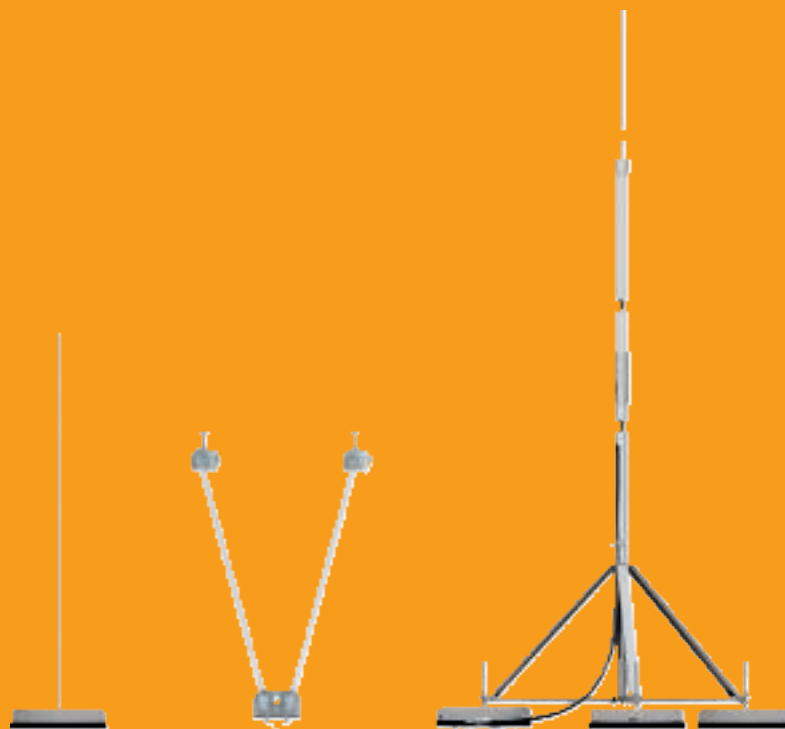




# Insulated lightning protection

Systems and components for maintenance  
of the separation distance in an insulated  
lightning protection system



# The lightning protection experts

## Safety for almost 100 years

OBO Bettermann is one of the world's most experienced manufacturers of lightning and surge protection systems. For almost 100 years, OBO has been developing and producing standard-compliant lightning protection components. The rapid rise of sensitive electrical devices began in the 1970s, from the electronic typewriter to today's computers. OBO responded by launching its groundbreaking V-15 surge arrester to protect these devices. Countless new products over the years, such as the first connectable type 2 surge protection device with VDE test mark, or the first connectable type 1 lightning current arrester with carbon technology, laid the foundation for the unique product range that we offer today. OBO was the first manufacturer to publish a guide to lightning protection – way back in the 1950s – whose motto is still relevant today: "LIGHTNING PROTECTION OFFERS SAFETY."



## Comprehensive

As a manufacturer of lightning protection components, OBO can offer tested products for your project. Strictly according to the lightning protection concepts of IEC 62305 (VDE 0185-305), the isCon®, isFang, irod and 101 protection systems can be used for easy planning and implementation of insulated lightning protection systems. OBO supports you through consultation, installation aids and our "Protected to the power of 4" portfolio for insulated lightning protection.





02\_BS53609\_001\_Export\_04602 / 20/09/2017

GRP-insulated grid with isCon® conductor

*Corrosion testing of connection components according to IEC/EN 62561-1 (VDE 0185-561-1)*

## Our quality promise

OBO can offer optimised, standardised lightning protection for all its products. All the products are tested and certified according to the current product standard from the series IEC 62561 (VDE 0185-561) Part 1 to Part 7. We actively integrate our experience and testing options in our own BET lightning current laboratory in Menden into national and internal development of the standards IEC 62305 and IEC 62561 (VDE 0185-305 and VDE 0185-561). Continuous quality and production controls mean that OBO products can fulfil global requirements for internal and external lightning protection.



*Tensile testing of connection components according to IEC/EN 62561-1 (VDE 0185-561-1)*

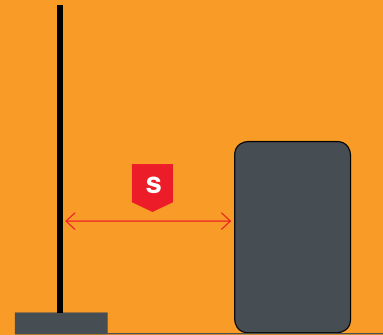


# Variants of insulated lighting protection

## 1.

### Maintaining the separation distance (s) without a mechanical connection

Numerous air-termination rods and systems from our portfolio can be used to maintain the separation distance. These products allow the implementation of the separation distance through the air to the building to be protected.

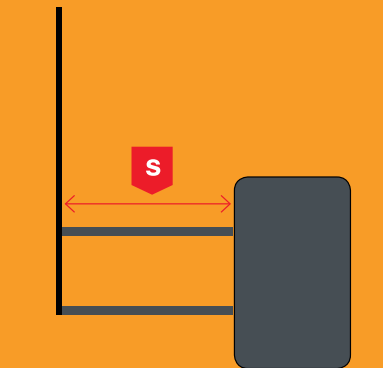


Mounting with air-termination rods or systems

## 2.

### Maintaining the separation distance (s) with a mechanical connection

However, should a direct mechanical connection to the building to be protected be required due to the project or reasons of economy, then the insulated systems of the OBO "101" series can be used.

