



Solutions for data centres



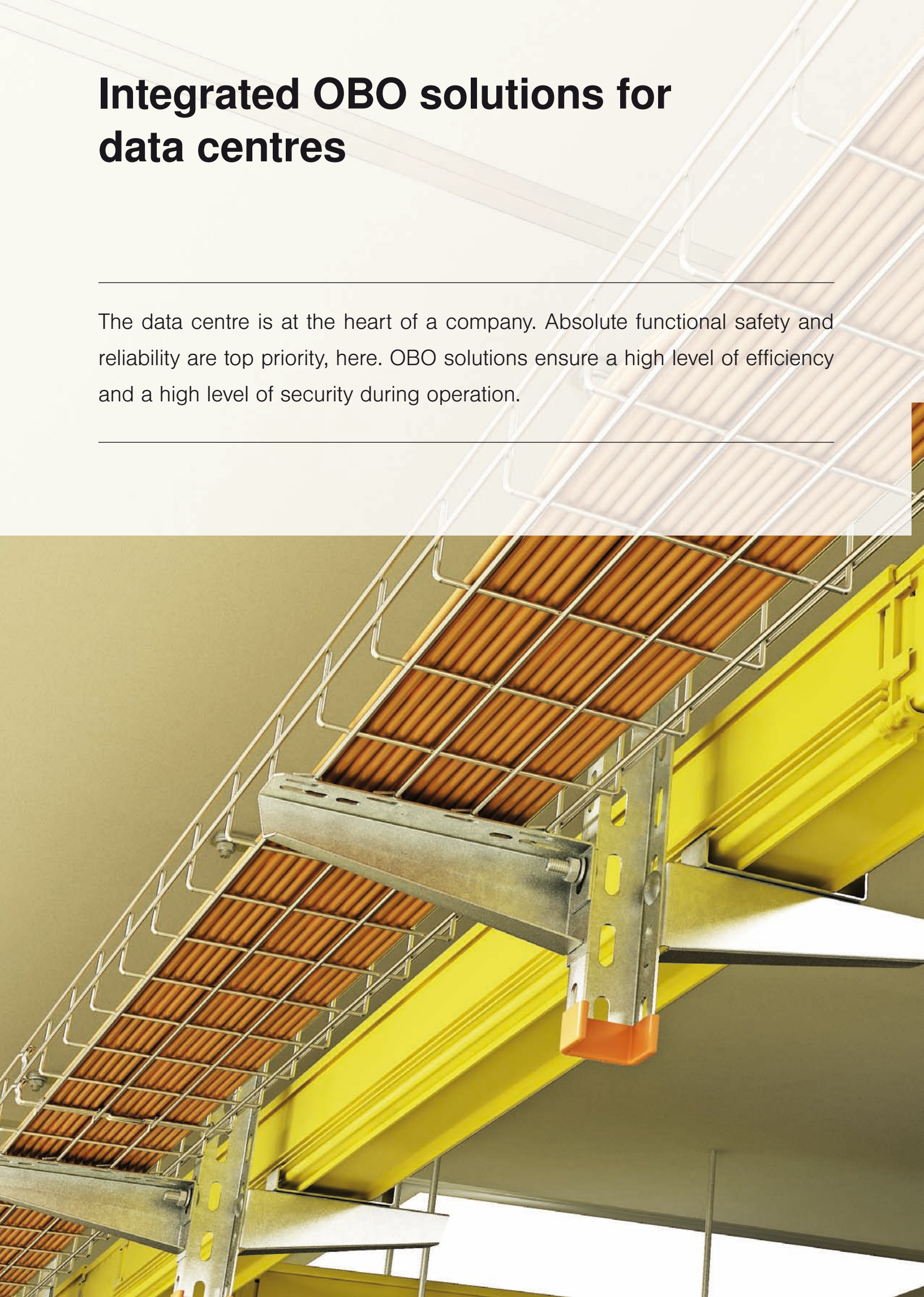
OBO
BETTERMANN



THINK CONNECTED.

Integrated OBO solutions for data centres

The data centre is at the heart of a company. Absolute functional safety and reliability are top priority, here. OBO solutions ensure a high level of efficiency and a high level of security during operation.



Contents

Complete supply and protection

In the past, there were providers of support systems for data and fibre optic cables, providers of power supply systems, providers of surge protection, providers of fire protection and providers of function maintenance systems. Today, at OBO, everything comes from one source.

Our selection for your project

This solutions catalogue contains a selection of our products for data centre structures. You can find over 30,000 additional products for all areas of electrical installations in our seven main catalogues, or on the Internet.

**Cable routing,
fibre optic cables**

**Routing of power/
copper cables**

Mounting systems

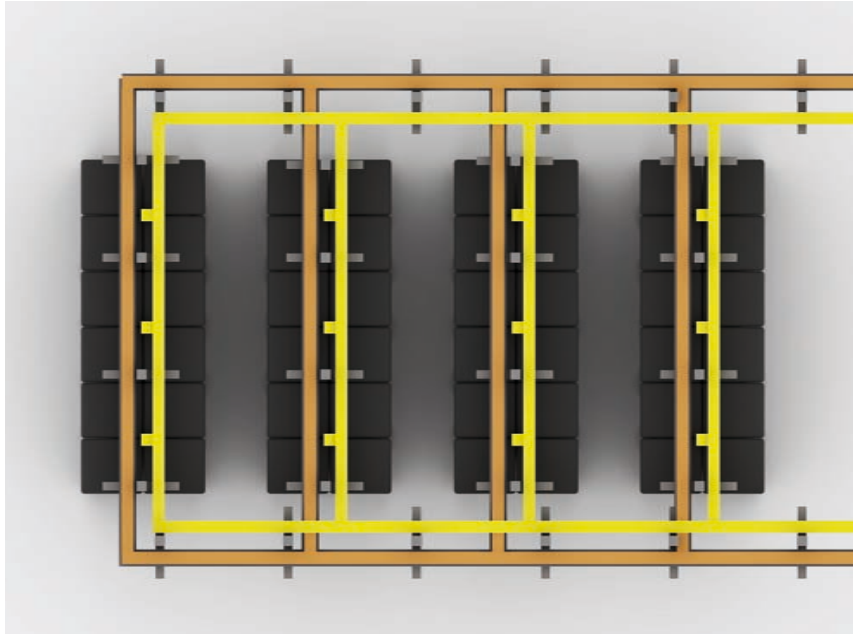
Fire protection systems

Lightning and surge protection

Directories



Increased efficiency through integrated planning and networked systems



Our data centre solutions also remain true to the OBO motto “Think connected”. We can offer you systems necessary for the electrical infrastructure of a data centre.

Take advantage of the synergy effects of perfectly matched components in all the project phases, from planning to mounting. Besides a wide range of products for feeding data and energy, we can offer you a range of systems to ensure the safe operation of your data centre in any area. Usually the data centre requirements are the same. However, structural conditions and infrastructure connections are not comparable. We make a distinction between:

Smaller data centres

- In small and medium-sized companies
- In stations for national networking of FTTO and FTTH
- In a setup as a standalone solution or housed in existing systems

Medium-sized data centres

- In larger companies
- At service providers and service centres for data backup and archiving

Large data centres

- In large companies
- In infrastructural buildings such as airports and railway stations
- At larger service providers and service centres for data backup and archiving

Should you have any questions regarding planning and execution, then OBO Customer Service will gladly provide you with help and advice – get in touch with us.







Connection from above and below

In modern data centres, the computer infrastructure is usually supplied in two stages: Data cables come from above and the power supply from below. This ensures tidy, fault-free connection of the complete data centre structures. Our systems are perfectly matched to these requirements.

Perfect connection for power and data

Cable routing for fibre optic cables

The modular system ensures a flexible, secure connection of sensitive fibre optic cables to the computer infrastructure. With various routing duct variants, fittings, end pieces, reductions and exits, you can match the system exactly to local requirements. The cable routing duct requires no metallic components and is completely halogen-free (PPO, ROHS-conformant, UL2024A standard-certified).

Cable routing for power and copper cables

Our cable tray and mesh cable tray systems run power and data cables – either in ceilings or in raised floors. The variety of our systems guarantees the right solution for any conceivable application.

Mounting systems

Cable routing duct for fibre optic cables, mesh cable trays or cable trays have a shared base: The universally applicable mounting systems. They ensure secure anchoring – beneath the ceiling, on the wall or in the floor, and are available in many different versions.



OBO systems are safe – even in emergencies



Secure operation and protection of the data centre is of key importance for your company. OBO can offer you a perfectly matched protection package against all kinds of faults.

Lightning and surge protection

Our lightning and surge protection systems protect against both lightning strikes and surges via the power and data networks.

Fire protection

If there is a fire, then extinguishing it is of paramount importance. OBO insulation systems prevent the spread of the fire via cable penetrations. This prevents the spread of fire and smoke into the next rooms.

Function maintenance

In addition, special function maintenance systems can also provide considerable time savings when shutting down the system and making backups. They can also be used to maintain power to the emergency lighting, fire alarm systems or systems for active fire-fighting.







LD cable routing duct for data centre systems

Today, fibre optic cables are used as standard to transmit the largest possible volumes of data across large distances. The proportion of fibre optic cables in IT and telecommunications is rising rapidly. The high sensitivity of these cables results in special requirements for the routing systems for fibre optic technology.





The LD cable routing duct system is specially designed for the installation of fibre optic cables. Careful routing with constant monitoring of approved bend radii is paramount with this extremely flexible system. The following material specifications are the hallmark of this system:

- Completely halogen-free plastic system made of Noryl (PPO)
- UL-certified (UL 94-V0)
- UV-resistant
- ROHS-conformant

These perfectly matched system sizes allow the creation of routing systems of different cable volumes in computer centres. The following system specifications are the hallmark of this system:

- Screwless, simple mounting/installation
- Comprehensive range of fittings for horizontal and vertical changes of direction
- Range of fittings perfectly matched to the bend radii of fibre optic cables
- Outlets can be attached at a later time without any risk or problems.
- Available in 4 dimensions from 50 x 50 mm to 300 x 100 mm

Cable routing, fibre optic cables

	Cable routing duct	Duct, closed with cover Duct, closed without cover Duct, perforated with cover	12 12 12
	Fittings	Coupling Bend T piece Intersection End piece Reduction Flexible tube Bend Radius Universal	13 13 14 15 16 17 17
	Mounting accessories	Mounting clamp	18
	Tool	Cut-out tool	19



Cable routing duct for data centre systems

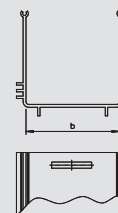


Closed cable routing duct with cover

Type	System size	Colour	Length	Dimension b	Pack.	Weight	Item No.
			mm	mm	m	kg/100 m	
LD 50050CCY	50	Yellow	2000	50	1	71.000	6149 02 1
LD 100100CCY	100	Yellow	2000	100	1	340.000	6149 02 7
LD 220100CCY	220	Yellow	2000	220	1	625.000	6149 03 3
LD 300100CCY	300	Yellow	2000	300	1	590.000	6149 03 9

PPO Polyphenylene oxide /m

Cable routing duct made of halogen-free PPO for the installation of data cables, closed without base/side perforation, with cover.

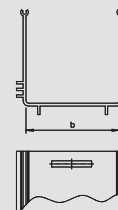


Closed cable routing duct without cover

Type	System size	Colour	Length	Dimension b	Pack.	Weight	Item No.
			mm	mm	m	kg/100 m	
LD 100100CY	100	Yellow	2000	100	1	230.000	6149 00 1
LD 220100CY	220	Yellow	2000	220	1	445.000	6149 00 7
LD 300100CY	300	Yellow	2000	300	1	430.000	6149 01 3

PPO Polyphenylene oxide /m

Cable routing duct made of halogen-free PPO for the installation of data cables, closed without base/side perforation, open version without cover.

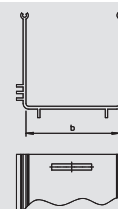


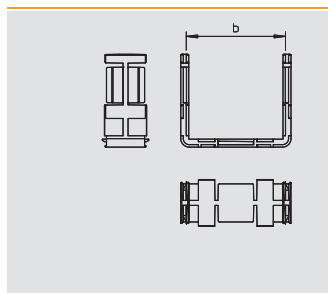
Perforated cable routing duct with cover

Type	System size	Colour	Length	Dimension b	Pack.	Weight	Item No.
			mm	mm	m	kg/100 m	
LD 50050CSY	50	Yellow	2000	50	1	71.000	6149 05 0

PPO Polyphenylene oxide /m

Cable routing duct made of halogen-free PPO for the installation of data cables, with side perforation, open version without cover.



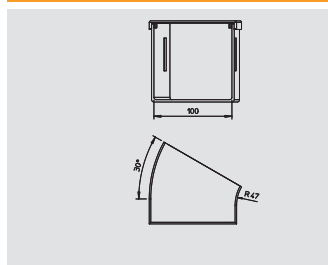
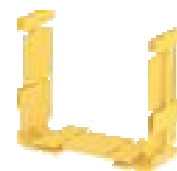


Coupling

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD C50050	50	Yellow	50	1	0.600	6149 06 1
LD C100100	100	Yellow	100	1	5.000	6149 06 7
LD C220100	220	Yellow	220	1	7.000	6149 07 3
LD C300100	300	Yellow	300	1	7.600	6149 07 9

PPO Polyphenylene oxide /pc.

Coupling for connecting the LD routing duct bases. Only 1 coupling is required per joint.

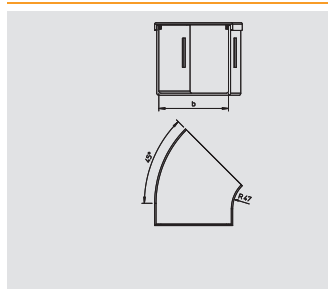


30° bend

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD 50050HB30C	50	Yellow	50	1	2.000	6149 22 5
LD 100100HB30C	100	Yellow	100	1	25.000	6149 27 3
LD 220100HB30C	220	Yellow	220	1	30.000	6149 24 3

PPO Polyphenylene oxide /pc.

Bend for horizontal change of direction of LD cable routing duct.

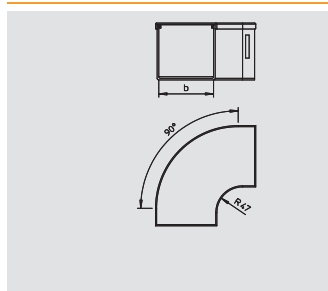


45° bend

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD 50050HB45C	50	Yellow	50	1	2.500	6149 23 1
LD 100100HB45C	100	Yellow	100	1	30.000	6149 23 7
LD 220100HB45C	220	Yellow	220	1	54.000	6149 24 9
LD 300100HB45C	300	Yellow	300	1	45.000	6149 25 5

PPO Polyphenylene oxide /pc.

Bend for horizontal change of direction of LD cable routing duct.

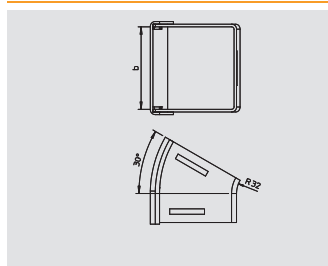


90° bend

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD 50050HB90C	50	Yellow	50	1	3.500	6149 26 1
LD 100100HB90C	100	Yellow	100	1	36.000	6149 26 7
LD 220100HB90C	220	Yellow	220	1	77.500	6149 27 9
LD 300100HB90C	300	Yellow	300	1	110.000	6149 28 5

PPO Polyphenylene oxide /pc.

Bend for horizontal change of direction of LD cable routing duct.

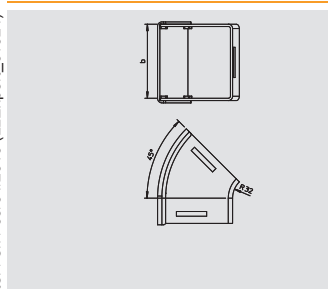
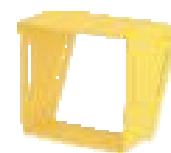


30° vertical bend, falling

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD 50050VBF30C	50	Yellow	50	1	2.500	6149 09 0
LD 100100VBF30C	100	Yellow	100	1	19.000	6149 09 6
LD 220100VBF30C	220	Yellow	220	1	30.300	6149 10 2

PPO Polyphenylene oxide /pc.

Vertical bend for vertical change of direction of LD cable routing duct.



45° vertical bend, falling

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD 50050VBF45C	50	Yellow	50	1	2.500	6149 12 5
LD 100100VBF45C	100	Yellow	100	1	30.000	6149 13 1
LD 220100VBF45C	220	Yellow	220	1	29.000	6149 13 7
LD 300100VBF45C	300	Yellow	300	1	36.000	6149 14 3

PPO Polyphenylene oxide /pc.

Falling vertical bend for vertical change of direction of LD cable routing duct.



Fittings



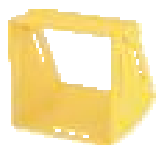
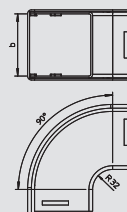
90° vertical bend, falling

Type	System size	Colour	Dimension b mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LD 50050VBF90C	50	Yellow	50	1	4.000	6149 17 0
LD 100100VBF90C	100	Yellow	100	1	31.000	6149 17 6
LD 220100VBF90C	220	Yellow	220	1	56.000	6149 18 3
LD 300100VBF90C	300	Yellow	300	1	73.200	6149 18 9

PPO Polyphenylene oxide

/pc.

Falling vertical bend for vertical change of direction of LD cable routing duct.



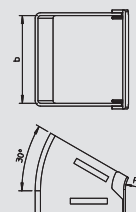
30° vertical bend, rising

Type	System size	Colour	Dimension b mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LD 100100VBR30C	100	Yellow	100	1	25.000	6149 11 0
LD 220100VBR30C	220	Yellow	220	1	25.000	6149 11 6

PPO Polyphenylene oxide

/pc.

Rising vertical bend for vertical change of direction of LD cable routing duct.



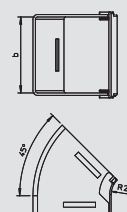
45° vertical bend, rising

Type	System size	Colour	Dimension b mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LD 100100VBR45C	100	Yellow	100	1	30.000	6149 14 9
LD 220100VBR45C	220	Yellow	220	1	25.000	6149 15 5
LD 300100VBR45C	300	Yellow	300	1	30.000	6149 16 1

PPO Polyphenylene oxide

/pc.

Rising vertical bend for vertical change of direction of LD cable routing duct.



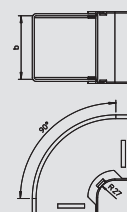
90° vertical bend, rising

Type	System size	Colour	Dimension b mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LD 50050VBR90C	50	Yellow	50	1	4.000	6149 19 7
LD 100100VBR90C	100	Yellow	100	1	30.000	6149 20 3
LD 220100VBR90C	220	Yellow	220	1	55.000	6149 20 9
LD 300100VBR90C	300	Yellow	300	1	73.000	6149 21 5

PPO Polyphenylene oxide

/pc.

Rising vertical bend for vertical change of direction of LD cable routing duct.



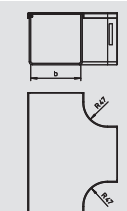
T piece horizontal

Type	System size	Colour	Dimension b mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LD 50050HTC	50	Yellow	50	1	5.500	6149 29 4
LD 100100HTC	100	Yellow	100	1	43.200	6149 30 0
LD 220100HTC	220	Yellow	220	1	93.200	6149 31 8
LD 300100HTC	300	Yellow	300	1	122.000	6149 33 0

PPO Polyphenylene oxide

/pc.

T piece to create horizontal changes of direction/cable branches for LD cable routing duct.



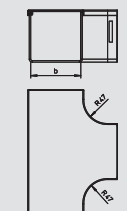
T-piece exit, horizontal

Type	System size	Colour	Dimension b mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LD 100TDO	100	Yellow	100	1	6.000	6149 30 6
LD 220TDO	220	Yellow	220	1	24.600	6149 32 4
LD 300TDO	300	Yellow	300	1	29.500	6149 33 6

PPO Polyphenylene oxide

/pc.

T piece as single side exit to create horizontal changes of direction/cable branches for LD cable routing duct.



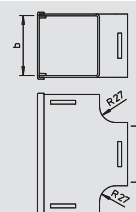
T piece vertical

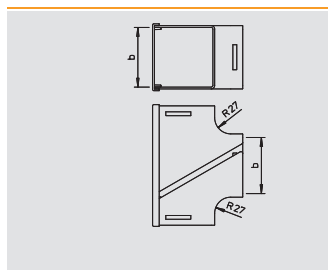
Type	System size	Colour	Dimension b mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LD 50050VTC	50	Yellow	50	1	5.500	6149 34 2
LD 100100VTC	100	Yellow	100	1	30.600	6149 35 4

PPO Polyphenylene oxide

/pc.

T piece to create vertical changes of direction/cable branches for LD cable routing duct.



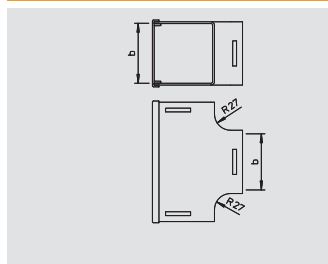


T piece vertical, retrofittable

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD 50050VTR	50	Yellow	50	1	5.500	6149 34 8
LD 100100VTR	100	Yellow	100	1	30.600	6149 36 0

PPO Polyphenylene oxide /pc.

T piece to create vertical changes of direction/cable branches for LD cable routing duct. Cables can also be added to the T piece at a later time.

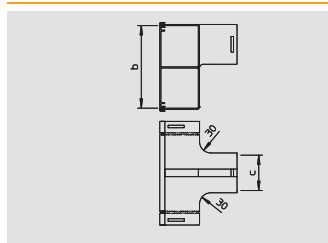


T piece vertical reduced

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD 220100VTC	220 to 100	Yellow	220	1	93.500	6149 37 2
LD 300100VTC	300 to 200	Yellow	300	1	112.500	6149 39 0

PPO Polyphenylene oxide /pc.

T piece with system size reduction to create vertical changes of direction/cable branches for LD cable routing duct.

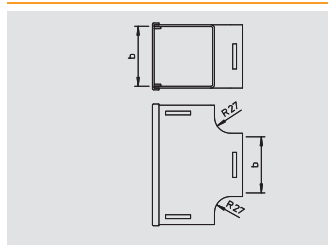


T piece vertical reduced, retrofittable

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD 220100VTR	220 to 100	Yellow	220	1	96.500	6149 37 8

PPO Polyphenylene oxide /pc.

T piece with system size reduction to create vertical changes of direction/cable branches for LD cable routing duct. Cables can also be added to the T piece at a later time.

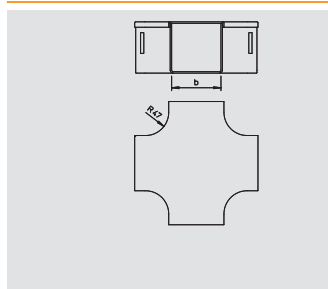


T piece vertical, 90° falling

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD 100VT90F	100	Yellow	100	1	25.000	6149 36 6
LD 200VT90F	220	Yellow	200	1	36.500	6149 38 4

PPO Polyphenylene oxide /pc.

T piece to create vertical changes of direction/cable branches for LD cable routing duct.

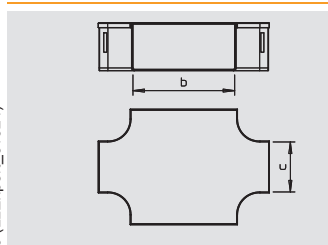


Intersection

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD 50050HCC	50	Yellow	50	1	7.000	6149 40 0
LD 100100HCC	100	Yellow	100	1	52.000	6149 40 6
LD 220100HCC	220	Yellow	220	1	110.000	6149 41 2
LD 300100HCC	300	Yellow	300	1	138.000	6149 41 8

PPO Polyphenylene oxide /pc.

Intersection to create intersections with LD cable routing duct.

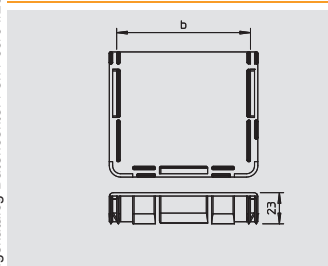


Intersection with reduction

Type	System size	Colour	Dimension b mm	Dimension C mm	Pack.	Weight	Item No.
					pcs	kg/100 pcs.	
LD 220100HCRC	220 to 100	Yellow	220	100	1	78.000	6149 42 4
LD 300100HCRC	220 to 300	Yellow	300	100	1	131.000	6149 43 0

PPO Polyphenylene oxide /pc.

Intersection with reduction to create intersections with LD cable routing duct.



End piece, closed

Type	System size	Colour	Dimension b mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
LD 100100EC	100	Yellow	100	1	6.000	6149 44 0
LD 220100EC	220	Yellow	220	1	11.000	6149 44 6
LD 300100EC	300	Yellow	300	1	15.000	6149 45 8

PPO Polyphenylene oxide /pc.

End piece to create end closures or end outlets of LD cable routing duct.



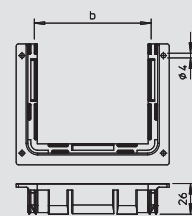
Fittings



End piece with cable outlet

Type	System size	Colour	Pack.	Weight		Item No.
				pcs	kg/100 pcs.	
LD EO50	50	Yellow	1	2.200		6149 46 4
LD EO100	100	Yellow	1	5.600		6149 47 0
LD 50050EA38	50 to 38	Yellow	1	2.500		6149 45 2

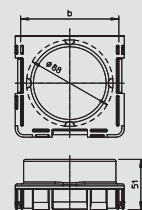
PPO Polyphenylene oxide /pc.
End piece to create end closures or end outlets of LD cable routing duct.



End piece for flexible tube system 100 mm

Type	System size	Colour	Dimension b mm	Pack.	Weight		Item No.
					pcs	kg/100 pcs.	
LD 100-88EA	100 to 1x88	Yellow	100	1	7.200		6149 47 6

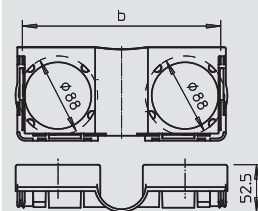
PPO Polyphenylene oxide /pc.
End piece to create end closures or end outlets of LD cable routing duct.



