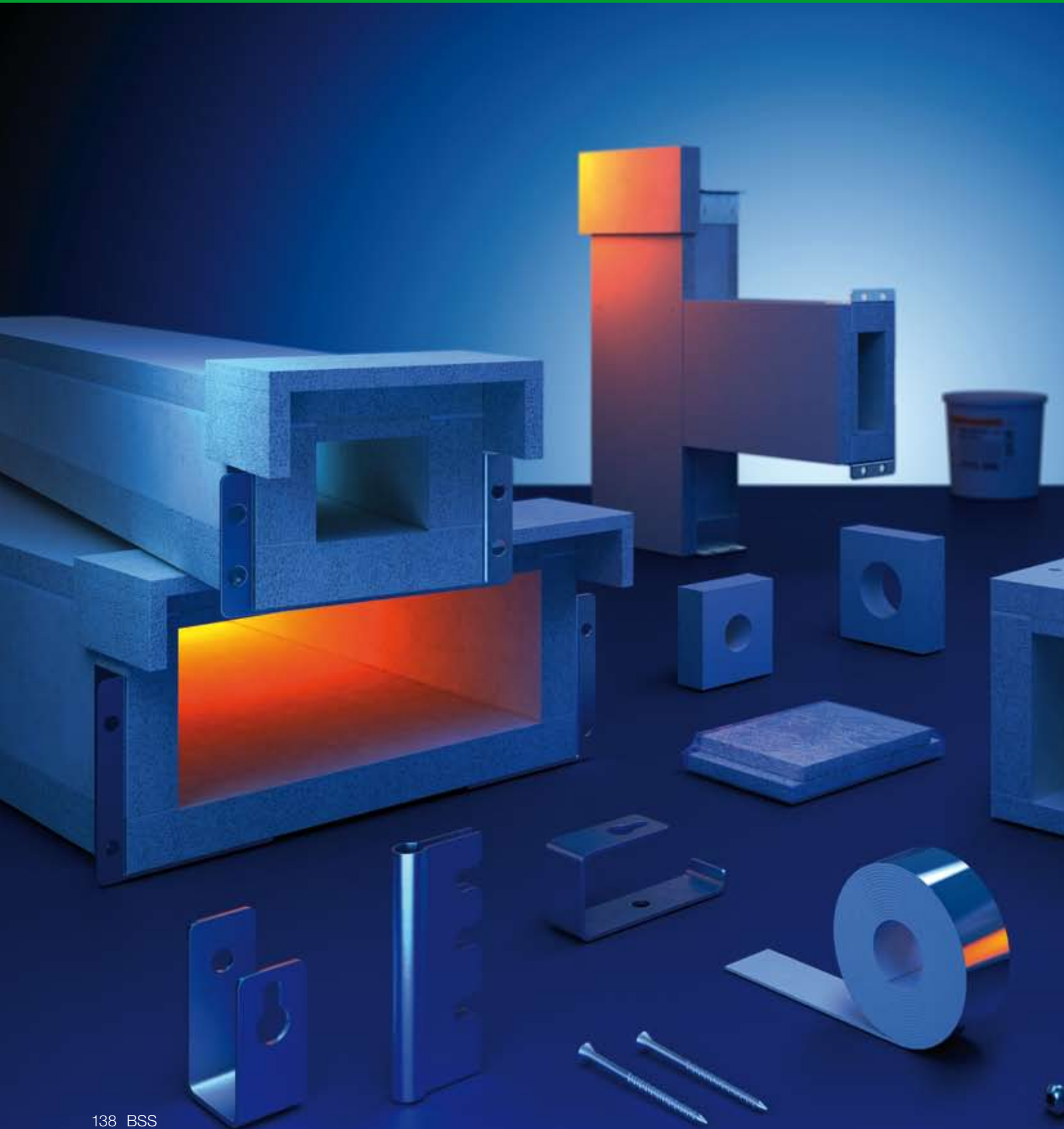
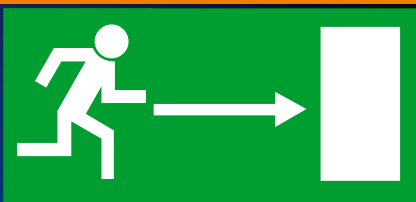


- ▶ Duct system tested according to DIN 4102 Part 11
- ▶ Function maintenance system tested to DIN 4102 Part 12
- ▶ Secure installations in emergency and escape routes
- ▶ Quick, practical mounting options



# Escape route installation systems

## Fire protection duct



**Basic principles and selection aid** 140

**BSK fire protection duct for direct wall and ceiling mounting** 144

**BSKH fire protection duct for suspended ceiling mounting** 150

**BSKH fire protection duct for suspended wall mounting** 158



# Fire protection ducts

OBO fire protection ducts are made from easily workable glass fibre, lightweight concrete (non-flammable, building material class A1). The material is harmless to both

health and the environment during installation or in the event of fire. The duct surface is sealed with glass fibre, which makes it hard, smooth and abrasion-proof. However, any

damage that does occur can easily be remedied using OBO BSK mortar. All ducts can be painted or papered over.



## Use as an I duct in emergency and escape routes

OBO fire protection duct, used as installation ducts for protecting escape and emergency routes from the effects of cable fires.



## Use as an E duct for function maintenance

The fire protection duct is always used as an E duct for function maintenance when the power supply to safety-relevant installations has to be

guaranteed in the event of fire. This type of installation also achieves the third protection aim of fire-protected building installations. See also function maintenance systems.

## Suspended fire protection duct BSKH

The BSKH fire protection duct means that fitters will never again have to grapple with other equipment such as ventilation, heating and sanitary installations when mounting fireproofing ducts. The new BSKH fire protection duct can be securely fitted on OBO installation systems underneath existing installations. The system is particularly suited to locations where many joists block the path of direction wall or ceiling mounting. Complementing the tried-and-tested BSK fireproofing duct for direct wall and ceiling mounting, this new concept clears the way for fireproof installation.



As with the BSK, the suspended ducts may be subjected to a maximum cable load of 22.5 kg/m. The loosely attached lid ensures rapid assignment and inspection. The support distance of the mounting system is always 1 m. Fittings must be supported on all sides with a maximum distance of 100 mm to the joint. The OBO fire protection duct is tested to






DIN 4102 Parts 11 and 12, and as such, is approved for use as an I duct in escape and emergency routes and as an E duct for maintaining the function of safety-relevant systems. The fire resistance period is 90 minutes for the I classification and 30 minutes when used as a functional maintenance component.

### Type overview, fire protection duct

Fire protection classes	Figure	Type	Internal dimensions H x W (mm)	External dimensions H x W (mm)	Usable cross-section areas (cm <sup>2</sup> )*
		<b>BSK 090506</b>	50 x 60	95 x 120	22.5
		<b>BSK 090511</b>	50 x 110	95 x 170	34.3
		<b>BSK 090521</b>	50 x 210	95 x 270	76.3
		<b>BSK 091016</b>	105 x 160	150 x 220	135.3
		<b>BSK 091026</b>	105 x 260	150 x 320	231.3
			<b>BSK 120506</b>	50 x 60	130 x 180
		<b>BSK 120511</b>	50 x 110	130 x 230	34.3
		<b>BSK 120521</b>	50 x 210	130 x 330	76.3
		<b>BSK 121016</b>	105 x 160	185 x 280	135.3
		<b>BSK 121026</b>	105 x 260	185 x 380	231.3