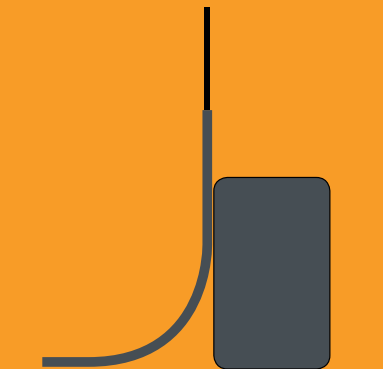


Mounting with GFRP insulating beam

## 3.

### Maintenance of the equivalent separation distance ( $s_e$ )

Our high voltage-resistant, insulated conductor isCon® fulfils the requirements of IEC 62305 (VDE 0185-305) for an insulated lightning protection system. It is particularly useful if it is interesting from an architectural point of view or if a necessary separation distance cannot be maintained. In this case, the isCon® conductor simulates the actual distance through air.



Mounting with isCon®

S

### The decisive factor: The separation distance (s)

All metallic parts of a building and electrical equipment and their supply cables must be integrated into the lightning protection system. This measure is required to avoid dangerous sparking between both air-termination system and conductor and also the metallic building parts and the electrical installation. If there is an adequate distance between the conductor passing from the lightning current and the metallic building parts, the risk of sparking is practically non-existent. This distance is described as the separation distance (s). You can find more information on calculating the separation distance in our lightning protection guide at <http://obo.eu/trennungsabstand>.

# The modular principle

## Safe function. Effective mounting.

If there is a direct lightning strike, insulated lightning protection has a decisive role to play in fire protection. The systems shown permit standardised lightning protection systems according to IEC/EN 62305 (VDE 0185-305). We place particular importance on our products allowing you to work quickly and effectively. We live up to this promise through a range of practical product characteristics.

## Planning aids

You can find comprehensive planning aids in our main catalogue, on the Internet or by visiting our seminars. Get in touch with us, we'd be glad to help you!



2

1

Air-termination rods and masts

2

Insulated air-termination systems

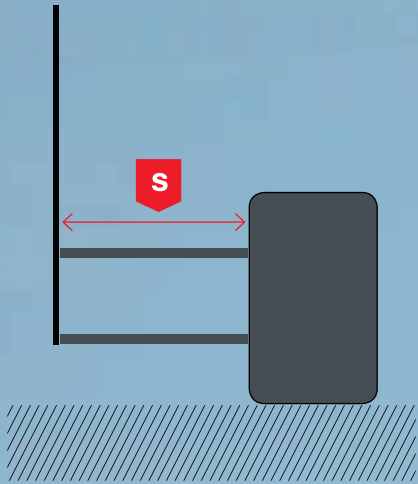
3

Insulated isCon® conductor

3

1

# Modular, simple, safe. Insulated air-termination system 101



## 101 GRP system for maintenance of the separation distance with a mechanical connection

The complex contours of metallic and electrical units protruding above the roof make particular demands of lightning protection and compliance with the separating distance.

## Creating a separating distance

With OBO insulated lightning protection, you can erect separate air-termination devices safely, economically and in accordance with standards. The core of the system is an insulating, fibre glass-reinforced plastic rod, which creates the separating distance safely and prevents uncontrolled arcing and dangerous spark creation. This means that no partial lightning currents can enter the building.

## Particularly easy mounting through pre-terminated sets

Besides the modular products, we can offer you preinstalled sets for standard installation requirements:

- Set with two fastening plates
- Set with wall connection brackets
- Set for fastening on folds
- Set for fastening on pipes
- Air-termination rod with Iso-combination set



### Two material thicknesses for different applications

The insulated lightning protection system consists of GFK rods with a diameter of 16 or 20 mm with the following properties:

#### 16 mm GRP rods

- Up to 3 m length
- UV-stable
- Light grey
- Material factor km: 0.7
- Load torque: > 400 mm<sup>3</sup>
- Support load: 54 N (1.5 m)

#### 20 mm GRP rods

- Up to 6 m length
- UV-stable
- Light grey
- Material factor km: 0.7
- Load torque: > 750 mm<sup>3</sup>
- Support load: 105 N (1.5 m)



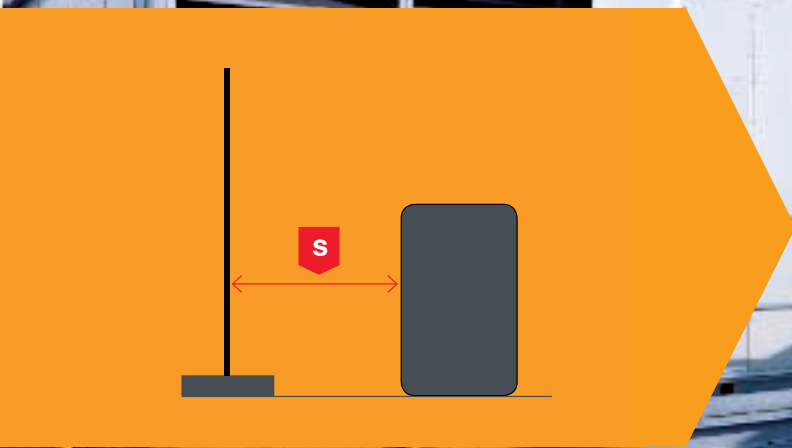
# Modular structure – the isFang air-termination rod system

## Basis:

### The isFang air-termination rod stand

The OBO isFang modular air-termination rod system can offer a fast and freely terminable solution for insulated air-termination rod systems, as well as high air-termination rods for the largest possible protection angle. High air-termination rods ensure the largest possible protection angle.

A secure base is the isFang air-termination rod stand, which is available with and without a side outlet. You can choose between two sizes and the two materials aluminium and stainless steel.



V2A



Simple erection of the tripod stand: Position the FangFix blocks, open up the stand and screw it to the blocks.

# Aluminium air-termination rods

## Aluminium variant

Our three-part aluminium air-termination rods from 4 to 10 m in length complement our conventional FangFix air-termination system consisting of air-termination rod and concrete block, which is used up to a height of 4 m. There is a range of different holders by which the different air-termination masts can be attached to walls, pipes and corner pipes, as well as tripods of varying widths.