End piece for flexible tube system 220 mm

Type	System size	Colour	Dimension b mm	Pack.	Weight		Item No.
					pcs	kg/100 pcs.	
LD 220-2-88EA	220 to 2x88	Yellow	220	1	11.800		6149 48 2

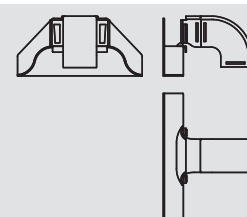
PPO Polyphenylene oxide /pc.
End piece to create end closures or end outlets of LD cable routing duct.



Side exit

Type	System size	Colour	Pack.	Weight		Item No.
				pcs	kg/100 pcs.	
LD DO80	For 80 cables	Yellow	1	12.000		6149 49 0
LD DO150	For 150 cables	Yellow	1	12.000		6149 49 6
LD DO50050	50	Yellow	1	14.000		6149 50 8
LD DO50050C	50	Yellow	1	3.000		6149 50 2

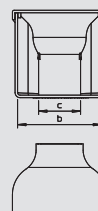
PPO Polyphenylene oxide /pc.
Side exit for LD cable routing duct.



Reduction

Type	System size	Colour	Pack.	Weight		Item No.
				pcs	kg/100 pcs.	
LD 100100RC	100 to 50	Yellow	1	9.000		6149 51 5
LD 300100RC	300 to 220	Yellow	1	34.500		6149 53 3

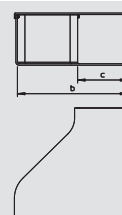
PPO Polyphenylene oxide /pc.
Reduction for LD cable routing duct.



Reduction, right

Type	System size	Colour	Pack.	Weight		Item No.
				pcs	kg/100 pcs.	
LD 220100RCR	220 to 100 right	Yellow	1	45.400		6149 52 1

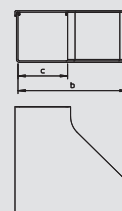
PPO Polyphenylene oxide /pc.
Reduction for LD cable routing duct.

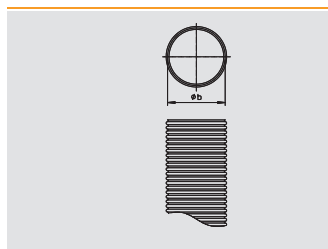


Reduction, left

Type	System size	Colour	Pack.	Weight		Item No.
				pcs	kg/100 pcs.	
LD 220100RCL	220 to 100 left	Yellow	1	45.400		6149 52 7

PPO Polyphenylene oxide /pc.
Reduction for LD cable routing duct.

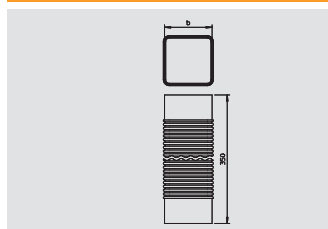
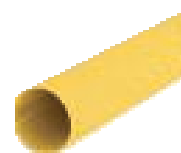




Flexible tube, round

Type	Length mm	System size	Colour	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LD FH50-2	2000	50	Yellow	50	1	40.000	6149 54 2
LD FH88-2	88	2000	Yellow	88	1	0.000	6149 54 8

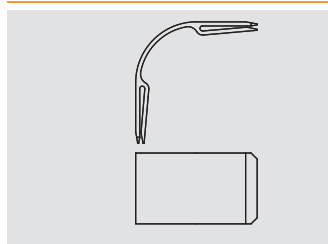
PPO Polyphenylene oxide /pc.
Special round flexible tube for flexible cable routing in the LD cable routing duct system.



Flexible tube, square

Type	System size	Length mm	Colour	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LD FHS50-350	80	350	Yellow	50	1	10.000	6149 55 4

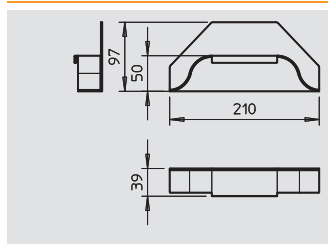
PPO Polyphenylene oxide /pc.
Special square flexible tube for flexible cable routing in the LD cable routing duct system.



Bend Radius Universal

Type	System size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
LD BR90-UNI	Universal	Yellow	1	1.000	6149 67 9

PPO Polyphenylene oxide /pc.
90° universally applicable bend radius for perfect cable routing and maintenance of the approved bend radii for fibre optic data cables in the LD routing duct system.



Exit ramp

Type	System size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
LD DOR100-300	Universal	Yellow	1	7.000	6149 67 0

PPO Polyphenylene oxide /pc.
Accessories perfect cable routing and maintenance of the approved bend radii for fibre optic data cables in the LD routing duct system.



Mounting accessories for data centre systems



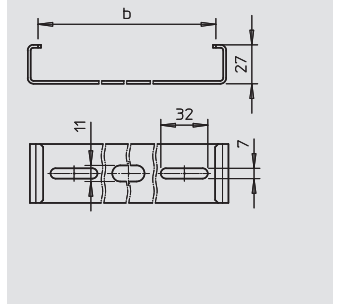
Mounting clamp

Type	System size	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
LD MC50	50	—	1	13.000	6149 57 1
LD MC100	100	—	1	0.000	6149 57 7
LD MC220	220	—	1	0.000	6149 58 3
LD MC300	300	—	1	0.000	6149 56 5

V2A Stainless steel, 1.4301

/pc.

Mounting/fastening element for LD cable routing duct system for fastening on OBO mounting systems (wall and support bracket).



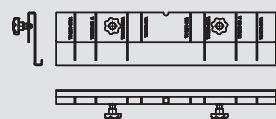
Cut-out tool

Type	Colour	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
LD ST50-100	—	1	420.000	6149 62 0
LD ST220-100	—	1	680.000	6149 61 0

ST Steel /pc.
Tool for processing the LD cable routing duct.



Saw guide



Type	Colour	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
LD ST-UNI	—	1	115.000	6149 63 5

ST Steel /pc.
Saw guide as tool to create branches and exits of the appropriate system sizes in LD cable routing duct.



Punching tool for 50 mm width

Type	Colour	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
LD ST50	—	1	220.000	6149 62 7

ST Steel /pc.
Tool to create cut-outs of the appropriate system sizes in LD cable routing duct.



Punching tool, hand-actuated

Type	Colour	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
LD CT-H	—	1	0.000	6149 65 5
LD CT-HC	—	1	260.000	6149 66 1

ST Steel /pc.
Tool (hand-actuated) to punch out branches and cable exits of the appropriate system sizes in LD cable routing duct. C version with case.



Punching tool, foot-actuated

Type	Colour	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
LD CT-F	—	1	0.000	6149 64 3
LD CT-FC	—	1	800.000	6149 64 9

ST Steel /pc.
Tool (foot-actuated) to punch out branches and cable exits of the appropriate system sizes in LD cable routing duct. C version with case.





For quick and targeted cable routing

No matter whether for individual cable routing or routing of cable bundles. OBO has tackled the challenge of being able to offer the right system for your application.

The following pages will give you an insight into the varied options for cable routing.




Heavy power cables, run in the floor and in cable trays or cable ladders, to power server cabinets, lighter plastic cables which, depending on use, can easily be run through the mesh of the mesh cable trays.

Versatile systems for a variety of applications

The following pages contain a small overview of our product range for cable routing, specifically for the installation requirements of computer centres.

Of course, all the systems listed here as well as others are available in other materials and surfaces. The main catalogues of the different product units contain a detailed overview of our complete product range.

Routing of power/copper cables

	Mesh cable tray systems	Mesh cable tray, GR-Magic	22
	Cable tray systems	Cable tray RKS-Magic®	24
	Cable ladder systems	Cable ladder LG 60 VS	25



Mesh cable tray systems

Routing of power/copper cables

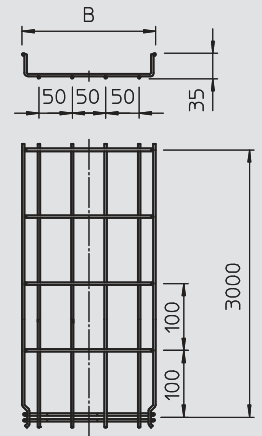


Mesh cable tray GR-Magic® 35

Type	Width mm	Wire Ø mm	Length mm	Useful cross- section cm ²	Weight kg/100 m	Item No.
GRM 35 50 G	50	3.9	3000	17,5	45.300	6000 06 0
GRM 35 100 G	100	3.9	3000	35	49.300	6000 06 2
GRM 35 150 G	150	3.9	3000	52,5	63.100	6000 06 3
GRM 35 200 G	200	3.9	3000	70	76.800	6000 06 4
GRM 35 300 G	300	4.8	3000	105	159.100	6000 06 6

ST Steel **G** Electrogalvanised /m

Mesh cable tray with shaped connector of side height 35 mm.
Magnetic shield insulation without cover 15 dB, with cover 25 dB.

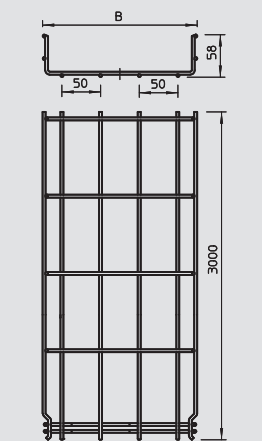


Mesh cable tray GR-Magic® 55

Type	Width mm	Wire Ø mm	Length mm	Useful cross- section cm ²	Weight kg/100 m	Item No.
GRM 55 50 G	50	3.9	3000	16	67.000	6001 44 1
GRM 55 100 G	100	3.9	3000	40	72.400	6001 44 2
GRM 55 150 G	150	3.9	3000	63	85.800	6001 44 4
GRM 55 200 G	200	3.9	3000	87	100.000	6001 44 6
GRM 55 200 4.8 G	200	4.8	3000	87	151.000	6001 44 7
GRM 55 300 G	300	4.8	3000	129	194.500	6001 44 8
GRM 55 400 G	400	4.8	3000	175	236.700	6001 45 0
GRM 55 500 G	500	4.8	3000	220	279.000	6001 45 2
GRM 55 600 G	600	4.8	3000	265	321.200	6001 45 4

ST Steel **G** Electrogalvanised /m

Mesh cable tray with shaped connector of side height 55 mm.
Magnetic shield insulation without cover 15 dB, with cover 25 dB.

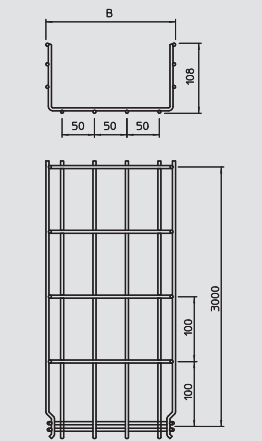


Mesh cable tray GR-Magic® 105

Type	Width mm	Wire Ø mm	Length mm	Useful cross- section cm ²	Weight kg/100 m	Item No.
GRM 105 100 G	100	3.9	3000	82	100.000	6002 40 2
GRM 105 150 G	150	3.9	3000	130	110.900	6002 40 4
GRM 105 200 G	200	4.8	3000	175	194.500	6002 40 6
GRM 105 300 G	300	4.8	3000	268	236.700	6002 40 8
GRM 105 400 G	400	4.8	3000	363	278.000	6002 41 0
GRM 105 500 G	500	4.8	3000	459	319.000	6002 41 5
GRM 105 600 G	600	4.8	3000	554	359.000	6002 41 7

ST Steel **G** Electrogalvanised /m

Mesh cable tray with shaped connector of side height 105 mm.
Magnetic shield insulation without cover 15 dB, with cover 25 dB.

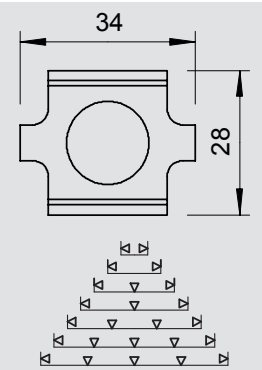


Joint connector

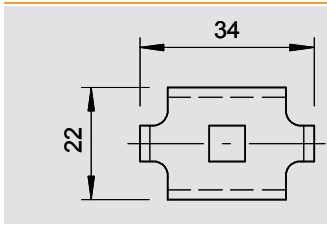
Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
GSV 34 G	25	3.000	6016 59 6

ST Steel **G** Electrogalvanised /pc.

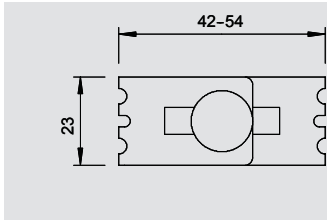
Screwed version of joint connector for cable trays.



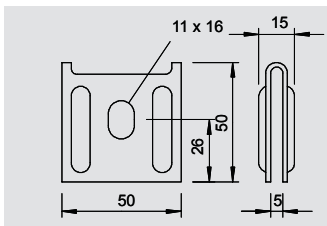
Mesh cable tray systems



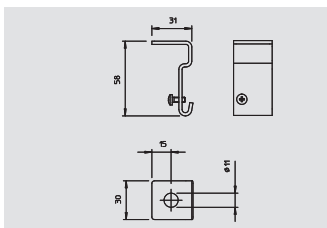
Type			Clamping piece		
Type	Material	Finish	Pack.	Weight	Item No.
	pcs	kg/100 pcs.			
GKS 34 G	100	2.000	6016 85 5		
ST Steel	G Electrogalvanised				/pc.



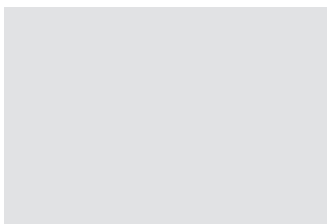
Type			Corner connector		
Type	Material	Finish	Pack.	Weight	Item No.
	pcs	kg/100 pcs.			
GEV 36 G	100	3.000	6016 71 5		
ST Steel	G Electrogalvanised				/pc.



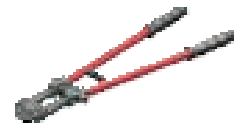
Type			Wall and floor fastener		
Type	Material	Finish	Pack.	Weight	Item No.
	pcs	kg/100 pcs.			
K 12 1818 FS	25	7.600	6437 10 9		
ST Steel	FS Strip-galvanised				/pc.



Type		Side holder		
Type	For threaded rod	Pack.	Weight	Item No.
	pcs	kg/100 pcs.		
SH M10 FS	M10	50	5.500	6015 33 6
ST Steel	FS Strip-galvanised			/pc.



Type			Bolt cutter		
Type	Length	Cutting area	Pack.	Weight	Item No.
	mm	mm	pcs	kg/100 pcs.	
GR BS	450	3 - 6.0	1	160.000	6017 70 0
ST Steel					/pc.



Cable tray systems

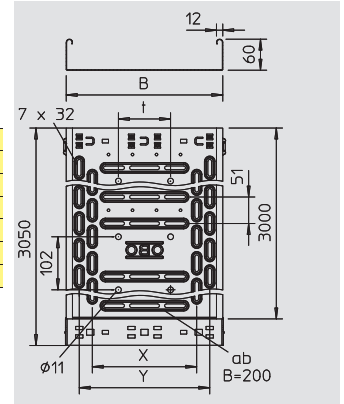


Cable tray RKS-Magic®

Type	Width mm	Plate thickness mm	Length mm	Useful cross- section cm ²	Dimen- sion x mm	Dimen- sion y mm	Dimen- sion t mm	Weight kg/100 m	Item No.
RKSM 610 FS	100	0.75	3050	58	—	50	—	134.300	6047 61 1
RKSM 615 FS	150	0.75	3050	88	50	100	—	157.700	6047 63 0
RKSM 620 FS	200	0.75	3050	118	100	150	—	183.000	6047 63 8
RKSM 630 FS	300	0.75	3050	178	200	250	100	239.000	6047 65 4
RKSM 640 FS	400	0.9	3050	238	300	350	200	331.300	6047 68 9
RKSM 650 FS	500	0.9	3050	298	400	450	300	392.300	6047 71 9
RKSM 660 FS	600	0.9	3050	358	450	550	400	453.300	6047 73 5

ST Steel **FS** Strip-galvanised

RKSM 60 = efficient magic cable tray system with 60 mm side height.
Magnetic shield insulation without cover 20 dB, with cover 50 dB.

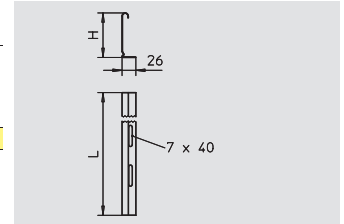


Separating retainer

Type	Dimen- sion H mm	Dimen- sion L mm	Pack. m	Weight kg/100 m	Item No.
TSG 60 FS	60	3000	45	0.000	6062 06 8

ST Steel **FS** Strip-galvanised

Barrier strip for separation of cables of different voltages or functions.

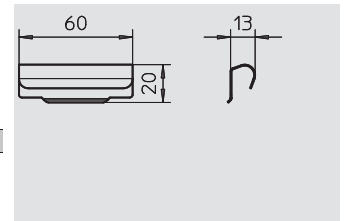


Separating retainer connector

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
TSGV VA4310	10	1.000	6067 97 0

V2A Stainless steel 1.4310

Barrier strip connector for screwless connection of the TSG barrier strip in all side heights.

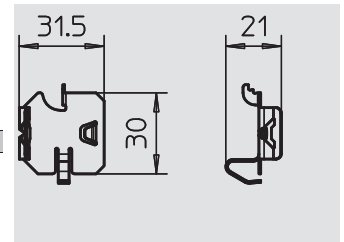


Clamping piece for separating retainer fastening

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KS KR VA4310	30	0.580	6062 28 0

V2A Stainless steel 1.4310

Clamping piece for screwless fastening of barrier strips in the cable tray types RKSM, MKS and SKS.

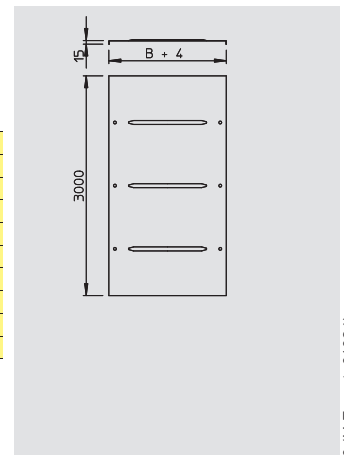


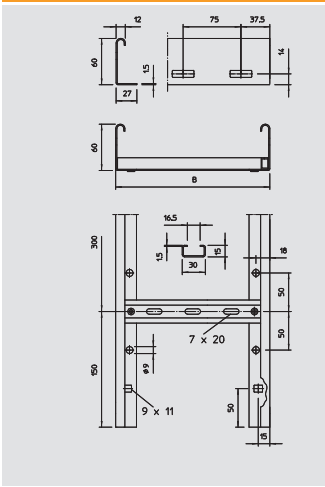
Cover with sash lock

Type	Width mm	Plate thickness mm	Length mm	Weight kg/100 m	Item No.
DRL 050 FS	50	0.75	3000	62.100	6052 05 3
DRL 075 FS	75	0.75	3000	81.700	6052 02 9
DRL 100 FS	100	0.75	3000	101.300	6052 09 6
DRL 150 FS	150	1	3000	140.600	6052 15 0
DRL 200 FS	200	1	3000	179.800	6052 20 7
DRL 300 FS	300	1	3000	258.300	6052 30 4
DRL 400 FS	400	1	3000	336.800	6052 40 1
DRL 500 FS	500	1.25	3000	518.500	6052 50 9
DRL 550 FS	550	1.25	3000	567.600	6052 56 8
DRL 600 FS	600	1.25	3000	616.700	6052 60 6

ST Steel **FS** Strip-galvanised

Cover for cable trays and cable ladders with three pairs of turn-buckles.
Take appropriate constructive protection measures if there are high wind speeds.



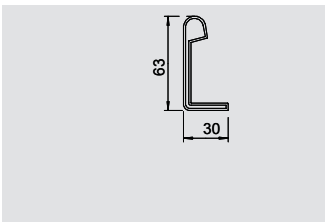


Cable ladder LG 60 VS

Type	Width mm	Rail thickness mm	Length mm	Weight kg/100 m	Item No.
LG 620 VS 3000FS	200	1.5	3000	281.700	6208 53 8
LG 630 VS 3000FS	300	1.5	3000	306.000	6208 54 1
LG 640 VS 3000FS	400	1.5	3000	330.000	6208 54 4
LG 650 VS 3000FS	500	1.5	3000	354.300	6208 54 7
LG 660 VS 3000FS	600	1.5	3000	378.300	6208 55 0
LG 620 VS 6000FS	200	1.5	6000	273.800	6208 62 7
LG 630 VS 6000FS	300	1.5	6000	298.000	6208 63 0
LG 640 VS 6000FS	400	1.5	6000	322.200	6208 63 3
LG 650 VS 6000FS	500	1.5	6000	346.300	6208 63 6
LG 660 VS 6000FS	600	1.5	6000	370.500	6208 63 9

ST Steel **FS** Strip-galvanised /m

Cable ladder with perforated side rail of side height 60 mm with riveted C profile rungs, open in an upwards direction (VS version).
Magnetic shield insulation without cover 10 dB, with cover 15 dB.

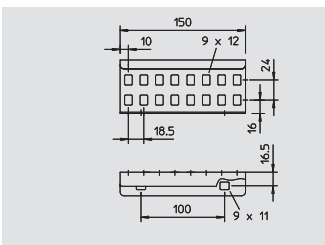


Protective cap

Type	Colour	Pack. pair	Weight kg/100 pairs	Item No.
SKH 60 OR	Pastel orange	40	1.100	6222 53 7

PE Polyethylene /pair

Protective cap to cover cable ladder ends of side height 60 mm.

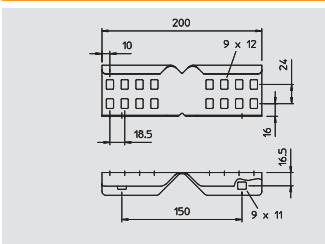
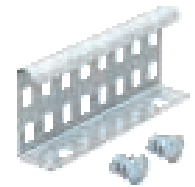


Straight connector

Type	Side height mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LVG 60 FS	60	20	20.000	6208 84 0

ST Steel **FS** Strip-galvanised /pc.

Straight connector as external connector to connect cable ladders and fittings with a side height of 60 mm and continuous rail perforation.

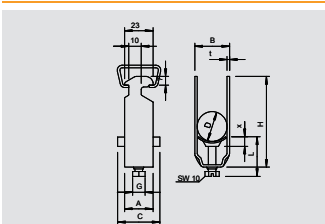


Angle connector

Type	Side height mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LWVG 60 FS	60	20	24.000	6208 89 5

ST Steel **FS** Strip-galvanised /pc.

Angle connector as external connector to join cable ladders and fittings with a side height of 60 mm and continuous rail perforation.



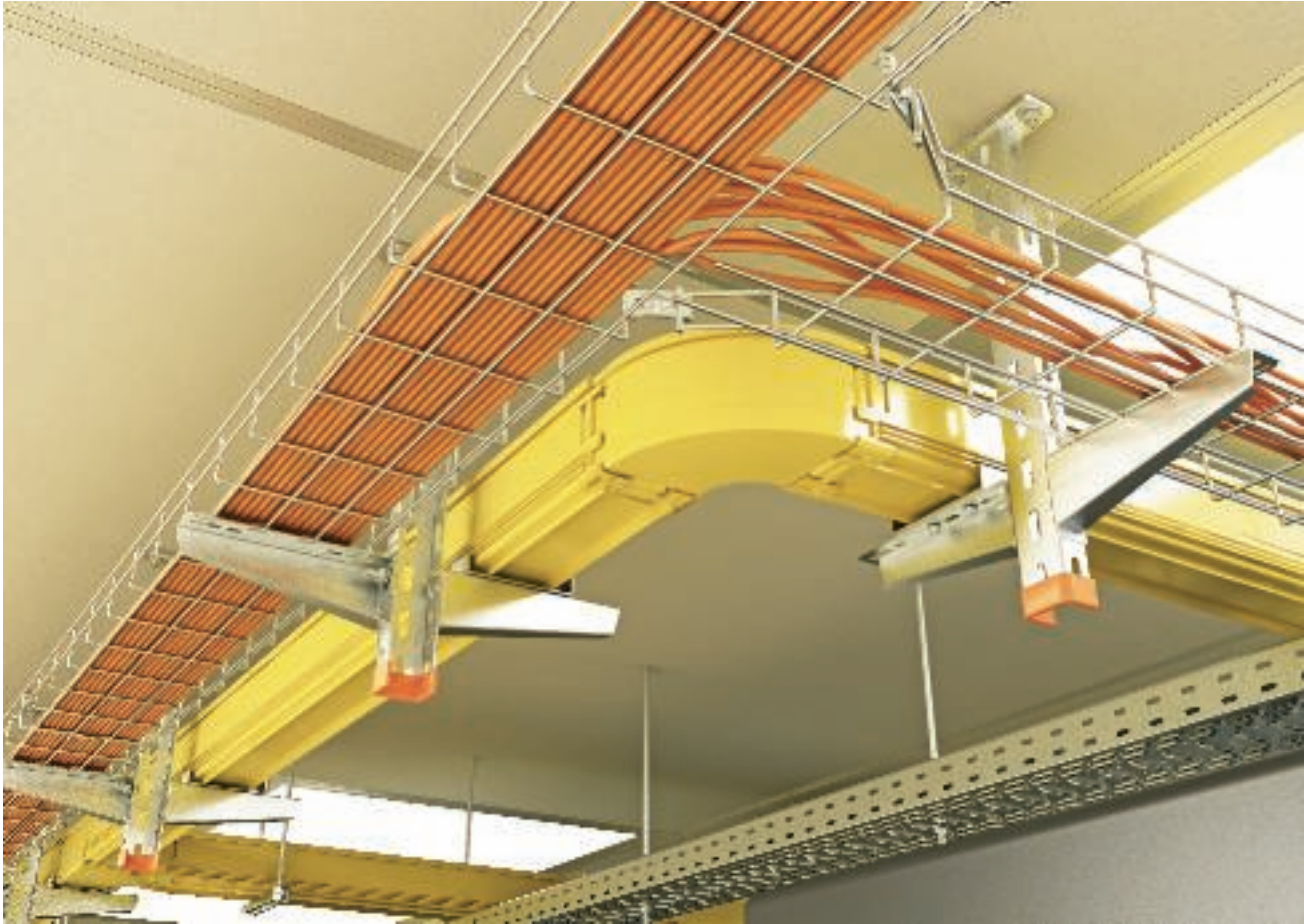
Clamp clip

Type	Clamping range D mm	Dimen- sion A mm	Dimen- sion B mm	Dimen- sion C mm	Dimen- sion G mm	Dimen- sion t mm	Dimen- sion H mm	Dimen- sion L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056 12 FT	8-12	23	16	34	M6	1.5	40	34	100	3.540	1160 12 5
2056 16 FT	12-16	23	20	34	M6	1.5	44	34	100	3.820	1160 16 8
2056 22 FT	16-22	23	27	34	M6	1.5	50	34	100	4.508	1160 22 2
2056 28 FT	22-28	23	33	34	M6	2	58	34	100	6.240	1160 28 1
2056 34 FT	28-34	23	39	34	M8	2	58	34	100	7.680	1160 34 6
2056 40 FT	34-40	23	45	45	M8	2	72	37.5	100	8.260	1160 40 0
2056 46 FT	40-46	23	51	40	M8	2	79	44.5	100	10.900	1160 45 1
2056 52 FT	46-52	23	57	40	M8	2	79	44.5	100	11.900	1160 52 4
2056 58 FT	52-58	23	64	40	M8	2.5	93	45.5	100	14.300	1160 58 3
2056 64 FT	58-64	23	70	40	M8	2.5	99	45.5	100	15.600	1160 64 8
2056 70 FT	64-70	25	76	40	M8	2.5	106	45.5	50	18.200	1160 70 2
2056 76 FT	70-76	25	82	40	M8	2.5	114	45.5	25	20.600	1160 76 1
2056 82 FT	76-82	25	88	40	M8	2.5	121	45.5	25	22.000	1160 82 6
2056 90 FT	82-90	25	97	40	M8	3	130	57.5	25	26.200	1160 90 7
2056 100 FT	90-100	25	107	40	M8	3	140	57.5	25	27.800	1160 99 0

ST Steel **FT** Hot-dip galvanised price/100 pc.

