimensions

Type	B	t	B1	t1
	mm	mm	mm	mm
574 03 BR	17	1	15,5	0,3
574 03 SW	17	1,2	15,5	0,3
574 03 LBL	17	1,2	15,5	0,3
574 05 PGN	17	1,2	14,5	0,5

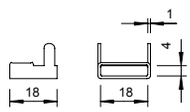


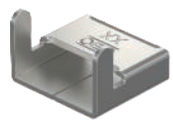
Tightening strap lock

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
SBV 15 A2	100	0.560	**6490964**

V2A Stainless steel, A2

Tightening strap lock made of rustproof steel, suitable for portfolio with 15 mm width.





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Always indicate the item number when ordering.

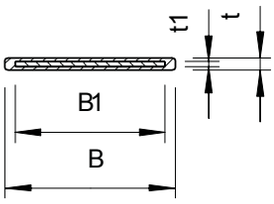
Tightening strap in fixed lengths

Type	Length mm	Ø breaking load kN	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
SBF 8-200 A2K	200	1.16	Jet black	25	0.700	**6490210**
SBF 8-300 A2K	300	1.16	Jet black	25	1.000	**6490214**
SBF 8-400 A2K	400	1.16	Jet black	25	1.300	**6490218**
SBF 8-500 A2K	500	1.16	Jet black	25	1.600	**6490222**
SBF 8-600 A2K	600	1.16	Jet black	25	1.800	**6490226**
SBF 8-200 A4K	200	1.09	Chestnut brown	25	0.700	**6490240**
SBF 8-300 A4K	300	1.09	Chestnut brown	25	1.000	**6490244**
SBF 8-400 A4K	400	1.09	Chestnut brown	25	1.300	**6490248**
SBF 8-500 A4K	500	1.09	Chestnut brown	25	1.600	**6490252**
SBF 8-600 A4K	600	1.09	Chestnut brown	25	1.800	**6490256**

V2A Stainless steel, A2 V4A Stainless steel, A4

K Plastic-coated

Pre-terminated tightening strap made of rustproof steel with plastic jacketing and tightening strap lock.



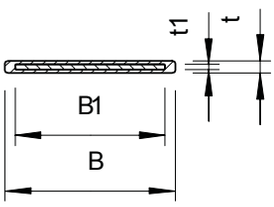
Tightening strap in fixed lengths

Type	Length mm	Ø breaking load kN	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
SBF 15-300 FSK	300	2.5	Stone grey	25	2.600	**6490300**
SBF 15-400 FSK	400	2.5	Stone grey	25	3.300	**6490304**
SBF 15-500 FSK	500	2.5	Stone grey	25	4.100	**6490308**
SBF 15-600 FSK	600	2.5	Stone grey	25	4.800	**6490312**
SBF 15-700 FSK	700	2.5	Stone grey	25	5.500	**6490316**
SBF 15-800 FSK	800	2.5	Stone grey	25	6.200	**6490320**
SBF 15-900 FSK	900	2.5	Stone grey	25	6.900	**6490324**
SBF 15-1000 FSK	1000	2.5	Stone grey	25	7.600	**6490328**
SBF 15-300 A2K	300	4.19	Jet black	25	2.600	**6490340**
SBF 15-500 A2K	500	4.19	Jet black	25	4.100	**6490348**
SBF 15-600 A2K	600	4.19	Jet black	25	4.800	**6490352**
SBF 15-700 A2K	700	4.19	Jet black	25	5.500	**6490356**
SBF 15-800 A2K	800	4.19	Jet black	25	6.200	**6490360**
SBF 15-900 A2K	900	4.19	Jet black	25	6.900	**6490364**
SBF 15-1000 A2K	1000	4.19	Jet black	25	7.600	**6490368**
SBF 15-300 A4K	300	3.93	Chestnut brown	25	2.600	**6490380**
SBF 15-400 A4K	400	3.93	Chestnut brown	25	3.300	**6490384**
SBF 15-500 A4K	500	3.93	Chestnut brown	25	4.100	**6490388**
SBF 15-600 A4K	600	3.93	Chestnut brown	25	4.800	**6490392**
SBF 15-700 A4K	700	3.93	Chestnut brown	25	5.500	**6490396**
SBF 15-800 A4K	800	3.93	Chestnut brown	25	6.200	**6490400**
SBF 15-900 A4K	900	3.93	Chestnut brown	25	6.900	**6490404**
SBF 15-1000 A4K	1000	3.93	Chestnut brown	25	7.600	**6490408**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FSK Strip galvanised/plastic-coated K Plastic-coated

Pre-terminated tightening strap made of strip-galvanised steel with plastic jacketing and tightening strap lock.



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Always indicate the item number when ordering.

Tightening strap

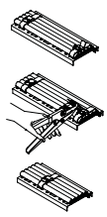
Type	Dimension mm	Length mm	Minimum breaking load kN	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
574 03 30 LBL	17 x 1,2	300	2.25	Light blue	25	2.410	**6490107**
574 03 45 LBL	17 x 1,2	450	2.25	Light blue	25	3.260	**6490123**
574 05 55 PGN	17 x 1,2	550	3.5	Patina green	25	4.660	**6490158**
574 05 65 PGN	17 x 1,2	650	3.5	Patina green	25	5.370	**6490174**

V2A Stainless steel, A2

Tightening strap, 574, completely pre-assembled with tightening strap lock.

Spring chuck

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
575	1	29.700	**6498019**

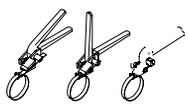


St Steel

Clamping tool for all OBO tightening straps in conjunction with appropriate tightening strap locks. Simple spring chuck without ratchet function and shortening unit. With ergonomically shaped grips.

Spring chuck

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
576	1	132.000	**6498027**



St Steel

Clamping tool for all OBO tightening straps in conjunction with appropriate tightening strap locks. With high clamping force, ratchet function, shortening unit and round grips for pleasant handling.

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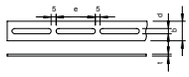
Always indicate the item number when ordering.

Slotted steel strap in strips



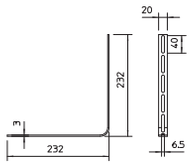
Type	Dimension mm	Hole size mm	Length mm	Pack. m	Weight kg/100 m	Item No.
OSS 20x3 3M FT	20 x 3	6,5 x 40	3000	60	35.000	**1465767**
OSS 30x3 3M FT	30 x 3	8,5 x 60	3000	30	72.000	**1465805**
OSS 40x4 3M FT	40 x 4	8,5 x 70	3000	30	101.000	**1465821**

St Steel

FT Hot-dip galvanised

Perforated slotted steel strap in strips.

Slotted steel strap, bent



Type	Dimension mm	Pack. pcs	Weight kg/100 pcs.	Item No.
OSG 20X3 FT	20x3	25	15.800	**6017371**

St Steel

FT Hot-dip galvanised

Bent slotted steel strap for creation of bends and tees.

Slotted steel strap, rings

Type	Dimension mm	Pack. m	Weight kg/100 m	Item No.
OSR 20x1.5 FS	20 x 1,5	200	18.000	**1465600**

St Steel

BK Bright

In rings.

Suspension chain

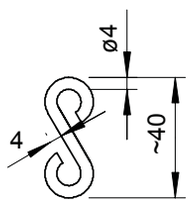
Type	Breaking load kN	Pack. m	Weight kg/100 m	Item No.
K-C30 G	0.7	25	10.000	**1488201**

St Steel

G Electrogalvanised

To suspend luminaire supports or other components.

S hook



Type	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
SH 40 G	0.5	100	0.800	**1488252**

St Steel

G Electrogalvanised

Connecting book of support clamps and suspension chains.

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Always indicate the item number when ordering.

Solvent mixture

Type	Contents ml	Pack. pcs	Weight kg/100 pcs.	Item No.
508	1000	1	105.000	**2341107**

Thinning.
Solvent mixture to create an optimum processing consistency of Impu-Fix ribbon conductor quick adhesive and to clean the working material.

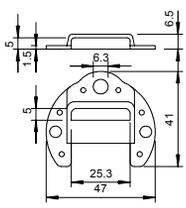
Impu-Fix ribbon conductor quick adhesive

Type	Contents kg	Pack. pcs	Weight kg/100 pcs.	Item No.
509	0.65	1	70.000	**2341018**

Impu-Fix ribbon conductor bonding agent to stick clips and ribbon conductors to masonry and concrete.

Ceiling outlet

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
510	Light grey	100	0.290	**2236028**



PS Polystyrene

To fasten ribbon conductors.

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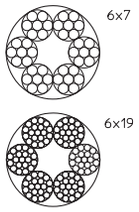
Always indicate the item number when ordering.

Steel wire tensioning rope



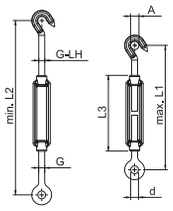
Type	Cable diameter mm	Breaking load kN	In rings m	Pack. m	Weight kg/100 m	Item No.
957 2 G	2	2.35	50	50	1.430	**5303202**
957 3 G	3	5.29	50	50	3.220	**5303206**
957 4 G	4	9.41	50	50	5.720	**5303214**
957 5 G	5	14.7	50	50	8.940	**5303222**
957 6 G	6	21.1	50	50	12.900	**5303230**
957 8 G	8	34.8	50	50	22.900	**5303257**
957 10 G	10	54.4	50	50	35.700	**5303265**
957 2 A4	2	2.35	50	50	1.430	**5303179**
957 3 A4	3	5.29	50	50	3.220	**5303182**
957 4 A4	4	9.41	50	50	5.720	**5303185**
957 5 A4	5	14.7	50	50	8.940	**5303188**
957 6 A4	6	21.1	50	50	12.900	**5303191**
957 8 A4	8	34.8	50	50	22.900	**5303194**
957 10 A4	10	54.4	50	50	35.700	**5303197**

St Steel V4A Stainless steel, A4

G Electrogalvanised

Steel wire tensioning rope, galvanised with fibre inlay (hemp core).
Cable Ø 2–6 mm: round-stranded cable 6 x 7 according to DIN 3055.
Cable Ø 8–10 mm: round-stranded cable 6 x19 according to DIN 3060.
Minimum break force 1770 N/mm².

Tension jack



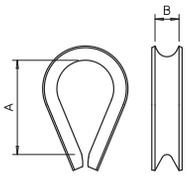
Type	Thread	Dimension A mm	Dimension B mm	Dimension C mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
945 M6 G	M6	9	8.5	110	2.25	5	13.050	**5300037**
945 M10 G	M10	14	13.5	125	7	5	33.650	**5300053**
945 M12 G	M12	16	15.5	125	7.5	5	53.000	**5300061**
945 M16 G	M16	22	19	170	12	5	84.000	**5300088**
945 M6 A4	M6	9	8.5	110	2.25	5	10.500	**5300120**
945 M10 A4	M10	14	13.5	125	7	5	28.000	**5300124**
945 M12 A4	M12	16	15.5	125	7.5	5	42.000	**5300127**
945 M16 A4	M16	22	19	170	12	5	100.000	**5300132**

St Steel V4A Stainless steel, A4

G Electrogalvanised

With hook and eye, to DIN 1480.

Cable eye stiffener



Type	For rope-Ø mm	Dimension A mm	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
946 3 G	3	23.5	3.5	25	0.210	**5301033**
946 4 G	4	28.5	5	25	0.390	**5301041**
946 5 G	5	30	6	25	0.660	**5301009**
946 6 G	6	33	7	25	0.840	**5301068**
946 8 G	8	39	9	10	1.880	**5301084**
946 10 FT	10	47.5	11	10	2.900	**5301106**
946 3 A4	3	23.5	3.5	25	0.210	**5301170**
946 4 A4	4	28.5	5	25	0.390	**5301172**
946 5 A4	5	30	6	25	0.660	**5301174**
946 6 A4	6	33	7	25	0.840	**5301176**
946 8 A4	8	39	9	10	1.880	**5301180**
946 10 A4	10	47.5	11	10	2.900	**5301184**

St Steel V4A Stainless steel, A4

G Electrogalvanised FT Hot-dip galvanised

Cable eye stiffener to DIN 65457.

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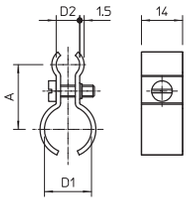
Always indicate the item number when ordering.

Tensioning wire clip

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
1020 11-16 G	11 - 16	50	1.420	**1404164**
1020 14-18 G	14 - 18	50	1.650	**1404180**
1020 18-28 G	19 - 28	50	2.000	**1404288**
1020 11-16 A4	11 - 16	50	1.420	**1404168**
1020 14-18 A4	14 - 18	50	1.650	**1404184**
1020 18-28 A4	19 - 28	50	2.000	**1404292**



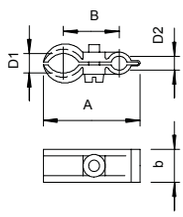
St Steel V4A Stainless steel, A4

G Electrogalvanised

To fasten cables to tensioning cables. With bolt M4x13.

Tensioning wire clip, polystyrene

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4024 9-16	9 - 16	100	0.460	**2305151**
4024 16-23	16 - 23	50	0.930	**2305232**

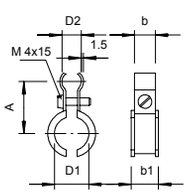


PS Polystyrene

Bolt, steel, electrogalvanised, light grey.

Fix ISO tensioning wire clip

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4021 K 6-13	6 - 13	100	1.295	**2307618**
4021 K 9-16	9 - 16	100	1.457	**2307634**
4021 K 6-13 A4	6 - 13	100	1.295	**2307622**
4021 K 9-16 A4	9 - 16	100	1.457	**2307638**



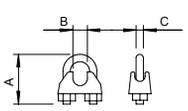
St Steel V4A Stainless steel, A4

FS Strip-galvanised

Metal clip with plastic insert, steel, electrogalvanised, polyethylene inserts.

Wire cable clamp

Type	For rope-Ø mm	Dimension A mm	Dimension B mm	Dimension C mm	Pack. pcs	Weight kg/100 pcs.	Item No.
947 3 G	3	20	4	4	25	1.100	**5302021**
947 5 G	5	24	6	5	25	1.400	**5302056**
947 6 G	6	28	8	5	25	1.700	**5302064**
947 8 G	8	34	9	6	10	3.100	**5302080**
947 10 G	10	42	11	8	10	6.500	**5302102**
947 3 A4	3	20	4	4	25	1.090	**5302170**
947 5 A4	5	24	6	5	25	1.500	**5302174**
947 6 A4	6	28	8	5	25	2.080	**5302178**
947 8 A4	8	34	9	6	10	3.390	**5302182**
947 10 A4	10	42	11	8	10	6.310	**5302188**



St Steel V4A Stainless steel, A4

G Electrogalvanised

Wire cable clamp for fastening steel wire tensioning ropes.

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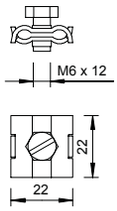
Always indicate the item number when ordering.

Wire cable clamp



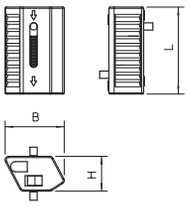
Type	For rope-Ø mm	Bolt	Pack. pcs	Weight kg/100 pcs.	Item No.
261 3-6 G	3 - 6	M6x12	100	1.498	**5305012**
261 3-6 A4	3 - 6	M6x12	100	1.498	**5305016**

St Steel V4A Stainless steel, A4

G Electrogalvanised

Wire cable clamp for fastening steel wire tensioning ropes.

Cable lock



Type	For rope-Ø mm	Dimension L mm	Dimension B mm	Dimension H mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
944 RZS 2 G	2 - 2.5	26.6	17.1	12.5	0.6	25	2.130	**5300015**
944 RZS 3 G	2.5 - 3.5	36.4	24.3	14.9	1.2	25	5.120	**5300019**

Zn Die-cast zinc

Cable lock for the flexible and easily readjustable suspension with steel wire tensioning rope, type 957. The system allows suspensions in different angles.

Always indicate the item number when ordering.

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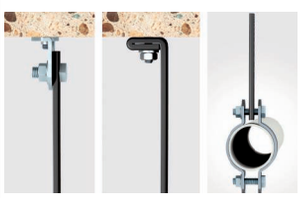
Loads, installation strip

When two loads are combined, the value of the worst case applies. In addition, the table values only apply under the following conditions:

- In perforated strip 5055, loads may only be applied in the round holes.
- If placing a bolt in the last hole, always ensure that there is one full bar left above the hole.
- The right sizes of bolt for the perforated strip must be used (M5 for size I, M6 for size II, M8 for size III).
- The bolts must be tightened. The user of smaller or loose bolts causes a strong drop in the breaking load.

Breaking loads



Type	Art.-No.	Load 1	Load 2	Load 3	Load 4
5055	1470 12 4	2150 N	1850 N	1650 N	3700 N
	1470 17 5	3050 N	2000 N	1800 N	4000 N
	1470 26 4	6750 N	6750 N	3300 N	13500 N
5055/L	1471 12 0	1150 N	1400 N	1200 N	2800 N
	1471 17 1	2200 N	1500 N	1300 N	3000 N
	1471 26 0	5350 N	2800 N	2400 N	5600 N
5055/ L PE	1473 22 0	1500 N	1500 N	1300 N	3000 N
	1473 27 1	2300 N	2300 N	1700 N	4600 N
	1473 36 0	4700 N	4250 N	4000 N	8500 N
5062	1475 12 6	1600 N	1600 N	2150 N	3200 N
	1475 17 7	2350 N	2350 N	3050 N	4700 N
	1475 26 6	4700 N	4700 N	3700 N	9400 N
5062/L	1475 62 2	1300 N	1300 N	1300 N	2600 N
	1475 67 3	1650 N	1650 N	1300 N	3300 N
	1475 76 2	3800 N	3800 N	3200 N	7600 N

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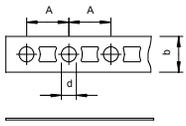
Perforated steel strap



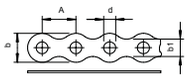
Type	Dimension mm	Dimension d mm	Dimension A mm	per roll m	Pack. pcs	Weight kg/100 pcs.	Item No.
5055 I12 FS	12 x 1	5.2	14.4	10	1	73.000	**1470124**
5055 II17 FS	17 x 1	6.5	20	10	1	106.000	**1470175**
5055 III26 FS	26 x 1,2	8.5	25	10	1	204.500	**1470264**
5055 LI12 FS	12 x 0,75	5.2	14.4	10	1	59.000	**1471120**
5055 LII17 FS	17 x 0,75	6.5	20	10	1	84.200	**1471171**
5055 LIII26 FS	26 x 1	8.5	25	10	1	172.300	**1471260**

St Steel

FS Strip-galvanised

Perforated steel strap, in practical uncoiling box.

Perforated steel strap, ridged



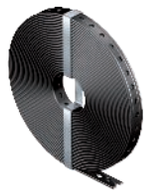
Type	Dimension mm	Dimension d mm	Dimension A mm	per roll m	Pack. pcs	Weight kg/100 pcs.	Item No.
5062 I12 FS	12 x 1	5	14	10	1	69.000	**1475126**
5062 II17 FS	17 x 1	7	20	10	1	98.500	**1475177**
5062 III26 FS	26 x 1,2	9	25	10	1	183.000	**1475266**
5062 LI12 FS	12 x 0,75	5	14	10	1	57.000	**1475622**
5062 LII17 FS	17 x 0,75	7	20	10	1	73.000	**1475673**
5062 LIII26 FS	26 x 1	9	25	10	1	153.000	**1475762**

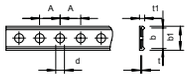
St Steel

FS Strip-galvanised

Perforated strap with wavy edges, in practical uncoiling box.

Perforated steel strap, plastic-coated





Type	Dimension mm	Dimension d mm	Dimension A mm	per roll m	Pack. pcs	Weight kg/100 pcs.	Item No.
5055 L PE I 14	14 x 3	5.2	12	10	1	70.000	**1473220**
5055 L PE II 19	19 x 3	6.5	15	10	1	100.500	**1473271**
5055 L PE III 28	28 x 3,7	8.5	20	10	1	167.500	**1473360**

St Steel

FSK Strip galvanised/plastic-coated

Perforated steel strap with PE plastic jacketing.

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Pipe systems

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IEC classification in accordance with DIN EN 61386-1

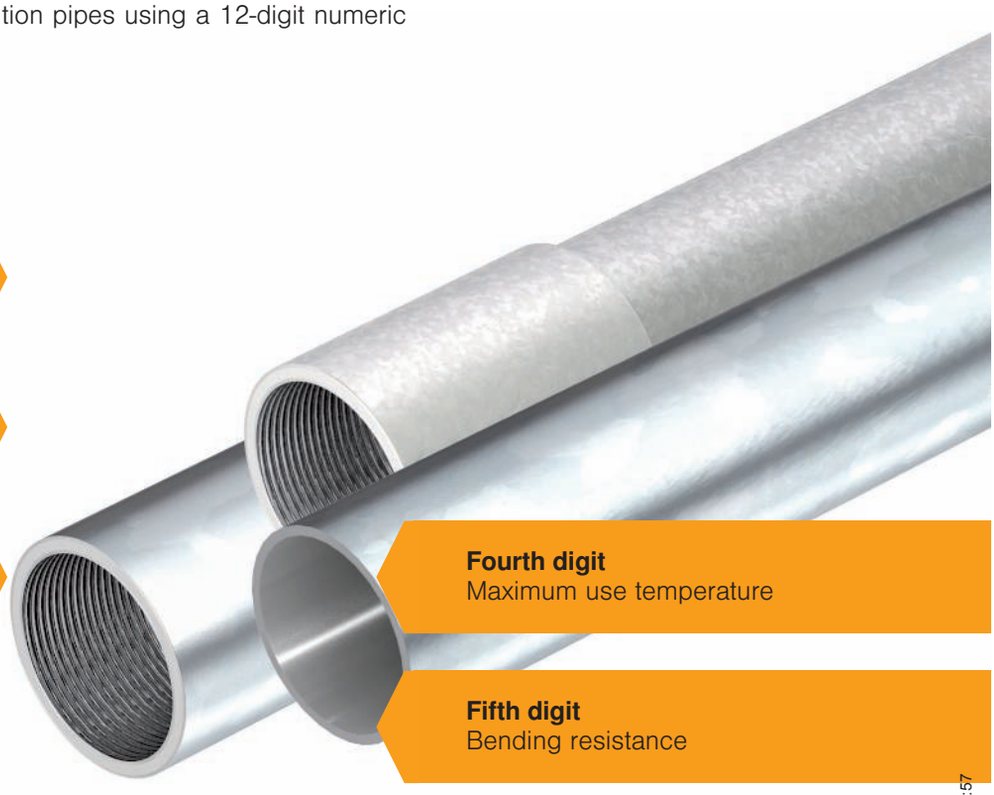
The OBO Bettermann pipe systems are machined and tested according to DIN EN 61386 (Electrical installation pipe systems for electrical energy and information) and DIN EN 60423 (External diameters of electrical installation pipes and thread for electrical installation pipes and their accessories).

Numeric code
DIN EN 61386-1 classifies installation pipes using a 12-digit numeric code, which provides information on the pressure resistance, impact resistance or use temperatures. You can find the first five digits in the product descriptions of the pipe systems.

First digit
Compression resistance

Second digit
Impact resistance

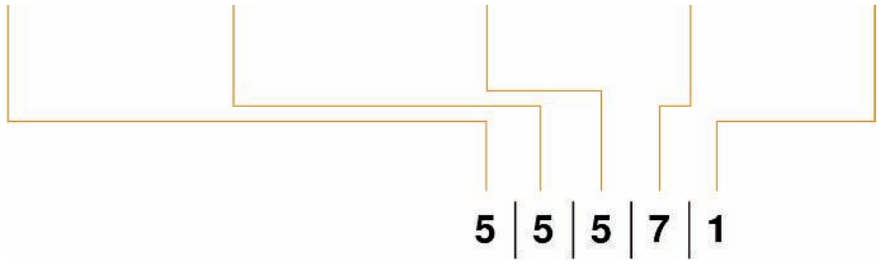
Third digit
Minimum use temperature



Fourth digit
Maximum use temperature

Fifth digit
Bending resistance

	First digit		Second digit		Third digit		Fourth digit		Fifth digit
	Pressure resistance		**Impact resistance**		**Minimum use temperature**		**Maximum use temperature**		**Bending behaviour**
1	Very light (125 N)	**1**	Very light (0.5 kg/100 mm)	**1**	+ 5 °C	**1**	+ 60 °C	1	Rigid
2	Light (320 N)	**2**	Light (1.0 kg/100 mm)	**2**	– 5 °C	**2**	+ 90 °C	**2**	Bendable
3	Medium (750 N)	**3**	Medium (2.0 kg/100 mm)	**3**	– 15 °C	**3**	+ 105 °C	**3**	Bendable, self-healing
4	Heavy (1250 N)	**4**	Heavy (2.0 kg/300 mm)	**4**	– 25 °C	**4**	+ 120 °C	**4**	Flexible
5	Very heavy (4000 N)	5	Very heavy (6.8 kg/300 mm)	5	– 45 °C	**5**	+ 150 °C		
						6	+ 250 °C		
						7	+ 400 °C		



Always indicate the item number when ordering.

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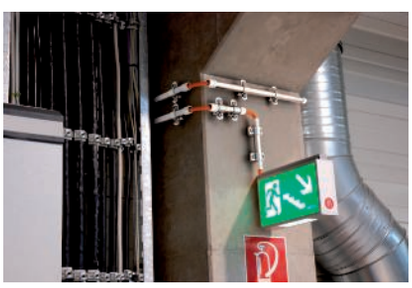
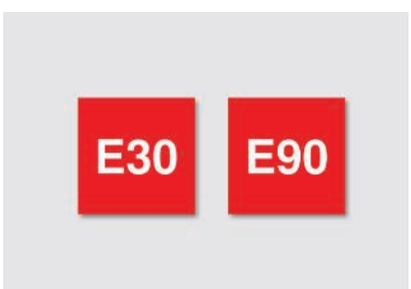
Electrical installation pipes

Classification according to IEC EN 61386-1: Corrosion protection

	9th digit	
	Resistance against corrosion	**Suitable surfaces**
1	Low protection, inside and outside	
2	Medium protection, inside and outside	• Painted black (SW) • Electrogalvanised (G) • Strip galvanised (FS)
3	Medium protection inside, high protection outside	
4	High protection, inside and outside	• Hot-dip galvanised (FT) • Stainless steel (V2A, V4A)





Protection against mechanical loads
OBO metal pipes are particularly suited to use under tough industrial conditions. They provide reliable protection against very heavy mechanical loads during cable routing.

The different material and surface qualities, from galvanised to painted, allow perfect adaptation to the requirements of the appropriate environment.

Maintenance of electrical function to E30/E90
Our steel pipes guarantee the maintenance of electrical function to E30/E90. They are thus ideal for the connection of safety-relevant equipment, such as fire alarm systems.

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Electrogalvanised threaded pipe

- VDE-tested
- Trimmed weld
- Internally galvanised

Electrogalvanised plug-in pipe

- VDE-tested
- Trimmed weld
- Galvanised inside

Black, powder-coated Threaded pipe

- VDE-tested
- Trimmed weld

Black, powder-coated Plug-in pipe

- VDE-tested
- Trimmed weld

Hot galvanised threaded pipe

- VDE-tested
- Trimmed weld
- High corrosion protection
- Zinc/nickel sleeve

Hot galvanised plug-in pipe

- VDE-tested
- Trimmed weld
- High corrosion protection

Stainless steel pipe, V2A

- VDE-tested
- Brushed surface

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Always indicate the item number when ordering.

Stainless steel plug-in pipe, V4A

- VDE-tested
- Brushed surface

Aluminium threaded pipe

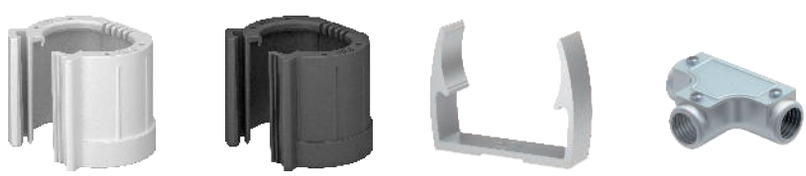
- VDE-tested

Aluminium plug-in pipe

- VDE-tested

Accessories

- Wide range of application options



Quick pipe

- Innovative system
- VDE-tested
- Reclosable

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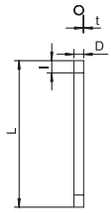
Electrogalvanised steel pipe, with thread



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M E30 E90

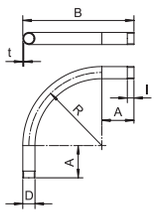
Type	Thread	Dimension D mm	Dimension L mm	Dimension l mm	Dimension t mm	Pack. m	Weight kg/100 m	Item No.
SM16W G	M16x1,5	16	3000	13	1.3	30	50.390	**2046861**
SM20W G	M20x1,5	20	3000	13	1.5	30	66.667	**2046862**
SM25W G	M25x1,5	25	3000	18	1.5	30	92.290	**2046863**
SM32W G	M32x1,5	32	3000	18	1.5	21	120.000	**2046864**
SM40W G	M40x1,5	40	3000	20.5	1.5	15	151.450	**2046865**
SM50W G	M50x1,5	50	3000	25	1.5	15	190.000	**2046866**
SM63W G	M63x1,5	63	3000	25	1.7	9	287.700	**2046867**

St Steel

G Electrogalvanised

Electrical installation pipe according to EN 61386-1 with threaded ends to EN 60423 for mechanical protection of cables.
With burr-free inner wall. One coupling is already screwed onto each pipe.

Electrogalvanised steel bend, with thread



M E30 E90

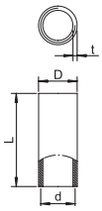
Type	Thread	Dimension A mm	Dimension B mm	Dimension D mm	Dimension l mm	Dimension R mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SBNM16 G	M16x1,5	45	103	16	13	50	1.4	15	10.400	**2046778**
SBNM20 G	M20x1,5	55	155	20	13	90	1.6	25	21.000	**2046779**
SBNM25 G	M25x1,5	68	190	25	18	110	1.6	25	33.000	**2046780**
SBNM32 G	M32x1,5	88	254	32	18	150	1.6	20	56.600	**2046781**
SBNM40 G	M40x1,5	89	279	40	20.5	170	1.6	15	77.600	**2046782**
SBNM50 G	M50x1,5	133	358	50	25	200	1.6	5	125.800	**2046783**
SBNM63 G	M63x1,5	165	446	63	25	250	1.8	3	227.000	**2046784**

St Steel

G Electrogalvanised

90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall.
One connection sleeve is already screwed onto each pipe bend.

Electrogalvanised steel sleeve, with thread



M E30 E90

Type	Thread	Dimension D mm	Dimension d mm	Dimension L mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SVM16W G	M16x1,5	18.5	16	26	2	25	2.110	**2046875**
SVM20W G	M20x1,5	22.5	20	30	2	50	3.400	**2046876**
SVM25W G	M25x1,5	27.5	25	40	2	50	5.030	**2046877**
SVM32W G	M32x1,5	35.5	32	40	2.5	50	8.800	**2046878**
SVM40W G	M40x1,5	43.5	40	45	2.5	25	11.370	**2046879**
SVM50W G	M50x1,5	53.5	50	54	2.5	10	16.970	**2046880**
SVM63W G	M63x1,5	68	63	60	3.2	5	30.670	**2046881**

St Steel

G Electrogalvanised

Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.

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Always indicate the item number when ordering.

Armoured steel pipe without thread, electrogalvanised

E30 E90

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Type	Dimension D mm	Dimension L mm	Dimension t mm	Pack. m	Weight kg/100 m	Item No.
S16W G	16	3000	1	30	37.000	**2046840**
S20W G	20	3000	1	30	44.700	**2046841**
S25W G	25	3000	1.2	30	70.400	**2046842**
S32W G	32	3000	1.2	21	91.200	**2046843**
S40W G	40	3000	1.2	15	139.700	**2046844**
S50W G	50	3000	1.2	15	176.000	**2046845**
S63W G	63	3000	1.2	9	223.000	**2046846**

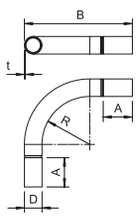
St Steel

G Electrogalvanised

Electrical installation pipe without threaded ends according to EN 61386-1 for mechanical protection of cables. With burr-free inner wall.

Electrogalvanised steel bend, without thread

E30 E90



Type	Dimension A mm	Dimension B mm	Dimension D mm	Dimension l mm	Dimension R mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SBN16 G	43.7	103	18.6	25	50	1	15	7.200	**2046808**
SBN20 G	53.7	155	22.6	30	90	1	25	13.300	**2046809**
SBN25 G	66.5	190	28	40	110	1.2	25	24.400	**2046810**
SBN32 G	86.5	254	35.1	40	150	1.2	20	41.000	**2046811**
SBN40 G	87.2	279	43.7	50	170	1.5	15	70.200	**2046812**
SBN50 G	131	358	54	60	200	1.5	5	111.800	**2046813**
SBN63 G	163	446	67	90	250	1.5	3	174.200	**2046814**

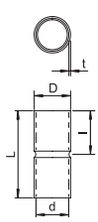
St Steel

G Electrogalvanised

90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

Armoured steel pipe connection sleeve without thread, electrogalvanised

E30 E90



Type	Dimension D mm	Dimension d mm	Dimension L mm	Dimension l mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SV16W G	18.6	16.6	50	25	1	25	2.400	**2046854**
SV20W G	23.1	20.7	60	30	1.2	50	4.000	**2046855**
SV25W G	28.1	25.7	60	30	1.2	50	5.200	**2046856**
SV32W G	35.2	32.8	70	35	1.2	50	7.200	**2046857**
SV40W G	43.8	43.8	80	40	1.5	25	13.200	**2046858**
SV50W G	54	51	100	50	1.5	10	20.000	**2046859**
SV63W G	67	64	100	50	1.5	5	28.000	**2046860**

St Steel

G Electrogalvanised

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.

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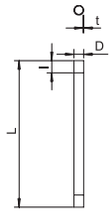
Always indicate the item number when ordering.

Armoured steel pipe with thread, black



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M E30 E90

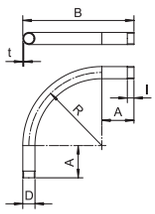
Type	Thread	Dimension D mm	Dimension L mm	Dimension l mm	Dimension t mm	Colour	Pack. m	Weight kg/100 m	Item No.
SM16W SW	M16x1,5	16	3000	13	1.3	Jet black	30	50.000	**2046500**
SM20W SW	M20x1,5	20	3000	13	1.5	Jet black	30	73.000	**2046501**
SM25W SW	M25x1,5	25	3000	18	1.5	Jet black	30	92.000	**2046502**
SM32W SW	M32x1,5	32	3000	18	1.5	Jet black	21	120.000	**2046503**
SM40W SW	M40x1,5	40	3000	20.5	1.5	Jet black	15	152.000	**2046505**
SM50W SW	M50x1,5	50	3000	25	1.5	Jet black	15	190.700	**2046506**
SM63W SW	M63x1,5	63	3000	25	1.7	Jet black	9	287.700	**2046507**

St Steel

PE50 PES50 - Polyester/epoxy

Electrical installation pipe according to EN 61386-1 with threaded ends to EN 60423 for mechanical protection of cables.
With burr-free inner wall. One coupling is already screwed onto each pipe.

Black powder-coated steel bend, with thread



M E30 E90

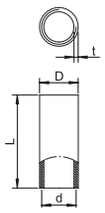
Type	Thread	Dimension B mm	Dimension D mm	Dimension R mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
SBNM16 SW	M16x1,5	103	16	50	Jet black	15	10.400	**2046793**
SBNM20 SW	M20x1,5	155	20	90	Jet black	25	21.000	**2046794**
SBNM25 SW	M25x1,5	190	25	110	Jet black	25	33.000	**2046795**
SBNM32 SW	M32x1,5	254	32	150	Jet black	20	56.600	**2046796**
SBNM40 SW	M40x1,5	279	40	170	Jet black	15	77.600	**2046797**
SBNM50 SW	M50x1,5	358	50	200	Jet black	5	125.800	**2046798**
SBNM63 SW	M63x1,5	446	63	250	Jet black	3	227.000	**2046799**

St Steel

PE50 PES50 - Polyester/epoxy

90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall.
One connection sleeve is already screwed onto each pipe bend.

Black powder-coated steel sleeve, with thread



M E30 E90

Type	Thread	Dimension D mm	Dimension d mm	Dimension L mm	Dimension t mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
SVM16W SW	M16x1,5	18.5	16	26	2	Jet black	25	2.100	**2046522**
SVM20W SW	M20x1,5	22.5	20	30	2	Jet black	50	3.400	**2046523**
SVM25W SW	M25x1,5	27.5	25	40	2	Jet black	50	5.000	**2046524**
SVM32W SW	M32x1,5	35.5	32	40	2.5	Jet black	50	8.800	**2046525**
SVM40W SW	M40x1,5	43.5	40	45	2.5	Jet black	25	11.400	**2046526**
SVM50W SW	M50x1,5	53.5	50	54	2.5	Jet black	10	17.000	**2046527**
SVM63W SW	M63x1,5	68	63	60	3.2	Jet black	5	30.700	**2046528**

St Steel

PE50 PES50 - Polyester/epoxy

Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.

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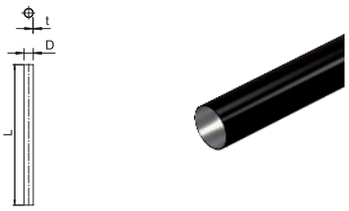
Always indicate the item number when ordering.

Armoured steel pipe without thread, black

E30 E90



Type	Dimension D mm	Dimension L mm	Dimension t mm	Colour	Pack. m	Weight kg/100 m	Item No.
S16W SW	16	3000	1	Jet black	30	37.000	**2046565**
S20W SW	20	3000	1	Jet black	30	44.700	**2046566**
S25W SW	25	3000	1.2	Jet black	30	70.400	**2046567**
S32W SW	32	3000	1.2	Jet black	21	91.200	**2046568**
S40W SW	40	3000	1.2	Jet black	15	139.700	**2046569**
S50W SW	50	3000	1.2	Jet black	15	176.000	**2046570**
S63W SW	63	3000	1.2	Jet black	9	223.000	**2046571**

St Steel

PE50 PES50 - Polyester/epoxy

Electrical installation pipe without threaded ends according to EN 61386-1 for mechanical protection of cables. With burr-free inner wall.

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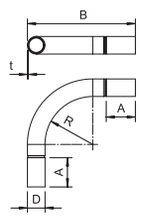
Black powder-coated steel bend, without thread

E30 E90



Type	Dimension B mm	Dimension D mm	Dimension R mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
SBN16 SW	103	16.6	50	Jet black	15	7.200	**2046824**
SBN20 SW	155	20.6	90	Jet black	25	13.300	**2046825**
SBN25 SW	190	25.6	110	Jet black	25	24.400	**2046826**
SBN32 SW	254	32.7	150	Jet black	20	41.000	**2046827**
SBN40 SW	279	40.7	170	Jet black	15	68.900	**2046828**
SBN50 SW	358	51	200	Jet black	5	111.800	**2046829**
SBN63 SW	446	64	250	Jet black	3	174.200	**2046830**

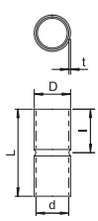
St Steel

PE50 PES50 - Polyester/epoxy

90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

Armoured steel pipe connection sleeve without thread, black

E30 E90



Type	Dimension D mm	Dimension d mm	Dimension L mm	Dimension l mm	Dimension t mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
SV16W SW	18.6	16.6	50	25	1	Jet black	25	2.400	**2046582**
SV20W SW	23.1	20.7	60	30	1.2	Jet black	50	3.200	**2046583**
SV25W SW	28.1	25.7	60	30	1.2	Jet black	50	5.200	**2046584**
SV32W SW	35.2	32.8	70	35	1.2	Jet black	50	7.200	**2046585**
SV40W SW	43.8	40.8	80	40	1.5	Jet black	25	13.200	**2046586**
SV50W SW	54	51	100	50	1.5	Jet black	10	20.000	**2046587**
SV63W SW	67	64	100	50	1.5	Jet black	5	28.000	**2046588**

St Steel

PE50 PES50 - Polyester/epoxy

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.

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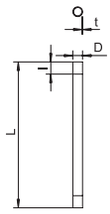
Hot-dip galvanised steel pipe, with thread



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M E30 E90

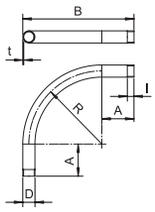
Type	Thread	Dimension D mm	Dimension L mm	Dimension l mm	Dimension t mm	Pack. m	Weight kg/100 m	Item No.
SM16W FT	M16x1,5	16	3000	13	1.3	30	54.000	**2046533**
SM20W FT	M20x1,5	20	3000	13	1.5	30	79.000	**2046534**
SM25W FT	M25x1,5	25	3000	18	1.5	30	99.000	**2046535**
SM32W FT	M32x1,5	32	3000	18	1.5	21	130.000	**2046536**
SM40W FT	M40x1,5	40	3000	20.5	1.5	15	164.000	**2046537**
SM50W FT	M50x1,5	50	3000	25	1.5	15	206.000	**2046538**
SM63W FT	M63x1,5	63	3000	26	1.8	9	324.700	**2046540**

St Steel

FT Hot-dip galvanised

Electrical installation pipe according to EN 61386-1 with threaded ends to EN 60423 for mechanical protection of cables.
With burr-free inner wall. Corrosion protection class 4 (high). One coupling is already screwed onto each pipe.

Hot-dip galvanised steel bend, with thread



M E30 E90

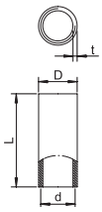
Type	Thread	Dimension A mm	Dimension B mm	Dimension D mm	Dimension l mm	Dimension R mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SBNM16 FT	M16x1,5	45	103	16	13	50	1.4	15	10.400	**2046786**
SBNM20 FT	M20x1,5	55	155	20	13	90	1.6	25	21.000	**2046787**
SBNM25 FT	M25x1,5	68	190	25	18	110	1.6	25	33.000	**2046788**
SBNM32 FT	M32x1,5	88	254	32	18	150	1.6	20	56.600	**2046789**
SBNM40 FT	M40x1,5	89	279	40	20.5	170	1.6	15	77.600	**2046790**
SBNM50 FT	M50x1,5	133	358	50	25	200	1.6	5	125.800	**2046791**
SBNM63 FT	M63x1,5	165	446	63	25	250	1.8	3	227.000	**2046792**

St Steel

FT Hot-dip galvanised

90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall.
One connection sleeve is already screwed onto each pipe bend.

Zinc-nickel coated steel sleeve, with thread



M E30 E90

Type	Thread	Dimension D mm	Dimension d mm	Dimension L mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SVM16W DN	M16x1,5	18.5	16	26	2	25	2.100	**2046553**
SVM20W DN	M20x1,5	22.5	20	30	2	50	3.400	**2046554**
SVM25W DN	M25x1,5	27.5	25	40	2	50	3.986	**2046556**
SVM32W DN	M32x1,5	35.5	32	40	2.5	50	8.800	**2046557**
SVM40W DN	M40x1,5	43.5	40	45	2.5	25	11.400	**2046558**
SVM50W DN	M50x1,5	53.5	50	54	2.5	10	17.000	**2046559**
SVM63W DN	M63x1,5	68	63	60	3.2	5	30.700	**2046560**

St Steel

DN Zinc / nickel-coated

Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.

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Always indicate the item number when ordering.

Hot-dip galvanised steel pipe, without thread

E30 E90

4 4 5 7 1

Type	Dimension D mm	Dimension L mm	Dimension t mm	Pack. m	Weight kg/100 m	Item No.
S16W FT	16	3000	1	30	37.000	**2046593**
S20W FT	20	3000	1	30	44.700	**2046594**
S25W FT	25	3000	1.2	30	70.400	**2046595**
S32W FT	32	3000	1.2	21	91.200	**2046596**
S40W FT	40	3000	1.2	15	139.700	**2046597**
S50W FT	50	3000	1.2	15	176.000	**2046598**
S63W FT	63	3000	1.2	9	223.000	**2046599**

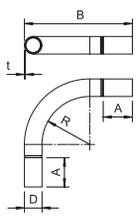
St Steel

FT Hot-dip galvanised

Electrical installation pipe without threaded ends according to EN 61386-1 for mechanical protection of cables. With burr-free inner wall. Corrosion protection class 4 (high).

Hot-dip galvanised steel bend, without thread

E30 E90



Type	Dimension A mm	Dimension B mm	Dimension D mm	Dimension l mm	Dimension R mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SBN16 FT	43.7	103	16.6	25	50	1	15	7.200	**2046816**
SBN20 FT	53.7	155	20.6	30	90	1	25	13.300	**2046817**
SBN25 FT	66.5	190	25.6	40	110	1.2	25	24.400	**2046818**
SBN32 FT	86.5	254	32.7	40	150	1.2	20	41.000	**2046819**
SBN40 FT	87.2	279	40.7	50	170	1.5	15	68.900	**2046820**
SBN50 FT	131	358	51	60	200	1.5	5	111.800	**2046821**
SBN63 FT	163	446	64	90	250	1.5	3	174.200	**2046822**

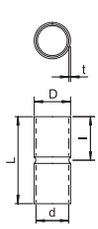
St Steel

FT Hot-dip galvanised

90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

Hot-dip galvanised steel sleeve, without thread

E30 E90



Type	Dimension D mm	Dimension d mm	Dimension L mm	Dimension l mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SV16W FT	18.6	16.6	50	25	1	25	2.200	**2046620**
SV20W FT	23.1	20.7	60	30	1.2	50	3.200	**2046621**
SV25W FT	28.1	25.7	60	30	1.2	50	5.600	**2046622**
SV32W FT	35.2	32.8	70	35	1.2	50	7.800	**2046623**
SV40W FT	43.8	40.8	80	40	1.5	25	14.400	**2046624**
SV50W FT	54	51	100	50	1.5	10	22.000	**2046625**
SV63W FT	67	63	100	50	1.5	5	28.000	**2046626**

St Steel

FT Hot-dip galvanised

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.

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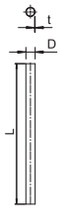
Stainless steel pipe, V2A



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E30 E90

Type	Dimension D mm	Dimension L mm	Dimension t mm	Pack. m	Weight kg/100 m	Item No.
S16W A2	16	3000	1	30	37.000	**2046720**
S20W A2	20	3000	1	30	46.900	**2046721**
S25W A2	25	3000	1	30	59.200	**2046722**
S32W A2	32	3000	1.2	21	91.200	**2046723**
S40W A2	40	3000	1.2	15	114.800	**2046724**
S50W A2	50	3000	1.5	15	179.400	**2046725**
S63W A2	63	3000	1.5	9	227.500	**2046726**

V2A Stainless steel, A2

GEB Brushed

Electrical installation pipe without threaded ends to EN 61386-1 for mechanical protection of cables. With burr-free inner wall. Corrosion protection class 4 (high).
Classification according to DIN EN 61386-1: 555711404010

Stainless steel pipe, V4A

5 | 5 | 5 | 7 | 1

E30 E90

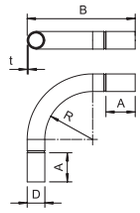
Type	Dimension D mm	Dimension L mm	Dimension t mm	Pack. m	Weight kg/100 m	Item No.
S16W A4	16	3000	1	15	37.000	**2046750**
S20W A4	20	3000	1	15	46.900	**2046751**
S25W A4	25	3000	1	15	59.200	**2046752**
S32W A4	32	3000	1.2	15	91.200	**2046753**
S40W A4	40	3000	1.2	9	114.800	**2046754**
S50W A4	50	3000	1.5	9	179.400	**2046755**
S63W A4	63	3000	1.5	9	227.500	**2046756**

V4A Stainless steel, A4

GEB Brushed

Electrical installation pipe without threaded ends to EN 61386-1 for mechanical protection of cables. With burr-free inner wall. Corrosion protection class 4 (high).

Stainless steel pipe bend, V4A



E30 E90

Type	Dimension A mm	Dimension B mm	Dimension D mm	Dimension l mm	Dimension R mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SB16W A4	54	104	18.2	25	50	1	5	7.200	**2046760**
SB20W A4	66	156	22.2	30	90	1	10	13.300	**2046761**
SB25W A4	81.5	194	27.2	30	112.5	1	10	20.400	**2046762**
SB32W A4	104	250	34.7	35	146	1.25	10	42.000	**2046763**
SB40W A4	129	294	42.7	40	165	1.25	5	61.200	**2046764**
SB50W A4	158	408	52.7	50	250	1.25	5	79.500	**2046765**
SB63W A4	198	448	65.7	50	250	1.25	3	144.600	**2046766**

V4A Stainless steel, A4

90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

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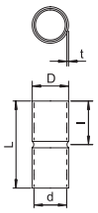
Always indicate the item number when ordering.

Stainless steel sleeve V4A

E30 E90



Type	Dimension D mm	Dimension d mm	Dimension L mm	Dimension l mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SV16W A4	18.2	16.2	50	25	1	10	2.100	**2046770**
SV20W A4	22.2	20.2	60	30	1	15	3.200	**2046771**
SV25W A4	27.2	25.2	60	30	1	15	3.900	**2046772**
SV32W A4	34.7	32.2	70	35	1.25	15	7.300	**2046773**
SV40W A4	42.7	40.2	80	40	1.25	10	10.300	**2046774**
SV50W A4	52.8	50.2	100	50	1.3	5	16.700	**2046775**
SV63W A4	65.8	63.2	100	50	1.3	3	20.900	**2046776**

V4A Stainless steel, A4

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.

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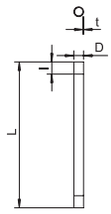
Always indicate the item number when ordering.

Aluminium pipe, with thread



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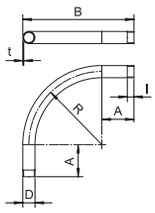
M

Type	Thread	Dimension D mm	Dimension L mm	Dimension t mm	Pack. m	Weight kg/100 m	Item No.
SM16W ALU	M16x1,5	16	3000	1.6	30	19.543	**2046032**
SM20W ALU	M20x1,5	20	3000	1.9	30	29.170	**2046033**
SM25W ALU	M25x1,5	25	3000	1.9	30	37.230	**2046034**
SM32W ALU	M32x1,5	32	3000	1.9	30	48.510	**2046035**
SM40W ALU	M40x1,5	40	3000	1.9	15	61.403	**2046036**
SM50W ALU	M50x1,5	50	3000	2.1	15	85.323	**2046037**
SM63W ALU	M63x1,5	63	3000	2.1	15	108.480	**2046038**

Alu Aluminium

Electrical installation pipe to EN 61386-1 with threaded ends to DIN EN 60423 for mechanical protection of cables.
With burr-free inner wall. One connection sleeve is already screwed onto each pipe.

Aluminium pipe bend, with thread



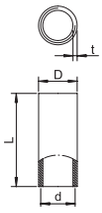
M

Type	Thread	Dimension A mm	Dimension B mm	Dimension D mm	Dimension l mm	Dimension R mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SBM16W ALU	M16x1,5	78	150	16	15	64	1.6	15	3.300	**2046042**
SBM20W ALU	M20x1,5	80	170	20	15	80	1.9	25	7.300	**2046043**
SBM25W ALU	M25x1,5	93	208	25	20	102.5	1.9	25	11.500	**2046044**
SBM32W ALU	M32x1,5	105	252	32	20	131	1.9	20	20.000	**2046045**
SBM40W ALU	M40x1,5	115	300	40	20	165	1.9	15	27.300	**2046046**
SBM50W ALU	M50x1,5	128	358	50	25	205	2.1	5	49.500	**2046047**
SBM63W ALU	M63x1,5	135	423	63	25	256.5	2.1	3	78.400	**2046048**

Alu Aluminium

90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall.
One connection sleeve is already screwed onto each pipe bend.

Aluminium sleeve, with thread



M

Type	Thread	Dimension D mm	Dimension d mm	Dimension L mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SVM16W ALU	M16x1,5	18.5	16	35	2.25	50	1.080	**2046052**
SVM20W ALU	M20x1,5	22.5	20	35	2.25	50	1.100	**2046053**
SVM25W ALU	M25x1,5	28	25	45	2.5	50	2.430	**2046054**
SVM32W ALU	M32x1,5	35	32	45	2.5	50	3.100	**2046055**
SVM40W ALU	M40x1,5	43.5	40	45	2.75	20	4.270	**2046056**
SVM50W ALU	M50x1,5	53.5	50	55	2.75	20	6.510	**2046057**
SVM63W ALU	M63x1,5	66.5	63	55	2.8	20	8.320	**2046058**

Alu Aluminium

Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.

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Aluminium pipe, without thread

Type	Dimension D mm	Dimension L mm	Dimension t mm	Pack. m	Weight kg/100 m	Item No.
S16W ALU	16	3000	1.2	30	15.065	**2046002**
S20W ALU	20	3000	1.2	30	19.134	**2046003**
S25W ALU	25	3000	1.3	30	26.134	**2046004**
S32W ALU	32	3000	1.3	30	33.853	**2046005**
S40W ALU	40	3000	1.4	15	45.839	**2046006**
S50W ALU	50	3000	1.4	15	57.714	**2046007**
S63W ALU	63	3000	1.7	15	88.394	**2046008**

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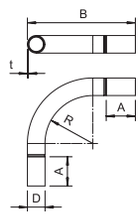
Alu Aluminium

Electrical installation pipe without threaded ends to EN 61386-1 for mechanical protection of cables. With burr-free inner wall.

Aluminium pipe bend, without thread

Type	Dimension A mm	Dimension B mm	Dimension D mm	Dimension l mm	Dimension R mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SB16W ALU	78	151	16	28	64	1.2	15	2.350	**2046012**
SB20W ALU	80	171	20	30	80	1.2	25	5.500	**2046013**
SB25W ALU	93	209	25	38	102.5	1.3	25	9.000	**2046014**
SB32W ALU	105	253	32	40	131	1.3	20	14.100	**2046015**
SB40W ALU	115	302	40	50	165	1.4	15	22.400	**2046016**
SB50W ALU	128	360	50	63	205	1.4	5	35.400	**2046017**
SB63W ALU	135	425	63	70	256.5	1.7	3	59.500	**2046018**

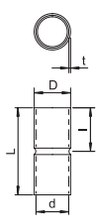


Alu Aluminium

90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

Aluminium sleeve, without thread

Type	Dimension D mm	Dimension d mm	Dimension L mm	Dimension l mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SV16W ALU	18.6	16.2	40	20	1.2	50	0.700	**2046022**
SV20W ALU	22.6	20.2	50	25	1.2	50	1.300	**2046023**
SV25W ALU	27.6	25.2	60	30	1.2	50	1.900	**2046024**
SV32W ALU	34.6	32.2	70	35	1.2	50	2.400	**2046025**
SV40W ALU	43	40.2	70	35	1.4	20	4.000	**2046026**
SV50W ALU	53	50.2	90	45	1.4	20	6.100	**2046027**
SV63W ALU	66.2	63.2	110	55	1.5	20	9.000	**2046028**



Alu Aluminium

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.

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Always indicate the item number when ordering.

Separable pipe end cap 129 TB

- For installation, repairs or retroinstallation
- Protects cables against sharp-edged pipe ends
- Draining holes against frost damage through condensation build-up
- Possible retroinstallation through locking snap closure
- UV-stable and halogen-free thanks to high-quality plastic
- 2 colours
- For metric pipes and PG sizes

For metric pipes and PG sizes

Small problem – major work: Remounting of defective pipe end caps on metal pipes has always been an unpopular and costly task. Now, the separable pipe end cap means that this is no longer the case. Open, plug it on, push it together – and you're done! Without any need to dismantle the installation. Of course, the splittable pipe end cap can also be used simply, safely and quickly for the first installation.
One pipe end cap for every application.

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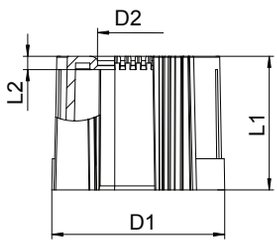
Always indicate the item number when ordering.

Pipe end cap, splittable, light grey

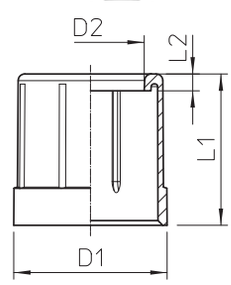


Type	Size	Dimension D1 mm	Dimension D2 mm	Dimension L1 mm	Dimension L2 mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
129 TB M16	M16	20	10	30	3	Light grey	50	0.400	**2047812**
129 TB M20	M20	24	13.4	30	3	Light grey	50	0.440	**2047831**
129 TB M25	M25	30	18.4	30	3	Light grey	50	0.500	**2047839**
129 TB M32	M32	36	25.4	30	3	Light grey	50	0.656	**2047855**
129 TB M40	M40	44	33.4	30	3	Light grey	30	0.790	**2047863**
129 TB M50	M50	53	43	30	3	Light grey	30	0.935	**2047890**
129 TB M63	M63	67	56	30	3	Light grey	20	1.140	**2047898**
129 TB M16 SW	M16	20	10	30	3	Black	50	0.400	**2047936**
129 TB M20 SW	M20	24	13.4	30	3	Black	50	0.440	**2047944**
129 TB M25 SW	M25	30	18.4	30	3	Black	50	0.500	**2047952**
129 TB M32 SW	M32	36	25.4	30	3	Black	50	0.656	**2047971**
129 TB M40 SW	M40	44	33.4	30	3	Black	30	0.790	**2047979**
129 TB M50 SW	M50	53	43	30	3	Black	30	0.935	**2047987**
129 TB M63 SW	M63	67	56	30	3	Black	20	1.140	**2047995**
129 TB PG9	PG9	20	10	30	3	Light grey	50	0.400	**2044509**
129 TB PG11	PG11	24	12.5	30	3	Light grey	50	0.430	**2044511**
129 TB PG13,5	PG13,5	26	15	30	3	Light grey	50	0.460	**2044513**
129 TB PG16	PG16	28	16	30	3	Light grey	50	0.500	**2044516**
129 TB PG21	PG21	34	21.5	30	3	Light grey	50	0.590	**2044521**
129 TB PG29	PG29	38	30	30	3	Light grey	50	0.700	**2044529**
129 TB PG36	PG36	48	40.5	30	3	Light grey	30	0.870	**2044536**
129 TB PG42	PG42	60	47.5	30	3	Light grey	30	0.980	**2044542**
129 TB PG48	PG48	66	52	30	3	Light grey	20	1.060	**2044548**

PE Polyethylene

Separable pipe end cap to slot onto metric electrical installation pipes.
The separable pipe end cap can be used for repairs on existing installations according to regulations. It is not necessary to disconnect the cables, allowing quick mounting.

Pipe end cap, metric, lightgrey



Type	Size	Dimension D1 mm	Dimension D2 mm	Dimension L1 mm	Dimension L2 mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
129 M16	M16	19.4	12.5	18	2	Light grey	100	0.104	**2047810**
129 M20	M20	23.4	16	22.5	2.5	Light grey	100	0.205	**2047829**
129 M25	M25	28.4	21	27.5	2.5	Light grey	50	0.235	**2047837**
129 M32	M32	35.4	27.5	34	3	Light grey	50	0.440	**2047853**
129 M40	M40	43.4	35	41	3	Light grey	50	0.650	**2047861**
129 M50	M50	53.4	44.5	48	3	Light grey	25	1.000	**2047888**
129 M63	M63	66.4	55	59	4	Light grey	25	1.900	**2047896**
129 M16 SW	M16	19.4	12.5	18	2	Black	100	0.104	**2047934**
129 M20 SW	M20	23.4	16	22.5	2.5	Black	100	0.205	**2047942**
129 M25 SW	M25	28.4	21	27.5	2.5	Black	50	0.235	**2047950**
129 M32 SW	M32	35.4	27.5	34	3	Black	50	0.440	**2047969**
129 M40 SW	M40	43.4	35	41	3	Black	50	0.650	**2047977**
129 M50 SW	M50	53.4	44.5	48	3	Black	25	1.000	**2047985**
129 M63 SW	M63	66.4	55	59	4	Black	25	1.900	**2047993**

PE Polyethylene

Pipe end sleeve to slot onto electrical installation pipes, metric.

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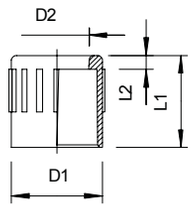
Pipe end cap, PG



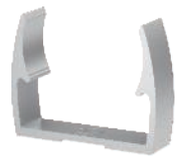
Pg

Type	Size	Colour	Dimension D1 mm	Dimension D2 mm	Dimension L1 mm	Dimension L2 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
129 PG11	Pg 11	Light grey	21.7	15	22	4	100	0.276	**2044110**
129 PG13.5	Pg 13,5	Light grey	23.5	16	24	4	100	0.326	**2044137**
129 PG16	Pg 16	Light grey	25.6	18	26	4	100	0.400	**2044161**
129 PG29	Pg 29	Light grey	40.3	32.5	38	4	50	1.070	**2044293**
129 PG36	Pg 36	Light grey	50.8	40	44	4	50	1.444	**2044366**
129 PG42	Pg 42	Light grey	58.2	46	50	4	25	2.176	**2044420**
129 PG48	Pg 48	Light grey	63.9	50	56	4	25	2.808	**2044471**

PE Polyethylene

Pipe end cap to slot onto electrical installation pipes, PG.

Quick clip, aluminium



Type	Nominal size	Pack. pcs	Weight kg/100 pcs.	Item No.
ALQ M16	16	100	0.780	**2149916**
ALQ M20	20	100	0.900	**2149920**
ALQ M25	25	100	1.110	**2149925**
ALQ M32	32	50	1.600	**2149932**
ALQ M40	40	50	2.400	**2149940**
ALQ M50	50	25	2.730	**2149950**
ALQ M63	63	20	3.340	**2149963**

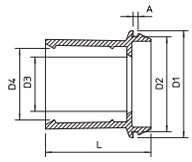
Alu Aluminium

OBO Quick clip, type ALQ M, for all metric ALU pipe systems, as well as light-duty and heavy-duty insulation pipes. Suitable for mounting the OBO pipe system, material: aluminium. Pipe centring aids allow optimal attachment of the pipe and automatically turn the clip into the correct position. Slot for side alignment during mounting with wood screw or knock-in anchor. Recommended fastening spacing 50–60 cm.

Dimensions

Type	Dimension A mm	Dimension B mm	Dimension E mm	Dimension F mm	Dimension H mm	Dimension h mm
ALQ M16	22	18	5.1	9.5	25	18.5
ALQ M20	25	18	5.1	9.5	27.5	20
ALQ M25	31	18	5.1	9.5	30	22
ALQ M32	39	18	5.1	9.5	35	26
ALQ M40	50	18	6.1	12	42	30.5
ALQ M50	60	18	6.1	12	46.5	33.5
ALQ M63	73	18	6.1	12	55.5	41.5

Plug-in seal for pipes, T-series junction box, light grey



IP 55 M25 M32 M40

Type	Size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
EDR 25 16-20 LGR	M25	Light grey	50	0.520	**2011506**
EDR 25 20-25 LGR	M25	Light grey	50	0.680	**2011514**
EDR 32 25-32 LGR	M32	Light grey	50	1.170	**2011530**
EDR 40 32-40 LGR	M40	Light grey	25	2.200	**2011546**

PVC Polyvinylchloride

Plug-in seal for junction boxes for direct insertion of metric pipes

Always indicate the item number when ordering.

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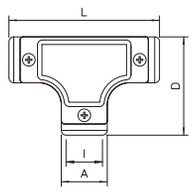
Control T piece without thread

IP 54

Type	Size	Dimension D mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SKT16W ALU	16	47.5	72	5	6.900	**2047588**
SKT20W ALU	20	65	102	5	12.900	**2047589**
SKT25W ALU	25	75	115	5	21.500	**2047590**
SKT32W ALU	32	96	156	4	45.300	**2047591**
SKT40W ALU	40	96	156	4	32.800	**2047592**
SKT50W ALU	50	124.5	194	2	53.100	**2047593**



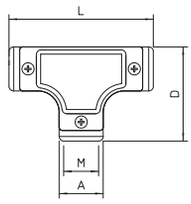
AIG Cast aluminium

Die-cast aluminium T piece, for mounting in pipe sections as a junction.
Removable cover for easier cable routing and later checking.

Control T piece with thread

M IP 54

Type	Size	Dimension D mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SKTM16W ALU	16	47.5	72	5	7.200	**2047604**
SKTM20W ALU	20	65	102	5	13.500	**2047605**
SKTM25W ALU	25	75	115	5	22.000	**2047606**
SKTM32W ALU	32	96	156	4	46.600	**2047607**
SKTM40W ALU	40	96	156	4	34.000	**2047608**
SKTM50W ALU	50	124.5	194	2	56.300	**2047609**



AIG Cast aluminium

Die-cast aluminium T piece, with internal thread, for mounting in pipe sections as a junction.
Removable cover for easier cable routing and later checking.

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Always indicate the item number when ordering.

Quick pipe

- 4 sizes – M16-M32
- Two colours: White and grey
- Simple installation
- Retroinstallation possible
- VDE-approved

Click, insert, twist

The Quick pipe system combines the benefits of cable duct and conventional electrical installation pipes to produce a single, intelligent system for surface-mounted installations. Cables are inserted in the open Quick pipe electrical installation pipes in the same way as with open cable ducting. After the cable is inserted, the Quick pipe is twisted in the Quick clip to securely lock it in place. Retroinstallation is also no problem, because a twist is all it takes to open the Quick pipe again. All Quick pipe system components such as 90° bends, T pieces and connection sleeves are available in the four metric sizes M16, M20, M25 and M32. You can order Quick pipe electrical installation pipe separately in 2 metre lengths – or in a handy complete set including the matching Quick clips.