*Aluminium air-termination rod, with 4 – 10 m height*

# Insulated air-termination rods with isCon® conductor

## Insulated air-termination rod with internal isCon® conductor

The three-part aluminium and GRP air-termination rod with its insulated structure allows the isCon® conductor (black and light grey) to be routed inside the air-termination rod – combining a perfect appearance with perfect functionality.

## Overview of product benefits

- Tidy appearance through internal isCon® conductor
- 4 variants: 4 – 10 m height
- Including connection element and potential connection in the rod
- For freestanding installation, can be combined with isFang air-termination rod stand with side exit

Internal

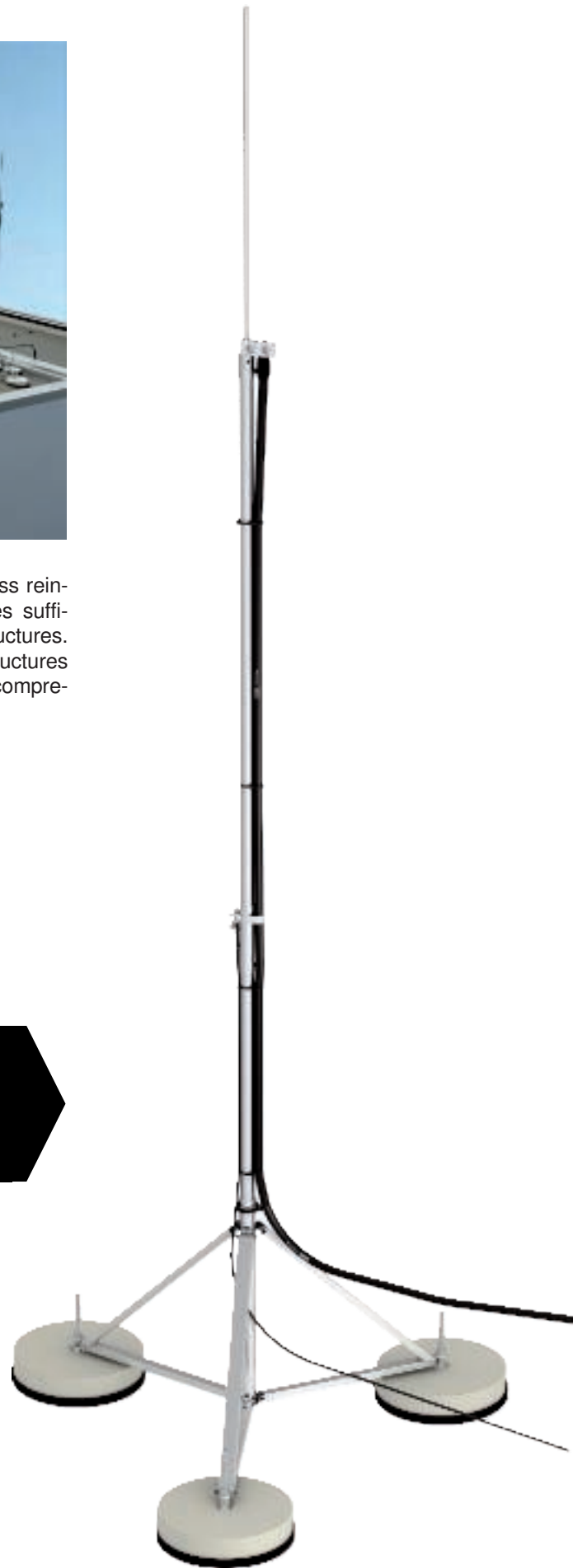




**Insulated air-termination rod with external IsCon® conductor**

The insulated air-termination rods protect electrical and metallic roof structures, taking the calculated separating distance (s), according to IEC 62305-3 (VDE 0185-305-3), into account. An insulated section of

1.5 metres made of fibre-glass reinforced plastic (GRP) ensures sufficient distance to all roof structures. Even complex building structures can be protected by the comprehensive system accessories.