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.
Version with welding and/or locknuts for use under difficult circumstances and for shake protection on request.





One suspension/two systems

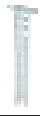




Beneficial synergies occur during planning. Fibre optic cable mounting systems can also be used for power/copper cabling and vice-versa. The range of installations can fulfil any requirements, as OBO mounting system are available in light- to heavy-duty designs. Light ceiling suspensions can, for example, be fitted with threaded rod suspensions or clamp constructions. Heavy-duty constructions are fastened to the ceiling or wall using supports or bracket suspensions.

And much, much more....

The following pages provide you with a brief overview of our mounting systems, matched to the installation requirements of computer centres.

Of course, all the systems listed here as well as others are available in other materials and surfaces. The main KTS (Cable support systems) catalogue contains a detailed overview of our complete product range.

Mounting systems

	Mounting systems	US 3 suspended support US 5 suspended support Wall and support brackets	28 28 29
	Wall and support brackets		29
	Spacer clamp		29
	Threaded rod		30
	Bolt tie		30



Mounting systems

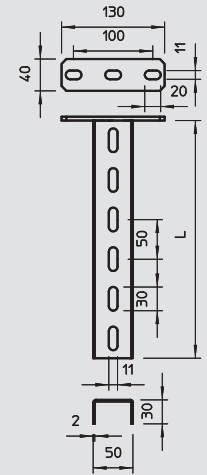


US 3 suspended support

Type	Length mm	Material thickness mm	Tensile load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
US 3 K 20 FT	200	2	5	1	50.500	6342 35 1
US 3 K 30 FT	300	2	5	1	64.400	6342 35 3
US 3 K 40 FT	400	2	5	4	78.300	6342 35 5
US 3 K 50 FT	500	2	5	1	92.300	6342 35 7
US 3 K 60 FT	600	2	5	1	106.200	6342 35 9
US 3 K 70 FT	700	2	5	1	120.200	6342 36 2
US 3 K 80 FT	800	2	5	1	134.100	6342 36 4
US 3 K 90 FT	900	2	5	1	147.800	6342 36 6
US 3 K 100 FT	1000	2	5	1	162.000	6342 36 8
US 3 K 110 FT	1100	2	5	1	175.900	6342 37 0
US 3 K 120 FT	1200	2	5	1	189.900	6342 37 2

ST Steel **FT** Hot-dip galvanised /pc.

Suspended support (U profile) of dimensions 50 x 30 mm with welded head plate.

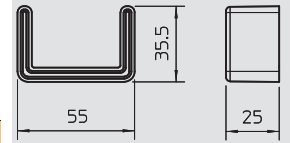


Protective cap

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
US 3 KS OR	Pastel orange	20	1.070	6338 45 8

PE Polyethylene /pc.

Protective cap to cover the ends of US 3 supports.

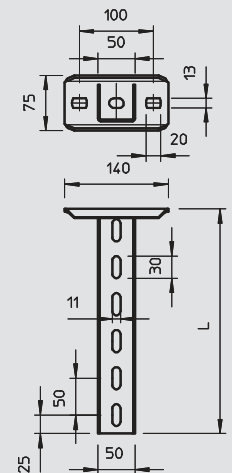


US 5 suspended support

Type	Length mm	Material thickness mm	Tensile load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
US 5 K 20 FT	200	2.5	10	1	85.000	6341 52 7
US 5 K 30 FT	300	2.5	10	2	110.000	6341 53 5
US 5 K 40 FT	400	2.5	10	1	136.000	6341 54 3
US 5 K 50 FT	500	2.5	10	1	161.000	6341 55 1
US 5 K 60 FT	600	2.5	10	1	186.000	6341 57 8
US 5 K 70 FT	700	2.5	10	1	211.000	6341 58 6
US 5 K 80 FT	800	2.5	10	1	236.000	6341 59 4
US 5 K 90 FT	900	2.5	10	1	262.000	6341 60 8
US 5 K 100 FT	1000	2.5	10	1	287.000	6341 61 6
US 5 K 110 FT	1100	2.5	10	1	311.000	6341 62 4
US 5 K 120 FT	1200	2.5	10	1	338.000	6341 63 2

ST Steel **FT** Hot-dip galvanised /pc.

U support of dimensions 50 x 50 mm with welded head plate.

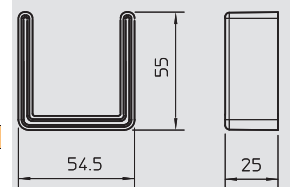


Protective cap

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
US 5 KS OR	Pastel orange	20	1.300	6338 46 2

PE Polyethylene /pc.

Protective cap for end covering of US 5 supports.

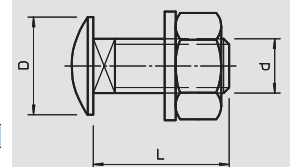


Truss-head bolt

Type	Grade	Dimen- sion mm	Dimen- sion L mm	Dimen- sion d mm	Dimen- sion D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
FRS 10X25 F 8.8	8.8	M10 x 25	25	10	24	50	4.500	6407 56 0

ST Steel **F** Hot-dip galvanised price/100 pc.

Truss-head bolt with square neck. With washer and hexagonal nut.



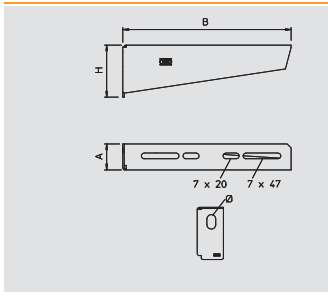
Hexagonal bolt

Type	Dimen- sion mm	Dimen- sion L mm	Dimen- sion d mm	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SKS 10X80 F	M10 x 80	80	10	17	20	7.700	6418 25 0
SKS 10X90 F	M10 x 90	90	10	17	20	8.000	6418 25 2

ST Steel **F** Hot-dip galvanised /pc.

Hexagonal bolt for universal fixing of structure components.



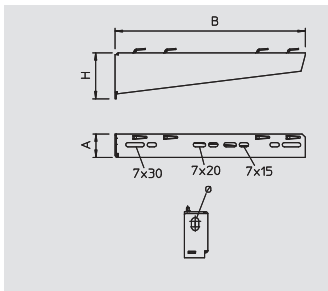


Wall and support bracket MWA 12

Type	Width mm	Dimension H mm	Dimension A mm	Hole Ø mm	F in kN kN	Pack. pcs	Weight kg/100 pcs.	Item No.
MWA 12 21S FS	210	65	32.5	11	1.2	30	24.500	6424 73 2
MWA 12 31S FS	310	75	38	11	1.2	30	57.000	6424 74 0
MWA 12 41S FS	410	83	38	11	1.2	30	68.000	6424 75 9

ST Steel **FS** Strip-galvanised /pc.

Folded light-duty wall and support bracket.

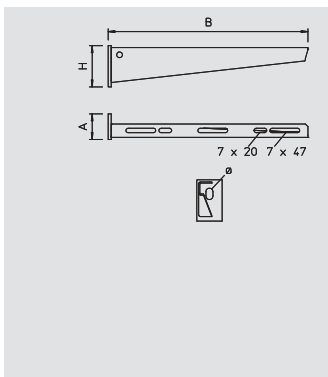


Wall and support bracket MWAG 12

Type	Width mm	Dimension H mm	Dimension A mm	Hole Ø mm	F in kN kN	Pack. pcs	Weight kg/100 pcs.	Item No.
MWAG 12 21 FS	210	65	32.5	11	1.2	30	24.400	6424 60 8
MWAG 12 31 FS	310	75	38	11	1.2	30	50.300	6424 61 6
MWAG 12 41 FS	410	83	38	11	1.2	25	68.100	6424 62 4

ST Steel **FS** Strip-galvanised /pc.

Folded light-duty wall and support bracket for screwless mesh cable tray fastening.

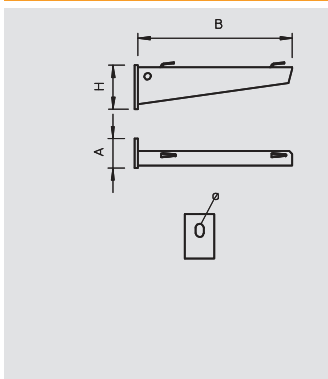


Wall and support bracket AW 15

Type	Width mm	Dimension H mm	Dimension A mm	Hole Ø mm	F in kN kN	Pack. pcs	Weight kg/100 pcs.	Item No.
AW 15 16 FT	160	55	40	11	1.5	30	21.000	6420 66 4
AW 15 21 FT	210	60	40	11	1.5	30	26.000	6420 68 0
AW 15 31 FT	310	65	40	11	1.5	30	32.500	6420 71 0
AW 15 41 FT	410	70	40	11	1.5	30	55.000	6420 74 5
AW 15 51 FT	510	75	40	11	1.5	20	72.000	6420 78 8
AW 15 56 FT	560	80	40	11	1.5	20	77.000	6420 79 6
AW 15 61 FT	610	80	40	11	1.5	20	85.000	6420 82 6

ST Steel **FT** Hot-dip galvanised /pc.

Light-duty wall and support bracket with welded head plate.

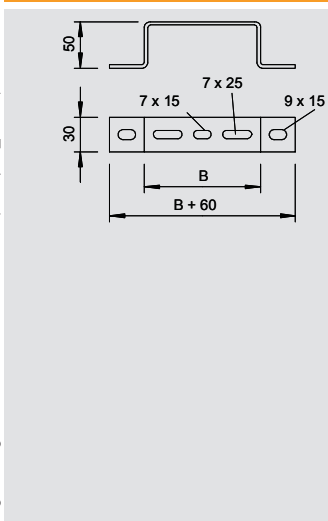


Wall and support bracket AWG 15

Type	Width mm	Dimension H mm	Dimension A mm	Hole Ø mm	F in kN kN	Pack. pcs	Weight kg/100 pcs.	Item No.
AW G 15 16 FT	160	55	40	11	1.5	30	20.000	6420 60 7
AW G 15 21 FT	210	60	40	11	1.5	30	26.000	6420 60 8
AW G 15 31 FT	310	65	40	11	1.5	30	35.000	6420 61 0
AW G 15 41 FT	410	70	40	11	1.5	30	56.000	6420 61 2
AW G 15 51 FT	510	75	40	11	1.5	20	69.000	6420 61 4
AW G 15 61 FT	610	80	40	11	1.5	20	84.000	6420 61 6

ST Steel **FT** Hot-dip galvanised /pc.

Light-duty wall and support bracket with welded head plate for screwless mesh cable tray fastening.



Spacer clamp

Type	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
DBL 50 150 FS	150	20	19.300	6015 51 4
DBL 50 200 FS	200	20	22.800	6015 52 2
DBL 50 300 FS	300	20	38.000	6015 53 0
DBL 50 400 FS	400	20	47.400	6015 54 9
DBL 50 500 FS	500	25	59.100	6015 55 2
DBL 50 600 FS	600	20	69.000	6015 55 5
DBL 50 100 FT	100	20	16.000	6015 56 5
DBL 50 150 FT	150	20	19.500	6015 57 3
DBL 50 200 FT	200	20	23.000	6015 58 1
DBL 50 300 FT	300	20	38.250	6015 60 3
DBL 50 400 FT	400	20	47.700	6015 61 1
DBL 50 500 FT	500	25	62.600	6015 61 4
DBL 50 600 FT	600	20	73.100	6015 61 7

ST Steel **FS** Strip-galvanised **FT** Hot-dip galvanised /pc.

Stand-off bracket for cable trays and mesh cable trays.



Mounting systems

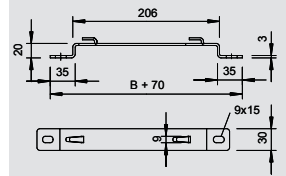


Spacer clamp

Type	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
DBLG 20 050 FS	50	20	10.300	6015 64 6
DBLG 20 100 FS	100	20	13.800	6015 65 4
DBLG 20 150 FS	150	20	17.400	6015 65 8
DBLG 20 200 FS	200	20	20.900	6015 66 2
DBLG 20 300 FS	300	20	37.300	6015 67 0
DBLG 20 400 FS	400	20	46.700	6015 68 9
DBLG 20 500 FS	500	25	56.900	6015 69 3
DBLG 20 600 FS	600	25	66.400	6015 69 7
DBLG 20 050 FT	50	20	10.700	6015 64 8
DBLG 20 100 FT	100	20	14.300	6015 65 6
DBLG 20 150 FT	150	20	18.100	6015 66 0
DBLG 20 200 FT	200	20	21.700	6015 66 4
DBLG 20 300 FT	300	20	38.800	6015 67 2
DBLG 20 400 FT	400	20	48.600	6015 69 1
DBLG 20 500 FT	500	25	59.200	6015 69 5
DBLG 20 600 FT	600	25	69.100	6015 69 9

ST Steel FS Strip-galvanised FT Hot-dip galvanised /pc.

Stand-off bracket for stand-off of mesh cable trays on the floor or on the wall.



Threaded rod

Type	Thread	Dimension d mm	Dimension L mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
2078 M8 1M G	M8	8	1000	14.6	50	30.000	3141 12 8
2078 M10 1M G	M10	10	1000	23.2	25	49.000	3141 20 9
2078 M12 1M G	M12	12	1000	33.7	20	100.000	3141 30 6
2078 M8 2M G	M8	8	2000	14.6	25	60.000	3141 13 6
2078 M10 2M G	M10	10	2000	23.2	25	98.000	3141 14 0
2078 M12 2M G	M12	12	2000	33.7	20	140.000	3141 14 4

ST Steel G Electrogalvanised price/100 pc.

Threaded rod to DIN 976.

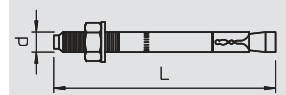


Bolt tie

Type	Thread	Dimension L mm	Dimension d mm	Clamping range mm	Perm. load range, tension zone kN	Pack. pcs	Weight kg/100 pcs.	Item No.
FAZ II 8 10 GS	M8	77	8	10	2.4	50	3.720	3498 50 6
FAZ II 10 10 GS	M10	95	10	10	4.3	50	7.680	3498 54 9

ST Steel G Electrogalvanised price/100 pc.

Bolt tie for fastening high loads. Matches OBO mounting systems and wall support brackets and supports.

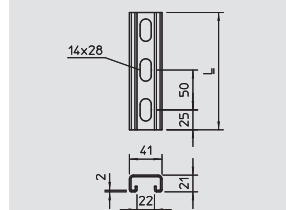


Mounting rail, MS 21

Type	Version	Interface	Dimension b x h mm	Material thickness mm	Length mm	Pack. m	Weight kg/100 m	Item No.
MS 21 L 2M FS	Perforated	FS	41x21	2	2000	1	201.488	1122 91 8
MS 21 L 3M FS	Perforated	FS	41x21	2	3000	1	201.488	1122 92 0
MS 21 L 6M FS	Perforated	FS	41x21	2	6000	1	201.488	1122 92 2

ST Steel FS Strip-galvanised price/100 m

Heavyweight profile/mounting rail with continuous perforation in base, slot width 22 mm.



Mounting rail, MS 41

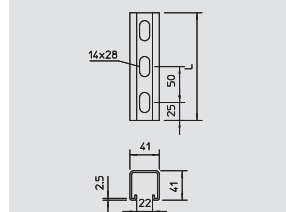
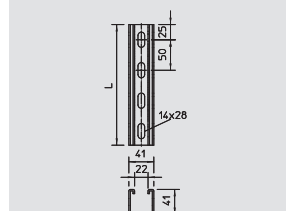
Type	Version	Interface	Dimension b x h mm	Material thickness mm	Length mm	Pack. m	Weight kg/100 m	Item No.
MS 41 L 1M 2 FS	Perforated	FS	41x41	2	1000	1	201.488	1122 97 0
MS 41 L 3M 2 FS	Perforated	FS	41x41	2	3000	1	201.488	1122 97 2
MS 41 L 6M 2 FS	Perforated	FS	41x41	2	6000	1	201.488	1122 97 4

ST Steel FS Strip-galvanised price/100 m

Heavyweight profile/mounting rail with continuous perforation in base, slot width 22 mm.

Type	Version	Interface	Dimension b x h mm	Material thickness mm	Length mm	Pack. m	Weight kg/100 m	Item No.
MS 41 L 1M FS	Perforated	FS	41x41	2.5	1000	1	244.768	1122 90 8
MS 41 L 3M FS	Perforated	FS	41x41	2.5	3000	1	244.768	1122 91 0
MS 41 L 6M FS	Perforated	FS	41x41	2.5	6000	1	244.768	1122 91 2

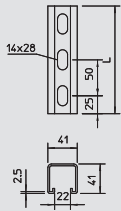
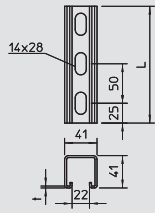
ST Steel FS Strip-galvanised price/100 m



Mounting systems

12 LDC Lösungskatalog Datencenter / en / 06/04/2010 (LLExpport_01024)

Mounting rail, MS 41



Type	Version	Interface	Dimension b x h mm	Material thickness mm	Length mm	Pack. m	Weight kg/100 m	Item No.
MS 41 LS 1M 2 FS	Perforated	FS	41x41	2	1000	1	183.888	1123 00 8
MS 41 LS 3M 2 FS	Perforated	FS	41x41	2	3000	1	183.888	1123 01 0
MS 41 LS 6M 2 FS	Perforated	FS	41x41	2	6000	1	183.888	1123 01 2

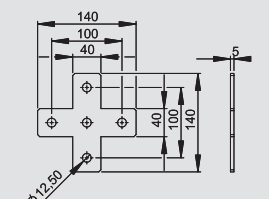
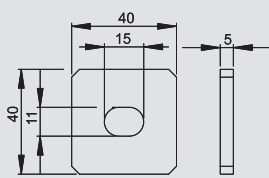
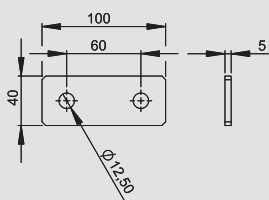
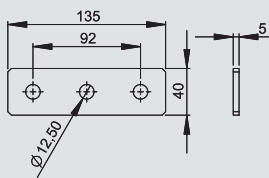
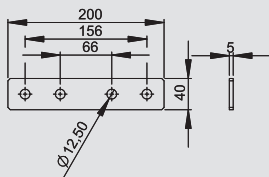
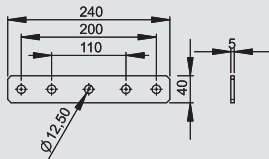
ST Steel **FS** Strip-galvanised price/100 m
Heavyweight profile/mounting rail with continuous, three-sided perforation, slot width 22 mm.

Type	Version	Interface	Dimension b x h mm	Material thickness mm	Length mm	Pack. m	Weight kg/100 m	Item No.
MS 41 LS 1M FS	Perforated	FS	41x41	2.5	1000	1	222.770	1122 48 1
MS 41 LS 3M FS	Perforated	FS	41x41	2.5	3000	1	222.770	1122 91 4
MS 41 LS 6M FS	Perforated	FS	41x41	2.5	6000	1	222.770	1122 91 6

ST Steel **FS** Strip-galvanised price/100 m



Rail mounting system, MS 41



Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 5 G	With continuous perforation 12.5 mm	10	10	38.810	1124 61 1

ST Steel **G** Electrogalvanised /pc.

Connection plate with five holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 4 G	With continuous perforation 12.5 mm	10	10	32.340	1124 60 9

ST Steel **G** Electrogalvanised /pc.

Connection plate with four holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 3 G	With continuous perforation 12.5 mm	10	10	21.830	1124 60 7

ST Steel **G** Electrogalvanised /pc.

Connection plate with three holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 2 G	With continuous perforation 12.5 mm	10	10	16.170	1124 60 5

ST Steel **G** Electrogalvanised /pc.

Connection plate with two holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 1 G	With 15 x 11 mm slot	10	10	6.470	1124 60 3

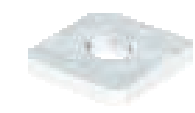
ST Steel **G** Electrogalvanised /pc.

Connection plate with lengthwise slot, for example for mounting threaded rods to profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS X G	—	10	10	39.000	1124 61 7

ST Steel **G** Electrogalvanised /pc.

Connection plate with five holes for cross connection of profile rails 41 x 41 mm and 41 x 21 mm.



Mounting systems

Rail mounting system, MS 41

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS L G	—	10	10	20.000	1124 61 3

ST Steel **G** Electrogalvanised /pc.

Connection plate with three holes for angled connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS T G	—	10	10	40.000	1124 61 5

ST Steel **G** Electrogalvanised /pc.

Connection plate with four holes for T-shaped connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GVMS G	With continuous perforation 12.5 mm	10	10	38.000	1124 60 1

ST Steel **G** Electrogalvanised /pc.

Connector gripping from outside with four holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 4141 G	With continuous perforation 12.5 mm	10	10	29.830	1124 63 3

ST Steel **G** Electrogalvanised /pc.

Fastening clip with 3 holes for cross-wise connection of profile rails 41 x 41 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS 4121 G	With continuous perforation 12.5 mm	10	10	23.550	1124 63 1

ST Steel **G** Electrogalvanised /pc.

Fastening clip with 3 holes for cross-wise connection of profile rails 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS L 45 G	45° bracket	10	10	21.200	1124 62 7

ST Steel **G** Electrogalvanised /pc.

Installation profile with three holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 45°.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS L 45 G	45° bracket	10	10	31.400	1124 62 9

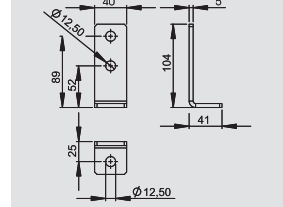
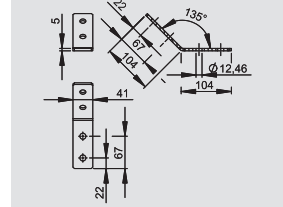
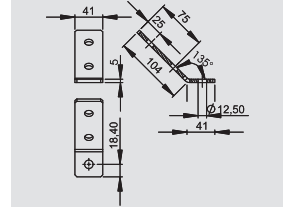
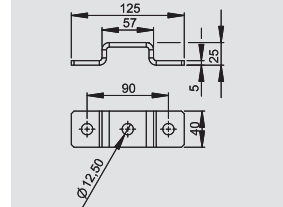
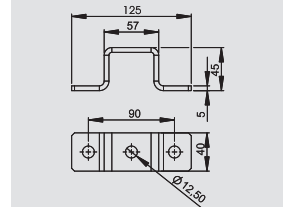
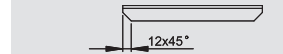
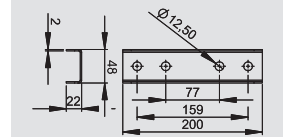
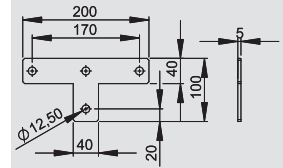
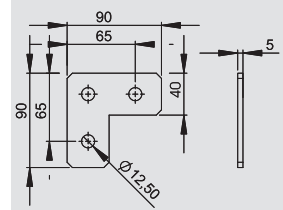
ST Steel **G** Electrogalvanised /pc.

Installation profile with four holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 45°.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS L 90 G	90° bracket	10	10	21.830	1124 62 1

ST Steel **G** Electrogalvanised /pc.

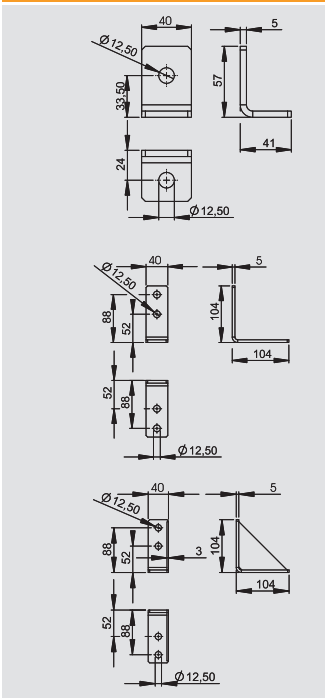
Installation profile with three holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°.