Always indicate the item number when ordering.

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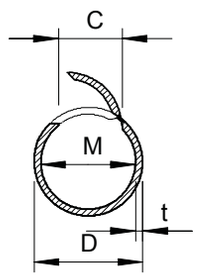
Quick pipe, light grey

IP 44 M

Type	Size	Colour	Length mm	Dimension t mm	Dimension C mm	Pack. m	Weight kg/100 m	Item No.
2953 M16 LGR	M16	Light grey	2000	1.2	8.2	50	7.000	**2153904**
2953 M20 LGR	M20	Light grey	2000	1.5	10	40	11.500	**2153912**
2953 M25 LGR	M25	Light grey	2000	1.6	13.6	30	16.000	**2153920**
2953 M32 LGR	M32	Light grey	2000	1.6	17	20	21.500	**2153939**
2953 M16 RW	M16	Pure white	2000	1.2	8.2	50	7.700	**2153960**
2953 M20 RW	M20	Pure white	2000	1.5	10	40	11.500	**2153963**
2953 M25 RW	M25	Pure white	2000	1.6	13.6	30	16.000	**2153966**
2953 M32 RW	M32	Pure white	2000	1.6	17	20	21.500	**2153969**



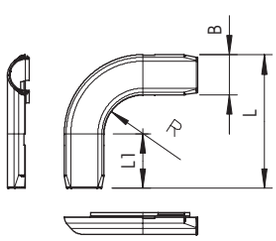
PVC Polyvinylchloride

Quick Pipe combines the advantages of cable duct and installation pipe in an intelligent system. This system allows tidy and safe surface-mounted installation of all kinds of cables on walls and ceilings. Quick pipe is available in four metric sizes: M16, M20, M25 and M32. The stock length is 2 m.
The system is VDE-tested and achieves a protection rating of IP44. The Quick Pipe can be used in the temperature range between -25 and +60 °C and is resistant against impact energy of 5 J.
The fittings are a component part of the system. The smallest shipped quantity is one shipping box.

90° Quick pipe bend, light grey

IP 44 M

Type	Size	Colour	Dimension B mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2953 B M16 LGR	M16	Light grey	20.4	68.4	5	1.057	**2153864**
2953 B M20 LGR	M20	Light grey	25.5	82.5	5	1.871	**2153866**
2953 B M25 LGR	M25	Light grey	31.2	91.2	5	2.565	**2153868**
2953 B M32 LGR	M32	Light grey	38.7	102.7	5	3.917	**2153870**
2953 B M16 RW	M16	Pure white	20.4	68.4	5	1.057	**2153980**
2953 B M20 RW	M20	Pure white	25.5	82.5	5	1.871	**2153982**
2953 B M25 RW	M25	Pure white	31.2	91.2	5	2.565	**2153984**
2953 B M32 RW	M32	Pure white	38.7	102.7	5	3.917	**2153986**



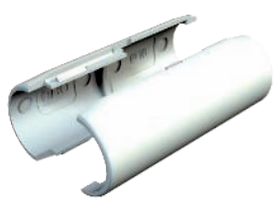
PVC Polyvinylchloride

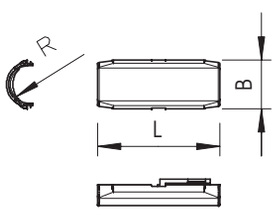
The Quick Pipe bends 90° are VDE-tested and consist of two interconnectable half shells, which can be closed around the Quick Pipe.

Quick pipe connecting sleeve, light grey

IP 44 M

Type	Size	Colour	Dimension L mm	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2953 M M16 LGR	M16	Light grey	52	20.4	10	0.538	**2153829**
2953 M M20 LGR	M20	Light grey	65	25.5	10	1.015	**2153831**
2953 M M25 LGR	M25	Light grey	72	31.2	10	1.348	**2153833**
2953 M M32 LGR	M32	Light grey	80	38.7	10	2.084	**2153835**
2953 M M16 RW	M16	Pure white	52	20.4	10	0.538	**2153971**
2953 M M20 RW	M20	Pure white	65	25.5	10	1.015	**2153973**
2953 M M25 RW	M25	Pure white	72	31.2	10	1.348	**2153975**
2953 M M32 RW	M32	Pure white	80	38.7	10	2.084	**2153977**





PVC Polyvinylchloride

The Quick Pipe connection sleeves are VDE-tested and consist of two interconnectable half shells, which can be closed around the Quick Pipe.

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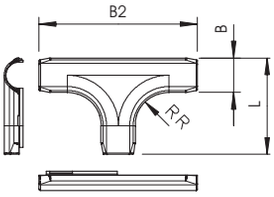
Quick pipe T piece, light grey



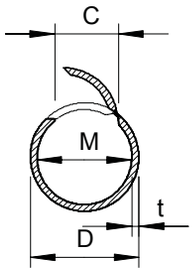
IP 44 M

Type	Size	Colour	Dimension L mm	Dimension B mm	Dimension B2 mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2953 T M16 LGR	M16	Light grey	57.4	20.4	94.4	5	1.421	**2153872**
2953 T M20 LGR	M20	Light grey	67.5	25.5	109.5	5	2.340	**2153874**
2953 T M25 LGR	M25	Light grey	77.2	31.2	123.2	5	3.203	**2153876**
2953 T M32 LGR	M32	Light grey	86.7	38.7	134.7	5	4.639	**2153878**
2953 T M16 RW	M16	Pure white	57.4	20.4	94.4	5	1.421	**2153992**
2953 T M20 RW	M20	Pure white	67.5	25.5	109.5	5	2.340	**2153994**
2953 T M25 RW	M25	Pure white	77.2	31.2	123.2	5	3.203	**2153996**
2953 T M32 RW	M32	Pure white	86.7	38.7	134.7	5	4.639	**2153998**

PVC Polyvinylchloride

The Quick Pipe T pieces are VDE-tested and consist of two interconnectable half shells, which can be closed around the Quick Pipe.

Set made of Quick clip and Quick pipe



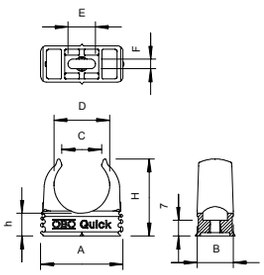
IP 44 M

Type	Size	Colour	Set consisting of	Pack. pcs	Weight kg/100 pcs.	Item No.
2954 M16 LGR	M16	Light grey	50 m Quick pipe and 156x OBO Quick clip	1	444.000	**2154501**
2954 M20 LGR	M20	Light grey	40 m Quick pipe and 120x OBO Quick clip	1	508.000	**2154528**
2954 M25 LGR	M25	Light grey	30 m Quick pipe and 96x OBO Quick clip	1	517.000	**2154536**
2954 M32 LGR	M32	Light grey	20 m Quick pipe and 60x OBO Quick clip	1	479.000	**2154544**

PVC Polyvinylchloride

Convenient set consisting of Quick clip and Quick pipe.
The Quick pipe combines the advantages of cable duct and installation pipe into an intelligent system. This system allows tidy and safe surface-mounted installation of all kinds of cables on walls and ceilings. Quick pipe is available in four metric sizes: M16, M20, M25 and M32 and the stock length is 2 m.
The system is VDE-tested and achieves a protection rating of IP44. The Quick pipe can be used in the temperature range from –25 to +60 °C and is resistant to an impact energy of 5 J.

Quick clip



M

Type	Nominal size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2955 M16	M16	Light grey	100	0.252	**2149004**
2955 M20	M20	Light grey	100	0.325	**2149010**
2955 M25	M25	Light grey	100	0.433	**2149016**
2955 M32	M32	Light grey	50	0.630	**2149022**
2955 M40	M40	Light grey	50	0.835	**2149028**
2955 M50	M50	Light grey	25	1.454	**2149034**
2955 M63	M63	Light grey	20	2.203	**2149040**

PP Polypropylene

OBO Quick clip, type 2955/...: for all metric steel armoured pipes, as well as light-duty and heavy-duty metric insulation pipes. Suitable for mounting the OBO Quick pipe.
Pipe centring aids allow optimal attachment of the pipe and automatically turn the clip into the correct position.
Universal fastening option; can be arranged with the OBO Multi-quick and starQuick clip.
Slot for side alignment during mounting with wood screw or knock-in anchor.
Size M16-M32 can be screwed onto an M6 thread.
Recommended fastening spacing 50–60 cm, for max. extraction values F at a room temperature of 20 °C, see the table.

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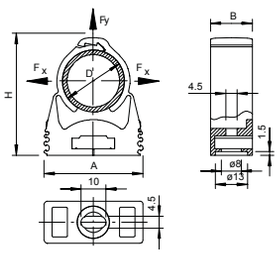
Always indicate the item number when ordering.

Quick clip, black

Type	Nominal size	Clamping range D mm	Breaking load kN	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
SQ-20 SW	20-23	19.5 - 23.5	0.8	Jet black	50	0.848	**2146164**

PP Polypropylene

Cable brackets for isCon® conductors for mounting on the building structure. Can also be used in the first 1.5 m. Can be arranged next to each other. Made from a UV and weather-resistant polyamide.



Quick pipe shears

IP 44 M

Type	Cutting area mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SQ 1632	16 - 32	1	40.000	**2153572**

For exact, burr-free cutting of the Quick pipe of Ø 16-32 mm.

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Always indicate the item number when ordering.

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Beam clamp systems

Beam clamps for knocking in, light-duty 376

Beam clamps for knocking in, heavy-duty 382

Beam clamps for screwing in, light-duty 383

Beam clamps for screwing in, heavy-duty 386

Special beam clamps 387

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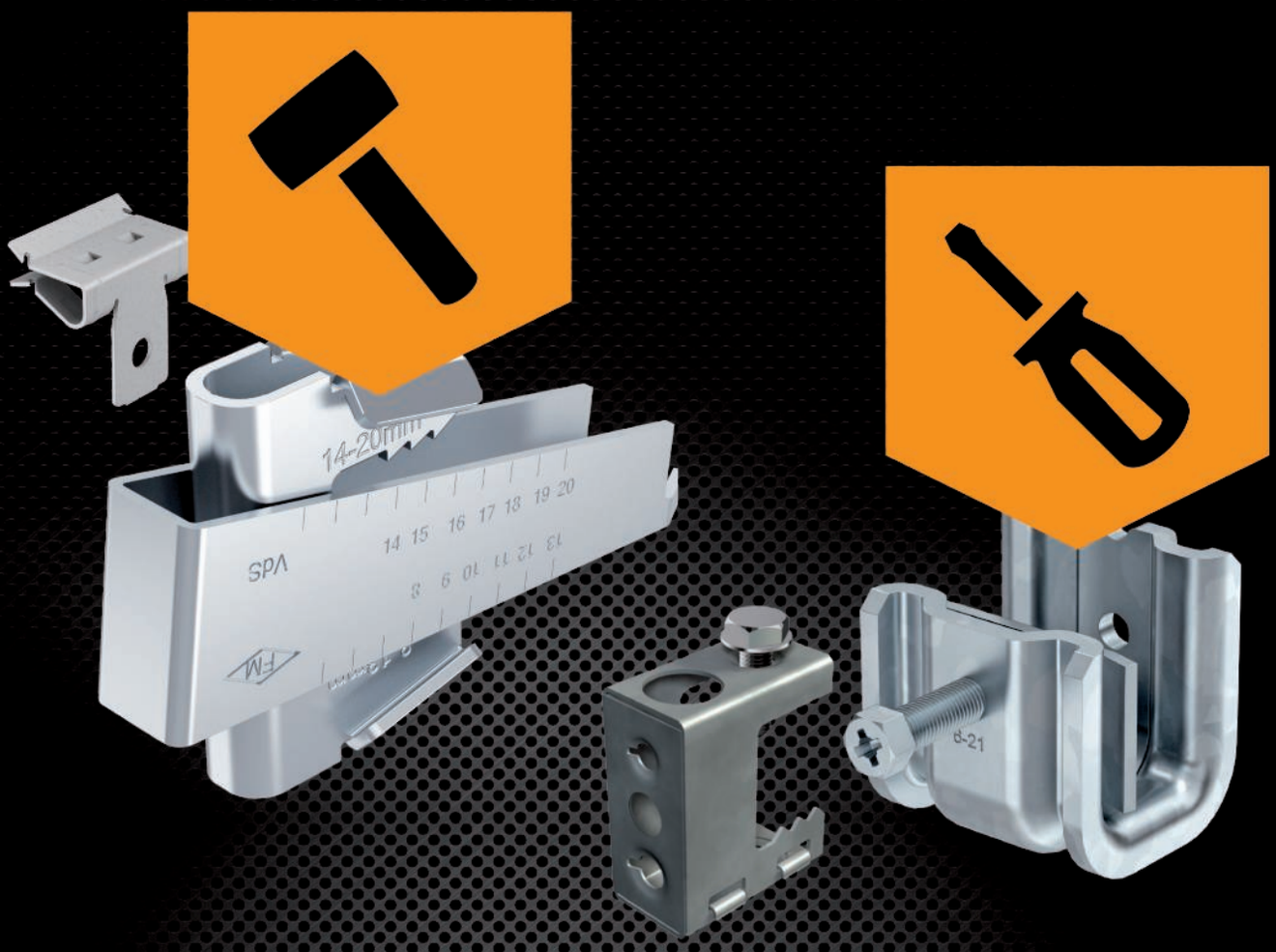
Beam clamp systems



The wide range of beam clamps available allows a very wide range of components to be fastened to steel girder structures of different flange thicknesses. With the knocking in variant of the beam clamps, the beam clamps grab the metal, whilst, with the screw-on variant, the bolt clamps the flange to the beam clamp.

Special

Always indicate the item number when ordering.

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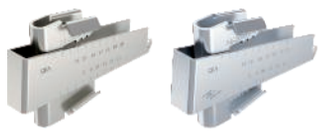
Beam clamp for knocking in, light-duty

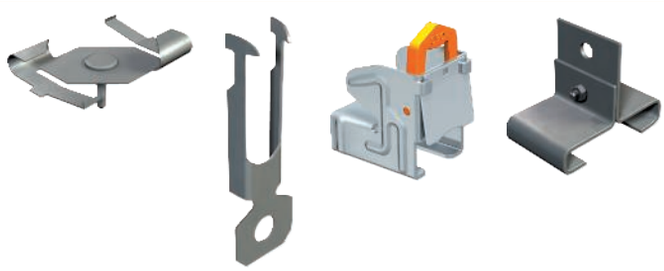
Beam clamp for knocking in, heavy-duty



Beam clamp for screwing on, light-duty

Beam clamp for screwing on, heavy-duty

Special beam clamps



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Always indicate the item number when ordering.

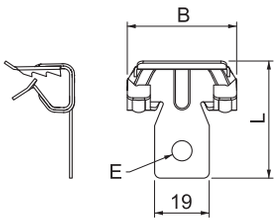
Beam clamp, with fastening hole

Type	Flange thickness mm	Fastening hole mm	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
BCVH 2-4	2 - 4	6.5	450	100	1.350	**1483601**
BCVH 4-8	4 - 8	6.5	950	100	1.660	**1483603**
BCVH 8-14	8 - 14	6.5	950	100	1.800	**1483605**
BCVH 14-20	14 - 20	6.5	950	100	1.950	**1483607**

St Steel

ZL Zinc scale

Beam clamp for knocking in with fastening hole as individual fastening solution on the beam.



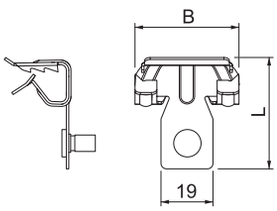
Beam clamp, with threaded bolt

Type	Flange thickness mm	Thread	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
BCVTB 2-4 M6	2 - 4	M6 x 9mm	450	100	0.900	**1483611**
BCVTB 4-8 M6	4 - 8	M6 x 9mm	450	100	1.600	**1483613**
BCVTB 8-14 M6	8 - 14	M6 x 9mm	450	100	1.800	**1483615**
BCVTB 14-20 M6	14 - 20	M6 x 9mm	450	100	2.000	**1483617**

St Steel

ZL Zinc scale

Beam clamp for knocking in with threaded bolt as individual fastening solution on the beam.



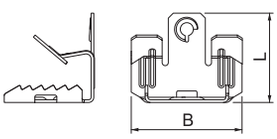
Beam clamp, with female thread

Type	Flange thickness mm	Thread	Fastening hole mm	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
BCUIT 3-7 M6	3 - 7	M6	7	350	100	2.100	**1483621**
BCUIT 8-12,5 M6	8 - 12	M6	7	500	100	2.450	**1483623**
BCUIT 14-20 M6	14 - 20	M6	7	500	100	2.700	**1483625**

St Steel

ZL Zinc scale

Beam clamp for knocking in with internal thread as individual fastening solution on the beam.



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Always indicate the item number when ordering.

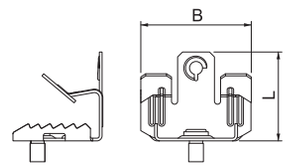
Beam clamp, with threaded bolt

Type	Flange thickness mm	Thread	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
BCUTB 3-7 M6	3 - 7	M6 x 9 mm	350	100	2.850	**1483631**
BCUTB 8-12,5 M6	8 - 12.5	M6 x 9 mm	500	100	2.900	**1483633**
BCUTB 14-20 M6	14 - 20	M6 x 9 mm	500	100	3.200	**1483635**

St Steel

ZL Zinc scale

Beam clamp for knocking in with threaded bolt as individual fastening solution on the beam.



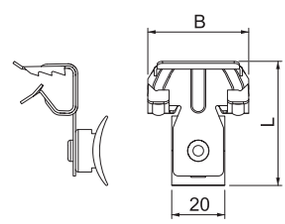
Beam clamp, with cable tie

Type	Flange thickness mm	Cable strip length mm	Max. D Ø	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
BCCT 2-4 L240	2 - 4	240	70	220	50	1.600	**1483641**
BCCT 4-8 L240	4 - 8	240	70	220	50	1.900	**1483643**
BCCT 4-8 L365	4 - 8	365	110	220	50	2.000	**1483645**
BCCT 8-14 L240	8 - 14	240	70	220	50	2.100	**1483647**
BCCT 8-14 L365	8 - 14	365	110	220	50	2.200	**1483649**
BCCT 14-20 L240	14 - 20	240	70	220	50	2.250	**1483651**
BCCT 14-20 L365	14 - 20	365	110	220	50	2.250	**1483653**

St Steel

ZL Zinc scale

Knock-on beam clamp with cable tie as an individual fastening solution at the beam.



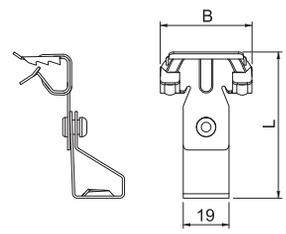
Beam clamp, for threaded rod

Type	Flange thickness mm	Thread	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
BCTR 4-8 M6	4 - 8	M6	650	50	3.100	**1483661**
BCTR 8-14 M6	8 - 14	M6	650	50	3.300	**1483663**
BCTR 4-8 M8	4 - 8	M8	700	50	3.100	**1483665**
BCTR 8-14 M8	8 - 14	M8	700	50	3.100	**1483667**
BCTR 4-8 M10	4 - 8	M10	750	50	3.100	**1483669**
BCTR 8-14 M10	8 - 14	M10	750	50	3.200	**1483671**

St Steel

ZL Zinc scale

Beam clamp for knocking in with threaded rod seat as individual fastening solution on the beam.



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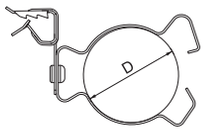
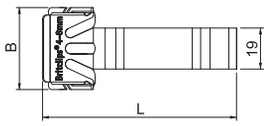
Always indicate the item number when ordering.

Beam clamp, for pipes





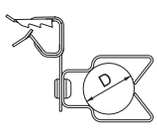
Type	Flange thickness mm	Clamping range D mm	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
BCHPC 2-4 D20	2 - 4	18 - 24	450	50	2.900	**1483681**
BCHPC 2-4 D25	2 - 4	22 - 26	450	50	3.200	**1483683**
BCHPC 2-4 D32	2 - 4	30 - 32	450	50	3.850	**1483685**
BCHPC 4-8 D20	4 - 8	18 - 24	450	50	3.400	**1483687**
BCHPC 4-8 D25	4 - 8	22 - 26	450	50	3.600	**1483689**
BCHPC 4-8 D32	4 - 8	30 - 32	450	50	3.900	**1483691**
BCHPC 4-8 D40	4 - 8	36 - 40	450	50	4.800	**1483693**
BCHPC 8-14 D20	8 - 14	18 - 24	450	50	3.800	**1483701**
BCHPC 8-14 D25	8 - 14	22 - 26	450	50	3.800	**1483703**
BCHPC 8-14 D32	8 - 14	30 - 32	450	50	4.200	**1483705**
BCHPC 8-14 D40	8 - 14	36 - 40	450	50	4.500	**1483707**
BCHPC 14-20 D20	14 - 20	18 - 24	450	50	3.500	**1483711**
BCHPC 14-20 D25	14 - 20	22 - 26	450	50	4.100	**1483713**
BCHPC 14-20 D32	14 - 20	30 - 32	450	50	4.700	**1483715**
BCHPC 14-20 D40	14 - 20	36 - 40	450	50	5.600	**1483717**

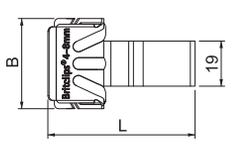
St Steel

ZL Zinc scale

Beam clamp for knocking in with closed pipe seat as individual fastening solution on the beam.

Beam clamp, for pipes





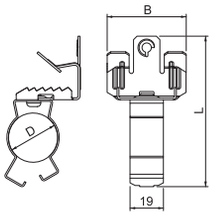
Type	Flange thickness mm	Pipe size D mm	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
BCHPO 2-4 D20	2 - 4	20	110	50	2.950	**1483811**
BCHPO 2-4 D25	2 - 4	25	110	50	2.000	**1483813**
BCHPO 2-4 D32	2 - 4	32	110	50	2.400	**1483815**
BCHPO 4-8 D20	4 - 8	20	110	50	3.000	**1483821**
BCHPO 4-8 D25	4 - 8	25	110	50	3.200	**1483823**
BCHPO 4-8 D32	4 - 8	32	110	50	3.000	**1483825**
BCHPO 8-14 D20	8 - 14	20	110	50	3.200	**1483831**
BCHPO 8-14 D25	8 - 14	25	110	50	3.100	**1483833**
BCHPO 8-14 D32	8 - 14	32	110	50	3.300	**1483835**
BCHPO 14-20 D20	14 - 20	20	110	50	3.200	**1483841**
BCHPO 14-20 D25	14 - 20	25	110	50	3.100	**1483843**
BCHPO 14-20 D32	14 - 20	32	110	50	3.300	**1483845**

St Steel

ZL Zinc scale

Beam clamp for knocking in with open pipe seat as individual fastening solution on the beam.

Beam clamp, for pipes



Type	Flange thickness mm	Clamping range D mm	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
BCVPC 3-7 D20	3 - 7	19 - 22	350	50	4.100	**1483781**
BCVPC 3-7 D25	3 - 7	23 - 25	450	50	4.500	**1483783**
BCVPC 3-7 D32	3 - 7	26 - 32	450	50	4.700	**1483785**
BCVPC 3-7 D40	3 - 7	33 - 40	450	50	5.600	**1483787**
BCVPC 8-12,5 D20	8 - 12.5	19 - 22	350	50	4.200	**1483791**
BCVPC 8-12,5 D25	8 - 12.5	23 - 25	450	50	4.700	**1483793**
BCVPC 8-12,5 D32	8 - 12.5	26 - 32	450	50	4.900	**1483795**
BCVPC 8-12,5 D40	8 - 12.5	33 - 40	450	50	5.800	**1483797**
BCVPC 14-20 D20	14 - 20	19 - 22	350	50	4.600	**1483801**
BCVPC 14-20 D25	14 - 20	23 - 25	450	50	5.200	**1483803**
BCVPC 14-20 D32	14 - 20	26 - 32	450	50	5.400	**1483805**
BCVPC 14-20 D40	14 - 20	33 - 40	450	50	6.300	**1483807**

St Steel

ZL Zinc scale

Beam clamp for knocking in with closed pipe seat as individual fastening solution on the beam.

Always indicate the item number when ordering.

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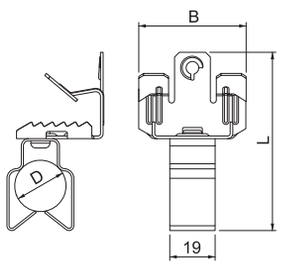
Beam clamp, for pipes

Type	Flange thickness mm	Pipe size D mm	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
BCVPO 3-7 D20	3 - 7	20	110	50	3.400	**1483751**
BCVPO 3-7 D25	3 - 7	25	110	50	3.500	**1483753**
BCVPO 3-7 D32	3 - 7	32	110	50	3.800	**1483757**
BCVPO 8-12,5 D20	8 - 12.5	20	110	50	4.100	**1483761**
BCVPO 8-12,5 D25	8 - 12.5	25	110	50	4.100	**1483763**
BCVPO 8-12,5 D32	8 - 12.5	32	110	50	4.100	**1483765**
BCVPO 14-20 D20	14 - 20	20	110	50	4.000	**1483771**
BCVPO 14-20 D25	14 - 20	25	110	50	4.250	**1483773**
BCVPO 14-20 D32	14 - 20	32	110	50	4.300	**1483775**



St Steel

ZL Zinc scale

Beam clamp for knocking in with open pipe seat as individual fastening solution on the beam.

Beam clamp, for pipes

Type	Flange thickness mm	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BCC 2-4 D5,5	2 - 4	4.5 - 5.5	100	0.400	**1483901**
BCC 2-4 D7	2 - 4	6 - 7	100	0.400	**1483903**
BCC 2-4 D9	2 - 4	7 - 9	100	0.450	**1483905**
BCC 2-4 D11	2 - 4	10 - 12	100	0.500	**1483907**
BCC 2-4 D14	2 - 4	12 - 14	100	0.550	**1483911**
BCC 2-4 D18	2 - 4	15 - 18	100	0.700	**1483915**
BCC 2-4 D24	2 - 4	19 - 24	100	0.800	**1483919**
BCC 2-4 D30	2 - 4	25 - 30	100	0.900	**1483923**
BCC 4-7 D5,5	4 - 7	4.5 - 5.5	100	0.500	**1483931**
BCC 4-7 D7	4 - 7	6 - 7	100	0.550	**1483933**
BCC 4-7 D9	4 - 7	7 - 9	100	0.600	**1483935**
BCC 4-7 D11	4 - 7	10 - 11	100	0.700	**1483937**
BCC 4-7 D14	4 - 7	12 - 14	100	0.700	**1483941**
BCC 4-7 D18	4 - 7	15 - 18	100	0.800	**1483945**
BCC 4-7 D24	4 - 7	19 - 24	100	0.900	**1483951**
BCC 4-7 D30	4 - 7	25 - 30	100	1.100	**1483955**
BCC 8-12 D5,5	8 - 12	4.5 - 5.5	100	0.500	**1483960**
BCC 8-12 D7	8 - 12	6 - 7	100	0.600	**1483961**
BCC 8-12 D9	8 - 12	7 - 9	100	0.700	**1483963**
BCC 8-12 D11	8 - 12	10 - 11	100	0.700	**1483965**
BCC 8-12 D14	8 - 12	12 - 14	100	0.800	**1483969**
BCC 8-12 D18	8 - 12	15 - 18	100	0.900	**1483973**
BCC 8-12 D24	8 - 12	19 - 24	100	1.100	**1483977**
BCC 8-12 D30	8 - 12	25 - 30	100	1.100	**1483981**

St Steel

ZL Zinc scale

Beam clamp for knocking in for cables as individual fastening solution on the beam.

Always indicate the item number when ordering.

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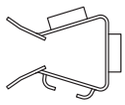
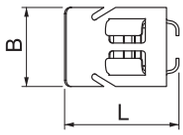
Beam clamp, for pipes





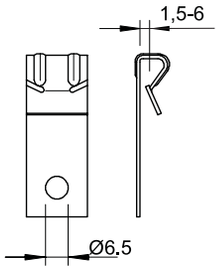
Type	Flange thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BCCA	12 - 20	100	1.700	**1483999**

St Steel

ZL Zinc scale

Beam clamp adapter for knocking in. Seat for BCC beam clamps for flange thicknesses of 2 - 4 mm.

Profile suspensions



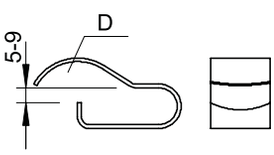
Type	Flange thickness mm	Height mm	Width mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
TKL 4	1.5 - 4	52	10	0.72	100	0.860	**1485105**
TKL 6	4 - 6	54	12	0.72	100	1.090	**1485113**

St Steel

ZL Zinc scale

Profile suspension with drill hole to accept S hooks.

Support clip



Type	Flange thickness mm	Pipe size D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BCCF 8-9 D20	8 - 9	20	100	1.100	**1483985**

St Steel

ZL Zinc scale

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Always indicate the item number when ordering.

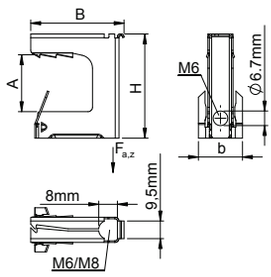
Beam clamp, multifunctional

Type	Flange thickness mm	Height mm	Width mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
TK MULTI 8	2 - 8	30	30	1.2	100	0.100	**1485140**
TK MULTI 16	8 - 16	38	32	1.2	100	0.120	**1485144**
TK MULTI 24	16 - 24	48	42	1.2	50	0.170	**1485148**

St Steel

ZDM Galvanised, MAGNI 565

The multifunctional beam clamp is suitable for fastening cables, protective pipes and cable sections on steel girders of any size (one clip for every application). Here, the beam clamp is very versatile thanks to various fastening options. Mounting of the beam clamp is quick and efficient, with no need for welding or drilling. It is simply mounted by hammering or pushing into place. The beam clamp can be used in both internal and external areas.



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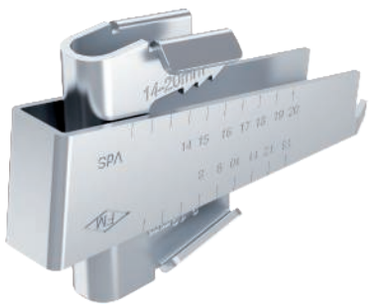
Always indicate the item number when ordering.

Beam clamp TKM Chock



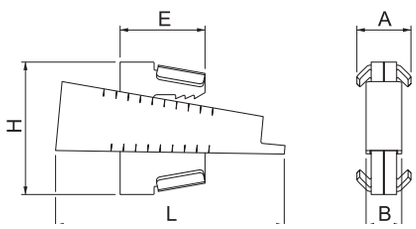
Type	Flange thickness mm	For threaded rod	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
TKM Chock 1 FS	8 - 20	M6 / M8	2	25	16.100	**1480850**
TKM Chock 2 FS	8 - 20	M8 / M10	3.5	25	16.400	**1480852**
TKM Chock 3 FS	8 - 20	M12	5	25	16.800	**1480854**

St Steel

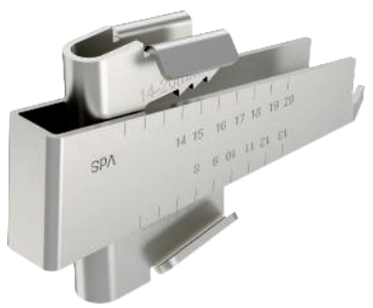
FS Strip-galvanised

Beam clamp for knocking in on the support with flange thicknesses of 8–20 mm.
Suitable for parallel and inclined flanges.
Maximum flange inclination: 14%

Dimensions



Beam clamp TKM Chock

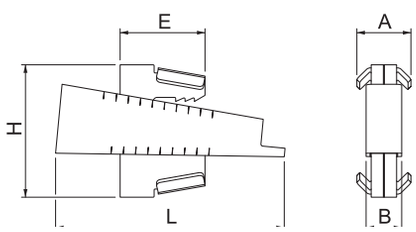


Type	Flange thickness mm	For threaded rod	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
TKM Chock 2 A4	8 - 20	M8/M10	3.5	25	16.400	**1480882**

V4A Stainless steel, A4

Beam clamp for knocking in on the support with flange thicknesses of 8–20 mm.
Suitable for parallel and inclined flanges.
Maximum flange inclination: 14%

Dimensions



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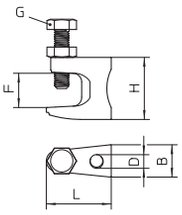
Always indicate the item number when ordering.

Screw-in beam clamp, with gland hole

Type	Flange thickness mm	Height mm	Fastening hole mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
FL 1 TG	0 - 18	35	9	1.2	50	8.500	**1488015**
FL 2 TG	0 - 20	42	11	2.5	50	14.000	**1488023**
FL 3 TG	0 - 26	54	13	3.5	25	18.000	**1488031**

TG Cast iron

With gland hole.

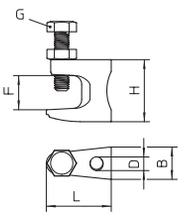


Screw-in beam clamp, with thread

Type	Flange thickness mm	Height mm	For threaded rod	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
FL1-G M8 TG	0 - 18	35	M8	1.2	50	8.500	**1488074**
FL2-G M10 TG	0 - 20	42	M10	2.5	50	14.000	**1488082**
FL3-G M12 TG	0 - 26	54	M12	3.5	25	18.000	**1488090**

TG Cast iron

With thread.



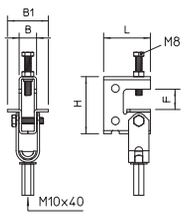
Screw-in beam clamp, with hinge

Type	Flange thickness mm	For threaded rod	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
TK FL G	0 - 24	M10	0.9 - 2.8	10	34.000	**1488111**

St Steel

ZL Zinc scale

Two-hinge beam clamp for fastening on beams without welding and drilling. The maximum load is dependent on the load direction.



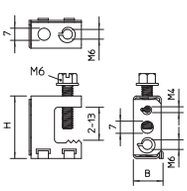
Screw-in beam clamp, universal

Type	Flange thickness mm	Height mm	Width mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
TK 213	2 - 13	35	–	1.35	100	2.720	**1484702**

St Steel

ZL Zinc scale

Various fastening options (horizontal and vertical).



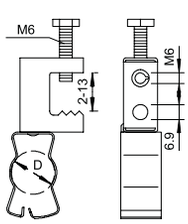
Screw-in beam clamp, for pipes and cables

Type	Flange thickness mm	Clamping range D mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
TKS 213-25	2 - 17	23 - 25	0.45	50	3.990	**1484818**
TKS 213-32	2 - 17	26 - 32	0.45	50	4.170	**1484826**

St Steel

ZL Zinc scale

With rotating clip to accept pipes and cables, lockable.



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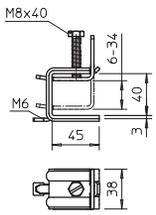
Always indicate the item number when ordering.

Beam clamp for screwing on, light-duty



Type	Flange thickness mm	Pack. pair	Weight kg/100 pairs	Item No.
339 2	6 - 34	5	37.000	**1408534**

St Steel

G Electrogalvanised

For rapid fastening on steel profiles during the mounting of cable tracks, clamp clips, luminaire suspensions, etc. A complete system consists of two beam clamps and a piece of C profile rail of any length, as well as two protective caps.

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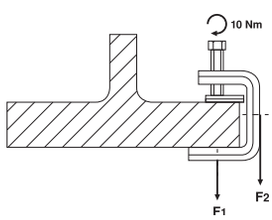
Always indicate the item number when ordering.

Beam clamp SSP

- High load capacity
- 2 clamping ranges (6–21 mm and 20–40 mm)
- 2 thread variants (M6 and M8)
- 3 materials (FT, V2A, V4A)
- BET-tested

Heavy loads.

The SSP beam clamps are used for fastening a wide range of components, including electrical installations, to load-bearing profiles. Their main benefit is their high load-bearing capacity.



	SSP 6-21	SSP 20-40
F1	1.75 kN	1.4 kN
F2	1.5 kN	1.3 kN

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Beam clamp SSP 6-21

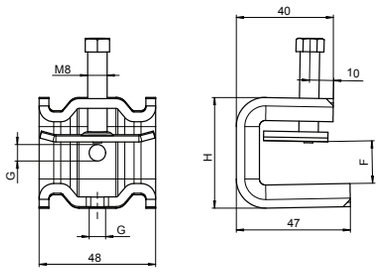
Type	Flange thickness mm	For threaded rod	Breaking load F1 kN	Breaking load F2 kN	Pack. pcs	Weight kg/100 pcs.	Item No.
SSP 6-21 M6 FT	6 - 21	M6	1.75	1.5	25	23.900	**1486232**
SSP 6-21 M6 A2	6 - 21	M6	1.75	1.5	25	23.200	**1486234**
SSP 6-21 M6 A4	6 - 21	M6	1.75	1.5	25	23.200	**1486236**
SSP 6-21 M8 FT	6 - 21	M8	1.75	1.5	25	23.900	**1486282**
SSP 6-21 M8 A2	6 - 21	M8	1.75	1.5	25	23.200	**1486284**
SSP 6-21 M8 A4	6 - 21	M8	1.75	1.5	25	23.200	**1486286**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

This type of beam clamp is pushed onto the support and fixed to the girder or flat iron using a pressure trough and bolt (M8). The hexagonal bolt has a WAF of 10 mm. In the clip element, two additional M6 threads are also incorporated, to fix threaded rods, for example.

Dimensions



Beam clamp SSP 20-40

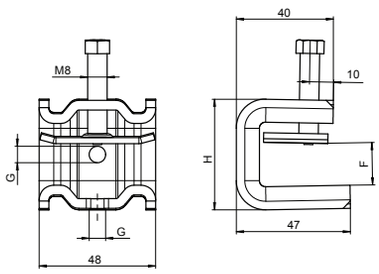
Type	Flange thickness mm	For threaded rod	Breaking load F1 kN	Breaking load F2 kN	Pack. pcs	Weight kg/100 pcs.	Item No.
SSP 20-40 M6 FT	20 - 40	M6	1.4	1.3	25	27.700	**1486238**
SSP 20-40 M6 A2	20 - 40	M6	1.4	1.3	25	27.700	**1486242**
SSP 20-40 M6 A4	20 - 40	M6	1.4	1.3	25	27.700	**1486244**
SSP 20-40 M8 FT	20 - 40	M8	1.4	1.3	25	27.800	**1486288**
SSP 20-40 M8 A2	20 - 40	M8	1.4	1.3	25	27.800	**1486292**
SSP 20-40 M8 A4	20 - 40	M8	1.4	1.3	25	27.800	**1486294**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

This type of beam clamp is pushed onto the support and fixed to the girder or flat iron using a pressure trough and bolt (M8). The hexagonal bolt has a WAF of 10 mm. In the clip element, two additional M6 threads are also incorporated, to fix threaded rods, for example.

Dimensions



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Always indicate the item number when ordering.

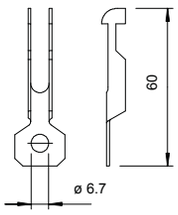
Profile ceiling suspensions

Type	Height mm	Fastening hole mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
TKT	60	6.7	0.45	100	0.900	**1486861**

St Steel

ZL Zinc scale

Push-through fastening, with opening to accept S hooks or bolt and nut.



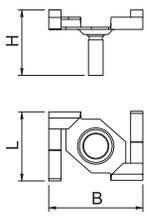
Ceiling profile clamp - CPC

Type	Thread	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
CPC M6x11	M6 x 11mm	220	100	1.000	**1483991**
CPC M6x16	M6 x 16 mm	220	100	1.150	**1483993**
CPC M6x25	M6 x 25 mm	220	100	1.250	**1483995**

St Steel

ZL Zinc scale

Ceiling profile clamp with threaded bolt



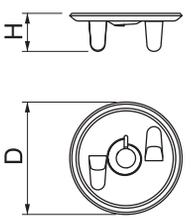
Locknut - CPCN

Type	Thread	Breaking load N	Pack. pcs	Weight kg/100 pcs.	Item No.
CPCN M6	M6	220	100	0.650	**1483997**

St Steel

ZL Zinc scale

Locknut for ceiling profile clamp CPC



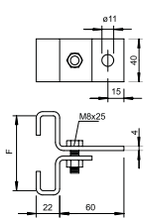
Beam clamp

Type	Flange thickness mm	Height mm	Fastening hole mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
325 70 FT	70	60	11	10	25	27.900	**5327075**
325 80 FT	80	60	11	10	25	32.000	**5327083**
325 100 FT	100	60	11	9	25	33.500	**5327105**
325 130 FT	130	60	11	8	25	36.500	**5327121**

St Steel

FT Hot-dip galvanised

The two brackets are clamped to the flange.
For individual component suspension.



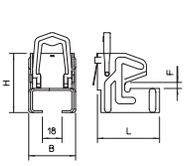
Beam clamp, for profile rail CM3518

Type	Flange thickness mm	Height mm	Width mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
328 1	5 - 11	54.3	39.5	57	50	10.800	**1408011**
328 2	10 - 19	54.3	39.5	67	50	12.500	**1408046**

St Steel

ZL Zinc scale

Screwless rustproof coated beam clamp, with blocking spring, suitable for profile rail, type CML3518 and CMS3518. For rapid fastening to steel profiles when installing cable tracks, clamp clips, light mounts, etc. A complete system consists of
2 beam clamps and one piece of C profile rail of any length, and 2 protective caps.



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Rail systems

Profile rail, light-duty 396

Profile rail, medium-duty 403

Profile rail, heavy-duty 418

Hat profile rail 441

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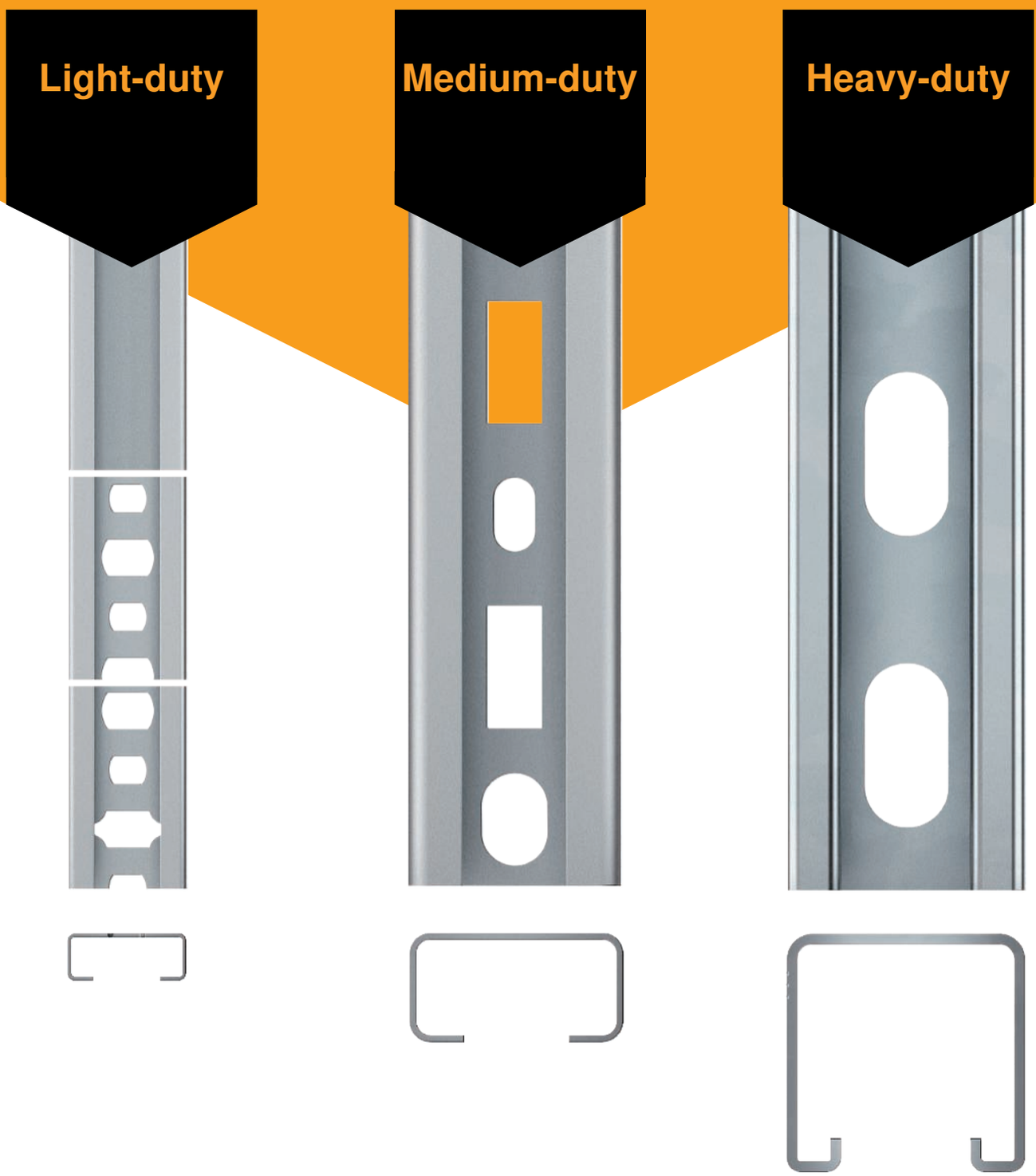
Three load classes for easy product selection

OBO's tried-and-tested rail system is now more logically structured than ever. It is now easy to choose the right product at a glance from the three load classes: light-duty, medium-duty and heavy-duty. The accessories are also right there in the selection aids. So choosing perfectly matching products is a breeze.



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Explanation of model codes

Class
L = light
M = medium
ML = medium-light
MS = medium-strong
S = strong
SL = strong-light

Drill hole
P = perforated
UP = unperforated
PP = side perforation
RP = oblong perforations
BP = perforation for breaking open

Profile type
C = profile
A = anchor profile
M = mounting profile

Dimensions
Width x height
in mm

Length
in mm

Surface
FS = strip galvanised
FT = hot-dip galvanised
BK = bright
A2 = stainless steel, quality A2
A4 = stainless steel, quality A4

CM3518P2000FT

Example
- Rail with C profile
- Load class: medium-duty
- 35 mm width, 18 mm height
- Perforated
- Length 2,000 mm
- FT hot-dip galvanised

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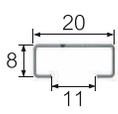
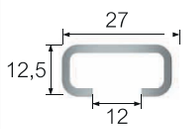
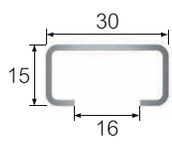
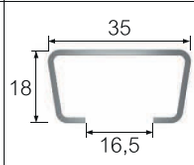
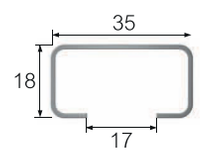
Rail systems and accessories

	light		medium		
Type	**Type CL2008** C profile	**Type CL2712** C profile	**Type CM3015** C profile	**Type AM3518** Anchor profile	**Type CM3518** C profile
Material	FS	FS FT	FS FT V2A	FS FT V2A V4A	FS FT V2A V4A
Material thickness	0.75 mm	2 mm	1.75 mm	1.5 mm /2mm	1.25 mm /1.75 mm
Hole pattern					
Cross-section					
Slide nuts					
Hammer-head bolt/Hook head bolt					
Clamp clip					
Series clip					
Series terminal clip			-	-	-
Impact clip			-	-	-

Always indicate the item number when ordering.

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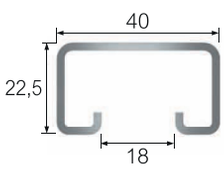
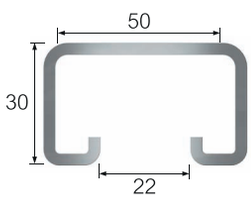
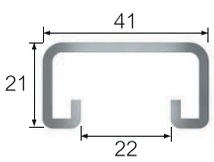
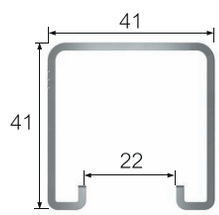
strong

Type MS4022 Mounting profile	**Type MS5030** Mounting profile	**Type MS4121** Mounting profile	**Type MS4141** Mounting profile
FT V2A V4A	FT V2A V4A	FS FT V2A V4A	FS FT V2A V4A
2 mm	3 mm	2 mm	2 mm / 2,5 mm
			

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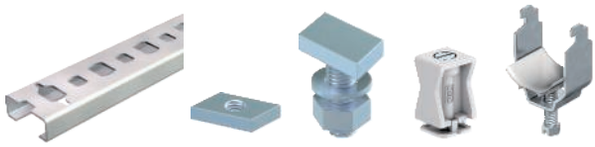
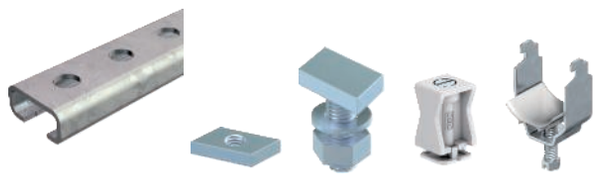
Always indicate the item number when ordering.

CL2008 profile rail, light-duty

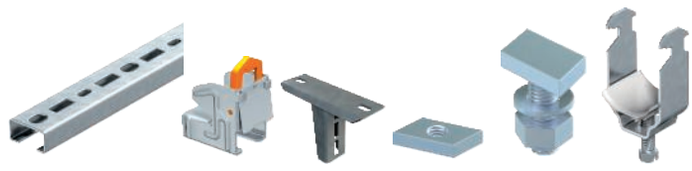


CL2712 profile rail, light-duty

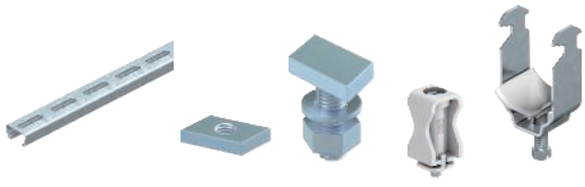


CM3015 profile rail, medium-duty

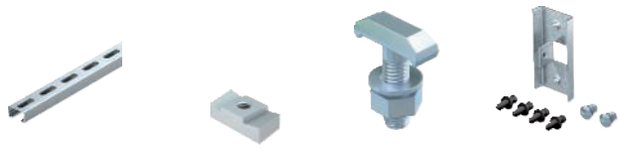
CM3518 profile rail, medium-duty



AML3518 profile rail, medium-duty



MS4022 mounting rail, heavy-duty



MS5030 mounting rail, heavy-duty

MS4121 mounting rail, strong

Always indicate the item number when ordering.

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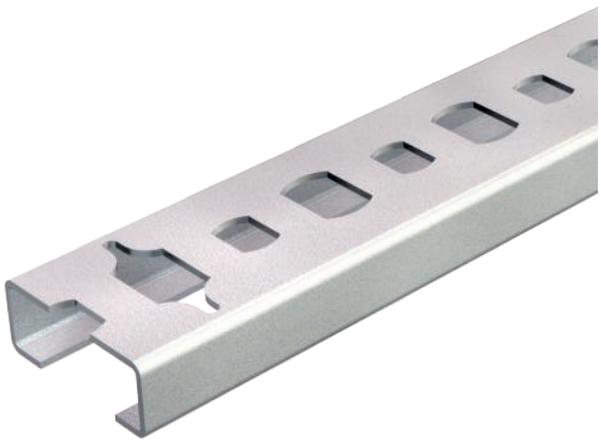
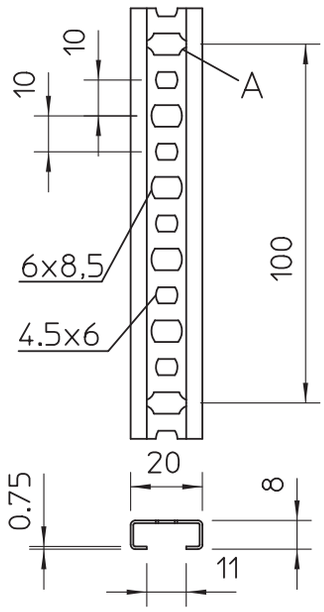
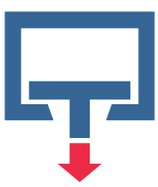
CL2008 profile rail, light-duty



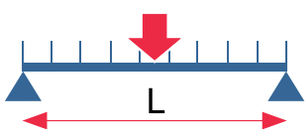


Permissible individual load



0.13 kN

Permissible total load at distance between supports of L



L [mm]	100	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	0.13	0.13	0.10	0.07	0.06	0.05	0.04	0.03	0.02
$q_{perm.}$ [kN/m]	3.42	1.48	0.66	0.37	0.24	0.15	0.09	0.06	0.03

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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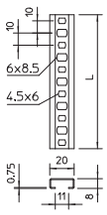
CL2008 profile rail, slot 11 mm, perforated, breakable



11

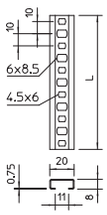
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
CL2008BP1000FS	1000	20 x 8	0.75	1000	10	21.500	**1105906**
CL2008BP2000FS	2000	20 x 8	0.75	2000	50	21.100	**1106120**
CL2008BP2000BK	2000	20 x 8	0.75	2000	50	20.000	**1106023**

St Steel

FS Strip-galvanised BK Bright

Light-duty C profile rail for cable routing, in conjunction with series clips or clamp clips with N foot. Can also be used in building of control cabinets.

CL2008 profile rail, slot 11 mm, perforated



11

Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
CL2008P2000FS	2000	20 x 8	0.75	2000	50	20.000	**1106627**
CL2008P2000A2	2000	20 x 8	0.75	2000	50	21.400	**1106628**
CL2008UP2000FS	2000	20 x 8	0.75	2000	50	20.000	**1105124**
CL2008UP2000A2	2000	20 x 8	0.75	2000	50	23.550	**1105125**

St Steel V2A Stainless steel, A2

FS Strip-galvanised

Light-duty C profile rail for cable routing, in conjunction with series clips or clamp clips with N foot. Can also be used in building of control cabinets.

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Always indicate the item number when ordering.

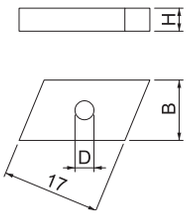
Slide nut

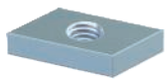
Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
CL20SN M4 ZL	17	10.5	4	M4	100	0.580	**1147008**
CL20SN M5 ZL	17	10.5	4	M5	100	0.550	**1147012**
CL20SN M6 ZL	17	10.5	4	M6	100	0.530	**1147016**

St Steel

ZL Zinc scale

Slide nut for use with CL2008 profile rail





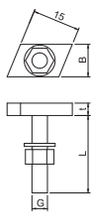
Hammer-head bolt

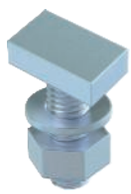
Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
CL20HB M5x25 ZL	21.1	10.5	4	M5x25mm	50	1.100	**1148008**
CL20HB M6x25 ZL	21.1	10.5	4	M6x25mm	50	1.420	**1148012**
CL20HB M8x25 ZL	21.1	10.5	4	M8x25mm	50	2.150	**1148016**

St Steel

ZL Zinc scale

Hammer-head bolt for use with CL2008 profile rail





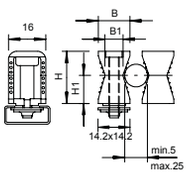
Series clip

11-12

Type	Clamping range D mm	Bolt	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2050 5-25 LGR	5 - 25	M4 x 27	Light grey	100	0.631	**2254026**
2050 5-25 RW	5 - 25	M4 x 27	Pure white	100	0.631	**2254522**
2051 8-36 LGR	8 - 36	M4 x 37.5	Light grey	100	0.851	**2254034**

PS Polystyrene

Also suitable for rails of 11 - 12 mm slot width; polystyrene clip element, impact resistant, halogen-free, light grey RAL 7035; metal parts: electrogalvanised steel.



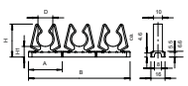
Series terminal clip

11-12

Type	Clamping range D mm	Colour	Number of clips per strip	Pack. pcs	Weight kg/100 pcs.	Item No.
2036 4-7 LGR	4 - 7	Light grey	4	25	0.160	**2259079**
2036 10-15 LGR	10 - 15	Light grey	4	25	1.700	**2259141**

PE Polyethylene

Individually separable, for pushing into profile rails.



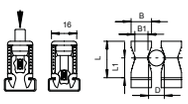
Impact clip

11-12

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2047 5-25 LGR	5 - 25	Light grey	100	0.320	**2251256**

PS Polystyrene

Series clip without metallic parts, thus protected against corrosion.
Use: lock the clip in the profile rail and fix it by hitting it with a hammer.



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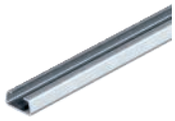
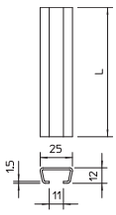
Always indicate the item number when ordering.

Profile rail CL2512, slot 11 mm, unperforated





Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
CL2512UP2000FT	2000	25 x 12	1.5	2000	20	65.000	**1117025**
CL2512UP2000FS	2000	25 x 12	1.5	2000	20	58.300	**1117033**

St Steel

FS Strip-galvanised FT Hot-dip galvanised

Light-duty C profile rail for cable routing, in conjunction with series clips or clamp clips with N foot. Can also be used in building of control cabinets.

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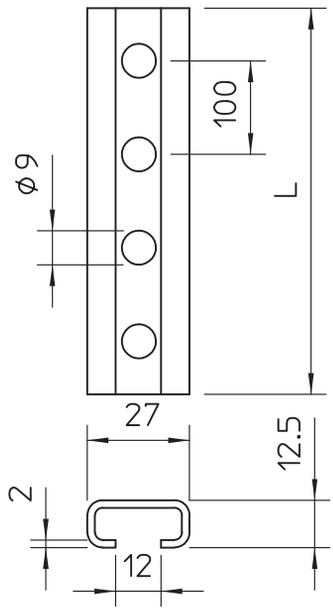
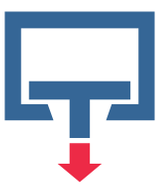
Always indicate the item number when ordering.

CL2712 profile rail, light-duty

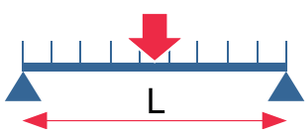


Permissible individual load



0.87 kN

Permissible total load at distance between supports of L



L [mm]	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	0.78	0.52	0.39	0.31	0.26	0.22	0.2	0.15
$q_{perm.}$ [kN/m]	7.85	3.49	1.96	1.26	0.87	0.64	0.47	0.24

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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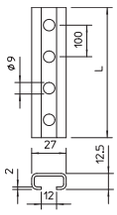
CL2712 profile rail, slot 12 mm, perforated



12 N

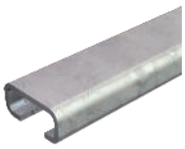
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
CL2712P2000FS	2000	27 x 12,5	2	2000	20	85.000	**1109525**
CL2712P2000FT	2000	27 x 12,5	2	2000	20	89.500	**1109529**

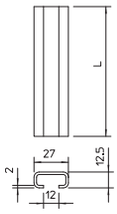
St Steel

FS Strip-galvanised FT Hot-dip galvanised

Light-duty C profile rail for cable routing, in conjunction with series clips or clamp clips with N foot. Can also be used in building of control cabinets.

Profile rail CL2712, slot 12 mm, unperforated





12 N

Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
CL2712UP2000FT	2000	27 x 12,5	2	2000	20	90.000	**1109022**
CL2712UP2000BK	2000	27 x 12,5	2	2000	20	90.000	**1109014**

St Steel

BK Bright FT Hot-dip galvanised

Light-duty C profile rail for cable routing, in conjunction with series clips or clamp clips with N foot. Can also be used in building of control cabinets.

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Always indicate the item number when ordering.

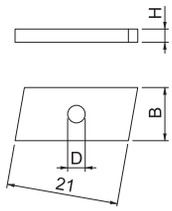
Slide nut

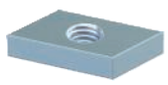
Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
CL27SN M4 ZL	21	10	2.5	M4	100	0.400	**1147020**
CL27SN M5 ZL	24.5	13	4	M5	100	0.870	**1147024**
CL27SN M6 ZL	24.5	13	4	M6	100	0.850	**1147028**
CL27SN M8 ZL	24.5	13	4	M8	100	0.800	**1147032**

St Steel

ZL Zinc scale

Slide nut for use with CL2712 profile rail





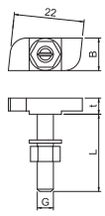
Hammer-head bolt

Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
CL27HB M5x25 ZL	23	10.1	4	M5x25mm	50	1.250	**1148020**
CL27HB M6x25 ZL	23	10.1	4	M6x25mm	50	1.570	**1148024**
CL27HB M8x25 ZL	23	10.1	4	M8x25mm	50	2.300	**1148028**

St Steel

ZL Zinc scale

Hammer-head bolt for use with CL2712 profile rail



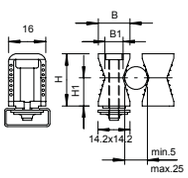
Series clip

11-12

Type	Clamping range D mm	Bolt	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2050 5-25 LGR	5 - 25	M4 x 27	Light grey	100	0.631	**2254026**
2050 5-25 RW	5 - 25	M4 x 27	Pure white	100	0.631	**2254522**
2051 8-36 LGR	8 - 36	M4 x 37.5	Light grey	100	0.851	**2254034**

PS Polystyrene

Also suitable for rails of 11 - 12 mm slot width; polystyrene clip element, impact resistant, halogen-free, light grey RAL 7035; metal parts: electrogalvanised steel.



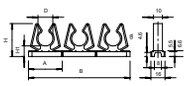
Series terminal clip

11-12

Type	Clamping range D mm	Colour	Number of clips per strip	Pack. pcs	Weight kg/100 pcs.	Item No.
2036 4-7 LGR	4 - 7	Light grey	4	25	0.160	**2259079**
2036 10-15 LGR	10 - 15	Light grey	4	25	1.700	**2259141**

PE Polyethylene

Individually separable, for pushing into profile rails.



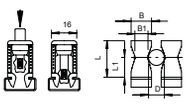
Impact clip

11-12

Type	Clamping range D mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2047 5-25 LGR	5 - 25	Light grey	100	0.320	**2251256**

PS Polystyrene

Series clip without metallic parts, thus protected against corrosion.
Use: lock the clip in the profile rail and fix it by hitting it with a hammer.



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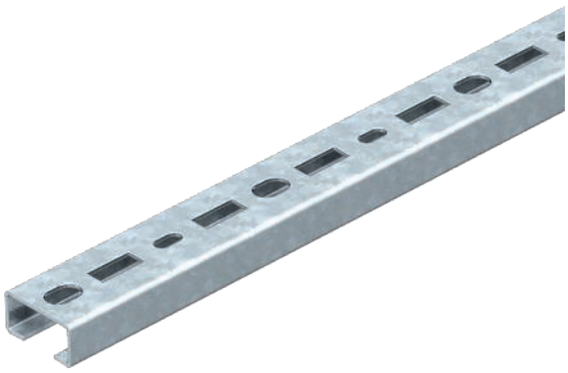
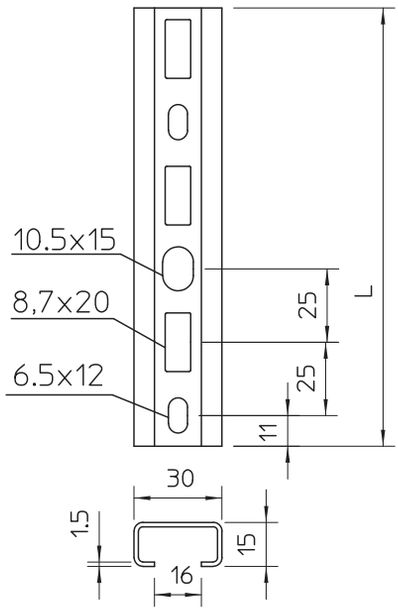
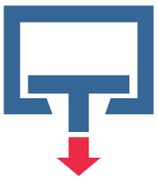
Always indicate the item number when ordering.

CM3015 profile rail, medium-duty



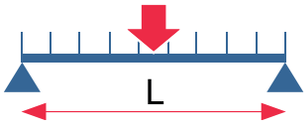


Permissible individual load



0.5 kN

Permissible total load at distance between supports of L



L [mm]	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	0.50	0.50	0.40	0.32	0.27	0.23	0.20	0.16
$q_{perm.}$ [kN/m]	6.60	3.58	2.01	1.29	0.89	0.66	0.50	0.31

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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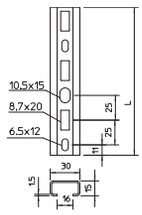
Always indicate the item number when ordering.

CM3015 profile rail, slot 16 mm, perforated



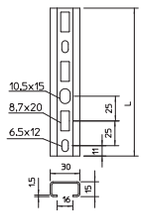
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
CM3015P2000FS	2000	30 x 15	1.5	2000	2	69.000	**1110002**
CM3015P1000FT	1000	30 x 15	1.5	1000	10	73.000	**1109863**
CM3015P2000FT	2000	30 x 15	1.5	2000	20	73.000	**1109871**
CM3015UP2000FS	2000	30 x 15	1.5	2000	20	75.500	**1110004**

St Steel

FS Strip-galvanised FT Hot-dip galvanised

Profile rail, perforated, slot width 16 mm.