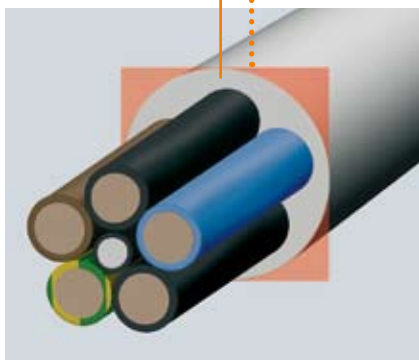
### Type over of suspended fire protection ducts

		<b>BSKH 090506</b>	50 x 60	110 x 120	50
		<b>BSKH 090511</b>	50 x 110	110 x 170	55
		<b>BSKH 090521</b>	50 x 210	110 x 270	105
		<b>BSKH 091016</b>	105 x 160	165 x 220	168
		<b>BSKH 091026</b>	105 x 260	165 x 320	273

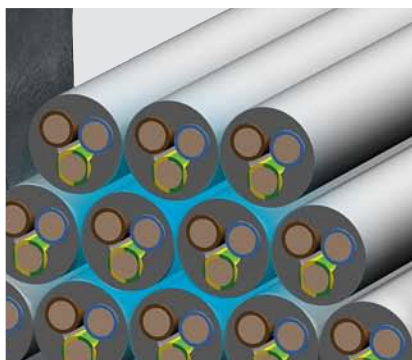
\* Theoretical volume  
Comply with the VDE specifications, e.g. with regard to heating

Diameter in mm

Space required in cm<sup>2</sup>



Cable diameter and space required



The useful cross-section of the cable simulates the spaces in real cable laying.

### How much space do my cables really need?

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

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

# System overview

## Fire protection ducts



**BSKH**  
Suspended fire protection duct

Page 150



**BSK**  
Fire protection duct

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Fire protection duct for direct wall and ceiling mounting



**I90 and I120 DIN 4102 Part 11**  
**E30 and E90 DIN 4102 Part 12**  
**ABP P-SAC 02/III-215**  
**ABP P-SAC 02/III-216**

Dimensions BSK I90/E30, internal/external [mm]

BSK 090506	50 x 60	95 x 120
BSK 090511	50 x 110	95 x 170
BSK 090521	50 x 210	95 x 270
BSK 091016	105 x 160	150 x 220
BSK 091026	105 x 260	150 x 320

Dimensions BSK I120/E90, internal/external [mm]

BSK 120506	50 x 60	130 x 180
BSK 120511	50 x 110	130 x 230
BSK 120521	50 x 210	130 x 330
BSK 121016	105 x 160	185 x 280
BSK 121026	105 x 260	185 x 380



The OBO fire protection duct consists of fibre glass light concrete fire protection plates, which are resistant to water and frost. The fire protection plates, which are classed as non-combustible (material class A1), have a compacted surface, which is thus hard, smooth and wear-resistant. The BSK fire protection duct fulfils the requirements as an I duct and as an E duct. It is thus the ideal solution as cable routing duct, taking existing fire protection requirements into account.

The I duct is used to protect escape and rescue routes against a possible cable fire. This means that the escape and rescue routes remain free from fire, smoke and heat. The E duct allows function maintenance of the safety-relevant circuits.

System components



BSK fire protection duct, separating clamp, separating bracket, doublers, mortar, fire protection screw tie, sealing strip, countersunk head screw

Wall and ceiling application



The duct must be mounted directly on the wall or under the ceiling.

Fittings application



All types of standard fittings, and also special fittings, can be created simply from the duct.

Surface application



It is permitted to paint or wallpaper over the duct after mounting. This allows adaptation of the duct to the appearance of the substrate.

**Fire protection duct for direct wall and ceiling mounting**

**Duct trough fastening**



The duct trough is fixed on the wall or ceiling with OBO fire protection bolt ties of type MMS 7.5 x 80, directly on the marking lines located on the duct base at a spacing of maximum 400 mm.

**Duct trough connection point**



The joints between the adjacent duct troughs are sealed using the self-adhesive sealing strips as butt joints.

**Installation aid**



Separating clamps are used as an installation aid for inserting the cables during ceiling mounting and separating brackets for wall mounting. These separating elements are fastened to the screw ties for duct mounting after the duct has been mounted. The OBO BSK fire protection duct may be subjected to a cable load of up to 22.5 kg/m.

**Mounting of duct lid**



The duct lid is sealed using the self-adhesive sealing strip. It is fastened using ten bolts on the appropriate marking lines.

**Fittings in the application**



Fittings can be created at any time to meet the approval from the OBO BSK fire protection duct. On the construction site, the duct routing can be adjusted easily to the local circumstances.

**Mounting example, internal corner: 1st duct section**



Apply sealing strips to the duct trough on the head side. Mount the duct trough in the corner of the room. In the corner, the sealing strips must be shortened to 3 mm.

**Mounting example, internal corner: 2nd duct section**



Fit the side walls of the second duct trough.

**Filling of the remaining joints**



Apply sealing strips to the cut and front surfaces. Mount the second duct trough in the corner of the room and fill unclosed joints with OBO BSK-M mortar.

**Mounting of neighbouring ducts**



Apply the sealing strip to additional ducts and mount them, blunt, in front of the corner piece.

**Mounting preparations, 1st lid**



Shorten the duct lid and apply the sealing strip on the inner sides.

**Mounting of 1st lid**



Screw the duct lid to the duct trough.

**Mounting preparations, 2nd lid**



Shorten the second duct lid and apply the sealing strip on the inner side. In addition, apply sealing strips to the front surface.

**Fire protection duct for direct wall and ceiling mounting**

**Mounting of 2nd lid**



Screw the second duct lid to the duct trough.

**Mounting of end piece**



Mount an end piece on the duct end.

**Flat angle application**



Use of a flat angle in a room corner.

**External and internal corner application**



Mount an internal and external corner on a wall offset.

**T piece application**



A T falling piece can be mounted at any point in the duct.

**Intersection application**



Asymmetrical fittings such as intersections and T pieces can also be created.

**Use of variable duct routing**



This means that no precise pre-planning is required on the construction site regarding the required fittings.

**Repairs**



Broken out sections of the duct and lid are refilled with BSK mortar.

**Wall connection for I 90 duct**



An I 90 wall connection collar is required for duct wall penetration. The individual parts of the plate are simply screwed onto the duct.

**Preparation of cable exits**



Drill in duct for the cables. Fasten doubler to the duct using the included bolts.

**Filling of the cable exits**



Cables can be run out of I duct as individual cables or as cable bundles out of the OBO BSK fire protection duct. This applies to individual cables in the case of E duct.

**Detail, cable exits**



For cable bundles and individual cables with larger cross-sections, additional doublers are fixed to the duct wall.

Fire protection duct for direct wall and ceiling mounting

Detail, cable exit



For individual cables with a normal cross-section, no additional doublers are fixed to the duct wall.

Re-treatment of the surface



The surface of the OBO BSK fire protection duct allows almost any secondary treatment. Wallpapering, painting and panelling allow harmonious integration of the fire protection duct into the architecture. This does not impair the fire protection classification of the fire protection duct.

Mounted fire protection duct



The individual creation of fittings on the construction site means that the OBO BSK fire protection duct is an ideal solution for the installation of cables in escape and emergency routes.

BSK fire protection duct I90 and E 30

Type	Internal dimensions mm	External dimensions mm	Length mm	Weight borders	Item No.	Price /m
<b>BSK 090506</b>	50x60	95x120	1000	730.000	<b>7215 15 0</b>	
<b>BSK 090511</b>	50x110	95x170	1000	940.000	<b>7215 15 4</b>	
<b>BSK 090521</b>	50x210	95x270	1000	1350.000	<b>7215 15 8</b>	
<b>BSK 091016</b>	105x160	150x220	1000	1430.000	<b>7215 16 2</b>	
<b>BSK 091026</b>	105x260	150x320	1000	1830.000	<b>7215 16 6</b>	

Fire protection duct I90/E30, to DIN 4102 Part 11 and Part 12, incl. 12 x countersunk head screw and 3 x 1 m sealing strip.