Mounting systems



12 LDC Lösungskatalog Datencenter / en / 06/04/2010 (LLExpport_01024)



Rail mounting system, MS 41

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS L 90 G	90° bracket	10	10	16.170	1124 61 9

ST Steel **G** Electrogalvanised /pc.

Installation profile with two holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS L 90 G	90° bracket	10	10	24.000	1124 62 3

ST Steel **G** Electrogalvanised /pc.

Installation profile with two holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
GMS L 90 G	90° bracket	10	10	42.000	1124 62 5

ST Steel **G** Electrogalvanised /pc.

Reinforced mounting bracket with four holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°.





Perfect fire protection for perfect data protection

OBO can offer a complete range of professional products for all application areas of fire protection systems in building installation. Tested cable insulation systems have proved the required effect in a fire test. The approvals are based on fire tests, which are carried out by official materials testing offices on the basis of DIN 4102 Part 9.






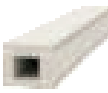
Tested function maintenance systems guarantee, in the event of fire, to maintain the power supply.

In addition, we can also offer the knowledgeable advice of an experienced, competent system manufacturer.

Additional BSS systems and advice

On the following pages, you will find an extract from our main catalogue, which will inform you about the various different insulation systems. You can find additional detailed explanations and planning aids in our BSS catalogue (Fire protection systems).

Fire protection systems

	Insulation: KBK cushion installation	KBK fire protection cushion	36
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Insulation, KBK bag installation



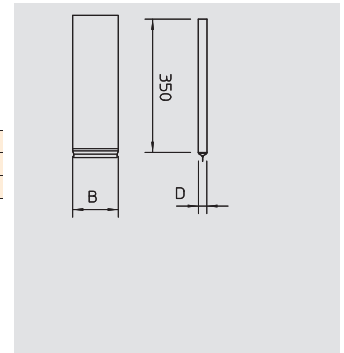
KBK fire protection cushion

Type	Dimension mm	Dimension B mm	Dimension D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
KBK-1	350 x 120 x 10	120	10	20	18.000	7202 70 9
KBK-2	350 x 170 x 23	170	23	20	33.000	7202 72 5
KBK-3	350 x 170 x 40	170	40	10	63.000	7202 74 1

/pc.

Cable fire protection cushions, fire resistance class S90, DIBt approvals Z-19.15-1115 and 1119.

The cushions consist of a close-knit, dense and mechanically solid glass fabric with a special filling. The shell and the filling are free of asbestos and mineral fibres and are also weatherproof and waterproof.

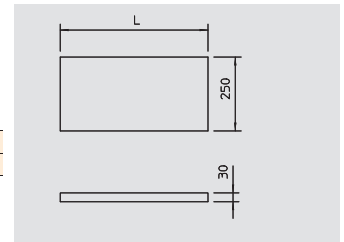


KBK-FP fibre silicate plate

Type	Dimension mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
KBK-FP1	500 x 250 x 30	500	1	110.500	7202 90 3
KBK-FP2	1,000 x 250 x 30	1000	1	211.000	7202 91 1

/pc.

Fibre silicate plate as support for KBK cushion insulation. Materials class A1 – non-combustible



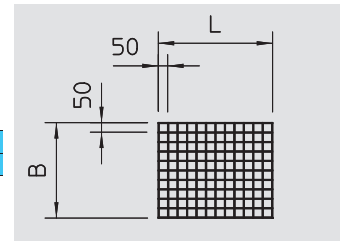
KBK-SG steel wire grid

Type	Dimension mm	Dimension L mm	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
KBK-SG1	500 x 600	600	500	1	135.000	7202 96 2
KBK-SG2	600 x 1,000	1000	600	1	270.000	7202 97 0

ST Steel **FT** Hot-dip galvanised

/pc.

Steel wire grid for KBK cushion insulation; as support and protection grid for ceiling insulation.

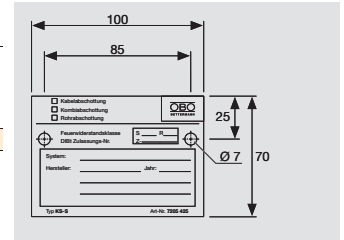


Identification plate

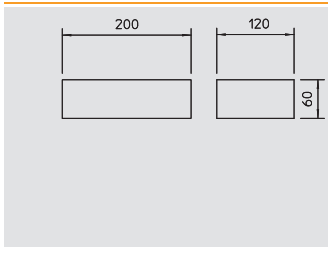
Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KS-S	1	2.400	7205 42 5

/pc.

Universal identification plate to be written on for all OBO insulation. For approved identification, including two push-fit anchors.



Insulation, FBA foam series



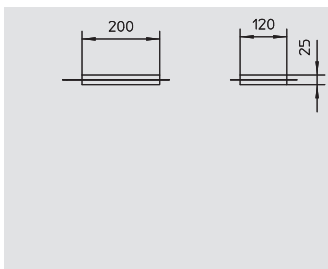
FBA-B200 foam block

Type	Dimension mm	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
FBA-B200	200 x 120 x 60	20	40.000	7202 50 6



/pc.

Foam block for combination insulation, fire resistance class S90, DIBt approval Z-19.15-1849. Protect the blocks against water in order to guarantee safe foaming in case of fire.



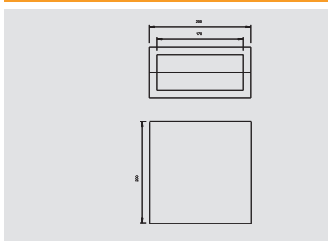
FBA-BV200 vacuum block

Type	Dimension mm	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
FBA-BV200	200 x 120 x 25	10	40.000	7202 51 6



/pc.

Vacuum block for combination insulation. On cutting the film, the vacuum block expands to its original size. Can be used with or without film. Protect the blocks against water in order to guarantee safe foaming in case of fire.



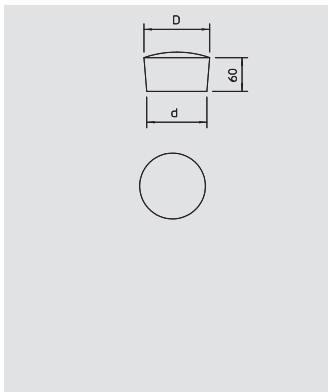
FBA-F box insulation

Type	Dimension mm	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
FBA-F	200 x 200 x 100	1	122.000	7202 66 0



/pc.

Box with inlays, fire resistance classes S30 and S90, DIBt approval Z-19.15-1557. Scope of delivery: 1 two-part frame, 2 internal pieces



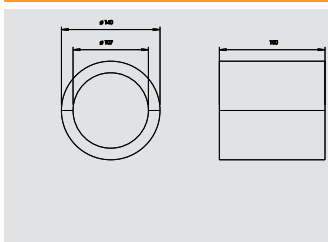
FBA-S plug

Type	For opening Ø mm	Dimension D mm	Dimension d mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
FBA-S65	65	75	65	20	8.000	7202 55 1
FBA-S78	78	87	78	20	11.000	7202 55 5
FBA-S107	107	117	107	20	19.000	7202 55 9
FBA-S122	122	132	122	20	23.100	7202 56 3
FBA-S134	134	144	134	20	28.600	7202 56 7
FBA-S165	165	175	165	20	43.200	7202 57 1
FBA-S200	200	210	200	20	67.000	7202 57 5
FBA-S250	250	260	250	10	86.500	7202 57 9



/pc.

Plug, fire resistance classes S30 and S90, DIBt approval Z-19.15-1558. Protect the FBA plugs against water in order to guarantee safe foaming in case of fire.



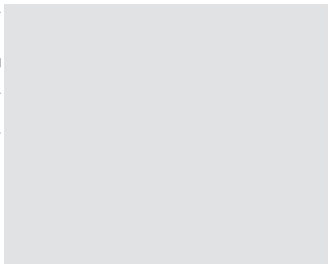
FBA-SR pipe shell

Type	For opening Ø mm	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
FBA-SR	140	4	73.000	7202 58 6



/pc.

Pipe shell, fire resistance classes S30 and S90, DIBt approval Z-19.15-1558. Scope of delivery: 1 two-part pipe shell Ø 140 mm, 2 plugs FBA-S107



FBA-D drilling-crown insulation

Type	Dimension mm	Dimension L mm	Pack.	Weight	Item No.
			pcs	kg/100 pcs.	
FBA-D100	100 x 78	100	4	15.500	7202 62 4
FBA-D150	150 x 78	150	8	19.200	7202 62 8



/pc.

Drill crown insulation, fire resistance classes S30 and S90, DIBt approval Z-19.15-1559. Scope of delivery: 1 pipe shell Ø 78 mm, 2 plugs Ø 50 mm

Fire protection systems

Insulation, FBA foam series



FBA-SP filler in a cartridge

Type	Dimension	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
FBA-SP	310ml	1	46.000	7202 32 2

/pc.

Fire protection filler in a cartridge.
 Usable as small insulation in a FBA-SP system, fire resistance class S90, DIBt approval Z-19.15-1851, and as join closing compound in all insulation of the FBA series.
 In dry, frost-free rooms, the fire protection compound can be stored at temperatures of +5 °C to +30 °C for up to 12 months.

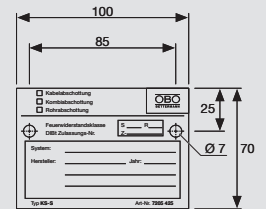


Identification plate

Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
KS-S	1	2.400	7205 42 5

/pc.

Universal identification plate to be written on for all OBO insulation. For approved identification, including two push-fit anchors.



Insulation, Pyrosit fire protection foam

Pyrosit fire protection case

Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
FBS90-K	1	340.000	7208 22 9



/pc.

The Pyrosit FBS90 fire protection kit contains a complete set of all the required products to install two-component foam insulation. The complete set consists of: 2 x FBS90-S, 1 x FBS90-P, 1 x FBS90-M and 1 x KS-S.

Pyrosit FBS90 fire protection foam

Type	Dimension	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
FBS90-S	310ml	1	57.000	7208 22 1



/pc.

PYROSIT 2-component fire protection foam in a cartridge, fire resistance class S90. DIBt approval Z-19.15-1894. Including mixing tubes. In dry, frost-free rooms, the fire protection foam can be stored for up to six months at a temperature of +5 °C to +30 °C. Always process with cartridge pistol FBS90-P2!

Note: The 2-component cartridge pistol, type FP520, can still be used.

Pyrosit cartridge pistol

Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
FBS90-P2	2	117.000	7208 22 5



/pc.

High-quality 2-component cartridge pistol for use with the PYROSIT FBS90 fire protection foam. The cartridge pistol can also be used with normal 300 ml cartridges.

Pyrosit mixer pipe set

Type	Pack.	Weight	Item No.
	PU	kg/100 PUs	
FBS90-M	1	10.000	7208 23 3



/VPE

10 mixing tubes and 5 extension tubes in the set for Pyrosit FBS90 fire protection foam.

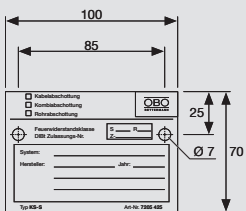
Identification plate

Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
KS-S	1	2.400	7205 42 5



/pc.

Universal identification plate to be written on for all OBO insulation. For approved identification, including two push-fit anchors.



Function maintenance, individual routing



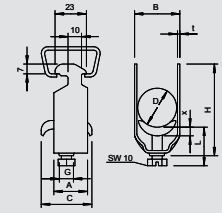
Clamp clip, single, metal pressure trough

Type	Clamping range D	Dimension A	Dimension B	Dimension C	Dimension G	Dimension t	Dimension H	Dimension L	Pack.	Weight	Item No.
	mm	mm	mm	mm	mm	mm	mm	mm	pcs	kg/100 pcs.	
2056 M 12 FT	8-12	23	16	30	M6	1.5	40	32.5	100	3.200	1156 00 4
2056 M 16 FT	12-16	23	20	30	M6	1.5	44	32.5	100	3.500	1156 01 2
2056 M 22 FT	16-22	23	27	30	M6	1.5	50	46.5	100	4.400	1156 02 0
2056 M 28 FT	22-28	23	33	30	M6	2	58	46.5	100	6.100	1156 03 9
2056 M 34 FT	28-34	23	39	35	M8	2	66	44	100	7.700	1156 04 7
2056 M 40 FT	34-40	23	45	35	M8	2	72	44	100	8.600	1156 05 5
2056 M 46 FT	40-46	23	51	35	M8	2	79	44	100	9.600	1156 06 3
2056 M 52 FT	46-52	23	57	35	M8	2	86	44	100	10.400	1156 07 1
2056 M 58 FT	52-58	23	64	35	M8	2.5	93	44	100	13.100	1156 09 8
2056 M 64 FT	58-64	23	70	35	M8	2.5	99	56	100	14.500	1156 10 1
2056 M 70 FT	64-70	25	76	35	M8	2.5	106	56	50	16.100	1156 12 8
2056 M 76 FT	70-76	25	82	40	M8	2.5	114	56	25	18.300	1156 13 6
2056 M 82 FT	76-82	25	88	40	M8	2.5	121	56	25	19.100	1156 14 4
2056 M 90 FT	82-90	25	97	40	M8	3	130	56	25	23.300	1156 15 2
2056 M 100 FT	90-100	25	107	40	M8	3	140	56	25	25.400	1156 16 0

ST Steel **FT** Hot-dip galvanised price/100 pc.

Suitable for all C profile rails with slot width 16–17 mm.
Clip, bolt and pressure trough made of hot-dip galvanised steel.

Version with welding and/or locknuts for use under difficult circumstances and for shake protection on request.

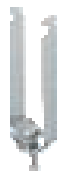
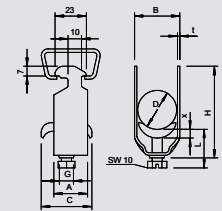


Clamp clip, double, metal pressure trough

Type	Clamping range D	Dimension A	Dimension B	Dimension C	Dimension G	Dimension t	Dimension H	Dimension L	Pack.	Weight	Item No.
	mm	mm	mm	mm	mm	mm	mm	mm	pcs	kg/100 pcs.	
2056 M2 12 FT	8-12	23	16	34	M6	1.5	52	34	50	3.980	1156 17 9
2056 M2 16 FT	12-16	23	20	34	M6	1.5	61	34	50	4.750	1156 18 7
2056 M2 22 FT	16-22	23	27	34	M6	1.5	73	47	50	6.900	1156 19 5
2056 M2 28 FT	22-28	23	33	34	M6	2	87	47	50	7.800	1156 20 9

ST Steel **FT** Hot-dip galvanised price/100 pc.

Suitable for all C profile rails with slot width 16–17 mm.
Clip, bolt and pressure trough made of hot-dip galvanised steel.

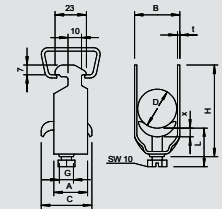


Clamp clip, triple, metal pressure trough

Type	Clamping range D	Dimension A	Dimension B	Dimension C	Dimension G	Dimension t	Dimension H	Dimension L	Pack.	Weight	Item No.
	mm	mm	mm	mm	mm	mm	mm	mm	pcs	kg/100 pcs.	
2056 M3 12 FT	8-12	23	16	34	M6	1.5	70	47	50	4.050	1156 24 1
2056 M3 16 FT	12-16	23	20	34	M6	1.5	82	47	50	5.800	1156 26 8
2056 M3 22 FT	16-22	23	27	34	M6	1.5	101	47	50	6.500	1156 27 6
2056 M3 28 FT	22-28	23	33	34	M6	2	121	47	50	9.500	1156 28 4

ST Steel **FT** Hot-dip galvanised price/100 pc.

Suitable for all C profile rails with slot width 16–17 mm.
Clip, bolt and pressure trough made of hot-dip galvanised steel.

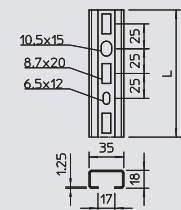


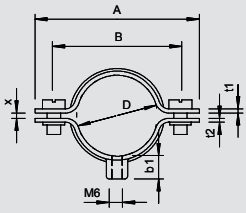
Profile rail, slot 17 mm

Type	Version	Interface	Dimension b x h	Material thickness	Length	Pack.	Weight	Item No.
			mm	mm	mm	pcs	kg/100 pcs.	
1268 L 200 FS	Perforated	FS	35 x 18	1.25	200	25	14.300	1104 26 8
1268 L 300 FS	Perforated	FS	35 x 18	1.25	300	25	21.450	1104 28 4
1268 L 400 FS	Perforated	FS	35 x 18	1.25	400	10	28.550	1104 29 2
1268 L 500 FS	Perforated	FS	35 x 18	1.25	500	10	35.750	1104 30 6
1268 L 2M FS	Perforated	FS	35 x 18	1.25	2000	20	71.500	1104 50 0

ST Steel **FS** Strip-galvanised price/100 m price/100 pc.

Light-duty profile rail, perforated, slot width 17 mm.

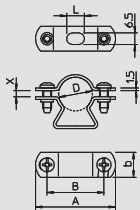




Cable and pipe spacer clip 732

Type	Clamping range D mm	Size	Bolt	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
732 6 GTP	5-6	-	M5 x 10	1200	100	1.160	1360 05 1
732 8 GTP	7-8	-	M5 x 10	1200	100	1.310	1360 08 6
732 10 GTP	9-10	-	M5 x 12	1000	100	1.360	1360 10 8
732 12 GTP	10.5-12	M12	M5 x 12	1000	100	1.460	1360 12 4
732 14 GTP	12.5-14	PG7	M5 x 12	1000	100	1.480	1360 14 0
732 15 GTP	13.5-15	PG9	M5 x 12	1000	100	1.530	1360 15 9
732 16 GTP	14.5-16	M16	M5 x 12	1000	100	1.590	1360 16 7
732 18 GTP	16.5-18	PG11	M5 x 12	1000	100	1.620	1360 18 3
732 20 GTP	18.5-20	M20	M5 x 12	600	50	1.730	1360 20 5
732 22 GTP	20-22	PG13,5	M5 x 12	500	50	1.780	1360 22 1
732 24 GTP	22-24	PG16	M5 x 12	500	50	1.840	1360 24 8
732 26 GTP	24-26	M25	M5 x 12	500	50	1.920	1360 26 4
732 28 GTP	26-28	PG21	M5 x 12	500	50	2.840	1360 28 0
732 30 GTP	28-30	PG21	M5 x 12	400	50	3.040	1360 30 2
732 33 GTP	31-33	M32	M5 x 12	250	25	3.120	1360 33 7
732 35 GTP	33-35	-	M5 x 12	250	25	3.280	1360 35 3
732 38 GTP	36-38	PG29	M5 x 12	250	25	3.490	1360 38 8
732 40 GTP	38-40	M40	M5 x 12	250	25	3.600	1360 39 6
732 42 GTP	40-42	M40	M5 x 12	250	25	3.840	1360 42 6
732 45 GTP	43-45	-	M5 x 12	250	25	3.990	1360 45 0
732 48 GTP	46-48	PG36	M5 x 12	250	25	4.040	1360 48 5
732 50 GTP	48-50	M50	M5 x 14	200	25	4.160	1360 50 7
732 60 GTP	58-60	PG48	M5 x 14	200	25	4.960	1360 60 4
732 63 GTP	61-63	M63	M5 x 14	200	25	5.000	1360 63 9

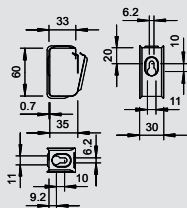
ST Steel **GTP** Electrogalvanised, transparently passivated price/100 pc.
With M6 thread.



Cable and pipe spacer clip 733

Type	Clamping range D mm	Hole size mm	Material thickness mm	Size	Bolt	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
733 21 G	19-21	6,5 x 10	1.5	M20	M5 x 14	500	50	2.730	1361 20 1
733 23 G	21-23	6,5 x 10	1.5	Pg16	M5 x 14	500	50	2.870	1361 23 6
733 29 G	24-29	6,5 x 10	1.5	M25	M5 x 18	450	50	3.480	1361 29 5
733 38 G	30-38	6,5 x 10	1.5	M32	M5 x 18	250	25	4.040	1361 38 4
733 48 G	39-48	6,5 x 10	1.5	M40	M5 x 18	300	25	4.810	1361 48 1
733 54 G	48-54	6,5 x 14	1.5	M50	M5 x 18	300	25	5.800	1361 51 1
733 61 G	53-61	6,5 x 14	1.5	Pg48	M5 x 18	240	20	6.370	1361 61 9
733 63 G	63	8 x 18	2	M63	M5 x 18	160	20	6.940	1361 63 5

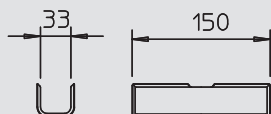
ST Steel **G** Electrogalvanised price/100 pc.
Steel screw material.
*Size M16 are not suitable for nail guns.
* Sizes M16 to PG16 not suitable for bolt-firing tool.



Collecting clamp GRIP "M" 15

Type	No. of conductors NYM 3 x 1.5	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 M 15 FS	15	50	50	3.700	2207 02 8

ST Steel **FS** Strip-galvanised price/100 pc.
Metal collecting clamp for high mechanical stability, even in case of fire. Halogen-free, fire load-free. Suitable for secure mounting above fire protection ceilings. Also approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. For wall/ceiling mounting: Lock can be opened without tools. Type 2031 M 70 FS incl. fire protection bolt tie MMS 6x50. Detailed information on the approved routing variants can be found in the appropriate testing documentation.



Long trough for collecting clamp GRIP "M" 15

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 LW15	25	8.200	2207 18 4

ST Steel **FS** Strip-galvanised price/100 pc.
Long trough for collecting clamp type 2031/M15, for function maintenance as cable-specific mounting variant.



Function maintenance, individual routing

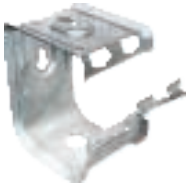
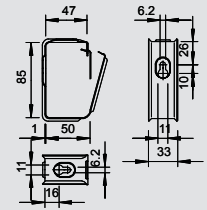


Collecting clamp GRIP "M" 30

Type	No. of conductors NYM 3 x 1.5	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 M 30 FS	30	25	25	6.200	2207 03 6

ST Steel **FS** Strip-galvanised price/100 pc.

Metal collecting clamp for high mechanical stability, even in case of fire. Halogen-free, fire load-free. Suitable for secure mounting above fire protection ceilings. Also approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. For wall/ceiling mounting: Lock can be opened without tools. Type 2031 M 70 FS incl. fire protection bolt tie MMS 6x50. Detailed information on the approved routing variants can be found in the appropriate testing documentation.



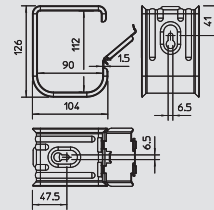
Collecting clamp GRIP "M" 70

Type	No. of conductors NYM 3 x 1.5	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 M 70 FS	70	10	10	34.500	2207 06 0

ST Steel **FS** Strip-galvanised price/100 pc.

Metal collecting clamp for high mechanical stability, even in case of fire. Halogen-free, fire load-free. Suitable for secure mounting above fire protection ceilings. Also approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. For wall/ceiling mounting: Lock can be opened without tools. Type 2031 M 70 FS incl. fire protection bolt tie MMS 6x50. Detailed information on the approved routing variants can be found in the appropriate testing documentation.

Including fire protection bolt tie MMS 6 type MMS 6 x 50

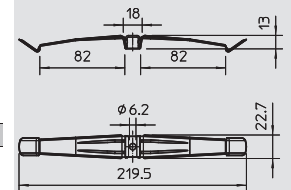


Metal pressure clip, for 16 cables

Type	No. of conductors NYM 3 x 1.5	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2033 M	16	25	25	2.310	2204 00 0

V2A Stainless steel 1.4310 price/100 pc.

Metal pressure clip for space-saving mounting with high mechanical stability, even in case of fire. Halogen-free, fire load-free. Also suitable for secure mounting above fire protection ceilings. Tested and approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. For ceiling mounting. Clamping height 10 mm – extendable to 13 mm with spacer. Fastening hole Ø 6 mm. Detailed information on the approved routing variants can be found in the appropriate testing documentation.

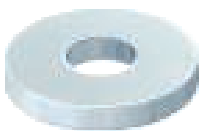
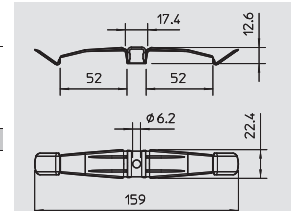


Metal pressure clip, for 10 cables

Type	No. of conductors NYM 3 x 1.5	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2034 M	10	50	50	1.860	2204 01 0

V2A Stainless steel 1.4310 price/100 pc.

Metal pressure clip for space-saving mounting with high mechanical stability, even in case of fire. Halogen-free, fire load-free. Also suitable for secure mounting above fire protection ceilings. Tested and approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. For ceiling mounting. Clamping height 10 mm – extendable to 13 mm with spacer. Fastening hole Ø 6 mm. Detailed information on the approved routing variants can be found in the appropriate testing documentation.

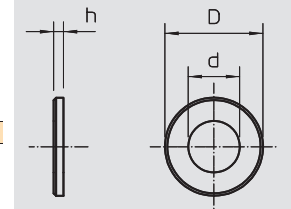


Spacer for pressure clips

Type	Dimension D mm	Dimension d mm	Dimension h mm	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2033 D 15x3 G	15	6.4	3	3000	50	0.340	2205 09 7

ST Steel **G** Electrogalvanised price/100 pc.

To increase the clamping height of pressure clips from 10 to 13 mm for large cable cross-sections.