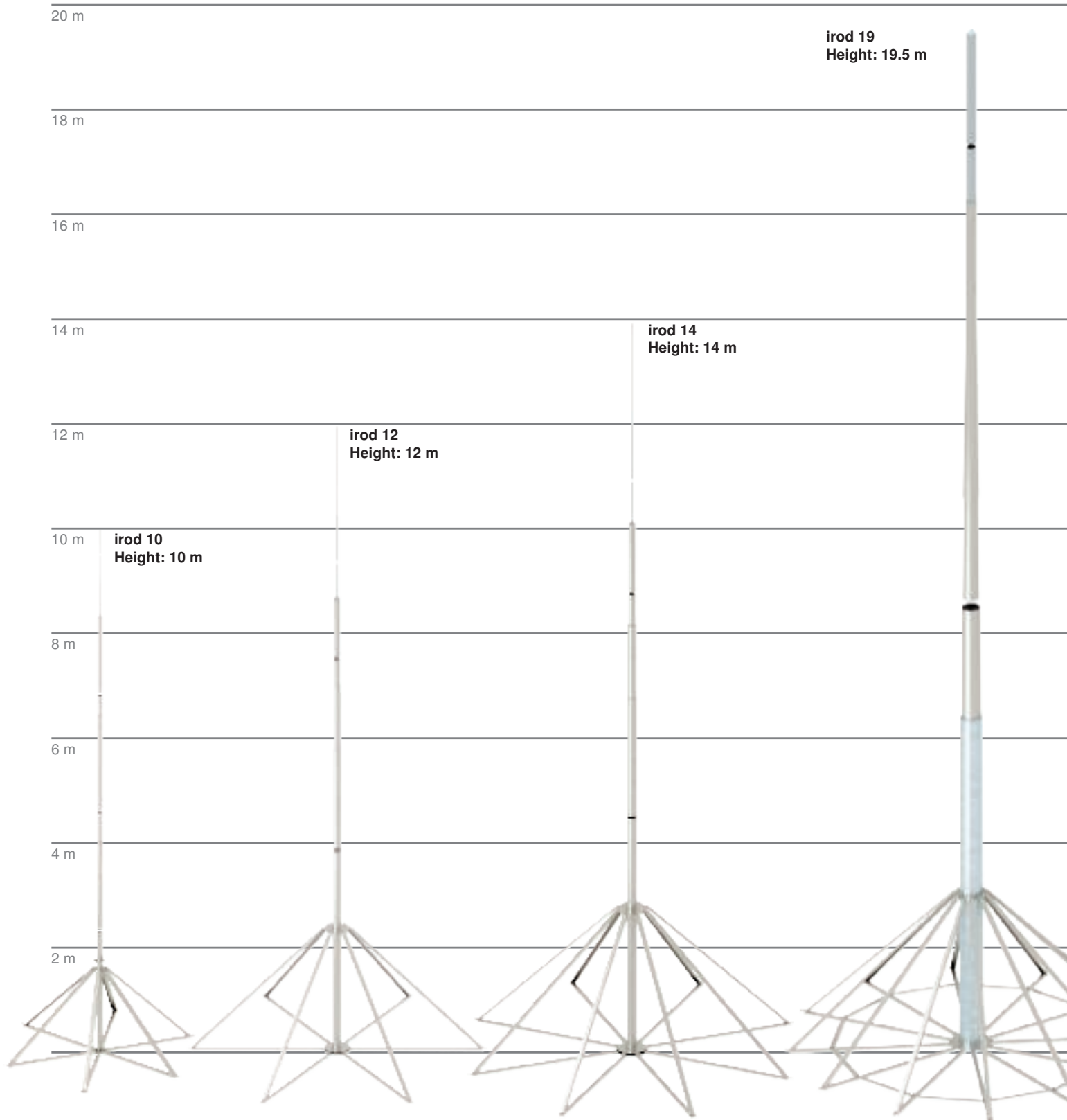


# Aim high: irod tele air-termination systems

## **irod tele air-termination systems**

The air-termination rods of the irod system from OBO can stand at more than 19 metres high. The flexible system protects extremely sensitive biogas plants as reliably as free-standing PV systems or installations in potentially explosive areas against direct lightning strikes.

The benefit of irod: There is no need for a shovel or digger to move the earth and no concrete foundation needs to be poured. Solid concrete bases, each weighing 16 kg, give both the air-termination rods and the stands sufficient support. During installation, it is very easy to align the systems using the threaded rods. Thanks to these features, irod is ideally suited for the installation in already existing systems.



### Maintenance of the equivalent separation distance ( $s_e$ )

Insulated conductors are used in the field of external lightning protection to reduce or avoid the separation distance according to IEC 62305 (VDE 0185-305). isCon® creates an equivalent separation distance of 0.75 m in air or 1.5 m in solid material.

In contrast to standard shielded medium-voltage cables with a metallic shield, insulated conductors possess a weakly conductive jacket for field control. This thus prevents arcing via the cable jacketing of the insulated conductor.

After the first potential connection of the cable jacket, the insulated conductor secures the specified equivalent separation distance.

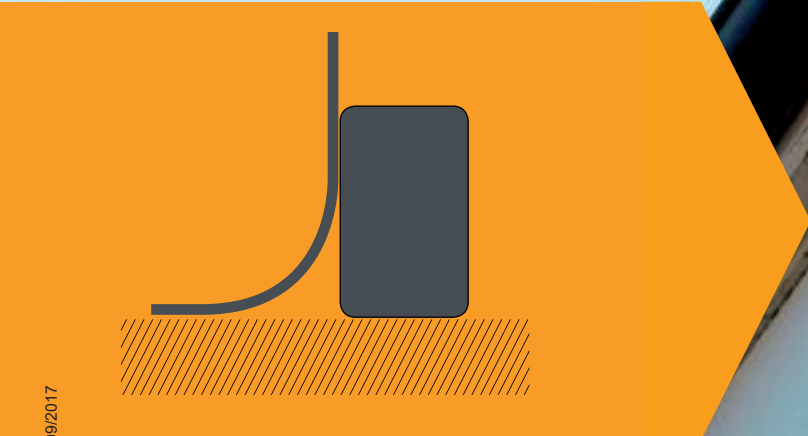
### Structure of the high-voltage-resistant OBO isCon® insulated conductor

The isCon® conductor is a single wire cable with a coaxial structure. It consists of several layers of conductive, slightly conductive and insulating material, and the internal conductor with corresponding conductivity.

Thanks to this structure, both a sufficient dielectric strength of the insulation in case of lightning voltage impulses and targeted manipulation of the electrical field strength at both ends of the cable is possible. This prevents the creeping discharges that would otherwise occur.







*Grey isCon® conductor routed in the rod*

# OBO isCon® system for Ex areas

## Installation in potentially explosive areas

When planning and running a lightning protection system in Ex zones, the following rules must particularly be taken into account:

- DIN EN 62305-3 – Appendix D – "Additional information for lightning protection systems for structure in areas with the risk of explosion"
- VDE 0185-305-3 – Supplementary sheet 2 – "Additional information for special structures"

For Ex systems with Ex zone 2 and 22, supplementary sheet 2 (VDE 0185-305-3, Point 4.3) states that a potentially explosive atmosphere will only occur in rare, unforeseen circumstances. Therefore, it is possible to position air-termination units in Ex zones 2 and 22, taking Appendix D in DIN EN 62305-3 (VDE 0185-305-3) into account. In the Ex zones 1 and 21, after the first potential connection, the OBO isCon® conductor should be connected at regular distances (0.5 metres) using a metallic cable bracket (e.g. isCon® H VA or PAE) to the equipotential bonding. If there is a lightning strike, lightning current may not flow through the equipotential bonding and it must be in the protection angle of the lightning protection system.