BSK end piece I90 and E 30

Type	Pack. pcs	Item No.	Price /pc.
<b>BSK-E090506</b>	1	<b>7215 25 0</b>	
<b>BSK-E090511</b>	1	<b>7215 25 2</b>	
<b>BSK-E090521</b>	1	<b>7215 25 4</b>	
<b>BSK-E091016</b>	1	<b>7215 25 6</b>	
<b>BSK-E091026</b>	1	<b>7215 25 8</b>	

End piece for fire protection duct I90/E 30; including appropriate fastening material.



BSK sealing strip I90 and E 30

Type	Dimension mm	Length m	Pack. pcs	Weight kg/% pc	Item No.	Price /pc.
<b>BSK-D0930</b>	5 x 30	15	1	37.500	<b>7215 42 3</b>	

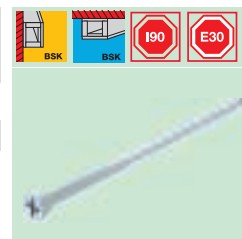
Self-adhesive sealing strip for BSK I90/E 30 and BSKH I90/E 30.



BSK countersunk head screw I90 ad E 30

Type	Dimension mm	Pack. pcs	Weight kg/% pc	Item No.	Price /pc.
<b>BSK-S0955</b>	4.0 x 55	50	0.340	<b>7215 40 0</b>	

Countersunk head screw for fire protection duct I90/E 30, for lid and doubler fastening.



Fire protection duct for direct wall and ceiling mounting

BSK doubler I90



Type	Dimension mm	Pack. pcs	Weight kg/% pc	Item No.
BSK-A0908	80 x 80 x 20	1	10.000	7215 45 2
BSK-A0910	100 x 100 x 20	1	14.000	7215 45 8

Price  
/pc.

Doubler for BSK I90 and for BSKH I90:  
BSK-A0908 with drill hole 40 mm, for duct heights to 95 mm,  
BSK-A0910 with drill hole 60 mm, for duct heights from 110 mm.  
Including fastening screws.

BSK wall connection collar I90



Type	Pack. pcs	Weight kg/% pc	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
BSK-K1016	1	65.000	7215 54 5
BSK-K1026	1	75.000	7215 54 9

Price  
/pc.

Wall connection collar for BSK, consisting of three single plates, to double the insulation for wall penetrations. Incl. fastening material. Only for I 90 classification.

BSK fire protection duct I120 and E 90



Type	Internal dimensions mm	External dimensions mm	Length mm	Weight borders	Item No.
BSK 120506	50x60	130x180	1000	1490.000	7215 21 0
BSK 120511	50x110	130x230	1000	1800.000	7215 21 6
BSK 120521	50x210	130x330	1000	2420.000	7215 22 2
BSK 121016	105x160	185x280	1000	2570.000	7215 22 8
BSK 121026	105x260	185x380	1000	3190.000	7215 23 4

Price  
/m

Fire protection duct I120/E 90, to DIN 4102 Part 11 and Part 12, incl. 12 x countersunk head screw and 3 x 1 m sealing strip.

BSK end piece I120 and E 90



Type	Pack. pcs	Item No.
BSK-E120506	1	7215 27 0
BSK-E120511	1	7215 27 2
BSK-E121016	1	7215 27 6
BSK-E120521	1	7215 27 4
BSK-E121026	1	7215 27 8

Price  
/pc.

End piece for fire protection duct I120/E 90; including appropriate fastening material.

BSK sealing strip I120 and E 90



Type	Dimension mm	Length m	Pack. pcs	Weight kg/% pc	Item No.
BSK-D1260	5 x 60	15	1	74.200	7215 43 2

Price  
/pc.

Self-adhesive sealing strip for BSK I120/E 90.

BSK countersunk head screw I120 ad E 90



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

Price  
/% pc

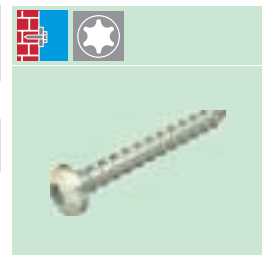
Countersunk head screw for BSK I120/E 90, for lid fastening

Fire protection duct for direct wall and ceiling mounting

Fire protection bolt tie

Type	Dimension	Pack.	Weight	Item No.	Price
	mm	pcs	kg/% pc	ST / G	/% pc
<b>MMS7,5</b>	7.5 x 80	50	2.174	<b>3498 27 1</b>	

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.



BSK separating clamp for ceiling mounting

Type	Dimension	Pack.	Weight	Item No.	Price
	mm	pcs	kg/% pc	ST / FS	/% pc
<b>BSK-B0511</b>	46 x 55	25	7.500	<b>7215 35 6</b>	
<b>BSK-B0521</b>	46 x 105	25	14.500	<b>7215 36 2</b>	
<b>BSK-B1016</b>	101 x 80	25	19.000	<b>7215 36 8</b>	
<b>BSK-B1026</b>	101 x 130	25	29.000	<b>7215 37 4</b>	

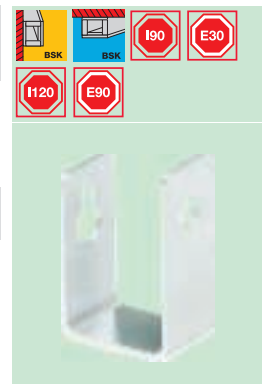
Separating clamp for BSK fire protection duct, as installation aid for ceiling mounting. Fastening by clamping under the fire protection bolt tie.



BSK separating bracket for wall mounting

Type	Dimension	Pack.	Weight	Item No.	Price
	mm	pcs	kg/% pc	ST / FS	/% pc
<b>BSK-W0511</b>	46 x 37.5	25	5.000	<b>7215 31 2</b>	
<b>BSK-W0521</b>	46 x 72.5	25	9.000	<b>7215 31 8</b>	
<b>BSK-W1016</b>	101 x 50	25	12.500	<b>7215 32 4</b>	
<b>BSK-W1026</b>	101 x 97.5	25	17.500	<b>7215 33 0</b>	

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.	Price
	pcs	kg/% pc		/pc.
<b>BSK-M</b>	1	350.000	<b>7215 50 0</b>	

Fire protection duct mortar, dry, ready-to-use mortar in a bucket for filling joints and smaller cracks during the mounting of the BSK and BSKH fire protection ducts.



Identification plate, function maintenance

Type	Pack.	Weight	Item No.	Price
	pcs	kg/% pc	PVC	/pc.
<b>KS-E</b>	10	0.220	<b>7205 42 2</b>	

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.



**Fire protection duct for suspended ceiling mounting**



**I90 to DIN 4102 Part 11**  
**E 30 to DIN 4102 Part 12**  
**ABP P-SAC 02/III-215**  
**ABP P-SAC 02/III-216**

Dimensions BSKH I90/E30, internal/external [mm]		
<b>BSKH 090506</b>	50 x 60	110 x 120
<b>BSKH 090511</b>	50 x 110	110 x 170
<b>BSKH 090521</b>	50 x 210	110 x 270
<b>BSKH 091016</b>	105 x 160	165 x 220
<b>BSKH 091026</b>	105 x 260	165 x 320
<b>Max. support width</b>	1.0 m	



The fibre glass lightweight concrete ducts, which can be flamed on four sides, can be mounted on OBO mounting systems, thus offering the greatest possible flexibility in cable routing in emergency and escape routes (installation duct to DIN 4102 Part 11) or in electrical function maintenance (to DIN 4102 Part 12). This allows elegant avoidance of objects from other areas such as heating, ventilation and sanitary applications. Mounting under the ceiling is simple, using U-shaped suspended supports and a bracket, or on a U cross-section suspended with threaded rods. The OBO BSKH is simply attached loosely. Mounted connectors ensure quick mounting in situ, whilst loosely placed lids ensure quick inspection and reassignment.