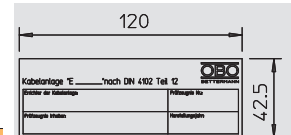


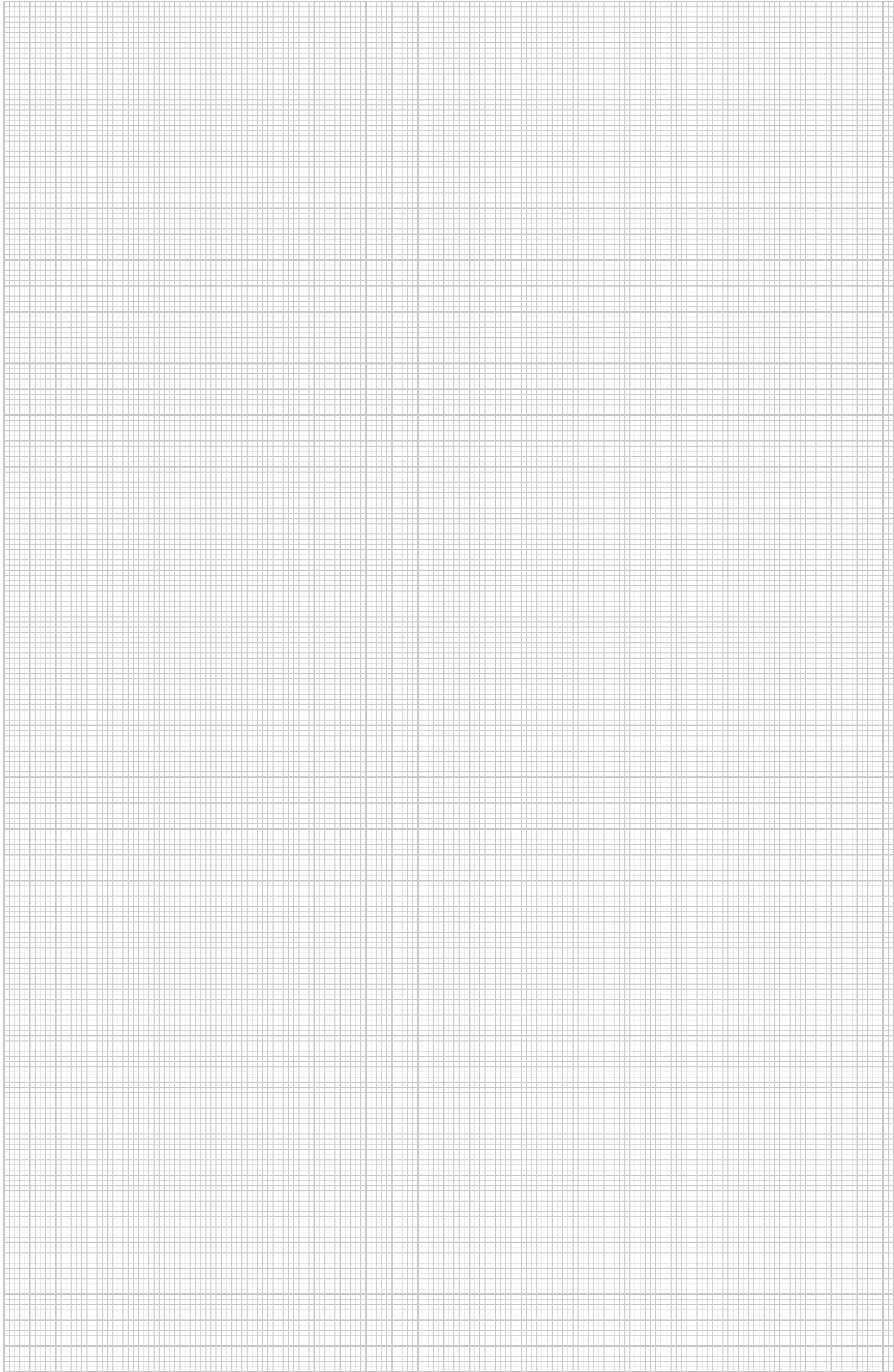
Identification plate

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
KS-E	10	0.220	7205 42 2

PVC Polyvinylchloride /pc.

The self-adhesive identification plate for labelling contains all the data required for approved cable system labelling for function maintenance as required by DIN 4102 Part 12.





Function maintenance, anchorings

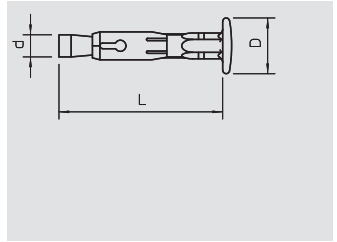


Nail tie with nail head

Type	Clamping range	Dimension d	Dimension L	Dimension D	Pack.	Weight	Item No.
	mm	mm	mm	mm	pcs	kg/100 pcs.	
FNA II 6X30/5	5	6	40	15	100	1.120	3498 46 8

ST Steel **G** Electrogalvanised price/100 pc.

Nail tie with drive-in head. European technical approval for concrete. Fire resistance class to F 120 according to fire protection testing report.

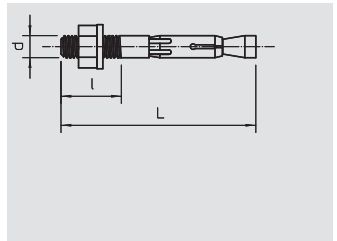


Nail tie with thread end

Type	Thread	Clamping range	Dimension d	Dimension l	Dimension L	Pack.	Weight	Item No.
		mm	mm	mm	mm	pcs	kg/100 pcs.	
FNA II 6X30 M6/5	M6	5	6	13	53	100	1.400	3498 42 5

ST Steel **G** Electrogalvanised price/100 pc.

Nail tie with M6 thread. European technical approval for concrete. Fire resistance class to F120 according to fire protection testing report.

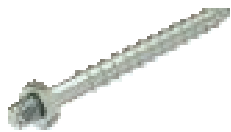
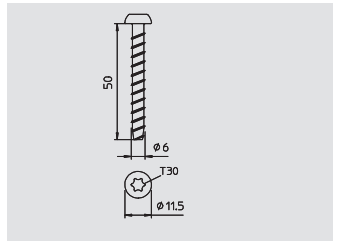


MMS 6 Panhead

Type	Dimension	Pack.	Weight	Item No.
	mm	pcs	kg/100 pcs.	
MMS6X50	6 x 50	100	0.960	3498 10 7

ST Steel **GC** Electrogalvanised, yellow-chromated price/100 pc.

Fire protection bolt tie with pan head, drive T30, drill hole 5 mm. Fire protection tested according to DIN 4102. Fire resistance class to F90.

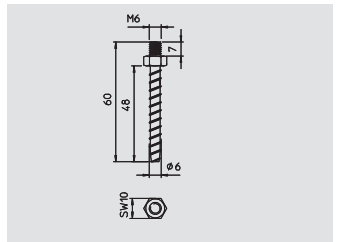


MMS-ST with thread

Type	Thread	Dimension	Bore hole Ø	Pack.	Weight	Item No.
		mm	mm	pcs	kg/100 pcs.	
MMS-ST6X60	M6	6 x 60	5	100	1.400	3498 26 3

ST Steel **G** Electrogalvanised price/100 pc.

Fire protection bolt tie with M6 thread and hexagonal head, WAF 10, drill hole 5 mm. Fire protection tested according to DIN 4102. Fire resistance class to F90.

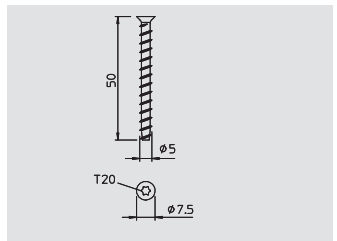


HMS-KS countersunk head

Type	Dimension	Bore hole Ø	Pack.	Weight	Item No.
	mm	mm	pcs	kg/100 pcs.	
HMS-KS5X50	5 x 50	4	200	0.460	3498 20 4

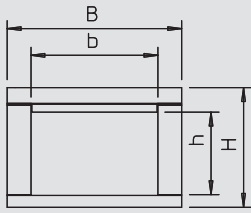
ST Steel **G** Electrogalvanised price/100 pc.

Fire protection bolt tie with conical countersunk head, drive T20, drill hole 4 mm. Fire protection tested according to DIN 4102. Fire resistance class to F90.



BSK fire protection duct for direct wall and ceiling mounting

BSK fire protection duct I 90/E 30, internal height 50 mm



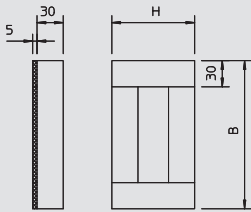
Type	Dimension B mm	Dimension H mm	Dimension h mm	Dimension b mm	Length mm	Weight kg/100 m	Item No.
BSK 090506	120	95	50	60	1000	730.000	7215 15 0
BSK 090511	170	95	50	110	1000	940.000	7215 15 4
BSK 090521	270	95	50	210	1000	1350.000	7215 15 8



/m

Fire protection duct I90/I30, to DIN 4102 Part 11 and Part 12, incl. 12 x countersunk head screws and 3 x 1 m sealing strip.

BSK end piece I 90/E 30 for internal height 50 mm



Type	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BSK-E090506	120	95	1	38.000	7215 25 0
BSK-E090511	170	95	1	51.000	7215 25 2
BSK-E090521	270	95	1	78.000	7215 25 4



/pc.

End piece for fire protection duct BSK I90/E30
Including bolts and sealing strip.

BSK wall connection collar I 90 for internal height 50 mm

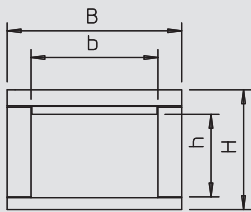
Type	Pack. pcs	Weight kg/100 pcs.	Item No.
BSK-K0506	1	40.000	7215 53 3
BSK-K0511	1	45.000	7215 53 7
BSK-K0521	1	55.000	7215 54 1



/pc.

Wall connection collar for BSK, consisting of three single plates, to double the insulation for wall penetrations. Incl. fastening material Only for I90 classification.

BSK fire protection duct I 90/E 30, internal height 105 mm



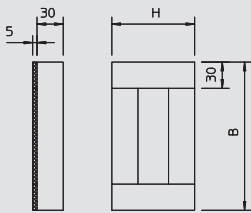
Type	Dimension B mm	Dimension H mm	Dimension h mm	Dimension b mm	Length mm	Weight kg/100 m	Item No.
BSK 091016	220	150	105	220	1000	1430.000	7215 16 2
BSK 091026	320	150	105	260	1000	1830.000	7215 16 6



/m

Fire protection duct I90/I30, to DIN 4102 Part 11 and Part 12, incl. 12 x countersunk head screws and 3 x 1 m sealing strip.

BSK end piece I 90/E 30 for internal height 105 mm



Type	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BSK-E091016	220	150	1	93.000	7215 25 6
BSK-E091026	320	150	1	131.000	7215 25 8



/pc.

End piece for fire protection duct BSK I90/E30
Including bolts and sealing strip.

BSK wall connection collar I 90 for internal height 105 mm

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
BSK-K1016	1	65.000	7215 54 5
BSK-K1026	1	75.000	7215 54 9



/pc.

Wall connection collar for BSK, consisting of three single plates, to double the insulation for wall penetrations. Incl. fastening material Only for I90 classification.

BSK fire protection duct for direct wall and ceiling mounting

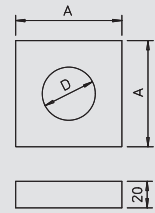


BSK doubler I 90

Type	Dimension A mm	Dimension D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BSK-A0908	80	40	1	10.000	7215 45 2
BSK-A0910	100	60	1	14.000	7215 45 8

/pc.

Doubler for cable routing for BSK I90 and for BSKH I90:
BSK-A0908 for duct heights to 95 mm,
BSK-A0910 for duct heights from 110 mm.
Including fastening screws.



BSK sealing strip I 90/E 30

Type	Dimension mm	Length m	Weight kg/100 pcs.	Item No.
BSK-D0930	5 x 30	15	37.500	7215 42 3

/pc.

Self-adhesive sealing strip for BSK I90/E30 and BSKH I90/E30

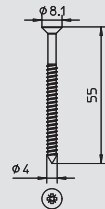
BSK countersunk head screw I 90/E 30

Type	Dimension mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BSK-S0955	4.0 x 55	50	0.340	7215 40 0

ST Steel **G** Electrogalvanised

price/100 pc.

Countersunk head screw for fire protection duct I90/E30, for cover and doubler fastening

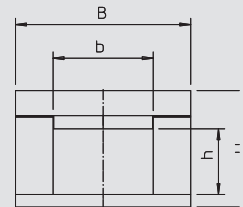


BSK fire protection duct I 120/E 90, internal height 50 mm

Type	Dimension B mm	Dimension H mm	Dimension b mm	Dimension h mm	Length mm	Weight kg/100 m	Item No.
BSK 120506	180	130	60	50	1000	1490.000	7215 21 0
BSK 120511	230	130	50	110	1000	1800.000	7215 21 6
BSK 120521	330	130	50	210	1000	2420.000	7215 22 2

/m

Fire protection duct I120/E90, to DIN 4102 Part 11 and Part 12, incl. 12 x countersunk head screws and 3 x 1 m sealing strip.

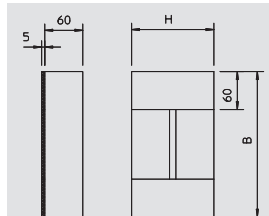


BSK end piece I 120/E 90 for internal height 50 mm

Type	Dimension B mm	Dimension H mm	Pack. pcs	Item No.
BSK-E120506	180	130	1	7215 27 0
BSK-E120511	230	130	1	7215 27 2
BSK-E120521	330	130	1	7215 27 4

/pc.

End piece for fire protection duct BSK I120/E90
Including bolts and sealing strip.

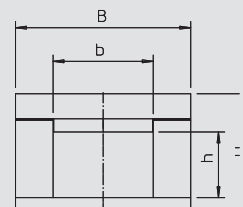


BSK fire protection duct I 120/E 90, internal height 105 mm

Type	Dimension B mm	Dimension H mm	Dimension b mm	Dimension h mm	Length mm	Weight kg/100 m	Item No.
BSK 121016	280	185	105	160	1000	2570.000	7215 22 8
BSK 121026	380	185	105	260	1000	3190.000	7215 23 4

/m

Fire protection duct I120/E90, to DIN 4102 Part 11 and Part 12, incl. 12 x countersunk head screws and 3 x 1 m sealing strip.

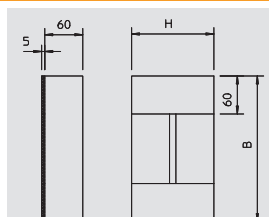


BSK end piece I 120/E 90 for internal height 105 mm

Type	Dimension B mm	Dimension H mm	Pack. pcs	Item No.
BSK-E121016	280	185	1	7215 27 6
BSK-E121026	380	185	1	7215 27 8

/pc.

End piece for fire protection duct BSK I120/E90
Including bolts and sealing strip.



BSK fire protection duct for direct wall and ceiling mounting

BSK sealing strip I 120/E 90

Type	Dimension mm	Length m	Weight kg/100 pcs.	Item No.
BSK-D1260	5 x 60	15	74.200	7215 43 2

/pc.



Self-adhesive sealing strip for BSK I120/E90.

BSK countersunk head screw I 120/E 90

Type	Dimension mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BSK-S1280	4.5 x 80	50	0.500	7215 41 2

ST Steel **G** Electrogalvanised price/100 pc.



Countersunk head screw for BSK I120/E90, for cover fastening.

BSK separating clamp for ceiling mounting

Type	Dimension H mm	Dimension h mm	Dimension B mm	Dimension b mm	Dimension A mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BSK-B0511	46	18	55	37.5	36.5	25	7.500	7215 35 6
BSK-B0521	46	18	105	62.5	52.5	25	14.500	7215 36 2
BSK-B1016	101	69	80	50	40	25	19.000	7215 36 8
BSK-B1026	101	69	130	75	65	25	29.000	7215 37 4

ST Steel **FS** Strip-galvanised price/100 pc.

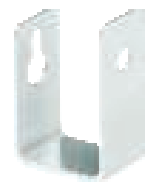


Separating clamp for BSK fire protection duct, as installation aid for ceiling mounting. Fastening by clamping under the fire protection bolt tie.

BSK separating bracket for wall mounting

Type	Dimension B mm	Dimension H mm	Dimension h mm	Dimension A mm	Pack. pcs	Weight kg/100 pcs.	Item No.
BSK-W0511	46	37.5	22.5	37.5	25	5.000	7215 31 2
BSK-W0521	46	62.5	52.5	52.5	25	9.000	7215 31 8
BSK-W1016	101	50	40	40	25	12.500	7215 32 4
BSK-W1026	101	75	97.5	65	25	17.500	7215 33 0

ST Steel **FS** Strip-galvanised price/100 pc.



Separating bracket for BSK fire protection duct, as installation aid for wall mounting. Fastening by clamping under the fire protection bolt tie.

BSK mortar

Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
BSK-M	1	350.000	7215 50 0

/pc.



Fire protection duct mortar, dried ready-to-use mortar in a bucket for filling joints and small cracks when mounting the fire protection ducts BSK and BSKH.

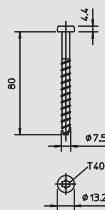
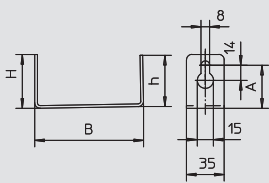
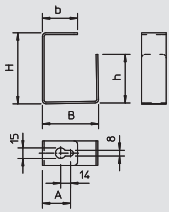
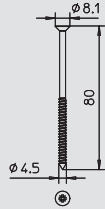
Fire protection bolt tie

Type	Dimension mm	Pack. pcs	Weight kg/100 pcs.	Item No.
MMS7.5X80	7.5 x 80	50	2.174	3498 27 1

ST Steel **G** Electrogalvanised price/100 pc.



Fire protection bolt tie with pan head, drive T40, drill hole 6 mm. Fire protection tested according to DIN 4102. Fire resistance class to F90.











Avoidance of faults is top priority
OBO lightning and surge protection systems help to maintain the function of computer centres if there are direct lightning strikes or, which is much more common, surge voltages, and thus are able to avoid faults.

And much, much more....
On the following pages, you will find an extract from our main catalogue, which will inform you about the various different systems for internal and external lightning and surge protection. You can find additional detailed explanations and planning aids in our TBS catalogue (Transient and lightning protection systems).

Lightning and surge protection

	External lightning protection	Round cable, aluminium	50
		Stand FangFix system 16 kg	50
		Screwless cable brackets	50
	Earthing and equipotential bonding	Stainless steel flat conductor	51
		Equipotential bonding rail	51
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		IT systems	57
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External lightning protection

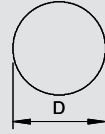


Round conductor, aluminium

Type	Material symbol	Inter-face	Nominal size Ø mm	Cross-section mm ²	Normal ring ca. m	Normal ring ca. kg	Weight kg/100 m	Item No.
RD 8-ALU-T	Al	—	8	50	150	20	13.500	5021 29 4

Al Aluminium price/100 m

- According to DIN EN 50164-2 (VDE 0185 Part 202)
- Meets the requirements of VDE 0185-305 (IEC 62305)
- RD 8/ALU: Semi-hard (E-AlMgSi0.5 corresponds to DIN 48801)
- RD 8/ALU-T: Twistable (E-AlMgSi0.5 corresponds to DIN 48801)
- RD 10/ALU: Pure aluminium (E-Al corresponds to DIN 48801)
- AL and ALMgSi may not be routed directly on, in or under the plaster, mortar or concrete nor underground

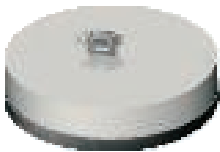


Interception rod, one end rounded

Type	Material symbol	Length mm	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
101 ALU-2000	Al	2000	16	10	109.000	5401 83 6

Al Aluminium price/100 pc.

- Ø 16 mm, Al
- For stand system with female thread M16

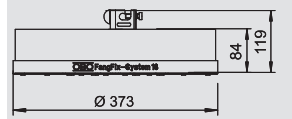


Stand FangFix system 16 kg

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
F-FIX-16	1	1732.500	5403 20 0

price/100 pc.

- System consists of FangFix stone with base and clamp
- FangFix clamp made of VA; lightning current tested with 100 kA (10/350)
- 16 kg stone of Ø 365 mm, high level of stability
- Quick and easy mounting of interception rod using anchors
- Concrete, frost-resistant
- The FangFix stone can be stacked

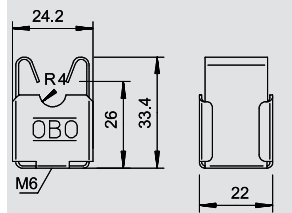


Screwless cable brackets

Type	Fit mm	Installation height mm	Pack. pcs	Weight kg/100 pcs.	Item No.
177 20 VA M6	Rd 8	20	50	2.500	5207 33 9

V2A Stainless steel, 1.4301 price/100 pc.

- With female thread M6 or through hole Ø 5 mm
- From stainless steel (V2A)
- Version -VK: copper-plated

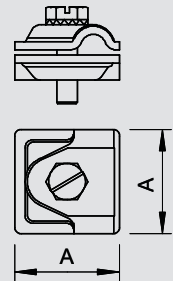


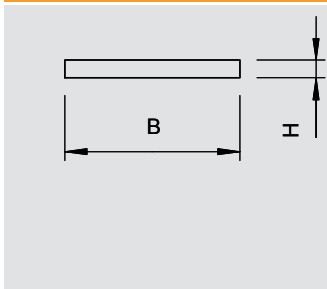
Variable earthing connector

Type	Fit mm	Dimension A mm	Material symbol	Pack. pcs	Weight kg/100 pcs.	Item No.
249 8-10 ALU	Rd 8-10	44	Al	30	6.600	5311 51 9

Al Aluminium price/100 pc.

- For T, cross and parallel connectors
- Quick installation using hex-head screw M10 x 30, high-grade stainless steel
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)



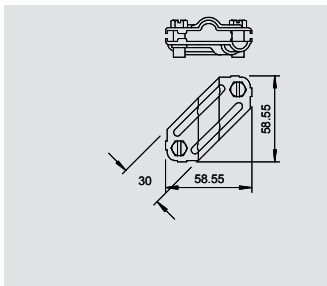


Stainless steel flat conductor

Type	Material symbol	Inter-face	Dimension b x h mm	Cross-section mm ²	Normal ring ca. m	Normal ring ca. kg	Weight kg/100 m	Item No.
5052 V4A 30X3.5	V4A	—	30 x 3,5	105	50	42	82.425	5018 70 6

V4A Stainless steel 1.4401 price/100 m

- According to DIN EN 50164-2 (VDE 0185 Part 202)
- Meets the requirements of VDE 0185-305 (IEC 62305)
- For use in areas at risk of corrosion
- For lightning protection, earthing systems and ring equipotential bonding

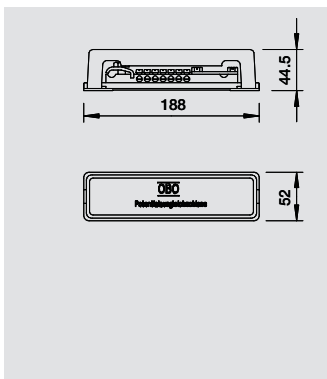


Cross-connectors

Type	Fit mm	Material symbol	Inter-face	Pack. pcs	Weight kg/100 pcs.	Item No.
250 VA	Rd 8-10/FL30	V2A	—	25	10.260	5312 92 2

V2A Stainless steel, 1.4301 price/100 pc.

- Fit: Rd 8-10 x Rd 8-10
- Fit: Rd 8-10 x FL 30
- Fit: FL 30 x FL 30
- Installed with 2 hex-head screws M8 x 20 (F)

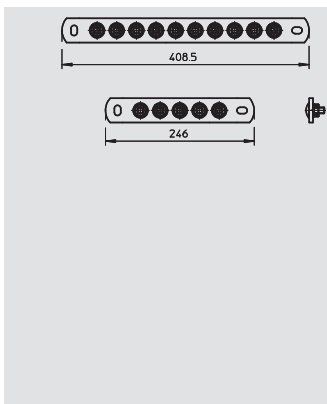


Equipotential bonding rail for outside installation

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
1809 A	Black	1	23.000	5015 11 1

V2A Stainless steel, 1.4301 /pc.

- Connection options:
- 7 single or multi-core conductors to 25 mm² or fine-core conductors to 16 mm²
 - 1 round conductor Rd 8-10
 - 1 flat strip to FL30 or round conductor Rd 8-10
 - Base plate and covering hood from polystyrene
 - Colour: black, UV-resistant
 - Screws and over-piece from VA
 - Capable of carrying lightning current 100 kA (10/350)

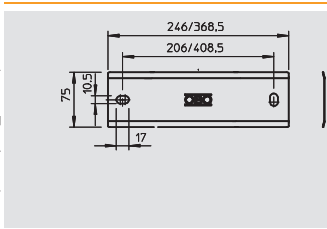


Equipotential bonding rail for inside installation

Type	Material symbol	Number of connections	Width mm	Length mm	Height mm	Pack. pcs	Weight kg/100 pcs.	Item No.
1802 10 CU	Cu	10	40	408.5	5	1	180.000	5015 84 2
1802 10 VA	V2A	10	40	408.5	6	1	190.000	5015 86 6

V2A Stainless steel, 1.4301 **Cu** Copper /pc.

- Main potential equalisation to VDE 0100 Part 410 and Part 540, and also lightning protection potential equalisation to VDE 0185-305 (IEC 62305)
- Insulation feet
- Quick, simple assembly of connection conductors to the contact rail using lock bolts M10
- The high-grade stainless steel versions (V2A) are suitable for outdoor use
- Complete with anchors and bolts for wall mounting
- With lock washer (DIN 137) for bolt locking against loosening (e.g. required in industry and Ex areas)

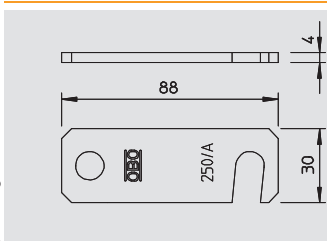


Cover for BigBar

Type	Material symbol	Number of connections	Pack. pcs	Weight kg/100 pcs.	Item No.
1802 AH 10	V2A	10	1	36.300	5015 88 4

V2A Stainless steel, 1.4301 /pc.