## Overview of product benefits:

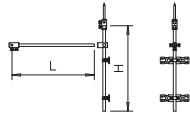
The isCon® conductor can be run in areas at risk of explosion (Ex zones 1 and 2; gasses, vapours, mist) and Ex zones 21 and 22 (dusts).

Special installation directives apply to the installation of the isCon® material. You can find the appropriate system installation instructions at [www.obo-bettermann.com](http://www.obo-bettermann.com)



*isCon® in Ex areas*

## Insulated lightning protection set, 3-corner fastening



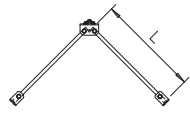
Type	Dimen- sion D Ø mm	Dimen- sion L mm	Dimen- sion H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 3-ES-16</b>	16	750	1500	1	207.100	<b>5408976</b>

/pc.

3-corner fastening for an insulated air-termination unit at the separating distance s.

- Mounting on walls and roof structures with two fastening plates
- For maintenance of the separation distance to electrically conductive parts according to VDE 0185-305-3 (IEC 62305-3)
- Acceptance of air-termination rods and round conductors with 8, 16 and 20 mm diameter
- UV-stabilised and weatherproof
- Continuous temperature range -50°C to +100°C
- Material factor  $k_m = 0.7$

## Insulated lightning protection set, V fastening



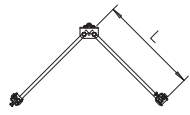
Type	Dimen- sion D Ø mm	Dimen- sion L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 VS-16</b>	16	750	1	201.800	<b>5408978</b>

/pc.

V fastening for an insulated air-termination unit at the separating distance s.

- Mounting on walls and roof structures with two wall connection brackets
- For maintenance of the separation distance to electrically conductive parts according to VDE 0185-305-3 (IEC 62305-3)
- Acceptance of air-termination rods and round conductors with 8, 16 and 20 mm diameter
- UV-stabilised and weatherproof
- Continuous temperature range -50°C to +100°C
- Material factor  $k_m = 0.7$

## Insulated lightning protection set, IR fastening



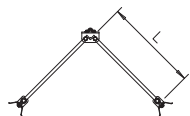
Type	Dimen- sion D Ø mm	Dimen- sion L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 FS-16</b>	16	750	1	235.500	<b>5408980</b>

/pc.

Fold fastening for an insulated air-termination unit at the separating distance s.

- Mounting on folds with a thickness of up to 20 mm
- For maintenance of the separation distance to electrically conductive parts according to VDE 0185-305-3 (IEC 62305-3)
- Acceptance of air-termination rods and round conductors with 8, 16 and 20 mm diameter
- UV-stabilised and weatherproof
- Continuous temperature range -50°C to +100°C
- Material factor  $k_m = 0.7$

## Insulated lightning protection set, VRS fastening



Type	Dimen- sion D Ø mm	Dimen- sion L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 VRS-16</b>	16	750	1	209.400	<b>5408982</b>

/pc.

Pipe V fastening for an insulated air-termination unit at the separating distance s.

- Mounting on pipes with two pipe clips
- Including 2 m tightening strip and tension jack
- For maintenance of the separation distance to electrically conductive parts according to VDE 0185-305-3 (IEC 62305-3)
- Acceptance of air-termination rods and round conductors with 8, 16 and 20 mm diameter
- UV-stabilised and weatherproof
- Continuous temperature range -50°C to +100°C
- Material factor  $k_m = 0.7$

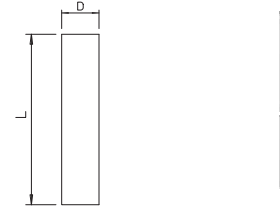
## Insulating rod

Type	Nominal size $\varnothing$ mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
101 20-3000	20	3000	5	190.000	5408105
101 20-6000	20	6000	5	380.000	5408148
101 16-750	16	750	5	30.000	5408107
101 16-1500	16	1500	5	60.000	5408108
101 16-3000	16	3000	5	120.000	5408109

GFK Fibre-glass-reinforced plastic

/pc.

- For the erection of insulated air-termination systems to VDE 0185-305 (IEC 62305)
- UV-stabilised and weatherproof
- Continuous temperature range  $-50^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$
- Material factor  $k_m = 0.7$



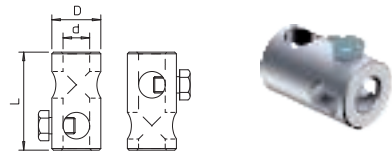
## T connector

Type	Dimension d $\varnothing$ mm	Length mm	Dimension D $\varnothing$ mm	Pack. pcs	Weight kg/100 pcs.	Item No.
101 IT	20	65	40	10	20.000	5408156
101 IT-16	16	60	30	10	11.475	5408158

Alu Aluminium

/pc.

- T-link for installation of insulating rods
- With M 10 bolts



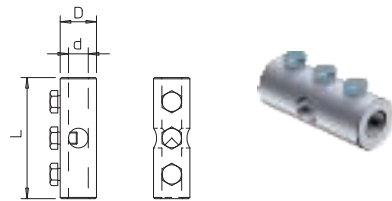
## K connector

Type	Dimension d $\varnothing$ mm	Length mm	Dimension D $\varnothing$ mm	Pack. pcs	Weight kg/100 pcs.	Item No.
101 IK	20	100	40	10	20.000	5408296
101 IK-16	16	100	30	10	17.500	5408298

Alu Aluminium

/pc.