**System components**



BSKH fire protection ducts, fittings: 90° bend, intersection and T piece, U suspended support, brackets, connection set, sealing strip, doublers, wall connection collar, threaded rod adapter, fire protection anchor, BSK mortar

**Ceiling area of application**



Mounted on OBO mounting systems to go under obstacles or for direct floor crossings.

**Fire protection duct for suspended ceiling mounting**

**Mounting preparations**



Draw on the exact position of the drill holes for the U suspended supports at a maximum spacing of 1 m.

**Bracket mounting**



Fasten the brackets on the U suspended support with the DSK 25 spacer and the SKS 10 x 80 hexagonal bolt.

**Duct lid**



After installing the cables, apply the self-adhesive sealing strip to the duct lid and place it loosely on the floor trough. In so doing, observe the correct position of the pre-mounted joint cover.

**E duct variant, alternative**



Alternatively, the threaded rod can also be locked on the ceiling with the fire protection clamp.

**Placing anchors**



Mount the FAZ II bolt ties to fasten the U suspended supports.

**Joint**



Apply the sealing strip all the way around joints between the duct elements.

**I duct variant**



When used as an I duct for wall penetrations, additional wall connection collars must be mounted.

**Shortening duct element**



If necessary, the duct elements can simply be shortened with a coarse saw. Dismantled connectors can be reused.

**Suspended support mounting**



Screw the U suspended supports onto the bolt ties.

**Connection, cable trough**



Place the duct troughs loosely on the bracket and connect them to the pre-mounted covers using the connection screws. To protect it against shaking, you can optionally secure the duct with a short Spring screw through the bracket.

**E duct variant**



Threaded rod lock with adapter mounted on the duct connectors and locked in the ceiling using an internal thread anchor.

**Mounting the connection set**



After shortening, remount the available connectors on the duct.

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Fire protection duct for suspended ceiling mounting

Fittings



All the fittings are locked with an additional suspension at a maximum distance of 100 mm to the joint on each side.

Mounted fire protection duct



Mounted BSKH with loose-fitting lid for quick inspection and retro-assignment.

Cable bundle output



To run cable bundles or single cables with a large diameter, fasten additional doublers to the duct and completely close them with BSK mortar.

Individual cable output



Individual cables can be run directly through the duct walls. Close the ring gap with BSK mortar.

BSKH fire protection duct



Type	Internal dimensions mm	External dimensions mm	Length mm	Weight borders	Item No.
<b>BSKH 090506</b>	50 x 60	110 x 120	1000	915.000	<b>7215 17 3</b>
<b>BSKH 090511</b>	50 x 110	110 x 170	1000	1195.000	<b>7215 17 7</b>
<b>BSKH 090521</b>	50 x 210	110 x 270	1000	1640.000	<b>7215 18 1</b>
<b>BSKH 091016</b>	105 x 160	165 x 220	1000	1705.000	<b>7215 18 5</b>
<b>BSKH 091026</b>	105 x 260	165 x 320	1000	2245.000	<b>7215 18 9</b>

Price  
/m

Fire protection duct BSKH I90/E 30, suspended, flammable on 4-sides, to DIN 4102 Part 11 and Part 12, for installation on OBO mounting systems. Including mounted connector on both duct ends, 3x 1 m self-adhesive sealing strip and connecting bolts.

BSKH fitting, 90° bend

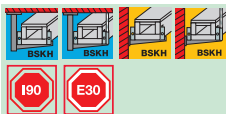


Type	Internal dimensions mm	External dimensions mm	Weight kg/% pc	Item No.
<b>BSKH-FB 090506</b>	50 x 60	110 x 120	430.000	<b>7215 60 2</b>
<b>BSKH-FB 090511</b>	50 x 110	110 x 170	595.000	<b>7215 60 6</b>
<b>BSKH-FB 090521</b>	50 x 210	110 x 270	1005.000	<b>7215 61 0</b>
<b>BSKH-FB 091016</b>	105 x 160	165 x 220	920.000	<b>7215 61 4</b>
<b>BSKH-FB 091026</b>	105 x 260	165 x 320	1405.000	<b>7215 61 8</b>

Price  
/pc.

90° bend for BSKH I90/E 30, to DIN 4102 Part 11 and Part 12, for installation on OBO mounting systems. Fittings must be supported by additional brackets. Including mounted connector on both duct ends, 3x 1 m self-adhesive sealing strip and connecting bolts.

BSKH fitting, T piece



Type	Internal dimensions mm	External dimensions mm	Weight kg/% pc	Item No.
<b>BSKH-FT 090506</b>	50 x 60	110 x 120	565.000	<b>7215 63 1</b>
<b>BSKH-FT 090511</b>	50 x 110	110 x 170	747.000	<b>7215 63 5</b>
<b>BSKH-FT 090521</b>	50 x 210	110 x 270	1225.000	<b>7215 63 9</b>
<b>BSKH-FT 091016</b>	105 x 160	165 x 220	1180.000	<b>7215 64 3</b>
<b>BSKH-FT 091026</b>	105 x 260	165 x 320	1715.000	<b>7215 64 7</b>

Price  
/pc.

T piece for BSKH I90/E 30, to DIN 4102 Part 11 and Part 12, for installation on OBO mounting systems. Fittings must be supported by additional brackets. Including mounted connector on all duct ends, 3x 1 m self-adhesive sealing strip and connecting bolts.

Fire protection duct for suspended ceiling mounting

BSKH fitting, intersection

Type	Internal dimensions mm	External dimensions mm	Weight kg/% pc	Item No.	Price /pc.
<b>BSKH-FK 090506</b>	50 x 60	110 x 120	740.000	<b>7215 66 1</b>	
<b>BSKH-FK 090511</b>	50 x 110	110 x 170	975.000	<b>7215 66 5</b>	
<b>BSKH-FK 090521</b>	50 x 210	110 x 270	1530.000	<b>7215 66 9</b>	
<b>BSKH-FK 091016</b>	105 x 160	165 x 220	1455.000	<b>7215 67 3</b>	
<b>BSKH-FK 091026</b>	105 x 260	165 x 320	2075.000	<b>7215 67 7</b>	

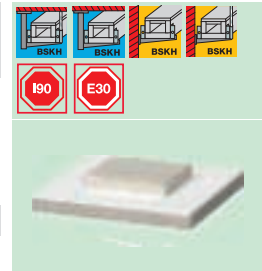
Intersection for BSKH I90/E 30, to DIN 4102 Part 11 and Part 12, for installation on OBO mounting systems. Fittings must be supported by additional brackets. Including mounted connector on all duct ends, 3x 1 m self-adhesive sealing strip and connecting bolts.



BSKH end piece

Type	Pack. pcs	Weight kg/% pc	Item No.	Price /pc.
<b>BSKH-E090506</b>	1	0.000	<b>7215 59 0</b>	
<b>BSKH-E090511</b>	1	0.000	<b>7215 59 2</b>	
<b>BSKH-E090521</b>	1	0.000	<b>7215 59 4</b>	
<b>BSKH-E091016</b>	1	0.000	<b>7215 59 6</b>	
<b>BSKH-E091026</b>	1	0.000	<b>7215 59 8</b>	

End piece for BSKH I90/E 30; including appropriate fastening material.