- Complete with all installation components



Crossbar

Type	Material symbol	Inter-face	Connection option	Pack. pcs	Weight kg/100 pcs.	Item No.
1802 KL	V2A	—	FL30	1	7.000	5015 89 0

V2A Stainless steel, 1.4301 /pc.

- For clamping flat conductors 30 x 3.5
- Fit BigBar 1802 potential equalisation rail



Earthing and equipotential bonding

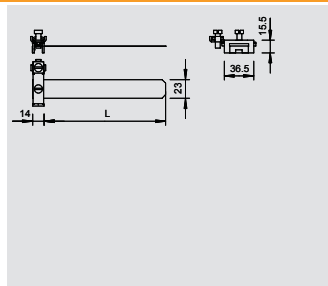


Strip earthing clip

Type	for pipe Ø		Pack.	Weight	Item No.
	inch	mm			
927 2	3/8-4	17.2-114	10	8.550	5057 52 3

V2A Stainless steel, 1.4301 price/100 pc.

- For pipes of Ø 3/8 - 6"
- Connection options: Max. 2 cables 2.5-25 mm²
- Round conductor Rd 8
- Clip element, bolts and tightening strap made of rustproof stainless steel (VA)

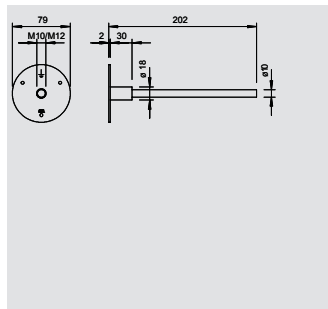


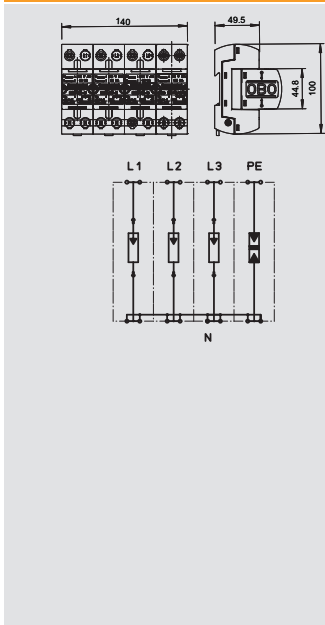
Earthing fixed point

Type	Thread	Pack.	Weight	Item No.
205 B-M10 VA	M10	25	25.500	5420 00 8
205 B-M12 VA	M12	25	25.500	5420 01 6

V4A Stainless steel, 1.4404 /pc.

- Connection to earthing systems, arresters and reinforcement
- Contact plate: Ø 79 mm, made of rustproof stainless steel (V4A)
- Clamping bolt Ø 10 mm, rustproof (V2A)
- Incl. plastic cover for simple installation





Combination arrester set, 4-pole

Type	Highest continuous voltage V	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
MCD 50-B 3+1	255	3 + NPE	1	168.000	5096 87 9



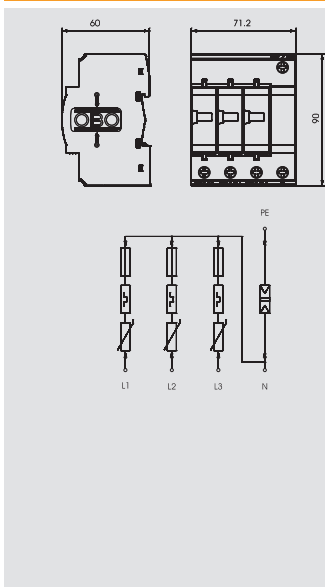
/pc.

Combination arrester, Type 1, according to DIN EN 61643-11(B according to VDE 0675 Part 6).

Completely pre-terminated and ready for connection, consisting of:
 MCD 50-B: Coordinated lightning current arrester, Type 1 (Class B) to EN 61643-11 and MCD 125-B/NPE: Coordinated N-PE spark gap, Type 1 (Class B) to EN 61643-11 for use in TN-S and TT systems. Interface 0 to 1 according to lightning protection zone concept according to IEC 61312-1 and VDE 0185-305 (IEC62305).

- Arresting capacity 50 kA 10/350 µs per pole (L-N)
- Arresting capacity 125 kA (10/350 µs) per pole (N-PE)
- Suitable for any TN or TT system
- Conforms to VDN Directive 2nd Edition 2004
- Protection level < 1.3 kV
- Line follow current quenching 25 kA Ipeak
- Incl. plug caps for identifying the connections
- Encapsulated, non-extinguishing spark gap

Application: Lightning protection equipotential bonding in buildings with external lightning protection of Class I to IV and in standard distributor housings.



Lightning current and surge arrester/CombiController V50

Type	Highest continuous voltage V	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
V50-B+C 3+NPE	280	3+NPE	1	55.000	5093 65 4



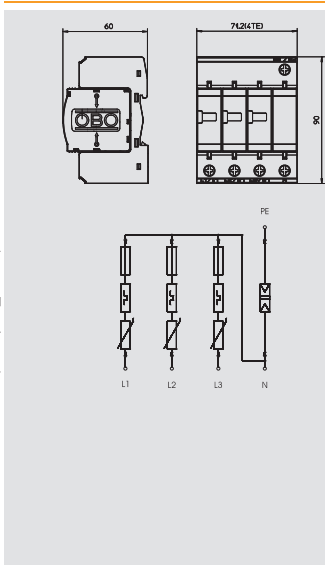
/pc.

Combination arrester set, lightning and surge arrester Type 1+2 to DIN EN 61643-11 (B+C to VDE 0675 part 6).

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity 12.5 kA (10/350) per pole and 50 kA (10/350) in total
- Universally suitable for TN and TT systems
- With new Multibase base with multi-connection terminals
- Complete unit, consisting of cover and base, pre-mounted and ready for connection
- Arrester, connectable with dynamic cut-off unit
- With visual function display
- Voltage protection level < 1,3 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in distributor housings
- Labelled connections

Application: Equipotential bonding in buildings, even those with external lightning protection of class III and IV, and in standard distributor housings.

* Complete = cover and base



Surge arrester/V20, 280 V

Type	Highest continuous voltage V	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
V20-C 3+NPE-280	280	3 + NPE	1	41.700	5094 65 6



/pc.

V 20-C/...: Surge protection device Type 2 (Class C) to VDE 0675 part 6-11 (DIN EN 61643-11).

- With new MultiBase base part and Multi-connection clamps
- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- VDE-tested
- Suitable for TN- and TT network systems
- Plug-in upper part; upper part can be separated from base without tools
- Including thermal and dynamic separating device
- With visual display of defects
- High current conductivity and long service life
- Marked connections

Application example: residential buildings, single-family homes without outer lightning protection system.

* Complete = cover and base



Surge protection in energy technology



Surge arrester/V10 Compact

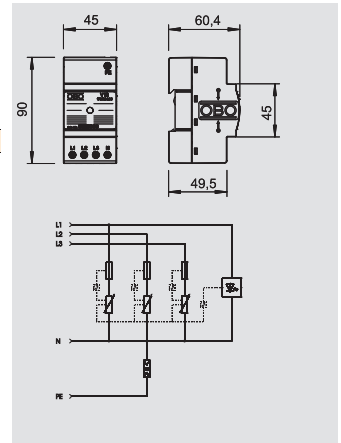
Type	Highest continuous voltage V	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
V10 COMPACT 255	255	3 + NPE	1	15.800	5093 38 0

/pc.

Surge arrester, Type 2+3 to EN 61643-11 (Class C+D to VDE 0675 Parts 6-11)

- Suitable for TN and TT network systems
- Integrated 3+1 solution
- Incl. thermal and dynamic cut-off unit
- With visual function display
- High current conductivity with long lifespan
- Labelled connections
- Separation unit only 45 mm

Application: Industrial, housing and protection of rotary current systems



Fine power protection/application hat profile rail

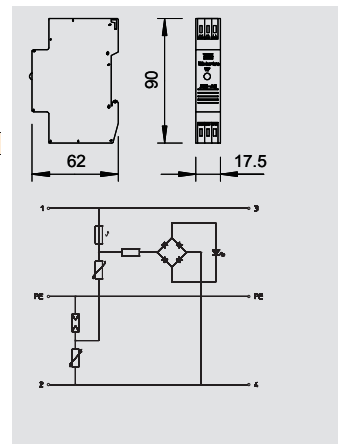
Type	U max AC V	U max DC V	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
VF230-AC/DC	255	350	230 V version	1	8.000	5097 64 9

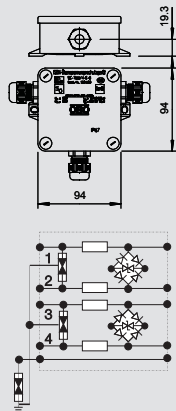
/pc.

Surge protection device, fine protection Type 3 to EN 61643-11 (Class D to VDE 0675, Parts 6-11)

- Suitable for DC and AC voltage systems
- With visual function display
- With installation-friendly, screwless connection terminals
- In a space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm hat profile rail in every normal commercially available distributor housings.





Surge protection for ISDN and DSL systems

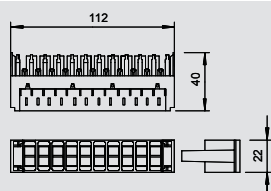
Type	Version	Connection system	Pack. pcs	Weight kg/100 pcs.	Item No.
SC-TELE 4-C-G	Combi protection	Terminal	1	30.000	5081 68 8

/pc.

Data cable protection device for telecommunication systems in insulated housing

- Suitable for any analogue, ISDN or DSL system
- Supports ADSL 2
- With two-level protective circuit
- Insulating housing to IP 54
- With screwless terminals for quick mounting
- For 2 DA systems (4 protected cores)

Application: For use at supply location on line, upstream of NT-S0 or splitter interface.



Surge protection for LSA-Plus systems

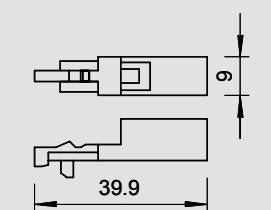
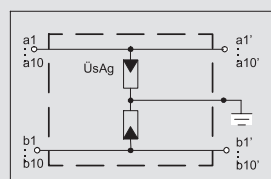
Type	Highest continuous voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
LSA-B-MAG	180	1	8.600	5084 02 0

/pc.

LSA-B-MAG: LSA basic protection magazine for use in multi-core data cable systems, MCR systems and telephone switchboards.

- Basic protection
- Fitted with 20 gas discharge protectors
- Max. voltage: 180 V

Application: Direct on LSA-Plus separation or connection bars

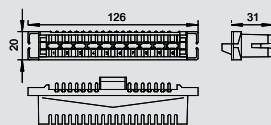
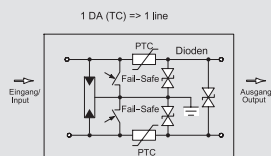


Type	Highest continuous voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
LSA-BF-180	180	1	0.500	5084 02 4

/pc.

LSA-BF 180: LSA basis and fine protection, for application in measurement technology systems.

- Basic and fine protection
- Course protection using fail-safe technology
- With PTC protection components against overcurrent
- Max. voltage: 180 V

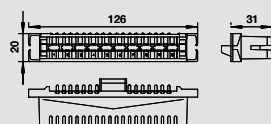


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
LSA-A-LEI	Grey	1	5.100	5084 00 8

/pc.

LSA-A-LEI: LSA attaching strip 2/10 for attaching ten double-cores.

- For use with protection element LSA-B-MAG
- Fastening to mounting trough LSA-M
- Colour: grey
- Clampable cross-sections 0.14-0.5 (AWG 26 to 20)

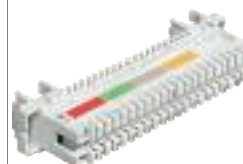


Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
LSA-T-LEI	White	1	5.400	5084 01 2

/pc.

LSA-T-LEI: LSA separating strip 2/10 for attaching up to ten double-cores.

- For use with protection element LSA-BF-180, LSA-BF-24, LSA-B-MAG
- Fastening to mounting trough LSA-M
- Colour: white
- Clampable cross-sections 0.14-0.5 (AWG 26 to 20)



Surge protection for telecommunication systems



Surge protection for LSA-Plus systems

Type	Colour	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
LSA-E-LEI	Red	1	6.500	5084 01 6

/pc.

LSA-E-LEI: LSA earthing strip, 40-pin for attaching earth lines or screens to the earth connection.

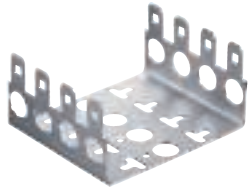
- Complete with connection line, green-yellow, 1.5 mm²
- Colour: red



Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
LSA-E	1	1.000	5084 03 2

/pc.

LSA-E: Earth rail as earth connection between overvoltage protectors LFS-BF... (1 DA) and distributor connector LSA-...-LEI.



Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
LSA-M	1	7.500	5084 03 6

/pc.

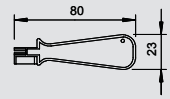
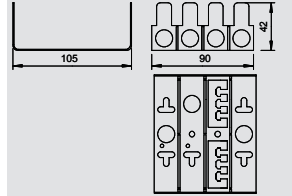
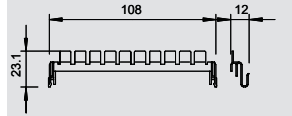
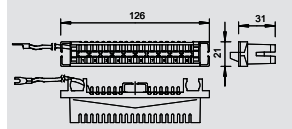
LSA-M: Installation frame for four connection or separating strips Grid 22.5 mm. Depth: 22 mm; 30 mm; 50 mm



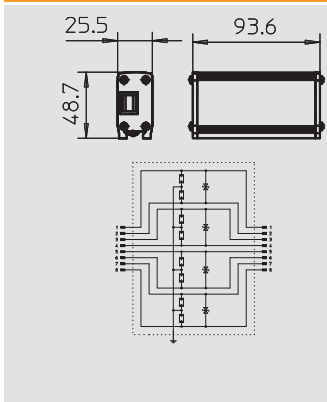
Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
LSA-TOOL	1	0.600	5084 04 0

/pc.

LSA-TOOL: Simple tool for soldering, bolting and stripping-free connection of cores, without cutter.



Surge protection for network technology



Surge protection for high-speed networks up to 10 GBit

Type	Version	Connection system	Pack. pcs	Weight kg/100 pcs.	Item No.
ND-CAT6A/EA	8-pole	RJ45	1	16.600	5081 80 0

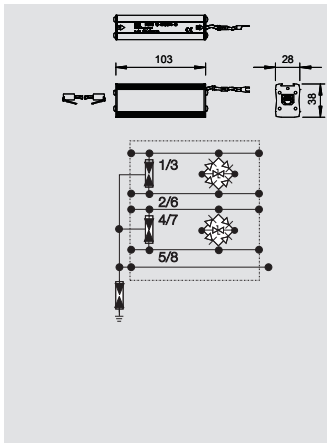


/pc.

Data cable protection devices for high-speed networks

- High-quality RJ-45 sockets
- Low protection level at high current load
- Support for Power over Ethernet + up to 1 A
- Tested transmission quality in networks up to 10 GBit (Class EA) or CAT6A
- Quick installation through connectable version

Application example: 10 GBit Ethernet, 10/100 MBit Ethernet, PoE applications



Surge protection for class D networks

Type	Version	Connection system	Pack. pcs	Weight kg/100 pcs.	Item No.
RJ45 S-ATM8-IND	—	RJ45	1	13.500	5081 79 8

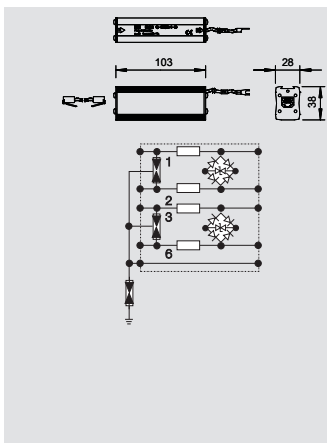


/pc.

Universal data line protection device for network technology and telecommunication systems.

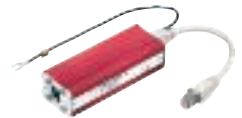
- In aluminium housing
- Protection of eight cores
- With two-stage protection circuit
- Simple installation
- With RJ 45-Western connector
- Incl. 150 mm connecting cable with RJ 45 connectors
- Cat 5 network technology, 10BaseT, 100BaseT

Application: for analogue, ISDN, DSL system, Ethernet Twisted Pair.



Surge protection for various IT systems

Type	Version	Connection system	Pack. pcs	Weight kg/100 pcs.	Item No.
RJ45 S-E100 4-B	Basic protection, 4 wires	RJ45	1	21.000	5081 72 6
RJ45 S-E100 4-C	Combi protection, 4 wires	RJ45	1	21.000	5081 73 4
RJ45 S-E100 4-F	Fine protection, 4 wires	RJ45	1	21.000	5081 74 2



/pc.

Data cable protection device for information technology systems

- In aluminium housing
- RJ 45 Connector
- Incl. 150 mm connecting cable with RJ 45 connectors
- Simple mounting using adapter plug
- Two-stage protective circuit

Application: Twisted pair, control circuits, communication cables



Surge protection for measuring, control and regulation systems



Testable lightning barriers for control circuits

Type	Nominal voltage V	Version	Maximum continuous voltage Vc / AC V	Maximum continuous voltage Vc / DC V	Pack. pcs	Weight kg/100 pcs.	Item No.
MDP-4 D-5-T	5	4-pole	7	10	1	5.800	5098 41 1

/pc.

MDP.../D...T: lightning barriers with test function

- Protection device for multi-wire systems
- Direct screen earthing
- With easy-to-mount, screwless connection terminals
- Space-saving width of just 8.1 mm
- Protective circuit testable with Life Control
- High bandwidth to 100 MHz

Application: universal use on 35 mm hat rail in any standard distributor housing.



Type	Nominal voltage V	Version	Maximum continuous voltage Vc / AC V	Maximum continuous voltage Vc / DC V	Pack. pcs	Weight kg/100 pcs.	Item No.
MDP-4 D-24-T	24	4-pole	20	28	1	5.800	5098 43 1

/pc.

MDP.../D...T: Lightning barrier with test function

- Protection device for multi-wire systems
- Direct shield earthing
- With easy-to-mount screwless connection terminals
- Space-saving width of just 8.1 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz

Application: Use on 35 mm hat profile rail in any standard distribution housing.



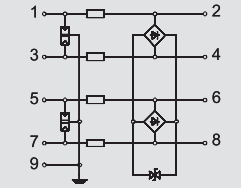
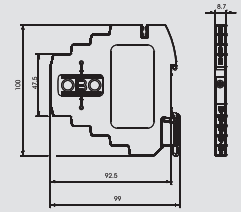
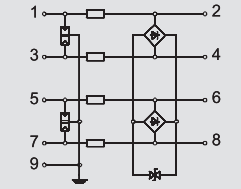
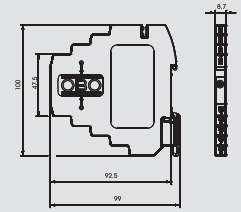
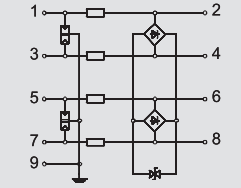
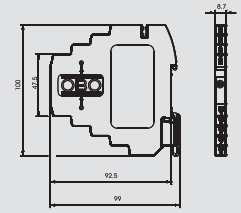
Type	Nominal voltage V	Version	Maximum continuous voltage Vc / AC V	Maximum continuous voltage Vc / DC V	Pack. pcs	Weight kg/100 pcs.	Item No.
MDP-4 D-48-T	48	4-pole	41	58	1	5.800	5098 45 0

/pc.

MDP.../D...T: lightning barriers with test function

- Protection device for multi-wire systems
- Direct screen earthing
- With easy-to-mount, screwless connection terminals
- Space-saving width of just 8.1 mm
- Protective circuit testable with Life Control
- High bandwidth to 100 MHz

Application: universal use on 35 mm hat profile rail in any standard distributor housing.



Portable testing unit for lightning barriers

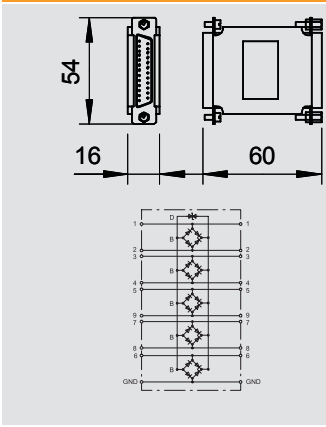
Type	Pack. pcs	Weight kg/100 pcs.	Item No.
LFC	1	164.500	5096 78 6

/pc.

OBO Life Control allows function control of the MDP lightning barriers. The lightning barriers can be checked while installed. Life Control will not have any influence on the measuring signal. Life Control possesses an integrated OLED with visual and acoustic defect signalling. A separate LED inside the testing pin is also integrated. Life Control is delivered in a case, complete with a CD and instructions.



Surge protection for measuring, control and regulation systems



Protection devices for serial interfaces

Type	Highest continuous voltage V	Version	Pack.	Weight	Item No.
			pcs	kg/100 pcs.	
SD09-V24 9	18	SUB-D-9; V24 RS232	1	6.000	5080 05 3
SD15-V24 15	18	SUB-D-15; V24 RS232	1	7.000	5080 15 0
SD25-V24 25	18	SUB-D-25; V24 RS232	1	8.000	5080 27 4
SD09-V11 9	7.5	SUB-D-9; V11 RS485	1	6.000	5080 06 1
SD25-V11 25	7.5	SUB-D-25; V11 RS485	1	8.000	5080 28 2



/pc.

Data cable protection devices, serial interface






- Different connection systems available
- Low protection level

Application: PLC, alarm systems, controllers





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5704157	6149 13 1		13	5705338	6149 67 9		17	6325634	6424 62 4		29	6779055	7215 45 2		46
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5704515	6149 27 3		13			/pc.		6142699	7202 58 6		37				
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Manufacturer code 1219 (for articles beginning with 0: 1010)

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101 ALU-2000	2000 / Al	5427872	5401 83 6	price/100 pc.	50	1268 L 2M FS	/ ST / FS	5038771	1104 50 0	price/100 m	40
177 20 VA M6	/ V2A	5404774	5207 33 9		50	1268 L 300 FS	/ ST / FS	5038351	1104 28 4	price/100 pc.	40
205 B-M10 VA	M10 / V4A	5900498	5420 00 8	/pc.	52	1268 L 400 FS	/ ST / FS	5836353	1104 29 2		40
205 B-M12 VA	M12 / V4A	5629290	5420 01 6		52	1268 L 500 FS	/ ST / FS	5038412	1104 30 6		40
249 8-10 ALU	44 / Al	5417736	5311 51 9	price/100 pc.	50	1802 10 CU	/ Cu	5002260	5015 84 2	/pc.	51
250 VA	/ V2A	5418757	5312 92 2		51	1802 10 VA	/ V2A	5002284	5015 86 6		51
732 10 GTP	9-10 - / St / GTP	5114611	1360 10 8		41	1802 AH 10	/ V2A	5033677	5015 88 4		51
732 12 GTP	10,5-12 M12 / St / GTP	5114673	1360 12 4		41	1802 KL	/ V2A	5033738	5015 89 0		51
732 14 GTP	12,5-14 PG7 / St / GTP	5114734	1360 14 0		41	1809 A	Black / V2A	5959427	5015 11 1		51
732 15 GTP	13,5-15 PG9 / St / GTP	5114796	1360 15 9		41	2031 LW15	/ St / FS	5864011	2207 18 4	price/100 pc.	41
732 16 GTP	14,5-16 M16 / St / GTP	5114857	1360 16 7		41	2031 M 15 FS	15 50 / St / FS	5863953	2207 02 8		41
732 18 GTP	16,5-18 PG11 / St / GTP	5114918	1360 18 3		41	2031 M 30 FS	30 25 / St / FS	5798798	2207 03 6		42
732 20 GTP	18,5-20 M20 / St / GTP	5114970	1360 20 5		41	2031 M 70 FS	70 10 / St / FS	5022497	2207 06 0		42
732 22 GTP	20-22 PG13,5 / St / GTP	5115038	1360 22 1		41	2033 D 15x3 G	15 6,4 / St / G	5044970	2205 09 7		42
732 24 GTP	22-24 PG16 / St / GTP	5115090	1360 24 8		41	2033 M	16 25 / V2A	5036616	2204 00 0		42
732 26 GTP	24-26 M25 / St / GTP	5115151	1360 26 4		41	2034 M	10 50 / V2A	5210672	2204 01 0		42
732 28 GTP	26-28 PG21 / St / GTP	5115212	1360 28 0		41	2056 100 FT	90-100 25 / ST / FT	5065296	1160 99 0		25
732 30 GTP	28-30 PG21 / St / GTP	5115274	1360 30 2		41	2056 12 FT	8-12 23 / ST / FT	5064459	1160 12 5		25
732 33 GTP	31-33 M32 / St / GTP	5115335	1360 33 7		41	2056 16 FT	12-16 23 / ST / FT	5064510	1160 16 8		25
732 35 GTP	33-35 - / St / GTP	5115397	1360 35 3		41	2056 22 FT	16-22 23 / ST / FT	5064572	1160 22 2		25
732 38 GTP	36-38 PG29 / St / GTP	5115458	1360 38 8		41	2056 28 FT	22-28 23 / ST / FT	5064633	1160 28 1		25
732 40 GTP	38-40 M40 / St / GTP	5115519	1360 39 6		41	2056 34 FT	28-34 23 / ST / FT	5064695	1160 34 6		25
732 42 GTP	40-42 M40 / St / GTP	5115571	1360 42 6		41	2056 40 FT	34-40 23 / ST / FT	5064756	1160 40 0		25
732 45 GTP	43-45 - / St / GTP	5115632	1360 45 0		41	2056 46 FT	40-46 23 / ST / FT	5064817	1160 45 1		25
732 48 GTP	46-48 PG36 / St / GTP	5115694	1360 48 5		41	2056 52 FT	46-52 23 / ST / FT	5064879	1160 52 4		25
732 50 GTP	48-50 M50 / St / GTP	5115755	1360 50 7		41	2056 58 FT	52-58 23 / ST / FT	5064930	1160 58 3		25
732 6 GTP	5-6 - / St / GTP	5114499	1360 05 1		41	2056 64 FT	58-64 23 / ST / FT	5064992	1160 64 8		25
732 60 GTP	58-60 PG48 / St / GTP	5115878	1360 60 4		41	2056 70 FT	64-70 25 / ST / FT	5065050	1160 70 2		25
732 63 GTP	61-63 M63 / St / GTP	5569114	1360 63 9		41	2056 76 FT	70-76 25 / ST / FT	5065111	1160 76 1		25
732 8 GTP	7-8 - / St / GTP	5114550	1360 08 6		41	2056 82 FT	76-82 25 / ST / FT	5065173	1160 82 6		25
733 21 G	19-21 6,5 x 10 / St / G	5116110	1361 20 1		41	2056 90 FT	82-90 25 / ST / FT	5065234	1160 90 7		25
733 23 G	21-23 6,5 x 10 / St / G	5116172	1361 23 6		41	2056 M 100 FT	90-100 25 / ST / FT	5063551	1156 16 0		40
733 29 G	24-29 6,5 x 10 / St / G	5116233	1361 29 5		41	2056 M 12 FT	8-12 23 / ST / FT	5062714	1156 00 4		40
733 38 G	30-38 6,5 x 10 / St / G	5116295	1361 38 4		41	2056 M 16 FT	12-16 23 / ST / FT	5062776	1156 01 2		40
733 48 G	39-48 6,5 x 10 / St / G	5116356	1361 48 1		41	2056 M 22 FT	16-22 23 / ST / FT	5062837	1156 02 0		40
733 54 G	48-54 6,5 x 14 / St / G	5116417	1361 51 1		41	2056 M 28 FT	22-28 23 / ST / FT	5062899	1156 03 9		40
733 61 G	53-61 6,5 x 14 / St / G	5116479	1361 61 9		41	2056 M 34 FT	28-34 23 / ST / FT	5062950	1156 04 7		40
733 63 G	63-63 8 x 18 / St / G	5116530	1361 63 5		41	2056 M 40 FT	34-40 23 / ST / FT	5063018	1156 05 5		40
927 2	/ V2A	5388630	5057 52 3		52	2056 M 46 FT	40-46 23 / ST / FT	5063070	1156 06 3		40
1268 L 200 FS	/ ST / FS	5038290	1104 26 8		40	2056 M 52 FT	46-52 23 / ST / FT	5063131	1156 07 1		40
						2056 M 58 FT	52-58 23 / ST / FT	5063193	1156 09 8		40
						2056 M 64 FT	58-64 23 / ST / FT	5063254	1156 10 1		40
						2056 M 70 FT	64-70 25 / ST / FT	5063315	1156 12 8		40