- K-link for installation of insulating rods
- With M10 bolts



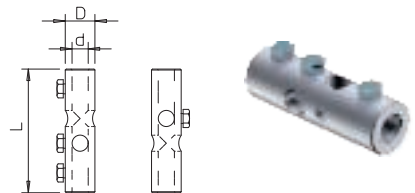
## DK connector

Type	Dimension d $\varnothing$ mm	Length mm	Dimension D $\varnothing$ mm	Pack. pcs	Weight kg/100 pcs.	Item No.
101 IDK	20	125	40	10	40.000	5408245

Alu Aluminium

/pc.

- DK-connector link for installing insulating rods
- With M10 bolts



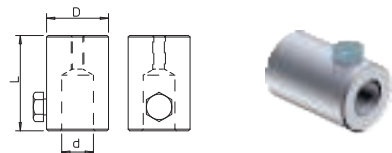
## Wall connection

Type	Dimension d $\varnothing$ mm	Length mm	Dimension D $\varnothing$ mm	Pack. pcs	Weight kg/100 pcs.	Item No.
101 IW-M10	20	60	40	10	20.000	5408687
101 W-16	16	60	30	10	14.200	5408689

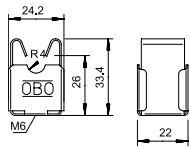
Alu Aluminium

/pc.

- For mounting insulating rods to structures or walls
- With M8 internal thread, e.g. for mounting the cable bracket type 177 (5207347) for loose cable routing of round conductors
- Incl. M10 bolts



## Screwless conductor bracket for Rd 8 mm, through-way Ø 7 mm

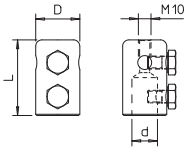


Type	Installation		Pack. pcs	Weight kg/100 pcs.	Item No.
	Fit mm	height mm			
<b>177 20 VA M8</b>	Rd 8	20	20	1.900	<b>5207347</b>

V2A Stainless steel, grade 304 /100 pc.

- With female thread M8 or through hole Ø 5 mm
- From stainless steel (V2A)

## End piece

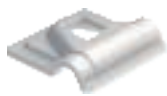


Type	Dimension d mm	Length mm	Dimension D Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 IES-16</b>	16	60	30	10	10.000	<b>5408395</b>

Alu Aluminium /pc.

- End piece for attaching round conductors Rd 8-10 and air-termination tips, type 101 ISP
- With M10 internal thread, e.g. for mounting a Vario quick connector for fixed cable routing at intersections
- With M10 bolts

## Connection terminal, equipotential bonding, Rd 8–10 mm

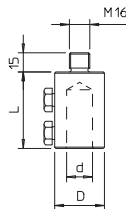
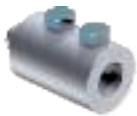


Type	Dimension A mm	Fit mm	Pack. pcs	Weight kg/100 pcs.	Item No.

Alu Aluminium /100 pc.

- For round conductor fastening RD 8-10
- Suitable for M10 bolts

## Connection piece

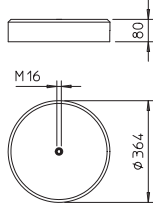


Type	Dimension d mm	Length mm	Dimension D Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 A-16</b>	16	60	30	10	13.000	<b>5408352</b>

Alu Aluminium /pc.

- Fitting with M16 thread
- For mounting on stands with M16 female thread such as type 101 (5402891,5402958)
- With M10 bolts

## Stand 16 kg with female thread

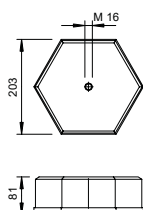


Type	Nominal size Ø mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.

BET Concrete /100 pc.

- Weight 16 kg
- From frost-resistant concrete
- Female thread M16
- Recommended air-termination rod length max. 3.0 m, depending on wind load zone

## Stand 6.9 kg with female thread



Type	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.

BET Concrete /100 pc.

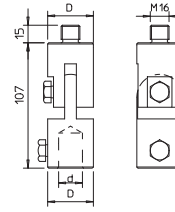
- Weight 6.9 kg
- From frost-resistant concrete
- Female thread M16
- Recommended air-termination rod length max. 1.0 m

### Connection joint

Type	Dimension d Ø mm	Length mm	Dimension D Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 IAG</b>	20	107	40	10	40.000	<b>5408504</b>

Alu Aluminium /pc.

- Attaching link for installation on concrete stones
- With thread M16 on slanting roof surfaces
- With M10 bolts

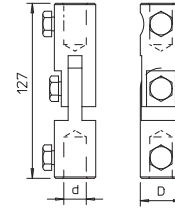


### Articulated connector

Type	Dimension d Ø mm	Length mm	Dimension D Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 IGL-16</b>	16	127	30	10	32.000	<b>5408630</b>

Alu Aluminium /pc.

Link for installation of insulation pipes, including M10 screws.

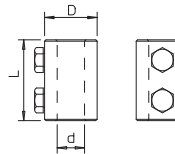


### Extension

Type	Dimension d Ø mm	Length mm	Dimension D Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 IV-16</b>	16	60	30	10	16.000	<b>5408557</b>

Alu Aluminium /pc.

- Extension of insulating rods
- With M10 bolts

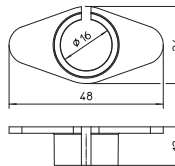


### FangFix reducing sleeve

Type	Fit Colour	mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 RH-16</b>	Black	16	25	0.190	<b>5408101</b>

PA Polyamide /100 pc.

Reduces the drill hole of the FangFix block from Ø 20 mm to Ø 16 mm. Suitable for the installation of GFK insulating rods of Ø 16 mm.