CM3015 profile rail, slot 16 mm, perforated



Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
CM3015P0200FT	200	30 x 15	1.5	200	25	15.000	**1109782**
CM3015P0300FT	300	30 x 15	1.5	300	25	22.000	**1109790**
CM3015P0400FT	400	30 x 15	1.5	400	10	30.000	**1109804**
CM3015P0500FT	500	30 x 15	1.5	500	10	37.000	**1109812**
CM3015P0600FT	600	30 x 15	1.5	600	10	44.000	**1109820**
CM3015P0700FT	700	30 x 15	1.5	700	10	50.000	**1109839**
CM3015P0800FT	800	30 x 15	1.5	800	10	56.000	**1109847**

St Steel

FT Hot-dip galvanised

Profile rail, perforated, slot width 16 mm.

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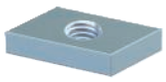
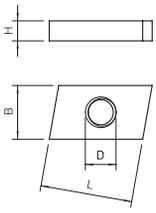
Slide nut





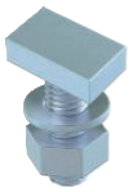
Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
ACMSN M6 ZL	26	16.5	4	M6	100	1.740	**1147056**
ACMSN M8 ZL	26	16.5	4	M8	100	1.640	**1147060**
ACMSN M10 ZL	26	16.5	4	M10	100	1.300	**1147064**
ACMSN M6 A4	26	16.5	4	M6	100	1.650	**1147076**
ACMSN M8 A4	26	16.5	4	M8	100	1.600	**1147080**
ACMSN M10 A4	26	16.5	4	M10	100	1.500	**1147084**

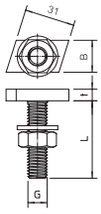
St Steel V4A Stainless steel, A4

ZL Zinc scale

Slide nut for use with CM3015, CM3518 and AM3518 profile rails

Hammer-head bolt





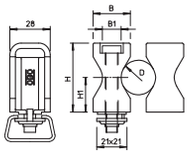
Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
ACMHB M6x30 ZL	26	16.5	5	M6x30mm	50	2.600	**1148056**
ACMHB M8x30 ZL	26	16.5	5	M8x30mm	50	3.450	**1148060**
ACMHB M8x60 ZL	26	16.5	5	M8x60mm	25	4.650	**1148064**
ACMHB M10x30 ZL	26	16.5	5	M10x30mm	50	4.950	**1148068**
ACMHB M10x60 ZL	26	16.5	5	M10x60mm	25	6.750	**1148072**
ACMHB M6x30 A4	26	16.5	5	M6x30mm	50	2.600	**1148076**
ACMHB M8x30 A4	26	16.5	5	M8x30mm	50	3.450	**1148080**
ACMHB M8x60 A4	26	16.5	5	M8x60mm	25	4.650	**1148084**
ACMHB M10x30 A4	26	16.5	5	M10x30mm	50	4.950	**1148088**
ACMHB M10x60 A4	26	16.5	5	M10x60mm	25	6.750	**1148092**

St Steel V4A Stainless steel, A4

ZL Zinc scale

Hammer-head bolt for use with CM3015, CM3518 and AM3518 profile rails

Series clip



16-17

Type	Clamping range D mm	Bolt	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2054 14-48 LGR	14 - 48	M8 x 55	Light grey	25	5.120	**2255014**
2055 24-72 LGR	24 - 72	M8 x 75	Light grey	20	6.471	**2255022**

PA Polyamide

Heavy-duty version, also suitable for rails of 16 - 17 mm slot width; polyamide clip element, light grey RAL 7035.
Metal parts: electrogalvanised steel.

Always indicate the item number when ordering.

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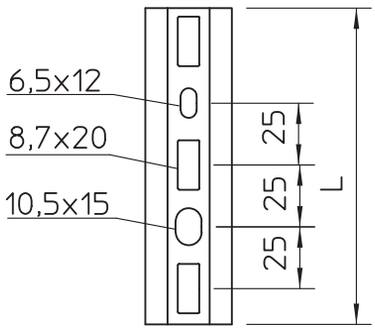
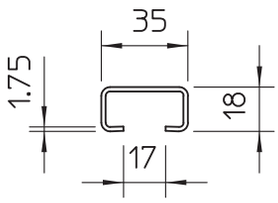
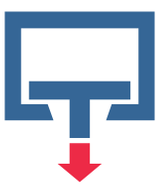
CMS3518 profile rail, medium-duty



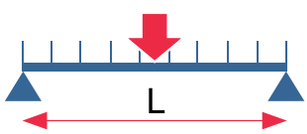


Permissible individual load



End: 0.73 kN
Middle: 1.96 kN

Permissible total load at distance between supports of L



L [mm]	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	1.59	1.06	0.79	0.64	0.53	0.45	0.40	0.32
$q_{perm.}$ [kN/m]	8.98	7.06	3.97	2.54	1.77	1.30	0.99	0.64

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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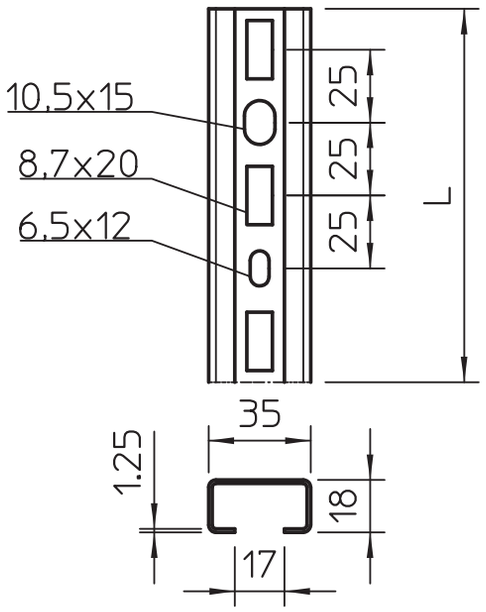
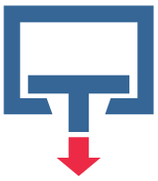
CML3518 profile rail, medium-duty

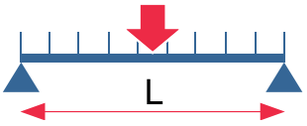


Permissible individual load



End: 0.38 kN
Middle: 1.06 kN

Permissible total load at distance between supports of L



L [mm]	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	0.92	0.82	0.62	0.49	0.41	0.35	0.31	0.25
$q_{perm.}$ [kN/m]	4.58	4.58	3.09	1.98	1.37	1.01	0.77	0.49

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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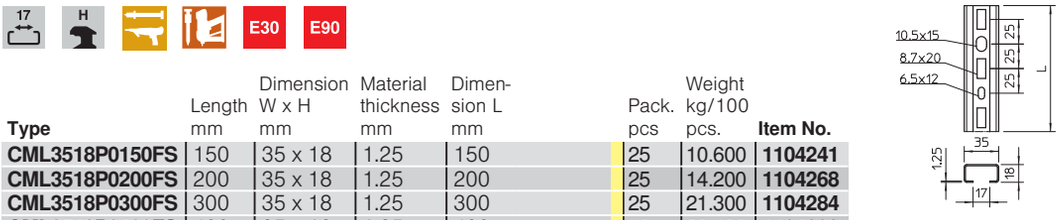
Always indicate the item number when ordering.

CM3518 profile rail, slot 17 mm, perforated



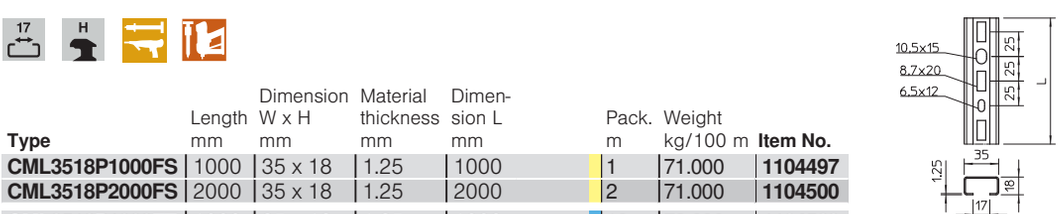
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
CML3518P0150FS	150	35 x 18	1.25	150	25	10.600	**1104241**
CML3518P0200FS	200	35 x 18	1.25	200	25	14.200	**1104268**
CML3518P0300FS	300	35 x 18	1.25	300	25	21.300	**1104284**
CML3518P0400FS	400	35 x 18	1.25	400	10	28.400	**1104292**
CML3518P0500FS	500	35 x 18	1.25	500	10	35.500	**1104306**
CML3518P0600FS	600	35 x 18	1.25	600	10	42.600	**1104310**
CML3518P0700FS	700	35 x 18	1.25	700	10	49.700	**1104315**
CML3518P0800FS	800	35 x 18	1.25	800	10	56.800	**1104320**
CML3518P0900FS	900	35 x 18	1.25	900	10	63.900	**1104325**
CML3518P0150FT	150	35 x 18	1.25	150	25	11.400	**1104550**
CML3518P0200FT	200	35 x 18	1.25	200	25	15.300	**1104552**
CML3518P0300FT	300	35 x 18	1.25	300	25	22.900	**1104554**
CML3518P0400FT	400	35 x 18	1.25	400	10	30.500	**1104556**
CML3518P0500FT	500	35 x 18	1.25	500	10	38.200	**1104558**
CML3518P0600FT	600	35 x 18	1.25	600	10	45.800	**1104560**
CML3518P0700FT	700	35 x 18	1.25	700	10	53.400	**1104562**
CML3518P0800FT	800	35 x 18	1.25	800	10	61.100	**1104564**
CML3518P0900FT	900	35 x 18	1.25	900	10	68.700	**1104566**
CMS3518P0150FS	150	35 x 18	1.75	150	25	14.670	**1104349**
CMS3518P0200FS	200	35 x 18	1.75	200	25	19.560	**1104357**
CMS3518P0300FS	300	35 x 18	1.75	300	25	29.340	**1104373**
CMS3518P0400FS	400	35 x 18	1.75	400	10	39.120	**1104391**
CMS3518P0500FS	500	35 x 18	1.75	500	10	48.900	**1104403**
CMS3518P0600FS	600	35 x 18	1.75	600	10	58.680	**1104411**
CMS3518P0700FS	700	35 x 18	1.75	700	10	68.460	**1104422**
CMS3518P0800FS	800	35 x 18	1.75	800	10	78.240	**1104427**
CMS3518P0900FS	900	35 x 18	1.75	900	10	88.020	**1104435**
CMS3518P0150FT	150	35 x 18	1.75	150	25	15.435	**1104581**
CMS3518P0200FT	200	35 x 18	1.75	200	25	20.580	**1104583**
CMS3518P0300FT	300	35 x 18	1.75	300	25	30.870	**1104585**
CMS3518P0400FT	400	35 x 18	1.75	400	10	41.160	**1104587**
CMS3518P0500FT	500	35 x 18	1.75	500	10	51.450	**1104589**
CMS3518P0600FT	600	35 x 18	1.75	600	10	61.740	**1104591**
CMS3518P0700FT	700	35 x 18	1.75	700	10	72.030	**1104593**
CMS3518P0800FT	800	35 x 18	1.75	800	10	82.320	**1104595**
CMS3518P0900FT	900	35 x 18	1.75	900	10	92.610	**1104597**

St Steel

FS Strip-galvanised FT Hot-dip galvanised

Light-duty profile rail, perforated, slot width 17 mm.

CM3518 profile rail, slot 17 mm, perforated



Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
CML3518P1000FS	1000	35 x 18	1.25	1000	1	71.000	**1104497**
CML3518P2000FS	2000	35 x 18	1.25	2000	2	71.000	**1104500**
CML3518P1000FT	1000	35 x 18	1.25	1000	10	73.600	**1104568**
CML3518P2000FT	2000	35 x 18	1.25	2000	20	73.600	**1104570**
CMS3518P1000FS	1000	35 x 18	1.75	1000	10	97.800	**1104445**
CMS3518P2000FS	2000	35 x 18	1.75	2000	2	97.800	**1104454**
CML3518P1000A2	1000	35 x 18	1.25	1000	10	71.000	**1104498**
CML3518P2000A2	2000	35 x 18	1.25	2000	20	71.000	**1104501**

St Steel V2A Stainless steel, A2

FS Strip-galvanised FT Hot-dip galvanised

Central C profile rail for cable routing, in conjunction with clamp clips with a hammerhead foot. Can also be used as suspension construction for cable support systems.

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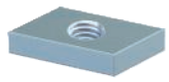
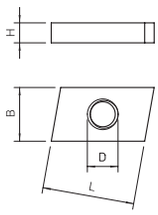
Always indicate the item number when ordering.

Slide nut





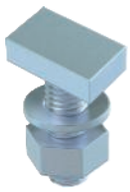
Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
ACMSN M6 ZL	26	16.5	4	M6	100	1.740	**1147056**
ACMSN M8 ZL	26	16.5	4	M8	100	1.640	**1147060**
ACMSN M10 ZL	26	16.5	4	M10	100	1.300	**1147064**
ACMSN M6 A4	26	16.5	4	M6	100	1.650	**1147076**
ACMSN M8 A4	26	16.5	4	M8	100	1.600	**1147080**
ACMSN M10 A4	26	16.5	4	M10	100	1.500	**1147084**

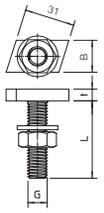
St Steel V4A Stainless steel, A4

ZL Zinc scale

Slide nut for use with CM3015, CM3518 and AM3518 profile rails

Hammer-head bolt





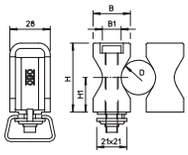
Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
ACMHB M6x30 ZL	26	16.5	5	M6x30mm	50	2.600	**1148056**
ACMHB M8x30 ZL	26	16.5	5	M8x30mm	50	3.450	**1148060**
ACMHB M8x60 ZL	26	16.5	5	M8x60mm	25	4.650	**1148064**
ACMHB M10x30 ZL	26	16.5	5	M10x30mm	50	4.950	**1148068**
ACMHB M10x60 ZL	26	16.5	5	M10x60mm	25	6.750	**1148072**
ACMHB M6x30 A4	26	16.5	5	M6x30mm	50	2.600	**1148076**
ACMHB M8x30 A4	26	16.5	5	M8x30mm	50	3.450	**1148080**
ACMHB M8x60 A4	26	16.5	5	M8x60mm	25	4.650	**1148084**
ACMHB M10x30 A4	26	16.5	5	M10x30mm	50	4.950	**1148088**
ACMHB M10x60 A4	26	16.5	5	M10x60mm	25	6.750	**1148092**

St Steel V4A Stainless steel, A4

ZL Zinc scale

Hammer-head bolt for use with CM3015, CM3518 and AM3518 profile rails

Series clip



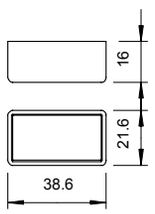
16-17

Type	Clamping range D mm	Bolt	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2054 14-48 LGR	14 - 48	M8 x 55	Light grey	25	5.120	**2255014**
2055 24-72 LGR	24 - 72	M8 x 75	Light grey	20	6.471	**2255022**

PA Polyamide

Heavy-duty version, also suitable for rails of 16 - 17 mm slot width; polyamide clip element, light grey RAL 7035.
Metal parts: electrogalvanised steel.

Protective cap

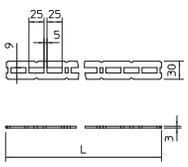


Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
CM3518 SK	Pastel orange	500	50	0.384	**1124502**

PE Polyethylene

Protective cap for profile rail types CM3518 and AM3518.

Self-build profile



Type	Length mm	Pack. m	Weight kg/100 m	Item No.
CMCP3000FT	3000	30	55.000	**6350208**

St Steel

FT Hot-dip galvanised

Flat iron with slots for individual mounting.

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Always indicate the item number when ordering.

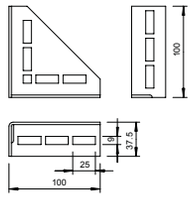
Triangular node

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
CM3518 KD FT	25	22.000	**6350100**

St Steel

FT Hot-dip galvanised

For stable corner fastening of individual mountings.



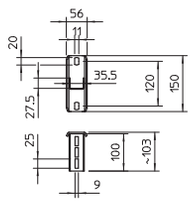
Head plate

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
CM3518 KP FT	25	42.000	**6350054**

St Steel

FT Hot-dip galvanised

For wall and ceiling fastening of individual mountings.



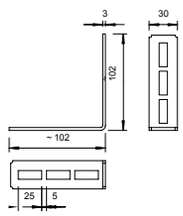
90° mounting bracket

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
CMW90FT	25	11.000	**6350151**

St Steel

FT Hot-dip galvanised

For stable 90° angle fastening of individual mountings.



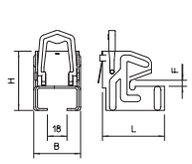
Beam clamp, for profile rail CM3518

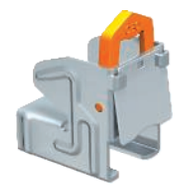
Type	Flange thickness mm	Height mm	Width mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
328 1	5 - 11	54.3	39.5	57	50	10.800	**1408011**
328 2	10 - 19	54.3	39.5	67	50	12.500	**1408046**

St Steel

ZL Zinc scale

Screwless rustproof coated beam clamp, with blocking spring, suitable for profile rail, type CML3518 and CMS3518. For rapid fastening to steel profiles when installing cable tracks, clamp clips, light mounts, etc. A complete system consists of
2 beam clamps and one piece of C profile rail of any length, and 2 protective caps.





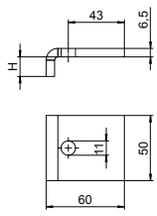
Clamping angle KL

Type	Height mm	Pack. pcs	Weight kg/100 pcs.	Item No.
KL1 10 S FT	10	10	22.500	**6354106**
KL1 15 S FT	15	10	24.000	**6354114**
KL1 20 S FT	20	10	25.000	**6354122**

St Steel

FT Hot-dip galvanised

Clamping lug, type KL1, to fasten light support structures to steel girder flanges.



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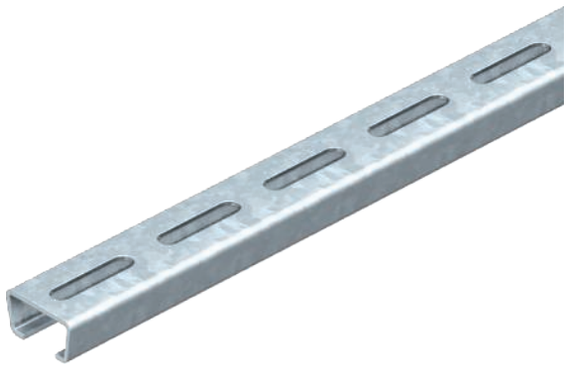
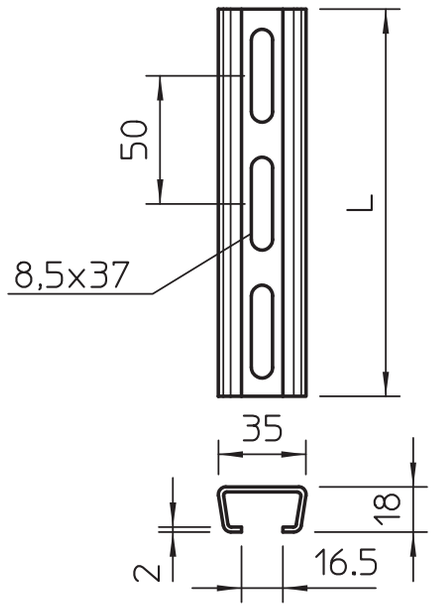
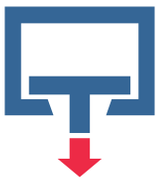
Always indicate the item number when ordering.

AMS3518 profile rail, medium-duty



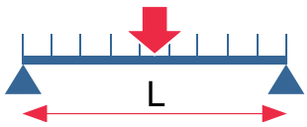


Permissible individual load



1.17 kN

Permissible total load at distance between supports of L



L [mm]	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	1.17	1.12	0.84	0.67	0.59	0.48	0.42	0.34
$q_{perm.}$ [kN/m]	8.16	7.49	4.21	2.70	1.87	1.38	1.05	0.67

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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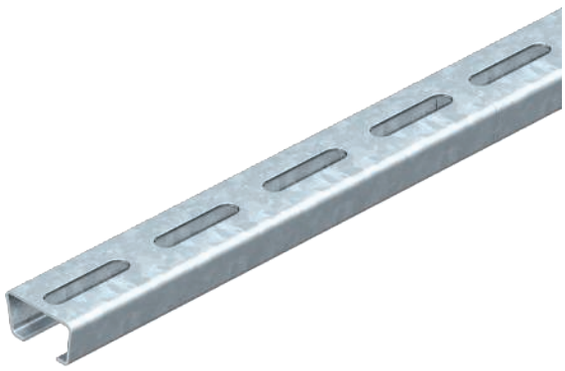
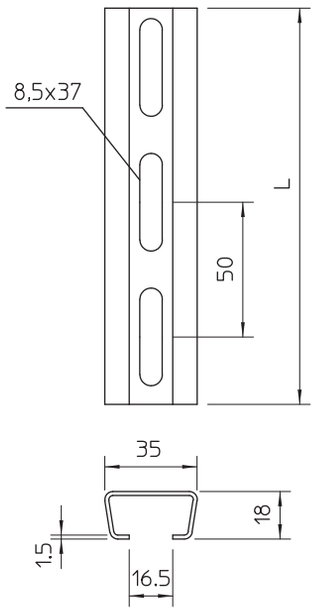
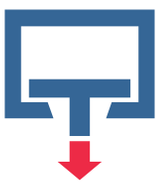
Always indicate the item number when ordering.

AML3518 profile rail, medium-duty



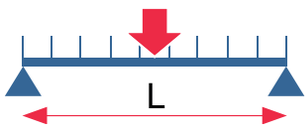


Permissible individual load



0.68 kN

Permissible total load at distance between supports of L



L [mm]	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	0.68	0.68	0.65	0.52	0.43	0.37	0.32	0.26
$q_{perm.}$ [kN/m]	4.60	4.60	3.24	2.07	1.44	1.06	0.81	0.52

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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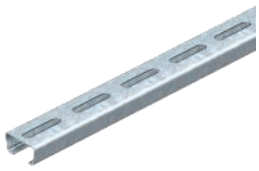
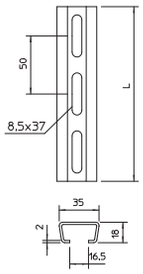
Profile rail 2068, slot width 16.5, perforated





Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
AML3518P1000FS	1000	35 x 18	1.5	1000	10	82.000	**1119646**
AML3518P2000FS	2000	35 x 18	1.5	2000	2	82.500	**1119648**
AML3518P2000FT	2000	35 x 18	1.5	2000	20	89.000	**1119656**
AML3518P1000FT	1000	35 x 18	1.5	1000	10	89.000	**1119672**
AMS3518P1000FS	1000	35 x 18	2	1000	10	115.000	**1112735**
AMS3518P1000FT	1000	35 x 18	2	1000	10	122.000	**1112755**
AML3518P1000A2	1000	35 x 18	1.5	1000	10	82.000	**1119700**
AML3518P2000A2	2000	35 x 18	1.5	2000	20	80.000	**1119702**
AML3518P6000A2	6000	35 x 18	1.5	6000	6	80.000	**1119729**

St Steel V2A Stainless steel, A2

FS Strip-galvanised FT Hot-dip galvanised

Central C profile rail for cable routing, in conjunction with clamp clips with a hammerhead foot. Can also be used as suspension construction for cable support systems.

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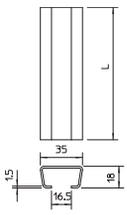
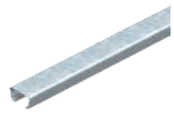
Always indicate the item number when ordering.

Anchor rail AM3518, slot 16.5 mm, unperforated





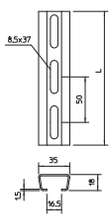
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
AML3518UP2000FS	2000	35 x 18	1.5	2000	20	90.000	**1118226**
AML3518UP2000FT	2000	35 x 18	1.5	2000	20	89.400	**1118129**
AML3518UP6000FT	6000	35 x 18	1.5	6000	6	94.840	**1118153**
AML3518UP2000BK	2000	35 x 18	1.5	2000	20	90.000	**1118021**
AML3518UP2000A2	2000	35 x 18	1.5	2000	20	90.000	**1112007**
AMS3518UP2000A2	2000	35 x 18	2	2000	20	116.000	**1110005**
AMS3518UP2000FS	2000	35 x 18	2	2000	20	116.000	**1112120**
AMS3518UP6000FS	6000	35 x 18	2	6000	6	116.000	**1112139**
AMS3518UP2000FT	2000	35 x 18	2	2000	20	121.350	**1112228**
AMS3518UP6000FT	6000	35 x 18	2	6000	6	111.167	**1112244**
AMS3518UP2000BK	2000	35 x 18	2	2000	20	116.000	**1112023**
AMS3518UP6000BK	6000	35 x 18	2	6000	6	116.000	**1112074**

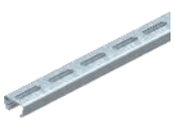
St Steel V2A Stainless steel, A2

FS Strip-galvanised BK Bright FT Hot-dip galvanised

Central C profile rail for cable routing, in conjunction with clamp clips with a hammerhead foot. Can also be used as suspension construction for cable support systems.

Anchor rail AML3518, slot 16.5 mm, perforated





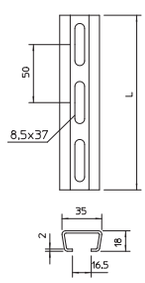
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
AML3518P0200FT	200	35 x 18	1.5	200	25	17.800	**1119696**
AML3518P0300FT	300	35 x 18	1.5	300	25	26.700	**1119693**
AML3518P0400FT	400	35 x 18	1.5	400	10	35.600	**1119690**
AML3518P0500FT	500	35 x 18	1.5	500	10	44.500	**1119687**
AML3518P0600FT	600	35 x 18	1.5	600	10	53.400	**1119684**
AML3518P0700FT	700	35 x 18	1.5	700	10	62.300	**1119681**
AML3518P0800FT	800	35 x 18	1.5	800	10	71.200	**1119678**

St Steel

FT Hot-dip galvanised

Central C profile rail for cable routing, in conjunction with clamp clips with a hammerhead foot. Can also be used as suspension construction for cable support systems.

Profile rail 2068, slot width 16.5, perforated



Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
AMS3518P1000FS	1000	35 x 18	2	1000	10	115.000	**1112735**
AMS3518P2000FS	2000	35 x 18	2	2000	2	115.000	**1112708**
AMS3518P1000FT	1000	35 x 18	2	1000	10	122.000	**1112755**
AMS3518P2000FT	2000	35 x 18	2	2000	20	122.000	**1112759**
AMS3518P1000A2	1000	35 x 18	2	1000	10	107.000	**1118421**
AMS3518P2000A2	2000	35 x 18	2	2000	20	107.000	**1112709**

St Steel V2A Stainless steel, A2

FS Strip-galvanised FT Hot-dip galvanised

Central C profile rail for cable routing, in conjunction with clamp clips with a hammerhead foot. Can also be used as suspension construction for cable support systems.

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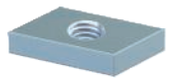
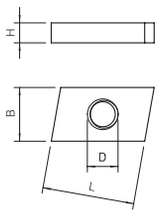
Slide nut





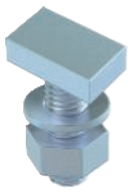
Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
ACMSN M6 ZL	26	16.5	4	M6	100	1.740	**1147056**
ACMSN M8 ZL	26	16.5	4	M8	100	1.640	**1147060**
ACMSN M10 ZL	26	16.5	4	M10	100	1.300	**1147064**
ACMSN M6 A4	26	16.5	4	M6	100	1.650	**1147076**
ACMSN M8 A4	26	16.5	4	M8	100	1.600	**1147080**
ACMSN M10 A4	26	16.5	4	M10	100	1.500	**1147084**

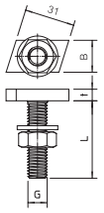
St Steel V4A Stainless steel, A4

ZL Zinc scale

Slide nut for use with CM3015, CM3518 and AM3518 profile rails

Hammer-head bolt





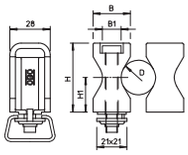
Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
ACMHB M6x30 ZL	26	16.5	5	M6x30mm	50	2.600	**1148056**
ACMHB M8x30 ZL	26	16.5	5	M8x30mm	50	3.450	**1148060**
ACMHB M8x60 ZL	26	16.5	5	M8x60mm	25	4.650	**1148064**
ACMHB M10x30 ZL	26	16.5	5	M10x30mm	50	4.950	**1148068**
ACMHB M10x60 ZL	26	16.5	5	M10x60mm	25	6.750	**1148072**
ACMHB M6x30 A4	26	16.5	5	M6x30mm	50	2.600	**1148076**
ACMHB M8x30 A4	26	16.5	5	M8x30mm	50	3.450	**1148080**
ACMHB M8x60 A4	26	16.5	5	M8x60mm	25	4.650	**1148084**
ACMHB M10x30 A4	26	16.5	5	M10x30mm	50	4.950	**1148088**
ACMHB M10x60 A4	26	16.5	5	M10x60mm	25	6.750	**1148092**

St Steel V4A Stainless steel, A4

ZL Zinc scale

Hammer-head bolt for use with CM3015, CM3518 and AM3518 profile rails

Series clip



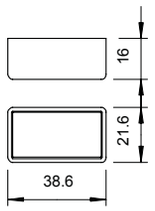
16-17

Type	Clamping range D mm	Bolt	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2054 14-48 LGR	14 - 48	M8 x 55	Light grey	25	5.120	**2255014**
2055 24-72 LGR	24 - 72	M8 x 75	Light grey	20	6.471	**2255022**

PA Polyamide

Heavy-duty version, also suitable for rails of 16 - 17 mm slot width; polyamide clip element, light grey RAL 7035.
Metal parts: electrogalvanised steel.

Protective cap

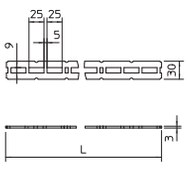


Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
CM3518 SK	Pastel orange	500	50	0.384	**1124502**

PE Polyethylene

Protective cap for profile rail types CM3518 and AM3518.

Self-build profile



Type	Length mm	Pack. m	Weight kg/100 m	Item No.
CMCP3000FT	3000	30	55.000	**6350208**

St Steel

FT Hot-dip galvanised

Flat iron with slots for individual mounting.

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Always indicate the item number when ordering.

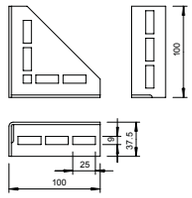
Triangular node

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
CM3518 KD FT	25	22.000	**6350100**

St Steel

FT Hot-dip galvanised

For stable corner fastening of individual mountings.



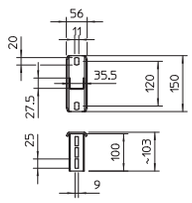
Head plate

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
CM3518 KP FT	25	42.000	**6350054**

St Steel

FT Hot-dip galvanised

For wall and ceiling fastening of individual mountings.



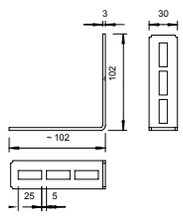
90° mounting bracket

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
CMW90FT	25	11.000	**6350151**

St Steel

FT Hot-dip galvanised

For stable 90° angle fastening of individual mountings.



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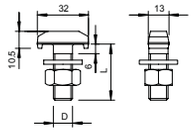
Always indicate the item number when ordering.

Hook head screw 5023



Type	Thread	Dimension L mm	Dimension D mm	Washer Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
5023 M12x50 G	M12	50	12	24	25	7.840	**1153641**

St Steel
G Electrogalvanised

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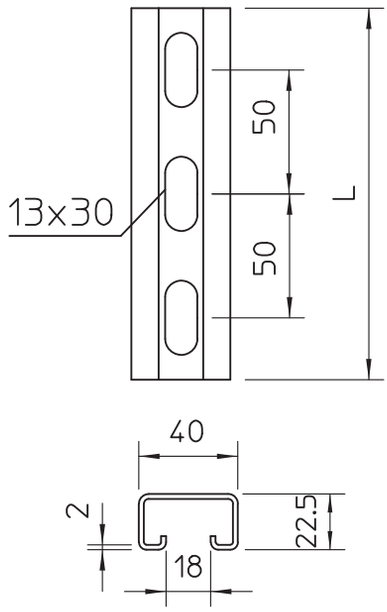
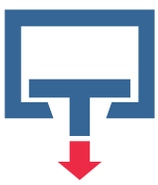
Always indicate the item number when ordering.

MS4022 mounting rail, heavy-duty

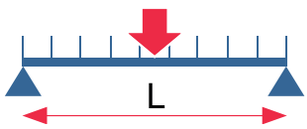


Permissible individual load



End: 1.18 kN
Middle: 3.21 kN

Permissible total load at distance between supports of L



L [mm]	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	2.76	1.94	1.46	1.16	0.97	0.83	0.73	0.58
$q_{perm.}$ [kN/m]	13.82	12.93	7.28	4.66	3.23	2.38	1.82	1.16

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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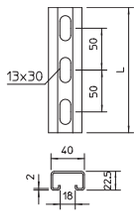
MS4022 mounting rail, heavy-duty, slot 18 mm, perforated



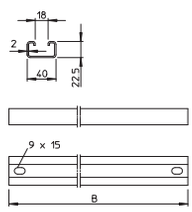
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
MS4022P2000FT	2000	40 x 22,5	2	2000	10	152.500	**1121979**
MS4022P6000FT	6000	40 x 22,5	2	6000	6	152.500	**1121898**
MS4022P2000A2	2000	40 x 22,5	2	2000	10	152.500	**1121960**
MS4022P6000A2	6000	40 x 22,5	2	6000	6	152.500	**1121901**
MS4022P2000A4	2000	40x22,5	2	2000	10	147.600	**1121963**
MS4022P6000A4	6000	40x22,5	2	6000	6	147.600	**1121903**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

MS4022 profile rail, heavy-duty, slot 18 mm



Type	Material thickness mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MS4022P0492FT	2	492	10	81.500	**6007244**
MS4022P0592FT	2	592	10	96.000	**6007252**
MS4022P0692FT	2	692	10	113.000	**6007260**
MS4022P0792FT	2	792	10	130.000	**6007279**
MS4022P0892FT	2	892	10	145.000	**6007287**
MS4022P0992FT	2	992	10	162.000	**6007295**
MS4022P1092FT	2	1092	10	178.000	**6007309**
MS4022P1192FT	2	1192	10	197.500	**6007317**

St Steel

FT Hot-dip galvanised

Profile rail MS4022 for use as rung in heavy-duty ladders.

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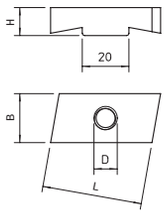
Always indicate the item number when ordering.

Slide nut

Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
MS40SN M6 ZL	35	17	10	M6	50	3.750	**1147106**
MS40SN M8 ZL	35	17	10	M8	50	3.600	**1147110**
MS40SN M10 ZL	35	17	10	M10	50	3.400	**1147114**
MS40SN M12 ZL	35	17	10	M12	50	3.160	**1147118**
MS40SN M6 A4	35	17	10	M6	50	3.750	**1147126**
MS40SN M8 A4	35	17	10	M8	50	3.600	**1147130**
MS40SN M10 A4	35	17	10	M10	50	3.400	**1147134**
MS40SN M12 A4	35	17	10	M12	50	3.160	**1147138**



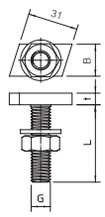
St Steel V4A Stainless steel, A4

ZL Zinc scale

Slide nut for use with MS4022 profile rail

Hook-head screw

Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
MS40HB M6x30 ZL	35	17	10	M6x30mm	50	4.800	**1148106**
MS40HB M8x30 ZL	35	17	10	M8x30mm	50	5.650	**1148110**
MS40HB M8x60 ZL	35	17	10	M8x60mm	25	6.850	**1148114**
MS40HB M10x30 ZL	35	14	7.5	M10x30mm	50	6.000	**1148118**
MS40HB M10x60 ZL	35	14	7.5	M10x60mm	25	7.850	**1148122**
MS40HB M12x30 ZL	35	14	7.5	M12x30mm	50	7.550	**1148126**
MS40HB M12x60 ZL	35	14	7.5	M12x60mm	25	10.250	**1148130**
MS40HB M6x30 A4	35	17	10	M6x30mm	50	4.800	**1148146**
MS40HB M8x30 A4	35	17	10	M8x30mm	50	5.650	**1148150**
MS40HB M8x60 A4	35	17	10	M8x60mm	25	6.850	**1148154**
MS40HB M10x30 A4	35	14	7.5	M10x30mm	50	6.000	**1148160**
MS40HB M10x60 A4	35	14	7.5	M10x60mm	25	7.850	**1148164**
MS40HB M12x30 A4	35	14	7.5	M12x30mm	50	7.550	**1148168**
MS40HB M12x60 A4	35	14	7.5	M12x60mm	25	10.250	**1148170**



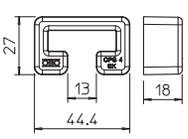
St Steel V4A Stainless steel, A4

ZL Zinc scale

Hook-head screw for use with MS4022 profile rail

Protective cap

Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
MS4022 SK	Pastel orange	300	25	0.675	**1124555**

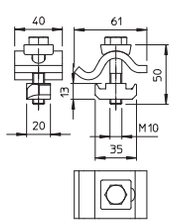


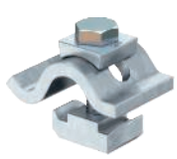
PE Polyethylene

Protective caps for profile rail, type MS4022.

Chuck jaw, light-duty TKH

Type	Height mm	F in kN kN	Pack. pair	Weight kg/100 pairs	Item No.
TKH-L-25 FT	25	10	10	46.000	**6355812**





St Steel

FT Hot-dip galvanised

Light-duty tensioning claw with slide nut for fixing mounting rails to steel girder flanges.

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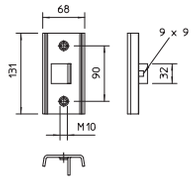
Always indicate the item number when ordering.

Rung seat for steel supports



Type	Pack. pair	Weight kg/100 pairs	Item No.
SAA MS4022 FT	5	82.600	**6007498**

St Steel

FT Hot-dip galvanised

Rung seat for fastening rungs of type MS4022 to steel girders.

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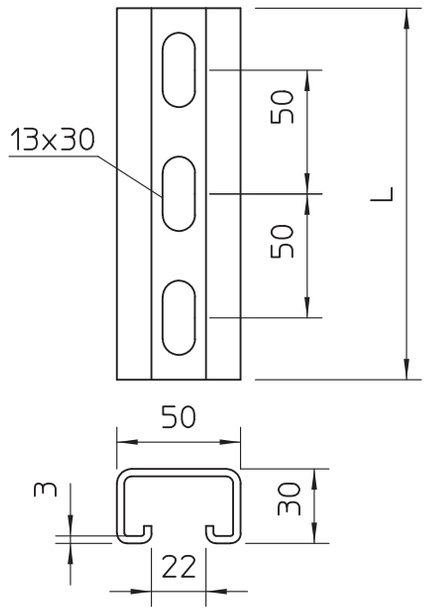
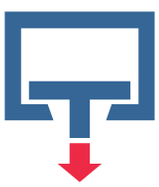
Always indicate the item number when ordering.

MS5030 mounting rail, heavy-duty

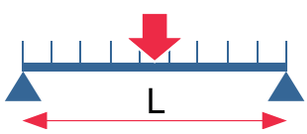


Permissible individual load



End: 3.08 kN
Middle: 7.87 kN

Permissible total load at distance between supports of L



L [mm]	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	6.15	6.38	4.78	3.83	3.19	2.73	2.39	1.91
$q_{perm.}$ [kN/m]	30.76	30.76	23.91	15.31	10.63	7.81	5.98	3.83

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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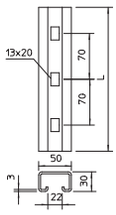
MS5030 mounting rail, slot 22 mm, perforated



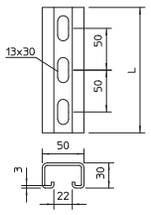
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MS5030RP0220FT	220	50 x 30	3	220	1	69.000	**6349404**
MS5030RP0260FT	260	50 x 30	3	260	1	81.500	**6349412**
MS5030RP0300FT	300	50 x 30	3	300	1	94.000	**6349439**
MS5030RP0340FT	340	50 x 30	3	340	1	107.000	**6349447**
MS5030RP0380FT	380	50 x 30	3	380	1	119.000	**6349463**

St Steel

FT Hot-dip galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

MS5030 mounting rail, slot 22 mm, perforated



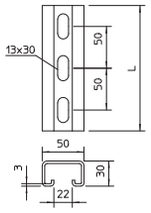
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
MS5030P1000FT	1000	50 x 30	3	1000	1	282.500	**1121448**
MS5030P2000FT	2000	50 x 30	3	2000	2	282.500	**1121464**
MS5030P3000FT	3000	50 x 30	3	3000	3	308.100	**1121466**
MS5030P6000FT	6000	50 x 30	3	6000	6	282.500	**1121472**
MS5030P2000A2	2000	50 x 30	3	2000	2	282.500	**1121480**
MS5030P6000A2	6000	50 x 30	3	6000	6	282.500	**1121499**
MS5030P2000A4	2000	50 x 30	3	2000	2	285.000	**1121465**
MS5030P6000A4	6000	50 x 30	3	6000	6	285.000	**1121473**
MS5030UP2000FT	6000	50x30	3	6000	20	307.000	**1121524**
MS5030UP6000FT	6000	50x30	3	6000	6	307.000	**1121529**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

MS5030 mounting rail, slot 22 mm, perforated



Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MS5030P0200FT	200	50 x 30	3	200	1	57.000	**1121391**
MS5030P0300FT	300	50 x 30	3	300	1	85.000	**1121243**
MS5030P0400FT	400	50 x 30	3	400	1	113.000	**1121278**
MS5030P0500FT	500	50 x 30	3	500	1	141.000	**1121405**
MS5030P0600FT	600	50 x 30	3	600	1	170.000	**1121294**
MS5030P0700FT	700	50 x 30	3	700	1	198.000	**1121332**
MS5030P0800FT	800	50 x 30	3	800	1	235.000	**1121308**
MS5030P0900FT	900	50 x 30	3	900	1	255.000	**1121336**
MS5030P1500FT	1500	50 x 30	3	1500	1	424.000	**1121363**

St Steel

FT Hot-dip galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

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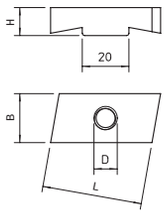
Always indicate the item number when ordering.

Slide nut

Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
MS50SN M6 ZL	43	21	12	M6	50	6.700	**1147156**
MS50SN M8 ZL	43	21	12	M8	50	6.550	**1147160**
MS50SN M10 ZL	43	21	12	M10	50	6.350	**1147164**
MS50SN M12 ZL	43	21	12	M12	50	6.100	**1147168**
MS50SN M6 A4	43	21	12	M6	50	6.700	**1147172**
MS50SN M8 A4	43	21	12	M8	50	6.550	**1147186**
MS50SN M10 A4	43	21	12	M10	50	6.350	**1147190**
MS50SN M12 A4	43	21	12	M12	50	6.100	**1147194**



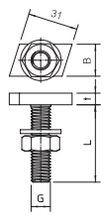
St Steel V4A Stainless steel, A4

ZL Zinc scale

Slide nut for use with MS5030 profile rail

Hook-head screw

Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
MS50HB M6x30 ZL	43	21	12	M6x30mm	50	7.800	**1148206**
MS50HB M8x30 ZL	43	21	12	M8x30mm	50	8.700	**1148210**
MS50HB M8x60 ZL	43	21	12	M8x60mm	25	9.900	**1148214**
MS50HB M10x30 ZL	43.3	13	10	M10x30mm	50	7.700	**1148218**
MS50HB M10x60 ZL	43.3	13	10	M10x60mm	25	9.450	**1148222**
MS50HB M12x30 ZL	43.3	13	10	M12x30mm	50	9.000	**1148226**
MS50HB M12x60 ZL	43.3	13	10	M12x60mm	25	11.650	**1148230**
MS50HB M6x30 A4	43	21	12	M6x30mm	50	7.800	**1148256**
MS50HB M8x30 A4	43	21	12	M8x30mm	50	8.700	**1148260**
MS50HB M8x60 A4	43	21	12	M8x60mm	25	9.900	**1148264**
MS50HB M10x30 A4	43.3	13	10	M10x30mm	50	7.700	**1148268**
MS50HB M10x60 A4	43.3	13	10	M10x60mm	25	9.450	**1148272**
MS50HB M12x30 A4	43.3	13	10	M12x30mm	50	9.000	**1148276**
MS50HB M12x60 A4	43.3	13	10	M12x60mm	25	11.650	**1148280**



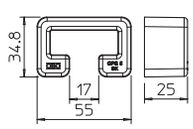
St Steel V4A Stainless steel, A4

ZL Zinc scale

Hook-head screw for use with MS5030 profile rail

Protective cap

Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
MS5030 SK	Pastel orange	300	25	1.260	**1124563**

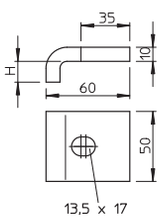


PE Polyethylene

Protective caps for profile rail, type MS5030.

Clamping angle KWH

Type	Height mm	F in kN kN	Pack. pair	Weight kg/100 pairs	Item No.
KWH 5 FT	5	5.7	10	67.000	**6355021**
KWH 10 FT	10	5.7	10	73.000	**6355048**
KWH 15 FT	15	5.7	10	76.000	**6355056**
KWH 20 FT	20	5.7	10	82.000	**6355064**
KWH 25 FT	25	5.7	10	87.000	**6355072**



St Steel

FT Hot-dip galvanised

Clamping profile, with hook-head bolt, type KWH, for fastening in the mounting rail, type MS5030.

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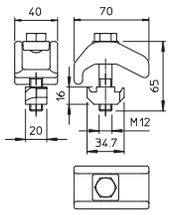
Always indicate the item number when ordering.

Chuck jaw, heavy-duty TKH



Type	Height mm	F in kN kN	Pack. pair	Weight kg/100 pairs	Item No.
TKH-S-30 FT	30	21	10	81.000	**6355804**

St Steel

FT Hot-dip galvanised

Heavy-duty chuck jaw with slide nut for fastening profile rails to steel girders.

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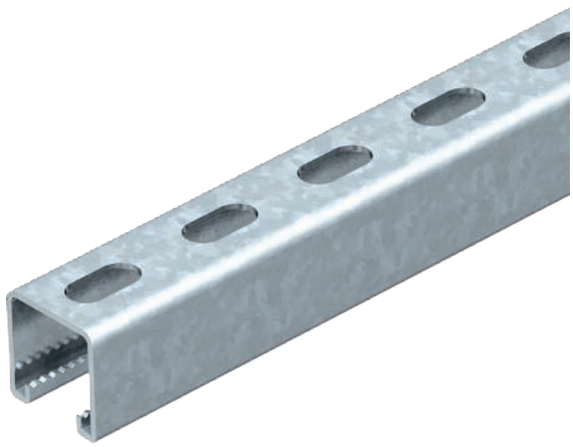
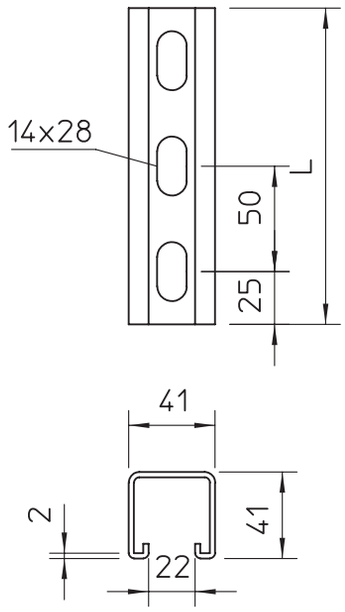
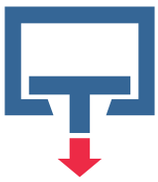
Always indicate the item number when ordering.

MSL4141 mounting rail, strong



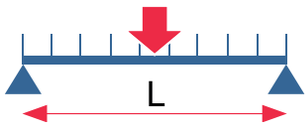


Permissible individual load



End: 1.41 kN
Middle: 3.67 kN

Permissible total load at distance between supports of L



L [mm]	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	2.53	3.76	3.35	2.68	2.24	1.92	1.68	1.34
$q_{perm.}$ [kN/m]	12.66	12.47	9.35	7.48	6.23	5.34	4.19	2.68

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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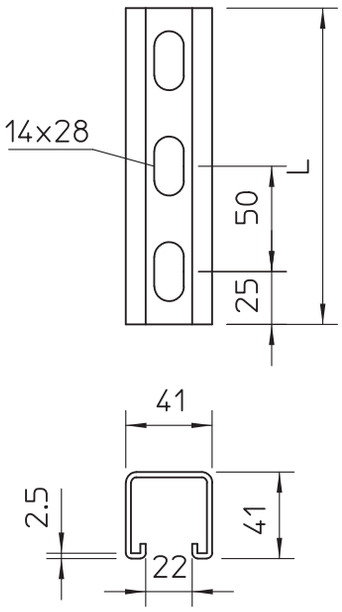
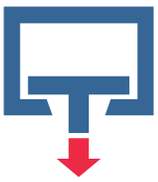
MS4141 mounting rail, heavy-duty

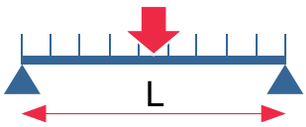


Permissible individual load



End: 1.66 kN
Middle: 5.60 kN

Permissible total load at distance between supports of L



L [mm]	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	3.88	5.29	3.97	3.17	2.64	2.27	1.98	1.59
$q_{perm.}$ [kN/m]	19.38	19.38	14.75	11.80	8.81	6.47	4.96	3.17

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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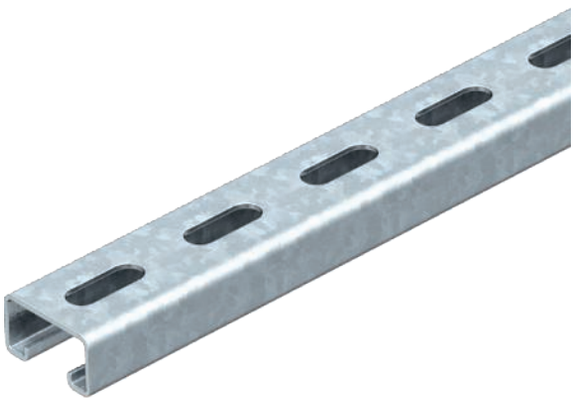
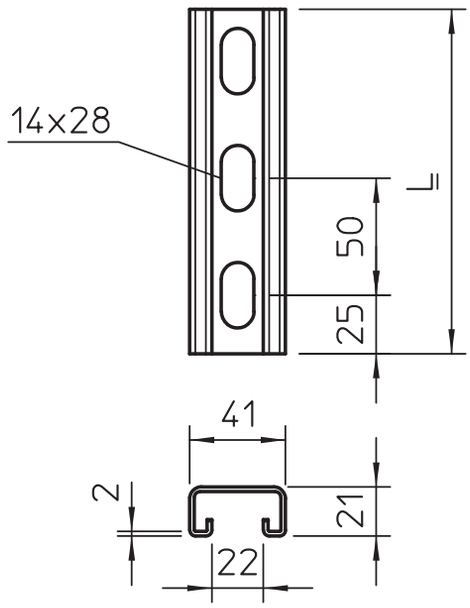
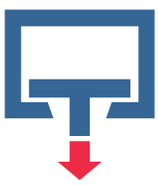
Always indicate the item number when ordering.

MS4121 mounting rail, strong



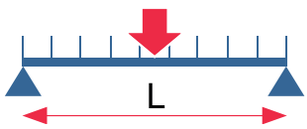


Permissible individual load



End: 1.41 kN
Middle: 3.67 kN

Permissible total load at distance between supports of L



L [mm]	200	300	400	500	600	700	800	1,000
$F_{perm.}$ [kN]	2.53	1.72	1.29	1.03	0.86	0.74	0.64	0.52
$q_{perm.}$ [kN/m]	12.66	11.46	6.45	4.13	2.87	2.11	1.61	1.03

- The carrying capacities indicated are valid for the hole pattern shown.
- The carrying capacity of the rail lip was determined on the basis of loading at the rail end, for the shortest rail variant. The fastenings were placed in the last holes. The value given for the permissible individual load is valid where both lips are loaded equally.
- Note: clamp clips with N and U bases only exert a load on one rail lip, hence only 50% of the permissible individual load may be exerted.

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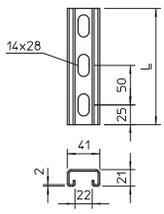
MS4121 mounting rail, slot width 22 mm, perforated



22 U

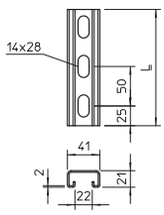
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
MS4121P2000FS	2000	41x21	2	2000	2	175.000	**1122918**
MS4121P3000FS	3000	41x21	2	3000	3	141.900	**1122920**
MS4121P6000FS	6000	41x21	2	6000	6	141.900	**1122922**
MS4121P2000FT	2000	41x21	2	2000	2	183.000	**1122923**
MS4121P3000FT	3000	41x21	2	3000	3	151.300	**1122924**
MS4121P6000FT	6000	41x21	2	6000	6	184.000	**1122926**
MS4121P2000A2	2000	41x21	2	2000	2	175.000	**1122925**
MS4121P3000A2	3000	41x21	2	3000	3	185.340	**1122928**
MS4121P6000A2	6000	41x21	2	6000	6	172.670	**1122929**
MS4121P2000A4	2000	41x21	2	2000	2	175.000	**1122476**
MS4121P3000A4	3000	41x21	2	3000	3	172.670	**1122931**
MS4121P6000A4	6000	41x21	2	6000	6	172.670	**1122932**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FS Strip-galvanised FT Hot-dip galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

MS4121 mounting rail, slot width 22 mm, perforated



22 U

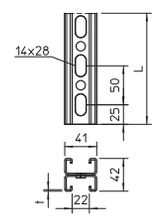
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MS4121P0200FS	200	41x21	2	200	1	35.000	**1122950**
MS4121P0300FS	300	41x21	2	300	1	52.500	**1122951**
MS4121P0400FS	400	41x21	2	400	1	70.000	**1122953**
MS4121P0500FS	500	41x21	2	500	1	87.500	**1122955**
MS4121P0600FS	600	41x21	2	600	1	105.000	**1122956**
MS4121P0700FS	700	41x21	2	700	1	122.500	**1122958**
MS4121P0800FS	800	41x21	2	800	1	134.000	**1122957**
MS4121P0900FS	900	41x21	2	900	1	157.500	**1122959**
MS4121P0200FT	200	41x21	2	200	1	35.100	**1122933**
MS4121P0300FT	300	41x21	2	300	1	53.000	**1122934**
MS4121P0400FT	400	41x21	2	400	1	70.000	**1122935**
MS4121P0500FT	500	41x21	2	500	1	87.000	**1122936**
MS4121P0600FT	600	41x21	2	600	1	105.000	**1122937**
MS4121P0700FT	700	41x21	2	700	1	123.000	**1122938**
MS4121P0800FT	800	41x21	2	800	1	140.000	**1122939**
MS4121P0900FT	900	41x21	2	900	1	158.000	**1122940**

St Steel

FS Strip-galvanised FT Hot-dip galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

MS4121 mounting rail, slot width 22 mm, double, perforated



22 U

Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
MS4142P3000FS	3000	41x42	2	3000	3	303.000	**1122947**
MS4142P6000FS	6000	41x42	2	6000	6	303.000	**1122948**
MS4142P3000FT	3000	41x42	2	3000	3	303.000	**1122944**
MS4142P6000FT	6000	41x42	2	6000	6	303.000	**1122945**
MS4142P6000A2	6000	41x42	2	6000	6	283.800	**1122954**

St Steel V2A Stainless steel, A2

FS Strip-galvanised FT Hot-dip galvanised

Heavy-duty profile/mounting rail with continuous perforation in base, slot width 22 mm. Double version, i.e. two profile rails are interconnected on the base (clinched).

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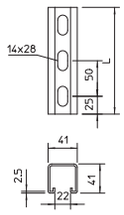
Always indicate the item number when ordering.

MS4141 mounting rail, slot width 22 mm, perforated



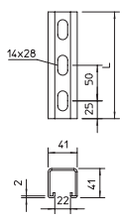
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
MS4141P1000FS	1000	41x41	2.5	1000	1	247.500	**1122908**
MS4141P3000FS	3000	41x41	2.5	3000	3	247.500	**1122910**
MS4141P6000FS	6000	41x41	2.5	6000	6	247.500	**1122912**
MS4141P1000FT	1000	41x41	2.5	1000	1	261.400	**1122606**
MS4141P3000FT	3000	41x41	2.5	3000	3	261.400	**1122622**
MS4141P6000FT	6000	41x41	2.5	6000	6	260.670	**1122657**
MS4141P3000A4	3000	41x41	2.5	3000	3	247.500	**1123049**
MS4141P6000A4	6000	41x41	2.5	6000	6	247.500	**1123051**

St Steel V4A Stainless steel, A4

FS Strip-galvanised FT Hot-dip galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

MS4141 mounting rail, slot width 22 mm, perforated



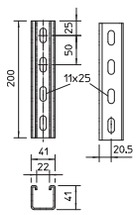
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
MSL4141P1000FS	1000	41x41	2	1000	1	201.100	**1122970**
MSL4141P3000FS	3000	41x41	2	3000	3	201.100	**1122972**
MSL4141P6000FS	6000	41x41	2	6000	6	201.100	**1122974**
MSL4141P1000FT	1000	41x41	2	1000	1	214.700	**1122962**
MSL4141P3000FT	3000	41x41	2	3000	3	214.700	**1122964**
MSL4141P6000FT	6000	41x41	2	6000	6	214.700	**1122966**
MSL4141P1000A2	1000	41x41	2	1000	1	201.100	**1122978**
MSL4141P3000A2	3000	41x41	2	3000	3	201.100	**1122980**
MSL4141P6000A2	6000	41x41	2	6000	6	201.100	**1122982**
MSL4141P1000A4	1000	41x41	2	1000	1	201.100	**1122988**
MSL4141P3000A4	3000	41x41	2	3000	3	201.100	**1122990**
MSL4141P6000A4	6000	41x41	2	6000	6	201.100	**1122992**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FS Strip-galvanised FT Hot-dip galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

MSL4141 mounting rail, slot width 22 mm, perforated



Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MSL4141P0200FS	200	41x41	2	200	1	40.400	**1123262**
MSL4141P0300FS	300	41x41	2	300	1	60.600	**1123264**
MSL4141P0400FS	400	41x41	2	400	1	80.800	**1123266**
MSL4141P0500FS	500	41x41	2	500	1	101.000	**1123268**
MSL4141P0600FS	600	41x41	2	600	1	121.000	**1123270**
MSL4141P0700FS	700	41x41	2	700	1	141.000	**1123272**
MSL4141P0800FS	800	41x41	2	800	1	162.000	**1123274**
MSL4141P0900FS	900	41x41	2	900	1	182.000	**1123276**

St Steel

FS Strip-galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

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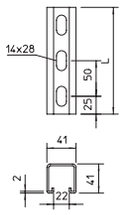
MS4141 mounting rail, slot width 22 mm, side-perforated



U 22

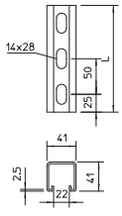
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
MSL4141PP1000FS	1000	41x41	2	1000	1	179.400	**1123008**
MSL4141PP3000FS	3000	41x41	2	3000	3	179.400	**1123010**
MSL4141PP6000FS	6000	41x41	2	6000	6	179.400	**1123012**
MSL4141PP1000FT	1000	41x41	2	1000	1	191.500	**1123001**
MSL4141PP3000FT	3000	41x41	2	3000	3	191.500	**1123003**
MSL4141PP6000FT	6000	41x41	2	6000	6	191.500	**1123005**
MSL4141PP1000A2	1000	41x41	2	1000	1	179.400	**1123014**
MSL4141PP3000A2	3000	41x41	2	3000	3	179.400	**1123016**
MSL4141PP6000A2	6000	41x41	2	6000	6	179.400	**1123018**
MSL4141PP1000A4	1000	41x41	2	1000	1	179.400	**1123021**
MSL4141PP3000A4	3000	41x41	2	3000	3	179.400	**1123023**
MSL4141PP6000A4	6000	41x41	2	6000	6	179.400	**1123025**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FS Strip-galvanised FT Hot-dip galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

MS4141 mounting rail, slot width 22 mm, perforated



U 22

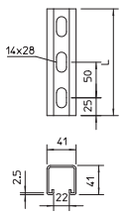
Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MS4141P0200FT	200	41x41	2.5	200	1	52.400	**1122509**
MS4141P0300FT	300	41x41	2.5	300	1	78.500	**1122517**
MS4141P0400FT	400	41x41	2.5	400	1	104.700	**1122525**
MS4141P0500FT	500	41x41	2.5	500	1	130.800	**1122533**
MS4141P0600FT	600	41x41	2.5	600	1	156.900	**1122541**
MS4141P0700FT	700	41x41	2.5	700	1	183.000	**1122568**
MS4141P0800FT	800	41x41	2.5	800	1	209.200	**1122576**
MS4141P0900FT	900	41x41	2.5	900	1	235.300	**1122584**

St Steel

FT Hot-dip galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

MS4141 mounting rail, slot width 22 mm, side-perforated



U 22

Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
MS4141PP1000FS	1000	41x41	2.5	1000	1	281.000	**1122481**
MS4141PP3000FS	3000	41x41	2.5	3000	3	218.000	**1122914**
MS4141PP6000FS	6000	41x41	2.5	6000	6	218.340	**1122916**
MS4141PP1000FT	1000	41x41	2.5	1000	1	225.000	**1122479**
MS4141PP3000FT	3000	41x41	2.5	3000	3	233.340	**1122483**
MS4141PP6000FT	6000	41x41	2.5	6000	6	225.000	**1122487**

St Steel

FS Strip-galvanised FT Hot-dip galvanised

Heavy-duty C profile rail for individual installation of support constructions, e.g. for cable trays or as a panel for switchgear cabinets. Can also be used for cable routing, in conjunction with clamp clips with a U foot.

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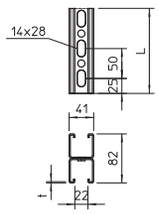
Always indicate the item number when ordering.

MS4141 mounting rail, slot width 22 mm, double, perforated



Type	Length mm	Dimension W x H mm	Material thickness mm	Dimension L mm	Pack. m	Weight kg/100 m	Item No.
MS4182P3000FS	3000	41x82	2	3000	3	402.200	**1122676**
MS4182P6000FS	6000	41x82	2	6000	6	402.200	**1122678**
MS4182P3000FT	3000	41x82	2	3000	3	402.200	**1122671**
MS4182P6000FT	6000	41x82	2	6000	6	402.200	**1122673**
MS4182P3000A2	3000	41x82	2	3000	3	402.200	**1122682**
MS4182P6000A2	6000	41x82	2	6000	6	402.200	**1122684**

St Steel V2A Stainless steel, A2

FS Strip-galvanised FT Hot-dip galvanised

Heavy-duty profile/mounting rail with continuous perforation in base, slot width 22 mm. Double version, i.e. two profile rails are interconnected on the base (clinched).

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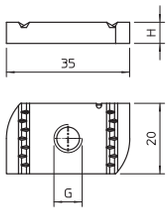
Always indicate the item number when ordering.

Slide nut



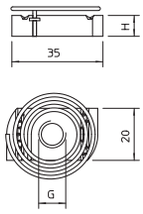
Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
MS41SN M6 ZL	35	20	6	M6	50	2.880	**1147206**
MS41SN M8 ZL	35	20	6	M8	50	2.800	**1147210**
MS41SN M10 ZL	35	20	8	M10	50	3.650	**1147214**
MS41SN M12 ZL	35	20	9.5	M12	50	4.200	**1147218**
MS41SN M6 A4	35	20	6	M6	50	2.880	**1147226**
MS41SN M8 A4	35	20	6	M8	50	2.800	**1147230**
MS41SN M10 A4	35	20	8	M10	50	3.650	**1147234**
MS41SN M12 A4	35	20	9.5	M12	50	4.200	**1147238**

St Steel V4A Stainless steel, A4

ZL Zinc scale

Slide nut for use with MS4121 und MS4141 profile rails

Slide nut with spring



Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
MS41SNF M6 F	35	20	6	M6	50	3.200	**1147306**
MS41SNF M8 F	35	20	6	M8	50	3.150	**1147310**
MS41SNF M10 F	35	20	8	M10	50	4.000	**1147314**
MS41SNF M12 F	35	20	9.5	M12	50	4.550	**1147318**
MS41SNF M6 A4	35	20	6	M6	50	3.200	**1147336**
MS41SNF M8 A4	35	20	6	M8	50	3.150	**1147340**
MS41SNF M10 A4	35	20	8	M10	50	4.000	**1147344**
MS41SNF M12 A4	35	20	9.5	M12	50	4.550	**1147348**

St Steel V4A Stainless steel, A4

F Hot-dip galvanised

Slide nut with spring for use with MS4121 und MS4141 profile rails

Hammer-head bolt

Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
MS41HB M6x30 ZL	35	20	6	M6x30	50	4.000	**1148306**
MS41HB M8x30 ZL	35	20	6	M8x30	50	4.850	**1148310**
MS41HB M8x60 ZL	35	20	6	M8x60	25	6.000	**1148314**
MS41HB M8x100 ZL	35	20	6	M8x100	20	7.600	**1148318**
MS41HB M10x30 ZL	35	20	8	M10x30	50	7.400	**1148322**
MS41HB M10x60 ZL	35	20	8	M10x60	25	9.250	**1148326**
MS41HB M10x100ZL	35	20	8	M10x100	20	11.700	**1148330**
MS41HB M12x30 ZL	35	20	9.5	M12x30	50	9.750	**1148334**
MS41HB M12x60 ZL	35	20	9.5	M12x60	25	12.400	**1148338**
MS41HB M12x100ZL	35	20	9.5	M12x100	20	15.950	**1148342**
MS41HB M6x30 A4	35	20	6	M6x30	50	4.000	**1148406**
MS41HB M8x30 A4	35	20	6	M8x30	50	4.800	**1148410**
MS41HB M8x60 A4	35	20	6	M8x60	25	6.000	**1148414**
MS41HB M8x100 A4	35	20	6	M8x100	20	7.550	**1148418**
MS41HB M10x30 A4	35	20	8	M10x30	50	7.350	**1148422**
MS41HB M10x60 A4	35	20	8	M10x60	25	9.200	**1148426**
MS41HB M10x100A4	35	20	8	M10x100	20	11.650	**1148430**
MS41HB M12x30 A4	35	20	9.5	M12x30	50	9.700	**1148434**
MS41HB M12x60 A4	35	20	9.5	M12x60	25	12.400	**1148438**
MS41HB M12x100A4	35	20	9.5	M12x100	20	15.900	**1148442**

St Steel V4A Stainless steel, A4

ZL Zinc scale

Hammer-head bolt for use with MS4121 und MS4141 profile rails

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Always indicate the item number when ordering.