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Type	Dimensions/Colour/Div.	EAN-C.	Art. no.	Price	Page	Type	Dimensions/Colour/Div.	EAN-C.	Art. no.	Price	Page
2056 M 76 FT	70-76 25/ ST / FT	5063377	1156 13 6	price/100 pc.	40	BSK-B1016	101 69/ St / FS	6896479	7215 36 8	price/100 pc.	47
2056 M 82 FT	76-82 25/ ST / FT	5063438	1156 14 4		40	BSK-B1026	101 69/ St / FS	6896530	7215 37 4		47
2056 M 90 FT	82-90 25/ ST / FT	5063490	1156 15 2		40	BSK-D0930	5 x 30 15	6025558	7215 42 3	/pc.	46
2056 M2 12 FT	8-12 23/ St / FT	5494836	1156 17 9		40	BSK-D1260	5 x 60 15	6645978	7215 43 2		47
2056 M2 16 FT	12-16 23/ St / FT	5494898	1156 18 7		40						
2056 M2 22 FT	16-22 23/ St / FT	5494959	1156 19 5		40						
2056 M2 28 FT	22-28 23/ St / FT	5958703	1156 20 9		40	BSK-E090506	120 95	5430360	7215 25 0		45
						BSK-E090511	170 95	5430384	7215 25 2		45
2056 M3 12 FT	8-12 23/ St / FT	5958765	1156 24 1		40	BSK-E090521	270 95	5430391	7215 25 4		45
2056 M3 16 FT	12-16 23/ St / FT	5958826	1156 26 8		40						
2056 M3 22 FT	16-22 23/ St / FT	5958888	1156 27 6		40	BSK-E091016	220 150	5430407	7215 25 6		45
2056 M3 28 FT	22-28 23/ St / FT	5958949	1156 28 4		40	BSK-E091026	320 150	5430414	7215 25 8		45
2078 M10 1M G	M10 10/ St / G	5253396	3141 20 9		30	BSK-E120506	180 130	5430421	7215 27 0		46
2078 M10 2M G	M10 10/ ST / G	5123583	3141 14 0		30	BSK-E120511	230 130	5430438	7215 27 2		46
						BSK-E120521	330 130	5430445	7215 27 4		46
2078 M12 1M G	M12 12/ St / G	5253457	3141 30 6		30						
2078 M12 2M G	M12 12/ ST / G	5123644	3141 14 4		30	BSK-E121016	280 185	5430476	7215 27 6		46
						BSK-E121026	380 185	5430483	7215 27 8		46
2078 M8 1M G	M8 8/ St / G	5253334	3141 12 8		30						
2078 M8 2M G	M8 8/ ST / G	5119982	3141 13 6		30	BSK-K0506		6025923	7215 53 3		45
				price/100 m		BSK-K0511		6026043	7215 53 7		45
5052 V4A 30X3.5	/ V4A	5800477	5018 70 6			51	BSK-K0521		6026166	7215 54 1	
						BSK-K1016		6026289	7215 54 5		45
AW 15 11 FT	110 50/ St / FT	6207077	6420 65 6		29	BSK-K1026		6026401	7215 54 9		45
AW 15 16 FT	160 55/ St / FT	6207138	6420 66 4		29	BSK-M		6888214	7215 50 0		47
AW 15 21 FT	210 60/ St / FT	6207190	6420 68 0		29					price/100 pc.	
AW 15 31 FT	310 65/ St / FT	6207251	6420 71 0		29	BSK-S0955	4.0 x 55/ St / G	6887651	7215 40 0		46
AW 15 41 FT	410 70/ St / FT	6207312	6420 74 5		29	BSK-S1280	4.5 x 80/ St / G	6887774	7215 41 2		47
AW 15 51 FT	510 75/ St / FT	6207374	6420 78 8		29	BSK-W0511	46 37,5/ St / FS	6896110	7215 31 2		47
AW 15 56 FT	560 80/ St / FT	6207435	6420 79 6		29	BSK-W0521	46 62,5/ St / FS	6896172	7215 31 8		47
AW 15 61 FT	610 80/ St / FT	6207497	6420 82 6		29	BSK-W1016	101 50/ St / FS	6896233	7215 32 4		47
						BSK-W1026	101 75/ St / FS	6896295	7215 33 0		47
AW G 15 11 FT	110 50/ St / FT	6662470	6420 60 6		29					/pc.	
AW G 15 16 FT	160 55/ St / FT	6079155	6420 60 7		29						
AW G 15 21 FT	210 60/ St / FT	6662531	6420 60 8		29						
AW G 15 31 FT	310 65/ St / FT	6662593	6420 61 0		29	DBL 50 100 FS	100/ ST / FS	6746118	6015 50 6		29
AW G 15 41 FT	410 70/ St / FT	6662654	6420 61 2		29	DBL 50 100 FT	100/ ST / FT	6785414	6015 56 5		29
AW G 15 51 FT	510 75/ St / FT	6662715	6420 61 4		29	DBL 50 150 FS	150/ ST / FS	6746170	6015 51 4		29
AW G 15 61 FT	610 80/ St / FT	6662777	6420 61 6		29	DBL 50 150 FT	150/ ST / FT	6785476	6015 57 3		29
						DBL 50 200 FS	200/ ST / FS	6746231	6015 52 2		29
				/m		DBL 50 200 FT	200/ ST / FT	6785537	6015 58 1		29
BSK 090506	120 95	6024834	7215 15 0		45						
BSK 090511	170 95	6024957	7215 15 4		45	DBL 50 300 FS	300/ ST / FS	6746293	6015 53 0		29
BSK 090521	270 95	6025077	7215 15 8		45	DBL 50 300 FT	300/ ST / FT	6785599	6015 60 3		29
						DBL 50 400 FS	400/ ST / FS	6746354	6015 54 9		29
BSK 091016	220 150	6025190	7215 16 2		45	DBL 50 400 FT	400/ ST / FT	6785650	6015 61 1		29
BSK 120506	180 130	6645794	7215 21 0		46						
BSK 120511	230 130	6645855	7215 21 6		46	DBL 50 500 FS	500/ ST / FS	5239154	6015 55 2		29
BSK 120521	330 130	6887477	7215 22 2		46	DBL 50 500 FT	500/ ST / FT	5239208	6015 61 4		29
						DBL 50 600 FS	600/ ST / FS	5239161	6015 55 5		29
BSK 121016	280 185	6887538	7215 22 8		46	DBL 50 600 FT	600/ ST / FT	5239215	6015 61 7		29
BSK 121026	380 185	6887590	7215 23 4		46						
						DBLG 20 050 FS	50/ ST / FS	6961528	6015 64 6		30
						DBLG 20 050 FT	50/ ST / FT	6042845	6015 64 8		30
				/pc.		DBLG 20 100 FS	100/ ST / FS	6961580	6015 65 4		30
BSK-A0908	80 40	6779055	7215 45 2		46	DBLG 20 100 FT	100/ ST / FT	6042968	6015 65 6		30
						DBLG 20 150 FS	150/ ST / FS	6279371	6015 65 8		30
BSK-A0910	100 60	6779116	7215 45 8		46	DBLG 20 150 FT	150/ ST / FT	6043088	6015 66 0		30
						DBLG 20 200 FS	200/ ST / FS	6961641	6015 66 2		30
				price/100 pc.		DBLG 20 200 FT	200/ ST / FT	6043200	6015 66 4		30
BSK-B0511	46 18/ St / FS	6896356	7215 35 6		47	DBLG 20 300 FS	300/ ST / FS	6961702	6015 67 0		30
BSK-B0521	46 18/ St / FS	6896417	7215 36 2		47						

Type listing

Structure of the EAN number: Country code 40

Manufacturer code 1219 (for articles beginning with 0: 1010)

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				/pc.						price/100 pc.	
DBLG 20 300 FT	300/ ST / FT	6043323	6015 67 2		30	F-FIX-16		5548713	5403 20 0		50
DBLG 20 400 FS	400/ ST / FS	6961764	6015 68 9		30						
DBLG 20 400 FT	400/ ST / FT	6043446	6015 69 1		30						
DBLG 20 500 FS	500/ ST / FS	5239222	6015 69 3		30	FNA II 6X30 M6/5	M6/ ST / G	5461890	3498 42 5		44
DBLG 20 500 FT	500/ ST / FT	5239260	6015 69 5		30	FNA II 6X30/5	6/ St / G	5693192	3498 46 8		44
DBLG 20 600 FS	600/ ST / FS	5239277	6015 69 7		30						
DBLG 20 600 FT	600/ ST / FT	5239284	6015 69 9		30	FRS 10X25 F 8.8	M10 x 25/ St / F	6201914	6407 56 0		28
				/m						/pc.	
DRL 050 FS	50 0,75/ St / FS	6057856	6052 05 3		24	GEV 36 G	/ St / G	6307876	6016 71 5		23
						GKS 34 G	/ ST / G	7261436	6016 85 5		23
DRL 075 FS	75 0,75/ St / FS	6385577	6052 02 9		24						
						GMS 1 G	10/ St / G	5485759	1124 60 3		31
DRL 100 FS	100 0,75/ St / FS	6057979	6052 09 6		24	GMS 2 G	10/ St / G	5485766	1124 60 5		31
						GMS 3 G	10/ St / G	5485803	1124 60 7		31
DRL 150 FS	150 1/ St / FS	6058099	6052 15 0		24	GMS 4 G	10/ St / G	5485810	1124 60 9		31
						GMS 4121 G	10/ St / G	5485971	1124 63 1		32
DRL 200 FS	200 1/ St / FS	6058150	6052 20 7		24	GMS 4141 G	10/ St / G	5485988	1124 63 3		32
						GMS 5 G	10/ St / G	5485827	1124 61 1		31
DRL 300 FS	300 1/ St / FS	6058273	6052 30 4		24	GMS L 45 G	10/ St / G	5485957	1124 62 7		32
						GMS L 45 G	10/ St / G	5485964	1124 62 9		32
DRL 400 FS	400 1/ St / FS	6058396	6052 40 1		24	GMS L 90 G	10/ St / G	5485926	1124 62 1		32
						GMS L 90 G	10/ St / G	5485919	1124 61 9		33
DRL 500 FS	500 1,25/ St / FS	6058518	6052 50 9		24	GMS L 90 G	10/ St / G	5485933	1124 62 3		33
						GMS L 90 G	10/ St / G	5485940	1124 62 5		33
DRL 550 FS	550 1,25/ St / FS	6058631	6052 56 8		24	GMS L G	10/ St / G	5485865	1124 61 3		32
						GMS T G	10/ St / G	5485872	1124 61 5		32
DRL 600 FS	600 1,25/ St / FS	6058754	6052 60 6		24	GMS X G	10/ St / G	5485889	1124 61 7		31
FAZ II 10 10 GS	M10 95/ St / G	5888499	3498 54 9		30	GR BS	450 3-6,0 / ST	6931330	6017 70 0		23
FAZ II 8 10 GS	M8 77/ St / G	5888437	3498 50 6		30						
FBA-B200	200 x 120 x 60	5428206	7202 50 6		37						
FBA-BV200	200 x 120 x 25	5428220	7202 51 6		37						
FBA-D100	100 x 78 100	6142811	7202 62 4		37						
FBA-D150	150 x 78 150	6142934	7202 62 8		37						
FBA-F	200 x 200 x 100	6144013	7202 66 0		37	GRM 105 100 G	100 3,9/ ST / G	6020270	6002 40 2		22
						GRM 105 150 G	150 3,9/ ST / G	6020393	6002 40 4		22
FBA-S107	107 117	6142330	7202 55 9		37	GRM 105 200 G	200 4,8/ ST / G	6020515	6002 40 6		22
						GRM 105 300 G	300 4,8/ ST / G	6020638	6002 40 8		22
FBA-S122	122 132	6142392	7202 56 3		37	GRM 105 400 G	400 4,8/ ST / G	6020751	6002 41 0		22
						GRM 105 500 G	500 4,8/ ST / G	6020997	6002 41 5		22
FBA-S134	134 144	6142453	7202 56 7		37	GRM 105 600 G	600 4,8/ ST / G	6021116	6002 41 7		22
FBA-S165	165 175	6142514	7202 57 1		37	GRM 35 100 G	100 3,9/ Steel / G	5037149	6000 06 2		22
						GRM 35 150 G	150 3,9/ Steel / G	5037170	6000 06 3		22
FBA-S200	200 210	6142576	7202 57 5		37						
						GRM 35 200 G	200 3,9/ Steel / G	5037187	6000 06 4		22
FBA-S250	250 260	6142637	7202 57 9		37						
						GRM 35 300 G	300 4,8/ Steel / G	5037194	6000 06 6		22
FBA-S65	65 75	6142217	7202 55 1		37						
						GRM 35 50 G	50 3,9/ St / G	5624813	6000 06 0		22
FBA-S78	78 87	6142279	7202 55 5		37						
						GRM 55 100 G	100 3,9/ St / G	6858552	6001 44 2		22
FBA-SP		5428190	7202 32 2		38	GRM 55 150 G	150 3,9/ St / G	6078974	6001 44 4		22
FBA-SR	140	6142699	7202 58 6		37	GRM 55 200 4.8 G	200 4,8/ St / G	5045274	6001 44 7		22
						GRM 55 200 G	200 3,9/ St / G	6858613	6001 44 6		22
FBS90-K		5650928	7208 22 9		39						
						GRM 55 300 G	300 4,8/ St / G	6858675	6001 44 8		22
FBS90-M		5650935	7208 23 3		39	GRM 55 400 G	400 4,8/ St / G	6858736	6001 45 0		22
FBS90-P2		5650911	7208 22 5		39	GRM 55 50 G	50 3,9/ St / G	5430957	6001 44 1		22
						GRM 55 500 G	500 4,8/ St / G	6858798	6001 45 2		22
FBS90-S		5650904	7208 22 1		39						

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Type	Dimensions/Colour/Div.	EAN-C.	Art. no.	Price	Page	Type	Dimensions/Colour/Div.	EAN-C.	Art. no.	Price	Page
GRM 55 600 G	600 4,8/ St / G	6858859	6001 45 4	/m	22	LD 220100HCC	Yellow/ PPO	5704850	6149 41 2	/pc.	15
						LD 220100HCRC	Yellow/ PPO	5704874	6149 42 4		15
						LD 220100HTC	Yellow/ PPO	5704621	6149 31 8		14
GSV 34 G	/ St / G	6520510	6016 59 6	/pc.	22	LD 220100RCL	Yellow/ PPO	5705093	6149 52 7		16
						LD 220100RCR	Yellow/ PPO	5705086	6149 52 1		16
						LD 220100VBF30C	Yellow/ PPO	5704096	6149 10 2		13
GVMS G	10/ St / G	5485742	1124 60 1		32	LD 220100VBF45C	Yellow/ PPO	5704164	6149 13 7		13
						LD 220100VBF90C	Yellow/ PPO	5704287	6149 18 3		14
						LD 220100VBR30C	Yellow/ PPO	5704133	6149 11 6		14
HMS-KS5X50	5 x 50 4/ ST / G	5964100	3498 20 4	price/100 pc.	44	LD 220100VBR45C	Yellow/ PPO	5704218	6149 15 5		14
						LD 220100VBR90C	Yellow/ PPO	5704348	6149 20 9		14
						LD 220100VTC	Yellow/ PPO	5704751	6149 37 2		15
K 12 1818 FS	/ ST / FS	6208876	6437 10 9	/pc.	23	LD 220100VTR	Yellow/ PPO	5704768	6149 37 8		15
						LD 220-2-88EA	Yellow/ PPO	5705000	6149 48 2		16
KBK-1	350 x 120 x 10 120	6460991	7202 70 9		36	LD 220TDO	Yellow/ PPO	5704638	6149 32 4		14
KBK-2	350 x 170 x 23 170	6460878	7202 72 5		36					/m	
KBK-3	350 x 170 x 40 170	6460755	7202 74 1		36	LD 300100CCY	Yellow/ PPO	5703662	6149 03 9		12
KBK-FP1	500 x 250 x 30 500	6449774	7202 90 3		36	LD 300100CY	Yellow/ PPO	5703600	6149 01 3		12
KBK-FP2	1,000 x 250 x 30 1000	6449712	7202 91 1		36	LD 300100EC	Yellow/ PPO	5704942	6149 45 8	/pc.	15
KBK-SG1	500 x 600 600/ St / FT	6449651	7202 96 2		36	LD 300100HB45C	Yellow/ PPO	5704461	6149 25 5		13
KBK-SG2	600 x 1,000 1000/ St / FT	6449590	7202 97 0		36	LD 300100HB90C	Yellow/ PPO	5704553	6149 28 5		13
						LD 300100HCC	Yellow/ PPO	5704867	6149 41 8		15
						LD 300100HCRC	Yellow/ PPO	5704881	6149 43 0		15
						LD 300100HTC	Yellow/ PPO	5704645	6149 33 0		14
						LD 300100RC	Yellow/ PPO	5705109	6149 53 3		16
						LD 300100VBF45C	Yellow/ PPO	5704195	6149 14 3		13
						LD 300100VBF90C	Yellow/ PPO	5704317	6149 18 9		14
KS KR VA4310	/ V2A	5694618	6062 28 0	price/100 pc.	24	LD 300100VBR45C	Yellow/ PPO	5704225	6149 16 1		14
						LD 300100VBR90C	Yellow/ PPO	5704386	6149 21 5		14
						LD 300100VTC	Yellow/ PPO	5704805	6149 39 0		15
KS-E	/ PVC	5010661	7205 42 2	/pc.	42	LD 300TDO	Yellow/ PPO	5704676	6149 33 6		14
KS-S		5448259	7205 42 5		36					/m	
KS-S		5448259	7205 42 5		38	LD 50050CCY	Yellow/ PPO	5703617	6149 02 1		12
KS-S		5448259	7205 42 5		39	LD 50050CSY	Yellow/ PPO	5703679	6149 05 0		12
						LD 50050EA38	Yellow/ PPO	5704935	6149 45 2	/pc.	16
						LD 50050HB30C	Yellow/ PPO	5704393	6149 22 5		13
LD 100100CCY	Yellow/ PPO	5703624	6149 02 7	/m	12	LD 50050HB45C	Yellow/ PPO	5704409	6149 23 1		13
LD 100100CY	Yellow/ PPO	5703563	6149 00 1		12	LD 50050HB90C	Yellow/ PPO	5704492	6149 26 1		13
						LD 50050HCC	Yellow/ PPO	5704812	6149 40 0		15
LD 100100EC	Yellow/ PPO	5704911	6149 44 0	/pc.	15	LD 50050HTC	Yellow/ PPO	5704560	6149 29 4		14
LD 100100HB30C	Yellow/ PPO	5704515	6149 27 3		13	LD 50050VBF30C	Yellow/ PPO	5704072	6149 09 0		13
LD 100100HB45C	Yellow/ PPO	5704430	6149 23 7		13	LD 50050VBF45C	Yellow/ PPO	5704140	6149 12 5		13
LD 100100HB90C	Yellow/ PPO	5704508	6149 26 7		13	LD 50050VBF90C	Yellow/ PPO	5704263	6149 17 0		14
LD 100100HCC	Yellow/ PPO	5704829	6149 40 6		15	LD 50050VBR90C	Yellow/ PPO	5704324	6149 19 7		14
LD 100100HTC	Yellow/ PPO	5704577	6149 30 0		14	LD 50050VTC	Yellow/ PPO	5704683	6149 34 2		14
LD 100100RC	Yellow/ PPO	5705079	6149 51 5		16	LD 50050VTR	Yellow/ PPO	5704690	6149 34 8		15
LD 100100VBF30C	Yellow/ PPO	5704089	6149 09 6		13	LD BR90-UNI	Yellow/ PPO	5705338	6149 67 9		17
LD 100100VBF45C	Yellow/ PPO	5704157	6149 13 1		13						
LD 100100VBF90C	Yellow/ PPO	5704270	6149 17 6		14	LD C100100	Yellow/ PPO	5704027	6149 06 7		13
LD 100100VBR30C	Yellow/ PPO	5704102	6149 11 0		14						
LD 100100VBR45C	Yellow/ PPO	5704201	6149 14 9		14	LD C220100	Yellow/ PPO	5704034	6149 07 3		13
LD 100100VBR90C	Yellow/ PPO	5704331	6149 20 3		14						
LD 100100VTC	Yellow/ PPO	5704706	6149 35 4		14	LD C300100	Yellow/ PPO	5704041	6149 07 9		13
LD 100100VTR	Yellow/ PPO	5704737	6149 36 0		15						
LD 100-88EA	Yellow/ PPO	5704997	6149 47 6		16	LD C50050	Yellow/ PPO	5703570	6149 06 1		13
LD 100TDO	Yellow/ PPO	5704584	6149 30 6		14	LD CT-F	/ St	5705284	6149 64 3		19
LD 100VT90F	Yellow/ PPO	5704744	6149 36 6		15	LD CT-FC	/ St	5705291	6149 64 9		19
LD 200VT90F	Yellow/ PPO	5704799	6149 38 4		15	LD CT-H	/ St	5705307	6149 65 5		19
						LD CT-HC	/ St	5705314	6149 66 1		19
LD 220100CCY	Yellow/ PPO	5703655	6149 03 3	/m	12	LD DO150	Yellow/ PPO	5705048	6149 49 6		16
LD 220100CY	Yellow/ PPO	5703594	6149 00 7		12						
LD 220100EC	Yellow/ PPO	5704928	6149 44 6	/pc.	15	LD DO50050	Yellow/ PPO	5705062	6149 50 8		16
LD 220100HB30C	Yellow/ PPO	5704447	6149 24 3		13	LD DO50050C	Yellow/ PPO	5705055	6149 50 2		16
LD 220100HB45C	Yellow/ PPO	5704454	6149 24 9		13	LD DO80	Yellow/ PPO	5705031	6149 49 0		16
LD 220100HB90C	Yellow/ PPO	5704522	6149 27 9		13						