BSKH wall connection collar I90

Type	Pack. pcs	Weight kg/% pc	Item No.	Price /pc.
<b>BSKH-K0506</b>	1	53.000	<b>7215 57 0</b>	
<b>BSKH-K0511</b>	1	64.000	<b>7215 57 4</b>	
<b>BSKH-K0521</b>	1	83.000	<b>7215 57 8</b>	
<b>BSKH-K1016</b>	1	87.000	<b>7215 58 2</b>	
<b>BSKH-K1026</b>	1	105.000	<b>7215 58 6</b>	

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



BSKH threaded rod adapter E 30

Type	Pack. pcs	Weight kg/% pc	Item No.	Price /pc.
<b>BSKH-G</b>	1	5.700	<b>7215 39 5</b>	

Adapter to accept threaded rods for the E duct application for function maintenance. The adapter is clamped between the connectors.



BSKH connector set

Type	Pack. pcs	Weight kg/% pc	Item No.	Price /pc.
<b>BSKH-V050</b>	1	22.000	<b>7215 38 1</b>	
<b>BSKH-V052</b>	1	26.000	<b>7215 38 5</b>	
<b>BSKH-V101</b>	1	40.000	<b>7215 38 9</b>	

Connection set as replacement, consisting of a pair of connection plates, left/right, bolts for fastening the connectors to the duct and bolts with nuts to connect the individual duct lengths.  
BSKH-V050 for ...090506 and ...090511  
BSKH-V052 for ...090521  
BSKH-V101 for ...091016 and ...091026



BSK sealing strip I90 and E 30

Type	Dimension mm	Length m	Pack. pcs	Weight kg/% pc	Item No.	Price /pc.
<b>BSK-D0930</b>	5 x 30	15	1	37.500	<b>7215 42 3</b>	

Self-adhesive sealing strip for BSK I90/E 30 and BSKH I90/E 30.



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Fire protection duct for suspended ceiling mounting

BSK doubler I90



Type	Dimension mm	Pack. pcs	Weight kg/% pc	Item No.
BSK-A0908	80 x 80 x 20	1	10.000	7215 45 2
BSK-A0910	100 x 100 x 20	1	14.000	7215 45 8

Price  
/pc.

Doubler for BSK I90 and for BSKH I90:  
BSK-A0908 with drill hole 40 mm, for duct heights to 95 mm,  
BSK-A0910 with drill hole 60 mm, for duct heights from 110 mm.  
Including fastening screws.

BSK mortar



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

Price  
/pc.

Fire protection duct mortar, dry, ready-to-use mortar in a bucket for filling joints and smaller cracks during the mounting of the BSK and BSKH fire protection ducts.

Identification plate, function maintenance



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

Price  
/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.

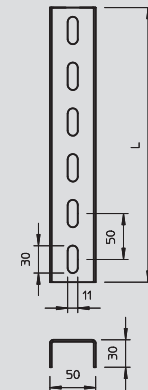
U support



Type	Length mm	Material thickness mm	Pack. pcs	Weight kg/% pc	Item No.
US 3/20	200	2	1	26.600	6342 30 2
US 3/30	300	2	1	39.900	6342 30 4
US 3/40	400	2	1	53.200	6342 30 6

Price  
/pc.

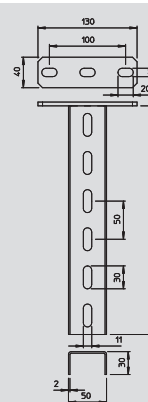
U support in fixed lengths. Dimensions 30 x 50 mm.



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

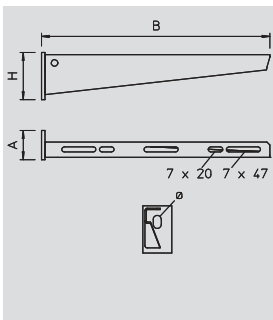
Price  
/pc.

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



Fire protection duct for suspended ceiling mounting

Bracket

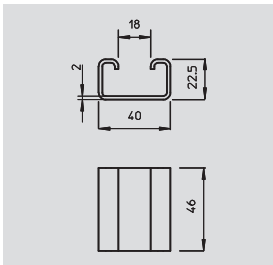


Type	Width mm	Dimension H mm	Dimension A mm	Hole Ø mm	Pack. pcs	Weight kg/% pc	Item No. ST / FT	Price /pc.
<b>AW 15/16</b>	160	55	40	11	30	21.000	<b>6420 66 4</b>	
<b>AW 15/21</b>	210	60	40	11	30	26.000	<b>6420 68 0</b>	
<b>AW 15/31</b>	310	65	40	11	30	32.500	<b>6420 71 0</b>	
<b>AW 15/41</b>	410	70	40	11	30	55.000	<b>6420 74 5</b>	

Lightweight wall and support bracket with welded head plate.



Spacer

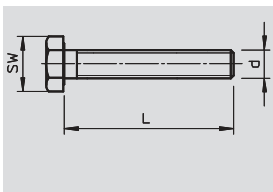


Type	Pack. pcs	Weight kg/% pc	Item No. ST / FT	Price /pc.
<b>DSK 25</b>	25	7.500	<b>6416 44 6</b>	

Spacer for use in U 3 supports.



Hexagonal bolt

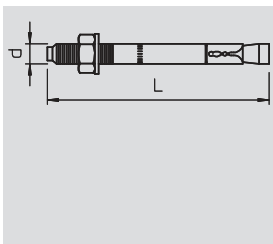


Type	Thread	Dimension L mm	Dimension d mm	SW mm	Pack. pcs	Weight kg/% pc	Item No. ST / F	Price /pc.
<b>SKS 10x80</b>	M10 x 80	80	10	17	20	7.700	<b>6418 25 0</b>	

Hexagonal bolt for universal fixing of structure components.

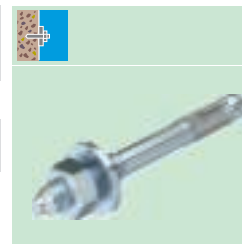


Fire protection anchor

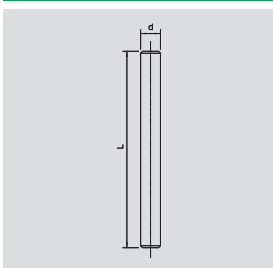


Type	Thread	Dimension L mm	Dimension d mm	Clamping area mm	Pack. pcs	Weight kg/% pc	Item No. ST / G	Price /pc.
<b>FAZ II 10/10 GS</b>	M10	95	10	10	50	7.680	<b>3498 54 9</b>	

Bolt tie for fastening heavy-duty anchors. Matches OBO mounting systems and wall support brackets and suspended supports.



Threaded rod

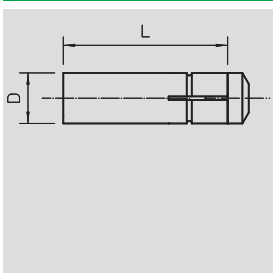


Type	Thread	Dimension d mm	Dimension L mm	Pack. pcs	Weight kg/% pc	Item No. ST / G	Price /pc.
<b>2078</b>	M10	10	1000	25	49.000	<b>3141 20 9</b>	

Threaded rod to DIN 976.



Drive-in tie bolt



Type	Thread	Dimension D mm	Dimension L mm	Screw-in depth min-max mm	Pack. pcs	Weight kg/% pc	Item No. ST / G	Price /pc.
<b>FZEA II 12x40</b>	M10	12	40	13-19	100	2.075	<b>3492 06 0</b>	

Back cut steel tie with internal thread.