Hammer-head bolt with spring

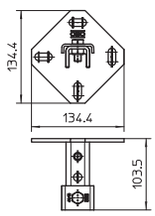
Type	Length mm	Width mm	Height mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
MS41HBF M8x30 F	35	20	6	M8x30	50	5.200	**1148376**
MS41HBF M8x60 F	35	20	6	M8x60	25	6.300	**1148380**
MS41HBF M10x30 F	35	20	8	M10x30	50	7.700	**1148384**
MS41HBF M10x60 F	35	20	8	M10x60	25	9.550	**1148388**
MS41HBF M12x30 F	35	20	9.5	M12x30	50	10.000	**1148392**
MS41HBF M12x60 F	35	20	9.5	M12x60	25	12.700	**1148396**
MS41HBF M8x30 A4	35	20	6	M8x30	50	4.800	**1148476**
MS41HBF M8x60 A4	35	20	6	M8x60	25	5.950	**1148480**
MS41HBF M10x30A4	35	20	8	M10x30	50	7.350	**1148484**
MS41HBF M10x60A4	35	20	8	M10x60	25	9.200	**1148488**
MS41HBF M12x30A4	35	20	9.5	M12x30	50	9.700	**1148492**
MS41HBF M12x60A4	35	20	9.5	M12x60	25	12.400	**1148496**

St Steel V4A Stainless steel, A4

F Hot-dip galvanised

Hammer-head bolt with spring for use with MS4121 und MS4141 profile rails

Wall, floor and ceiling bracket with 3 holes



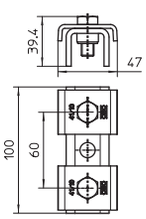
Type	Version	Dimension W x H mm	Material thickness mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
WBDHE 41 FT	Perforated	134x110	5	102	10	73.000	**1123191**
WBDHE 41 A2	Perforated	134x110	5	102	10	73.000	**1123195**
WBDHE 41 A4	Perforated	134x110	5	102	10	73.000	**1123197**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

The wall, floor and ceiling bracket can ideally be used as a panel for wall, floor and ceiling mounting.
Also suitable for stand and frame construction in conjunction with the mounting rails MS4141.

Rail connector SV with 3 holes



Type	Version	Dimension W x H mm	Material thickness mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SVE 41 FT	Perforated	47x39,4	4	100	10	42.000	**1123121**
SVE 41 A2	Perforated	47x39,4	4	100	10	42.000	**1123126**
SVE 41 A4	Perforated	47x39,4	4	100	10	42.000	**1123128**

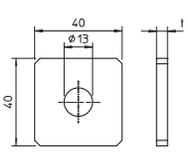
St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

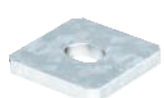
FT Hot-dip galvanised

The rail connector is used to extend the mounting rail MS4141. The connection can be made simply and securely on the construction site or prefabricated in the workshop.
There is a guarantee that there is no weak point in the area of the rail coupling. The static values of the mounting rail apply here.

Scope of delivery:
Retaining plates, type 4141, and suitable hexagonal bolts included loosely.

Connection plate with 1 hole





Type	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 1 VP FT	5	10	7.120	**1124643**
GMS 1 VP A2	4	10	4.450	**1124683**
GMS 1 VP A4	4	10	4.450	**1124723**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Connection plate with lengthwise slot, for example for mounting threaded rods to profile rails 41 x 41 mm and 41 x 21 mm.

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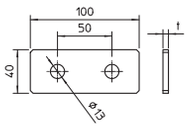
Always indicate the item number when ordering.

Connection plate with 2 holes



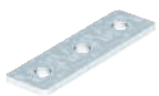
Type	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 2 VP FT	5	10	14.000	**1124645**
GMS 2 VP A2	4	10	11.500	**1124685**
GMS 2 VP A4	4	10	11.500	**1124725**

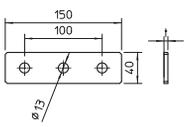
St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Connection plate with two holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Connection plate with 3 holes





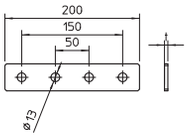
Type	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 3 VP FT	5	20	24.010	**1124647**
GMS 3 VP A2	4	20	17.200	**1124687**
GMS 3 VP A4	4	20	17.200	**1124727**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Connection plate with three holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Connection plate with 4 holes



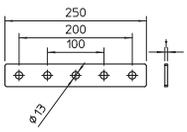
Type	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 4 VP FT	5	10	35.580	**1124649**
GMS 4 VP A2	4	10	23.300	**1124689**
GMS 4 VP A4	4	10	23.300	**1124729**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Connection plate with four holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Connection plate with 5 holes



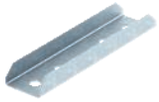
Type	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 5 VP FT	5	10	40.000	**1124651**
GMS 5 VP A2	4	10	28.900	**1124691**
GMS 5 VP A4	4	10	28.900	**1124731**

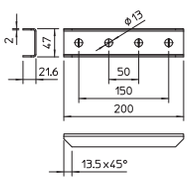
St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Connection plate with five holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Connector





Type	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
GVMS 4 ASV FT	With continuous perforation 13 mm	10	44.040	**1124641**
GVMS 4 ASV A2	With continuous perforation 13 mm	10	24.900	**1124681**
GVMS 4 ASV A4	With continuous perforation 13 mm	10	24.900	**1124715**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Connector gripping from outside with four holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Always indicate the item number when ordering.

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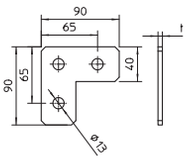
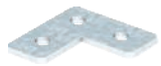
Connection plate, L-shaped

Type	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 3 VP L FT	5	10	25.000	**1124653**
GMS 3 VP L A2	4	10	15.900	**1124693**
GMS 3 VP L A4	4	10	15.900	**1124733**





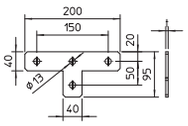
St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Connection plate with three holes for angled connection of profile rails 41 x 41 mm and 41 x 21 mm.

Connection plate, T-shaped

Type	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 4 VP T FT	5	10	41.000	**1124655**
GMS 4 VP T A2	4	10	30.200	**1124695**
GMS 4 VP T A4	4	10	30.200	**1124735**



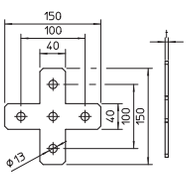
St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

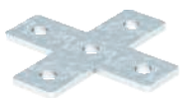
FT Hot-dip galvanised

Connection plate with four holes for T-shaped connection of profile rails 41 x 41 mm and 41 x 21 mm.

Connection plate, X-shaped

Type	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 5 VP X FT	5	10	48.000	**1124657**
GMS 5 VP X A2	4	10	29.600	**1124697**
GMS 5 VP X A4	4	10	29.600	**1124737**





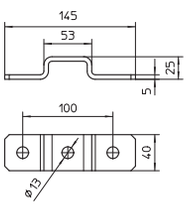
St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Connection plate with five holes for cross connection of profile rails 41 x 41 mm and 41 x 21 mm.

Omega clamp

Type	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 3 O 4121 FT	5	10	26.800	**1124671**
GMS 3 O 4121 A2	5	10	20.900	**1124711**
GMS 3 O 4121 A4	5	10	20.900	**1124751**



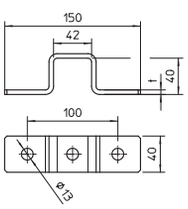
St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Fastening clip with 3 holes for cross-wise connection of profile rails 41 x 21 mm.

Omega clamp

Type	Material thickness mm	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 3 O 4141 FT	5	10	35.000	**1124673**
GMS 3 O 4141 A2	5	10	25.400	**1124713**
GMS 3 O 4141 A4	5	10	25.400	**1124753**



St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Fastening clip with 3 holes for cross-wise connection of profile rails 41 x 41 mm.

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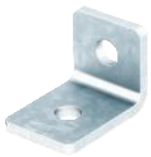
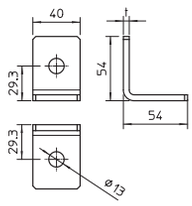
Always indicate the item number when ordering.

Mounting bracket, 90° with 2 holes





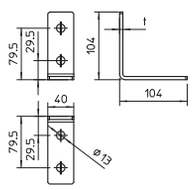
Type	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 2 VW 90 FT	90° angle	10	14.000	**1124659**
GMS 2 VW 90 A2	90° angle	10	11.500	**1124699**
GMS 2 VW 90 A4	90° angle	10	11.500	**1124739**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Mounting bracket with two holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°.

Mounting bracket, 90° with 4 holes



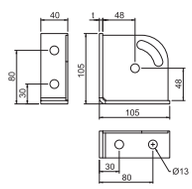
Type	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 4 VW 90 FT	90° angle	10	32.000	**1124663**
GMS 4 VW 90 A2	90° angle	10	23.300	**1124703**
GMS 4 VW 90 A4	90° angle	10	23.300	**1124743**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Mounting bracket with two holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°.

Mounting bracket, 90° with 6 holes



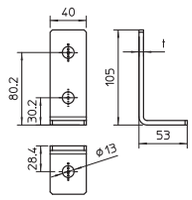
Type	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 6 KD FT	90° bracket	10	50.900	**1124792**
GMS 6 KD A2	90° bracket	10	48.800	**1124796**
GMS 6 KD A4	90° bracket	10	48.800	**1124798**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Reinforced mounting bracket with 6 holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°. Additional fastening option for a strut at an angle of 45° with an adjusting range of +/- 30°. Can be used for angles between 15° and 75°.

Mounting bracket, 90° with 3 holes



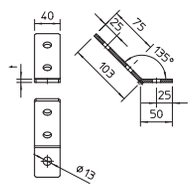
Type	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 3 VW 90 FT	90° angle	10	25.910	**1124661**
GMS 3 VW 90 A2	90° angle	10	17.700	**1124701**
GMS 3 VW 90 A4	90° angle	10	17.700	**1124741**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Installation profile with three holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°.

Mounting bracket, 45° with 3 holes



Type	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 3 VW 45 FT	45° angle	10	24.010	**1124667**
GMS 3 VW 45 A2	45° angle	10	17.200	**1124707**
GMS 3 VW 45 A4	45° angle	10	17.200	**1124747**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Mounting bracket with three holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 45°.

Always indicate the item number when ordering.

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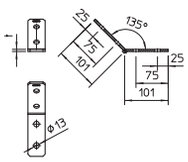
Mounting bracket, 45° with 4 holes

Type	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 4 VW 45 FT	45° angle	10	32.000	**1124669**
GMS 4 VW 45 A2	45° angle	10	23.300	**1124709**
GMS 4 VW 45 A4	45° angle	10	23.300	**1124749**

St Steel V2A Stainless steel, A2 V4A Stainless steel, A4

FT Hot-dip galvanised

Mounting bracket with four holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 45°.



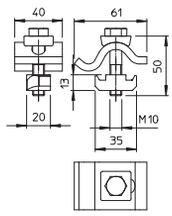
Chuck jaw, light-duty TKH

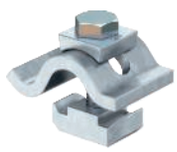
Type	Height mm	F in kN	Pack. pair	Weight kg/100 pairs	Item No.
TKH-L-25 FT	25	10	10	46.000	**6355812**

St Steel

FT Hot-dip galvanised

Light-duty tensioning claw with slide nut for fixing mounting rails to steel girder flanges.





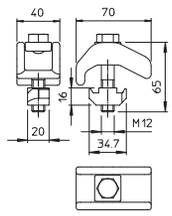
Chuck jaw, heavy-duty TKH

Type	Height mm	F in kN	Pack. pair	Weight kg/100 pairs	Item No.
TKH-S-30 FT	30	21	10	81.000	**6355804**

St Steel

FT Hot-dip galvanised

Heavy-duty chuck jaw with slide nut for fastening profile rails to steel girders.

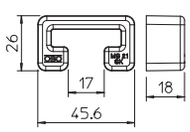


Protective cap MS4121

Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
MS4121 SK	Pastel orange	300	25	0.650	**1122902**

PE Polyethylene

Protective caps for profile rail, type MS4121.

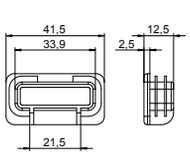


End cap MS4121

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
MS4121 EK	Pastel orange	50	0.645	**1122904**

PE Polyethylene

End cap for profile rail, type MS4121.

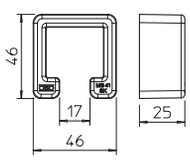


Protective cap MS4141

Type	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
MS4141 SK	Pastel orange	300	25	1.320	**1122900**

PE Polyethylene

Protective caps for profile rail, type MS4141.



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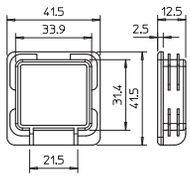
Always indicate the item number when ordering.

End cap MS4141



Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
MS4141 EK	Pastel orange	50	0.670	**1122906**

PE Polyethylene

End cap for profile rail, type MS4141.

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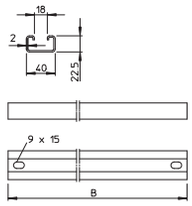
Always indicate the item number when ordering.

MS4022 profile rail, heavy-duty, slot 18 mm



Type	Material thickness mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MS4022P0192FT	2	192	10	31.800	**6007201**
MS4022P0292FT	2	292	10	44.700	**6007228**
MS4022P0392FT	2	392	10	60.100	**6007236**
MS4022P0492FT	2	492	10	81.500	**6007244**
MS4022P0592FT	2	592	10	96.000	**6007252**
MS4022P0692FT	2	692	10	113.000	**6007260**
MS4022P0792FT	2	792	10	130.000	**6007279**
MS4022P0892FT	2	892	10	145.000	**6007287**
MS4022P0992FT	2	992	10	162.000	**6007295**
MS4022P1092FT	2	1092	10	178.000	**6007309**
MS4022P1192FT	2	1192	10	197.500	**6007317**

St Steel

FT Hot-dip galvanised

Profile rail MS4022 for use as rung in heavy-duty ladders.

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Always indicate the item number when ordering.

Information on hat profile rails

The OBO hat/G support rails are machined according to DIN EN 60715. According to the standard IEC 60947-7-2, steel support rails are approved as a protective conductor busbar (PE function), however not as a PEN function!

Article type	Material (material thickness)	Short-circuit resistant ^= E CU cable (mm²)	Short-time withstand current 1 s
46277 GTP	Steel (1 mm)	10 mm²	1.2 kA
46277 GTPL	Steel (1 mm)	10 mm²	1.2 kA
2069	Steel (1 mm)	16 mm²	1.92 kA
2069S	Steel (1 mm)	16 mm²	1.90 kA
2069 GTP	Steel (1 mm)	16 mm²	1.92 kA
2069 GTPL	Steel (1 mm)	16 mm²	1.90 kA
2069/15 GTP	Steel (1 mm)	16 mm²	1.92 kA
2069/15 GTPL	Steel (1 mm)	16 mm²	1.90 kA
2069/15 GTP	Steel (1.5 mm)	35 mm²	4.2 kA
2069/15 GTPL	Steel (1.5 mm)	35 mm²	4.1 kA
2069/15 GTP	Steel (2.25 mm)	50 mm²	5.9 kA
2069/15 GTPL	Steel (2.25 mm)	50 mm²	5.8 kA
2064 GTP	Steel (1.5 mm)	35 mm²	4.2 kA
2064 GTPL	Steel (1.5 mm)	35 mm²	4.1 kA
(Rounded values)	Cross-sections calculated according to IEC 60439-1/EN 60439-1/VDE 0660-500 Table 3.	Relevant cross-section range according to DIN VDE 0100-540 Table 54.3.	

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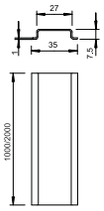
Always indicate the item number when ordering.

Hat profile rail, unperforated



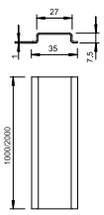
Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
2069 2M BK	Unperforated	1	2000	50	36.040	**1115618**
2069 3M BK	Unperforated	1	3000	—	36.034	**1115855**

St Steel

BK Bright

Hat profile rail 35 x 7.5 mm to DIN EN 60715 (formerly DIN EN 50022).

Hat profile rail, unperforated



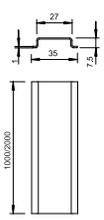
Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
2069 1M FS	Unperforated	1	1000	25	36.020	**1115677**
2069 2M FS	Unperforated	1	2000	50	36.033	**1115626**

St Steel

FS Strip-galvanised

Hat profile rail 35 x 7.5 mm to DIN EN 60715 (formerly DIN EN 50022).

Hat profile rail, unperforated



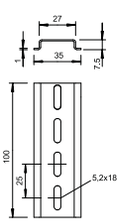
Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
2069 1M GTP	Unperforated	1	1000	25	36.020	**1115685**
2069 2M GTP	Unperforated	1	2000	50	36.040	**1115650**

St Steel

GTP Electrogalvanised, transparently passivated

Hat profile rail 35 x 7.5 mm to DIN EN 60715 (formerly DIN EN 50022).

Hat profile rail, perforated



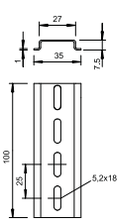
Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
2069 2M GTPL	Perforated	1	2000	50	33.280	**1115669**

St Steel

GTP Electrogalvanised, transparently passivated

Hat profile rail 35 x 7.5 mm to DIN EN 60715 (formerly DIN EN 50022).

Hat profile rail, perforated



Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
2069 L 2M FS	Perforated	1	2000	50	33.280	**1115804**

St Steel

FS Strip-galvanised

Hat profile rail 35 x 7.5 mm to DIN EN 60715 (formerly DIN EN 50022).

Always indicate the item number when ordering.

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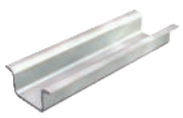
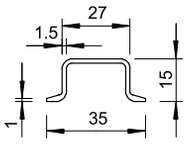
Hat profile rail, unperforated





35 | 1 m

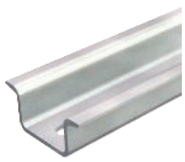
Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
2069 15 1.5 GTP	Unperforated	1.5	2000	20	66.000	**1115421**

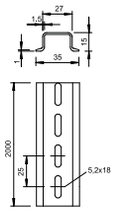
St Steel

GTP Electrogalvanised, transparently passivated

Hat profile rail 35 x 15 mm similar to DIN EN 60715 (formerly DIN EN 50022), but with material thickness 1.5 mm.

Hat profile rail, perforated





35 | 1 m

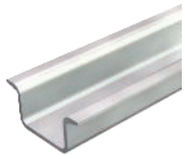
Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
2069 15 1.5 FS	Perforated	1.5	2000	20	66.000	**1115460**
2069 15 1.5 GTPL	Perforated	1.5	2000	20	66.000	**1115456**

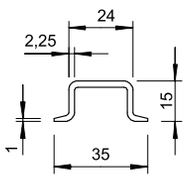
St Steel

FS Strip-galvanised GTP Electrogalvanised, transparently passivated

Hat profile rail 35 x 15 mm similar to DIN EN 60715 (formerly DIN EN 50022), but with material thickness 1.5 mm.

Hat profile rail, unperforated





35 | 1 m

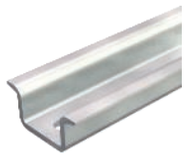
Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
2069 15 2.2 GTP	Unperforated	2.25	2000	20	97.000	**1115553**

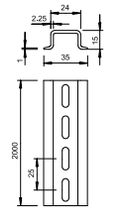
St Steel

GTP Electrogalvanised, transparently passivated

Hat profile rail 35 x 15 mm to DIN EN 60715 (formerly DIN EN 50022).

Hat profile rail, perforated





35 | 1 m

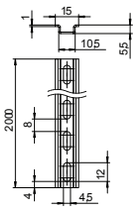
Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
2069 15 2.2 GTPL	Perforated	2.25	2000	20	97.000	**1115596**

St Steel

GTP Electrogalvanised, transparently passivated

Hat profile rail 35 x 15 mm to DIN EN 60715 (formerly DIN EN 50022).

Hat profile rail unperforated



15 | 1 m

Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
46277 GTP	Unperforated	1	2000	50	12.400	**1115332**
46277 GTPL	Perforated	1	2000	50	12.400	**1115359**

St Steel

GTP Electrogalvanised, transparently passivated

Hat profile rail 15 x 5 mm to DIN EN 60715 (formerly DIN EN 50045).

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Always indicate the item number when ordering.

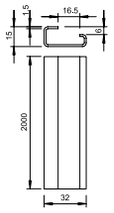
Support rail

Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
2064 GTP 2M	Unperforated	1.5	2000	20	70.000	**1115057**

St Steel

GTP Electrogalvanised, transparently passivated

G rail G32 to DIN EN 60715 (previously DIN EN 50035).



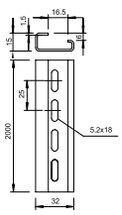
Support rail perforated

Type	Version	Material thickness mm	Length mm	Bundle m	Weight kg/100 m	Item No.
2064 GTPL 2M	Perforated	1.5	2000	20	69.000	**1115065**

St Steel

GTP Electrogalvanised, transparently passivated

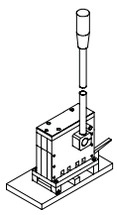
G rail G32 to DIN EN 60715 (previously DIN EN 50035).



Hat and support rail cutting unit

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
HTS 35	1	2,000.000	**1125036**

With the HTS 35 hat and support rail cutting device, you can cut the four most common hat and support rail profiles (types 2069..., 46277... and 2064...) to fit and without burring in accordance with DIN 50022 and DIN 50035.



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Always indicate the item number when ordering.

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Clamp clip systems

	Clamp clips, N base	450
	Clamp clips, hammer-head base	452
	Clamp clips, U base	458
	Fastening to flat steel	462
	Fastening to angular steel	464
	Clamp clip, special application	466
	Bundle clip	467
	Clamp clips, system accessories	468

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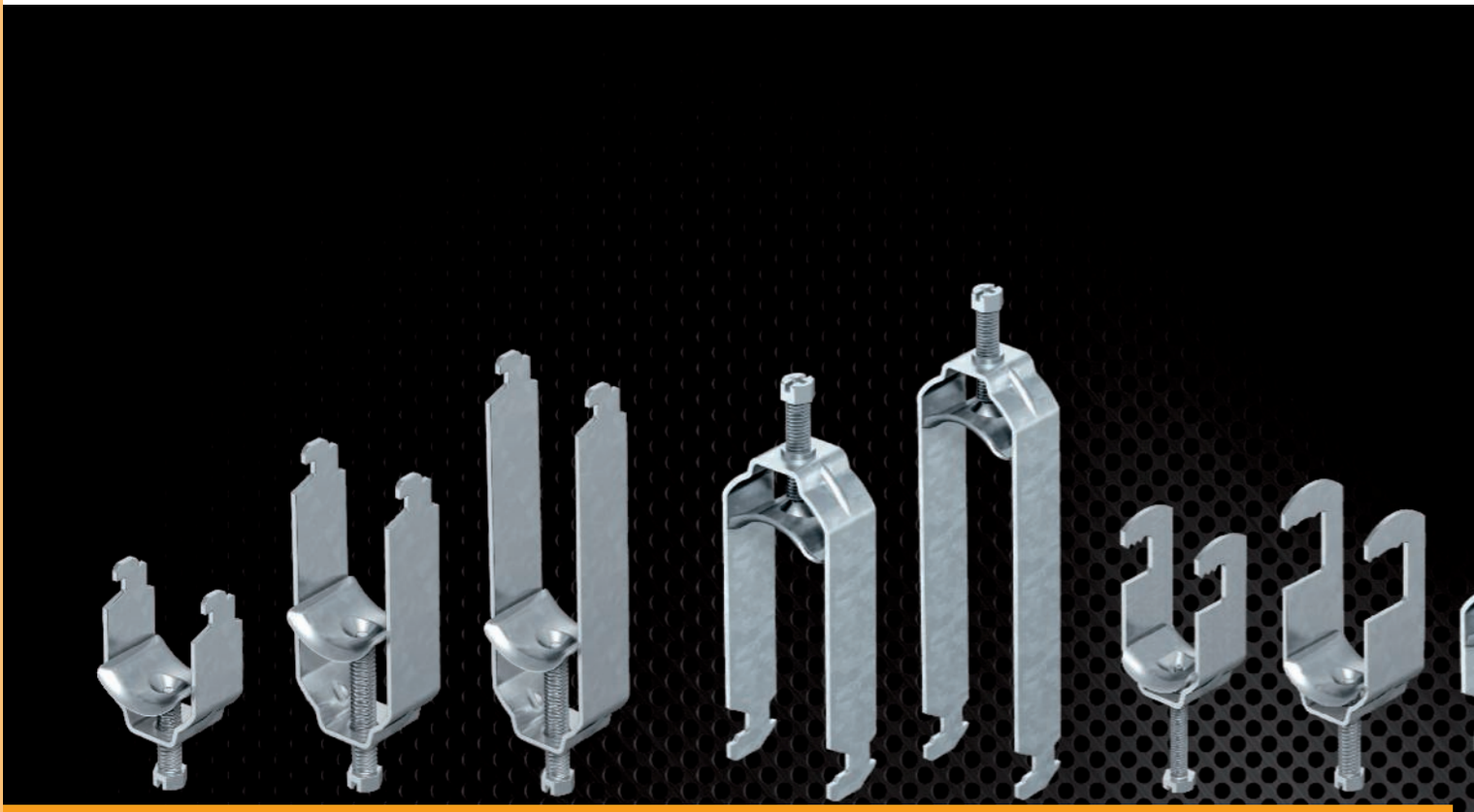

Where quality and quantity meet. OBO clamp clips

Clamp clips allow cables and pipes to be fastened to profile rails and cable ladders. Clamp clips are available in three standard base shapes, but OBO even offers suitable clamp clips for mounting on angular or flat steel and round profiles. There are special versions of BBS clips available for bundling multiple installation cables and fixing single-wire cables in rotary current systems.

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- Quick mounting thanks to double-start thread
- Wide range of base shapes for all conceivable applications
- Various materials and finishes
- Wide range of special clips
- Comprehensive accessories

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Clamp clips with N base

- Slot width 11–12 mm
- Large clamping range
- Large variety, single, double version
- FT, AL, VA

Clamp clips with hammer-head base

- Slot width 16–17 mm
- Large clamping range
- Single, double and triple versions
- FT, AL, VA

Clamp clips with U base

- Slot width 18–22 mm
- Large clamping range
- Single, double and triple versions
- FT, AL, VA

Clamp clips with F base

- Base clamping width: 4–12 mm
- Large clamping range
- Single and double versions
- FT, Al, VA

Clamp clips with W base

- Angular steel up to 40 mm limb length
- Large clamping range
- Single and double versions
- FT, Al, VA

Always indicate the item number when ordering.

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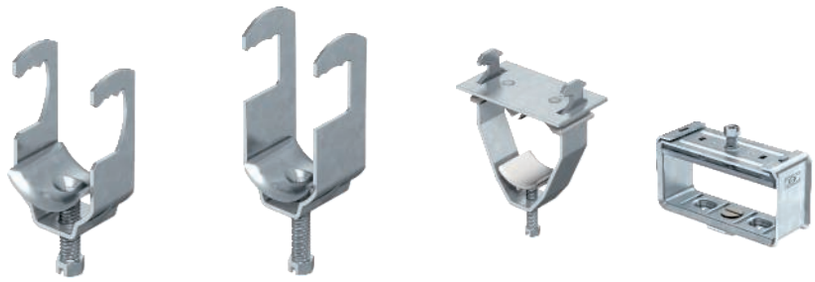
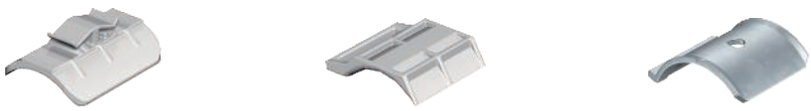
Cable tidys for special applications

- Wide range of possibilities
- Solution-oriented



Counter-troughs, single

- Improved cable protection
- Universally applicable



Counter-trough, double

- Improved cable protection
- Universally usable

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Clamp clip, single, plastic pressure trough

N | 11-12 | Fluor Chlor Brom HALOGENFREE

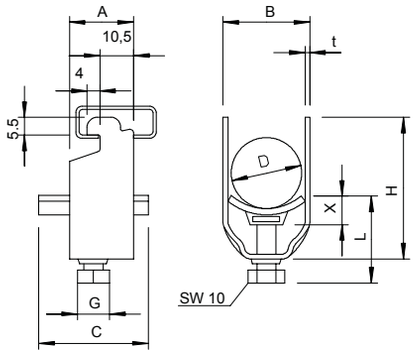
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056N 12 FT	8 - 12	100	2.500	**1163124**
2056N 16 FT	12 - 16	100	2.750	**1163167**
2056N 22 FT	16 - 22	100	3.100	**1163221**
2056N 28 FT	22 - 28	100	4.600	**1163280**
2056N 34 FT	28 - 34	100	5.900	**1163345**
2056N 40 FT	34 - 40	100	5.970	**1163396**
2056N 46 FT	40 - 46	100	6.640	**1163469**
2056N 52 FT	46 - 52	100	7.270	**1163523**
2056N 58 FT	52 - 58	50	10.560	**1163582**
2056N 64 FT	58 - 64	50	11.200	**1163647**
2056N 70 FT	64 - 70	50	12.330	**1163701**
2056N 12 ALU	8 - 12	50	0.900	**1183605**
2056N 16 ALU	12 - 16	50	1.090	**1183613**
2056N 22 ALU	16 - 22	50	1.200	**1183621**
2056N 28 ALU	22 - 28	50	1.700	**1183648**
2056N 34 ALU	28 - 34	50	2.200	**1183656**
2056N 40 ALU	34 - 40	50	2.350	**1183664**
2056N 46 ALU	40 - 46	50	2.550	**1183672**
2056N 52 ALU	46 - 52	50	2.880	**1183680**
2056N 58 ALU	52 - 58	50	4.100	**1183699**

St Steel Alu Aluminium

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 11–12 mm; at least 6.5 mm clear internal height and at least 18.5 mm clear internal width.
Clip and bolt made of hot-dip galvanised steel.
Polypropylene pressure trough, halogen-free, colour light grey RAL 7035.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056N 12 FT	8 - 12	20	16	34	M6	1.5	5	34	34	3
2056N 16 FT	12 - 16	20	20	34	M6	1.5	5	38	34	3
2056N 22 FT	16 - 22	20	27	34	M6	1.5	5	44	34	3
2056N 28 FT	22 - 28	20	33	34	M6	2	5	51	34	3
2056N 34 FT	28 - 34	20	39	34	M8	2	5.5	59	37.5	5
2056N 40 FT	34 - 40	20	45	34	M8	2	5.5	66	37.5	5
2056N 46 FT	40 - 46	20	51	40	M8	2	5.5	72	37.5	5
2056N 52 FT	46 - 52	20	57	40	M8	2	6.5	79	37.5	5
2056N 58 FT	52 - 58	23	64	40	M8	2.5	6.5	86	45.5	5
2056N 64 FT	58 - 64	23	70	40	M8	2.5	6.5	92	45.5	5
2056N 70 FT	64 - 70	23	76	40	M8	2.5	6.5	99	45.5	5

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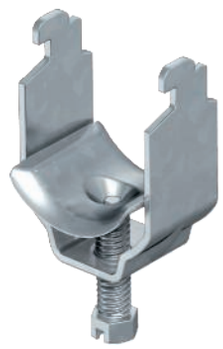
Always indicate the item number when ordering.

Clamp clip, single, metal pressure trough

N 11-12



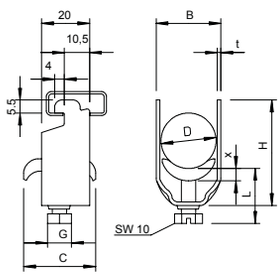
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056N M 12 FT	8 - 12	100	2.450	**1155407**
2056N M 16 FT	12 - 16	100	2.800	**1155415**
2056N M 22 FT	16 - 22	100	3.150	**1155423**
2056N M 28 FT	22 - 28	100	4.900	**1155431**
2056N M 34 FT	28 - 34	100	6.400	**1155458**
2056N M 40 FT	34 - 40	100	7.000	**1155466**
2056N M 46 FT	40 - 46	100	8.500	**1155474**
2056N M 52 FT	46 - 52	100	9.150	**1155482**
2056N M 58 FT	52 - 58	100	12.100	**1155490**

St Steel

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 11–12 mm; at least 6.5 mm clear internal height and at least 18.5 mm clear internal width; metal troughs have strongly rounded edges on all sides, so that there is no risk of cable damage.

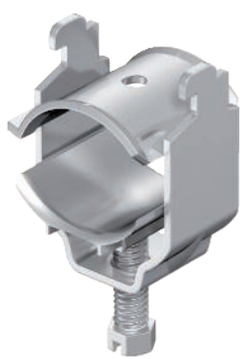
Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056N M 12 FT	8 - 12	20	16	30	M6	1.5	3.5	34	32.5	3
2056N M 16 FT	12 - 16	20	20	30	M6	1.5	3.5	38	32.5	3
2056N M 22 FT	16 - 22	20	27	30	M6	1.5	4.5	44	33.5	3
2056N M 28 FT	22 - 28	20	33	30	M6	2	4.5	51	33.5	3
2056N M 34 FT	28 - 34	20	39	35	M8	2	4.5	59	37	5
2056N M 40 FT	34 - 40	20	45	35	M8	2	5	66	37	5
2056N M 46 FT	40 - 46	20	51	35	M8	2	5	72	37	5
2056N M 52 FT	46 - 52	20	57	35	M8	2	5	79	37	5
2056N M 58 FT	52 - 58	23	64	35	M8	2.5	5	89	37	5

Clamp clips for screen connection

11-12

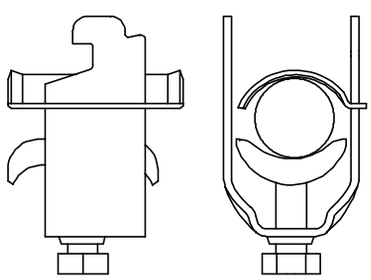


Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056N SAS 8 A2	4 - 8	50	2.900	**1167006**
2056N SAS 12 A2	8 - 12	50	3.700	**1167014**
2056N SAS 16 A2	12 - 16	50	4.200	**1167022**
2056N SAS 22 A2	16 - 22	50	4.850	**1167030**
2056N SAS 28 A2	22 - 28	50	6.600	**1167049**

V2A Stainless steel, A2

For electrical connection of the braided shield of stripped cables.
Delivery complete with counter-trough; pressure trough and VA counter-trough.
A cable screen for protection against electromagnetic influences, can also contribute towards equipotential bonding as both ends are connected to the reference potential.

Dimensions



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Clamp clip, single, plastic pressure trough

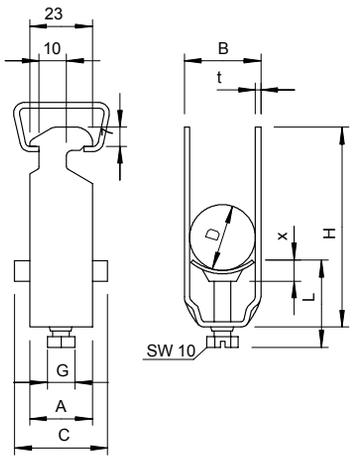
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056 12 FT	8 - 12	100	3.540	**1160125**
2056 16 FT	12 - 16	100	3.820	**1160168**
2056 22 FT	16 - 22	100	4.508	**1160222**
2056 28 FT	22 - 28	100	6.240	**1160281**
2056 34 FT	28 - 34	100	7.680	**1160346**
2056 40 FT	34 - 40	100	8.260	**1160400**
2056 46 FT	40 - 46	100	10.900	**1160451**
2056 52 FT	46 - 52	100	11.900	**1160524**
2056 58 FT	52 - 58	100	14.300	**1160583**
2056 64 FT	58 - 64	100	15.600	**1160648**
2056 70 FT	64 - 70	50	18.200	**1160702**
2056 76 FT	70 - 76	25	20.600	**1160761**
2056 82 FT	76 - 82	25	22.000	**1160826**
2056 90 FT	82 - 90	25	26.200	**1160907**
2056 100 FT	90 - 100	25	27.800	**1160990**
2056 12 A2	8 - 12	50	3.300	**1159518**
2056 16 A2	12 - 16	50	3.600	**1159526**
2056 22 A2	16 - 22	50	4.200	**1159534**
2056 28 A2	22 - 28	50	6.500	**1159542**
2056 34 A2	28 - 34	50	7.400	**1159550**
2056 40 A2	34 - 40	25	8.000	**1159569**
2056 46 A2	40 - 46	25	10.900	**1159577**
2056 52 A2	46 - 52	25	11.400	**1159585**
2056 58 A2	52 - 58	25	14.500	**1159593**
2056 64 A2	58 - 64	15	15.600	**1159607**
2056 70 A2	64 - 70	15	18.200	**1159615**
2056 76 A2	70 - 76	10	20.800	**1159623**
2056 12 ALU	8 - 12	100	0.750	**1183206**
2056 16 ALU	12 - 16	100	0.900	**1183214**
2056 22 ALU	16 - 22	100	1.050	**1183222**
2056 28 ALU	22 - 28	100	1.500	**1183230**
2056 34 ALU	28 - 34	100	2.300	**1183249**
2056 40 ALU	34 - 40	100	2.700	**1183257**
2056 46 ALU	40 - 46	100	3.600	**1183265**
2056 52 ALU	46 - 52	100	3.900	**1183273**
2056 58 ALU	52 - 58	50	4.200	**1183281**
2056 64 ALU	58 - 64	50	4.500	**1183303**
2056 70 ALU	64 - 70	50	5.400	**1183311**
2056 76 ALU	70 - 76	25	5.850	**1183338**

St Steel Alu Aluminium V2A Stainless steel, A2

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 16–17 mm.
Hot-dip galvanised steel clip and bolt, polypropylene pressure trough, halogen-free, colour light grey RAL 7035.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056 12 FT	8 - 12	23	16	34	M6	1.5	5	40	34	3
2056 16 FT	12 - 16	23	20	34	M6	1.5	5	44	34	3
2056 22 FT	16 - 22	23	27	34	M6	1.5	5	50	34	3
2056 28 FT	22 - 28	23	33	34	M6	2	5	58	34	3
2056 34 FT	28 - 34	23	39	34	M8	2	5.5	66	34	5
2056 40 FT	34 - 40	23	45	34	M8	2	5.5	72	37.5	5
2056 46 FT	40 - 46	23	51	40	M8	2	5.5	79	44.5	5
2056 52 FT	46 - 52	23	57	40	M8	2	6.5	86	44.5	5
2056 58 FT	52 - 58	23	64	40	M8	2.5	6.5	93	45.5	5
2056 64 FT	58 - 64	23	70	40	M8	2.5	6.5	99	45.5	5
2056 70 FT	64 - 70	23	76	40	M8	2.5	6.5	106	45.5	5
2056 76 FT	70 - 76	25	82	40	M8	2.5	6.5	114	45.5	5
2056 82 FT	76 - 82	25	88	40	M8	2.5	6.5	121	45.5	5
2056 90 FT	82 - 90	25	97	40	M8	3	6.5	130	57.5	5
2056 100 FT	90 - 100	25	107	40	M8	3	6.5	140	57.5	5

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Always indicate the item number when ordering.

Clamp clip, double, plastic pressure trough

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056 2 12 FT	8 - 12	50	4.100	**1161121**
2056 2 16 FT	12 - 16	50	4.650	**1161164**
2056 2 22 FT	16 - 22	50	5.120	**1161229**
2056 2 28 FT	22 - 28	50	7.700	**1161288**
2056 2 34 FT	28 - 34	50	10.200	**1161342**
2056 2 40 FT	34 - 40	50	11.450	**1161407**
2056 2 46 FT	40 - 46	50	14.900	**1161466**
2056 2 52 FT	46 - 52	50	16.700	**1161520**
2056 2 58 FT	52 - 58	50	21.400	**1161571**
2056 2 64 FT	58 - 64	50	24.250	**1161644**
2056 2 22 A2	16 - 22	50	5.150	**1161822**
2056 2 28 A2	22 - 28	50	7.700	**1161830**
2056 2 34 A2	28 - 34	50	10.200	**1161849**
2056 2 40 A2	34 - 40	25	14.350	**1161857**
2056 2 46 A2	40 - 46	25	14.950	**1161865**
2056 2 52 A2	46 - 52	25	16.700	**1161873**
2056 2 58 A2	52 - 58	25	21.400	**1161881**
2056 2 64 A2	58 - 64	15	24.250	**1161903**
2056 2 12 ALU	8 - 12	50	1.000	**1183389**
2056 2 16 ALU	12 - 16	50	1.250	**1183397**
2056 2 22 ALU	16 - 22	50	1.500	**1183400**
2056 2 28 ALU	22 - 28	50	2.000	**1183419**
2056 2 34 ALU	28 - 34	50	3.200	**1183427**
2056 2 40 ALU	34 - 40	50	3.750	**1183435**
2056 2 46 ALU	40 - 46	50	4.850	**1183443**
2056 2 52 ALU	46 - 52	50	5.300	**1183451**
2056 2 58 ALU	52 - 58	50	6.000	**1183478**

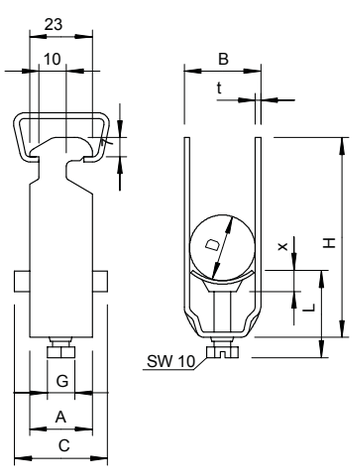
St Steel Alu Aluminium V2A Stainless steel, A2

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 16–17 mm.
Hot-dip galvanised steel clip and bolt, polypropylene pressure trough, halogen-free, colour light grey RAL 7035.

Dimensions

Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056 2 12 FT	8 - 12	23	16	34	M6	1.5	4.5	52	34	3
2056 2 16 FT	12 - 16	23	20	34	M6	1.5	4.5	61	34	3
2056 2 22 FT	16 - 22	23	27	34	M6	1.5	5	73	47	3
2056 2 28 FT	22 - 28	23	33	34	M6	2	5	87	47	3
2056 2 34 FT	28 - 34	23	39	34	M8	2	6	101	44.5	5
2056 2 40 FT	34 - 40	23	45	34	M8	2	6	114	44.5	5
2056 2 46 FT	40 - 46	23	51	40	M8	2	6	129	44.5	5
2056 2 52 FT	46 - 52	23	57	40	M8	2	6.5	129	45.5	5
2056 2 58 FT	52 - 58	23	64	40	M8	2.5	6.5	154	45.5	5
2056 2 64 FT	58 - 64	23	70	40	M8	2.5	6.5	167	44.5	5



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Always indicate the item number when ordering.

Clamp clip, triple, plastic pressure trough

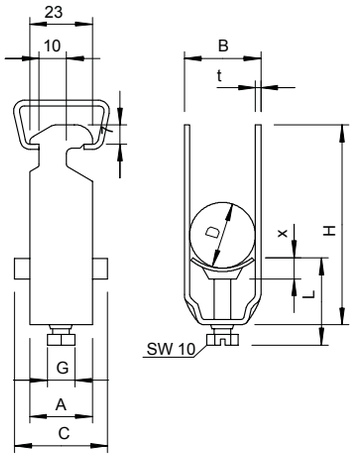
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056 3 12 FT	8 - 12	50	4.900	**1162128**
2056 3 16 FT	12 - 16	50	6.200	**1162160**
2056 3 22 FT	16 - 22	50	7.100	**1162225**
2056 3 28 FT	22 - 28	50	10.650	**1162284**
2056 3 34 FT	28 - 34	50	13.100	**1162349**
2056 3 40 FT	34 - 40	50	14.350	**1162403**
2056 3 46 FT	40 - 46	25	19.800	**1162462**
2056 3 22 ALU	16 - 22	50	2.050	**1183524**
2056 3 28 ALU	22 - 28	50	2.900	**1183532**
2056 3 34 ALU	28 - 34	50	4.200	**1183540**

St Steel Alu Aluminium

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 16–17 mm.
Hot-dip galvanised steel clip and bolt, polypropylene pressure trough, halogen-free, colour light grey RAL 7035.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056 3 12 FT	8 - 12	23	16	34	M6	1.5	5	70	47	3
2056 3 16 FT	12 - 16	23	20	34	M6	1.5	5	82	47	3
2056 3 22 FT	16 - 22	23	27	34	M6	1.5	5	101	47	3
2056 3 28 FT	22 - 28	23	33	34	M6	2	5	121	47	3
2056 3 34 FT	28 - 34	23	39	34	M8	2	6	142	56.5	5
2056 3 40 FT	34 - 40	23	45	34	M8	2	6	162	56.5	5
2056 3 46 FT	40 - 46	23	51	40	M8	2	6	184	56.5	5

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Always indicate the item number when ordering.

Clamp clip, single, metal pressure trough

H 16-17 E30 E90

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056 M 12 FT	8 - 12	100	3.200	**1156004**
2056 M 16 FT	12 - 16	100	3.500	**1156012**
2056 M 22 FT	16 - 22	100	4.400	**1156020**
2056 M 28 FT	22 - 28	100	6.100	**1156039**
2056 M 34 FT	28 - 34	100	7.700	**1156047**
2056 M 40 FT	34 - 40	100	8.600	**1156055**
2056 M 46 FT	40 - 46	100	9.600	**1156063**
2056 M 52 FT	46 - 52	100	10.400	**1156071**
2056 M 58 FT	52 - 58	100	13.100	**1156098**
2056 M 64 FT	58 - 64	100	14.500	**1156101**
2056 M 70 FT	64 - 70	50	16.100	**1156128**
2056 M 76 FT	70 - 76	25	18.300	**1156136**
2056 M 82 FT	76 - 82	25	19.100	**1156144**
2056 M 90 FT	82 - 90	25	23.300	**1156152**
2056 M 100 FT	90 - 100	25	24.500	**1156160**
2056 M 12 A2	8 - 12	50	3.200	**1159712**
2056 M 16 A2	12 - 16	50	3.500	**1159716**
2056 M 22 A2	16 - 22	50	4.400	**1159722**
2056 M 28 A2	22 - 28	25	6.100	**1159728**
2056 M 34 A2	28 - 34	25	7.700	**1159734**
2056 M 40 A2	34 - 40	25	8.600	**1159740**
2056 M 46 A2	40 - 46	25	9.600	**1159746**
2056 M 52 A2	46 - 52	25	10.400	**1159752**
2056 M 58 A2	52 - 58	15	13.100	**1159758**
2056 M 64 A2	58 - 64	15	14.500	**1159764**
2056 M 70 A2	64 - 70	15	16.100	**1159770**
2056 M 76 A2	70 - 76	10	18.300	**1159776**

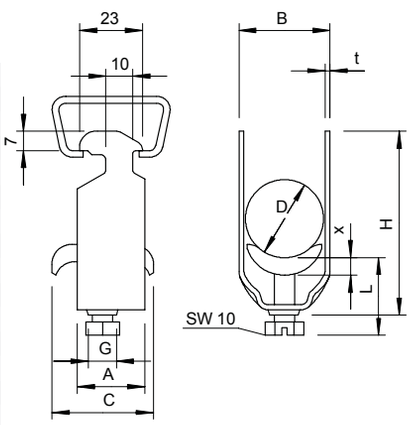
St Steel V2A Stainless steel, A2

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 16–17 mm.
Clip, bolt and pressure trough made of hot-dip galvanised steel.

Dimensions

Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056 M 12 FT	8 - 12	23	16	30	M6	1.5	3.5	40	32.5	3
2056 M 16 FT	12 - 16	23	20	30	M6	1.5	3.5	44	32.5	3
2056 M 22 FT	16 - 22	23	27	30	M6	1.5	4.5	50	46.5	3
2056 M 28 FT	22 - 28	23	33	30	M6	2	4.5	58	46.5	3
2056 M 34 FT	28 - 34	23	39	35	M8	2	5	66	44	5
2056 M 40 FT	34 - 40	23	45	35	M8	2	5	72	44	5
2056 M 46 FT	40 - 46	23	51	35	M8	2	5	79	44	5
2056 M 52 FT	46 - 52	23	57	35	M8	2	5	86	44	5
2056 M 58 FT	52 - 58	23	64	35	M8	2.5	5	93	44	5
2056 M 64 FT	58 - 64	23	70	35	M8	2.5	5	99	56	5
2056 M 70 FT	64 - 70	25	76	35	M8	2.5	5	106	56	5
2056 M 76 FT	70 - 76	25	82	40	M8	2.5	5	114	56	5
2056 M 82 FT	76 - 82	25	88	40	M8	2.5	5	121	56	5
2056 M 90 FT	82 - 90	25	97	40	M8	3	5	130	56	5
2056 M 100 FT	90 - 100	25	107	40	M8	3	5	140	56	5



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Always indicate the item number when ordering.

Clamp clip, double, metal pressure trough

H 16-17 E30 E90

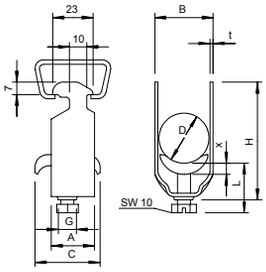
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056 M2 12 FT	8 - 12	50	3.980	**1156179**
2056 M2 16 FT	12 - 16	50	4.750	**1156187**
2056 M2 22 FT	16 - 22	50	6.900	**1156195**
2056 M2 28 FT	22 - 28	50	7.800	**1156209**

St Steel

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 16–17 mm.
Clip, bolt and pressure trough made of hot-dip galvanised steel.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056 M2 12 FT	8 - 12	23	16	34	M6	1.5	5	52	34	3
2056 M2 16 FT	12 - 16	23	20	34	M6	1.5	5	61	34	3
2056 M2 22 FT	16 - 22	23	27	34	M6	1.5	5	73	47	3
2056 M2 28 FT	22 - 28	23	33	34	M6	2	5	87	47	3

Clamp clip, triple, metal pressure trough

H 16-17 E30 E90

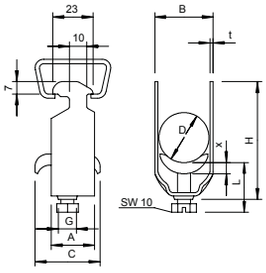
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056 M3 12 FT	8 - 12	50	4.050	**1156241**
2056 M3 16 FT	12 - 16	50	5.800	**1156268**
2056 M3 22 FT	16 - 22	50	6.500	**1156276**
2056 M3 28 FT	22 - 28	50	9.500	**1156284**

St Steel

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 16–17 mm.
Clip, bolt and pressure trough made of hot-dip galvanised steel.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056 M3 12 FT	8 - 12	23	16	34	M6	1.5	5	70	47	3
2056 M3 16 FT	12 - 16	23	20	34	M6	1.5	5	82	47	3
2056 M3 22 FT	16 - 22	23	27	34	M6	1.5	5	101	47	3
2056 M3 28 FT	22 - 28	23	33	34	M6	2	5	121	47	3

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Always indicate the item number when ordering.

Clamp clip, fastening earthing strips

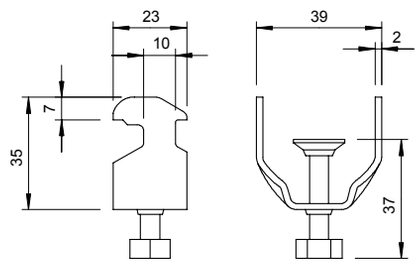
Type	For rail with slot width mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056 BE FT	16 - 17	25	4.700	**1174053**

St Steel

FT Hot-dip galvanised

To fasten earthing strips with widths of up to 30 mm to profile rails, suitable for all C profile rails with 16–17 mm slot width.

Dimensions



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Always indicate the item number when ordering.

Clamp clip, single, plastic pressure trough

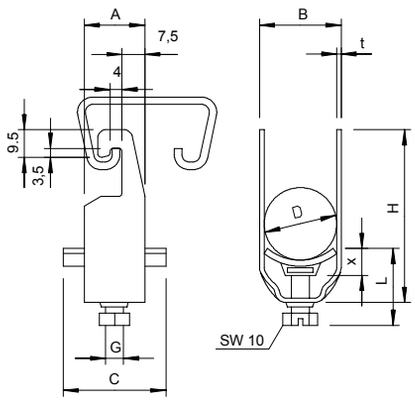
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056U 12 FT	8 - 12	100	3.150	**1175122**
2056U 16 FT	12 - 16	100	3.600	**1175165**
2056U 22 FT	16 - 22	100	3.223	**1175211**
2056U 28 FT	22 - 28	100	4.344	**1175289**
2056U 34 FT	28 - 34	100	7.500	**1175343**
2056U 40 FT	34 - 40	100	8.100	**1175408**
2056U 46 FT	40 - 46	100	10.000	**1175467**
2056U 52 FT	46 - 52	100	11.200	**1175521**
2056U 58 FT	52 - 58	100	13.400	**1175580**
2056U 64 FT	58 - 64	100	14.300	**1175645**
2056U 70 FT	64 - 70	50	15.250	**1175696**
2056U 76 FT	70 - 76	25	20.600	**1175769**
2056U 82 FT	76 - 82	25	22.000	**1175823**
2056U 90 FT	82 - 90	25	26.200	**1175904**
2056U 100 FT	90 - 100	25	30.000	**1175998**
2056U 12 A2	8 - 12	50	3.000	**1178504**
2056U 16 A2	12 - 16	50	3.200	**1178512**
2056U 22 A2	16 - 22	50	3.800	**1178520**
2056U 28 A2	22 - 28	50	5.350	**1178539**
2056U 34 A2	28 - 34	50	7.200	**1178547**
2056U 40 A2	34 - 40	25	8.100	**1178555**
2056U 46 A2	40 - 46	25	9.900	**1178563**
2056U 52 A2	46 - 52	25	11.200	**1178571**
2056U 58 A2	52 - 58	25	13.400	**1178598**
2056U 64 A2	58 - 64	15	14.300	**1178601**
2056U 70 A2	64 - 70	15	20.500	**1178628**
2056U 76 A2	70 - 76	10	19.100	**1178636**
2056U 12 ALU	8 - 12	50	1.100	**1184407**
2056U 16 ALU	12 - 16	50	1.200	**1184415**
2056U 22 ALU	16 - 22	50	1.350	**1184423**
2056U 28 ALU	22 - 28	50	1.950	**1184431**
2056U 34 ALU	28 - 34	50	2.550	**1184458**
2056U 40 ALU	34 - 40	50	2.800	**1184466**
2056U 46 ALU	40 - 46	50	3.600	**1184474**
2056U 52 ALU	46 - 52	50	3.950	**1184482**
2056U 58 ALU	52 - 58	50	4.900	**1184490**
2056U 64 ALU	58 - 64	50	5.250	**1184504**
2056U 70 ALU	64 - 70	50	5.600	**1184539**
2056U 76 ALU	70 - 76	50	7.050	**1184512**

St Steel Alu Aluminium V2A Stainless steel, A2

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 18 mm and 22 mm.
Polypropylene pressure sleeve, halogen-free, colour light grey RAL 7035.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056U 12 FT	8 - 12	20	16	34	M6	1.5	5	42	34	3
2056U 16 FT	12 - 16	20	20	34	M6	1.5	5	46	34	3
2056U 22 FT	16 - 22	20	27	34	M6	1.5	5	53	34	3
2056U 28 FT	22 - 28	20	33	34	M6	2	5	59	34	3
2056U 34 FT	28 - 34	20	39	34	M8	2	5.5	67	37.5	5
2056U 40 FT	34 - 40	20	45	34	M8	2	5.5	73	37.5	5
2056U 46 FT	40 - 46	20	51	40	M8	2	5.5	79	37.5	5
2056U 52 FT	46 - 52	20	57	40	M8	2	6.5	85	38.5	5
2056U 58 FT	52 - 58	23	64	40	M8	2.5	6.5	91	38.5	5
2056U 64 FT	58 - 64	23	70	40	M8	2.5	6.5	97	38.5	5
2056U 70 FT	64 - 70	23	76	40	M8	2.5	6.5	103	38.5	5
2056U 76 FT	70 - 76	25	82	40	M8	2.5	6.5	110	45.5	5
2056U 82 FT	76 - 82	25	88	40	M8	2.5	6.5	116	45.5	5
2056U 90 FT	82 - 90	25	97	40	M8	3	6.5	125	45.5	5
2056U 100 FT	90 - 100	25	107	40	M8	3	6.5	135	45.5	5

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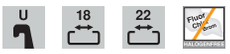
Always indicate the item number when ordering.

Clamp clip, double, plastic pressure trough



Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056U 2 12 FT	8 - 12	50	2.850	**1176129**
2056U 2 16 FT	12 - 16	50	3.050	**1176161**
2056U 2 22 FT	16 - 22	50	4.950	**1176226**
2056U 2 28 FT	22 - 28	50	6.940	**1176285**
2056U 2 34 FT	28 - 34	50	9.500	**1176331**
2056U 2 40 FT	34 - 40	50	11.350	**1176404**
2056U 2 46 FT	40 - 46	50	11.350	**1176463**
2056U 2 52 FT	46 - 52	50	15.050	**1176528**
2056U 2 58 FT	52 - 58	50	19.800	**1176587**

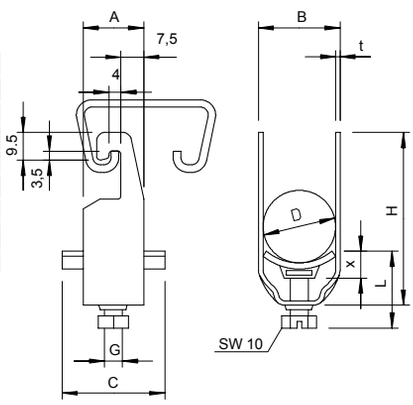
St Steel

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 18 mm and 22 mm.
Polypropylene pressure sleeve, halogen-free, colour light grey RAL 7035.

Dimensions

Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056U 2 12 FT	8 - 12	20	16	34	M6	1.5	5	56	34	3
2056U 2 16 FT	12 - 16	20	20	34	M6	1.5	5	64	34	3
2056U 2 22 FT	16 - 22	20	27	34	M6	1.5	5	77	47	3
2056U 2 28 FT	22 - 28	20	33	34	M6	2	5	89	47	3
2056U 2 34 FT	28 - 34	20	39	34	M8	2	5.5	103	44.5	5
2056U 2 40 FT	34 - 40	20	45	34	M8	2	5.5	115	44.5	5
2056U 2 46 FT	40 - 46	23	51	40	M8	2	5.5	128	44.5	5
2056U 2 52 FT	46 - 52	23	57	40	M8	2	6.5	140	45.5	5
2056U 2 58 FT	52 - 58	23	64	40	M8	2.5	6.5	152	45.5	5



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Always indicate the item number when ordering.

Clamp clip, triple, plastic pressure trough

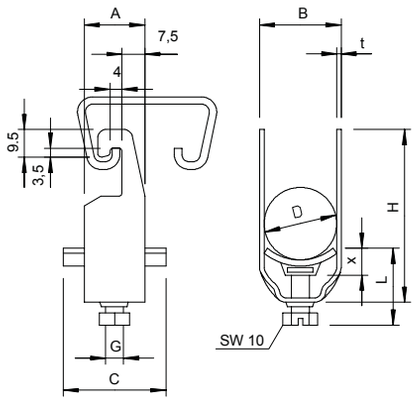
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056U 3 12 FT	8 - 12	50	4.750	**1177125**
2056U 3 16 FT	12 - 16	50	4.850	**1177168**
2056U 3 22 FT	16 - 22	50	6.600	**1177222**
2056U 3 28 FT	22 - 28	50	10.500	**1177281**
2056U 3 34 FT	28 - 34	50	13.250	**1177346**
2056U 3 40 FT	34 - 40	50	14.400	**1177400**
2056U 3 46 FT	40 - 46	50	18.950	**1177451**

St Steel

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 18 mm and 22 mm.
Polypropylene pressure sleeve, halogen-free, colour light grey RAL 7035.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056U 3 12 FT	8 - 12	20	16	34	M6	1.5	5	70	47	3
2056U 3 16 FT	12 - 16	20	20	34	M6	1.5	5	82	47	3
2056U 3 22 FT	16 - 22	20	27	34	M6	1.5	5	101	47	3
2056U 3 28 FT	22 - 28	20	33	34	M6	2	5	119	47	3
2056U 3 34 FT	28 - 34	20	39	34	M8	2	5.5	139	44.5	5
2056U 3 40 FT	34 - 40	20	45	34	M8	2	5.5	157	44.5	5
2056U 3 46 FT	40 - 46	23	51	40	M8	2	5.5	177	56.5	5

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Always indicate the item number when ordering.

Clamp clip, single, metal pressure trough

U 18 22 E30 E90

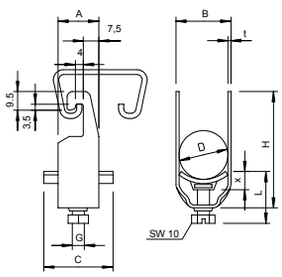
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056U M 12 FT	8 - 12	100	3.300	**1158007**
2056U M 16 FT	12 - 16	100	3.520	**1158015**
2056U M 22 FT	16 - 22	100	3.960	**1158023**
2056U M 28 FT	22 - 28	100	5.890	**1158031**
2056U M 34 FT	28 - 34	100	7.650	**1158058**
2056U M 40 FT	34 - 40	100	8.360	**1158066**
2056U M 46 FT	40 - 46	100	10.890	**1158074**
2056U M 52 FT	46 - 52	100	11.660	**1158082**
2056U M 58 FT	52 - 58	100	14.740	**1158090**
2056U M 64 FT	58 - 64	100	15.730	**1158104**
2056U M 70 FT	64 - 70	50	18.200	**1158112**
2056U M 76 FT	70 - 76	25	20.600	**1158120**
2056U M 12 A4	8 - 12	100	3.300	**1158207**
2056U M 16 A4	12 - 16	100	3.520	**1158211**
2056U M 22 A4	16 - 22	100	3.960	**1158215**
2056U M 28 A4	22 - 28	100	5.890	**1158219**
2056U M 34 A4	28 - 34	100	7.650	**1158223**
2056U M 40 A4	34 - 40	100	8.360	**1158227**
2056U M 46 A4	40 - 46	100	10.890	**1158231**
2056U M 52 A4	46 - 52	100	11.660	**1158235**
2056U M 58 A4	52 - 58	100	14.740	**1158239**
2056U M 64 A4	58 - 64	100	15.730	**1158243**
2056U M 70 A4	64 - 70	50	18.200	**1158247**
2056U M 76 A4	70 - 76	25	20.600	**1158251**

St Steel V4A Stainless steel, A4

FT Hot-dip galvanised

Suitable for all C profile rails with slot width 18 mm and 22 mm.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056U M 12 FT	8 - 12	20	16	34	M6	1.5	5	42	34	3
2056U M 16 FT	12 - 16	20	20	34	M6	1.5	5	46	34	3
2056U M 22 FT	16 - 22	20	27	34	M6	1.5	5	53	34	3
2056U M 28 FT	22 - 28	20	33	34	M6	2	5	59	34	3
2056U M 34 FT	28 - 34	20	39	34	M8	2	5.5	67	37.5	5
2056U M 40 FT	34 - 40	20	45	34	M8	2	5.5	73	37.5	5
2056U M 46 FT	40 - 46	20	51	40	M8	2	5.5	79	37.5	5
2056U M 52 FT	46 - 52	20	57	40	M8	2	6.5	85	38.5	5
2056U M 58 FT	52 - 58	23	64	40	M8	2.5	6.5	91	38.5	5
2056U M 64 FT	58 - 64	23	70	40	M8	2.5	6.5	97	38.5	5
2056U M 70 FT	64 - 70	23	76	40	M8	2.5	6.5	103	38.5	5
2056U M 76 FT	70 - 76	25	82	40	M8	2.5	6.5	110	45.5	5

Always indicate the item number when ordering.