Type listing

Structure of the EAN number: Country code **40**

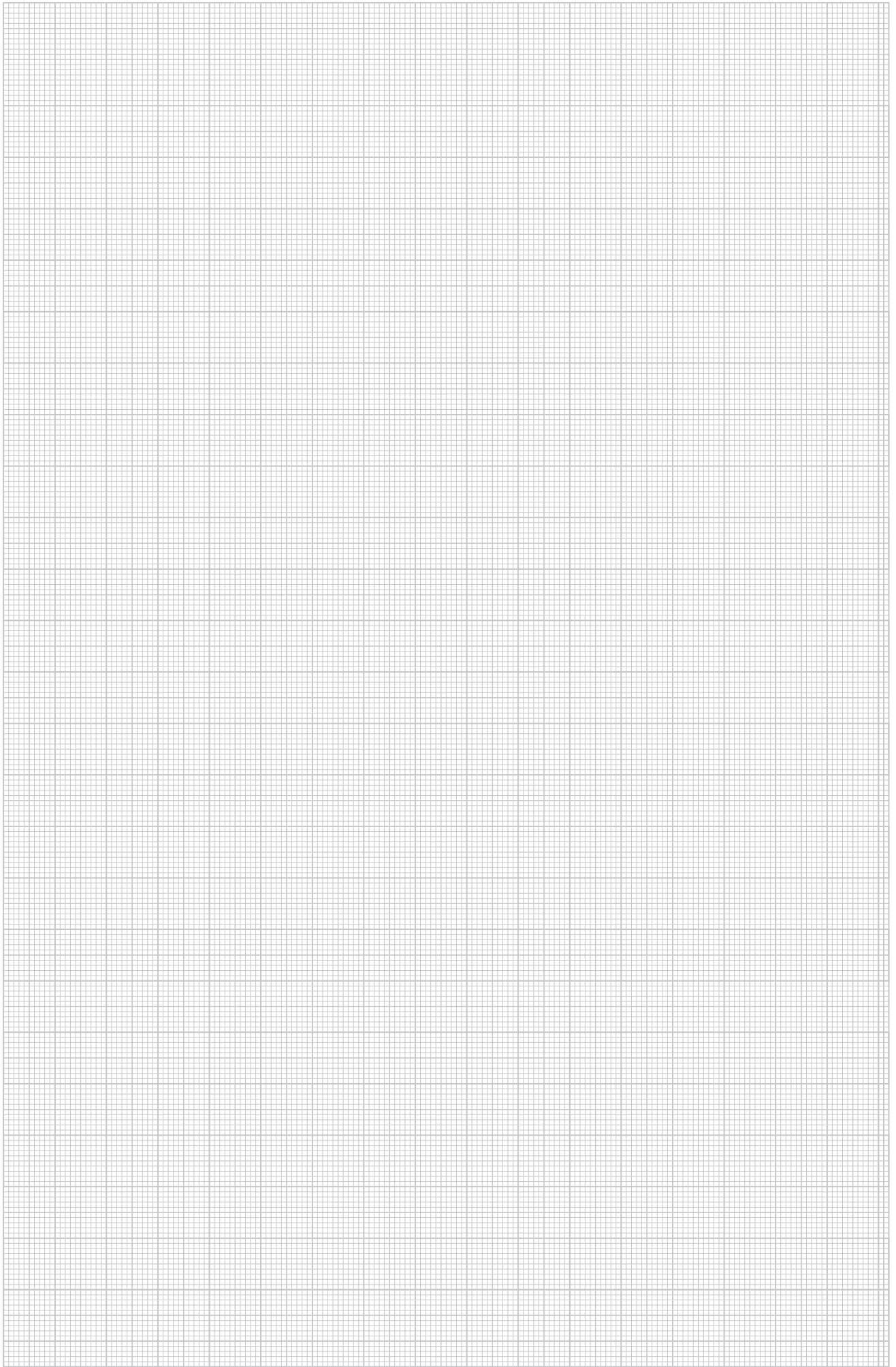
Manufacturer code **1219** (for articles beginning with **0: 1010**)

Individual EAN-C **5647589**

Type	Dimensions/Colour/Div.	EAN-C.	Art. no.	Price	Page	Type	Dimensions/Colour/Div.	EAN-C.	Art. no.	Price	Page
LD DOR100-300	Yellow / PPO	5705321	6149 67 0	/pc.	17	MMS7.5X80	7.5 x 80 / St / G	5519973	3498 27 1	price/100 pc.	47
LD EO100	Yellow / PPO	5704980	6149 47 0		16	MMS-ST6X60	M6 6 x 60 / St / G	5964162	3498 26 3		44
LD EO50	Yellow / PPO	5704973	6149 46 4		16					price/100 m	
LD FH50-2	2000 / PPO	5705116	6149 54 2		17	MS 21 L 2M FS	/ St / FS	5686262	1122 91 8		30
LD FH88-2	2000 / PPO	5705123	6149 54 8		17	MS 21 L 3M FS	/ St / FS	5686279	1122 92 0		30
LD FHS50-350	350 / PPO	5705130	6149 55 4		17	MS 21 L 6M FS	/ St / FS	5686286	1122 92 2		30
LD MC100	/ V2A	5705161	6149 57 7		18	MS 41 L 1M 2 FS	/ St / FS	5698142	1122 97 0		30
LD MC220	/ V2A	5705178	6149 58 3		18	MS 41 L 1M FS	/ St / FS	5697503	1122 90 8		30
LD MC300	/ V2A	5705147	6149 56 5		18	MS 41 L 3M 2 FS	/ St / FS	5698159	1122 97 2		30
LD MC50	/ V2A	5705154	6149 57 1		18	MS 41 L 3M FS	/ St / FS	5686224	1122 91 0		30
LD ST220-100	/ St	5705215	6149 61 0		19	MS 41 L 6M 2 FS	/ St / FS	5698166	1122 97 4		30
LD ST50	/ St	5705239	6149 62 7		19	MS 41 L 6M FS	/ St / FS	5686231	1122 91 2		30
LD ST50-100	/ St	5705222	6149 62 0		19	MS 41 LS 1M 2 FS	/ St / FS	5697923	1123 00 8		31
LD ST-UNI	/ St	5705246	6149 63 5		19	MS 41 LS 1M FS	/ St / FS	5697978	1122 48 1		31
LFC		5425182	5096 78 6		58	MS 41 LS 3M 2 FS	/ St / FS	5698319	1123 01 0		31
LG 620 VS 3000FS	200 1,5 / Steel / FS	5064022	6208 53 8	/m	25	MS 41 LS 3M FS	/ St / FS	5686248	1122 91 4		31
LG 620 VS 6000FS	200 1,5 / St / FS	5064251	6208 62 7		25	MS 41 LS 6M 2 FS	/ St / FS	5698326	1123 01 2		31
LG 630 VS 3000FS	300 1,5 / Steel / FS	5064053	6208 54 1		25	MS 41 LS 6M FS	/ St / FS	5686255	1122 91 6		31
LG 630 VS 6000FS	300 1,5 / St / FS	5064268	6208 63 0		25	MWA 12 11S FS	110 53 / St / FS	6636853	6424 71 6	/pc.	29
LG 640 VS 3000FS	400 1,5 / Steel / FS	5064060	6208 54 4		25	MWA 12 21S FS	210 65 / St / FS	6636976	6424 73 2		29
LG 640 VS 6000FS	400 1,5 / St / FS	5064299	6208 63 3		25	MWA 12 31S FS	310 75 / St / FS	6637034	6424 74 0		29
LG 650 VS 3000FS	500 1,5 / Steel / FS	5064077	6208 54 7		25	MWA 12 41S FS	410 83 / St / FS	6637096	6424 75 9		29
LG 650 VS 6000FS	500 1,5 / St / FS	5064305	6208 63 6		25	MWAG 12 11 FS	110 53 / St / FS	6324736	6424 60 0		29
LG 660 VS 3000FS	600 1,5 / Steel / FS	5064084	6208 55 0		25	MWAG 12 21 FS	210 65 / St / FS	6325030	6424 60 8		29
LG 660 VS 6000FS	600 1,5 / St / FS	5064312	6208 63 9		25	MWAG 12 31 FS	310 75 / St / FS	6325337	6424 61 6		29
LSA-A-LEI	Grey	5525134	5084 00 8	/pc.	55	MWAG 12 41 FS	410 83 / St / FS	6325634	6424 62 4		29
LSA-BF-180		5525370	5084 02 4		55	ND-CAT6A/EA		5614364	5081 80 0		57
LSA-B-MAG		5525318	5084 02 0		55	RD 8-ALU-T	/ Al	5901273	5021 29 4	price/100 m	50
LSA-E		5525493	5084 03 2		56	RJ45 S-ATM8-IND		5811275	5081 79 8	/pc.	57
LSA-E-LEI	Red	5525257	5084 01 6		56	RJ45 S-E100 4-B		5239956	5081 72 6		57
LSA-M	/ St	5525554	5084 03 6		56	RJ45 S-E100 4-C		5239895	5081 73 4		57
LSA-T-LEI	White	5525196	5084 01 2		55	RJ45 S-E100 4-F		5239833	5081 74 2		57
LSA-TOOL		5525615	5084 04 0		56	RKSM 610 FS	100 0,75 / St / FS	5390879	6047 61 1	/m	24
LVG 60 FS	60 / Steel / FS	5065555	6208 84 0		25	RKSM 615 FS	150 0,75 / St / FS	5391197	6047 63 0		24
LWVG 60 FS	60 / Steel / FS	5065586	6208 89 5		25	RKSM 620 FS	200 0,75 / St / FS	5391203	6047 63 8		24
MCD 50-B 3+1		5077091	5096 87 9		53	RKSM 630 FS	300 0,75 / St / FS	5391210	6047 65 4		24
MDP-4 D-24-T		5406884	5098 43 1		58	RKSM 640 FS	400 0,9 / St / FS	5391227	6047 68 9		24
MDP-4 D-48-T		5406914	5098 45 0		58	RKSM 650 FS	500 0,9 / St / FS	5391234	6047 71 9		24
MDP-4 D-5-T		5406853	5098 41 1		58	RKSM 660 FS	600 0,9 / St / FS	5391241	6047 73 5		24
MMS6X50	6 x 50 / ST / GC	5963929	3498 10 7	price/100 pc.	44	SC-TELE 4-C-G		5834793	5081 68 8	/pc.	55
						SD09-V11 9		5916277	5080 06 1		59
						SD09-V24 9		5915973	5080 05 3		59
						SD15-V24 15		5916031	5080 15 0		59

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Type	Dimensions/Colour/Div.	EAN-C.	Art. no.	Price	Page				
SD25-V11 25		5916390	5080 28 2	/pc.	59				
SD25-V24 25		5916215	5080 27 4		59				
SH M10 FS	M10/ St / FS	6608539	6015 33 6		23				
SKH 60 OR	Pastel orange/ PE	5668008	6222 53 7	/pair	25				
SKS 10X80 F	M10 x 80 80/ St / F	6437474	6418 25 0	/pc.	28				
SKS 10X90 F	M10 x 90 90/ St / F	6518470	6418 25 2		28				
TSG 60 FS	60 3000/ St / FS	5694540	6062 06 8	/m	24				
TSGV VA4310	/ V2A	5694724	6067 97 0	/pc.	24				
US 3 K 100 FT	1000 2/ St / FT	6225132	6342 36 8		28				
US 3 K 110 FT	1100 2/ St / FT	6225378	6342 37 0		28				
US 3 K 120 FT	1200 2/ St / FT	6225439	6342 37 2		28				
US 3 K 20 FT	200 2/ St / FT	6224470	6342 35 1		28				
US 3 K 30 FT	300 2/ St / FT	6224531	6342 35 3		28				
US 3 K 40 FT	400 2/ St / FT	6224593	6342 35 5		28				
US 3 K 50 FT	500 2/ St / FT	6224654	6342 35 7		28				
US 3 K 60 FT	600 2/ St / FT	6224715	6342 35 9		28				
US 3 K 70 FT	700 2/ St / FT	6224777	6342 36 2		28				
US 3 K 80 FT	800 2/ St / FT	6225019	6342 36 4		28				
US 3 K 90 FT	900 2/ St / FT	6225071	6342 36 6		28				
US 3 KS OR	Pastel orange/ PE	5668039	6338 45 8		28				
US 5 K 100 FT	1000 2,5/ St / FT	6536290	6341 61 6		28				
US 5 K 110 FT	1100 2,5/ St / FT	6536238	6341 62 4		28				
US 5 K 120 FT	1200 2,5/ St / FT	6536177	6341 63 2		28				
US 5 K 20 FT	200 2,5/ St / FT	6536771	6341 52 7		28				
US 5 K 30 FT	300 2,5/ St / FT	6536719	6341 53 5		28				
US 5 K 40 FT	400 2,5/ St / FT	6536658	6341 54 3		28				
US 5 K 50 FT	500 2,5/ St / FT	6536597	6341 55 1		28				
US 5 K 60 FT	600 2,5/ St / FT	6536535	6341 57 8		28				
US 5 K 70 FT	700 2,5/ St / FT	6536474	6341 58 6		28				
US 5 K 80 FT	800 2,5/ St / FT	6536412	6341 59 4		28				
US 5 K 90 FT	900 2,5/ St / FT	6536351	6341 60 8		28				
US 5 KS OR	Pastel orange/ PE	5668046	6338 46 2		28				
V10 COMPACT 255		5076551	5093 38 0		54				
V20-C 3+NPE-280		5240099	5094 65 6		53				
V50-B+C 3+NPE		5425120	5093 65 4		53				
VF230-AC/DC	255 350	5447856	5097 64 9		54				



Terms and conditions of sale and delivery of the companies OBO BETTERMANN GmbH & Co. KG and OBO BETTERMANN Projekt und Systemtechnik GmbH, and OBO Befestigungselemente GmbH, Menden

1. All our supplies and services shall be governed exclusively by the following terms and conditions, including our additional terms and conditions for cable tray business transactions. Any terms and conditions of business and purchasing of the customer shall be valid only if we have acknowledged them in writing. Our quotations are without engagement; they are mere invitations to submit contract offers. Any and all transactions and agreements, including those entered into by our employees and agents shall only be binding upon our written confirmation or invoicing. The foregoing provision shall also apply to any modifications of the agreed formal requirements.

2. The documents and data pertaining to the quotation, such as illustrations, brochures, drawings, dimensions, loading capacity values and weight details are approximate only, unless they are expressly stipulated to be binding.

Samples are non-binding samples for inspection. Any purchase according to sample will be subject to customary deviations and deviations resulting from normal production processes. The properties of the sample shall be no guaranteed quality of the purchase object unless expressly stated otherwise in the confirmation of order. Samples must be returned to us at the latest within four weeks in perfect condition. If they are not returned within this period in proper condition, we shall be entitled to charge the purchase price for the sample in accordance with our current price list. All information on our products, in particular the illustrations, drawings, weight, dimension and performance data included in our quotations and printed matter shall be regarded as approximate average values and shall not represent any quality guarantee.

With regard to products made according to customer drawings, samples and other instructions of the customer, we will not provide any warranty nor assume any liability for the due and proper functioning of the product or for any other defects if and to the extent they are based upon the customer's specifications. The customer shall indemnify us from any third party claims, including claims for product liability as may be asserted against us for damages resulting from the products unless we have caused such damages by intent or gross negligence. The customer shall warrant that the manufacture and supply of products made in accordance with his instructions will not infringe any proprietary rights of third parties. Should any proprietary rights be asserted against us, we shall be entitled, without any legal review of the third party claims, to withdraw from the contract after hearing the customer, unless the third party withdraws the claims asserted against us under its proprietary rights within eight days by written declaration. The customer shall compensate us for any damage sustained as a result of the assertion of proprietary rights. In case of withdrawal, the work we have carried out so far shall be remunerated. Further rights under the statutory provisions shall not be affected thereby.

Any moulds, tools and design data produced by us for the execution of the order shall be our exclusive property. Unless expressly agreed otherwise, the customer shall not have any claims thereto, even if he has contributed to the costs of producing any such moulds, tools and design data.

3. The packing, shipping route and means of transportation shall be left to our discretion in the absence of any other agreements. They shall be charged at their cost price. We will take back undamaged cases, when being returned carriage paid, at 2/3 of the amount invoiced. The one-way or pool pallets used for transport shall be either exchanged upon taking delivery or returned. The smallest packing units stocked and listed may not be broken up for rationalisation reasons. In case of orders for different quantities, the nearest packing unit will be supplied.

We reserve the right to deviate from the agreed delivery quantity, in particular in the case of custom-made products, to a customary extent or in conformity with national or international standards. In case of a demand for adhering to a precise quantity, an express reference is necessary and subject to confirmation.

Master and call orders shall oblige the customer to accept the total quantity on which the master/call order is based. Where no particular call orders are specified in the contract, the total quantity of the master call order must be called within twelve months. If the customer fails to adhere to call deadlines, we shall be entitled to deliver and charge the total quantity in full after four weeks from written notice with reference to the consequences of any failure to call. Our rights arising from any default of the customer shall not be affected thereby.

4. Unless otherwise agreed, our prices are quoted ex works and do not include packing and insurance. The value added tax at the rate applicable on the date of dispatch will be added to our prices. The purchaser shall ensure the correctness of his VAT identification number, which he must notify to us immediately without being asked. He shall undertake to inform both us and the competent domestic tax authority without delay of any change in his name, address and VAT identification number.

Delivery shall be franco domicile within Germany, i.e. carriage and packing prepaid, if the net order value is in excess of € 1,200. For small orders below € 100 (net excluding value added tax), we shall invoice a lower quantity surcharge of € 10 (net) per order. Upon transfer of our supplies and services to a carrier or forwarding agent, at the latest upon their leaving our warehouse or supply plant, the risk shall pass to the recipient, even in case of deliveries free place of destination.

5. Delivery periods and delivery deadlines shall be approximate only unless we have expressly stated in writing that they are binding. Delivery periods shall commence upon receipt of our confirmation of order, but not before clarification of all execution details, ex place of delivery. The customer shall only be entitled to withdraw from the contract after having granted a reasonable extension of time. We reserve the right to make partial deliveries. Claims for damages and reimbursement of expenses - for any reason whatsoever - shall be subject to the provisions set out in article 10.

In the event of any circumstances that are beyond our control within the scope of normal operating risks and obstruct or make impracticable any delivery, we shall be entitled to suspend delivery by the duration of such obstruction plus a reasonable start-up period or to withdraw from the contract for the part not yet fulfilled. The purchaser can demand a statement from us as to whether we wish to deliver within a reasonable period or withdraw. If we fail to make such a statement, the purchaser may withdraw. Our notice to the purchaser shall be deemed to be sufficient evidence that we have been prevented from delivering.

Delivery time is extended in case of such events as labour disputes, strikes and lockouts, orders from the authorities, difficulties with the procurement of materials, spoiled work or post-processing, shutdowns and staff shortage as well as shortage of means of transport, and general occurrence of unforeseen events beyond our scope of influence, by the length of duration of these events.

6. Payments shall be made upon receipt of invoice less a 3% cash discount for payment within 10 days or net after 30 days from date of invoice. Erection work and all paid labour work must be paid within 10 days without deduction of any cash discount. In case of non-cash payments, the date of the credit note will be deemed to be the date of receipt of payment. Payments received shall always be credited first against costs, then against interest and then against the earliest liability. Cheques and bills of exchange shall only be accepted as means of payment. Any payment by bill of exchange shall be subject to a prior separate and written agreement, whereby all bill costs shall be borne by the customer and no discount can be granted. The customer shall have no right to refuse performance and no right of retention - for any legal reason whatsoever - unless we have acknowledged his claim beforehand in writing or his claim has the force of law.

The customer shall only be entitled to set off claims which have the force of law, are undisputed or acknowledged by us in writing.

7. We shall retain title to the goods supplied by us until all our claims arising from our business transactions with the customer have been satisfied - current account clause - and all bills of exchange or cheques submitted for payment by the customer have been honoured.

Any treatment or processing of goods subject to our retention of title (reserved goods) shall be carried out for us as the manufacturer in accordance with § 950 BGB (German Civil Code) without any obligation on our part. If our reserved goods are to be regarded as the main item or the main item is owned by the customer, full title to the new item shall pass to us when it is created. In other cases, we shall acquire a co-ownership interest in the new item in the proportion of the sales value of our reserved goods to the other goods used for the new item at the time of processing, intermingling, joining or mixing. The customer shall take custody of our ownership or co-ownership interest free of charge; it shall be treated as reserved goods.

Before transfer of title, our goods shall be neither pledged nor assigned as collateral without our prior consent. In addition, any third party rights or pledges shall be notified to us immediately and we shall be given all details and provided all documents necessary for intervention; otherwise the customer must bear our loss. In the latter case, our total claims against the customer shall also be immediately payable.

The customer shall be entitled to sell or to use our reserved goods in the ordinary course of business subject to the condition that the relevant claims are transferred in accordance with article 8 below. This right shall lapse upon the customer's failure to promptly meet his payment obligations towards us or in the event of any cheque or bill protests or his suspension of payments. In such cases, we shall be entitled to take back the goods provisionally at the

customer's expense and to sell them at our duly exercised discretion after a corresponding reminder has been sent to the customer. We will then pass the due amount to the customer's credit.

8. If our goods are sold before payment of our claim, the customer shall be obliged to retain our title against his purchaser until the goods have been paid for in full by the purchaser. The claim arising against the purchaser from such resale as well as any other ancillary rights or security interests of the customer resulting from the sale and any claims for compensation in case of damage to or destruction of our reserved property, including the relevant insurance sum shall hereby be assigned to us. We hereby accept this assignment. Where our co-ownership interest is sold, the relevant claims shall be assigned in the amount corresponding to the value of our interest.

The customer shall, at our request, inform us of his purchasers, notify them of the assignment made and provide us with any and all documents required to assert our rights.

As long as the customer meets his contractual obligations without delay, he shall be authorised to collect the claims assigned. He shall keep the amounts collected on our behalf separately and remit them to us immediately as soon and as far as our claims become due. The authorisation shall lapse in case of any cheque or bill protest of the customer or his definite suspension of payments. The customer shall bear the costs incurred for any action taken against third parties and shall advance them upon request.

If the security provided to us by the retention of title and the anticipatory assignment should exceed the claims to be secured by more than 20%, we shall, at the customer's request, release paid supplies of our choice. Upon payment of all our claims by the customer, assigned claims shall pass to the customer.

9. Any complaints for obvious defects regarding the quantity or quality of our supplies and services that are identifiable upon careful inspection shall without delay, but at the latest within the period of limitation of eight days from arrival of the goods at the address of the customer or the person appointed by him, be notified in writing to us, not to our representatives. Slight deviations in dimensions and designs within the scope of defined technical tolerances shall not give rise to any right of complaint. Any rejected goods may only be returned to us with our prior written authorisation.

In case of justified complaints within the prescribed period, we shall, at our option, take remedial action by way of subsequent performance, by rectifying the defect, supplying non-defective goods or providing a credit note for the lower value calculated.

We shall be entitled to refuse subsequent performance in accordance with the statutory provisions. If we refuse subsequent performance, if any subsequent performance remains unsuccessful or if the customer cannot be reasonably expected to accept any subsequent performance, the latter shall be entitled to withdraw from the contract in compliance with the provisions of the following sentences. The customer shall only be entitled to withdraw from the contract - where a withdrawal is not excluded by law - upon the unsuccessful expiry of a reasonable period for subsequent performance set by him, unless this period was not required under the statutory provisions (§§ 281 para. 2, 323 para. 2, 440, 441 para. 1 BGB (German Civil Code)).

In case of his withdrawal, the customer shall be liable for any deterioration, destruction or loss of use resulting from any negligence or intent on his part. Any claims for damages or reimbursement of expenses of the customer shall be subject to the provisions set out in article 10.

In the case of any fraudulent concealment of a defect or in the case of any provision of a quality guarantee for the goods sold at the time of the passing of risk within the meaning of § 444 BGB (German Civil Code) (seller's declaration that the object sold has a specific property at the time of the passing of risk and that the seller, regardless of any fault on his part, intends to be answerable for any and all consequences resulting from its absence), the customer's rights shall be exclusively governed by the statutory provisions.

We shall - in addition to the statutory grounds for refusal - also be entitled to refuse subsequent performance if and as long as the customer fails to send us, at our request, the rejected goods or a sample thereof; the customer shall have no right of withdrawal for any such refusal. We may further refuse any subsequent performance if the goods concerned have been altered or modified without our consent unless the customer can prove that the defect was not caused by such alteration or modification.

The limitation period for any claims arising from defects shall be one year; in the case of goods which have been used in accordance with their intended purpose for a building and have caused its defectiveness, the limitation period shall be two years. The provisions of §§ 478, 479 BGB (German Civil Code) on recourse in the chain of suppliers shall not be affected thereby.

10. In the case of a pre-contractual, contractual or non-contractual breach of duty, including unsatisfactory delivery, tortious conduct and producer's liability, we shall only be liable for compensatory damages and reimbursement of expenses - subject to further contractual or statutory liability requirements - in the case of intent, gross negligence or slightly negligent breach of a material contractual duty (contractual duty the infringement of which jeopardises the fulfilment of the object of the contract). However - except in the case of intent - our liability shall be limited to the typical contractual damage that was foreseeable at the time the contract was entered into. The purchaser shall not be permitted to make a claim for expenses incurred in vain.

Except for any breach of material duties, our liability for slight negligence shall be excluded, but in any case be limited to the amount of the purchase price.

Any claim asserted by the customer or a third party for payment of a contractual penalty shall be excluded.

With regard to damages caused by delay, we shall only be liable for slight negligence up to the amount of 5% of the purchase price agreed with us.

The exclusions and limitations of liability set forth above shall not apply in the event that a guarantee is given with respect to the quality of the object sold within the meaning of § 444 BGB (German Civil Code) if a defect is fraudulently concealed or in the event of injury to life, physical injury or injury to health, or strict liability under the German Product Liability Act.

Any and all claims for damages against us, for any legal reason whatsoever, shall become statute-barred at the latest after one year from delivery of the goods to the customer, in the case of tortious liability from the time of knowledge, or grossly negligent ignorance, of the circumstances giving rise to the claim and the person liable to pay damages. This provision shall not apply in the case of liability for intent and in the event that a guarantee is given for the quality of the object sold, in the case of fraudulent concealment of a defect or in the event of injury to life, physical injury or injury to health, or strict liability under the German Product Liability Act. Any shorter limitation periods shall take precedence.

11. We shall be entitled to process and store any customer data obtained with regard to or in connection with the business relationship in accordance with the German Federal Data Protection Act, irrespective of whether such data is provided by the purchaser himself or by any third parties.

12. Place of performance for delivery and payment is Menden/Sauerland. The court of competent jurisdiction for any and all disputes, including disputes with regard to bills of exchange and cheques, is the Local Court (Amtsgericht) of Menden or, at our option, the District Court (Landgericht) of Arnsberg, irrespective of the value of the object in dispute. We shall, however, also be entitled to take legal proceedings against the customer at the place of his registered office.

German law shall be exclusively applicable. The application of international purchase laws is hereby excluded. Should, for any reason whatsoever, individual provisions of our terms and conditions of sale and delivery be invalid, the validity and binding nature of the other provisions shall not be affected thereby. The customer agrees, that the invalid provision shall be replaced by a valid provision that comes as close as possible to the economic meaning of the invalid provision.

13. The prices of products made of brass and copper are subject to certain fluctuations that are based on the relevant DEL listings. The prices of our brass articles are based on a DEL listing of € 150 for Ms 58, those of our copper products on a DEL value for electrolyte copper of € 200.

In case of any increase or reduction in these prices by more than € 15, a five per cent surcharge or deduction shall be made for each 15 points. The calculation of any such surcharges or deductions shall be based on the DEL listing of the date of our receipt of the order.

Valid from August 2004



QR Code

With the QR Code you have direct access to our products on the Internet.

You can find further information on the QR Code at www.obo-bettermann.com.

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