Fire protection duct for suspended ceiling mounting

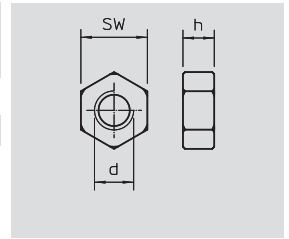
Hexagonal nut



Type	Thread	Dimension d	Dimension h	SW	Pack.	Weight	Item No.
		mm	mm	mm	pcs	kg/% pc	ST / G
<b>DIN 934</b>	M10	10	8.4	17	100	1.084	<b>3400 10 7</b>

Hexagonal nut to DIN 934 with metric thread.

Price /% pc



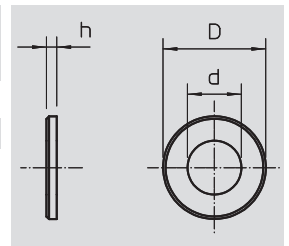
Washer



Type	Thread	Dimension D	Dimension d	Dimension h	Pack.	Weight	Item No.
		mm	mm	mm	pcs	kg/% pc	ST / G
<b>966</b>	M10	20	10.5	2	100	0.408	<b>3402 09 6</b>

Washer according to DIN 125, shape A, for universal use.

Price /% pc



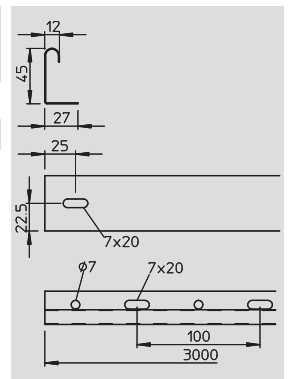
Separating retainer



Type	Side height	Length	Pack.	Weight	Item No.
	mm	mm	m	borders	ST / FS
<b>TSG 45</b>	45	3000	45	50.000	<b>6062 03 2</b>

Separating retainer for separation of cables of different voltages or functions.

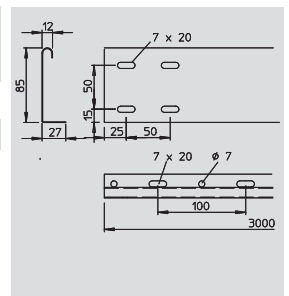
Price /m



Type	Side height	Length	Pack.	Weight	Item No.
	mm	mm	m	borders	ST / FS
<b>TSG 85</b>	85	3000	45	96.700	<b>6062 11 3</b>

Separating retainer for separation of cables of different voltages or functions.

Price /m



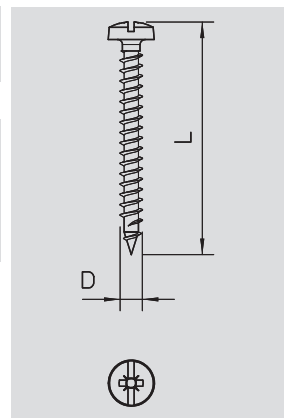
Sprint screw for separating retainer fastener



Type	Thickness	Length	Head Ø	Shipping box	Pack.	Weight	Item No.
	mm	mm	mm	pcs	pcs	kg/% pc	ST / GGP
<b>4758</b>	4	20	7.5	6000	200	0.140	<b>3195 22 8</b>

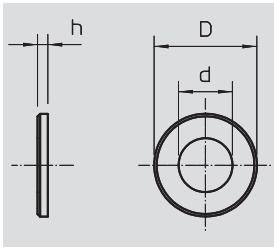
Hardened steel, electrogalvanised and yellow passivated, as well as Hostafon-coated, panhead with combined Philips and slotted head (Pozidrive size 2 except Ø 6 mm Pozidrive size 3). The use of Sprint screws leads to considerably reduced screw-in times compared with standard screws. This noticeable advantage comes from the point with the first thread, which leads on to the double thread beyond.  
Areas of use: wood, chipboard, Rigips panels, plastic anchors.

Price /% pc



Fire protection duct for suspended ceiling mounting

Large washer



Type	Thread	Dimension D mm	Dimension d mm	Dimension h mm	Pack. pcs	Weight kg/% pc	Item No. ST / G	Price /% pc
964	M4	15	4.3	1.2	100	0.156	3403 02 5	

Washer of particularly large outer diameter.



## Fire protection duct for suspended wall mounting



**I90 to DIN 4102 Part 11**  
**E30 to DIN 4102 Part 12**  
**ABP P-SAC 02/III-215**  
**ABP P-SAC 02/III-216**

Dimensions BSKH I90/E30, internal/external [mm]		
BSKH 090506	50 x 60	110 x 120
BSKH 090511	50 x 110	110 x 170
BSKH 090521	50 x 210	110 x 270
BSKH 091016	105 x 160	165 x 220
BSKH 091026	105 x 260	165 x 320
Max. support width	1.0 m	



The fibre glass lightweight concrete ducts, which can be flamed on four sides, can be mounted on OBO mounting systems, thus offering the greatest possible flexibility in cable routing in emergency and escape routes (installation duct to DIN 4102 Part 11) or in electrical function maintenance (to DIN 4102 Part 12). This allows elegant avoidance of objects from other areas such as heating, ventilation and sanitary applications. They are simply mounted on the wall with a bracket, upon which the OBO BSKH is simply placed loosely. Mounted connectors ensure quick mounting in situ, whilst loosely placed lids ensure quick inspection and reassignment.

### System components



BSKH fire protection ducts, fittings: 90° bend, intersection and T piece, brackets, connection set, doublers, wall connection collar, threaded rod adapter, fire protection anchor, fire protection bolt tie, BSK mortar

#### Wall application area



Mounted on OBO mounting systems to avoid obstacles or when the wall is inaccessible for mounting.

**Fire protection duct for suspended wall mounting**

**Mounting preparations**



Draw on the exact position of the drill holes for the wall brackets at a maximum spacing of 1 m.

**Connection, cable trough**



Place the duct troughs loosely on the bracket and connect them to the pre-mounted covers using the connection screws. To protect it against shaking, you can optionally secure the duct with a short Spring screw through the bracket.

**E duct variant**



Threaded rod lock with adapter mounted on the duct connectors and locked in the ceiling using an internal thread anchor.

**Mounting the connection set**



After shortening, remount the available connectors on the duct.

**Bracket mounting**



Mount the brackets with MMS fire protection bolt for masonry or with FAZ II bolt ties for concrete.

**Duct lid**



After installing the cables, apply the self-adhesive sealing strip to the duct lid and place it loosely on the floor trough. In so doing, observe the correct position of the pre-mounted joint cover.

**E duct variant, alternative**



Alternatively, the threaded rod can also be locked on the ceiling with the fire protection clamp.

**Fittings**



All the fittings are locked with an additional suspension at a maximum distance of 100 mm to the joint on each side.

**Joint**



Apply the sealing strip all the way around joints between the duct elements.

**I duct variant**



When used as an I duct for wall penetrations, additional wall connection collars must be mounted.

**Shortening duct elements**



If necessary, the duct elements can simply be shortened with a coarse saw. Dismantled connectors can be reused.

**Cable bundle output**



To run cable bundles or single cables with a large diameter, fasten additional doublers to the duct and completely close them with BSK mortar.

Fire protection duct for suspended wall mounting

Individual cable output



Individual cables can be run directly through the duct walls. Close the ring gap with BSKM mortar.

Mounted fire protection duct



Mount the BSKH with loose-fitting lid for quick inspection and retro-assignment.