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Clamp clip, single, plastic pressure trough FT

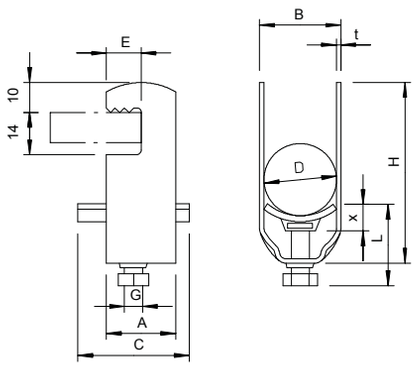
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056F 12 FT	8 - 12	100	3.700	**1169122**
2056F 16 FT	12 - 16	100	3.900	**1169165**
2056F 22 FT	16 - 22	100	4.500	**1169211**
2056F 28 FT	22 - 28	100	6.000	**1169289**
2056F 34 FT	28 - 34	100	8.740	**1169343**
2056F 40 FT	34 - 40	100	8.500	**1169408**
2056F 46 FT	40 - 46	100	10.600	**1169467**
2056F 52 FT	46 - 52	100	11.700	**1169521**
2056F 58 FT	52 - 58	50	13.050	**1169580**
2056F 64 FT	58 - 64	50	14.800	**1169645**

St Steel

FT Hot-dip galvanised

Suitable for flat, bracket and U irons of 4–12 mm material thickness.
Clip and bolt made of hot-dip galvanised steel.
Polypropylene pressure trough, halogen-free, colour light grey RAL 7035.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056F 12 FT	8 - 12	23	16	34	M6	1.5	5	43	34	3
2056F 16 FT	12 - 16	23	20	34	M6	1.5	5	47	34	3
2056F 22 FT	16 - 22	23	27	34	M6	1.5	5	54	34	3
2056F 28 FT	22 - 28	23	33	34	M6	2	5	60	34	3
2056F 34 FT	28 - 34	23	39	34	M8	2	5.5	68	37.5	5
2056F 40 FT	34 - 40	23	45	34	M8	2	5.5	74	37.5	5
2056F 46 FT	40 - 46	25	51	40	M8	2	5.5	80	37.5	5
2056F 52 FT	46 - 52	25	57	40	M8	2	6.5	86	38.5	5
2056F 58 FT	52 - 58	25	64	40	M8	2.5	6.5	92	38.5	5
2056F 64 FT	58 - 64	25	70	40	M8	2.5	6.5	98	38.5	5

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Always indicate the item number when ordering.

Clamp clip, double, plastic pressure trough

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056F 2 12 FT	8 - 12	50	4.250	**1170120**
2056F 2 16 FT	12 - 16	50	4.550	**1170163**
2056F 2 22 FT	16 - 22	50	5.200	**1170228**
2056F 2 28 FT	22 - 28	50	7.900	**1170287**
2056F 2 34 FT	28 - 34	50	9.900	**1170341**
2056F 2 40 FT	34 - 40	50	10.672	**1170406**
2056F 2 46 FT	40 - 46	50	12.050	**1170465**
2056F 2 52 FT	46 - 52	50	16.600	**1170511**

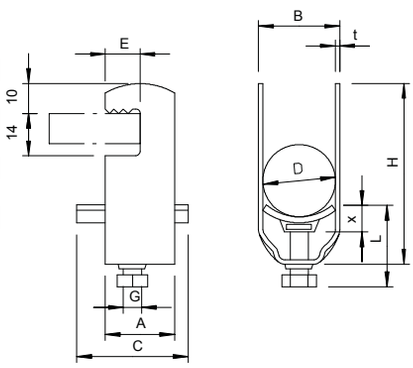
St Steel

FT Hot-dip galvanised

Suitable for flat, bracket and U irons of 4–12 mm material thickness.
Clip and bolt made of hot-dip galvanised steel.
Polypropylene pressure trough, halogen-free, colour light grey RAL 7035.

Dimensions

Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056F 2 12 FT	8 - 12	23	16	34	M6	1.5	4.5	57	25	3
2056F 2 16 FT	12 - 16	23	20	34	M6	1.5	4.5	65	25	3
2056F 2 22 FT	16 - 22	23	27	34	M6	1.5	5	78	38	3
2056F 2 28 FT	22 - 28	23	33	34	M6	2	5	90	38	3
2056F 2 34 FT	28 - 34	23	39	34	M8	2	6	104	33	5
2056F 2 40 FT	34 - 40	23	45	34	M8	2	6	116	33	5
2056F 2 46 FT	40 - 46	25	51	40	M8	2	6	128	33	5
2056F 2 52 FT	46 - 52	25	57	40	M8	2	6.5	140	33	5



Clamp clip, single, metal pressure trough

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056F M 12 FT	8 - 12	100	3.700	**1156802**
2056F M 16 FT	12 - 16	100	3.900	**1156810**
2056F M 22 FT	16 - 22	100	4.550	**1156829**
2056F M 28 FT	22 - 28	100	6.000	**1156837**

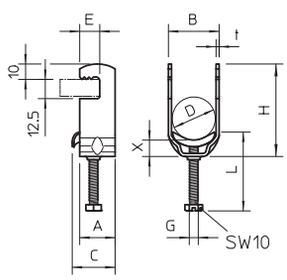
St Steel

FT Hot-dip galvanised

The metal troughs have strongly rounded edges on all sides, so that there is no risk of cable damage.

Dimensions

Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056F M 12 FT	8 - 12	23	16	34	M6	1.5	5	43	34	3
2056F M 16 FT	12 - 16	23	20	34	M6	1.5	5	47	34	3
2056F M 22 FT	16 - 22	23	27	34	M6	1.5	5	54	34	3
2056F M 28 FT	22 - 28	23	33	34	M6	2	5	60	34	3



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Always indicate the item number when ordering.

Clamp clip, single, plastic pressure trough

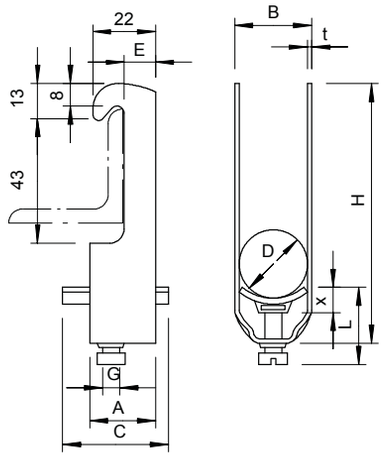
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056W 12 FT	8 - 12	100	4.450	**1180126**
2056W 16 FT	12 - 16	100	4.890	**1180169**
2056W 22 FT	16 - 22	100	5.700	**1180223**
2056W 28 FT	22 - 28	100	7.800	**1180282**
2056W 34 FT	28 - 34	100	9.400	**1180347**
2056W 40 FT	34 - 40	100	10.000	**1180401**
2056W 46 FT	40 - 46	100	12.800	**1180460**
2056W 52 FT	46 - 52	100	13.600	**1180525**
2056W 58 FT	52 - 58	50	17.100	**1180584**
2056W 64 FT	58 - 64	50	18.600	**1180649**
2056W 70 FT	64 - 70	50	18.500	**1180681**
2056W 22 A2	16 - 22	50	5.700	**1185438**
2056W 28 A2	22 - 28	50	7.800	**1185446**
2056W 34 A2	28 - 34	50	9.400	**1185454**
2056W 40 A2	34 - 40	25	10.000	**1185462**
2056W 46 A2	40 - 46	25	12.800	**1185470**
2056W 52 A2	46 - 52	25	13.600	**1185489**
2056W 58 A2	52 - 58	25	17.100	**1185497**
2056W 22 ALU	16 - 22	50	1.900	**1184024**
2056W 28 ALU	22 - 28	50	2.550	**1184032**
2056W 34 ALU	28 - 34	50	3.200	**1184040**
2056W 40 ALU	34 - 40	50	3.500	**1184059**
2056W 46 ALU	40 - 46	50	4.550	**1184067**
2056W 52 ALU	46 - 52	50	4.800	**1184075**
2056W 58 ALU	52 - 58	50	5.850	**1184083**
2056W 64 ALU	58 - 64	50	6.450	**1184091**

St Steel Alu Aluminium V2A Stainless steel, A2

FT Hot-dip galvanised

Suitable for angular steel of 40 mm limb length.
Clip and bolt made of hot-dip galvanised steel.
Polypropylene pressure trough, halogen-free, colour light grey RAL 7035.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056W 12 FT	8 - 12	23	16	34	M6	1.5	5	74	27	3
2056W 16 FT	12 - 16	23	20	34	M6	1.5	5	78	27	3
2056W 22 FT	16 - 22	23	27	34	M6	1.5	5	85	27	3
2056W 28 FT	22 - 28	23	33	34	M6	2	5	91	27	3
2056W 34 FT	28 - 34	23	39	34	M8	2	5.5	99	31.5	5
2056W 40 FT	34 - 40	23	45	34	M8	2	5.5	105	31.5	5
2056W 46 FT	40 - 46	25	51	40	M8	2	5.5	111	31.5	5
2056W 52 FT	46 - 52	25	57	40	M8	2	6.5	117	32.5	5
2056W 58 FT	52 - 58	25	64	40	M8	2.5	6.5	123	32.5	5
2056W 64 FT	58 - 64	25	70	40	M8	2.5	6.5	130	32.5	5
2056W 70 FT	64 - 70	25	76	40	M8	2.5	6.5	136	32.5	5

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Always indicate the item number when ordering.

Clamp clip, double, plastic pressure trough

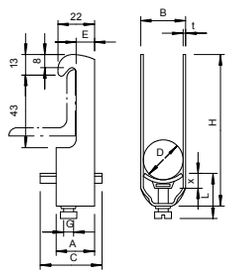
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056W 2 16 FT	12 - 16	50	5.700	**1181165**
2056W 2 22 FT	16 - 22	50	7.050	**1181211**
2056W 2 28 FT	22 - 28	50	10.350	**1181289**
2056W 2 34 FT	28 - 34	50	11.600	**1181343**
2056W 2 40 FT	34 - 40	25	12.700	**1181408**
2056W 2 46 FT	40 - 46	25	16.750	**1181467**
2056W 2 52 FT	46 - 52	25	18.200	**1181521**
2056W 2 58 FT	52 - 58	25	23.000	**1181580**

St Steel

FT Hot-dip galvanised

Suitable for angular steel of 40 mm limb length.
Clip and bolt made of hot-dip galvanised steel.
Polypropylene pressure trough, halogen-free, colour light grey RAL 7035.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension x mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056W 2 16 FT	12 - 16	23	20	34	M6	1.5	5	96	34	3
2056W 2 22 FT	16 - 22	23	27	34	M6	1.5	5	109	34	3
2056W 2 28 FT	22 - 28	23	33	34	M6	2	5	121	34	3
2056W 2 34 FT	28 - 34	23	39	34	M8	2	5.5	135	37.5	5
2056W 2 40 FT	34 - 40	23	45	34	M8	2	5.5	147	37.5	5
2056W 2 46 FT	40 - 46	25	51	40	M8	2	5.5	160	37.5	5
2056W 2 52 FT	46 - 52	25	57	40	M8	2	6.5	172	38.5	5
2056W 2 58 FT	52 - 58	25	64	40	M8	2.5	6.5	185	38.5	5

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Clamp clip, single, metal pressure trough, round profiles/pipes

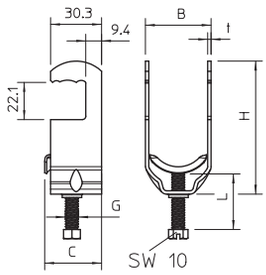
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056RS M 16 FT	12 - 16	100	4.000	**1158305**
2056RS M 22 FT	16 - 22	100	5.200	**1158309**
2056RS M 28 FT	22 - 28	100	7.500	**1158313**
2056RS M 34 FT	28 - 34	100	9.000	**1158317**
2056RS M 40 FT	34 - 40	100	10.000	**1158321**
2056RS M 46 FT	40 - 46	100	10.900	**1158325**
2056RS M 52 FT	46 - 52	100	12.200	**1158329**
2056RS M 58 FT	52 - 58	100	15.000	**1158333**
2056RS M 64 FT	58 - 64	100	16.500	**1158337**

St Steel

FT Hot-dip galvanised

Suitable for all round profile irons or pipes of diameters to 22 mm; clip, pressure trough and bolt made of steel, hot-dip galvanised;
the metal troughs have strongly rounded edges on all sides, so that no damage to the cables need be feared.

Dimensions



Type	Clamping range D mm	Dimension B mm	Dimension C mm	Dimension G	Dimension t mm	Dimension H mm	Dimension L mm	Max. tightening torque Nm
2056RS M 16 FT	12 - 16	20	28	M6	1.5	57	26	3
2056RS M 22 FT	16 - 22	27	28	M6	1.5	69	30	3
2056RS M 28 FT	22 - 28	33	28	M6	2	73	38	3
2056RS M 34 FT	28 - 34	39	33	M8	2	79	33	5
2056RS M 40 FT	34 - 40	45	33	M8	2	86	33	5
2056RS M 46 FT	40 - 46	51	33	M8	2	92	33	5
2056RS M 52 FT	46 - 52	57	33	M8	2	97	33	5
2056RS M 58 FT	52 - 58	64	33	M8	2.5	103	33	5
2056RS M 64 FT	58 - 64	70	33	M8	2.5	112	33	5

Clamp clip, hammer-head base, 3x single-wire connection

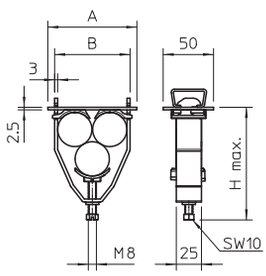
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056 E 31 FT	28 - 31	25	19.500	**1174606**
2056 E 37 FT	34 - 37	25	24.600	**1174614**
2056 E 44 FT	40 - 44	25	28.300	**1174630**

St Steel

FT Hot-dip galvanised

Clip element, bolt and lock plate made of hot-dip galvanised steel,
pressure and counter-trough made of polypropylene, halogen-free, light grey RAL 7035.
Delivered complete with lock plate and counter-troughs.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension H mm	Max. tightening torque Nm
2056 E 31 FT	28 - 31	83	69	107	5
2056 E 37 FT	34 - 37	95	81	118	5
2056 E 44 FT	40 - 44	109	95	143	5

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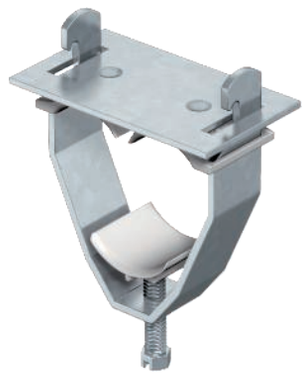
Always indicate the item number when ordering.

Clamp clip, U base, 3x single-wire connection



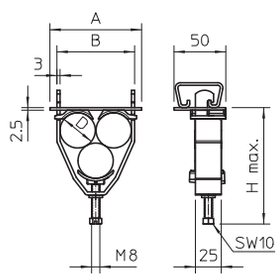
Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056U-E28 FT	25 - 28	25	20.000	**1174509**
2056U-E31 FT	28 - 31	25	19.500	**1174541**
2056U-E34 FT	31 - 34	25	23.000	**1174517**
2056U-E37 FT	34 - 37	25	24.600	**1174568**
2056U-E40 FT	37 - 40	25	26.000	**1174525**
2056U-E44 FT	40 - 44	25	28.300	**1174576**

St Steel

FT Hot-dip galvanised

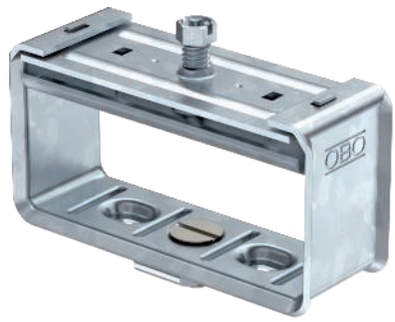
Clip element, bolt and lock plate made of hot-dip galvanised steel,
pressure and counter-trough made of polypropylene, halogen-free, light grey RAL 7035.
Delivered complete with lock plate and counter-troughs.

Dimensions



Type	Clamping range D mm	Dimension A mm	Dimension B mm	Dimension H mm	Max. tightening torque Nm
2056U-E28 FT	25 - 28	77	63	101	5
2056U-E31 FT	28 - 31	83	69	107	5
2056U-E34 FT	31 - 34	89	75	112	5
2056U-E37 FT	34 - 37	95	81	118	5
2056U-E40 FT	37 - 40	101	87	123	5
2056U-E44 FT	40 - 44	109	95	143	5

Bundle clip



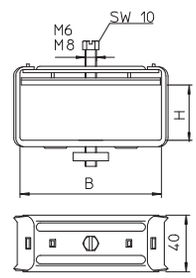
Type	Height x Width mm	Dimension H mm	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056 B 35 FT	35 x 50	35	50	100	16.000	**1194054**
2056 B 40 FT	40 x 100	40	100	50	32.700	**1194046**
2056 B 80 FT	80 x 100	80	100	25	38.300	**1194089**
2056 B 80 A2	80 x 100	80	100	25	38.300	**1194372**

St Steel V2A Stainless steel, A2

FT Hot-dip galvanised

Clip and bolt made of hot-dip galvanised steel, countersunk head bolt made of rustproof stainless steel, slide nut made of electrogalvanised stainless steel.

Dimensions



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Always indicate the item number when ordering.

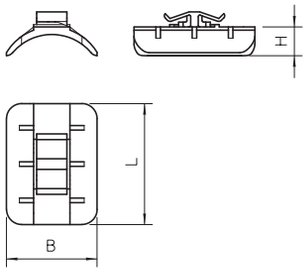
Counter-trough, plastic 16–17 mm slot width

Type	Clamping range D mm	Dimension L mm	Dimension B mm	Dimension H mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2058 12 LGR	8 - 12	34	12	5.4	Light grey	100	0.146	**1195123**
2058 16 LGR	12 - 16	34	15.5	6	Light grey	100	0.162	**1195166**
2058 22 LGR	16 - 22	34	20	6.7	Light grey	100	0.172	**1195220**
2058 28 LGR	22 - 28	34	25	8.1	Light grey	100	0.200	**1195271**
2058 34 LGR	28 - 34	40	30	9.5	Light grey	100	0.302	**1195344**
2058 40 LGR	34 - 40	40	35	10.8	Light grey	100	0.331	**1195409**
2058 46 LGR	40 - 46	40	40	12.2	Light grey	100	0.385	**1195468**
2058 52 LGR	46 - 52	40	42	11	Light grey	100	0.391	**1195522**
2058 58 LGR	52 - 58	40	45	11.5	Light grey	100	0.430	**1195581**
2058 64 LGR	58 - 64	40	48	11.8	Light grey	50	0.432	**1195646**
2058 70 LGR	64 - 70	40	50	11.5	Light grey	50	0.453	**1195700**

PP Polypropylene

Area of use rails with slot width 16–17 mm. Counter-trough is clamped into the slot width as protection between the cable and rail.

Dimensions



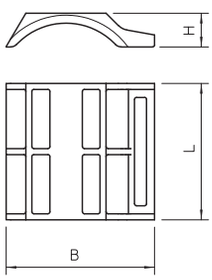
Counter-trough, plastic, universal

Type	Clamping range D mm	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2058FW 12 LGR	8 - 12	34	16.5	5	100	0.102	**1197126**
2058FW 16 LGR	12 - 16	34	20	5	100	0.131	**1197169**
2058FW 22 LGR	16 - 22	34	25.5	5.8	100	0.164	**1197223**
2058FW 28 LGR	22 - 28	34	31.5	7.2	100	0.206	**1197282**
2058FW 34 LGR	28 - 34	34	37	8.4	100	0.289	**1197347**
2058FW 40 LGR	34 - 40	34	42.5	9.7	100	0.311	**1197401**
2058FW 46 LGR	40 - 46	40	48	11	100	0.416	**1197460**
2058FW 52 LGR	46 - 52	40	51.5	9.8	100	0.420	**1197525**
2058FW 58 LGR	52 - 58	40	57	10.6	100	0.444	**1197584**
2058FW 64 LGR	58 - 64	40	61.2	10.4	50	0.500	**1197649**
2058FW 70 LGR	64 - 70	40	67.2	10.4	50	0.536	**1197703**
2058FW 76 LGR	70 - 76	40	71.4	11	25	0.637	**1197762**
2058FW 82 LGR	76 - 82	40	75.6	11	25	0.641	**1197827**
2058FW 90 LGR	82 - 90	40	82.6	12	25	0.870	**1197908**
2058FW 100 LGR	90 - 100	40	89.5	12	25	0.900	**1197991**

PP Polypropylene

Irrespective of the rail, universally applicable by pushing onto a limb of the BBS clamp clip.

Dimensions



Always indicate the item number when ordering.

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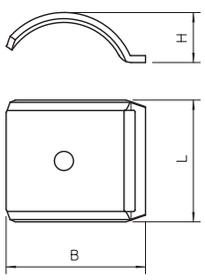
Counter-trough, metal, universal

11-12 16-17 18 22

Type	Clamping range D mm	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2058FW M 12 FT	8 - 12	35	17.5	6.5	100	0.940	**1199846**
2058FW M 16 FT	12 - 16	35	21.5	7.7	100	1.100	**1199854**
2058FW M 22 FT	16 - 22	35	28	8.8	100	1.200	**1199862**
2058FW M 28 FT	22 - 28	35	34	10.4	100	1.400	**1199870**
2058FW M 34 FT	28 - 34	35	40	135	100	2.160	**1199889**
2058FW M 40 FT	34 - 40	35	46	15.1	100	2.490	**1199897**
2058FW M 46 FT	40 - 46	35	52	17.2	100	3.270	**1199900**
2058FW M 52 FT	46 - 52	35	58	19.2	50	3.460	**1199919**
2058FW M 58 FT	52 - 58	35	64	20.3	50	3.620	**1199927**
2058FW M 64 FT	58 - 64	35	70	22.4	50	4.280	**1199935**
2058FW M 70 FT	64 - 70	35	76	24.5	50	4.590	**1199943**
2058FW M 8 A2	4 - 8	35	13	2.25	100	0.249	**1197096**
2058FW M 12 A2	8 - 12	35	17.5	6.5	100	0.567	**1197134**
2058FW M 16 A2	12 - 16	35	21.5	7.7	100	0.770	**1197177**
2058FW M 22 A2	16 - 22	35	28	8.8	100	1.062	**1197231**
2058FW M 28 A2	22 - 28	35	34	10.4	100	1.356	**1197290**
2058FW M 34 A2	28 - 34	35	40	13.5	100	2.187	**1197355**
2058FW M 40 A2	34 - 40	35	46	15.1	100	2.576	**1197428**
2058FW M 46 A2	40 - 46	35	52	17.2	100	3.005	**1197479**
2058FW M 52 A2	46 - 52	35	58	19.2	50	3.425	**1197533**
2058FW M 58 A2	52 - 58	35	40	13.5	50	3.776	**1197592**
2058FW M 64 A2	58 - 64	35	70	24.5	50	4.203	**1197606**

Dimensions



St Steel V2A Stainless steel, A2

FT Hot-dip galvanised

Irrespective of the rail, universally applicable by pushing onto a limb of the BBS clamp clip.

Double trough, plastic

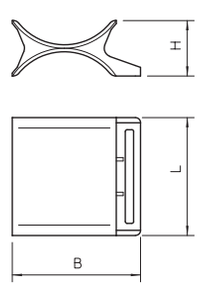
11-12 16-17 18 22

Type	Clamping range D mm	Dimension L mm	Dimension B mm	Dimension H mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
2058 2 12 LGR	8 - 12	34	16.5	7	Light grey	50	0.126	**1196111**
2058 2 16 LGR	12 - 16	34	20	9	Light grey	50	0.166	**1196162**
2058 2 22 LGR	16 - 22	34	25.5	11	Light grey	50	0.210	**1196227**
2058 2 28 LGR	22 - 28	34	31.5	14	Light grey	50	0.278	**1196286**
2058 2 34 LGR	28 - 34	34	37	16	Light grey	50	0.336	**1196340**
2058 2 40 LGR	34 - 40	34	42	18	Light grey	50	0.427	**1196405**
2058 2 46 LGR	40 - 46	40	47.5	20	Light grey	50	0.676	**1196464**
2058 2 52 LGR	46 - 52	40	53	22	Light grey	50	0.775	**1196529**
2058 2 58 LGR	52 - 58	40	58	24	Light grey	50	0.832	**1196588**

PP Polypropylene

Clamp clips allows both cables and pipes to be fastened to profile rails. The clamp clips are hooked into the appropriate slot widths of the profile rails and the component to be fastened is pressed onto the profile rail with the pressure trough of the clamp clip and held in place.

Dimensions



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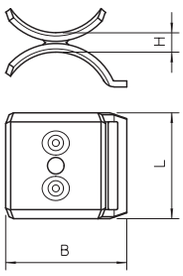
Always indicate the item number when ordering.

Double trough, metal

Dimensions



Type	Clamping range D mm	Dimension L mm	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2058 M2 12 FT	8 - 12	35	17.6	5.4	100	1.360	**1199706**
2058 M2 16 FT	12 - 16	35	21.5	5.4	50	1.800	**1199714**
2058 M2 22 FT	16 - 22	35	28	5.4	50	2.300	**1199722**
2058 M2 28 FT	22 - 28	35	34	5.4	50	3.100	**1199730**
2058 M2 34 FT	28 - 34	35	40	6.4	50	3.760	**1199749**
2058 M2 40 FT	34 - 40	35	46	6.4	50	5.600	**1199757**
2058 M2 22 A2	16 - 22	35	28	5.4	50	2.300	**1196597**
2058 M2 28 A2	22 - 28	35	34	5.4	50	3.100	**1196599**
2058 M2 34 A2	28 - 34	35	40	6.4	50	3.760	**1196601**

St Steel V2A Stainless steel, A2

FT Hot-dip galvanised

Clamp clips allows both cables and pipes to be fastened to profile rails. The clamp clips are hooked into the appropriate slot widths of the profile rails and the component to be fastened is pressed onto the profile rail with the pressure trough of the clamp clip and held in place.

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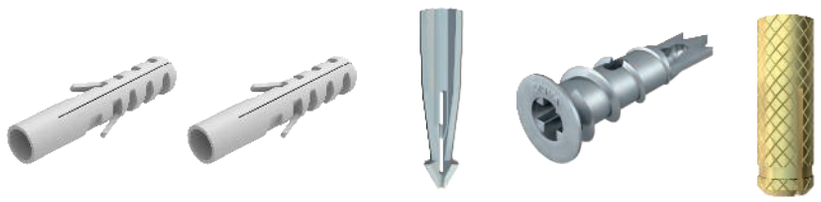
Steel nails

OBO anchors

Anchor technology, light-duty fastening



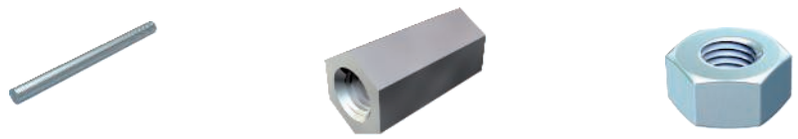
Anchor technology, heavy-duty fastening

Bolt tie

Special applications

Wood screws

Metric bolts and accessories



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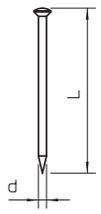
Steel nail

Type	Dimension L mm	Dimension d mm	Pack. pcs	Weight kg/100 pcs.	Item No.
362 16 BK	16	2	100	0.044	**3353168**
362 18 BK	18	2	100	0.049	**3353184**
362 23 BK	23	2	100	0.061	**3353230**
362 30 BK	30	2	100	0.080	**3353303**
362 40 BK	40	2	100	0.103	**3353400**
362 50 BK	50	2	100	0.128	**3353508**
362 60 BK	60	2	100	0.150	**3353605**

St Steel

BK Bright

Hardened steel, blue tempered, with bead head.



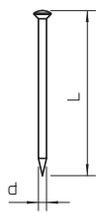
Steel nail

Type	Dimension L mm	Dimension d mm	Pack. pcs	Weight kg/100 pcs.	Item No.
362 Z 16 G	16	2	100	0.044	**3354164**
362 Z 18 G	18	2	100	0.049	**3354180**
362 Z 23 G	23	2	100	0.061	**3354237**
362 Z 30 G	30	2	100	0.078	**3354296**
362 Z 40 G	40	2	100	0.103	**3354407**
362 Z 50 G	50	2	100	0.128	**3354504**
362 Z 60 G	60	2	100	0.150	**3354601**

St Steel

G Electrogalvanised

Hardened steel, electrogalvanised, with bead head.



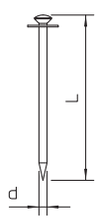
Impu steel nail

Type	Dimension L mm	Dimension d mm	Pack. pcs	Weight kg/100 pcs.	Item No.
500 12	12	2	100	0.040	**3360121**
500 16	16	2	100	0.046	**3360164**
500 18	18	2	100	0.055	**3360180**
500 23	23	2	100	0.062	**3360237**
500 30	30	2	100	0.081	**3360296**
500 40	40	2	100	0.108	**3360407**
500 50	50	2	100	0.128	**3360504**
500 60	60	2	100	0.150	**3360601**

St Steel

BK Bright

Hardened steel, blue tempered, with vulcanised fibre disc.



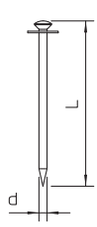
Impu steel nail

Type	Dimension L mm	Dimension d mm	Pack. pcs	Weight kg/100 pcs.	Item No.
500 Z 12	12	2	100	0.040	**3361128**
500 Z 16	16	2	100	0.046	**3361160**
500 Z 18	18	2	100	0.058	**3361187**
500 Z 23	23	2	100	0.068	**3361233**
500 Z 30	30	2	100	0.085	**3361306**
500 Z 40	40	2	100	0.108	**3361403**
500 Z 50	50	2	100	0.128	**3361500**
500 Z 60	60	2	100	0.150	**3361608**

St Steel

G Electrogalvanised

Hardened steel, electrogalvanised, with vulcanised fibre disc.



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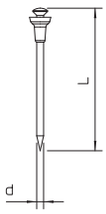
Always indicate the item number when ordering.

Siko nail



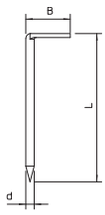
Type	Dimension L mm	Dimension d mm	Pack. pcs	Weight kg/100 pcs.	Item No.
511 12	12	2	100	0.042	**3366111**
511 16	16	2	100	0.049	**3366162**
511 18	18	2	100	0.052	**3366189**
511 23	23	2	100	0.064	**3366235**
511 30	30	2	100	0.081	**3366308**
511 40	40	2	100	0.104	**3366405**
511 50	50	2	100	0.134	**3366502**
511 60	60	2	100	0.154	**3366596**

St Steel

BK Bright

Hardened steel, blue tempered, with polyethylene safety head.

Hook nail



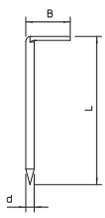
Type	Dimension L mm	Dimension d mm	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
1101 3x40	40	3	18	250	0.290	**3341046**
1101 3x50	50	3	18	250	0.344	**3341054**
1101 3x60	60	3	18	250	0.404	**3341062**
1101 3x70	70	3	18	250	0.466	**3341070**
1101 3.4x50	50	3.4	18	250	0.451	**3341496**
1101 3.4x60	60	3.4	18	250	0.548	**3341607**
1101 3.4x70	70	3.4	18	250	0.672	**3341704**
1101 3.4x80	80	3.4	18	250	0.682	**3341801**
1101 3.4x90	90	3.4	18	250	0.757	**3341909**
1101 3.4x100	100	3.4	18	250	0.820	**3341992**

St Steel

BK Bright

Steel, with 18 mm hook on the head.

Hook nail



Type	Dimension L mm	Dimension d mm	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
1101 Z 40 G	40	3	18	250	0.288	**3342042**
1101 Z 50 G	50	3	18	250	0.360	**3342050**
1101 Z 60 G	60	3	18	250	0.404	**3342069**
1101 Z 70 G	70	3	18	250	0.474	**3342077**
1101 Z3.4x50 G	50	3.4	18	250	0.464	**3342506**
1101 Z3.4x60 G	60	3.4	18	250	0.548	**3342603**
1101 Z3.4x70 G	70	3.4	18	250	0.600	**3342700**
1101 Z3.4x80 G	80	3.4	18	250	0.674	**3342808**

St Steel

G Electrogalvanised

Steel, galvanised, with 18 mm hook on the head.

Steel wall hook

Type	Dimension L mm	Dimension d mm	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
716 3X50 BK	50	3	18	100	0.415	**3347052**
716 3X60 BK	60	3	18	100	0.489	**3347060**
716 3X70 BK	70	3	18	100	0.553	**3347079**

St Steel

BK Bright

Steel, bright (St), hardened, blue tempered, made of square bar steel.

Always indicate the item number when ordering.

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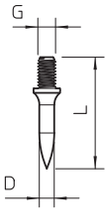
OBO anchor

Type	Shank length mm	Dimension L mm	Dimension D Ø mm	Dimension G mm	Pack. pcs	Weight kg/100 pcs.	Item No.
903 15 G	15	23	4	M6	100	0.330	**3100154**
903 18 G	18	26	4	M6	100	0.360	**3100189**
903 25 G	25	33	4	M6	100	0.404	**3100251**
903 30 G	30	38	4	M6	100	0.470	**3100308**
903 40 G	40	48	4	M6	100	0.571	**3100405**

St Steel

G Electrogalvanised

Hardened steel, electrogalvanised with M6 x 8 mm thread.

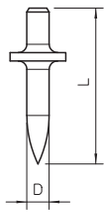


OBO anchor

Type	Shank length mm	Dimension L mm	Dimension D Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
903 RB 15	15	21	4	200	0.295	**3105016**
903 RB 18	18	24	4	200	0.348	**3105024**
903 RB 22	22	30	4	200	0.325	**3105032**

St Steel

Hardened steel, shiny without thread.

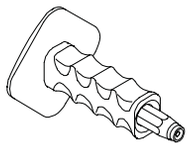


Flattener with hand protection

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
915 RBS M4	1	52.000	**3031500**

St Steel

Flattener with hand protection for OBO anchors 903/RB Ø 4 mm and also for OBO anchors 904 with M4 thread.

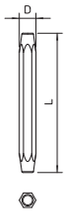


Flattener

Type	Dimension L mm	Dimension D mm	Size	Pack. pcs	Weight kg/100 pcs.	Item No.
915 S M6	135	14	M6	1	17.000	**3031012**

St Steel

Flattener for OBO anchors 903 with M6 thread.



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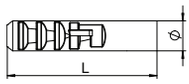
Always indicate the item number when ordering.

Angler spreading anchor

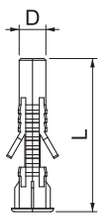


Type	Dowel Ø mm	Dimension L mm	Wood screws Ø mm	Pull-out value N	Pack. pcs	Weight kg/100 pcs.	Item No.
910 N 5x25 GRW	5	25	2,5-4	2100	100	0.051	**2349043**
910 N 6x30 GRW	6	30	3,5-5	3300	100	0.052	**2349051**
910 N 6x60 GRW	6	60	3,5-5	3300	100	0.079	**2349078**
910 N 8x40 GRW	8	40	4,5-6	4500	100	0.140	**2349086**
910 N 10x50 GRW	10	50	6-8	9400	50	0.306	**2349108**
910 N 12x60 GRW	12	60	8-10	11600	25	0.459	**2349124**

PA Polyamide

Required minimum bolt length = anchor length + component thickness + 1 x bolt Ø.
Withdrawal force applies to wood screws of the largest bolt diameter in concrete of class B25.
Our safety value recommendation: 5x

Multipurpose anchor

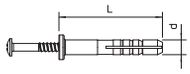


Type	Dowel Ø mm	Dimension L mm	Wood screws Ø mm	Pull-out value N	Pack. pcs	Weight kg/100 pcs.	Item No.
910 MZ 5x25	5	30	2,5-4	800	100	0.036	**2347523**
910 MZ 6x35	6	35	4-5	1000	100	0.063	**2347539**
910 MZ 8x42	8	50	5-6	1600	100	0.158	**2347547**
910 MZ 10x60	10	60	6-8	1900	50	0.276	**2347555**
910 MZ 12x60	12	60	8-10	2500	25	0.330	**2347570**

PA Polyamide

Also suitable as a cavity anchor, with collars to prevent slipping. 3 tabs take up the torque.
Required minimum bolt length = anchor length + component thickness + 1 x bolt Ø.
Withdrawal force applies to wood screws of the largest bolt diameter in concrete of class B25.
Our safety value recommendation: 5x

Knock-in anchor

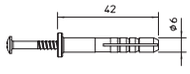


Type	Dowel Ø mm	Length mm	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
910 SD 5X35	5	35	1200	100	0.360	**2351021**
910 SD 6X35	6	35	1200	100	0.310	**2351056**
910 SD 6X40	6	40	1000	100	0.555	**2351064**
910 SD 8X55	8	55	500	50	1.070	**2351099**

PA Polyamide

Knock-in anchor: steel, electrogalvanised and transparently passivated.

Knock-in anchor



Type	Dowel Ø mm	Length mm	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
910 SD-Q 6x40	6	40	1200	100	0.480	**2351218**

PA Polyamide

Knock-in anchor for Quick clips type 2955.
Knock-in anchor: steel, tempered, electrogalvanised and transparently passivated.

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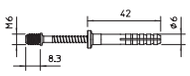
Knock-in anchor

Type	Dowel Ø mm	Length mm	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
910 SDM M6	6	40	1200	100	0.480	**2350807**

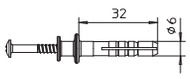


PA Polyamide

With M6 thread.
Knock-in anchor: steel, tempered, electrogalvanised and transparently passivated.

Double-flange anchor

Type	Dowel Ø mm	Length mm	Bore hole depth mm	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
910 DF 6x35	6	35	40	1200	100	0.425	**2347407**

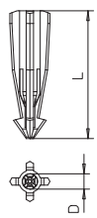


PA Polyamide

Knock-in anchor: steel, tempered, electrogalvanised and transparently passivated.

Gas concrete anchor

Type	Dimension D mm	Dimension L mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
910 GD 6x35	6	35	Light grey	100	0.094	**2347229**
910 GD 8x50	8	50	Light grey	50	0.263	**2347261**

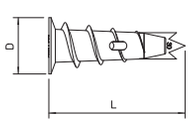


PA Polyamide

The anchor can be knocked directly into the porous concrete (gas concrete resistance class G2).
With a resistance class of G4 or greater, a 5 or 6 mm hole should be pre-drilled.
Screw length: Component thickness + 40 mm (6 mm) / 55 mm (8 mm).

Plasterboard anchor

Type	Dimension D mm	Dimension L mm	Perm. load range, tension zone kN	Pack. pcs	Weight kg/100 pcs.	Item No.
910 GKDM 12x30	12	30	0.04	100	0.400	**3483214**

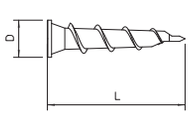


Zn Die-cast zinc

To fasten components to plasterboard or fibre composite plates.
Minimum plate thickness: 12 mm
for Ø 4.5 Golden Sprint or Sprint screws.

Plasterboard anchor

Type	Dimension D mm	Dimension L mm	Perm. load range, tension zone kN	Pack. pcs	Weight kg/100 pcs.	Item No.
910 GKSM 6x25	7.5	26.4	0.04	100	0.160	**3483239**



Zn Die-cast zinc

To fasten components to plasterboard or fibre composite plates.
Min. plate thickness: 5 mm.

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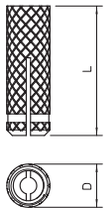
Insulation plug

Type	Length mm	Dowel Ø mm	Wood screws Ø mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
Thermo 60	63.5	9	4 - 5	0.05	10	0.658	**2347601**

PA Polyamide

Thermo insulation anchor for universal lightweight fastening in plastered heat composite systems. The self-tapping point makes pre-drilling almost superfluous.

Brass spreading anchor

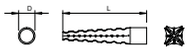


Type	Thread	Bore hole depth mm	Length mm	Bore hole Ø mm	Pull-out value N	Pack. pcs	Weight kg/100 pcs.	Item No.
865 M6x24	M6	32	24	8	6000	100	0.442	**3483061**
865 M8x30	M8	41	30	11	7000	100	0.867	**3483088**
865 M10x34	M10	53	34	12	9000	100	1.315	**3483096**

CuZn Brass

Areas of application: full brick, concrete, wood. Ideally suited for areas exposed to high temperatures.

Metal spreading anchor



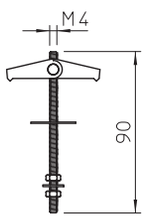
Type	Dimension D mm	Dimension L mm	Bore hole Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MD 5 GTP	5	30	5 - 7	200	0.190	**3484602**
MD 6 GTP	6	32	7 - 9	100	0.250	**3484629**

St Steel

GTP Electrogalvanised, transparently passivated

Areas of application: gas concrete, lightweight concrete, Poroton, pumice, plaster, hollow brick and full brick. Can be knocked into porous concrete (gas concrete) of low resistance without drilling. Superbly suited for areas subjected to high temperatures.

Sprung hinged anchor



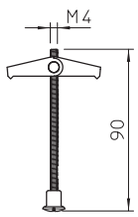
Type	Thread	Length mm	Bore hole Ø mm	Minimum cavity depth mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
450 M4x95 G	M4	95	14	35	0.2	50	1.750	**3481611**

St Steel

G Electrogalvanised

With threaded rod, washer and hexagonal nut; brass axle.

Sprung hinged anchor



Type	Thread	Length mm	Minimum cavity depth mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
451 M4x95 G	M4	95	35	0.2	50	1.700	**3481662**

St Steel

G Electrogalvanised

With threaded rod and slotted brass nut; brass axle.

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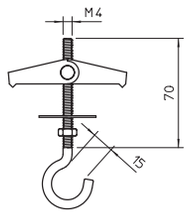
Sprung hinged anchor

Type	Thread	Length mm	Bore hole Ø mm	Minimum cavity depth mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
452 M4x70 G	M4	70	14	35	0.4	50	1.950	**3481778**

St Steel

G Electrogalvanised

With ceiling hook, washer and hexagonal nut; brass axle.



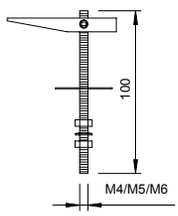
Tilting anchor

Type	Thread	Length mm	Bore hole Ø mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
458 M4x100 G	M4	100	13	0.5	50	3.310	**3482154**
456 M5x100 G	M5	100	13	0.8	50	3.810	**3482103**
453 M6x100 G	M6	100	16	1.3	50	5.250	**3482014**

St Steel

G Electrogalvanised

Two washers and two hexagonal nuts, with threaded shank.



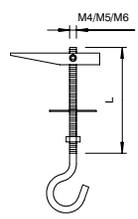
Tilting anchor

Type	Thread	Dimension L mm	Bore hole Ø mm	Hook-Ø mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
457 M4x55 G	M4	55	13	14	0.25	50	3.250	**3482138**
455 M5x65 G	M5	65	13	16	0.4	50	3.850	**3482057**
455 M5x100 G	M5	100	13	16	0.4	50	4.250	**3482073**
454 M6x100 G	M6	100	16	16	0.8	25	6.000	**3482030**

St Steel

G Electrogalvanised

One washer and one hexagonal nut, with ceiling hook.
Note: Reckon with 5x safety for luminaire suspensions.



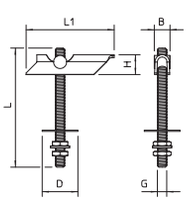
Tilting anchor

Type	Thread	Dimension L mm	Bore hole Ø mm	Breaking load kN	Minimum cavity depth mm	Pack. pcs	Weight kg/100 pcs.	Item No.
KD 8 100	M8	100	22	2.4	75	25	11.200	**3482707**
KD 10 100	M10	100	25	2.4	75	25	11.200	**3482758**

St Steel

G Electrogalvanised

Including nut and large washer.
The universal heavy-duty fastening for stressed concrete, hollow steel profiles, metal sheets and plates.
Use: heating, ventilation and air conditioning technology, cooling systems, sprinkler systems, pipes, cable tracks, etc.
* Dependent on the thickness of the ceiling profile.



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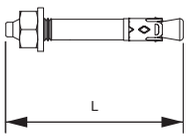
Always indicate the item number when ordering.

Nail anchor N with thread



Type	Thread	Bore hole Ø mm	Bore hole depth mm	Clamping range mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
N 6-5-10/49	M6	6	40	5 - 10	49	100	1.160	**3498396**

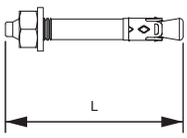
St Steel

G Electrogalvanised

The nail anchor N can be used for multiple fastenings of non-load-bearing systems and in cracked and non-cracked concrete, thereby combining the benefits of a bolt tie with even easier mounting. The nail tie only needs to be hammered into the drill hole. It is not necessary to apply torque subsequently. When the load occurs, the nail tie spreads itself and bolts itself in the drill hole.

European technical approval ETA-11/0240, including characteristic values under fire exposure to fire resistance R 120.

Nail anchor N with thread, V4A



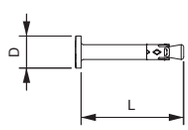
Type	Thread	Bore hole Ø mm	Bore hole depth mm	Fixture thickness mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
N 6-5/49 A4	M6	6	40	5	49	50	1.200	**3498399**

V4A Stainless steel, A4

The nail anchor N can be used for multiple fastenings of non-load-bearing systems, indoors and outdoors, in cracked and non-cracked concrete, thereby combining the benefits of a bolt tie with an even easier mounting. The nail anchor only needs to be hammered into the drill hole. It is not necessary to apply torque subsequently. When the load occurs, the nail anchor spreads itself and bolts itself in the drill hole.

European technical approval ETA-11/0240, including characteristic values under fire exposure to fire resistance R 120.

Nail anchor N-K with nail head



Type	Bore hole Ø mm	Bore hole depth mm	Clamping range mm	Dimension L mm	Dimension D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
N-K 6-5-10/44	6	40	5 - 10	44	13	100	1.135	**3498390**

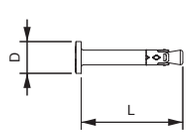
St Steel

G Electrogalvanised

The nail anchor N-K can be used for multiple fastenings of non-load-bearing systems and in cracked and non-cracked concrete, thereby combining the benefits of a bolt tie with an even easier mounting. The nail anchor only needs to be hammered into the drill hole. When the load occurs, the nail anchor spreads itself and bolts itself in the drill hole.

European technical approval ETA-11/0240, including characteristic values under fire exposure to fire resistance R 120.

Nail anchor N-K with nail head, V4A



Type	Bore hole Ø mm	Bore hole depth mm	Fixture thickness mm	Dimension L mm	Dimension D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
N-K 6-5/44 A4	6	40	5	44	13	50	1.140	**3498393**

V4A Stainless steel, A4

The nail anchor N can be used for multiple fastenings of non-load-bearing systems, indoors and outdoors, in cracked and non-cracked concrete, thereby combining the benefits of a bolt tie with an even easier mounting. The nail anchor only needs to be hammered into the drill hole. When the load occurs, the nail anchor spreads itself and bolts itself in the drill hole.

European technical approval ETA-11/0240, including characteristic values under fire exposure to fire resistance R 120.

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Always indicate the item number when ordering.

Bolt tie BZ

Type	Thread	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BZ10-100-120/180	M10	180	25	10.320	**3498342**
BZ 12-15-35/110	M12	110	25	10.320	**3498350**
BZ 16-15-35/135	M16	135	20	21.600	**3498360**

St Steel

G Electrogalvanised

Wedge anchor BZ for the anchoring of medium-duty to heavy-duty loads, both in cracked and non-cracked concrete. It combines high approved loads with small edge distances and axial spacings.

European technical approval ETA-99/0010, including characteristic values under fire exposure to fire resistance R 120.
Proof of suitability in the case of seismic impacts, categories C1 and C2.
Shock approval by the Federal Office for Civil Protection in Bern, Switzerland.

Load

Standard anchoring depth

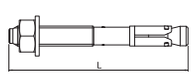
Loads and Characteristics	Anchoring depth	Bore hole Ø	Bore hole depth	Clamping strength	Approved load area, tension zone
	mm	mm	mm	mm	kN
M 8-100/165	46	8	60	100	2.4
M 10-75/155	60	10	75	75	4.3
M 10-100/180	60	10	75	100	4.3
M 10-150/230	60	10	75	150	4.3
M 12-15/110	70	12	90	15	7.6
M 12-85/180	70	12	90	85	7.6
M 12-105/200	70	12	90	105	7.6
M 12-160/255	70	12	90	160	7.6
M 16-15/135	85	16	110	15	11.9

Reduced anchoring depth

Loads and Characteristics	Anchoring depth	Bore hole Ø	Bore hole depth	Clamping strength	Approved load area, tension zone
	mm	mm	mm	mm	kN
M 8-111/165	35	8	49	111	2.4
M 10-95/155	40	10	55	95	3.6
M 10-120/180	40	10	55	120	3.6
M 12-35/110	50	12	70	35	6.1
M 12-105/180	50	12	70	105	6.1
M 12-125/200	50	12	70	125	6.1
M 16-35/135	65	16	90	35	9.0

Bolt tie BZ

Type	Thread	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BZ12-15-35/110A4	M12	110	25	10.440	**3498352**



V4A Stainless steel, A4

Wedge anchor BZ for the anchoring of medium-duty to heavy-duty loads, indoors and outdoors, both in cracked and non-cracked concrete. It combines high approved loads with small edge distances and axial spacings.

European technical approval ETA-99/0010, including characteristic values under fire exposure to fire resistance R 120.
Proof of suitability in the case of seismic impacts, categories C1 and C2.
Shock approval by the Federal Office for Civil Protection in Bern, Switzerland.

Load

Standard anchoring depth

Loads and Characteristics	embedment depth	Bore hole Ø	Bore hole depth	Clamping strength	Approved load area, tension zone
	mm	mm	mm	mm	kN
M 12-15/110	70	12	90	15	7,6

Reduced anchoring depth

Loads and Characteristics	embedment depth	Bore hole Ø	Bore hole depth	Clamping strength	Approved load area, tension zone
	mm	mm	mm	mm	kN
M 12-35/110	50	12	70	35	6.1

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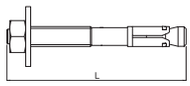
Always indicate the item number when ordering.

Bolt tie BZ-U



Type	Thread	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BZ-U 8-10-21/75	M8	75	50	3.460	**3498320**
BZ-U 8-30-41/95	M8	95	50	4.010	**3498326**
BZ-U 10-10-30/90	M10	90	50	6.720	**3498334**
BZ-U10-30-50/110	M10	110	25	7.900	**3498340**

St Steel

G Electrogalvanised

Bolt tie BZ for the anchoring of medium-duty to heavy-duty loads, both in cracked and non-cracked concrete. It combines high approved loads with small edge distances and axial spacings.

European technical approval ETA-99/0010, including characteristic values under fire exposure to fire resistance R 120.
Proof of suitability in the case of seismic impacts, categories C1 and C2.
Shock approval by the Federal Office for Civil Protection in Bern, Switzerland.

Load

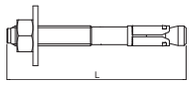
Standard anchoring depth

Loads and Characteristics	Anchoring depth	Bore hole Ø	Bore hole depth	Clamping strength	Approved load area, tension zone
	mm	mm	mm	mm	kN
M 8-10/75	46	8	60	10	2,4
M 8-30/75	46	8	60	30	2,4
M 10-10/90	60	10	75	10	4,3
M 10-30/110	60	10	75	30	4,3

Reduced anchoring depth

Loads and Characteristics	Anchoring depth	Bore hole Ø	Bore hole depth	Clamping strength	Approved load area, tension zone
	mm	mm	mm	mm	kN
M 8-21/75	35	8	49	21	2,4
M 8-41/95	35	8	49	41	2,4
M 10-30/90	40	10	55	30	3,6
M 10-50/110	40	10	55	50	3,6

Bolt tie BZ-U



Type	Thread	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BZ-U8-10-21/75A4	M8	75	50	3.460	**3498322**
BZ-U8-30-41/95A4	M8	95	50	4.090	**3498328**
BZU10-10-30/90A4	M10	90	50	6.740	**3498336**

V4A Stainless steel, A4

Wedge anchor BZ for the anchoring of medium-duty to heavy-duty loads, indoors and outdoors, both in cracked and non-cracked concrete. It combines high approved loads with small edge distances and axial spacings.

European technical approval ETA-99/0010, including characteristic values under fire exposure to fire resistance R 120.
Proof of suitability in the case of seismic impacts, categories C1 and C2.
Shock approval by the Federal Office for Civil Protection in Bern, Switzerland.

Load

Standard anchoring depth

Loads and Characteristics	Anchoring depth	Bore hole Ø	Bore hole depth	Clamping strength	Approved load area, tension zone
	mm	mm	mm	mm	kN
M 8-10/75	46	8	60	10	2,4
M 8-30/75	46	8	60	30	2,4
M 10-10/90	60	10	75	10	4,3

Reduced anchoring depth

Loads and Characteristics	Anchoring depth	Bore hole Ø	Bore hole depth	Clamping strength	Approved load area, tension zone
	mm	mm	mm	mm	kN
M 8-21/75	35	8	49	21	2,4
M 8-41/95	35	8	49	41	2,4
M 10-30/90	40	10	55	30	3,6

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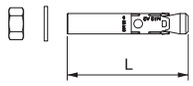
Always indicate the item number when ordering.

Bolt tie BZ-IG

Type	Thread	Bore hole Ø mm	Bore hole depth mm	Dimension L mm	Perm. load range, tension zone kN	Pack. pcs	Weight kg/100 pcs.	Item No.
BZ-IG M 6-0	M6	8	60	50	2	20	1.830	**3498370**
BZ-IG M 8-0	M8	10	75	62	3.6	20	3.333	**3498372**
BZ-IG M 10-0	M10	12	90	70	4.8	20	5.700	**3498374**
BZ-IG M 12-0	M12	16	105	86	7.9	20	12.000	**3498376**



St Steel

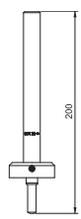
G Electrogalvanised

Bolt tie BZ-IG with internal thread for the anchoring of medium-duty to heavy-duty loads, both in cracked and non-cracked concrete. It combines high approved loads with small edge distances and axial spacings. Undercutting the drill holes is not necessary.
The fastening of the component is possible with hexagonal screws or with countersunk head screws as well as with a system of nut and washer and a standard threaded rod.

European technical approval ETA-99/0010, including characteristic values under fire exposure to fire resistance R 120.
Shock approval by the Federal Office for Civil Protection in Bern, Switzerland.

Tool set BZ-IG

Type	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
BZ-IGS M 6V	M6	1	39.400	**3498380**
BZ-IGS M 8V	M8	1	38.300	**3498382**
BZ-IGS M 10V	M10	1	40.600	**3498384**
BZ-IGS M 12V	M12	1	42.100	**3498386**



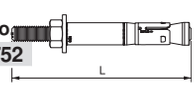
St Steel

G Electrogalvanised

Setting tool BZ-IGS for push-through installation.

High-load anchor SZ-B

Type	Thread	Bore hole Ø mm	Bore hole depth mm	Dimension L mm	Fixture thickness mm	Perm. load range, tension zone kN	Pack. pcs	Weight kg/100 pcs.	Item No.
SZ-B 18/0x142	M12	18	105	142	30	12.3	20	21.123	**3498752**



St Steel

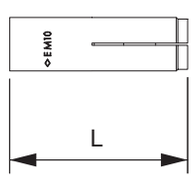
G Electrogalvanised

The high-load anchor SZ is a heavy-duty push-through anchor system with a threefold expanding special sleeve which facilitates very high approved loads with small axial spacings and edge distances. The plastic press ring secures the permanent tightening of the fastening piece against the ground.

Due to the special design with an elongated thread and a shortened anchor sleeve, this special version is not approved to the European technical norm ETA .

Drop-in anchor E

Type	Thread	Screw-in depth min.-max. mm	Bore hole Ø mm	Bore hole depth mm	Dimension L mm	Perm. load range, tension zone kN	Pack. pcs	Weight kg/100 pcs.	Item No.
E M 6x30	M6	7 - 13	8	30	30	1.2	100	0.840	**3492900**
E M 8x40	M8	9 - 20	10	40	40	2	100	1.490	**3492910**
E M 10x40	M10	11 - 15	12	40	40	2	50	2.140	**3492920**
E M 12x50	M12	13 - 18	15	50	50	2.4	50	4.420	**3492930**



St Steel

G Electrogalvanised

The drop-in anchor E can be used for single fixings in non-cracked concrete as well as for multiple fixings in cracked concrete of non-load-bearing systems.
The setting tool is placed onto the anchor sleeve thereby creating a visible mark which confirms the correct installation. Through the controlled expansion, the necessary axial spacings and edge distances are decreased significantly.

European Technical Approval ETA-02/0020 (option 7) for single fixings in non-cracked concrete and European Technical Approval ETA-05/0116 for multiple fixings in cracked and non-cracked concrete, including characteristic values under fire exposure to fire protection R 120.

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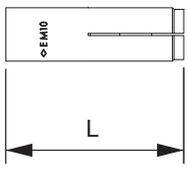
Drop-in anchor E A4



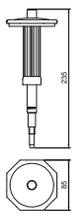
Type	Thread	Screw-in depth min.-max. mm	Bore hole Ø mm	Bore hole depth mm	Dimension L mm	Perm. load range, tension zone kN	Pack. pcs	Weight kg/100 pcs.	Item No.
E M 8x40 A4	M8	9 - 20	10	40	40	2	50	1.490	**3492912**
E M 10x40 A4	M10	11 - 15	12	40	40	2	50	2.160	**3492922**
E M 12x50 A4	M12	13 - 18	15	50	50	2.4	50	4.380	**3492932**

V4A Stainless steel, A4

The drop-in anchor E can be used for single fixings in non-cracked concrete as well as for multiple fixings in cracked concrete of non-load-bearing systems.
The setting tool is placed onto the anchor sleeve thereby creating a visible mark which confirms the correct installation. Through the controlled expansion, the necessary axial spacings and edge distances are decreased significantly.

European Technical Approval ETA-02/0020 (option 7) for single fixings in non-cracked concrete and European Technical Approval ETA-05/0116 for multiple fixings in cracked and non-cracked concrete, including characteristic values under fire exposure to fire protection R 120.

Setting tool for drop-in anchor



Type	Length mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
E-MSH 8x40	235	M8	1	38.000	**3492970**
E-MSH 10x40	235	M10	1	45.000	**3492974**
E-MSH 12x50	235	M12	1	47.000	**3492978**

St Steel

G Electrogalvanised

Setting tool with hand protection for drop-in anchor of the type E.

Setting tool for drop-in anchor

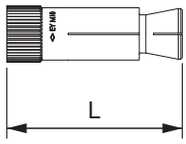
Type	Length mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
E-SW 6x30	168	M6	1	51.000	**3492990**

St Steel

G Electrogalvanised

Setting tool for drop-in anchor of the type E. With the standard version there is no marking made on the anchor sleeve.

Hollow core anchor Easy



Type	Thread	Bore hole Ø mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
Easy M8	M8	12	44	25	1.500	**3498770**
Easy M10	M10	16	53	25	3.320	**3498774**
Easy M12	M12	18	58	25	4.230	**3498776**

St Steel

G Electrogalvanised

Hollow core anchor "Easy" for mounting in prestressed hollow concrete slabs. When the screw or the nut is tightened, the cone is released from the anchor sleeve and pulled into it. This makes the anchor expand in the hollow space, thereby creating form lock. The hollow core anchor can also be used when the expansion area is not located in the cavity.
The fastening of the component can be done with standard screws and threaded rods.

General type approval Z-21.1-1785 granted by the German Institute for civil engineering (DIBt), Berlin, including permissible loads when exposed to fire up to a fire resistance duration of 120 minutes.

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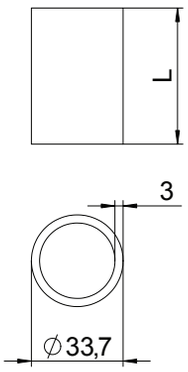
Always indicate the item number when ordering.

Spacer sleeve for insulated ceilings

Type	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
DHI 050	50	30	11.600	**7205900**
DHI 060	60	24	14.000	**7205901**
DHI 070	70	20	16.200	**7205902**
DHI 080	80	20	18.200	**7205903**
DHI 090	90	14	20.800	**7205904**
DHI 100	100	14	23.400	**7205905**
DHI 110	110	12	24.600	**7205906**
DHI 120	120	12	27.600	**7205907**
DHI 130	130	12	30.400	**7205908**
DHI 140	140	12	32.800	**7205909**
DHI 150	150	12	35.000	**7205910**

St Steel

FT Hot-dip galvanised



Spacer sleeve for mounting suspension components under insulated ceilings. They prevent the insulation from pushing in when the fastening screws are tightened.
Burr arm, galvanised internally and externally.

Injection mortar in cartridge, 280 ml

Type	Contents ml	Pack. pcs	Weight kg/100 pcs.	Item No.
VMU plus 280	280	1	56.000	**3497800**

The injection mortar VMU is a 2-component mortar, which sticks the anchor rods and internal thread sleeves in concrete or masonry without any spreading pressure. Depending on the size of the means of fastening, loads of different magnitudes can be fastened to the anchor rods or internal thread sleeves.

The injection mortar possesses a European technical approval (ETA) for cracked and uncracked concrete, as well as for masonry of full or hollow brick. It is earthquake-proof according to performance category C1 and has fire protection approvals for concrete and masonry with a fire resistance class up to 120 minutes.

Injection mortar in cartridge, 420 ml

Type	Contents ml	Pack. pcs	Weight kg/100 pcs.	Item No.
VMU plus 420	420	1	83.000	**3497803**

Styrene-free, vinyl ester composite mortar for spread-free anchoring of high loads with threaded anchor rods. Coaxial cartridge, including one mixing tube, to be worked with the pressing gun, type VM-P 380 Profi.

European Technical Assessment for cracked and uncracked concrete, as well as for masonry of full and hollow brick. Earthquake-proof in concrete according to Category C1. Fire protection approval for concrete and masonry with fire resistance classes up to 120 minutes.

Substrate temperature during processing –10 °C to +40 °C (concrete), ambient temperature after complete hardening –40 °C to +120 °C (in concrete). If stored in a dark, cool and dry place, will keep for at least 18 months.

Pressing gun for 280 ml and side-by-side cartridges

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
VM-P 345 Profi	1	100.000	**3497906**

Plastic

Side-by-side cartridge pistol for the use of standard cartridges or side-by-side cartridges. The cartridge pistol is suitable for the injection mortar VMU plus 280 and can also be used with normal 300 ml cartridges.

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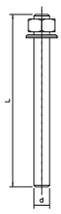
Pressing gun for 10:1 coaxial cartridges

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
VM-P 380 Profi	1	110.000	**3497909**

Plastic

High-quality 2-component cartridge pistol. The parallel movement of the outlet to the holding grip ensures easy working. Suitable for the injection mortar type VMU plus 420.

Anchor rod



Type	Dimension L mm	Dimension d mm	Thread	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
VMU-A 8-110vz	110	6.5	M8	13	10	4.350	**3497820**
VMU-A 10-130vz	130	8.2	M10	17	10	8.150	**3497822**
VMU-A 10-150vz	150	8.2	M10	17	10	9.150	**3497824**
VMU-A 12-155vz	155	9.9	M12	19	10	13.850	**3497826**
VMU-A 8-110A4	110	6.5	M8	13	10	4.350	**3497830**
VMU-A 10-130A4	130	8.2	M10	17	10	8.150	**3497832**
VMU-A 12-155A4	155	9.9	M12	19	10	13.850	**3497834**

St Steel

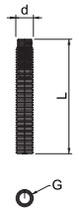
G Electrogalvanised

With the anchor rod and matching plastic wire sleeve, loads are fastened without spreading pressure in masonry walls using the VMS plus injection mortar. The system is also used for fastening in concrete ceilings. On concrete and full brick walls, the anchor rod is only mounted with the injection mortar VMU plus, without a wire sleeve.

The anchor rod VMU-A 8x110 mm is mounted using the plastic wire sleeve VM-SH 12x80 or VM-SH 16x85.
The anchor rod VMU-A 10x130 mm is mounted using the plastic wire sleeve VM-SH 16x85.
The anchor rod VMU-A 10x150 mm is mounted using the plastic wire sleeve VM-SH 16x85 or VM-SH 16x130.
The anchor rod VMU-A 12x155 mm is mounted using the plastic wire sleeve VM-SH 20x85.

Use the wire sleeve VMU-SH 12x50 for the anchor rods M6 (L=65 mm) and M8 (L=65 mm). Should the anchor rods M8 (L=120 mm), M10 (L=140 mm), M10 (L=160 mm) and M12 (L=165 mm) be used, then use the wire sleeve VMU-SH 18x95.

Metallic internal thread sleeve



Type	Pack. pcs	Weight kg/100 pcs.	Item No.
VMU-IG M6x80vz	10	3.350	**3497840**
VMU-IG M8x80vz	10	4.650	**3497842**
VMU-IG M10x80vz	10	8.750	**3497844**
VMU-IG M6x80A4	10	3.350	**3497850**
VMU-IG M8x80A4	10	4.650	**3497852**
VMU-IG M10x80A4	10	8.750	**3497854**

St Steel

G Electrogalvanised

With the internal thread sleeve and matching plastic wire sleeve, loads are fastened without spreading pressure in concrete and masonry walls and ceilings using the VMS plus injection mortar.