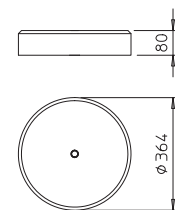


### Concrete block for FangFix-System 16 kg

Type	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>F-FIX-S16</b>	365	1	1,700.000	<b>5403227</b>

BET Concrete /100 pc.

- 16 kg stone of Ø 365 mm, high level of stability
- Concrete, frost-resistant
- Stackable

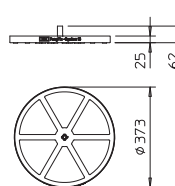


### Base for FangFix system 16 kg

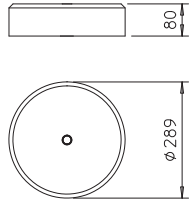
Type	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>F-FIX-B16</b>	373	10	16.400	<b>5403235</b>

PP Polypropylene /100 pc.

Edge protection with integrated dowel (basic) suitable for FangFix system.



### Concrete block for FangFix system 10 kg

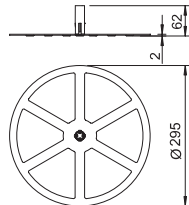


Type	Nominal size Ø mm	Pack. Weight		Item No.
		pcs	kg/100 pcs.	
<b>F-FIX-S10</b>	289	1	1,000.000	<b>5403117</b>

**BET** Concrete /100 pcs.

- 10 kg stone of Ø 289 mm, high level of stability
- Concrete, frost-resistant
- Stackable

### Base for FangFix system 10 kg

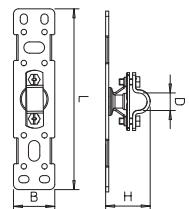


Type	Nominal size Ø mm	Pack. Weight		Item No.
		pcs	kg/100 pcs.	
<b>F-FIX-B10</b>	295	10	7.600	<b>5403124</b>

**PP** Polypropylene /100 pcs.

Edge protection with integrated dowel (basic) suitable for FangFix 10 system.

### Fastening plate

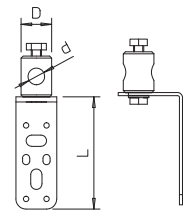


Type	Length mm	Dimen- sion B mm	Dimen- sion H mm	Pack. Weight		Item No.
				pcs	kg/100 pcs.	
<b>101 BP-16</b>	175	40	42	1	21.200	<b>5408984</b>

/pc.

To mount insulating rods on constructions or walls  
Plate made of VA stainless steel  
Holder and crosspiece for 16 and 20 mm rods and Rd 8–10 mm

### Wall connection, angled

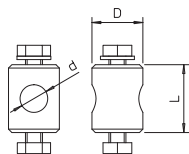


Type	Dimen- sion d mm	Dimen- sion L mm	Dimen- sion D Ø mm	Pack. Weight		Item No.
				pcs	kg/100 pcs.	
<b>101 WG-16</b>	16	110	30	1	27.960	<b>5408986</b>

**V2A** Stainless steel, grade 304 /pc.

- Wall connection for GFK rods
- Dimension D Ø: 16 mm

### Fastening bolts

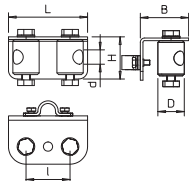


Type	Dimen- sion d mm	Dimen- sion L mm	Dimen- sion D Ø mm	Pack. Weight		Item No.
				pcs	kg/100 pcs.	
<b>101 BB-16</b>	16	40	30	1	13.920	<b>5408988</b>

**Alu** Aluminium /pc.

For GFK rods, Dimension D Ø: 16 mm

### Holder, V support



Type	Dimen- sion d mm	Dimen- sion L mm	Dimen- sion H mm	Dimen- sion B mm	Pack. Weight		Item No.
					pcs	kg/100 pcs.	
<b>101 HV-16</b>	16	90	55	48	1	50.700	<b>5408990</b>

**V2A** Stainless steel, grade 304 /pc.

- Rod holder to accept two GRP rods
- Bracket and crossbar for 16 and 20 mm rods and Rd 8-10 mm

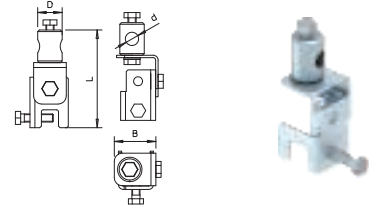


Fold fastening

Type	Dimension d Ø mm	Dimension L mm	Dimension D Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 F-16</b>	16	121	30	1	45.120	<b>5408992</b>

V2A Stainless steel, grade 304 /pc.

To fasten a GFK rod on constructions of 4 to 20 mm, Dimension D Ø: 16 mm

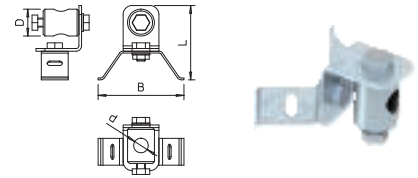


Pipe fastening

Type	Dimension d Ø mm	Dimension L mm	Dimension D Ø mm	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 R-16</b>	16	81	30	96	1	26.830	<b>5408994</b>

V2A Stainless steel, grade 304 /pc.

- For pipe fastening of a GRP rod using a tightening strap
- Slot width (l x w) 17 x 6 mm

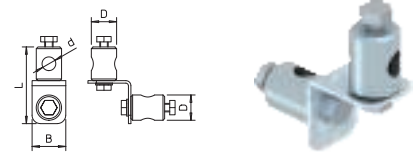


Multi-adapter

Type	Dimension d Ø mm	Dimension L mm	Dimension D Ø mm	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 MA-16</b>	16	91	30	40	1	36.280	<b>5408996</b>

V2A Stainless steel, grade 304 /pc.