BSKH fire protection duct



Type	Internal dimensions mm	External dimensions mm	Length mm	Weight borders	Item No.
<b>BSKH 090506</b>	50 x 60	110 x 120	1000	915.000	<b>7215 17 3</b>
<b>BSKH 090511</b>	50 x 110	110 x 170	1000	1195.000	<b>7215 17 7</b>
<b>BSKH 090521</b>	50 x 210	110 x 270	1000	1640.000	<b>7215 18 1</b>
<b>BSKH 091016</b>	105 x 160	165 x 220	1000	1705.000	<b>7215 18 5</b>
<b>BSKH 091026</b>	105 x 260	165 x 320	1000	2245.000	<b>7215 18 9</b>

Price  
/m

Fire protection duct BSKH I90/E 30, suspended, flammable on 4-sides, to DIN 4102 Part 11 and Part 12, for installation on OBO mounting systems. Including mounted connector on both duct ends, 3x 1 m self-adhesive sealing strip and connecting bolts.

BSKH fitting, 90° bend



Type	Internal dimensions mm	External dimensions mm	Weight kg/% pc	Item No.
<b>BSKH-FB 090506</b>	50 x 60	110 x 120	430.000	<b>7215 60 2</b>
<b>BSKH-FB 090511</b>	50 x 110	110 x 170	595.000	<b>7215 60 6</b>
<b>BSKH-FB 090521</b>	50 x 210	110 x 270	1005.000	<b>7215 61 0</b>
<b>BSKH-FB 091016</b>	105 x 160	165 x 220	920.000	<b>7215 61 4</b>
<b>BSKH-FB 091026</b>	105 x 260	165 x 320	1405.000	<b>7215 61 8</b>

Price  
/pc.

90° bend for BSKH I90/E 30, to DIN 4102 Part 11 and Part 12, for installation on OBO mounting systems. Fittings must be supported by additional brackets. Including mounted connector on both duct ends, 3x 1 m self-adhesive sealing strip and connecting bolts.

BSKH fitting, T piece



Type	Internal dimensions mm	External dimensions mm	Weight kg/% pc	Item No.
<b>BSKH-FT 090506</b>	50 x 60	110 x 120	565.000	<b>7215 63 1</b>
<b>BSKH-FT 090511</b>	50 x 110	110 x 170	747.000	<b>7215 63 5</b>
<b>BSKH-FT 090521</b>	50 x 210	110 x 270	1225.000	<b>7215 63 9</b>
<b>BSKH-FT 091016</b>	105 x 160	165 x 220	1180.000	<b>7215 64 3</b>
<b>BSKH-FT 091026</b>	105 x 260	165 x 320	1715.000	<b>7215 64 7</b>

Price  
/pc.

T piece for BSKH I90/E 30, to DIN 4102 Part 11 and Part 12, for installation on OBO mounting systems. Fittings must be supported by additional brackets. Including mounted connector on all duct ends, 3x 1 m self-adhesive sealing strip and connecting bolts.

BSKH fitting, intersection



Type	Internal dimensions mm	External dimensions mm	Weight kg/% pc	Item No.
<b>BSKH-FK 090506</b>	50 x 60	110 x 120	740.000	<b>7215 66 1</b>
<b>BSKH-FK 090511</b>	50 x 110	110 x 170	975.000	<b>7215 66 5</b>
<b>BSKH-FK 090521</b>	50 x 210	110 x 270	1530.000	<b>7215 66 9</b>
<b>BSKH-FK 091016</b>	105 x 160	165 x 220	1455.000	<b>7215 67 3</b>
<b>BSKH-FK 091026</b>	105 x 260	165 x 320	2075.000	<b>7215 67 7</b>

Price  
/pc.

Intersection for BSKH I90/E 30, to DIN 4102 Part 11 and Part 12, for installation on OBO mounting systems. Fittings must be supported by additional brackets. Including mounted connector on all duct ends, 3x 1 m self-adhesive sealing strip and connecting bolts.

**Fire protection duct for suspended wall mounting**

**BSKH end piece**

Type	Pack.	Weight	Item No.	Price /pc.
	pcs	kg/% pc		
<b>BSKH-E090506</b>	1	0.000	<b>7215 59 0</b>	
<b>BSKH-E090511</b>	1	0.000	<b>7215 59 2</b>	
<b>BSKH-E090521</b>	1	0.000	<b>7215 59 4</b>	
<b>BSKH-E091016</b>	1	0.000	<b>7215 59 6</b>	
<b>BSKH-E091026</b>	1	0.000	<b>7215 59 8</b>	



End piece for BSKH I90/E 30; including appropriate fastening material.

**BSKH wall connection collar I90**

Type	Pack.	Weight	Item No.	Price /pc.
	pcs	kg/% pc		
<b>BSKH-K0506</b>	1	53.000	<b>7215 57 0</b>	
<b>BSKH-K0511</b>	1	64.000	<b>7215 57 4</b>	
<b>BSKH-K0521</b>	1	83.000	<b>7215 57 8</b>	
<b>BSKH-K1016</b>	1	87.000	<b>7215 58 2</b>	
<b>BSKH-K1026</b>	1	105.000	<b>7215 58 6</b>	



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

**BSKH threaded rod adapter E30**

Type	Pack.	Weight	Item No.	Price /pc.
	pcs	kg/% pc	ST / FS	
<b>BSKH-G</b>	1	5.700	<b>7215 39 5</b>	



Adapter to accept threaded rods for the E duct application for function maintenance. The adapter is clamped between the connectors.

**BSKH connector set**

Type	Pack.	Weight	Item No.	Price /pc.
	pcs	kg/% pc	ST / FS	
<b>BSKH-V050</b>	1	22.000	<b>7215 38 1</b>	
<b>BSKH-V052</b>	1	26.000	<b>7215 38 5</b>	
<b>BSKH-V101</b>	1	40.000	<b>7215 38 9</b>	



Connection set as replacement, consisting of a pair of connection plates, left/right, bolts for fastening the connectors to the duct and bolts with nuts to connect the individual duct lengths. BSKH-V050 for ...090506 and ...090511 BSKH-V052 for ...090521 BSKH-V101 for ...091016 and ...091026

**BSK sealing strip I90 and E 30**

Type	Dimension	Length	Pack.	Weight	Item No.	Price /pc.
	mm	m	pcs	kg/% pc		
<b>BSK-D0930</b>	5 x 30	15	1	37.500	<b>7215 42 3</b>	



Self-adhesive sealing strip for BSK I90/E 30 and BSKH I90/E 30.

**BSK doubler I90**

Type	Dimension	Pack.	Weight	Item No.	Price /pc.
	mm	pcs	kg/% pc		
<b>BSK-A0908</b>	80 x 80 x 20	1	10.000	<b>7215 45 2</b>	
<b>BSK-A0910</b>	100 x 100 x 20	1	14.000	<b>7215 45 8</b>	



Doubler for BSK I90 and for BSKH I90: BSK-A0908 with drill hole 40 mm, for duct heights to 95 mm, BSK-A0910 with drill hole 60 mm, for duct heights from 110 mm. Including fastening screws.

Fire protection duct for suspended wall mounting

BSK mortar



Type	Pack.	Weight	Item No.	Price /pc.
	pcs	kg/% pc		
<b>BSK-M</b>	1	350.000	<b>7215 50 0</b>	

Fire protection duct mortar, dry, ready-to-use mortar in a bucket for filling joints and smaller cracks during the mounting of the BSK and BSKH fire protection ducts.

Identification plate, function maintenance



Type	Pack.	Weight	Item No.	Price /pc.
	pcs	kg/% pc	PVC	
<b>KS-E</b>	10	0.220	<b>7205 42 2</b>	

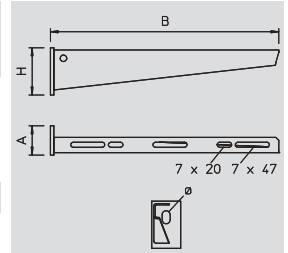
The self-adhesive identification plate for labelling contains all the data required for approved cable system labelling for function maintenance as required by DIN 4102 Part 12.