The internal thread sleeve VMU-IG M6x80 mm is mounted using the plastic wire sleeve VM-SH 16x85.
The internal thread sleeves VMU-IG M8x80 and VMU-IG M10x80 mm are mounted using the plastic wire sleeve VM-SH 20x85.

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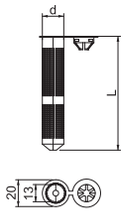
Plastic wire sleeve

Type	Dimension L mm	Dimension d mm	Pack. pcs	Weight kg/100 pcs.	Item No.
VMU-SH 12x80	80	12	10	0.200	**3497860**
VMU-SH 16x85	85	16	10	0.300	**3497862**
VMU-SH 16x130	130	16	10	0.400	**3497864**
VMU-SH 20x85	85	20	10	0.400	**3497866**



PA Polyamide

The plastic wire sleeve is a supplement to the anchor rod or internal thread sleeve and is used to mount loads on masonry.

The plastic wire sleeve VM-SH 12x80 is mounted with the anchor rod VMU-A 8x110.
The plastic wire sleeve VM-SH 16x85 is mounted with the anchor rods VMU-A 10x130 and VMU-A 10x150 or the internal thread sleeve VMU-IG M6x80.
The plastic wire sleeve VM-SH 16x130 is mounted with the anchor rod VMU-A 10x150.
The plastic wire sleeve VM-SH 20x85 is mounted with the anchor rod VMU-A 12x155 or the internal thread sleeve VMU-IG M8x80 and VMU-IG M10x80.

Perforated sleeve, metal

Type	Dimension L mm	Dimension d mm	Pack. pcs	Weight kg/100 pcs.	Item No.
VM-SH 12x1000	1000	12	1	6.000	**3497972**
VM-SH 16x1000	1000	16	1	7.000	**3497975**
VM-SH 22x1000	1000	22	1	10.000	**3497978**

St Steel

Metal wire sleeve for use in hollow brick and stones in combination with injection mortar system VMU plus.

Blow pump for drill holes

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
VM-AP 360	1	27.000	**3497912**

Plastic

Manual pump with 750 ml air volume to blowing out drill holes according to anchor approval.

Steel cleaning brush for drill holes

Type	Diameter mm	Length mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
RB 10 M 6	10	130	M6	1	5.000	**3497870**
RB 12 M 6	12	140	M6	1	5.000	**3497872**
RB 14 M 6	14	180	M6	1	5.000	**3497874**
RB 16 M 6	16	190	M6	1	5.000	**3497875**
RB 18 M 6	18	200	M6	1	5.000	**3497876**
RB 20 M 6	20	220	M6	1	5.000	**3497878**

St Steel

G Electrogalvanised

Using the steel wire brush, drill holes must be mechanically cleaned according to the anchor approval, in order to obtain a clean adhesion substrate for the injection mortar.

The steel wire brush is fixed to an SDS adapter with a threaded connection, in order to clean the drill holes with a drill.

SDS adapter

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
RBL M6 SDS	1	6.000	**3497915**

St Steel

Adapter for accepting steel wire brushes for mechanical cleaning of drill holes according to the anchor approval. Suitable for drills with SDS seat.

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SDS extension

Type	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
RB-L 150 M6	150	1	9.700	**3497932**

St Steel

Extension with internal and external M6 thread for the connection of the SDS adapter with steel wire brush in difficult to access drill holes.

Mixer pipe for mortar cartridge

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
VM-X	12	1.000	**3497981**

PA Polyamide

Mixing tubes for attachment to the cartridges of the VMU plus injection mortar system.

Extension pipe

Type	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
VM-XE 10/200	200	12	1.000	**3497984**
VM-XE 10/500	500	10	2.000	**3497987**

PA Polyamide

Fixed length extension tube for use on the mixing tube tips in the VMU plus injection mortar system.

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Always indicate the item number when ordering.

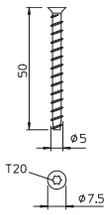
Screw anchor

Type	Dimension mm	Anchor length mm	Bore hole Ø mm	Head Ø mm	Screw system	Pack. pcs	Weight kg/100 pcs.	Item No.
MMS-plus KS 5x50	5 x 50	50	4	7.5	Torx	200	0.460	**3498204**

St Steel

G Electrogalvanised

Screw anchor with countersunk cone head for mounting without additional anchors. Drive T20, drill hole 4 mm. Fire protection-tested according to DIN 4102 for concrete and masonry. Fire resistance class to F90.



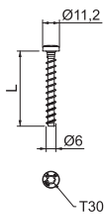
Fire protection screw tie

Type	Dimension mm	Anchor length mm	Bore hole Ø mm	Head Ø mm	Screw system	Pack. pcs	Weight kg/100 pcs.	Item No.
MMS-plus 6X50	6 x 50	50	5	11.2	Torx	100	1.000	**3498108**

St Steel

G Electrogalvanised

Fire protection bolt tie with pan head for direct installation without additional anchors. Drive T30, drill hole 5 mm. Tested anchor according to ETAG 001 - Part 3. Fire resistance class to R120 for concrete and masonry.



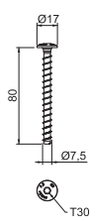
Bolt tie

Type	Dimension mm	Anchor length mm	Bore hole Ø mm	Head Ø mm	Screw system	Pack. pcs	Weight kg/100 pcs.	Item No.
MMS-plus 7.5X80	7,5 x 80	80	6	13.2	Torx	50	1.600	**3498272**

St Steel

G Electrogalvanised

Fire protection bolt tie with pan head for direct mounting without anchors. Drive T40, drill hole 6 mm. Tested anchor according to ETAG 001 - Part 3. Fire resistance class to R120 for concrete and masonry.



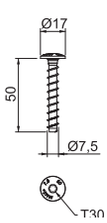
Fire protection screw tie

Type	Dimension mm	Anchor length mm	Bore hole Ø mm	Head Ø mm	Screw system	Pack. pcs	Weight kg/100 pcs.	Item No.
MMS-plus 7.5X50	7,5 x 50	50	6	17	Torx	100	1.500	**3498261**

St Steel

G Electrogalvanised

Fire protection bolt tie with large pan head for direct mounting without additional anchors. Drive T30, drill hole 6 mm. Tested anchor according to ETAG 001 - Part 3. Fire resistance class to R120 for concrete and masonry.



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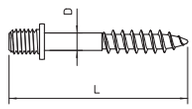
Always indicate the item number when ordering.

Screw-in anchor with M6 thread



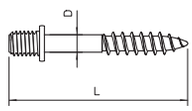
Type	Dimension D mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
985 M6 25	4.3	25	100	0.412	**3133028**
985 M6 35	4.3	35	100	0.533	**3133036**

St Steel

G Electrogalvanised

With wood screw shank and M6 thread.

Screw-in anchor with M8 thread



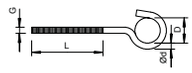
Type	Dimension D mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
985 M8 35	5.2	35	100	1.288	**3133230**

St Steel

G Electrogalvanised

With wood screw shank and M8 thread.

Ceiling hook



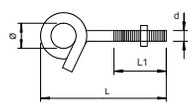
Type	Dimension L mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
867 M5X125 G	90	0.4	100	1.730	**3470148**
867 M6X 95 G	55	0.8	100	2.095	**3470210**
867 M6X125 G	85	0.8	100	2.760	**3470237**

St Steel

G Electrogalvanised

Ceiling hook with long metric thread.

Ceiling hook



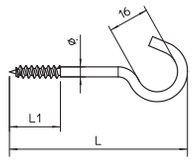
Type	Thread	Dimension d mm	Dimension L mm	Dimension L1 mm	Dimension d Ø mm	Washer Ø mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
948 TG6	M6	6	70	46	13	18	1	25	5.000	**3453820**

St Steel

G Electrogalvanised

Tightly wound ceiling hook. Including two large washers and nuts.

Ceiling hook



Type	Material Ø mm	Dimension L mm	Dimension L1 mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
915 3.9x50 G	3.9	50	20	0.15	100	0.724	**3450058**
915 3.9x60 G	3.9	60	20	0.15	100	0.800	**3450066**
915 3.9x70 G	3.9	70	20	0.15	100	0.879	**3450074**
915 3.9x80 G	3.9	80	20	0.15	100	0.913	**3450082**
915 3.9x90 G	3.9	90	20	0.15	100	1.076	**3450090**
915 3.9x100 G	3.9	100	20	0.15	100	1.187	**3450104**
915 4.3x120 G	4.3	120	24	0.2	100	1.662	**3450120**

St Steel

G Electrogalvanised

Ceiling hook with rolled wood screw thread.

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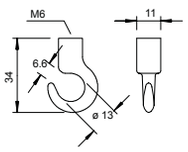
Ceiling hook

Type	Thread	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
2081 M6 G	M6	1.35	100	1.257	**3460169**

St Steel

G Electrogalvanised

Ceiling hook with metric internal thread.



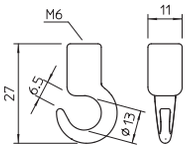
Ceiling hook

Type	Thread	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
2081 K M6	M6	1.6	100	0.899	**3460061**

St Steel

G Electrogalvanised

Ceiling hook with metric internal thread.



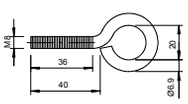
Frame eyelet

Type	Thread	Length mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
869 M8X40 G	M8	70	2	25	3.540	**3472086**

St Steel

G Electrogalvanised

Frame eyelet M8 x 40 mm.



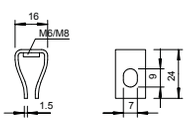
Rabitz coupler

Type	Thread	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
2083 M6 G	M6	4.5	100	1.090	**3462064**
2083 M8 G	M8	5.5	100	1.090	**3462080**

St Steel

G Electrogalvanised

Rabitz coupler with metric thread.



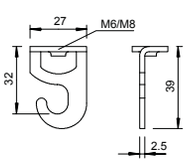
TS ceiling hook

Type	Thread	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
2989 M6 G	M6	1.5	50	2.540	**3460762**
2989 M8 G	M8	1.5	50	2.540	**3460789**

St Steel

G Electrogalvanised

TS ceiling hook with metric thread.



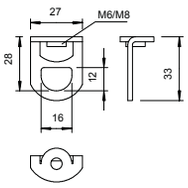
TS suspension eyelet

Type	Thread	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
2990 M6 G	M6	3.5	50	2.320	**3462862**
2990 M8 G	M8	3.5	50	2.320	**3462889**

St Steel

G Electrogalvanised

Suspension eyelet with interior thread.



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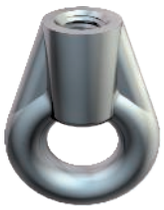
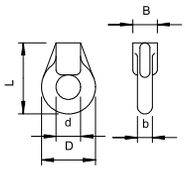
Ring eyelet





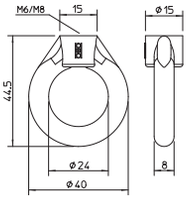
Type	Thread	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
2084 M6 G	M6	1.15	100	2.200	**3463567**
2084 M8 G	M8	1.15	100	2.100	**3463583**
2084 K M6	M6	1.15	100	1.500	**3463060**

Zn Die-cast zinc

G Electrogalvanised

Ring eyelet with metric internal thread.

Suspension eyelet



Type	Thread	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
2085 M6 G	M6	1.1	50	3.900	**3464067**
2085 M8 G	M8	1.1	50	3.700	**3464083**

Zn Die-cast zinc

G Electrogalvanised

Suspension eyelet with metric thread.

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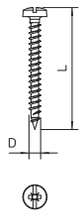
GOLDEN SPRINT, with Philips screw



Type	Dimension L mm	Dimension D mm	Head Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4758 3.5x15	15	3.5	6.5	200	0.070	**3195007**
4758 3.5x20	20	3.5	6.5	200	0.090	**3195015**
4758 3.5x25	25	3.5	6.5	200	0.120	**3195023**
4758 3.5x30	30	3.5	6.5	200	0.163	**3195031**
4758 3.5x35	35	3.5	6.5	200	0.170	**3195058**
4758 3.5x40	40	3.5	6.5	200	0.208	**3195066**
4758 3.5x45	45	3.5	6.5	200	0.220	**3195074**
4758 3.5x50	50	3.5	6.5	200	0.240	**3195082**
4758 4.0x15	15	4	7.5	200	0.100	**3195201**
4758 4.0x20	20	4	7.5	200	0.140	**3195228**
4758 4.0x25	25	4	7.5	200	0.177	**3195236**
4758 4.0x30	30	4	7.5	200	0.220	**3195244**
4758 4.0x35	35	4	7.5	200	0.250	**3195252**
4758 4.0x40	40	4	7.5	200	0.270	**3195260**
4758 4.0x45	45	4	7.5	200	0.280	**3195279**
4758 4.0x50	50	4	7.5	200	0.310	**3195287**
4758 4.5x25	25	4.5	8.2	200	0.237	**3195422**
4758 4.5x30	30	4.5	8.2	200	0.290	**3195430**
4758 4.5x35	35	4.5	8.2	200	0.300	**3195449**
4758 4.5x40	40	4.5	8.2	200	0.310	**3195457**
4758 4.5x45	45	4.5	8.2	200	0.350	**3195465**
4758 4.5x50	50	4.5	8.2	200	0.393	**3195473**
4758 5.0x30	30	5	9.5	200	0.376	**3195635**
4758 5.0x35	35	5	9.5	200	0.415	**3195643**
4758 5.0x40	40	5	9.5	200	0.454	**3195651**
4758 5.0x45	45	5	9.5	200	0.493	**3195678**
4758 5.0x50	50	5	9.5	200	0.533	**3195686**
4758 5.0x60	60	5	9.5	200	0.600	**3195694**
4758 6.0x30	30	6	12	200	0.600	**3195910**
4758 6.0x40	40	6	12	200	0.720	**3195929**
4758 6.0x50	50	6	12	200	0.830	**3195937**
4758 6.0x60	60	6	12	200	0.960	**3195945**

St Steel

GGP Electrogalvanised, yellow passivated

Hardened steel, electrogalvanised and yellow passivated, as well as Hostaflon-coated, pan head with combined Philips and slotted head (Pozidrive size 2 except Ø 6 mm Pozidrive size 3).
The use of Sprint screws leads to considerably reduced screw-in times compared with standard screws. This noticeable advantage comes from the point with the first thread, which leads on to the double thread beyond.
Areas of use: wood, chipboard, Rigips panels, plastic anchors.

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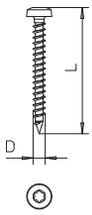
GOLDEN SPRINT, with Torx



Type	Dimension L mm	Dimension D mm	Head Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4758T 3.5x15	15	3.5	6.5	200	0.070	**3198016**
4758T 3.5x20	20	3.5	6.5	200	0.110	**3198018**
4758T 3.5x25	25	3.5	6.5	200	0.133	**3198020**
4758T 3.5x30	30	3.5	6.5	200	0.163	**3198022**
4758T 3.5x35	35	3.5	6.5	200	0.170	**3198024**
4758T 3.5x40	40	3.5	6.5	200	0.208	**3198026**
4758T 4.0x15	15	4	7.5	200	0.120	**3198030**
4758T 4.0x20	20	4	7.5	200	0.159	**3198032**
4758T 4.0x25	25	4	7.5	200	0.187	**3198034**
4758T 4.0x30	30	4	7.5	200	0.214	**3198036**
4758T 4.0x35	35	4	7.5	200	0.246	**3198038**
4758T 4.0x40	40	4	7.5	200	0.265	**3198040**
4758T 4.0x45	45	4	7.5	200	0.290	**3198042**
4758T 4.0x50	50	4	7.5	200	0.323	**3198044**
4758T 4.5x30	30	4.5	8.2	200	0.260	**3198054**
4758T 4.5x35	35	4.5	8.2	200	0.300	**3198056**
4758T 4.5x40	40	4.5	8.2	200	0.329	**3198058**
4758T 4.5x45	45	4.5	8.2	200	0.355	**3198060**
4758T 4.5x50	50	4.5	8.2	200	0.393	**3198062**
4758T 5.0x30	30	5	9.5	200	0.370	**3198073**
4758T 5.0x35	35	5	9.5	200	0.410	**3198075**
4758T 5.0x40	40	5	9.5	200	0.450	**3198077**
4758T 5.0x45	45	5	9.5	200	0.490	**3198079**
4758T 5.0x50	50	5	9.5	200	0.530	**3198081**

St Steel

GGP Electrogalvanised, yellow passivated

Hardened steel, electrogalvanised and yellow passivated, as well as Hostaflon-coated, pan head with T bit (Allen head), sizes Ø 3 mm T10, Ø 3.5 mm T15, Ø 4 and 4.5 mm T20, Ø 5 mm T25.
The use of Sprint screws leads to considerably reduced screw-in times compared with standard screws. This noticeable advantage comes from the point with the first thread, which leads on to the double thread beyond.
Areas of use: wood, chipboard, Rigips panels, plastic anchors.

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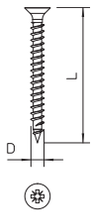
Always indicate the item number when ordering.

Sprint screw, with Philips slot



Type	Dimension L mm	Dimension D mm	Head Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4759 3.5x25	25	3.5	6.5	200	0.105	**3192113**
4759 3.5x30	30	3.5	6.5	200	0.120	**3192121**
4759 3.5x35	35	3.5	6.5	200	0.140	**3192148**
4759 3.5x40	40	3.5	6.5	200	0.160	**3192156**
4759 3.5x45	45	3.5	6.5	200	0.180	**3192164**
4759 3.5x50	50	3.5	6.5	200	0.205	**3192172**
4759 4.0x25	25	4	7.5	200	0.153	**3192210**
4759 4.0x30	30	4	7.5	200	0.167	**3192229**
4759 4.0x35	35	4	7.5	200	0.192	**3192237**
4759 4.0x40	40	4	7.5	200	0.210	**3192245**
4759 4.0x45	45	4	7.5	200	0.236	**3192253**
4759 4.0x50	50	4	7.5	200	0.262	**3192261**
4759 4.5x30	30	4.5	8.3	200	0.237	**3192334**
4759 4.5x35	35	4.5	8.3	200	0.270	**3192342**
4759 4.5x40	40	4.5	8.3	200	0.300	**3192350**
4759 4.5x45	45	4.5	8.3	200	0.320	**3192369**
4759 4.5x50	50	4.5	8.3	200	0.363	**3192377**
4759 5.0x30	30	5	9.2	200	0.304	**3192415**
4759 5.0x35	35	5	9.2	200	0.356	**3192423**
4759 5.0x40	40	5	9.2	200	0.380	**3192431**
4759 5.0x45	45	5	9.2	200	0.430	**3192458**
4759 5.0x50	50	5	9.2	200	0.480	**3192466**
4759 6.0x40	40	6	11	200	0.570	**3192628**
4759 6.0x50	50	6	11	200	0.680	**3192636**
4759 6.0x60	60	6	11	200	0.790	**3192644**

St Steel

GGP Electrogalvanised, yellow passivated

Hardened steel, electrogalvanised and yellow passivated, as well as Hostaflon-coated, countersunk head with Philips head (Pozidrive size 2 except Ø 6 mm Pozidrive size 3).
The use of Sprint screws leads to considerably reduced screw-in times compared with standard screws. This noticeable benefit is achieved by the point with the first thread, which leads onto the double thread beyond.
Areas of use: wood, chipboard, Rigips panels, plastic anchors.

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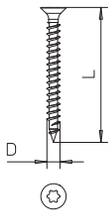
Always indicate the item number when ordering.

Sprint screw, with Torx



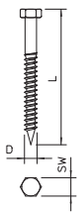
Type	Dimension L mm	Dimension D mm	Head Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
4759T 3.0x15	15	3	5.6	200	0.048	**3198193**
4759T 3.0x25	25	3	5.6	200	0.085	**3198197**
4759T 3.0x30	30	3	5.6	200	0.097	**3198199**
4759T 3.5x15	15	3.5	6.5	200	0.070	**3198219**
4759T 3.5x20	20	3.5	6.5	200	0.094	**3198221**
4759T 3.5x25	25	3.5	6.5	200	0.106	**3198223**
4759T 3.5x30	30	3.5	6.5	200	0.126	**3198225**
4759T 3.5x35	35	3.5	6.5	200	0.138	**3198227**
4759T 3.5x40	40	3.5	6.5	200	0.163	**3198229**
4759T 3.5x50	50	3.5	6.5	200	0.205	**3198231**
4759T 4.0x15	15	4	7.5	200	0.120	**3198237**
4759T 4.0x20	20	4	7.5	200	0.126	**3198239**
4759T 4.0x25	25	4	7.5	200	0.151	**3198241**
4759T 4.0x30	30	4	7.5	200	0.176	**3198243**
4759T 4.0x35	35	4	7.5	200	0.197	**3198245**
4759T 4.0x40	40	4	7.5	200	0.226	**3198247**
4759T 4.0x45	45	4	7.5	200	0.244	**3198249**
4759T 4.0x50	50	4	7.5	200	0.275	**3198251**
4759T 4.5x30	30	4.5	8.2	200	0.214	**3198260**
4759T 4.5x35	35	4.5	8.2	200	0.265	**3198262**
4759T 4.5x40	40	4.5	8.2	200	0.271	**3198264**
4759T 4.5x45	45	4.5	8.2	200	0.308	**3198266**
4759T 4.5x50	50	4.5	8.2	200	0.340	**3198268**
4759T 5.0x30	30	5	9.2	200	0.304	**3198276**
4759T 5.0x35	35	5	9.2	200	0.330	**3198278**
4759T 5.0x40	40	5	9.2	200	0.380	**3198280**
4759T 5.0x45	45	5	9.2	200	0.430	**3198282**
4759T 5.0x50	50	5	9.2	200	0.480	**3198284**

St Steel

GGP Electrogalvanised, yellow passivated

Hardened steel, electrogalvanised and yellow passivated, as well as Hostaflon-coated, countersunk head with T bit (Allen head), sizes Ø 3 mm T10, Ø 3.5 mm T15, Ø 4 and 4.5 mm T20, Ø 5 mm T25.
The use of Sprint screws leads to considerably reduced screw-in times compared with standard screws. This noticeable benefit is achieved by the point with the first thread, which leads onto the double thread.
Areas of use: wood, chipboard, Rigips panels, plastic anchors.

Hexagonal wood screw DIN 571



Type	Dimension L mm	Dimension D mm	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
HHWS 6x40 G	40	6	10	50	0.825	**3188043**
HHWS 6x50 G	50	6	10	50	0.960	**3188051**
HHWS 6x60 G	60	6	10	50	1.120	**3188078**
HHWS 6x80 G	80	6	10	50	1.375	**3188094**
HHWS 8x40 G	40	8	13	50	1.560	**3188140**
HHWS 8x50 G	50	8	13	50	1.820	**3188159**
HHWS 8x60 G	60	8	13	50	2.100	**3188167**
HHWS 8x70 G	70	8	13	50	2.360	**3188175**
HHWS 8x80 G	80	8	13	50	2.650	**3188183**
HHWS 8x100 G	100	8	13	50	3.200	**3188205**
HHWS 10x60 G	60	10	17	25	3.650	**3188256**
HHWS 10x70 G	70	10	17	25	4.050	**3188272**
HHWS 10x80 G	80	10	17	25	4.510	**3188280**
HHWS 10x100 G	100	10	17	25	5.400	**3188302**
HHWS 12x70 G	70	12	19	20	5.750	**3188361**
HHWS 12x80 G	80	12	19	20	6.430	**3188388**

St Steel

G Electrogalvanised

Hexagonal screw to DIN 571 with wood thread. Suitable for anchors, type 910.

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Always indicate the item number when ordering.

Threaded rod

Type	Thread	Dimension d mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
TR M6 1M G	M6	6	1000	10	18.300	**3141047**
TR M8 1M G	M8	8	1000	10	30.000	**3141128**
TR M10 1M G	M10	10	1000	10	49.000	**3141209**
TR M12 1M G	M12	12	1000	10	62.000	**3141306**
TR M6 2M G	M6	6	2000	10	36.600	**3141048**
TR M8 2M G	M8	8	2000	10	60.000	**3141136**
TR M10 2M G	M10	10	2000	10	98.000	**3141140**
TR M12 2M G	M12	12	2000	10	140.000	**3141144**

St Steel

G Electrogalvanised

Threaded rod to DIN 976.

Threaded rod A2

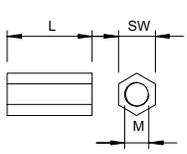
Type	Thread	Dimension d mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
TR M6 1M A2	M6	6	1000	10	18.300	**3141327**
TR M8 1M A2	M8	8	1000	10	30.000	**3141310**
TR M10 1M A2	M10	10	1000	10	49.000	**3141312**
TR M12 1M A2	M12	12	1000	10	70.000	**3141314**
TR M6 2M A2	M6	6	2000	10	36.600	**3141328**
TR M8 2M A2	M8	8	2000	10	60.000	**3141330**
TR M10 2M A2	M10	10	2000	10	98.000	**3141339**
TR M12 2M A2	M12	12	2000	10	140.000	**3141316**
TR M6 1M A4	M6	6	1000	50	18.300	**3141482**
TR M8 1M A4	M8	8	1000	50	30.000	**3141492**
TR M10 1M A4	M10	10	1000	25	49.000	**3141502**
TR M12 1M A4	M12	12	1000	20	70.000	**3141512**
TR M6 2M A4	M6	6	2000	25	36.600	**3141484**
TR M8 2M A4	M8	8	2000	25	60.000	**3141494**
TR M10 2M A4	M10	10	2000	20	98.000	**3141504**
TR M12 2M A4	M12	12	2000	10	140.000	**3141514**

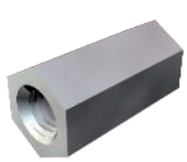
V2A Stainless steel, A2 V4A Stainless steel, A4

Threaded rod to DIN 976.

Spacer sleeve

Type	Thread	Dimension L mm	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
965 M6X20 G	M6	20	10	100	0.900	**3415031**
965 M6X25 G	M6	25	10	100	1.000	**3415066**
965 M6X30 G	M6	30	10	100	1.200	**3415082**
965 M6X40 G	M6	40	10	100	1.500	**3415104**
965 M6X50 G	M6	50	10	100	2.000	**3415120**
965 M8X20 G	M8	20	13	100	1.200	**3415147**
965 M8X30 G	M8	30	13	100	1.800	**3415163**





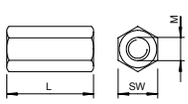
Zn Die-cast zinc

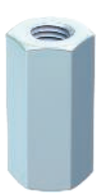
G Electrogalvanised

Continuous internal thread.

Connection sleeve

Type	Thread	Dimension L mm	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
CSTR M8 G	M8	30	13	50	2.000	**6410081**
CSTR M10 G	M10	40	17	50	6.000	**6410103**
CSTR M12 G	M12	40	19	25	7.000	**6410111**





St Steel

G Electrogalvanised

Connection sleeve with continuous internal thread.

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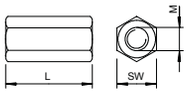
Connection sleeve

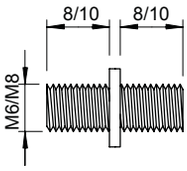


Type	Thread	Dimension L mm	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
CSTR M8 A2	M8	30	13	50	2.000	**6410154**
CSTR M10 A2	M10	40	17	50	6.000	**6410162**

V2A Stainless steel, A2

Connection sleeve with continuous internal thread.

Double nipple



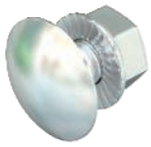
Type	Thread	Thread length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
3100 M6 G	M6	8	100	0.355	**3131068**
3100 M8 G	M8	10	100	0.680	**3131084**

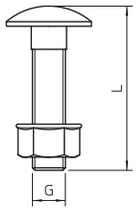
St Steel

G Electrogalvanised

Double nipple with metric thread.

Truss-head bolt with combination nut, V2A



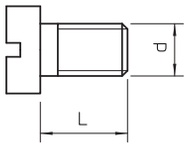


Type	Dimension mm	Dimension D mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
FRSB M8x35 A2	M8 x 35	8	35	50	2.570	**3175608**
FRSB M10x20 A2	M10 x 20	10	20	50	3.000	**3175620**
FRSB M10x25 A2	M10 x 25	10	25	50	3.700	**3175625**

V2A Stainless steel, A2

Truss-head bolt with square neck and combination nut.

Cylinder head bolt



Type	Thread	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
341 M6x10 G	M6	10	100	0.392	**3153096**
341 M6x16 G	M6	16	100	0.479	**3153150**
341 M6x20 G	M6	20	100	0.569	**3153207**

St Steel

G Electrogalvanised

Cylinder head bolt according to ISO 1207 with metric thread

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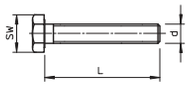
Always indicate the item number when ordering.

Hexagonal bolt ISO 4017

Type	Thread	Dimension mm	Dimension L mm	Dimension d mm	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
HHS M6x16 G	M6	M6 x 16	16	6	10	100	0.494	**3156141**
HHS M6x20 G	M6	M 6 x 20	20	6	10	100	0.580	**3156206**
HHS M6x25 G	M6	M6 x 25	25	6	10	100	0.665	**3156257**
HHS M6x30 G	M6	M6 x 30	30	6	10	100	0.751	**3156303**
HHS M6x35 G	M6	M6 x 35	35	6	10	100	0.837	**3156354**
HHS M6x40 G	M6	M6 x 40	40	6	10	100	0.923	**3156400**
HHS M8x20 G	M8	M 8 x 20	20	8	13	100	1.230	**3158209**
HHS M8x25 G	M8	M 8 x 25	25	8	13	100	1.390	**3158241**
HHS M8x30 G	M8	M 8 x 30	30	8	13	100	1.550	**3158306**
HHS M8x40 G	M8	M 8x40	40	8	13	100	1.870	**3158403**
HHS M8x50 G	M8	M 8x50	50	8	13	100	2.180	**3158500**
HHS M10x20 G	M10	M 10 x 20	20	10	17	100	2.320	**3160203**
HHS M10x30 G	M10	M 10 x 30	30	10	17	100	2.820	**3160300**
HHS M10x40 G	M10	M 10 x 40	40	10	17	50	3.240	**3160408**
HHS M10x50 G	M10	M 10 x 50	50	10	17	50	3.820	**3160505**
HHS M10x60 G	M10	M 10 x 60	60	10	17	50	4.330	**3160602**
HHS M12x30 G	M12	M 12 x 30	30	12	19	50	4.020	**3162303**
HHS M12x40 G	M12	M 12 x 40	40	12	19	50	4.740	**3162400**
HHS M12x50 G	M12	M 12 x 50	50	12	19	50	5.450	**3162508**



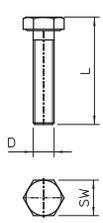
St Steel

G Electrogalvanised

Hexagonal bolt to ISO 4017 with metric thread

Hexagonal bolt DIN 933 V2A

Type	Thread	Dimension mm	Dimension L mm	Dimension d mm	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
HHS M10x45 A2	M10	M10 x 45	45	10	17	50	3.370	**3156040**
HHS M12x45 A2	M12	M12 x 45	45	12	19	50	4.850	**3156042**
HHS M16x50 A2	M16	M16 x 50	50	16	24	50	10.300	**3156044**

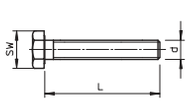


V2A Stainless steel, A2

Hexagonal bolt according to DIN 933 with metric thread.

Hexagonal bolt DIN 933 V4A

Type	Thread	Dimension mm	Dimension L mm	Dimension d mm	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
HHS M6x16 A4	M6	M6 x 16	16	6	10	100	0.511	**3156016**
HHS M6x20 A4	M6	M6 x 20	20	6	10	100	0.580	**3156018**
HHS M6x25 A4	M6	M6 x 25	25	6	10	100	0.665	**3156019**
HHS M6x30 A4	M6	M6 x 30	30	6	10	100	0.751	**3156020**
HHS M6x35 A4	M6	M6 x 35	35	6	10	100	0.837	**3156021**
HHS M6x40 A4	M6	M6 x 40	40	6	10	100	0.923	**3156022**
HHS M8x20 A4	M8	M8 x 20	20	8	13	100	1.230	**3156024**
HHS M8x25 A4	M8	M8 x 25	25	8	13	100	1.390	**3156025**
HHS M8x30 A4	M8	M8 x 30	30	8	13	100	1.550	**3156026**
HHS M8x40 A4	M8	M8 x 40	40	8	13	100	1.870	**3156027**
HHS M8x50 A4	M8	M8 x 50	50	8	13	100	2.180	**3156028**
HHS M10x20 A4	M10	M10 x 20	20	10	17	100	2.320	**3156031**
HHS M10x30 A4	M10	M10 x 30	30	10	17	100	2.620	**3156032**
HHS M10x40 A4	M10	M10 x 40	40	10	17	50	3.120	**3156033**
HHS M10x50 A4	M10	M10 x 50	50	10	17	50	3.620	**3156034**
HHS M10x60 A4	M10	M10 x 60	60	10	17	50	4.130	**3156035**
HHS M12x30 A4	M12	M12 x 30	30	12	19	50	3.770	**3156036**
HHS M12x40 A4	M12	M12x40	40	12	19	50	4.740	**3156029**
HHS M12x50 A4	M12	M12 x 50	50	12	19	50	5.200	**3156037**



V4A Stainless steel, A4

Hexagonal bolt M6 x 16 mm.

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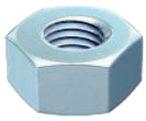
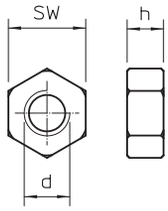
Always indicate the item number when ordering.

Hexagonal nut DIN 934 G





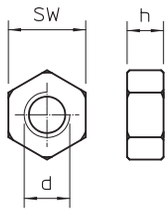
Type	Thread	SW mm	Dimension h mm	Dimension d mm	Pack. pcs	Weight kg/100 pcs.	Item No.
HN M4 G	M4	7	3.2	4	100	0.081	**3400042**
HN M5 G	M5	8	4.7	5	100	0.123	**3400050**
HN M6 G	M6	10	5.2	6	100	0.225	**3400069**
HN M8 G	M8	13	6.8	8	100	0.474	**3400085**
HN M10 G	M10	17	8.4	10	100	1.084	**3400107**
HN M12 G	M12	19	10.8	12	100	1.730	**3400123**

St Steel

G Electrogalvanised

Hexagonal nut to DIN 934 with metric thread.

Hexagonal nut DIN 934 V2A

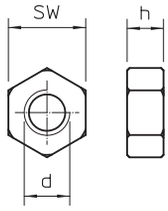


Type	Thread	SW mm	Dimension h mm	Dimension d mm	Pack. pcs	Weight kg/100 pcs.	Item No.
HN M6 A2	M6	10	5.2	6	100	0.250	**3397068**
HN M8 A2	M8	13	6.8	8	100	0.520	**3397084**
HN M10 A2	M10	17	8.4	10	100	1.160	**3397106**
HN M12 A2	M12	19	10.8	12	100	1.730	**3397114**

V2A Stainless steel, A2

Hexagonal nut to DIN 934 with metric thread.

Hexagonal nut DIN 934 V4A

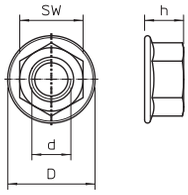


Type	Thread	SW mm	Dimension h mm	Dimension d mm	Pack. pcs	Weight kg/100 pcs.	Item No.
HN M6 A4	M6	10	5.2	6	100	0.250	**3400173**
HN M8 A4	M8	13	6.8	8	100	0.520	**3400175**
HN M10 A4	M10	17	8.4	10	100	1.084	**3400177**
HN M12 A4	M12	19	10.8	12	100	1.730	**3397145**

V4A Stainless steel, A4

Hexagonal nut to DIN 934 with metric thread.

Hexagonal nut with underhead toothing DIN 6923 V2A

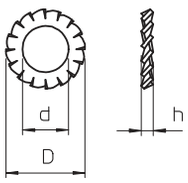


Type	Thread	SW mm	Dimension h mm	Dimension d mm	Pack. pcs	Weight kg/100 pcs.	Item No.
KM M8 A2	M8	13	8	17.9	100	0.800	**3156120**
KM M10 A2	M10	17	10	21.8	50	1.320	**3156122**
KM M12 A2	M12	19	12	26	50	2.100	**3156126**

V2A Stainless steel, A2

Combination nut with pressed washer in accordance with EN 1661.

Serrated washer DIN 6798



Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SWS M5 G	M5	5.3	10	1.8	100	0.022	**3404056**
SWS M6 G	M6	6.4	11	2.1	100	0.036	**3404064**
SWS M8 G	M8	8.4	15	2.4	100	0.080	**3404080**
SWS M10 G	M10	10.5	18	2.7	100	0.125	**3404102**
SWS M12 G	M12	13	20.5	3	100	0.160	**3404129**

St Steel

G Electrogalvanised

Serrated washer to DIN 6798, shape A.

Always indicate the item number when ordering.

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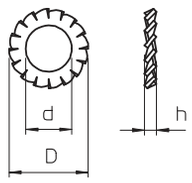
Serrated washer DIN 6798 A4

Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SWS M6 A4	M6	6.4	11	2.1	100	0.036	**3404372**
SWS M8 A4	M8	8.4	15	2.4	100	0.080	**3404377**
SWS M10 A4	M10	10.5	18	2.7	100	0.125	**3404381**
SWS M12 A4	M12	13	20.5	3	100	0.170	**3404385**

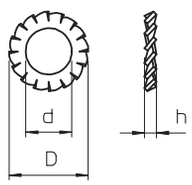


V4A Stainless steel, A4

Serrated washer to DIN 6798, shape A.

Serrated washer DIN 6798 A2

Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SWS M6 A2	M6	6.4	11	2.1	100	0.040	**3404331**
SWS M8 A2	M8	8.4	15	2.4	100	0.080	**3404358**

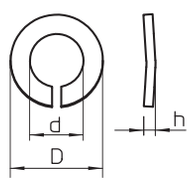


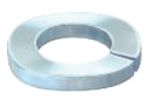
V2A Stainless steel, A2

Serrated washer to DIN 6798, shape A.

Lock washer

Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LWS M6 G	M6	6.3	11.8	2.1	100	0.070	**3405060**
LWS M8 G	M8	8.3	14.8	2.6	100	0.130	**3405087**
LWS M10 G	M10	10.5	18.1	3	100	0.210	**3405109**
LWS M12 G	M12	12.5	21.1	3.5	100	0.320	**3405125**





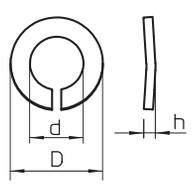
St Steel

G Electrogalvanised

Lock washer according to DIN 128, shape A.

Lock washer V4A

Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LWS M6 A4	M6	6.3	11.8	2.1	100	0.070	**3405062**
LWS M8 A4	M8	8.3	14.8	2.6	100	0.130	**3405089**
LWS M10 A4	M10	10.5	18.1	3	100	0.210	**3405111**
LWS M12 A4	M12	12.5	21.1	3.5	100	0.320	**3405127**

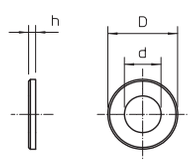


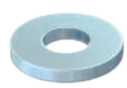
V4A Stainless steel, A4

Lock washer according to DIN 128, shape A.

Washer

Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
WS M4 D09 G	M4	4.3	9	0.8	100	0.031	**3402045**
WS M6 D12 G	M6	6.4	12	1.6	100	0.114	**3402061**
WS M8 D16 G	M8	8.4	16	1.6	100	0.214	**3402088**
WS M10 D20 G	M10	10.5	20	2	100	0.408	**3402096**
WS M12 D24 G	M12	13	24	2.5	100	0.627	**3402126**





St Steel

G Electrogalvanised

Washer according to DIN 125, shape A, for universal use.

Always indicate the item number when ordering.

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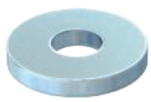
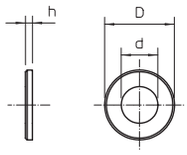
Washer ISO 7093





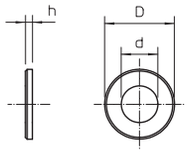
Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
WS M6 D28 G	M6	6.5	28	2.5	100	1.150	**3402207**
WS M8 D28 G	M8	8.5	28	2.5	100	1.100	**3402215**
WS M10 D28 G	M10	11	28	2.5	100	1.020	**3402223**

St Steel

G Electrogalvanised

Washer of large outer diameter for universal use.

Washer V2A

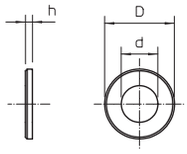


Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
WS M6 D12 A2	M6	6.4	12	1.6	100	0.114	**3402304**
WS M8 D16 A2	M8	8.4	16	1.6	100	0.214	**3402312**
WS M10 D20 A2	M10	10.5	20	2	100	0.408	**3402320**
WS M12 D24 A2	M12	13	24	2.5	100	0.627	**3402339**

V2A Stainless steel, A2

Washer according to DIN 125, shape A, for universal use.

Washer V4A

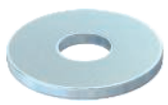


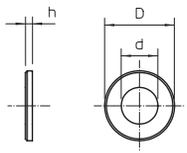
Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
WS M6 D12 A4	M6	6.4	12	1.6	100	0.114	**3402306**
WS M8 D16 A4	M8	8.4	16	1.6	100	0.214	**3402314**
WS M10 D20 A4	M10	10.5	20	2	100	0.408	**3402322**
WS M12 D24 A4	M12	13	24	2.5	100	0.627	**3402345**

V4A Stainless steel, A4

Washer according to DIN 125, shape A, for universal use.

Large washer steel





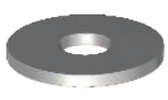
Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
WS M4 G15 G	M4	4.3	15	1.2	100	0.156	**3403025**
WS M5 G20 G	M5	5.3	20	1.2	100	0.274	**3403041**
WS M6 G25 G	M6	6.4	25	1.2	100	0.415	**3403084**
WS M6 G30 G	M6	6.4	30	1.3	100	0.675	**3403092**
WS M6 G20 G	M6	6.4	20	1.5	100	0.262	**3403076**
WS M8 G20 G	M8	8.4	20	1.5	100	0.240	**3403122**
WS M8 G25 G	M8	8.4	25	1.2	100	0.370	**3403130**
WS M10 G30 G	M10	10.5	30	1.5	100	0.592	**3403165**

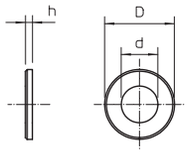
St Steel

G Electrogalvanised

Washer of particularly large outer diameter.

Large washer, V2A





Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
WS M8 D20 A2	M8	8.4	20	1.5	100	0.240	**3403125**
WS M8 D25 A2	M8	8.4	25	1.2	100	0.370	**3403135**
WS M8 D40 A2	M8	8.5	40	1.5	100	0.370	**3403145**
WS M10 D30 A2	M10	10.5	30	1.5	100	0.592	**3403155**
WS M10 D40 A2	M10	10.5	40	1.5	100	0.592	**3403175**

V2A Stainless steel, A2

Washer of particularly large outer diameter. In the case of connections on the MS 41 mounting rail, we recommend the external diameter of 40 mm.

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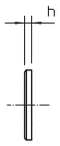
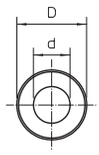
Always indicate the item number when ordering.

Large washer, V4A

Type	Thread	Dimension d mm	Dimension D mm	Dimension h mm	Pack. pcs	Weight kg/100 pcs.	Item No.
WS M8 D20 A4	M8	8.4	20	1.5	100	0.240	**3403127**
WS M8 D25 A4	M8	8.4	25	1.2	100	0.370	**3403137**
WS M8 D40 A4	M8	8.4	40	1.5	100	0.370	**3403147**
WS M10 D30 A4	M10	10.5	30	1.5	100	0.592	**3403163**
WS M10 D40 A4	M10	10.5	40	1.5	100	0.592	**3403177**



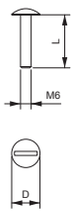


V4A Stainless steel, A4

Washer of particularly large outer diameter. In the case of connections on the MS 41 mounting rail, we recommend the external diameter of 40 mm.

Pan head screw, steel

Type	Dimension mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BS M6x30 G	M6x30	100	0.800	**1148898**
BS M6x30 A2	M6x30	100	0.790	**1148896**



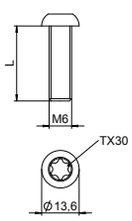
St Steel V2A Stainless steel, A2

G Electrogalvanised

The cup screw is used to connect two panels or to fasten cable sections on brackets. The flat, rounded head offers optimum cable protection.

Flat-head screw with internal Torx, steel

Type	Dimension mm	Screw system	Pack. pcs	Weight kg/100 pcs.	Item No.
7380T 6x20 G	M6x20	Torx	100	0.570	**3164952**
7380T 6x35 G	M6x35	Torx	100	0.910	**3164956**
7380T M6x20 A2	M6x20	Torx	100	0.580	**3164972**
7380T M6x35 A2	M6x35	Torx	100	0.910	**3164976**



St Steel V2A Stainless steel, A2

G Electrogalvanised

Flat head screw with TX 30, according to ISO 7380-1, suitable for fastening cable routes on brackets as well as for the mounting of barrier strips. The rounded head shape provides optimum cable protection. The Torx drive offers optimum force transmission in the screw movement.

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1015 10 G	5007753	1009079	316
1015 11 G	5007814	1009087	316
1015 12 G	5007876	1009109	316
1015 13 G	5007937	1009117	316
1015 14 G	5007999	1009168	316
1015 15 G	5008057	1009184	316
1015 16 G	5008118	1009192	316
1015 17 G	5008170	1009206	316
1015 18 G	5008231	1009214	316
1015 20 G	5008354	1009230	316
1015 25 G	5009078	1009427	316
1015 28 G	5008712	1009362	316
1015 5 G	5007456	1009028	316
1015 6 G	5007517	1009036	316
1015 7 G	5007579	1009044	316
1015 8 G	5007630	1009052	316
1015 9 G	5007692	1009060	316
1020 11-16 A4	5901792	1404168	343
1020 11-16 G	5125891	1404164	343
1020 14-18 A4	5901808	1404184	343
1020 14-18 G	5125952	1404180	343
1020 18-28 A4	5901815	1404292	343
1020 18-28 G	5126010	1404288	343
106 FL 16 8 19	5156734	2012758	218
106 FL 21 10 29	5157090	2012839	219
106 FL 21 10 31	5157335	2012871	219
106 FL 21 12 35	5157151	2012847	219
106 FL 21 14 40	5157458	2012928	219
106 FL 21 6 30	5157212	2012855	219
106 FL 21 8 33	5156918	2012782	219
106 FL 21 9 22	5157038	2012820	219
106 FL 21 9 39	5156970	2012804	219
106 FL 29 14 40	5156857	2012774	219
106 FL M20 8 19	5515173	2013002	217
106 FL M25 10 29	5515470	2013010	218
106 FL M25 10 31	5515531	2013011	218
106 FL M25 12 35	5515593	2013012	218
106 FL M25 14 40	5515654	2013013	218
106 FL M25 6 30	5515234	2013006	218
106 FL M25 8 33	5515296	2013007	218
106 FL M25 9 22	5515357	2013008	218
106 FL M25 9 39	5515418	2013009	218
106 FL M32 10 29	5515951	2013019	218
106 FL M32 10 31	5516019	2013020	218
106 FL M32 12 35	5516071	2013021	218
106 FL M32 14 40	5516132	2013022	218
106 FL M32 6 30	5515715	2013015	218
106 FL M32 8 33	5515777	2013016	218
106 FL M32 9 22	5515838	2013017	218
106 FL M32 9 39	5515890	2013018	218
106 M 20 PS	5465256	2035332	216
106 M 25 PS	5465317	2035340	216
106 M 32 PS	5467410	2035359	216
106 M 40 PS	5467472	2035367	216
106 M 50 PS	5467953	2035375	216
106 M 63 PS	5468011	2035383	216
106 M12 PS	5464952	2035316	216
106 M16 PS	5465072	2035324	216
106 PG11	5172277	2036118	216
106 PG13.5	5172390	2036134	216
106 PG16	5172574	2036169	216
106 PG21	5172635	2036215	216
106 PG29	5172758	2036290	216
106 PG36	5172871	2036363	216
106 PG42	5172994	2036428	216
106 PG48	5173113	2036487	216
106 PG7	5172093	2036061	216
106 PG9	5172215	2036096	216
107 ADA PG11-M16	5372066	2031467	226
107 ADA PG13-M20	5372073	2031468	226
107 ADA PG16-M20	5372080	2031469	226
107 ADA PG21-M25	5372097	2031470	226
107 ADA PG29-M32	5372103	2031471	226
107 ADA PG7-M12	5372042	2031465	226
107 ADA PG9-M12	5372059	2031466	226
107 B PG11	5167112	2029111	227
107 B PG11	5167112	2029111	254
107 B PG13.5	5167174	2029138	227
107 B PG13.5	5167174	2029138	254
107 B PG16	5167235	2029162	227
107 B PG16	5167235	2029162	254

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107 B PG21	5167297	2029219	227
107 B PG21	5167297	2029219	254
107 B PG29	5167358	2029294	227
107 B PG29	5167358	2029294	254
107 B PG36	5167419	2029367	227
107 B PG36	5167419	2029367	254
107 B PG42	5167471	2029421	227
107 B PG42	5167471	2029421	254
107 B PG48	5167532	2029480	227
107 B PG48	5167532	2029480	254
107 B PG9	5167051	2029103	227
107 B PG9	5167051	2029103	254
107 C V 16 2x6	5824718	2029634	213
107 C V 16 3x5	5824657	2029626	213
107 C V 16 3x6	5824770	2029642	213
107 C V 16 5x4	5824596	2029618	213
107 C V 21 2x8	5824893	2029669	213
107 C V 21 3x7	5824831	2029650	213
107 C VM 20 2x4	5035831	2029672	213
107 C VM 20 2x6	5035954	2029677	213
107 C VM 20 4x5	5035893	2029675	213
107 C VM 25 2x6	5036135	2029685	213
107 C VM 25 2x8	5036258	2029690	213
107 C VM 25 3x6	5036074	2029682	213
107 C VM 25 3x7	5036197	2029688	213
107 C VM 25 5x4	5036012	2029679	213
107 C VM 32 2x8	5036319	2029693	213
107 C VM 32 4x8	5036371	2029696	213
107 D PG11 GTP	5164890	2027119	254
107 D PG13.5 GTP	5164951	2027135	254
107 D PG16 GTP	5165019	2027151	254
107 D PG21 GTP	5165071	2027216	254
107 D PG7 GTP	5164777	2027070	254
107 D PG9 GTP	5164838	2027097	254
107 E M 12-16 PA	5371878	2031450	225
107 E M 16-20 PA	5371885	2031451	225
107 E M 20-25 PA	5371915	2031452	225
107 E M 25-32 PA	5371922	2031453	225
107 E M 32-40 PA	5371939	2031454	225
107 E PG11 PA	5163695	2025531	223
107 E PG11 PS	5163091	2025116	222
107 E PG13.5 PA	5163756	2025566	223
107 E PG13.5 PS	5163152	2025132	222
107 E PG16 PS	5163213	2025167	222
107 E PG21 PA	5163879	2025604	223
107 E PG21 PS	5163275	2025213	222
107 E PG29 PS	5163336	2025299	222
107 E PG36 PA	5163992	2025647	223
107 E PG36 PS	5163398	2025361	222
107 E PG42 PS	5163459	2025426	222
107 E PG48 PS	5163510	2025485	222
107 E PG7 PS	5162971	2025078	222
107 E PG9 PS	5163039	2025094	222
107 F M12 PE	5374299	2030004	227
107 F M12 PE	5374299	2030004	254
107 F M16 PE	5374350	2030008	227
107 F M16 PE	5374350	2030008	254
107 F M20 PE	5375678	2030012	227
107 F M20 PE	5375678	2030012	254
107 F M25 PE	5375913	2030016	227
107 F M25 PE	5375913	2030016	254
107 F M32 PE	5376156	2030020	227
107 F M32 PE	5376156	2030020	254
107 F M40 PE	5376514	2030024	227
107 F M40 PE	5376514	2030024	254
107 F M50 PE	5376576	2030028	227
107 F M50 PE	5376576	2030028	254
107 F M63 PE	5377290	2030032	227
107 F M63 PE	5377290	2030032	254
107 F PG11 PE	5168317	2030101	228
107 F PG11 PE	5168317	2030101	255
107 F PG13.5 PE	5168379	2030136	228
107 F PG13.5 PE	5168379	2030136	255
107 F PG16 PE	5168430	2030160	228
107 F PG16 PE	5168430	2030160	255
107 F PG21 PE	5168492	2030217	228
107 F PG21 PE	5168492	2030217	255
107 F PG29 PE	5168553	2030292	228
107 F PG29 PE	5168553	2030292	255
107 F PG36 PE	5168614	2030365	228
107 F PG36 PE	5168614	2030365	255
107 F PG48 PE	5168737	2030489	228
107 F PG48 PE	5168737	2030489	255
107 F PG7 PE	5168195	2030071	228

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107 F PG7 PE	5168195	2030071	255
107 F PG9 PE	5168256	2030098	228
107 F PG9 PE	5168256	2030098	255
107 R M20-12 PA	5377412	2030616	224
107 R M20-16 PA	5383352	2030619	224
107 R M25-12 PA	5384076	2030624	224
107 R M25-16 PA	5389118	2030626	224
107 R M25-20 PA	5389170	2030628	224
107 R M32-12 PA	5394518	2030632	224
107 R M32-16 PA	5401711	2030634	224
107 R M32-20 PA	5402497	2030637	224
107 R M32-25 PA	5402558	2030640	224
107 R M40-16 PA	5402619	2030643	224
107 R M40-20 PA	5402671	2030646	224
107 R M40-25 PA	5402732	2030649	224
107 R M40-32 PA	5402794	2030652	224
107 R M50-20 PA	5402978	2030655	224
107 R M50-25 PA	5403517	2030659	224
107 R M50-32 PA	5403999	2030661	224
107 R M50-40 PA	5404118	2030664	224
107 R M63-25 PA	5405610	2030667	224
107 R M63-32 PA	5405795	2030670	224
107 R M63-40 PA	5405856	2030673	224
107 R M63-50 PA	5407713	2030675	224
107 R PG11- 7 PA	5824350	2030705	225
107 R PG13- 9 PA	5434238	2030713	225
107 R PG16- 9 PA	5434351	2030748	225
107 R PG16-11 PA	5434412	2030756	225
107 R PG21-11 PA	5907510	2030764	225
107 R PG21-13 PA	5434535	2030772	225
107 R PG21-16 PA	5434597	2030780	225
107 R PG29-16 PA	5824411	2030799	225
107 R PG29-21 PA	5434658	2030802	225
107 R PG36-21 PA	5824473	2030829	225
107 R PG36-29 PA	5434719	2030810	225
107 R PG42-29 PA	5824534	2030837	225
107 S VTEC M12	5035299	2028870	214
107 S VTEC M12	5035299	2028870	229
107 S VTEC M12	5035299	2028870	256
107 S VTEC M16	5035350	2028873	214
107 S VTEC M16	5035350	2028873	229
107 S VTEC M16	5035350	2028873	256
107 S VTEC M20	5035411	2028875	214
107 S VTEC M20	5035411	2028875	229
107 S VTEC M20	5035411	2028875	256
107 S VTEC M25	5035473	2028877	214
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107 S VTEC M25	5035473	2028877	256
107 S VTEC M32	5035534	2028880	214
107 S VTEC M32	5035534	2028880	229
107 S VTEC M32	5035534	2028880	256
107 S VTEC M40	5035596	2028883	214
107 S VTEC M40	5035596	2028883	229
107 S VTEC M40	5035596	2028883	256
107 S VTEC M50	5035718	2028885	214
107 S VTEC M50	5035718	2028885	229
107 S VTEC M50	5035718	2028885	256
107 S VTEC PG11	5843672	2028913	214
107 S VTEC PG11	5843672	2028913	229
107 S VTEC PG11	5843672	2028913	256
107 S VTEC PG13	5843733	2028921	214
107 S VTEC PG13	5843733	2028921	229
107 S VTEC PG13	5843733	2028921	256
107 S VTEC PG16	5843795	2028948	214
107 S VTEC PG16	5843795	2028948	229
107 S VTEC PG16	5843795	2028948	256
107 S VTEC PG21	5843856	2028956	214
107 S VTEC PG21	5843856	2028956	229
107 S VTEC PG21	5843856	2028956	256
107 S VTEC PG29	5843917	2028964	214
107 S VTEC PG29	5843917	2028964	229
107 S VTEC PG29	5843917	2028964	256
107 S VTEC PG36	5843979	2028972	214
107 S VTEC PG36	5843979	2028972	229
107 S VTEC PG36	5843979	2028972	256
107 S VTEC PG42	5844037	2028980	214
107 S VTEC PG42	5844037	2028980	229
107 S VTEC PG42	5844037	2028980	256
107 S VTEC PG48	5844099	2028999	214
107 S VTEC PG48	5844099	2028999	229
107 S VTEC PG48	5844099	2028999	256
107 S VTEC PG7	5843559	2028891	214
107 S VTEC PG7	5843559	2028891	229
107 S VTEC PG7	5843559	2028891	256

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107 S VTEC PG9	5843610	2028905	229
107 S VTEC PG9	5843610	2028905	256
107 V PG 7 PVC	5167594	2029707	229
107 V PG 7 PVC	5167594	2029707	257
107 V PG 9 PVC	5167655	2029715	229
107 V PG 9 PVC	5167655	2029715	257
107 V PG11 PVC	5167716	2029723	229
107 V PG11 PVC	5167716	2029723	257
107 V PG13.5 PVC	5167778	2029731	229
107 V PG13.5 PVC	5167778	2029731	257
107 V PG16 PVC	5167839	2029758	229
107 V PG16 PVC	5167839	2029758	257
107 V PG21 PVC	5167891	2029766	229
107 V PG21 PVC	5167891	2029766	257
107 V PG29 PVC	5167952	2029774	229
107 V PG29 PVC	5167952	2029774	257
107 W PG 9 PA	5445395	2029901	226
107 W PG11 PA	5445456	2029928	226
107 W PG13.5 PA	5445517	2029936	226
107 W PG16 PA	5445579	2029944	226
107 W PG21 PA	5445630	2029952	226
107 Z PG 9 PA	5161653	2023091	223
107 Z PG11 PA	5161714	2023113	223
107 Z PG13.5 PA	5161776	2023121	223
107 Z PG16 PA	5161837	2023164	223
107 Z PG21 PA	5161899	2023210	223
107 Z PG29 PA	5161950	2023296	223
107CR VM 12	5360582	2029560	214
107CR VM 16	5360599	2029563	214
107CR VM 20	5360605	2029566	214
107CR VM 25	5360636	2029569	214
107CR VM 32	5360643	2029572	214
107CR VM 40	5360650	2029575	214
107CR VM 50	5360667	2029578	214
107CR VM 63	5360698	2029581	214
107VS VM 12 PA	5389972	2029517	215
107VS VM 16 PA	5389989	2029520	215
107VS VM 20 PA	5389996	2029523	215
107VS VM 27 PA	6117512	2029529	215
107VS VM 35 PA	6117529	2029533	215
107VS VM 5 PA	5389934	2029511	215
107VS VM 9 PA	5389941	2029514	215
108 M12 PS	5409274	2033003	222
108 M16 PS	5424031	2033007	222
108 M20 PS	5426554	2033011	222
108 M25 PS	5426615	2033016	222
108 M32 PS	5431299	2033021	222
108 M40 PS	5434177	2033026	222
108 M50 PS	5452478	2033032	222
108 M63 PS	5464778	2033038	222
108 PG 7	5170235	2033070	222
108 PG 9	5170297	2033097	222
108 PG11	5170358	2033119	222
108 PG13.5	5170419	2033135	222
108 PG16	5170471	2033151	222
108 PG21	5170532	2033216	222
108 PG29	5170594	2033291	222
108 PG36	5170655	2033364	222
108 PG42	5170716	2033429	222
108 PG48	5170778	2033488	222
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109 M20 LGR	6595723	2034680	106
109 M20 LGR	6595723	2034680	234
		/100 pc.	
1101 3.4x100	5288077	3341992	476
1101 3.4x50	5287773	3341496	476
1101 3.4x60	5287834	3341607	476
1101 3.4x70	5287896	3341704	476
1101 3.4x80	5287957	3341801	476
1101 3.4x90	5288015	3341909	476
1101 3x40	5287537	3341046	476
1101 3x50	5287599	3341054	476
1101 3x60	5287650	3341062	476
1101 3x70	5287711	3341070	476
1101 Z 40 G	5288138	3342042	476
1101 Z 50 G	5288190	3342050	476
1101 Z 60 G	5288251	3342069	476
1101 Z 70 G	5288312	3342077	476

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1101 Z3.4x60 G	5288435	3342603	476
1101 Z3.4x70 G	5288497	3342700	476
1101 Z3.4x80 G	5288558	3342808	476
113 M20 LGR	5088639	2024063	217
113 PG13.5 LGR	5162858	2024136	217
113 PG16 LGR	5162919	2024160	217
115 GR-GN	5228011	2340038	230
116 M12 LGR PA	5874157	2048906	220
116 M12 LGR PS	5128656	2049503	221
116 M12 SGR PA	5446477	2048752	220
116 M12 SW PA	5089179	2049066	220
116 M16 LGR PA	5874218	2048914	220
116 M16 LGR PS	5139331	2049511	221
116 M16 SGR PA	5446538	2048760	220
116 M16 SW PA	5095354	2049074	220
116 M20 LGR PA	5944539	2048922	220
116 M20 LGR PS	5153313	2049538	221
116 M20 SGR PA	5446590	2048779	220
116 M20 SW PA	5095415	2049082	220
116 M25 LGR PA	5944591	2048930	220
116 M25 LGR PS	5155478	2049546	221
116 M25 SGR PA	5446651	2048787	220
116 M25 SW PA	5095538	2049090	220
116 M32 LGR PA	5944652	2048949	220
116 M32 LGR PS	5161592	2049554	221
116 M32 SGR PA	5446712	2048795	220
116 M32 SW PA	5095651	2049104	220
116 M40 LGR PA	5088998	2048957	220
116 M40 LGR PS	5228615	2049562	221
116 M40 SGR PA	5088752	2048809	220
116 M40 SW PA	5095712	2049112	220
116 M50 LGR PA	5089056	2048965	220
116 M50 LGR PS	5232810	2049570	221
116 M50 SGR PA	5088875	2048817	220
116 M50 SW PA	5096313	2049120	220
116 M63 LGR PA	5089117	2048973	220
116 M63 LGR PS	5315018	2049589	221
116 M63 SGR PA	5088936	2048825	220
116 M63 SW PA	5127758	2049139	220
116 PG 7	5178811	2043076	221
116 PG 9	5178873	2043092	221
116 PG11	5178934	2043114	221
116 PG13.5	5178996	2043130	221
116 PG16	5179054	2043165	221
116 PG21	5179115	2043211	221
116 PG29	5179177	2043297	221
116 PG36	5179238	2043351	221
116 PG42	5179290	2043424	221
116 PG48	5179351	2043483	221
116 VDE PG 9 PA	5182474	2048094	220
116 VDE PG 9 PA	5182474	2048094	221
116 VDE PG11 PA	5182535	2048116	220
116 VDE PG11 PA	5182535	2048116	221
116 VDE PG13.5PA	5182597	2048132	220
116 VDE PG13.5PA	5182597	2048132	221
116 VDE PG16 PA	5182658	2048167	220
116 VDE PG16 PA	5182658	2048167	221
116 VDE PG21 PA	5182719	2048221	220
116 VDE PG21 PA	5182719	2048221	221
116 VDE PG29 PA	5182771	2048299	220
116 VDE PG29 PA	5182771	2048299	221
116 VDE PG36 PA	5182832	2048361	220
116 VDE PG36 PA	5182832	2048361	221
116 VDE PG42 PA	5182894	2048426	220
116 VDE PG42 PA	5182894	2048426	221
116 VDE PG48 PA	5182955	2048485	220
116 VDE PG48 PA	5182955	2048485	221
116 VDE PG7 PA	5182412	2048078	220
116 VDE PG7 PA	5182412	2048078	221
117 5x2.5	5159858	2022028	116
117 5x6	5159919	2022060	116
129 M16	5490753	2047810	365
129 M16 SW	5468851	2047934	365
129 M20	5490692	2047829	365
129 M20 SW	5468912	2047942	365
129 M25	5490630	2047837	365
129 M25 SW	5468974	2047950	365
129 M32	5487692	2047853	365

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129 M32 SW	5469155	2047969	365
129 M40	5037699	2047861	365
129 M40 SW	5469216	2047977	365
129 M50	5037637	2047888	365
129 M50 SW	5469278	2047985	365
129 M63	5037576	2047896	365
129 M63 SW	5469339	2047993	365
129 PG11	5180135	2044110	366
129 PG13.5	5180197	2044137	366
129 PG16	5180258	2044161	366
129 PG29	5180371	2044293	366
129 PG36	5180432	2044366	366
129 PG42	5180494	2044420	366
129 PG48	5180555	2044471	366
129 TB M16	6332243	2047812	365
129 TB M16 SW	6332335	2047936	365
129 TB M20	6332250	2047831	365
129 TB M20 SW	6332342	2047944	365
129 TB M25	6332267	2047839	365
129 TB M25 SW	6332373	2047952	365
129 TB M32	6332274	2047855	365
129 TB M32 SW	6332380	2047971	365
129 TB M40	6332281	2047863	365
129 TB M40 SW	6332397	2047979	365
129 TB M50	6332311	2047890	365
129 TB M50 SW	6332403	2047987	365
129 TB M63	6332328	2047898	365
129 TB M63 SW	6332434	2047995	365
129 TB PG11	6594108	2044511	365
129 TB PG13,5	6594115	2044513	365
129 TB PG16	6594122	2044516	365
129 TB PG21	6594139	2044521	365
129 TB PG29	6594146	2044529	365
129 TB PG36	6594153	2044536	365
129 TB PG42	6594160	2044542	365
129 TB PG48	6594177	2044548	365
129 TB PG9	6594092	2044509	365
157 MS PG 7	5157755	2013061	250
157 MS PG 9	5157816	2013096	250
157 MS PG11	5157878	2013118	250
157 MS PG13.5	5157939	2013134	250
157 MS PG16	5157991	2013169	250
157 MS PG21	5158059	2013215	250
157 MS PG29	5158110	2013290	250
159 MS PG 7	5181811	2046075	247
159 MS PG 9	5181873	2046091	247
159 MS PG11	5181934	2046113	247
159 MS PG13.5	5181996	2046121	247
159 MS PG16	5182054	2046164	247
159 MS PG21	5182115	2046210	247
159 MS PG29	5182177	2046296	247
159 MS PG36	5182238	2046369	247
159 MS PG42	5182290	2046423	247
159 MS PG48	5182351	2046482	247
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162 MS M16	5517696	2083712	245
162 MS M20	5517757	2083716	245
162 MS M25	5517818	2083720	245
162 MS M32	5517870	2083724	245
162 MS M40	5517931	2083728	245
162 MS M50	5517993	2083732	245
162 MS M63	5518051	2083736	245
162 MS PG 9	5582670	2082519	246
162 MS PG11	5187578	2082500	246
162 MS PG13.5	5187639	2082527	246
162 MS PG16	5187691	2082543	246
162 MS PG21	5187752	2082578	246
162 MS PG29	5187813	2082594	246
162 MS PG36	5187875	2082616	246
163 MS M12	5481331	2083612	246
163 MS M16	5481393	2083620	246
163 MS M20	5481874	2083639	246
163 MS M25	5481997	2083647	246
163 MS M32	5482055	2083655	246
163 MS M40	5482116	2083663	246
163 MS M50	5482178	2083671	246
163 MS M63	5482239	2083698	246
163 MS PG 7	5186977	2082071	247
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163 MS PG29	5187332	2082292	247
163 MS PG36	5187394	2082365	247
163 MS PG42	5187455	2082411	247
163 MS PG48	5187516	2082489	247
164 MS PG11	5188834	2084112	249
164 MS PG16	5188957	2084163	249
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165 ADA M12-16	5372158	2088280	250
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165 ADA M16-20	5372165	2088281	250
165 ADA M16-PG11	5372332	2088302	252
165 ADA M16-PG7	5390923	2088310	252
165 ADA M16-PG9	5390930	2088312	252
165 ADA M20-25	5372172	2088282	250
165 ADA M20-PG11	5390954	2088316	252
165 ADA M20-PG13	5372349	2088303	252
165 ADA M20-PG16	5390961	2088318	252
165 ADA M20-PG9	5390947	2088314	252
165 ADA M25-32	5372189	2088283	250
165 ADA M25-PG11	5391005	2088320	252
165 ADA M25-PG13	5391012	2088322	252
165 ADA M25-PG16	5372356	2088304	252
165 ADA M25-PG21	5391029	2088324	252
165 ADA M32-40	5372196	2088284	250
165 ADA M32-PG16	5391067	2088328	252
165 ADA M32-PG21	5372363	2088305	252
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165 ADA PG36-M50	5372318	2088299	253
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167 R MS PG29-21	5193517	2089319	251
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168 MS M32	5472995	2090562	249
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169 MS M40	5474197	2091666	248
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169 MS PG36	5194958	2091364	248
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2056 M 76 A2	5668336	1159776	455
2056 M 76 FT	5063377	1156136	455
2056 M 82 FT	5063438	1156144	455
2056 M 90 FT	5063490	1156152	455
2056 M2 12 FT	5494836	1156179	456
2056 M2 16 FT	5494898	1156187	456
2056 M2 22 FT	5494959	1156195	456
2056 M2 28 FT	5958703	1156209	456
2056 M3 12 FT	5958765	1156241	456
2056 M3 16 FT	5958826	1156268	456
2056 M3 22 FT	5958888	1156276	456
2056 M3 28 FT	5958949	1156284	456
2056F 12 FT	5070634	1169122	462
2056F 16 FT	5070696	1169165	462
2056F 2 12 FT	5071532	1170120	463
2056F 2 16 FT	5071594	1170163	463
2056F 2 22 FT	5071655	1170228	463
2056F 2 28 FT	5071716	1170287	463
2056F 2 34 FT	5071778	1170341	463
2056F 2 40 FT	5071839	1170406	463
2056F 2 46 FT	5071891	1170465	463
2056F 2 52 FT	5071952	1170511	463

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2056F 28 FT	5070818	1169289	462
2056F 34 FT	5070870	1169343	462
2056F 40 FT	5070931	1169408	462
2056F 46 FT	5070993	1169467	462
2056F 52 FT	5071051	1169521	462
2056F 58 FT	5071112	1169580	462
2056F 64 FT	5071174	1169645	462
2056F M 12 FT	5495192	1156802	463
2056F M 16 FT	5495253	1156810	463
2056F M 22 FT	5495314	1156829	463
2056F M 28 FT	5495376	1156837	463
2056N 12 ALU	5436515	1183605	450
2056N 12 FT	5067399	1163124	450
2056N 16 ALU	5436577	1183613	450
2056N 16 FT	5067450	1163167	450
2056N 22 ALU	5436638	1183621	450
2056N 22 FT	5067511	1163221	450
2056N 28 ALU	5436690	1183648	450
2056N 28 FT	5067573	1163280	450
2056N 34 ALU	5436751	1183656	450
2056N 34 FT	5067634	1163345	450
2056N 40 ALU	5436812	1183664	450
2056N 40 FT	5067696	1163396	450
2056N 46 ALU	5436874	1183672	450
2056N 46 FT	5067757	1163469	450
2056N 52 ALU	5436935	1183680	450
2056N 52 FT	5067818	1163523	450
2056N 58 ALU	5436997	1183699	450
2056N 58 FT	5067870	1163582	450
2056N 64 FT	5067931	1163647	450
2056N 70 FT	5067993	1163701	450
2056N M 12 FT	5060857	1155407	451
2056N M 16 FT	5060918	1155415	451
2056N M 22 FT	5060970	1155423	451
2056N M 28 FT	5061038	1155431	451
2056N M 34 FT	5061090	1155458	451
2056N M 40 FT	5061151	1155466	451
2056N M 46 FT	5061212	1155474	451
2056N M 52 FT	5061274	1155482	451
2056N M 58 FT	5061335	1155490	451
2056N SAS 12 A2	5432432	1167014	451
2056N SAS 16 A2	5432494	1167022	451
2056N SAS 22 A2	5432555	1167030	451
2056N SAS 28 A2	5432616	1167049	451
2056N SAS 8 A2	5432371	1167006	451
2056RS M 16 FT	5358411	1158305	466
2056RS M 22 FT	5358428	1158309	466
2056RS M 28 FT	5358435	1158313	466
2056RS M 34 FT	5358442	1158317	466
2056RS M 40 FT	5358473	1158321	466
2056RS M 46 FT	5358480	1158325	466
2056RS M 52 FT	5358497	1158329	466
2056RS M 58 FT	5358503	1158333	466
2056RS M 64 FT	5358534	1158337	466
2056U 100 FT	5073574	1175998	458
2056U 12 A2	5074595	1178504	458
2056U 12 ALU	5439035	1184407	458
2056U 12 FT	5072737	1175122	458
2056U 16 A2	5074656	1178512	458
2056U 16 ALU	5439097	1184415	458
2056U 16 FT	5072799	1175165	458
2056U 2 12 FT	5073635	1176129	459
2056U 2 16 FT	5073697	1176161	459
2056U 2 22 FT	5073758	1176226	459
2056U 2 28 FT	5073819	1176285	459
2056U 2 34 FT	5073871	1176331	459
2056U 2 40 FT	5073932	1176404	459
2056U 2 46 FT	5073994	1176463	459
2056U 2 52 FT	5074052	1176528	459
2056U 2 58 FT	5074113	1176587	459
2056U 22 A2	5074717	1178520	458
2056U 22 ALU	5439158	1184423	458
2056U 22 FT	5072850	1175211	458
2056U 28 A2	5074779	1178539	458
2056U 28 ALU	5439219	1184431	458
2056U 28 FT	5072911	1175289	458
2056U 3 12 FT	5074175	1177125	460
2056U 3 16 FT	5074236	1177168	460
2056U 3 22 FT	5074298	1177222	460
2056U 3 28 FT	5074359	1177281	460
2056U 3 34 FT	5074410	1177346	460
2056U 3 40 FT	5074472	1177400	460
2056U 3 46 FT	5074533	1177451	460

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2056U 34 FT	5072973	1175343	458
2056U 40 A2	5074892	1178555	458
2056U 40 ALU	5439332	1184466	458
2056U 40 FT	5073031	1175408	458
2056U 46 A2	5074953	1178563	458
2056U 46 ALU	5439394	1184474	458
2056U 46 FT	5073093	1175467	458
2056U 52 A2	5075011	1178571	458
2056U 52 ALU	5439455	1184482	458
2056U 52 FT	5073154	1175521	458
2056U 58 A2	5075073	1178598	458
2056U 58 ALU	5439516	1184490	458
2056U 58 FT	5073215	1175580	458
2056U 64 A2	5075134	1178601	458
2056U 64 ALU	5439578	1184504	458
2056U 64 FT	5073277	1175645	458
2056U 70 A2	5075196	1178628	458
2056U 70 ALU	5439752	1184539	458
2056U 70 FT	5073338	1175696	458
2056U 76 A2	5075257	1178636	458
2056U 76 ALU	5439639	1184512	458
2056U 76 FT	5073390	1175769	458
2056U 82 FT	5073451	1175823	458
2056U 90 FT	5073512	1175904	458
2056U M 12 A4	5912255	1158207	461
2056U M 12 FT	5498254	1158007	461
2056U M 16 A4	5912262	1158211	461
2056U M 16 FT	5498315	1158015	461
2056U M 22 A4	5912279	1158215	461
2056U M 22 FT	5498377	1158023	461
2056U M 28 A4	5912286	1158219	461
2056U M 28 FT	5498438	1158031	461
2056U M 34 A4	5912293	1158223	461
2056U M 34 FT	5498490	1158058	461
2056U M 40 A4	5912309	1158227	461
2056U M 40 FT	5498551	1158066	461
2056U M 46 A4	5912316	1158231	461
2056U M 46 FT	5498612	1158074	461
2056U M 52 A4	5912323	1158235	461
2056U M 52 FT	5498674	1158082	461
2056U M 58 A4	5912330	1158239	461
2056U M 58 FT	5498735	1158090	461
2056U M 64 A4	5912347	1158243	461
2056U M 64 FT	5498797	1158104	461
2056U M 70 A4	5912354	1158247	461
2056U M 70 FT	5498858	1158112	461
2056U M 76 A4	5912361	1158251	461
2056U M 76 FT	5498919	1158120	461
2056U-E28 FT	5451211	1174509	467
2056U-E31 FT	5072553	1174541	467
2056U-E34 FT	5451273	1174517	467
2056U-E37 FT	5072614	1174568	467
2056U-E40 FT	5451334	1174525	467
2056U-E44 FT	5072676	1174576	467
2056W 12 FT	5075431	1180126	464
2056W 16 FT	5075493	1180169	464
2056W 2 16 FT	5076391	1181165	465
2056W 2 22 FT	5076452	1181211	465
2056W 2 28 FT	5076513	1181289	465
2056W 2 34 FT	5076575	1181343	465
2056W 2 40 FT	5076636	1181408	465
2056W 2 46 FT	5076698	1181467	465
2056W 2 52 FT	5076759	1181521	465
2056W 2 58 FT	5076810	1181580	465
2056W 22 A2	5079392	1185438	464
2056W 22 ALU	5446354	1184024	464
2056W 22 FT	5075554	1180223	464
2056W 28 A2	5079453	1185446	464
2056W 28 ALU	5437833	1184032	464
2056W 28 FT	5075615	1180282	464
2056W 34 A2	5079514	1185454	464
2056W 34 ALU	5437895	1184040	464
2056W 34 FT	5075677	1180347	464
2056W 40 A2	5079576	1185462	464
2056W 40 ALU	5437956	1184059	464
2056W 40 FT	5075738	1180401	464
2056W 46 A2	5079637	1185470	464
2056W 46 ALU	5438014	1184067	464
2056W 46 FT	5075790	1180460	464
2056W 52 A2	5079699	1185489	464
2056W 52 ALU	5438076	1184075	464
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2056W 58 FT	5075912	1180584	464
2056W 64 ALU	5438199	1184091	464
2056W 64 FT	5075974	1180649	464
2056W 70 FT	5076032	1180681	464
2058 12 LGR	5081371	1195123	468
2058 16 LGR	5081432	1195166	468
2058 2 12 LGR	5082576	1196111	469
2058 2 16 LGR	5082637	1196162	469
2058 2 22 LGR	5082699	1196227	469
2058 2 28 LGR	5082750	1196286	469
2058 2 34 LGR	5082811	1196340	469
2058 2 40 LGR	5082873	1196405	469
2058 2 46 LGR	5082934	1196464	469
2058 2 52 LGR	5082996	1196529	469
2058 2 58 LGR	5083054	1196588	469
2058 22 LGR	5081494	1195220	468
2058 28 LGR	5081555	1195271	468
2058 34 LGR	5081616	1195344	468
2058 40 LGR	5081678	1195409	468
2058 46 LGR	5081739	1195468	468
2058 52 LGR	5081791	1195522	468
2058 58 LGR	5081852	1195581	468
2058 64 LGR	5081913	1195646	468
2058 70 LGR	5081975	1195700	468
2058 M2 12 FT	5441434	1199706	470
2058 M2 16 FT	5441496	1199714	470
2058 M2 22 A2	5847649	1196597	470
2058 M2 22 FT	5441557	1199722	470
2058 M2 28 A2	5847656	1196599	470
2058 M2 28 FT	5441618	1199730	470
2058 M2 34 A2	5847663	1196601	470
2058 M2 34 FT	5441670	1199749	470
2058 M2 40 FT	5441731	1199757	470
2058FW 100 LGR	5083955	1197991	468
2058FW 12 LGR	5083115	1197126	468
2058FW 16 LGR	5083177	1197169	468
2058FW 22 LGR	5083238	1197223	468
2058FW 28 LGR	5083290	1197282	468
2058FW 34 LGR	5083351	1197347	468
2058FW 40 LGR	5083412	1197401	468
2058FW 46 LGR	5083474	1197460	468
2058FW 52 LGR	5083535	1197525	468
2058FW 58 LGR	5083597	1197584	468
2058FW 64 LGR	5083658	1197649	468
2058FW 70 LGR	5083719	1197703	468
2058FW 76 LGR	5083771	1197762	468
2058FW 82 LGR	5083832	1197827	468
2058FW 90 LGR	5083894	1197908	468
2058FW M 12 A2	5514091	1197134	469
2058FW M 12 FT	5442035	1199846	469
2058FW M 16 A2	5514152	1197177	469
2058FW M 16 FT	5442097	1199854	469
2058FW M 22 A2	5514213	1197231	469
2058FW M 22 FT	5442158	1199862	469
2058FW M 28 A2	5514275	1197290	469
2058FW M 28 FT	5442219	1199870	469
2058FW M 34 A2	5514336	1197355	469
2058FW M 34 FT	5442271	1199889	469
2058FW M 40 A2	5860297	1197428	469
2058FW M 40 FT	5442332	1199897	469
2058FW M 46 A2	5844334	1197479	469
2058FW M 46 FT	5442394	1199900	469
2058FW M 52 A2	5821892	1197533	469
2058FW M 52 FT	5442455	1199919	469
2058FW M 58 A2	5847632	1197592	469
2058FW M 58 FT	5442516	1199927	469
2058FW M 64 A2	5865995	1197606	469
2058FW M 64 FT	5442578	1199935	469
2058FW M 70 FT	5442639	1199943	469
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2064 GTP 2M	5044291	1115057	443
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2069 15 1.5 FS	6413010	1115460	442
2069 15 1.5 GTP	5044833	1115421	442
2069 15 1.5 GTPL	5044895	1115456	442
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2069 2M GTPL	5045496	1115669	441
2069 3M BK	5871453	1115855	441
2069 L 2M FS	5045977	1115804	441
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2069 T100 GTP	5440994	1115382	80
2069 T160 GTP	5441007	1115384	80
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2069 T350 GTP	5441045	1115388	80
2069 T60 GTP	5440987	1115380	80
2069 X06 FS	6614257	1115876	108
2069 X10 FS	6614264	1115879	108
2069 X16 FS	6614271	1115882	108
2069 X25 FS	6614288	1115887	108
2070 M6 G	5120735	1380028	312
2071 M6 G	5120858	1380222	312
2072 M6 G	5120971	1380427	312
2073 M6 G	5121152	1380729	312
2081 K M6	5305958	3460061	493
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2084 M6 G	5307211	3463567	494
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2900 M6 43-48 G	5121695	1383361	313
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2900WM10 27 FT	5124511	1388053	314
2900WM10 33.5 FT	5124573	1388061	314
2900WM10 48.5 FT	5124696	1388118	314
2900WM10 60 FT	5124757	1388134	314
2900WM6 13.5 FT	5122838	1385003	313
2900WM6 17 FT	5122890	1385011	313
2900WM6 21.5 FT	5122951	1385038	313
2900WM6 27 FT	5123019	1385054	313
2900WM6 33.5 FT	5123071	1385062	313
2900WM6 42.5 FT	5123132	1385089	313
2900WM6 48.5 FT	5123194	1385119	313
2900WM6 54 FT	5123255	1385127	313
2900WM6 60 FT	5123316	1385135	313
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2900WM8 21.5 FT	5123736	1387030	314
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2953 B M20 RW	5539056	2153982	369
2953 B M25 LGR	5510192	2153868	369
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2953 M16 LGR	5028093	2153904	369
2953 M16 RW	5538578	2153960	369
2953 M20 LGR	5027799	2153912	369
2953 M20 RW	5538639	2153963	369
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2953 T M20 LGR	5469575	2153874	370
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2953 T M25 LGR	5510376	2153876	370
2953 T M25 RW	5539599	2153996	370
2953 T M32 LGR	5510437	2153878	370
2953 T M32 RW	5539650	2153998	370
2954 M16 LGR	5482895	2154501	370
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2955 F M20 RW	5586036	2149357	265
2955 F M20 STGR	5585251	2149309	265
2955 F M25 RW	5586159	2149363	265
2955 F M25 STGR	5585312	2149315	265
2955 F M32 RW	5586395	2149369	265
2955 F M32 STGR	5585435	2149321	265
2955 F M40 RW	5586456	2149375	265
2955 F M40 STGR	5585497	2149327	265
2955 F M50 STGR	5585558	2149333	265
2955 F M63 STGR	5585619	2149339	265
2955 M16	5583219	2149004	264
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2955 M16 SW	5616276	2149559	265
2955 M20	5583936	2149010	264
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2955 M20 SW	5616337	2149563	265
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2955 M25 SW	5616399	2149567	265
2955 M32	5584056	2149022	264
2955 M32	5584056	2149022	370
2955 M32 SW	5616450	2149571	265
2955 M40	5584292	2149028	264
2955 M40	5584292	2149028	370
2955 M40 SW	5616511	2149575	265
2955 M50	5588191	2149034	264
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2962 28 LGR	5199397	2140284	284
2962 2X10	5199694	2140608	285
2962 2x16	5199939	2140683	285
2962 2x22	5199991	2140721	285
2962 35 LGR	5199458	2140357	284
2962 42 LGR	5199519	2140411	284
2962 6 LGR	5198970	2140063	284
2962 8 LGR	5199038	2140071	284
2989 M6 G	5306191	3460762	493
2989 M8 G	5306252	3460789	493
2990 M6 G	5306979	3462862	493
2990 M8 G	5307037	3462889	493
3015 12 LGR	5206897	2157128	283
3015 17 LGR	5206958	2157179	283
3015 24 LGR	5207016	2157241	283
3015 34 LGR	5207078	2157349	283
3019 M6 LGR	5207139	2158124	284
3020 LGR	5207191	2158175	284
3021 LGR	5207252	2158248	284
3022 LGR	5207313	2158345	284
3030 2	5213017	2213117	287
3040 2	5195610	2107015	281
3040 3	5195795	2109018	281
3040 LGR	5195436	2105012	280
3041 2	5195672	2107031	281
3041 LGR	5195498	2105039	280
3042 LGR	5195559	2105055	280
3050 2 6-16	5196211	2115018	280
3050 LGR	5195252	2101017	279
3051 LGR	5195313	2101033	279
3052 LGR	5195375	2101068	279
3079 LGR	5196570	2124149	282
3080 LGR	5196631	2124173	282
3081 LGR	5196693	2124254	282
3082 LGR	5196754	2124343	282
3083 LGR	5196815	2124459	282
3100 M6 G	5250272	3131068	500
3100 M8 G	5250333	3131084	500
325 100 FT	5422716	5327105	387
325 130 FT	5422778	5327121	387
325 70 FT	5422594	5327075	387
325 80 FT	5422655	5327083	387
328 1	5126799	1408011	387
328 1	5126799	1408011	409

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339 2	5127031	1408534	384
		/100 pc.	
341 M6x10 G	5254836	3153096	500
341 M6x16 G	5254898	3153150	500
341 M6x20 G	5254959	3153207	500
362 16 BK	5291374	3353168	475
362 18 BK	5291435	3353184	475
362 23 BK	5291497	3353230	475
362 30 BK	5291558	3353303	475
362 40 BK	5291619	3353400	475
362 50 BK	5291671	3353508	475
362 60 BK	5291732	3353605	475
362 Z 16 G	5291916	3354164	475
362 Z 18 G	5291978	3354180	475
362 Z 23 G	5292036	3354237	475
362 Z 30 G	5292098	3354296	475
362 Z 40 G	5292159	3354407	475
362 Z 50 G	5292210	3354504	475
362 Z 60 G	5292272	3354601	475
4021 K 6-13	5224419	2307618	343
4021 K 6-13 A4	5901853	2307622	343
4021 K 9-16	5224471	2307634	343
4021 K 9-16 A4	5901860	2307638	343
4024 16-23	5224358	2305232	343
4024 9-16	5224297	2305151	343
4028	5213130	2215047	287
4029	5213192	2215071	287
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4031 10-14	5213314	2215144	287
4031 14-17	5213376	2215179	287
4032	5213437	2215209	287
4039	5213550	2215306	288
4039 SP	5599777	2214873	288
4040	5213611	2215314	288
4040 SP	5599838	2214881	288
4041	5213796	2215349	288
4042	5213673	2215322	288
4043	5213734	2215330	289
4044	5213857	2215357	289
450 M4x95 G	5442936	3481611	480
451 M4x95 G	5432852	3481662	480
452 M4x70 G	5432975	3481778	481
453 M6x100 G	5310631	3482014	481
454 M6x100 G	5310693	3482030	481
455 M5x100 G	5310815	3482073	481
455 M5x65 G	5310754	3482057	481
456 M5x100 G	5310877	3482103	481
457 M4x55 G	5310938	3482138	481
458 M4x100 G	5310990	3482154	481
		price/100	
46277 GTP	5044598	1115332	442
46277 GTPL	5044659	1115359	442
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46277 T160 Q GTP	5897958	1115270	80
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46277 T250 Q GTP	5897965	1115274	80
46277 T250 Q GTP	5897965	1115274	152
46277 T350 L GTP	5898016	1115286	80
46277 T350 L GTP	5898016	1115286	152
46277 T350 Q GTP	5898009	1115282	80
46277 T350 Q GTP	5898009	1115282	152
4758 3.5x15	5274759	3195007	495
4758 3.5x20	5274810	3195015	495
4758 3.5x25	5274872	3195023	495
4758 3.5x30	5274933	3195031	495
4758 3.5x35	5274995	3195058	495
4758 3.5x40	5275053	3195066	495
4758 3.5x45	5275114	3195074	495
4758 3.5x50	5275176	3195082	495
4758 4.0x15	5275237	3195201	495
4758 4.0x20	5275299	3195228	495
4758 4.0x25	5275350	3195236	495
4758 4.0x30	5275411	3195244	495
4758 4.0x35	5275473	3195252	495
4758 4.0x40	5275534	3195260	495
4758 4.0x45	5275596	3195279	495
4758 4.0x50	5275657	3195287	495
4758 4.5x25	5275718	3195422	495
4758 4.5x30	5275770	3195430	495
4758 4.5x35	5275831	3195449	495
4758 4.5x40	5275893	3195457	495
4758 4.5x45	5275954	3195465	495
4758 4.5x50	5276012	3195473	495
4758 5.0x30	5276074	3195635	495
4758 5.0x35	5276135	3195643	495
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4758 5.0x45	5276258	3195678	495
4758 5.0x50	5276319	3195686	495
4758 5.0x60	5321019	3195694	495
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4758 6.0x60	5682691	3195945	495
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4758T 3.5x30	5552192	3198022	496
4758T 3.5x35	5552253	3198024	496
4758T 3.5x40	5552314	3198026	496
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4758T 4.0x25	5555438	3198034	496
4758T 4.0x30	5555551	3198036	496
4758T 4.0x35	5557111	3198038	496
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4758T 4.0x45	5558132	3198042	496
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4758T 4.5x40	5559030	3198058	496
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4758T 4.5x50	5560357	3198062	496
4758T 5.0x30	5628750	3198073	496
4758T 5.0x35	5628873	3198075	496
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4758T 5.0x45	5785835	3198079	496
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4759 3.5x25	5271932	3192113	497
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4759 3.5x35	5272052	3192148	497
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4759 3.5x45	5272175	3192164	497
4759 3.5x50	5272236	3192172	497
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4759 4.0x30	5272359	3192229	497
4759 4.0x35	5272410	3192237	497
4759 4.0x40	5272472	3192245	497
4759 4.0x45	5272533	3192253	497
4759 4.0x50	5272595	3192261	497
4759 4.5x30	5272717	3192334	497
4759 4.5x35	5272779	3192342	497
4759 4.5x40	5272830	3192350	497
4759 4.5x45	5272892	3192369	497
4759 4.5x50	5272953	3192377	497
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4759T 3.0x15	5797593	3198193	498
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4759T 3.5x35	5561439	3198227	498
4759T 3.5x40	5561552	3198229	498
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4759T 4.0x15	5785958	3198237	498
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4759T 4.0x35	5786016	3198245	498
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500 Z 23	5293897	3361233	475
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500 Z 50	5294139	3361500	475
500 Z 60	5294191	3361608	475
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5055 II17 FS	5138372	1470175	346
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5055 L PE I 14	5139393	1473220	346
5055 L PE II 19	5139454	1473271	346
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5055 LI12 FS	5138679	1471120	346
5055 LII17 FS	5138730	1471171	346
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5062 I12 FS	5139935	1475126	346
5062 II17 FS	5139997	1475177	346
5062 III26 FS	5140054	1475266	346
5062 LI12 FS	5140115	1475622	346
5062 LII17 FS	5140177	1475673	346
5062 LIII26 FS	5140238	1475762	346
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511 40	5294733	3366405	476
511 50	5294795	3366502	476
511 60	5294856	3366596	476
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565 2.5x100 WS	6416943	2331810	334
565 2.5x150 SWUV	6416981	2331818	334
565 2.5x150 WS	6416974	2331816	334
565 2.5x200 SWUV	6417001	2331824	334
565 2.5x200 WS	6416998	2331822	334
565 2.5x75 SWUV	6416936	2331802	334
565 2.5x75 WS	6416929	2331800	334
565 3.6x150 SWUV	6417032	2331832	334
565 3.6x150 WS	6417018	2331830	334
565 3.6x200 SWUV	6417056	2331838	334
565 3.6x200 WS	6417049	2331836	334
565 3.6x290 SWUV	6417117	2331844	334
565 3.6x290 WS	6417100	2331842	334
565 3.6x365 SWUV	6417131	2331850	334
565 3.6x365 WS	6417124	2331848	334
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565 7.6x380 WS	6417339	2331922	334
565 7.6x450 SWUV	6417377	2331936	334
565 7.6x450 WS	6417360	2331934	334
565 9x760 SWUV	6417391	2331946	334
565 9x760 WS	6417384	2331944	334
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574 03 45 LBL	6209590	6490123	339
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574 03 LBL	6209415	6490034	337
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574 05 55 PGN	6209651	6490158	339
574 05 65 PGN	6209712	6490174	339
		price/100	
574 05 PGN	6209477	6490050	337
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60 N 7x16 BL	5183198	2054000	182
60 S 12x16 GN	5183372	2054094	175
60 S 12x16 GN	5183372	2054094	182
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604 11 G	5001270	1003119	315
604 12 G	5001331	1003127	315
604 13 G	5001393	1003135	315
604 16 G	5001454	1003178	315
604 19 G	5001515	1003194	315
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604 5 G	5000914	1003054	315
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604 9 G	5001157	1003097	315
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605 11 G	5016519	1018116	322
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605 12 G	5016571	1018124	322
605 13 G	5016632	1018132	322
605 14 G	5016694	1018140	322
605 15 G	5016755	1018159	322
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605 16 ALU	5449539	1017799	324
605 16 G	5016816	1018167	322
605 17 G	5016878	1018175	322
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605 20 ALU	5449652	1017837	324
605 20 G	5017059	1018205	322
605 21 G	5017110	1018213	322
605 23 G	5017172	1018221	322
605 25 A4	5912132	1018679	325
605 25 ALU	5449836	1017861	324
605 25 G	5017233	1018256	322
605 26 G	5017295	1018264	322
605 28 G	5017356	1018280	322
605 30 G	5017417	1018302	322
605 32 A4	5912170	1018693	325
605 32 ALU	5590170	1017926	324
605 32 G	5017479	1018337	322
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605 50 A4	5906476	1018717	325
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605 63 A4	5906506	1018729	325
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605 7 G	5016274	1018078	322
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61 2/1 25 WS	5849353	2054755	173
61 225 FL	6334629	2054450	170
61 325 FL	6334650	2054454	170
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61 525 FL	6334667	2054458	170
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61 825 LGR	5477976	2054523	172
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70 S	5183853	2055201	175
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71	5183914	2055503	175
716 3X50 BK	5289272	3347052	476
716 3X60 BK	5289333	3347060	476
716 3X70 BK	5289395	3347079	476
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72 CE WS/EKL 0 S	5702610	2056070	177
72 VDE/EKL 0E PA	5432258	2055929	177
731 W 12 G	5117919	1366122	312
731 W 16 G	5117971	1366165	312
731 W 20 G	5118039	1366203	312
731 W 25 G	5118091	1366254	312
731 W 30 G	5118152	1366300	312
731 W 35 G	5118213	1366351	312
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732 12 GTP	5114673	1360124	307
732 14 A4	5912415	1360652	307
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732 15 A4	5912422	1360654	307
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732 16 A4	5912439	1360656	307
732 16 GTP	5114857	1360167	307
732 18 A4	5912446	1360658	307
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732 20 A4	5912453	1360660	307
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732 22 A4	5912460	1360662	307
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732 60 GTP	5115878	1360604	307
732 63 A4	5912651	1360690	307
732 63 GTP	5569114	1360639	307
732 8 A4	5912385	1360646	307
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733 13 A4	5912668	1361643	310
733 13 FT	5029755	1361091	309
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733 16 A4	5912705	1361647	310
733 16 ALU	5450252	1362526	311
733 16 FT	5029762	1361094	309
733 16 G	5115991	1361163	309
733 19 A2	5116776	1362038	310
733 19 A4	5912712	1361651	310
733 19 ALU	5450313	1362534	311
733 19 FT	5029809	1361097	309
733 19 G	5116059	1361198	309
733 21 A2	5116837	1362046	310
733 21 A4	5912729	1361655	310
733 21 ALU	5450375	1362542	311
733 21 FT	5029816	1361100	309
733 21 G	5116110	1361201	309
733 23 A2	5116899	1362054	310
733 23 A4	5912750	1361659	310
733 23 FT	5029823	1361103	309
733 23 G	5116172	1361236	309
733 29 A2	5116950	1362062	310
733 29 A4	5912767	1361663	310
733 29 ALU	5450498	1362569	311
733 29 FT	5029861	1361106	309
733 29 G	5116233	1361295	309

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733 38 A4	5912774	1361667	310
733 38 ALU	5450559	1362577	311
733 38 FT	5029878	1361109	309
733 38 G	5116295	1361384	309
733 48 A2	5117070	1362089	310
733 48 A4	5912781	1361671	310
733 48 ALU	5450610	1362585	311
733 48 FT	5029885	1361112	309
733 48 G	5116356	1361481	309
733 54 A2	5117131	1362097	310
733 54 A4	5912828	1361675	310
733 54 ALU	5450672	1362593	311
733 54 FT	5615651	1361117	309
733 54 G	5116417	1361511	309
733 61 A2	5117193	1362100	310
733 61 A4	5912835	1361679	310
733 61 FT	5254348	1361115	309
733 61 G	5116479	1361619	309
733 63 A2	5117254	1362127	310
733 63 A4	5912842	1361683	310
733 63 ALU	5590293	1362615	311
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7380T 6x20 G	6101023	3164952	505
7380T 6x35 G	6101030	3164956	505
7380T M6x20 A2	6101047	3164972	505
7380T M6x35 A2	6101078	3164976	505
74 CE SW/EKL 1 S	5879312	2056232	178
74 CE WS/EKL 1 S	5702559	2056224	178
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74 VDE/EKL 1BEF2	5184331	2056143	178
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78 CE SW/EKL 3 S	5879435	2056569	179
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7901 5 G	5134831	1435019	327
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7903 8 G	5135135	1437011	327
7903 9 G	5135197	1437038	327
7904 6 G	5135258	1438018	327
7905 5 G	5135319	1439014	327
7908 11 G	5135555	1442015	328
7909 6 G	5135616	1443011	328
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822 10 FT	5013693	1014013	317
822 12 A4	5911760	1013869	318
822 12 FT	5013754	1014021	317
822 14 A4	5911807	1013873	318
822 14 FT	5013815	1014048	317
822 16 A4	5911814	1013877	318
822 16 FT	5013877	1014099	317
822 18 A4	5911821	1013881	318
822 18 FT	5013938	1014110	317
822 20 A4	5911838	1013885	318
822 20 FT	5013990	1014137	317
822 22.5 A4	5911845	1013889	318
822 22.5 FT	5014058	1014161	317
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822 40 FT	5567134	1014536	317
822 47 FT	5014232	1014366	317
822 50 A4	5911913	1013921	318
822 50 FT	5567493	1014544	317
822 6 A4	5911746	1013861	318
822 6 FT	5013631	1014005	317
822 63 A4	5911920	1013925	318
822 63 FT	5567554	1014552	317
823 16 FT	5015130	1015095	326
823 18.3 FT	5015192	1015117	326
823 20 FT	5015253	1015133	326
823 22.5 FT	5015314	1015168	326
823 25 FT	5567615	1015494	326
823 28.3 FT	5015376	1015214	326
823 32 FT	5567738	1015496	326
823 37 FT	5015437	1015303	326
823 40 FT	5567790	1015498	326
823 47 FT	5015499	1015362	326
823 50 FT	5567851	1015500	326
823 54 FT	5015550	1015427	326
823 59.3 FT	5015611	1015486	326
823 63 FT	5567912	1015508	326
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865 M6x24	5311171	3483061	480
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867 M6X125 G	5309376	3470237	492
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89 SW	5129370	2012146	77
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90 M16 OF	5477617	2032011	231
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90 M25 GE	5481638	2032384	231
90 M25 OF	5477792	2032019	231
90 M32 GE	5481690	2032386	231
90 M32 OF	5477853	2032023	231
90 M40 GE	5481812	2032388	231
90 M40 OF	5477914	2032031	231
90 PG 9 DSMB	5169819	2032503	232
90 PG11 DSMB	5169871	2032511	232
90 PG11 OF	5169031	2032112	231
90 PG13.5 DSMB	5169932	2032538	232
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90 PG21 DSMB	5170051	2032554	232
90 PG21 OF	5169215	2032201	231
90 PG29 DSMB	5170112	2032562	232
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910 GD 6x35	5828198	2347229	479
910 GD 8x50	5828259	2347261	479
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910 GKSM 6x25	5418207	3483239	479
910 MZ 10x60	5084990	2347555	478
910 MZ 12x60	5625667	2347570	478
910 MZ 5x25	5625650	2347523	478
910 MZ 6x35	5228738	2347539	478
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910 N 12x60 GRW	5229216	2349124	478
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910 N 6x30 GRW	5228912	2349051	478
910 N 6x60 GRW	5228974	2349078	478
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910 SD 6X35	5669197	2351056	278
910 SD 6X35	5669197	2351056	478
910 SD 6X40	5229513	2351064	278
910 SD 6X40	5229513	2351064	478
910 SD 8X55	5229575	2351099	478
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910 SD-Q 6x40	5229636	2351218	478
910 STK 6x30	5708971	2351609	272
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965 M6X50 G	5303794	3415120	499
965 M8X20 G	5303855	3415147	499
965 M8X30 G	5303916	3415163	499
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BCHPO 2-4 D32	6503162	1483815	378
BCHPO 4-8 D20	6503193	1483821	378
BCHPO 4-8 D25	6503209	1483823	378
BCHPO 4-8 D32	6503216	1483825	378
BCHPO 8-14 D20	6503223	1483831	378
BCHPO 8-14 D25	6503254	1483833	378
BCHPO 8-14 D32	6503261	1483835	378
BCTR 4-8 M10	6502547	1483669	377
BCTR 4-8 M6	6502486	1483661	377
BCTR 4-8 M8	6502509	1483665	377

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BCTR 8-14 M10	6502554	1483671	377
BCTR 8-14 M6	6502493	1483663	377
BCTR 8-14 M8	6502530	1483667	377
BCUIT 14-20 M6	6502318	1483625	376
BCUIT 3-7 M6	6502295	1483621	376
BCUIT 8-12,5 M6	6502301	1483623	376
BCUTB 14-20 M6	6502363	1483635	377
BCUTB 3-7 M6	6502325	1483631	377
BCUTB 8-12,5 M6	6502356	1483633	377
BCVH 14-20	6502196	1483607	376
BCVH 2-4	6502165	1483601	376
BCVH 4-8	6502172	1483603	376
BCVH 8-14	6502189	1483605	376
BCVPC 14-20 D20	6503018	1483801	378
BCVPC 14-20 D25	6503025	1483803	378
BCVPC 14-20 D32	6503032	1483805	378
BCVPC 14-20 D40	6503049	1483807	378
BCVPC 3-7 D20	6502899	1483781	378
BCVPC 3-7 D25	6502905	1483783	378
BCVPC 3-7 D32	6502912	1483785	378
BCVPC 3-7 D40	6502929	1483787	378
BCVPC 8-12,5 D20	6502950	1483791	378
BCVPC 8-12,5 D25	6502967	1483793	378
BCVPC 8-12,5 D32	6502974	1483795	378
BCVPC 8-12,5 D40	6502981	1483797	378
BCVPO 14-20 D20	6502851	1483771	379
BCVPO 14-20 D25	6502868	1483773	379
BCVPO 14-20 D32	6503704	1483775	379
BCVPO 3-7 D20	6502776	1483751	379
BCVPO 3-7 D25	6502783	1483753	379
BCVPO 3-7 D32	6502790	1483757	379
BCVPO 8-12,5 D20	6502806	1483761	379
BCVPO 8-12,5 D25	6502837	1483763	379
BCVPO 8-12,5 D32	6502844	1483765	379
BCVTB 14-20 M6	6502264	1483617	376
BCVTB 2-4 M6	6502202	1483611	376
BCVTB 4-8 M6	6502240	1483613	376
BCVTB 8-14 M6	6502257	1483615	376
BE TS GR	5840602	2007833	78
BE TS KR	5840640	2007835	78
BS M6x30 A2	6429370	1148896	505
BS M6x30 G	6429400	1148898	505
BZ 12-15-35/110	6411894	3498350	483
BZ 16-15-35/135	6411917	3498360	483
BZ10-100-120/180	6411887	3498342	483
BZ12-15-35/110A4	6411900	3498352	483
BZ-IG M 10-0	6429516	3498374	485
BZ-IG M 12-0	6429523	3498376	485
BZ-IG M 6-0	6429493	3498370	485
BZ-IG M 8-0	6429509	3498372	485
		/pc.	
BZ-IGS M 10V	6429554	3498384	485
BZ-IGS M 12V	6429561	3498386	485
BZ-IGS M 6V	6429530	3498380	485
BZ-IGS M 8V	6429547	3498382	485
		/100 pc.	
BZ-U 10-10-30/90	6411856	3498334	484
BZ-U 8-10-21/75	6411818	3498320	484
BZ-U 8-30-41/95	6411832	3498326	484
BZU10-10-30/90A4	6411863	3498336	484
BZ-U10-30-50/110	6411870	3498340	484
BZ-U8-10-21/75A4	6411825	3498322	484
BZ-U8-30-41/95A4	6411849	3498328	484
		price/100	
CL2008BP1000FS	5039556	1105906	396
CL2008BP2000BK	5039617	1106023	396
CL2008BP2000FS	5039730	1106120	396
CL2008P2000A2	5627104	1106628	396
CL2008P2000FS	5040095	1106627	396

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CL2008UP2000A2	5627098	1105125	396
CL2008UP2000FS	5039433	1105124	396
		/100 pc.	
CL20HB M5x25 ZL	6488704	1148008	397
CL20HB M6x25 ZL	6488735	1148012	397
CL20HB M8x25 ZL	6488742	1148016	397
CL20SN M4 ZL	6488636	1147008	397
CL20SN M5 ZL	6488643	1147012	397
CL20SN M6 ZL	6488650	1147016	397
		price/100	
CL2512UP2000FS	5046578	1117033	398
CL2512UP2000FT	5046516	1117025	398
CL2712P2000FS	6470693	1109525	400
CL2712P2000FT	5041894	1109529	400
CL2712UP2000BK	5041412	1109014	400
CL2712UP2000FT	5041474	1109022	400
		/100 pc.	
CL27HB M5x25 ZL	6488759	1148020	401
CL27HB M6x25 ZL	6488766	1148024	401
CL27HB M8x25 ZL	6488773	1148028	401
CL27SN M4 ZL	6488667	1147020	401
CL27SN M5 ZL	6488674	1147024	401
CL27SN M6 ZL	6488681	1147028	401
CL27SN M8 ZL	6488698	1147032	401
CM3015P0200FT	5036975	1109782	403
CM3015P0300FT	5037033	1109790	403
CM3015P0400FT	5037095	1109804	403
CM3015P0500FT	5037156	1109812	403
CM3015P0600FT	5037217	1109820	403
CM3015P0700FT	5037279	1109839	403
CM3015P0800FT	5037330	1109847	403
		price/100	
CM3015P1000FT	5037934	1109863	403
CM3015P2000FS	5053897	1110002	403
CM3015P2000FT	5041771	1109871	403
CM3015UP2000FS	5042075	1110004	403
		/pc.	
CM3518 KD FT	6192373	6350100	409
CM3518 KD FT	6192373	6350100	415
CM3518 KP FT	6192311	6350054	409
CM3518 KP FT	6192311	6350054	415
		/100 pc.	
CM3518 SK	5668114	1124502	408
CM3518 SK	5668114	1124502	414
		/m	
CMCP3000FT	6192557	6350208	408
CMCP3000FT	6192557	6350208	414
		/100 pc.	
CML3518P0150FS	5038238	1104241	407
CML3518P0150FT	6470815	1104550	407
CML3518P0200FS	5038290	1104268	407
CML3518P0200FT	6470822	1104552	407
CML3518P0300FS	5038351	1104284	407
CML3518P0300FT	6470839	1104554	407
CML3518P0400FS	5836353	1104292	407
CML3518P0400FT	6470846	1104556	407
CML3518P0500FS	5038412	1104306	407
CML3518P0500FT	6470853	1104558	407
CML3518P0600FS	5036678	1104310	407
CML3518P0600FT	6470860	1104560	407
CML3518P0700FS	5036739	1104315	407
CML3518P0700FT	6470877	1104562	407
CML3518P0800FS	5036791	1104320	407
CML3518P0800FT	6470884	1104564	407
CML3518P0900FS	5036852	1104325	407
CML3518P0900FT	6470914	1104566	407
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CML3518P1000A2	5627074	1104498	407
CML3518P1000FS	5694458	1104497	407
CML3518P1000FT	6470921	1104568	407
CML3518P2000A2	5627081	1104501	407
CML3518P2000FS	5038771	1104500	407
CML3518P2000FT	6470938	1104570	407
		/100 pc.	
CMS3518P0150FS	5038474	1104349	407
CMS3518P0150FT	6470952	1104581	407
CMS3518P0200FS	5038535	1104357	407

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CMS3518P0200FT	6470969	1104583	407
CMS3518P0300FS	5038597	1104373	407
CMS3518P0300FT	6470976	1104585	407
CMS3518P0400FS	5052814	1104391	407
CMS3518P0400FT	6470983	1104587	407
CMS3518P0500FS	5038658	1104403	407
CMS3518P0500FT	6470990	1104589	407
CMS3518P0600FS	5486190	1104411	407
CMS3518P0600FT	6471003	1104591	407
CMS3518P0700FS	6470945	1104422	407
CMS3518P0700FT	6471010	1104593	407
CMS3518P0800FS	5051732	1104427	407
CMS3518P0800FT	6471027	1104595	407
CMS3518P0900FS	5052630	1104435	407
CMS3518P0900FT	6471034	1104597	407
		price/100	
CMS3518P1000FS	5052692	1104445	407
CMS3518P2000FS	5038719	1104454	407
		/pc.	
CMW90FT	6192496	6350151	409
CMW90FT	6192496	6350151	415
		/100 pc.	
CPC M6x11	6503070	1483991	387
CPC M6x16	6503087	1483993	387
CPC M6x25	6503094	1483995	387
CPCN M6	6503100	1483997	387
CSTR M10 A2	6043682	6410162	500
CSTR M10 G	6202270	6410103	499
CSTR M12 G	6202331	6410111	499
CSTR M8 A2	6043569	6410154	500
CSTR M8 G	6202218	6410081	499
CTC 7,5x180 LGR	6515158	2332790	286
CTC 7,5x280 LGR	6515165	2332794	286
DHI 050	6397228	7205900	487
DHI 060	6397235	7205901	487
DHI 070	6397242	7205902	487
DHI 080	6397266	7205903	487
DHI 090	6397297	7205904	487
DHI 100	6397303	7205905	487
DHI 110	6397310	7205906	487
DHI 120	6397327	7205907	487
DHI 130	6397358	7205908	487
DHI 140	6397365	7205909	487
DHI 150	6397372	7205910	487
E M 10x40	6411993	3492920	485
E M 10x40 A4	6412006	3492922	486
E M 12x50	6412013	3492930	485
E M 12x50 A4	6412020	3492932	486
E M 6x30	6411962	3492900	485
E M 8x40	6411979	3492910	485
E M 8x40 A4	6411986	3492912	486
Easy M10	6412082	3498774	486
Easy M12	6466313	3498776	486
Easy M8	6412075	3498770	486
EDK 25 LGR	5246961	2011638	77
EDK 25 LGR	5246961	2011638	233
EDK 25 OR	6280551	7205675	133
EDK 25 OR	6280551	7205675	233
EDK 25 RW	5303206	2011689	77
EDK 25 RW	5303206	2011689	233
EDK 32 LGR	5246978	2011646	77
EDK 32 LGR	5246978	2011646	233
EDK 32 OR	6280568	7205677	133
EDK 32 OR	6280568	7205677	233
EDK 32 RW	5303213	2011697	77
EDK 32 RW	5303213	2011697	233
EDK 40 LGR	5246985	2011654	77
EDK 40 LGR	5246985	2011654	233
EDK 40 OR	6280582	7205679	133
EDK 40 OR	6280582	7205679	233
EDK 40 RW	5303220	2011700	77
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EDR 25 16-20 LGR	5246909	2011506	233

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EDR 25 20-25 LGR	5246916	2011514	77
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EDR 25 20-25 LGR	5246916	2011514	366
EDR 32 25-32 LGR	5246930	2011530	77
EDR 32 25-32 LGR	5246930	2011530	233
EDR 32 25-32 LGR	5246930	2011530	366
EDR 40 32-40 LGR	5246954	2011546	77
EDR 40 32-40 LGR	5246954	2011546	233
EDR 40 32-40 LGR	5246954	2011546	366
EDS M20 LGR	6478064	2012350	106
EDS M20 LGR	6478064	2012350	232
EDS M20 LGR	6478064	2012350	232
EDS M25 LGR	6478071	2012354	106
EDS M25 LGR	6478071	2012354	232
EDS M25 LGR	6478071	2012354	232
EDS M32 LGR	6478088	2012358	106
EDS M32 LGR	6478088	2012358	232
EDS M32 LGR	6478088	2012358	232
EDVS M20 LGR	5105251	2012375	77
EDVS M20 LGR	5105251	2012375	232
EDVS M25 LGR	5105190	2012383	77
EDVS M25 LGR	5105190	2012383	232
EDVS M32 LGR	5105138	2012391	77
EDVS M32 LGR	5105138	2012391	232
		/pc.	
E-MSH 10x40	6412044	3492974	486
E-MSH 12x50	6412051	3492978	486
E-MSH 8x40	6412037	3492970	486
E-SW 6x30	6412068	3492990	486
		/100 pc.	
FL 1 TG	5150855	1488015	383
FL 2 TG	5150916	1488023	383
FL 3 TG	5150978	1488031	383
FL1-G M8 TG	5151036	1488074	383
FL2-G M10 TG	5151098	1488082	383
FL3-G M12 TG	5151159	1488090	383
FRSB M10x20 A2	5849537	3175620	500
FRSB M10x25 A2	5849544	3175625	500
FRSB M8x35 A2	5849520	3175608	500
GMS 1 VP A2	5804895	1124683	433
GMS 1 VP A4	5805137	1124723	433
GMS 1 VP FT	5486015	1124643	433
GMS 2 VP A2	5804901	1124685	434
GMS 2 VP A4	5805144	1124725	434
GMS 2 VP FT	5486022	1124645	434
GMS 2 VW 90 A2	5804994	1124699	436
GMS 2 VW 90 A4	5805236	1124739	436
GMS 2 VW 90 FT	5486091	1124659	436
GMS 3 O 4121 A2	5805076	1124711	435
GMS 3 O 4121 A4	5805298	1124751	435
GMS 3 O 4121 FT	5486152	1124671	435
GMS 3 O 4141 A2	5805083	1124713	435
GMS 3 O 4141 A4	5805304	1124753	435
GMS 3 O 4141 FT	5486169	1124673	435
GMS 3 VP A2	5804918	1124687	434
GMS 3 VP A4	5805175	1124727	434
GMS 3 VP FT	5486039	1124647	434
GMS 3 VP L A2	5804949	1124693	435
GMS 3 VP L A4	5805205	1124733	435
GMS 3 VP L FT	5486060	1124653	435
GMS 3 VW 45 A2	5805052	1124707	436
GMS 3 VW 45 A4	5805274	1124747	436
GMS 3 VW 45 FT	5486138	1124667	436
GMS 3 VW 90 A2	5805007	1124701	436
GMS 3 VW 90 A4	5805243	1124741	436
GMS 3 VW 90 FT	5486107	1124661	436
GMS 4 VP A2	5804925	1124689	434
GMS 4 VP A4	5805182	1124729	434
GMS 4 VP FT	5486046	1124649	434
GMS 4 VP T A2	5804956	1124695	435
GMS 4 VP T A4	5805212	1124735	435

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GMS 4 VP T FT	5486077	1124655	435
GMS 4 VW 45 A2	5805069	1124709	437
GMS 4 VW 45 A4	5805281	1124749	437
GMS 4 VW 45 FT	5486145	1124669	437
GMS 4 VW 90 A2	5805014	1124703	436
GMS 4 VW 90 A4	5805250	1124743	436
GMS 4 VW 90 FT	5486114	1124663	436
GMS 5 VP A2	5804932	1124691	434
GMS 5 VP A4	5805199	1124731	434
GMS 5 VP FT	5486053	1124651	434
GMS 5 VP X A2	5804963	1124697	435
GMS 5 VP X A4	5805229	1124737	435
GMS 5 VP X FT	5486084	1124657	435
GMS 6 KD A2	6559831	1124796	436
GMS 6 KD A4	6559848	1124798	436
GMS 6 KD FT	6559824	1124792	436
GVMS 4 ASV A2	5804888	1124681	434
GVMS 4 ASV A4	5805120	1124715	434
GVMS 4 ASV FT	5486008	1124641	434
HG 60	5032779	2003414	163
HG 60 2	5032830	2003422	163
HG 60 MW	5246732	2003611	161
HG 60-35	5051350	2003426	163
HG 60-35 MW	5246725	2003603	161
HHS M10x20 A4	5940548	3156031	501
HHS M10x20 G	5256816	3160203	501
HHS M10x30 A4	5940555	3156032	501
HHS M10x30 G	5256939	3160300	501
HHS M10x40 A4	5940562	3156033	501
HHS M10x40 G	5257059	3160408	501
HHS M10x45 A2	5849490	3156040	501
HHS M10x50 A4	5940609	3156034	501
HHS M10x50 G	5257110	3160505	501
HHS M10x60 A4	5940616	3156035	501
HHS M10x60 G	5257172	3160602	501
HHS M12x30 A4	5940623	3156036	501
HHS M12x30 G	5257592	3162303	501
HHS M12x40 A4	5891994	3156029	501
HHS M12x40 G	5257714	3162400	501
HHS M12x45 A2	5849513	3156042	501
HHS M12x50 A4	5940661	3156037	501
HHS M12x50 G	5257776	3162508	501
HHS M16x50 A2	5849582	3156044	501
HHS M6x16 A4	5940371	3156016	501
HHS M6x16 G	5255437	3156141	501
HHS M6x20 A4	5940388	3156018	501
HHS M6x20 G	5255499	3156206	501
HHS M6x25 A4	5940395	3156019	501
HHS M6x25 G	5255550	3156257	501
HHS M6x30 A4	5940401	3156020	501
HHS M6x30 G	5255611	3156303	501
HHS M6x35 A4	5940418	3156021	501
HHS M6x35 G	5255673	3156354	501
HHS M6x40 A4	5940425	3156022	501
HHS M6x40 G	5255734	3156400	501
HHS M8x20 A4	5940432	3156024	501
HHS M8x20 G	5256212	3158209	501
HHS M8x25 A4	5940449	3156025	501
HHS M8x25 G	5256274	3158241	501
HHS M8x30 A4	5940487	3156026	501
HHS M8x30 G	5256335	3158306	501
HHS M8x40 A4	5940494	3156027	501
HHS M8x40 G	5256458	3158403	501
HHS M8x50 A4	5940500	3156028	501
HHS M8x50 G	5256519	3158500	501
HHWS 10x100 G	5867135	3188302	498
HHWS 10x60 G	5867074	3188256	498
HHWS 10x70 G	5270430	3188272	498
HHWS 10x80 G	5270492	3188280	498
HHWS 12x70 G	5270553	3188361	498
HHWS 12x80 G	5270614	3188388	498
HHWS 6x40 G	5866718	3188043	498
HHWS 6x50 G	5270195	3188051	498
HHWS 6x60 G	5270256	3188078	498
HHWS 6x80 G	5866770	3188094	498
HHWS 8x100 G	5867012	3188205	498
HHWS 8x40 G	5866831	3188140	498
HHWS 8x50 G	5866893	3188159	498
HHWS 8x60 G	5270317	3188167	498
HHWS 8x70 G	5270379	3188175	498

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HLAK 1-2x35 GR	6614356	2009042	107
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HLAK 1-2x35 GRBL	6614370	2009046	107
HLAK 1-2x35 GRBL	6614370	2009046	185
HLAK 1-2x35 GRGN	6614363	2009044	107
HLAK 1-2x35 GRGN	6614363	2009044	185
HLAK 4-8x16	6614325	2009032	107
HLAK 4-8x16	6614325	2009032	185
HLAK 5-10x16	6614332	2009036	107
HLAK 5-10x16	6614332	2009036	185
HLAK 5-10x25	6614349	2009038	107
HLAK 5-10x25	6614349	2009038	185
HN M10 A2	5297796	3397106	502
HN M10 A4	5618072	3400177	502
HN M10 G	5298212	3400107	502
HN M12 A2	5297857	3397114	502
HN M12 A4	5894810	3397145	502
HN M12 G	5298274	3400123	502
HN M4 G	5297970	3400042	502
HN M5 G	5298038	3400050	502
HN M6 A2	5297673	3397068	502
HN M6 A4	5909293	3400173	502
HN M6 G	5298090	3400069	502
HN M8 A2	5297734	3397084	502
HN M8 A4	5909309	3400175	502
HN M8 G	5298151	3400085	502
		/pc.	
HTS 35	5477259	1125036	443
		/100 pc.	
HV 100 KD	5033011	2003449	164
HV 60	5032953	2003442	163
HV 60 MW	5246749	2003619	162
HV 70 D	5032892	2003430	164
		price/100	
K-C30 G	5151210	1488201	340
		/100 pc.	
KD 10 100	5239352	3482758	481
KD 8 100	5239475	3482707	481
		/pc.	
KL1 10 S FT	6194292	6354106	409
KL1 15 S FT	6194353	6354114	409
KL1 20 S FT	6194414	6354122	409
		/100 pc.	
KL-DBN12x02GRBL	6474233	2016265	150
KL-DBN12x02GRBL	6474233	2016265	184
KL-DBN4x16BL	6474226	2016255	151
KL-DBN4x16BL	6474226	2016255	184
KL-DBP12x02GR	6474981	2016270	151
KL-DBP12x02GR	6474981	2016270	184
KL-DBS12x02GRGN	6474202	2016260	150
KL-DBS12x02GRGN	6474202	2016260	184
KL-DBS4x16GN	6474219	2016250	151
KL-DBS4x16GN	6474219	2016250	184
		/pc.	
KLS-SDB 03	6465828	2008880	149
KLS-SDB 03	6465828	2008880	186
KLS-SDB 03S	6465866	2008910	149
KLS-SDB 03S	6465866	2008910	186
KLS-SDB 05	6465835	2008884	149
KLS-SDB 05	6465835	2008884	186
KLS-SDB 05S	6465873	2008914	150
KLS-SDB 05S	6465873	2008914	187
KLS-SDB 09	6465842	2008888	149
KLS-SDB 09	6465842	2008888	186
KLS-SDB 09S	6465880	2008918	150
KLS-SDB 09S	6465880	2008918	187
KLS-SDB 12	6465859	2008892	149
KLS-SDB 12	6465859	2008892	186
KLS-SDB 12S	6465897	2008922	150
KLS-SDB 12S	6465897	2008922	187

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		/100 pc.	
KL-T 01-04	5942825	2016180	79
KL-T 01-04	5942825	2016180	181
KL-T 02-06	5942832	2016185	79
KL-T 02-06	5942832	2016185	106
KL-T 02-06	5942832	2016185	114
KL-T 02-06	5942832	2016185	181
KL-T 06-16	5896951	2016190	79
KL-T 06-16	5896951	2016190	106
KL-T 06-16	5896951	2016190	181
KL-T 16-35	5896968	2016195	79
KL-T 16-35	5896968	2016195	107
KL-T 16-35	5896968	2016195	182
		/pc.	
KL-X10 06-16	6614295	2008931	107
KL-X10 06-16	6614295	2008931	187
KL-X16 06-16	6614301	2008935	107
KL-X16 06-16	6614301	2008935	187
KL-X25 16-35	6614318	2008939	107
KL-X25 16-35	6614318	2008939	187
		/100 pc.	
KM M10 A2	5849711	3156122	502
KM M12 A2	5849728	3156126	502
KM M8 A2	5849643	3156120	502
		/pc.	
KS-E DE	5847830	7205423	133
KS-E EN	5811688	7205432	133
KS-E HU	5883753	7205434	133
KS-E PL	5980124	7205436	133
KVM 250	5577768	2363010	135
		/VPE	
KVM-M	5686354	2363015	135
		/pc.	
KVM-P	5687771	2363019	136
		/pair	
KWH 10 FT	6194537	6355048	423
KWH 15 FT	6194599	6355056	423
KWH 20 FT	6194650	6355064	423
KWH 25 FT	6194711	6355072	423
KWH 5 FT	6194476	6355021	423
		/100 pc.	
LWS M10 A4	5909750	3405111	503
LWS M10 G	5302414	3405109	503
LWS M12 A4	5909774	3405127	503
LWS M12 G	5302476	3405125	503
LWS M6 A4	5909651	3405062	503
LWS M6 G	5302292	3405060	503
LWS M8 A4	5909712	3405089	503
LWS M8 G	5302353	3405087	503
MBS 015	5693345	7203100	335
MBS 030	5693352	7203102	335
MBS 045	5693369	7203104	335
MBS 061	5693376	7203106	335
MBS 075	5693383	7203108	335
MBS 100	5693390	7203110	335
MBS 120	5693406	7203112	335
MBS 150	5693413	7203114	335
MD 5 GTP	5683414	3484602	480
MD 6 GTP	5683353	3484629	480
MMS-plus 6X50	6559657	3498108	491
MMS-plus 7.5X50	6559664	3498261	491
MMS-plus 7.5X80	6559640	3498272	491
MMS-plus KS 5x50	5964100	3498204	491
		/pc.	
MP T610	6134946	7205480	132
MP T616	6134977	7205484	132
MP UNI FS	6146895	7084773	78
MP WI KL. DD	5163305	7085111	78
MP WI KL. DD	5163305	7085111	114
MP WI KL. FS	6146833	7084765	78
MP WI KL. FS	6146833	7084765	114

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		/pc.	
MPG 65 FT	6933259	6006486	78
		/100 pc.	
M-Quick 15-19LGR	5880936	2153106	267
M-Quick 18-22LGR	5880998	2153114	267
M-Quick 25-28LGR	5881056	2153130	267
M-Quick 31-37LGR	5881117	2153157	267
M-Quick M20 LGR	5742395	2153718	268
M-Quick M25 LGR	5741732	2153726	268
M-Quick M32 LGR	5741671	2153734	268
MS4022 SK	5785316	1124555	419
		/pc.	
MS4022P0192FT	6355518	6007201	439
MS4022P0292FT	6005895	6007228	439
MS4022P0392FT	6005956	6007236	439
MS4022P0492FT	6006014	6007244	418
MS4022P0492FT	6006014	6007244	439
MS4022P0592FT	6006076	6007252	418
MS4022P0592FT	6006076	6007252	439
MS4022P0692FT	6006137	6007260	418
MS4022P0692FT	6006137	6007260	439
MS4022P0792FT	6006199	6007279	418
MS4022P0792FT	6006199	6007279	439
MS4022P0892FT	6006250	6007287	418
MS4022P0892FT	6006250	6007287	439
MS4022P0992FT	6006311	6007295	418
MS4022P0992FT	6006311	6007295	439
MS4022P1092FT	6006373	6007309	418
MS4022P1092FT	6006373	6007309	439
MS4022P1192FT	6006434	6007317	418
MS4022P1192FT	6006434	6007317	439
		price/100	
MS4022P2000A2	5050179	1121960	418
MS4022P2000A4	5905585	1121963	418
MS4022P2000FT	5050230	1121979	418
MS4022P6000A2	5049999	1121901	418
MS4022P6000A4	5907022	1121903	418
MS4022P6000FT	5049937	1121898	418
		/100 pc.	
MS40HB M10x30 A4	6489572	1148160	419
MS40HB M10x30 ZL	6489503	1148118	419
MS40HB M10x60 A4	6489589	1148164	419
MS40HB M10x60 ZL	6489510	1148122	419
MS40HB M12x30 A4	6489596	1148168	419
MS40HB M12x30 ZL	6489527	1148126	419
MS40HB M12x60 A4	6489602	1148170	419
MS40HB M12x60 ZL	6489534	1148130	419
MS40HB M6x30 A4	6489541	1148146	419
MS40HB M6x30 ZL	6489473	1148106	419
MS40HB M8x30 A4	6489558	1148150	419
MS40HB M8x30 ZL	6489480	1148110	419
MS40HB M8x60 A4	6489565	1148154	419
MS40HB M8x60 ZL	6489497	1148114	419
MS40SN M10 A4	6489459	1147134	419
MS40SN M10 ZL	6489411	1147114	419
MS40SN M12 A4	6489466	1147138	419
MS40SN M12 ZL	6489428	1147118	419
MS40SN M6 A4	6489435	1147126	419
MS40SN M6 ZL	6489398	1147106	419
MS40SN M8 A4	6489442	1147130	419
MS40SN M8 ZL	6489404	1147110	419
MS4121 EK	6255726	1122904	437
MS4121 SK	5686217	1122902	437
MS4121P0200FS	6471119	1122950	428
MS4121P0200FT	5697626	1122933	428
MS4121P0300FS	6471126	1122951	428
MS4121P0300FT	5697664	1122934	428
MS4121P0400FS	6471157	1122953	428
MS4121P0400FT	5697671	1122935	428
MS4121P0500FS	6471164	1122955	428
MS4121P0500FT	5697688	1122936	428
MS4121P0600FS	6471171	1122956	428
MS4121P0600FT	5697725	1122937	428
MS4121P0700FS	6471188	1122958	428
MS4121P0700FT	5697732	1122938	428
MS4121P0800FS	5848042	1122957	428
MS4121P0800FT	5697749	1122939	428
MS4121P0900FS	6471218	1122959	428
MS4121P0900FT	5697787	1122940	428
		price/100	
MS4121P2000A2	6471225	1122925	428
MS4121P2000A4	5907114	1122476	428