Bracket



Type	Width	Dimension H	Dimension A	Hole Ø	Pack.	Weight	Item No.	Price /pc.
	mm	mm	mm	mm	pcs	kg/% pc	ST / FT	
<b>AW 15/16</b>	160	55	40	11	30	21.000	<b>6420 66 4</b>	
<b>AW 15/21</b>	210	60	40	11	30	26.000	<b>6420 68 0</b>	
<b>AW 15/31</b>	310	65	40	11	30	32.500	<b>6420 71 0</b>	
<b>AW 15/41</b>	410	70	40	11	30	55.000	<b>6420 74 5</b>	

Lightweight wall and support bracket with welded head plate.

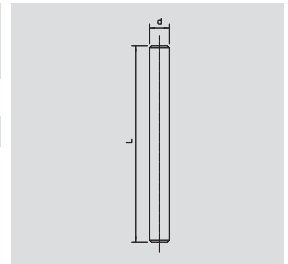


Threaded rod



Type	Thread	Dimension d	Dimension L	Pack.	Weight	Item No.	Price /% pc
		mm	mm	pcs	kg/% pc	ST / G	
<b>2078</b>	M10	10	1000	25	49.000	<b>3141 20 9</b>	

Threaded rod to DIN 976.

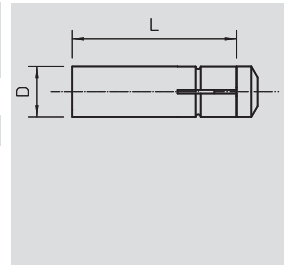


Drive-in tie bolt



Type	Thread	Dimension D	Dimension L	Screw-in depth min-max	Pack.	Weight	Item No.	Price /% pc
		mm	mm	mm	pcs	kg/% pc	ST / G	
<b>FZEA II 12x40</b>	M10	12	40	13-19	100	2.075	<b>3492 06 0</b>	

Back cut steel tie with internal thread.

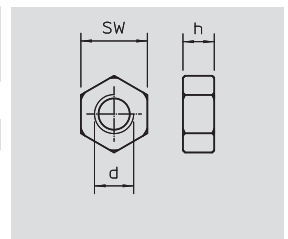


Hexagonal nut



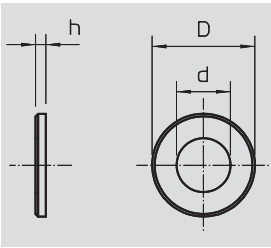
Type	Thread	Dimension d	Dimension h	SW	Pack.	Weight	Item No.	Price /% pc
		mm	mm	mm	pcs	kg/% pc	ST / G	
<b>DIN 934</b>	M10	10	8.4	17	100	1.084	<b>3400 10 7</b>	

Hexagonal nut to DIN 934 with metric thread.



Fire protection duct for suspended wall mounting

Washer

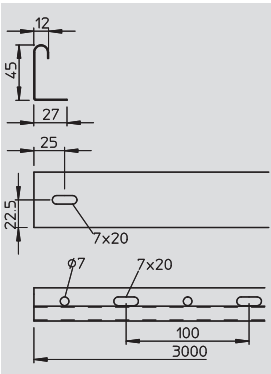


Type	Thread	Dimension D mm	Dimension d mm	Dimension h mm	Pack. pcs	Weight kg/% pc	Item No. ST / G	Price / % pc
966	M10	20	10.5	2	100	0.408	3402 09 6	

Washer according to DIN 125, shape A, for universal use.

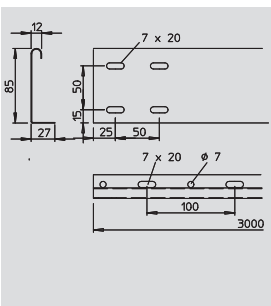


Separating retainer



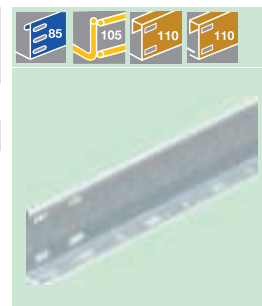
Type	Side height mm	Length mm	Pack. m	Weight borders	Item No. ST / FS	Price /m
TSG 45	45	3000	45	50.000	6062 03 2	

Separating retainer for separation of cables of different voltages or functions.

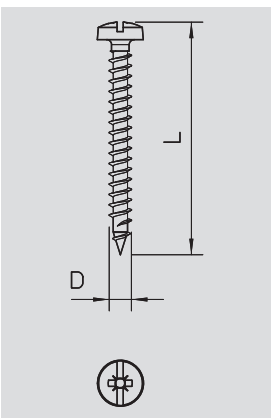


Type	Side height mm	Length mm	Pack. m	Weight borders	Item No. ST / FS	Price /m
TSG 85	85	3000	45	96.700	6062 11 3	

Separating retainer for separation of cables of different voltages or functions.

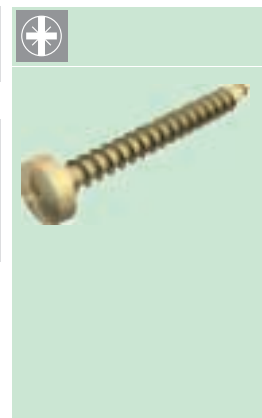


Sprint screw for separating retainer fastener

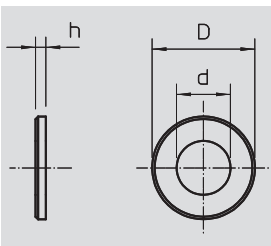


Type	Thickness mm	Length mm	Head Ø mm	Shipping box pcs	Pack. pcs	Weight kg/% pc	Item No. ST / GGP	Price / % pc
4758	4	20	7.5	6000	200	0.140	3195 22 8	

Hardened steel, electrogalvanised and yellow passivated, as well as Hostafon-coated, panhead with combined Philips and slotted head (Pozidrive size 2 except Ø 6 mm Pozidrive size 3). The use of Sprint screws leads to considerably reduced screw-in times compared with standard screws. This noticeable advantage comes from the point with the first thread, which leads on to the double thread beyond.  
Areas of use: wood, chipboard, Rigips panels, plastic anchors.



Large washer



Type	Thread	Dimension D mm	Dimension d mm	Dimension h mm	Pack. pcs	Weight kg/% pc	Item No. ST / G	Price / % pc
964	M4	15	4.3	1.2	100	0.156	3403 02 5	

Washer of particularly large outer diameter.



## Fire protection duct for suspended wall mounting

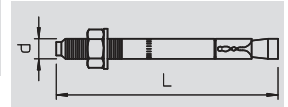
### Fire protection anchor



Type	Thread	Dimension L mm	Dimension d mm	Clamping area mm	Pack. pcs	Weight kg/% pc	Item No. ST / G
<b>FAZ II 10/10 GS</b>	M10	95	10	10	50	7.680	<b>3498 54 9</b>

Bolt tie for fastening heavy-duty anchors. Matches OBO mounting systems and wall support brackets and suspended supports.

Price  
/% pc



### Fire protection bolt tie



Type	Dimension mm	Drill hole Ø mm	Dimension L mm	Pack. pcs	Weight kg/% pc	Item No. ST / G
<b>MMS10</b>	10 x 80	8	80	50	3.800	<b>3498 12 3</b>

Fire protection bolt tie with hexagonal head for direct installation without additional anchors. Substrate: concrete or masonry. WAF 16. Drill hole 8 mm. Fire protection tested according to DIN 4102. Fire resistance class to F90.

Price  
/% pc