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MS4121P2000FS	5686262	1122918	428
MS4121P2000FT	5697541	1122923	428
MS4121P3000A2	5697558	1122928	428
MS4121P3000A4	5697602	1122931	428
MS4121P3000FS	5686279	1122920	428
MS4121P3000FT	5686293	1122924	428
MS4121P6000A2	5697565	1122929	428
MS4121P6000A4	5697619	1122932	428
MS4121P6000FS	5686286	1122922	428
MS4121P6000FT	5686309	1122926	428
		/100 pc.	
MS4141 EK	5894117	1122906	438
MS4141 SK	5686200	1122900	437
MS4141P0200FT	5484516	1122509	430
MS4141P0300FT	5485896	1122517	430
MS4141P0400FT	5486251	1122525	430
MS4141P0500FT	5486794	1122533	430
MS4141P0600FT	5486916	1122541	430
MS4141P0700FT	5487036	1122568	430
MS4141P0800FT	5487098	1122576	430
MS4141P0900FT	5487159	1122584	430
		price/100	
MS4141P1000FS	5697503	1122908	429
MS4141P1000FT	5487272	1122606	429
MS4141P3000A4	5907213	1123049	429
MS4141P3000FS	5686224	1122910	429
MS4141P3000FT	5487876	1122622	429
MS4141P6000A4	5907220	1123051	429
MS4141P6000FS	5686231	1122912	429
MS4141P6000FT	5488170	1122657	429
MS4141PP1000FS	5697978	1122481	430
MS4141PP1000FT	5697961	1122479	430
MS4141PP3000FS	5686248	1122914	430
MS4141PP3000FT	5050735	1122483	430
MS4141PP6000FS	5686255	1122916	430
MS4141PP6000FT	5050742	1122487	430
MS4142P3000FS	5697848	1122947	428
MS4142P3000FT	5697794	1122944	428
MS4142P6000A2	5938019	1122954	428
MS4142P6000FS	5697855	1122948	428
MS4142P6000FT	5697800	1122945	428
MS4182P3000A2	5938026	1122682	431
MS4182P3000FS	5698036	1122676	431
MS4182P3000FT	5697985	1122671	431
MS4182P6000A2	5938033	1122684	431
MS4182P6000FS	5698043	1122678	431
MS4182P6000FT	5698029	1122673	431
		/100 pc.	
MS41HB M10x100A4	6490370	1148430	432
MS41HB M10x100ZL	6490134	1148330	432
MS41HB M10x30 A4	6490356	1148422	432
MS41HB M10x30 ZL	6490110	1148322	432
MS41HB M10x60 A4	6490363	1148426	432
MS41HB M10x60 ZL	6490127	1148326	432
MS41HB M12x100A4	6490431	1148442	432
MS41HB M12x100ZL	6490189	1148342	432
MS41HB M12x30 A4	6490387	1148434	432
MS41HB M12x30 ZL	6490141	1148334	432
MS41HB M12x60 A4	6490424	1148438	432
MS41HB M12x60 ZL	6490172	1148338	432
MS41HB M6x30 A4	6490295	1148406	432
MS41HB M6x30 ZL	6490059	1148306	432
MS41HB M8x100 A4	6490325	1148418	432
MS41HB M8x100 ZL	6490080	1148318	432
MS41HB M8x30 A4	6490301	1148410	432
MS41HB M8x30 ZL	6490066	1148310	432
MS41HB M8x60 A4	6490318	1148414	432
MS41HB M8x60 ZL	6490073	1148314	432
MS41HBF M10x30 F	6490233	1148384	433
MS41HBF M10x30A4	6490493	1148484	433
MS41HBF M10x60 F	6490240	1148388	433
MS41HBF M10x60A4	6490509	1148488	433
MS41HBF M12x30 F	6490257	1148392	433
MS41HBF M12x30A4	6490547	1148492	433
MS41HBF M12x60 F	6490264	1148396	433
MS41HBF M12x60A4	6490554	1148496	433
MS41HBF M8x30 A4	6490448	1148476	433
MS41HBF M8x30 F	6490196	1148376	433
MS41HBF M8x60 A4	6490486	1148480	433
MS41HBF M8x60 F	6490202	1148380	433
MS41SN M10 A4	6489916	1147234	432
MS41SN M10 ZL	6489879	1147214	432
MS41SN M12 A4	6489923	1147238	432
MS41SN M12 ZL	6489886	1147218	432

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MS41SN M6 A4	6489893	1147226	432
MS41SN M6 ZL	6489855	1147206	432
MS41SN M8 A4	6489909	1147230	432
MS41SN M8 ZL	6489862	1147210	432
MS41SNF M10 A4	6490011	1147344	432
MS41SNF M10 F	6489954	1147314	432
MS41SNF M12 A4	6490028	1147348	432
MS41SNF M12 F	6489961	1147318	432
MS41SNF M6 A4	6489992	1147336	432
MS41SNF M6 F	6489930	1147306	432
MS41SNF M8 A4	6490004	1147340	432
MS41SNF M8 F	6489947	1147310	432
MS5030 SK	5785323	1124563	423
		/pc.	
MS5030P0200FT	5745037	1121391	422
MS5030P0300FT	5672975	1121243	422
MS5030P0400FT	5672555	1121278	422
MS5030P0500FT	5886334	1121405	422
MS5030P0600FT	5672494	1121294	422
MS5030P0700FT	5672616	1121332	422
MS5030P0800FT	5882251	1121308	422
MS5030P0900FT	5068310	1121336	422
		price/100	
MS5030P1000FT	5886211	1121448	422
		/pc.	
MS5030P1500FT	5514572	1121363	422
		price/100	
MS5030P2000A2	5049272	1121480	422
MS5030P2000A4	5906995	1121465	422
MS5030P2000FT	5049210	1121464	422
MS5030P3000FT	5419686	1121466	422
MS5030P6000A2	5049333	1121499	422
MS5030P6000A4	5907015	1121473	422
MS5030P6000FT	5462491	1121472	422
		/pc.	
MS5030RP0220FT	6191710	6349404	422
MS5030RP0260FT	6191772	6349412	422
MS5030RP0300FT	6191833	6349439	422
MS5030RP0340FT	6191895	6349447	422
MS5030RP0380FT	6191956	6349463	422
		price/100	
MS5030UP2000FT	6471065	1121524	422
MS5030UP6000FT	5049517	1121529	422
		/100 pc.	
MS50HB M10x30 A4	6489794	1148268	423
MS50HB M10x30 ZL	6489725	1148218	423
MS50HB M10x60 A4	6489800	1148272	423
MS50HB M10x60 ZL	6489732	1148222	423
MS50HB M12x30 A4	6489817	1148276	423
MS50HB M12x30 ZL	6489749	1148226	423
MS50HB M12x60 A4	6489824	1148280	423
MS50HB M12x60 ZL	6489756	1148230	423
MS50HB M6x30 A4	6489763	1148256	423
MS50HB M6x30 ZL	6489695	1148206	423
MS50HB M8x30 A4	6489770	1148260	423
MS50HB M8x30 ZL	6489701	1148210	423
MS50HB M8x60 A4	6489787	1148264	423
MS50HB M8x60 ZL	6489718	1148214	423
MS50SN M10 A4	6489671	1147190	423
MS50SN M10 ZL	6489633	1147164	423
MS50SN M12 A4	6489688	1147194	423
MS50SN M12 ZL	6489640	1147168	423
MS50SN M6 A4	6489657	1147172	423
MS50SN M6 ZL	6489619	1147156	423
MS50SN M8 A4	6489664	1147186	423
MS50SN M8 ZL	6489626	1147160	423
MSL4141P0200FS	6471232	1123262	429
MSL4141P0300FS	6471249	1123264	429
MSL4141P0400FS	6471270	1123266	429
MSL4141P0500FS	6471287	1123268	429
MSL4141P0600FS	6471294	1123270	429
MSL4141P0700FS	6471300	1123272	429
MSL4141P0800FS	6471317	1123274	429
MSL4141P0900FS	6471324	1123276	429
		price/100	
MSL4141P1000A2	5698203	1122978	429
MSL4141P1000A4	5698265	1122988	429
MSL4141P1000FS	5698142	1122970	429
MSL4141P1000FT	5698081	1122962	429
MSL4141P3000A2	5698210	1122980	429
MSL4141P3000A4	5698272	1122990	429
MSL4141P3000FS	5698159	1122972	429

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MSL4141P6000A2	5698227	1122982	429
MSL4141P6000A4	5698289	1122992	429
MSL4141P6000FS	5698166	1122974	429
MSL4141P6000FT	5698104	1122966	429
MSL4141PP1000A2	5698333	1123014	430
MSL4141PP1000A4	5698395	1123021	430
MSL4141PP1000FS	5697923	1123008	430
MSL4141PP1000FT	5697862	1123001	430
MSL4141PP3000A2	5698340	1123016	430
MSL4141PP3000A4	5698401	1123023	430
MSL4141PP3000FS	5698319	1123010	430
MSL4141PP3000FT	5697909	1123003	430
MSL4141PP6000A2	5698388	1123018	430
MSL4141PP6000A4	5698432	1123025	430
MSL4141PP6000FS	5698326	1123012	430
MSL4141PP6000FT	5697916	1123005	430
		/100 pc.	
Mx 060503 CR3	6622603	2011378	112
Mx 060503 SGR	6030774	2011304	110
Mx 080705 CR3	6622610	2011381	112
Mx 080705 SGR	6030781	2011308	110
Mx 090603 CR3	6622627	2011384	112
Mx 120805 CR3	6622658	2011386	112
Mx 120805 SGR	6030811	2011312	110
Mx 161008 CR3	6622665	2011389	112
Mx 161008 SGR	6030828	2011316	110
Mx 161609 CR3	6622672	2011392	112
Mx 161609 SGR	6030835	2011320	111
Mx 170805 SGR	6030873	2011324	111
Mx 221209 CR3	6622689	2011394	112
Mx 261609 CR3	6622696	2011396	112
Mx 261609 SGR	6030880	2011328	111
Mx 361609 CR3	6622702	2011398	112
Mx 361609 SGR	6030897	2011332	111
N 6-5/49 A4	6429585	3498399	482
N 6-5-10/49	6411948	3498396	482
N-K 6-5/44 A4	6429578	3498393	482
N-K 6-5-10/44	6411924	3498390	482
		/pc.	
OSG 20X3 FT	6326112	6017371	340
		price/100	
OSR 20x1.5 FS	5549079	1465600	340
OSS 20x3 3M FT	5137597	1465767	340
OSS 30x3 3M FT	5137771	1465805	340
OSS 40x4 3M FT	5137832	1465821	340
		/pc.	
RB 10 M 6	6606948	3497870	489
RB 12 M 6	6606955	3497872	489
RB 14 M 6	6606962	3497874	489
RB 16 M 6	6615384	3497875	489
RB 18 M 6	6606993	3497876	489
RB 20 M 6	6615391	3497878	489
RB-L 150 M6	6467884	3497932	490
RBL M6 SDS	6464708	3497915	489
		price/100	
S16W A2	5923640	2046720	360
S16W A4	5923886	2046750	360
S16W ALU	5925743	2046002	363
S16W FT	5782148	2046593	359
S16W G	5924647	2046840	355
S16W SW	5782032	2046565	357
S20W A2	5923657	2046721	360
S20W A4	5923923	2046751	360
S20W ALU	5925774	2046003	363
S20W FT	5782155	2046594	359
S20W G	5924654	2046841	355
S20W SW	5782049	2046566	357

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S25W A4	5923947	2046752	360
S25W ALU	5925781	2046004	363
S25W FT	5782162	2046595	359
S25W G	5924661	2046842	355
S25W SW	5782070	2046567	357
S32W A2	5923671	2046723	360
S32W A4	5923978	2046753	360
S32W ALU	5925804	2046005	363
S32W FT	5782209	2046596	359
S32W G	5924678	2046843	355
S32W SW	5782087	2046568	357
S40W A2	5923688	2046724	360
S40W A4	5923985	2046754	360
S40W ALU	5925835	2046006	363
S40W FT	5782216	2046597	359
S40W G	5924685	2046844	355
S40W SW	5782094	2046569	357
S50W A2	5923695	2046725	360
S50W A4	5923992	2046755	360
S50W ALU	5925842	2046007	363
S50W FT	5782223	2046598	359
S50W G	5924692	2046845	355
S50W SW	5782100	2046570	357
S63W A2	5923701	2046726	360
S63W A4	5924036	2046756	360
S63W ALU	5925859	2046008	363
S63W FT	5782261	2046599	359
S63W G	5924708	2046846	355
S63W SW	5782131	2046571	357
		/pair	
SAA MS4022 FT	5439479	6007498	420
		/100 pc.	
SB16W A4	5924050	2046760	360
SB16W ALU	5925866	2046012	363
SB20W A4	5924104	2046761	360
SB20W ALU	5925897	2046013	363
SB25W A4	5924111	2046762	360
SB25W ALU	5925903	2046014	363
SB32W A4	5924173	2046763	360
SB32W ALU	5925910	2046015	363
SB40W A4	5924180	2046764	360
SB40W ALU	5925927	2046016	363
SB50W A4	5924197	2046765	360
SB50W ALU	5925965	2046017	363
SB63W A4	5924203	2046766	360
SB63W ALU	5925972	2046018	363
SBF 15-1000 A2K	6591046	6490368	338
SBF 15-1000 A4K	6591121	6490408	338
SBF 15-1000 FSK	6590964	6490328	338
SBF 15-300 A2K	6590971	6490340	338
SBF 15-300 A4K	6591053	6490380	338
SBF 15-300 FSK	6590896	6490300	338
SBF 15-400 A4K	6591060	6490384	338
SBF 15-400 FSK	6590902	6490304	338
SBF 15-500 A2K	6590995	6490348	338
SBF 15-500 A4K	6591077	6490388	338
SBF 15-500 FSK	6590919	6490308	338
SBF 15-600 A2K	6591008	6490352	338
SBF 15-600 A4K	6591084	6490392	338
SBF 15-600 FSK	6590926	6490312	338
SBF 15-700 A2K	6591015	6490356	338
SBF 15-700 A4K	6591091	6490396	338
SBF 15-700 FSK	6590933	6490316	338
SBF 15-800 A2K	6591022	6490360	338
SBF 15-800 A4K	6591107	6490400	338
SBF 15-800 FSK	6590940	6490320	338
SBF 15-900 A2K	6591039	6490364	338
SBF 15-900 A4K	6591114	6490404	338
SBF 15-900 FSK	6590957	6490324	338
SBF 8-200 A2K	6589708	6490210	338

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SBF 8-200 A4K	6589777	6490240	338
SBF 8-300 A2K	6589715	6490214	338
SBF 8-300 A4K	6589784	6490244	338
SBF 8-400 A2K	6589722	6490218	338
SBF 8-400 A4K	6589791	6490248	338
SBF 8-500 A2K	6589739	6490222	338
SBF 8-500 A4K	6589807	6490252	338
SBF 8-600 A2K	6589746	6490226	338
SBF 8-600 A4K	6589814	6490256	338
SBM16W ALU	5926184	2046042	362
SBM20W ALU	5926191	2046043	362
SBM25W ALU	5926207	2046044	362
SBM32W ALU	5926214	2046045	362
SBM40W ALU	5926221	2046046	362
SBM50W ALU	5926238	2046047	362
SBM63W ALU	5926245	2046048	362
SBN16 FT	6387953	2046816	359
SBN16 G	6387816	2046808	355
SBN16 SW	6388066	2046824	357
SBN20 FT	6387960	2046817	359
SBN20 G	6387823	2046809	355
SBN20 SW	6388073	2046825	357
SBN25 FT	6387991	2046818	359
SBN25 G	6387830	2046810	355
SBN25 SW	6388080	2046826	357
SBN32 FT	6388004	2046819	359
SBN32 G	6387847	2046811	355
SBN32 SW	6388127	2046827	357
SBN40 FT	6388011	2046820	359
SBN40 G	6387878	2046812	355
SBN40 SW	6388134	2046828	357
SBN50 FT	6388028	2046821	359
SBN50 G	6387885	2046813	355
SBN50 SW	6388141	2046829	357
SBN63 FT	6388059	2046822	359
SBN63 G	6387892	2046814	355
SBN63 SW	6388158	2046830	357
SBNM16 FT	6387588	2046786	358
SBNM16 G	6388165	2046778	354
SBNM16 SW	6387700	2046793	356
SBNM20 FT	6387595	2046787	358
SBNM20 G	6388172	2046779	354
SBNM20 SW	6387717	2046794	356
SBNM25 FT	6387601	2046788	358
SBNM25 G	6388189	2046780	354
SBNM25 SW	6387724	2046795	356
SBNM32 FT	6387632	2046789	358
SBNM32 G	6387526	2046781	354
SBNM32 SW	6387755	2046796	356
SBNM40 FT	6387649	2046790	358
SBNM40 G	6387533	2046782	354
SBNM40 SW	6387762	2046797	356
SBNM50 FT	6387656	2046791	358
SBNM50 G	6387540	2046783	354
SBNM50 SW	6387779	2046798	356
SBNM63 FT	6387663	2046792	358
SBNM63 G	6387571	2046784	354
SBNM63 SW	6387786	2046799	356
		price/100	
SBR 15 A2K	6590872	6490282	336
SBR 15 A4K	6590889	6490284	336
SBR 15 FSK	6590865	6490280	336
SBR 8 A2K	6589685	6490192	336
SBR 8 A4K	6589692	6490194	336
		/100 pc.	
SBV 15 A2	6209835	6490964	336
SBV 15 A2	6209835	6490964	337
SBV 15 A4	6650118	6490972	336
SBV 15 FS	6589609	6490950	336

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SBV 8 A2	6589586	6490942	336
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SBV 8 FS	6589579	6490940	336
		/pc.	
SDB 03 PC	6465743	2008840	144
SDB 03 PS	6465668	2008800	144
SDB 03L PC	6465781	2008860	144
SDB 03L PS	6465705	2008820	144
SDB 05 PC	6465750	2008844	145
SDB 05 PS	6465675	2008804	145
SDB 05L PC	6465798	2008864	145
SDB 05L PS	6465712	2008824	145
SDB 09 PC	6465767	2008848	146
SDB 09 PS	6465682	2008808	146
SDB 09L PC	6465804	2008868	146
SDB 09L PS	6465729	2008828	146
SDB 12 PC	6465774	2008852	147
SDB 12 PS	6465699	2008812	147
SDB 12L PC	6465811	2008872	147
SDB 12L PS	6465736	2008832	147
		/100 pc.	
SH 40 G	5151272	1488252	340
SKT16W ALU	5957799	2047588	367
SKT20W ALU	5957805	2047589	367
SKT25W ALU	5957812	2047590	367
SKT32W ALU	5957829	2047591	367
SKT40W ALU	5957836	2047592	367
SKT50W ALU	5957843	2047593	367
SKTM16W ALU	5957737	2047604	367
SKTM20W ALU	5957744	2047605	367
SKTM25W ALU	5957751	2047606	367
SKTM32W ALU	5957768	2047607	367
SKTM40W ALU	5957775	2047608	367
SKTM50W ALU	5957782	2047609	367
		price/100	
SM16W ALU	5926092	2046032	362
SM16W FT	5781424	2046533	358
SM16W G	5924852	2046861	354
SM16W SW	5781028	2046500	356
SM20W ALU	5926108	2046033	362
SM20W FT	5781431	2046534	358
SM20W G	5924869	2046862	354
SM20W SW	5781066	2046501	356
SM25W ALU	5926139	2046034	362
SM25W FT	5781448	2046535	358
SM25W G	5924876	2046863	354
SM25W SW	5781073	2046502	356
SM32W ALU	5926146	2046035	362
SM32W FT	5781486	2046536	358
SM32W G	5924883	2046864	354
SM32W SW	5781080	2046503	356
SM40W ALU	5926153	2046036	362
SM40W FT	5781493	2046537	358
SM40W G	5924890	2046865	354
SM40W SW	5781127	2046505	356
SM50W ALU	5926160	2046037	362
SM50W FT	5781509	2046538	358
SM50W G	5924906	2046866	354
SM50W SW	5781134	2046506	356
SM63W ALU	5926177	2046038	362
SM63W FT	5781547	2046540	358
SM63W G	5924913	2046867	354
SM63W SW	5781141	2046507	356
		/pc.	
SQ 1632	5028154	2153572	371
		/100 pc.	
SQ M6	5016069	2146509	270

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SQ-15 LGR	5595472	2146096	270
SQ-17 LGR	5595533	2146118	270
SQ-20 LGR	5595656	2146134	270
SQ-20 SW	5655367	2146164	371
SQ-25 LGR	5595717	2146207	270
SQ-28 LGR	5595779	2146215	270
SQ-32 LGR	5595830	2146258	270
SQ-36 LGR	5204275	2146290	270
SQ-40 LGR	5595892	2146320	270
SQ-47 LGR	5204398	2146363	270
SQ-51 LGR	5595953	2146444	270
SQ-59 LGR	5204510	2146487	270
SSP 20-40 M6 A2	6342174	1486242	386
SSP 20-40 M6 A4	6342181	1486244	386
SSP 20-40 M6 FT	6342167	1486238	386
SSP 20-40 M8 A2	6342211	1486292	386
SSP 20-40 M8 A4	6342228	1486294	386
SSP 20-40 M8 FT	6342204	1486288	386
SSP 6-21 M6 A2	6342136	1486234	386
SSP 6-21 M6 A4	6342150	1486236	386
SSP 6-21 M6 FT	6342112	1486232	386
SSP 6-21 M8 A2	6342143	1486284	386
SSP 6-21 M8 A4	6342198	1486286	386
SSP 6-21 M8 FT	6342129	1486282	386
SV16W A4	5924210	2046770	361
SV16W ALU	5925989	2046022	363
SV16W FT	5782384	2046620	359
SV16W G	5924784	2046854	355
SV16W SW	5781776	2046582	357
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SV20W ALU	5926016	2046023	363
SV20W FT	5782391	2046621	359
SV20W G	5924791	2046855	355
SV20W SW	5781783	2046583	357
SV25W A4	5924272	2046772	361
SV25W ALU	5926023	2046024	363
SV25W FT	5782407	2046622	359
SV25W G	5924807	2046856	355
SV25W SW	5781790	2046584	357
SV32W A4	5924296	2046773	361
SV32W ALU	5926030	2046025	363
SV32W FT	5782445	2046623	359
SV32W G	5924814	2046857	355
SV32W SW	5781806	2046585	357
SV40W A4	5924302	2046774	361
SV40W ALU	5926047	2046026	363
SV40W FT	5782452	2046624	359
SV40W G	5924821	2046858	355
SV40W SW	5781844	2046586	357
SV50W A4	5924333	2046775	361
SV50W ALU	5926078	2046027	363
SV50W FT	5782469	2046625	359
SV50W G	5924838	2046859	355
SV50W SW	5781851	2046587	357
SV63W A4	5924340	2046776	361
SV63W ALU	5926085	2046028	363
SV63W FT	5782490	2046626	359
SV63W G	5924845	2046860	355
SV63W SW	5781868	2046588	357
SVE 41 A2	5939238	1123126	433
SVE 41 A4	5939245	1123128	433
SVE 41 FT	5939214	1123121	433
SVM16W ALU	5926252	2046052	362
SVM16W DN	5781912	2046553	358
SVM16W G	5924999	2046875	354
SVM16W SW	5781295	2046522	356
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SVM20W G	5925002	2046876	354
SVM20W SW	5781301	2046523	356
SVM25W ALU	5926276	2046054	362
SVM25W DN	5781967	2046556	358
SVM25W G	5925019	2046877	354
SVM25W SW	5781318	2046524	356
SVM32W ALU	5926283	2046055	362
SVM32W DN	5781974	2046557	358
SVM32W G	5925026	2046878	354
SVM32W SW	5781325	2046525	356
SVM40W ALU	5926290	2046056	362
SVM40W DN	5781981	2046558	358
SVM40W G	5925033	2046879	354
SVM40W SW	5781363	2046526	356
SVM50W ALU	5926306	2046057	362
SVM50W DN	5782018	2046559	358
SVM50W G	5925040	2046880	354
SVM50W SW	5781370	2046527	356
SVM63W ALU	5926313	2046058	362
SVM63W DN	5782025	2046560	358
SVM63W G	5925057	2046881	354
SVM63W SW	5781387	2046528	356
SWS M10 A4	6095520	3404381	503
SWS M10 G	5301752	3404102	502
SWS M12 A4	6095537	3404385	503
SWS M12 G	5301813	3404129	502
SWS M5 G	5301578	3404056	502
SWS M6 A2	5301936	3404331	503
SWS M6 A4	6095506	3404372	503
SWS M6 G	5301639	3404064	502
SWS M8 A2	5301998	3404358	503
SWS M8 A4	6095513	3404377	503
SWS M8 G	5301691	3404080	502
SZ-B 18/0x142	6429486	3498752	485
T 100	5246794	2007077	44
		/pc.	
T 100 2MSD WS	5615880	2007821	65
T 100 4MSD WS	5615903	2007825	65
T 100 D MSD2A	5654582	2007826	66
T 100 E 4-5	5930143	7205510	130
T 100 ED 10-5	5993087	7205533	120
T 100 ED 10-5 A	5993117	7205543	123
T 100 ED 10-6 AF	6002504	7205563	124
T 100 ED 10-6 F	6002375	7205553	121
T 100 ED 4-10 AD	5993148	7205583	128
T 100 ED 4-10 D	5993131	7205580	127
T 100 ED 4-5	6634286	7205529	120
T 100 ED 6-5	5993070	7205530	120
T 100 ED 6-5 A	5993100	7205540	123
T 100 ED 6-6 AF	6002443	7205560	124
T 100 ED 6-6 F	6002313	7205550	121
		/100 pc.	
T 100 F	5286547	2007347	47
T 100 HD LGR	5985860	2007712	57
T 100 HD TR	5985945	2007752	61
T 100 KL	5441212	2007436	50
T 100 M25-M32	5470632	2007081	44
T 100 OE	5246855	2007255	53
T 100 OE HD LGR	5985907	2007732	59
T 100 OE HD TR	5985983	2007772	63
T 100 RO-LGR	5303282	2007644	44
T 100 RW	5286677	2007533	44
		/pc.	
T 100 WB 1W3 1S3	5615859	2007815	69
T 100 WB 1W3 2S3	5615866	2007817	69
T 100 WB 2S3	5615828	2007809	67
T 100 WB 2s4	5847533	2007848	72
T 100 WB 2s5	5847540	2007852	73
T 100 WB 2W3 2S3	5615873	2007819	70
T 100 WB 3S3	5615842	2007813	68
T 100 WB 4S3	5615835	2007811	68
T 100 WB 4s5	5847557	2007856	74
T 100 WB 6S 3x2	5854203	2007814	71
T 100 WB 6S3	5654568	2007822	68
T 100 WB3	5615811	2007807	67
T 100 WB3-10	6257867	2007808	67

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T 100 WB5	5847519	2007840	73
		/100 pc.	
T 160	5246800	2007093	44
		/pc.	
T 160 E 10-5	5930167	7205524	131
T 160 E 16-5	5930174	7205528	131
T 160 E 4-8D	5930150	7205520	131
T 160 ED 16-5	5993094	7205536	121
T 160 ED 16-5 A	5993124	7205546	124
T 160 ED 16-6 AF	6111169	7205566	125
T 160 ED 16-6 F	6330904	7205556	122
		/100 pc.	
T 160 F	5286554	2007355	47
T 160 HD LGR	5985877	2007714	58
T 160 HD TR	5985952	2007754	62
T 160 KL	5682189	2007440	50
T 160 M32	5470649	2007097	44
T 160 OE	5246862	2007271	53
T 160 OE HD LGR	5985914	2007734	60
T 160 OE HD TR	5985990	2007774	64
T 160 RO-LGR	5303299	2007649	44
T 160 RW	5286684	2007541	44
T 25	5246770	2007029	42
T 25 F	5286486	2007312	46
T 25 KL	5441168	2007430	49
T 25 RW	5286615	2007509	42
T 250	5246817	2007109	45
T 250 F	5286561	2007363	48
T 250 HD LGR	5985884	2007716	58
T 250 HD TR	5985969	2007756	62
T 250 KL	5682196	2007444	51
T 250 OE	5246879	2007287	53
T 250 OE HD LGR	5985921	2007736	60
T 250 OE HD TR	5986003	2007776	64
T 250 RO-LGR	5303305	2007657	45
T 250 RW	5286721	2007554	45
T 350	5246824	2007125	45
		/pc.	
T 350 ED 4-28 AD	6002528	7205590	128
		/100 pc.	
T 350 F	5286608	2007371	48
T 350 HD LGR	5985891	2007718	58
T 350 HD TR	5985976	2007758	62
T 350 KL	5682202	2007448	51
T 350 OE	5246886	2007303	53
T 350 OE HD LGR	5985938	2007738	60
T 350 OE HD TR	5986010	2007778	64
T 350 RW	5286738	2007568	45
T 40	5246756	2007045	43
T 40 F	5286493	2007320	46
T 40 KL	5441175	2007432	49
		/pc.	
T 40 KVM	6440085	2363012	135
		/100 pc.	
T 40 M20	5885375	2007900	54
T 40 M20 KL	5885382	2007904	54
T 40 OE	5246831	2007223	52
T 40 RO-LGR	5303244	2007630	43
T 40 RW	5286622	2007517	43
T 60	5246787	2007061	43
T 60 F	5286509	2007339	47
T 60 HD LGR	5985822	2007710	57
T 60 HD TR	5985846	2007750	61
T 60 KL	5441182	2007434	50
T 60 M20	5885399	2007910	55
T 60 M20 KL	5885405	2007914	55
T 60 M20 NL	6085484	2007918	56
T 60 M25	6610136	2007926	55
T 60 M25 NL	6440092	2007922	56
T 60 M25 RO-LGR	6610143	2007927	55
T 60 OE	5246848	2007239	52
T 60 OE HD LGR	5985839	2007730	59
T 60 OE HD TR	5985853	2007770	63
T 60 RO-LGR	5303275	2007638	43
T 60 RW	5286660	2007525	43
		/pc.	
T100 WS 1S3 2S3D	5903697	2007876	75

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T100 WS 1S4 2S3C	5903666	2007874	76
T100ED 10-5 AS	6147908	7205623	125
T100ED 10-6 AFS	6147953	7205633	126
T100ED 4-10 ADS	6147960	7205640	129
T100ED 6-5 AS	6147892	7205620	125
T100ED 6-6 AFS	6147946	7205630	126
T160ED 16-5 AS	6147939	7205626	126
TE-FH 520	5993162	7205570	132
		/100 pc.	
Thermo 60	6521197	2347601	480
TK 04	6396016	7205700	132
TK 06	6396023	7205702	132
TK 10	6396030	7205704	132
TK 16	6396047	7205706	132
TK 213	5145936	1484702	383
TK FL G	5407140	1488111	383
TK MULTI 16	5928133	1485144	381
TK MULTI 24	5928140	1485148	381
TK MULTI 8	5928126	1485140	381
		/pair	
TKH-L-25 FT	6579259	6355812	419
TKH-L-25 FT	6579259	6355812	437
TKH-S-30 FT	6114610	6355804	424
TKH-S-30 FT	6114610	6355804	437
		/100 pc.	
TKL 4	5146353	1485105	380
TKL 6	5146414	1485113	380
		/pc.	
TKM Chock 1 FS	6429875	1480850	382
TKM Chock 2 A4	6429905	1480882	382
TKM Chock 2 FS	6429882	1480852	382
TKM Chock 3 FS	6429899	1480854	382
		/100 pc.	
TKS 213-25	5145998	1484818	383
TKS 213-32	5146056	1484826	383
TKT	5149231	1486861	387
TPE 04	6396054	7205708	132
TPE 25	6396061	7205710	132
TR M10 1M A2	5023579	3141312	499
TR M10 1M A4	6098446	3141502	499
TR M10 1M G	5253396	3141209	499
TR M10 2M A2	6096909	3141339	499
TR M10 2M A4	6098453	3141504	499
TR M10 2M G	5123583	3141140	499
TR M12 1M A2	5594437	3141314	499
TR M12 1M A4	6098460	3141512	499
TR M12 1M G	5253457	3141306	499
TR M12 2M A2	6096930	3141316	499
TR M12 2M A4	6098507	3141514	499
TR M12 2M G	5123644	3141144	499
TR M6 1M A2	6096886	3141327	499
TR M6 1M A4	6098385	3141482	499
TR M6 1M G	5253211	3141047	499
TR M6 2M A2	6096893	3141328	499
TR M6 2M A4	6098392	3141484	499
TR M6 2M G	6096640	3141048	499
TR M8 1M A2	5023456	3141310	499
TR M8 1M A4	6098408	3141492	499
TR M8 1M G	5253334	3141128	499
TR M8 2M A2	5882886	3141330	499
TR M8 2M A4	6098439	3141494	499
TR M8 2M G	5119982	3141136	499
T-S MST	5615910	2007831	80
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X06 SW	6580507	2005122	86
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X06 T G M25 LGR	6617623	2005226	93
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X06C R LGR	6582822	2005490	103
X06C R LGR-TR	6582891	2005560	103
X06C SW	6580712	2005602	101
X10 H25 GNP5 LGR	6585854	2005308	98
X10 LGR	6577439	2005016	87
X10 LGR-TR	6577507	2005066	87
X10 R LGR-TR	6582761	2005096	96
X10 SW	6580514	2005126	87
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X10 T LGR	6584468	2005206	90
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X10C LGR-TR	6577781	2005536	102
X10C R LGR	6582839	2005494	104
X10C R LGR-TR	6582907	2005564	104
X10C SW	6580729	2005606	102
X16 H25 GNP5 LGR	6585861	2005312	99
X16 H35 GNP5 LGR	6585878	2005316	99
X16 LGR	6577446	2005020	87
X16 LGR-TR	6577545	2005070	87
X16 R LGR-TR	6582778	2005100	97
X16 SW	6580521	2005130	87
X16 SW-RO	6580620	2005160	87
X16 T LGR	6584475	2005210	90
X16C LGR	6577675	2005470	102
X16C LGR-TR	6577798	2005540	102
X16C R LGR	6582846	2005498	104
X16C R LGR-TR	6582945	2005568	104
X16C SW	6580736	2005610	102
X25 H35 GNP5 LGR	6585885	2005320	99
X25 H50 GNP5 LGR	6585892	2005324	99
X25 LGR	6577453	2005024	87
X25 LGR-TR	6577552	2005074	87
X25 R LGR-TR	6582785	2005104	97
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X25 SW-RO	6580675	2005164	87
X25 T LGR	6584482	2005214	91
X25C LGR	6577682	2005474	102
X25C LGR-TR	6577804	2005544	102
X25C R LGR	6582884	2005502	105
X25C R LGR-TR	6582952	2005572	105
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Sale and delivery conditions
of the companies OBO Bettermann Vertrieb Deutschland GmbH & Co. KG, OBO Bettermann Projekt und Systemtechnik GmbH, OBO Bettermann Export GmbH & Co. KG, OBTEC GmbH, Flugplatzgesellschaft Arnsberg – Menden mbH, FAM Holding GmbH, OBO JET-CHARTER GmbH, Grundstücksverwaltung Bettermann GmbH & Co. KG, OBO Bettermann Produktion Deutschland GmbH & Co. KG as well as OBO Bettermann Holding GmbH & Co. KG

§ 1 General
(1.1) The general terms and conditions of business given below (hereinafter referred to as "AGB" or "VLB") are applicable in the respectively latest version for all contracts signed and to be signed in future between the OBO Bettermann Vertrieb Deutschland GmbH & Co. KG, OBO Bettermann Projekt und Systemtechnik GmbH, OBO Bettermann Export GmbH & Co. KG, OBTEC GmbH, Flugplatzgesellschaft Arnsberg – Menden mbH, FAM Holding GmbH, OBO JET-CHARTER GmbH, Grundstücksverwaltung Bettermann GmbH & Co. KG, OBO Bettermann Produktion Deutschland GmbH & Co. KG, as well as the OBO Bettermann Holding GmbH & Co. KG (hereinafter referred to as "sellers") and the respective (possibly future) contractual partners (hereinafter referred to as "Customer") regarding the sale and / or delivery of goods, as far as these are used against entrepreneurs, legal entities under public law and special assets governed by public law as defined in § 310 I BGB.
(1.2) It is pointed out explicitly that the local AGB also contain the additional conditions for plant engineering, if the contract is / should be signed with the OBO Bettermann Projekt und Systemtechnik GmbH. The additional conditions for plant engineering in this case are attached with the offer or with the acceptance of the offer and can also be viewed and stored in the Internet at http://cdn.obo.de/mailings/downloads/AGB_PuS_Anlagenbau.pdf.
(1.3) It is pointed out explicitly that AGB of the customer become an integral part of the contract only when these have been acknowledged in writing by the sellers. In particular, an inclusion through a conclusive behaviour is not effected to the extent that the customer discernibly refers to his AGB and the sellers do not contradict their validity.
(1.4) Insofar as the AGB of the customer have also become a part of the contract and contradict the AGB, the AGB of both parts become a part of the contract only when they match (principle of congruency). Disagreement arising from the contradicting AGB is to be interpreted primarily under consideration of the interests of both parties and a solution satisfying the interests of both the parties is to be found. If this is not possible, the legal regulations are applicable. Disagreements do not impact the effectiveness of the contract and of the AGB.
(1.5) Contracts or amendments of the contracts are effective only when they have been agreed upon in writing; to this extent, the written form not only serves the purpose of a proof, but is also a rightconstitutive pre-requisite for effectiveness of the declaration of intent (constitutive written form). This also applies to an amendment of this written form clause. Informally signed contracts and contractual amendments are effective only when they have been signed by means of individually negotiated terms as defined in§ 305b BGB. It is clarified explicitly that the written form requirement is maintained by transmission through telecommunication (e-mail, fax) (see § 127 II, S.1 BGB).
(1.6) These VLB can be amended at any time for adaptation to changes in law, changes in judicature or in the event of essential changes to the economic situation. The amendments shall become effective to the extent that seller has notified customer of the new version of the VLB in a textual form with clear emphasis of the changes, seller makes reference as early as the notification of the new version that the changes also become effective without customer's consent if customer does not contradict the changes in good time and a contradiction from customer is not made in good time within 2 weeks of receipt of the notification.
(1.7) The seller reserves the right to make technical changes in design, shape and material even during the delivery period, if the changes are reasonable for the customer and nothing on the contrary has been agreed upon.
§ 2 Offers
(2.1) Offers from the seller always are not binding and represent only a request for submitting a binding offer from the interested parties.
(2.2) Offers of the seller are, in case they do not contain any deviating data - subject to an adequate assurance of the order sum (e.g. through credit insurance or bank guarantee) - valid four weeks starting from the day of the proposal submittal.
(2.3) The documents belonging to the Offers such as diagrams, leaflets, drawings, dimensions, load capacity values and weight data are subject to deviations, which are usual in the industry and / or lie in the framework of the normal production tolerances.
(2.4) Samples are non-binding approval samples. Deviations, which are customary to trade and/or lie in the framework of the normal production tolerances, are reserved in case of purchase after sample. After receipt, samples are to be returned to the seller in a flawless state within four weeks, unless agreed upon otherwise. If the return is not done within this period or not in a proper way, the seller has the right to invoice the purchase price of the sample according to the latest price list.
§ 3 Protection rights
(3.1) The seller reserves the copyright for drawings and other design documents and data. These may not be made accessible to third parties, unless agreed upon otherwise, such as for the case that the data / drawings / images are also to be used for a web-shop.
(3.2) The customer guarantees vis-à-vis the seller that the manufacture and delivery of the goods made according to his instructions do not violate any third party protection rights. In case third party protection rights are asserted vis-à-vis the seller, the seller has the right without a legal check to withdraw from the corresponding contracts after hearing the customer; unless the third party declares the non-assertion of protection rights vis-à-vis the seller within eight days in writing.
(3.3) The customer must exempt the seller from the claims in the context of the assertion of protection rights of third parties. Services and expenses of the seller already made are to be compensated or reimbursed in case of assertion of third-party protection rights regardless of their maturity.
§ 4 Prices and payment modalities, notification duties
(4.1) The prices mentioned in the offers and documents of the seller are the ex-factory or the exwarehouse prices of the seller. The prices do not include the respectively applicable value-added tax, the cost of packing, loading and unloading, freight, customs, insurance, dismantling, return and proper disposal of electrical and electronic old devices for commercial purposes as defined in the ordinance for waster electrical and electronic equipment, unless agreed upon otherwise. Fees, taxes or other expenses in the context of the delivery will be borne by the customer. Unless agreed upon otherwise, the delivery taken over from the seller does not include the unloading and bringing the goods.
(4.2) The unit prices mentioned by the seller in an offer are valid only upon placing a purchase order for the complete delivery scope given in the respective offer or for the actual service offer. In case of a purchase order deviating in quantity or in scope from the offer of the seller, the prices listed in the offer are not applicable to the seller.
(4.3) Payments for invoices as well as credits, which are made within 10 (ten) days after receiving, with the exception of payments made by means of exchange are to be made with 2 (two) percent net cash discount; later incoming payments within 30 (thirty) days from the date of the invoice are to be made net without cash discount. Mounting services as well as all wage work are to be paid without cash discount within 10 (ten) days. Incoming payments are credited at first against costs, then against interest and then against the longest due liability.
(4.4) All invoices and credits - subject to different written agreements in the individual case - are payable by within 30 (thirty) days of the invoice without deduction; a default of payment occurs after this. Payments are to be made only to the accounts of the seller mentioned in the invoice in the agreed upon currency by mentioning the account number. For payments of all kinds, fulfilment is said to occur on the day, on which the payment becomes available to the seller without restriction. The seller is not committed to accept bills of exchange or cheques. However, if these are acknowledged, they are then accepted only subject to the possibility of discounting against the payment of all expenses on account of performance (see § 364 II BGB). Similarly, the seller is also not obliged to provide timely notification of changes and checks as well as to raise protests.
(4.5) The customer ensures the correctness of his sales tax identification number, which is to be informed immediately and without being asked. The customer is committed to inform immediately about each change in his company name, his address, the delivery address and his sales tax identification number to the seller as well as to the responsible financial authority of the country.
(4.6) The seller has the right to adjust his prices, if needed, to the normal level in the market, if wages, material prices or taxes increase in the period between signing the contract and executing the order. In case of an increase in stock exchange listing for NE metals, the seller has the right to charge the difference applicable on the day of receipt of the order in the form of a surcharge for products containing copper, silver or brass. In case of further changes in stock exchange listings, the seller has the right to correct the calculated basis for the list prices.
(4.7) The prices of the products containing brass and copper are subject to certain fluctuations, which are based on the respective DEL quotations. The prices of brass articles are based on a DEL quotation of Euro 150.00 for Ms 58, those of copper products are based on a DEL value of Euro 200.00 for electrolyte copper. In case of an upward or downward change of these rates by more than Euro 15.00, a five percent surcharge or deduction is credited for each 15 (fifteen) points. For calculating the surcharge or the deduction the respective DEL note of the date is taken as the basis, on which the seller received the offer.
(4.8) In case of payment default by the customer, the seller has the right to charge default interest amounting to 9 (nine) percentpoints p.a. over and above the respective base interest rate as per § 247 BGB. The asserting of a further damage caused by delay remains reserved.
(4.9) The customer is entitled to the rights of set-off or rights of retention only when counter-claims have been recognised by declaratory judgement or are undisputed.
(4.10) If an application has been filed for initiating insolvency proceedings over the assets of the customer, the customer has initiated an out-of-court process for debt settlement, has stopped his payments or else the seller is aware of other circumstances, which essentially reduce the creditworthiness of the customer and which jeopardise the rendering of the services by the customer, the seller has the right to demand security through advance payment or bank (choice of the customer) guarantee for the deliveries still pending by setting a notice period of one week and to refuse the rendering of his services till the security is paid. After a suitable notice period has elapsed in vain, the seller further has the right to withdraw from the contract as well as to demand indemnity. Moreover, in this case, the seller can also demand the resale authorisation along with direct debit authorisation as per § 8.8 as well as the revoke the right of processing, bonding and mixing the already delivered goods according to §§ 8.4-8.5 as well as demand the return of the delivered goods according to §§ 8.8-8.9.
(4.11) If the legal situation at the time of the conclusion of the contract decisively changes or if control of customer or of a considerable part of its holdings passes to other natural or legal entities, customer shall be obliged to notify seller without delay.
(4.12) In order to have a tax-free delivery and, alternatively, not having to include sales tax in all invoices and thereafter to pay the sales tax after receiving the papers, the customer must bring forth the proof of delivery. To do this, he has to demonstrate the delivery of goods by sending the corresponding original document within 4 (four) weeks to the seller after pick-up / dispatch of the goods. In case the seller does not receive this document within the mentioned period, he has the right to charge the customer the sales tax on the net goods value valid for this period.
(4.13) Invoice reductions, differences, debit advices or other disagreements do not change the original term of payment of the invoice. All indisputable receivables, not affected by disagreements, become due for payment according to the original invoicing. All credit advices created by the seller for settling the differences do not change in any way the original term of payment of the invoice.
§ 5 Delivery
(5.1) Packaging, dispatch route and means of transportation are generally based on the graded lumpsum prices; the regulations of § 4.1 are applicable in addition. The seller charges the costs for packaging, dispatch route and means of transportation.
(5.2) A carriage-paid delivery i.e. a delivery without freight and packaging costs within Germany, is done for free starting with a net order value of Euro 2,500.00. It is made clear that a delivery is "free to the door" when the carrier opens his vehicle at the agreed upon unloading point and makes it available for unloading. The unloading as well as the on-site delivery of the goods is to be done by the customer.
(5.3) Undamaged returnable load carriers are taken back by the seller in case of freight-free provision. The pool pallets used for transportation are to be exchanged with the freight carrier or are to be returned. Details of the processing are given in the respectively applicable loading equipment handling of the seller, which can be stored permanently in the Internet at http://cdn.obo.de/mailings/downloads/Packschema_Ladehilfsmittel.pdf and are a part of this contract.
(5.4) The smallest selling units defined in the article master data are binding. Goods ordered below the smallest selling unit are rounded off automatically i.e. without consulting the buyer, to the next higher smallest selling unit.
(5.5) The seller reserves the over and under-deliveries, in particular in case of order-related production in the market-based scope or the as per the national or international standard. In case of a demand for adhering to precise quantity, an explicit instruction is necessary, which must be confirmed.
(5.6) The seller has the right to partial deliveries, but is not committed, if the partial deliveries are reasonable for the customer. Partial deliveries can be invoiced separately.
(5.7) The customer cannot reject excess or reduced services in a reasonable scope. The complaint of an excess or reduced service does not justify the rejection of further deliveries from the same or from another contract. In case of custom-made products the seller reserves an excess or under-delivery of 10% of the ordered quantity. In each case, only the actually delivered quantity is invoiced.
(5.8) Blanket and call orders commit the customer for accepting the total quantity underlying the blanket and call orders. In case no specific call orders result from the contract or from any other agreement, the total quantity of the blanket or call order is to be called within 3 (three) months. If the customer does not adhere to the call dates, the seller has the right to completely deliver the total quantity to his house address and to invoice it 4 (four) weeks after written declaration by indicating the consequences of the omitted call. The rights of the seller from default of the customer remain unaffected.
(5.9) The delivery commitment of the seller is subject to the provision of defect-free and on-time selfdelivery, if the seller procures the goods as a whole or parts of product from a sub-contractor. This does not apply, if the seller is responsible for the non-delivery or for the delay.
(5.10) Events, such as those below, for which the seller is not responsible in the scope of the normal operating risk and which make the (partial) delivery essentially difficult or even impossible, entitle the seller to postpone the (partial) delivery by the duration of the hindrance together with suitable start-up time or alternatively to withdraw from the contract. In each case, the customer can demand a declaration from the seller, whether he will deliver within a suitable time period according to the circumstances or whether he will withdraw. The delivery periods gets extended in case of events such as industrial conflicts, strikes and lockouts, regulatory actions, material procurement difficulties, scrap or rework, business disruptions and lack of staff, lack of means of transportation as well as upon occurrence of other unforeseen events, on which the seller has no influence, by the duration of these events.
(5.11) Even in case of dispatch readiness , the customer comes in default of acceptance, if in case of delivery ex-factory/warehouse or agreed upon pick-up obligation the delivery is offered to him by the seller only in writing or else the customer has declared that he will final not accept the delivery.
(5.12) Products reported as ready for dispatch as per the contract must be accepted immediately by the customer. Otherwise, the customer comes in default of acceptance so that the seller - his other rights notwithstanding - has the right either to dispatch the goods at the cost and risk of the customer or to store them and invoice them upon the expiry of a notice period of one week. The same applies, if the goods are not called or not called completely within the decisive call period (see § 5.8).
(5.13) For the case that the customer comes in default of acceptance or violates other service or participation duties, the seller has the right to demand the damages caused to him including possible extra expenses.
(5.14) If the customer defaults with the fulfilment of the obligations arising from the aforesaid regulations by more than one month, the seller can - further rights notwithstanding - demand from the customer a contractual penalty of 5 (five) percent of the invoice value instead of contract fulfilment and dispose of the stored goods in any other way under consideration of the interests of the customer or scrap the goods. The contractual penalty is charged at a reimbursement of damages or expenses to be paid by the customer. A bulk discount granted on earlier deliveries based on this contract is then to be paid back later by the customer.
§ 6 Delivery periods and dates
(6.1) Delivery periods and dates apply only approximately unless something to the contrary has been agreed upon.
(6.2) The adherence to delivery periods and dates requires the on time fulfilment of the contractual obligations of the customer. Delivery periods start with the date of order confirmation by the seller, but not before clarifying all details of the execution of the order and receipt of all documents necessary for the order execution and other information to be made by the customer as well as the receipt of an advance payment agreed upon. If these requirements are not fulfilled on time, the delivery periods and the dates get extended accordingly. This is not applicable if the delay is caused by the seller. The delivery period shall be deemed to have been met, if the goods leave the plant or the warehouse at the appointed time or the dispatch readiness of the customer is reported, but the goods cannot be dispatched on time without a fault of the seller. The aforesaid regulations apply accordingly to delivery dates.
(6.3) In case of a later amendment of the order desired by the customer, the seller can demand an appropriate extension of the delivery periods and dates. If the delivery is delayed upon request or by fault of the customer, the goods are then stored at the cost and risk of the customer, unless agreed upon otherwise.
(6.4) Regulatory and other third party approvals, necessary for executing the assets or deliveries e.g. for the purpose of import are to be obtained by the customer. If such approvals are not present at the right time (i.e. at the start of the fulfilment negotiations / acts by the seller) then the delivery period gets extended accordingly.
(6.5) The seller has the right to carry out partial deliveries as well as deliveries before due date and to settle them separately. If the delivery is agreed upon call, the goods are then considered as called latest by three months after placing the order, unless agreed upon otherwise. The customer then has an obligation to accept the delivery, upon whose violation the seller in particular has the right to store the goods with a third party at the cost and on behalf of the customer or to deliver them at the address of the customer.
(6.6) In case of articles manufactured by the seller on order, the customer is obliged to accept the same. It is agreed upon explicitly that in case of a withdrawal of the customer from the contract, the customer must bear the costs accruing till the time of the withdrawal.
(6.7) Unforeseen events not under the control of the seller, such as war, risk of war, unrest, use of violence by third party against persons or objects, sovereign interventions including currency and trade-related measures, industrial actions at the place of the seller or his suppliers or transportation companies, disruptions of the intended traffic connections, fire, scarcity of raw material, shortage of power and other disruptions of the seller through no fault of one's own extend the agreed upon delivery periods and dates by the duration of the hindrance. This also applies, if the seller is already in default of delivery or if the performance hindrances mentioned above were already present before signing the contract, but were not known to the seller. The seller will inform the customer immediately about the hindrances of the aforesaid type.
(6.8) If the delivery delays cause by these factors last for more than two months, both sides have the right to withdraw from the contract. However, the customer can withdraw only when the seller does not declare upon his request within a notice period of one week, whether he will withdraw or delivery within a suitable period. The same right of withdrawal arises independent of the aforesaid period, if the execution of the contract has become unreasonable for one of the parties under consideration of the delay that has occurred.
§ 7 Return delivery of goods
(7.1) A claim of the customer for return of the goods not needed arises - except for warranty cases or other return obligations resulting from the law - only after a prior written approval of the seller. Return requests, whose net goods value - before sales tax - is less than Euro 15.00 for each item, cannot be accepted and processed. Credit notes or charges resulting from returns can be maximum up to 70 (seventy) percent of the net goods value.
(7.2) In addition, the conditions and conditions set out below shall be complied with pursuant to §§ 7.3- 7.6 and no case of § 7.7 shall exist.
(7.3) A return is permitted till maximum 12 (twelve) months after the date of delivery and only by specifying the delivery note or invoice number of the seller.
(7.4) A product currently in the catalogue is to be returned in a flawless state so that it can be resold. A product is to be returned unused, undamaged, in original packing as well as in complete packaging units. The minimum value for accepting each item in the warehouse is Euro 15.00.
(7.5) The return must be reported and confirmed by the seller in writing with a return number. If needed, an inspection of the product is done by the seller at site, which the customer has to allow. The return confirmation of the seller is to be attached with the dispatch. The return is done free of charge. A remuneration is paid via credit note. Only approved articles in a flawless condition are credited. Debit notes of the customer are not permitted.
(7.6) For handling and checking in the scope of the quality management system ISO:9001, the seller charges a lump-sum processing fee of 30 (thirty) percent of the affected goods value. The seller bears the necessary costs for the new packing and cleaning of the goods.
(7.7) Custom-made products, not listed / inactive articles and discontinued types, packaging units with a shortfall and old executions are not taken back.
(7.8) If one of the points mentioned under § 7.7 is relevant, the returned product is scrapped after consulting with the customer and expiry of a suitable period set for the customer.
§ 8 Reservation and structure of ownership / Reservation of proprietary rights and property relations
(8.1) The seller retains the ownership of the delivered objects till the receipt of all payments from the business relationship with the customer. The reservation of ownership also extends to the recognised balance, if the seller posts receivables vis-à-vis the customer in the current invoice (current account retention).
(8.2) The dies, tools, design documents and other similar objects delivered by the seller for executing the order also remain the property of the seller. In particular, no ownership rights follow from the fact that the customer has contributed towards the costs of manufacturing the dies, tools, design documents and other similar objects.
(8.3) The customer is committed, as long as the ownership has not been transferred to him, to handle the purchased object properly and to identify it clearly and permanently as property of the seller. He is especially committed in case of high quality products to insure these at the new value adequately against theft, fire and water damages at his own cost. In case of doubt, the customer must obtain information from the seller. If maintenance and inspection work is to be done, the customer must carry these out on time at his cost.
(8.4) The processing or restructuring of the delivered objects by the customer is done always for the seller as manufacturer as defined in § 950 BGB (manufacturer's clause), but without committing him. If the delivered objects are processed with other objects not belonging to the seller, the seller then acquires the co-ownership of the new object in the ratio of the value of the delivered object to the other connected or joined objects at the time of processing. The object arising from processing must be handled as the goods subject to retention of title.
(8.5) If the delivered objects are processed with other objects not belonging to the seller, are connected or joined inseparably, the seller then acquires the co-ownership of the new object in the ratio of the value of the delivered object to the other connected or joined objects at the time of processing. The object arising from processing must be handled as the goods subject to retention of title.
(8.6) The customer is committed to take charge of the (co-) ownership of the seller free of cost and with proper business care; it is to be treated like goods subject to retention of title. In doing so, the customer is committed to show the care over and above the one he shows in his own matters.
(8.7) Before the transfer of ownership, the product of the seller may neither be mortgaged nor pledged as security without a written permission. The assertion of third party rights on the product is to be informed immediately to the seller. In addition, all information necessary in this case for a possible intervention of the seller is to be given and the documents and other correspondence necessary for this must be handed over. If the customer does not fulfil the requirements, the damages arising from this are charged to the customer. In this case, all claims against the customer become due immediately.
(8.8) As long as the customer goes according to the contract i.e. fulfils his contractual payment obligations, the customer has the right to sell further or use the delivered objects in the scope of proper business transaction and to collect the corresponding receivables after assignment of claim. Otherwise, the authorisation can be revoked. If the goods are sold before paying the receivables of the seller, the customer is then committed to preserve and secure the ownership rights of the seller till the complete repayment of the receivables. To do this, he surrenders all receivables to the seller (the receivables arising from the resale as well as the ancillary rights and security interests of the customer from the resale, and possible indemnity claims owing to damage and destruction of the goods subject to retention of title, which also includes an insurance sum in place of the retention of title) amounting to the final invoice amount (including VAT), which accrue for the customer from the resale to his customers or to third parties, regardless of the fact whether the delivery objects have been resold without or according to the agreement. The assignment of claim is accepted here explicitly. In case coownership of the customer is sold, the assignment of claim of the receivable extends to the amount, which matches the share value of the seller. The customer is authorised to collect the receivables even after surrendering them. The authority of the seller to collect the receivable himself remains unaffected by this; however, the seller is committed not to collect the receivable as long as the customer fulfils his payment obligations in a proper way and does not come in default of payment. In each case the seller can demand that the customer discloses the collected receivables and their debtors as well as provides all information necessary for the collection, hands over all the documents necessary for this and notifies the surrender to the debtors (third parties). In this case the seller - other rights notwithstanding - is especially entitled to take the delivered objects (or their substitutes) provisionally at the cost of the customer and to utilise the delivered objects (or their substitutes) after giving reminders according to dutiful discretion, whereby a corresponding credit (minus the costs of utilisation) is granted to the customer.
(8.9) The customer has no right to the other dispositions over the goods subject to retention of title, in particular to a hypothecation or a security pledging. The authorisation of the customer can further be revoked by the seller in case of violation of duties from §§ 3, 8 as well as non-payment of the invoice. In these cases, the processing of the goods subject to retention of title and their connecting or joining with other products is also prohibited to the customer as well as the seller has the right to take back the delivered objects; the customer is committed to surrender / take the goods back. The taking back of the delivered objects by the seller implies a withdrawal from the contract. A withdrawal from the contract also lies in the garnishment of the delivered objects. In case of garnishments or other third party interventions, the customer must inform the seller immediately in writing.
(8.10) Apart from this, the seller can, if the customer defaults with his payment obligations vis-à-vis the seller for longer than three months, demand the goods subject to retention of time at the cost of the customer and collect the receivables and other claims surrendered to the seller. Moreover, the seller can - if there is still a security interest of the seller - utilise the goods subject to retention of title for satisfying his claims according to discretion as per the duty at the cost of the customer. The profit gained with the deduction of the utilisation costs is offset against the open receivables of the seller visà- vis the customer –starting with the latest receivable that is due.
(8.11) The seller is committed to release the securities, to which he is entitled upon request by the customer to the extent that their value exceeds the receivables to be secured in case these are not compensated, by more than ten (10) percent.
(8.12) With the repayment of all claims of the seller by the customer, all surrendered claims along with ancillary rights and security interests are transferred again to the customer.
§ 9 Warranty and warranty exclusion
(9.1) The customer must check the delivered product immediately with a thoroughness reasonable for him and - if necessary, through a sample processing - check the texture of the delivered product and complain about the ascertained defects immediately in writing (as far as possible and reasonable, by submitting reference samples) and by specifying the invoice, manufacture and dispatch number. Hidden defects are to be complained in the same way. Else, the product is considered as approved unconditionally. Possibly further obligations of the customer according to § 377 HGB remain unaffected.
(9.2) Obvious defects, caused through transportation by the carrier, must be noted by the customer in the bill of lading of the carrier so that a later recourse of the seller against the carrier becomes possible.
(9.3) Minor deviations in dimensions and execution, present in the scope of technically specified tolerances, do not justify a complaint.
(9.4) The warranty does not include those defects that are caused by arrangement and mounting not done by the seller, improper installation, nonadherence to installation requirements and usage conditions, overload on the parts over and above the performance specified by the seller, negligent or incorrect handling and use of inappropriate operating materials; this also applies to defects caused by the material provided by the customer. The seller is also not responsible for damages, which are caused by third party handling, by atmospheric discharges, overstress and improper chemical influences. The warranty does not include the use of parts, which are subject to a natural wear. This does not apply, if the defect is caused by a condition not mentioned above.
(9.5) The seller also has the right to refuse a supplementary performance in the case and as long as the customer does not allow any proper checking of the complained defects by the supplier.
(9.6) In case of a justified and on-time complaint of defects, the seller rectifies the defect upon request and choice of the customer during a supplementary service either by removing the defect or by delivering a defect-free product.
(9.7) The time limitation of defect complaints and reimbursement of expenses pursuant to § 445a BGB is - regardless of §§ 307 No. 7 a) and b) BGB, the liability in case of intention, the malicious concealment of a defect and existence of a quality guarantee (§ 444 BGB) - one year starting from the handover; in the case of defects per § 438 I, No. 2 b) BGB (possibly together with § 651, S.1 BGB) or § 634a I, No. 2 BGB five years after handover / acceptance (in the case of structures and in the case of a product which has been used for a building according to its normal use and which has caused its defect).
(9.8) Recourse claims of the customer according to § 445a BGB are excluded.
(9.9) Further, the indemnity claims are restricted according to specification of § 10.
§ 10 Exclusion of liability and Statute of Limitation
(10.1) Explicitly ruled out from the liability exclusions and restrictions given below are the injuries to life, body and health, caused by an intentional (§ 276 III BGB) or negligent (§ 276 II BGB) breach of duty of the seller or an intentional or negligent breach of duty of the legal representative or agents (§ 278 BGB) of the seller, as well as for other damages, which are caused by a grossly negligent breach of duty of the seller or an intentional and grossly negligent breach of duty of a legal representative or agents of the seller as defined in §§ 309 No. 7 a) and b) BGB. Moreover, the liability exclusions and restrictions given below do no apply in case of take over of a guarantee for the texture or durability of the product as defined in § 444 BGB and in case of a malicious concealment, as well as in case of a mandatory liability according to product liability law and insofar as an obligation, the fulfillment of which allows the proper performance of the contract, and on whose compliance the contractual partner may regularly trust and trust (cardinal obligation) is violated.
(10.2) The seller, his representatives and his agents are liable in case of a violation of non-essential contractual obligations only for intent and gross negligence.
(10.3) A claim of the customer or third part for the payment of contractual penalty is ruled out.
(10.4) For damages caused by delay, the seller is liable in case of simple negligence only up to an amount of 5% of the agreed upon purchase price.
(10.5) If a product is manufactured by the seller based on design specifications, drawings, models or other specifications of the customer, the liability of the seller then extends only to the execution as per the conditions. There is no obligation of the seller to warn in case of lack of suitability of the design specifications, drawings, models or other specifications made available by the customer.
(10.6) In case of non-adherence to conditions for mounting, commissioning and usage (such as the ones given in instructions for use) or the regulatory permit conditions all indemnity claims are ruled out.
(10.7) If the seller makes available samples or specimens to the customer or receives these from him, specifies analyses, DIN provisions, other domestic or foreign quality standards or provides other information about the texture of the product, these are meant only for a detailed description of the services to be provided by the seller. This is not connected with a guarantee of quality. The seller is especially not committed to check, whether the product serves the intended purpose specified by the customer or is suitable for it.
(10.8) All indemnity claims, no matter for what reason, expire latest by one year after the handover of the product to the customer. In case of a criminal liability, the time limitation starts from the knowledge or grossly negligent ignorance of the conditions and identity of the liable person justifying the claim. Shorter time limitation periods take precedence.
§ 11 Unauthorised withdrawal
If the customer withdraws from the contract in an unauthorised way or else refuses to accept the delivery or service in an unauthorised way, the seller has the right to demand 30 (thirty) percent of the agreed upon price as lump-sum indemnity without special proof, if the lump-sum amount typically does not exceed the damages to be expected. The proof remains open to the customer that no or a lower damage than the lump-sum damage accrued for the seller.
§ 12 Prohibition of assignment
The customer may concede his claims from this contract made against the seller to a third party only with his prior written consent.
§ 13 Jurisdiction and place of fulfilment
(13.1) Jurisdiction for all disputes, also for bills of exchange and cheques, is the District Court Menden or the District Court (Land Court Arnsberg. However, the seller also has the right to sue the customer at his head-office.
(13.2) Place of fulfilment of the delivery, all services and payments of the companies OBO Bettermann Vertrieb Deutschland GmbH & Co. KG and OBO Bettermann Projekt und Systemtechnik is Iserlohn (Sauerland), and of the companies OBO Bettermann Export GmbH & Co. KG, OBTEC GmbH, Flugplatzgesellschaft Arnsberg – Menden mbH, FAM Holding GmbH, OBO JET-CHARTER GmbH, Grundstücksverwaltung Bettermann GmbH & Co. KG, OBO Bettermann Produktion Deutschland GmbH & Co. KG and OBO Bettermann Holding GmbH & Co. KG is Menden (Sauerland).
§ 14 Other provisions
(14.1) The seller has the right to process and save the data about the customer received in course of the business relation according to the Federal Data Privacy Act, no matter whether these data originate from the customer or from third parties.
(14.2) German law is applicable exclusively. In particular, the application of the UN Convention on Contracts for the International Sale of Goods is ruled out.
(14.3) All agreements made between the parties for the purpose of executing this contract are documented in writing in this contract.
(14.4) In the case of differences between the English and the German version, the German version of the AEB shall prevail.

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