- Connector for two GFK rods
- Dimension D Ø: 16 mm

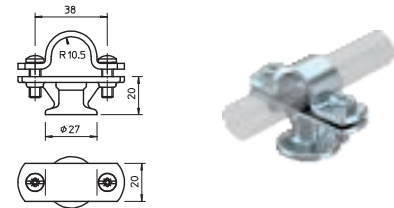


Rod holder

Type	Fit mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>113 Z-20</b>	Rd 20	20	8.200	<b>5230527</b>

Zn Die-cast zinc /100 pc.  
VZ Galvanised

- Installed with over-piece and hex-head screws M6 x 16
- With female thread M8 or through hole Ø 7 mm



Rod holder for 16 mm air-termination and earth entry rods

Type	Clamping range D mm	Hole size mm	Bolt	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>733 16 VA</b>	14 - 16	6,5 x 10	M5 x 12	500	50	2.430	<b>1362011</b>

V2A Stainless steel, grade 304 /100 pc.

- \* Size M16 is not suitable for nail device
- \* Sizes M16 - PG16 are not suitable for bolt-firing tool



Rod holder for 20 mm rods

Type	Clamping range D mm	Hole size mm	Bolt	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>733 21 VA</b>	19 - 21	6,5 x 10	M5 x 16	500	50	2.740	<b>1362046</b>

V2A Stainless steel, grade 304 /100 pc.

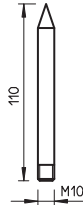


## Vario quick connector Rd 8-10x16



Type	Fit mm	Dimension A mm	Lightning current carrying capacity kA	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>249 8-10X16 VA</b>	8-10X16	—	H/100	10	16.300	<b>5311590</b>
V2A Stainless steel, grade 304						/100 pcs.

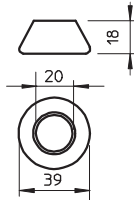
## Air-termination tip



Type	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 ISP M10</b>	110	10	10.000	<b>5408458</b>
Alu Aluminium /pc.				

Air-termination tip for attaching to end piece, type 101 IES, with M10 thread

## Water repellent



Type	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 IAB</b>	18	10	2.000	<b>5408733</b>
Alu Aluminium /pc.				

Water repellent for mounting on insulation rods with d = 20 mm

## Adjustable insulating beam – pipe



Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>ISAV1000R</b>	1	130.000	<b>5408849</b>
GFK Fibre-glass-reinforced plastic /pc.			

Variable spacer for cables and air-termination rods to maintain the separation distance.

- Infinitely adjustable distance range (L = 550–1,000 mm)
- Made of fibre-glass-reinforced plastic (km = 0.7)
- For pipe mounting (including 2 m tightening strap and tension jack)

## Adjustable insulating beam – wall



Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>ISAV1000W</b>	1	130.000	<b>5408852</b>
GFK Fibre-glass-reinforced plastic /pc.			

Variable spacer for cables and air-termination rods to maintain the separation distance.

- Infinitely adjustable distance range (L = 550–1,000 mm)
- Made of fibre-glass-reinforced plastic (km = 0.7)
- For wall mounting with 10 4.2 mm fastening holes and 4 6.9 mm fastening holes

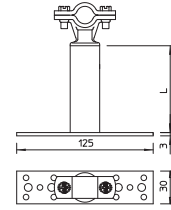
## Insulated spacer

Type	Length Fit		Pack. pcs	Weight kg/100 pcs.	Item No.
	mm	mm			
<b>ISO-A-500</b>	500	Rd 16	15	36.000	<b>5408806</b>
<b>ISO-A-800</b>	800	Rd 16	15	55.000	<b>5408814</b>
<b>ISO-A-1030</b>	1030	Rd 16	15	68.000	<b>5408820</b>
<b>ISO-A-150 8</b>	150	Rd 8	15	13.800	<b>5408800</b>

Alu Aluminium PA Polyamide

/pc.

- Mounting foot with 10 connection holes  $\varnothing$  6.5 mm and 4 connection holes  $\varnothing$  8.5 mm
- Type ...150 8 with holder suitable for round conductor RD 8
- Application for shelters e.g. golf, barbecue or mountain huts



### Tele lightning protection system, 10 metre rod + stand



Type	Dimension D Ø mm	Dimension B mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>irod 10</b>	48.3	1800	10000	1	6,500.000	<b>5400810</b>

V2A Stainless steel, grade 304 /pc.

- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants
- Consisting of air-termination rod and air-termination rod stand
- Please order concrete foot, edge protection and threaded rods separately

### Tele lightning protection system, 12 metre rod + stand



Type	Dimension D Ø mm	Dimension B mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>irod 12</b>	85	3000	12000	1	10,900.000	<b>5400812</b>

V2A Stainless steel, grade 304 /pc.

- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants
- Consisting of air-termination rod and air-termination rod stand
- Please order concrete foot, edge protection and threaded rods separately

### Tele lightning protection system, 14 metre rod + stand



Type	Dimension D Ø mm	Dimension B mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>irod 14</b>	85	3200	14000	1	15,400.000	<b>5400814</b>

V2A Stainless steel, grade 304 /pc.

- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants, gas pressure regulation plants, control and greenfield photovoltaic systems
- Consisting of air-termination rod and air-termination rod stand
- Please order concrete foot, edge protection and threaded rods separately

### Tele lightning protection system, 19 metre rod + stand



Type	Dimension D Ø mm	Dimension B mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>irod 19</b>	198	3400	19500	1	41,500.000	<b>5400819</b>

V2A Stainless steel, grade 304 /pc.

- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants, gas-pressure regulation plants, control and greenfield photovoltaic systems
- Consisting of air-termination rod and air-termination rod stand
- Please order concrete foot and edge protection separately
- Including 800-mm threaded rods

### isFang-3B threaded rod



Type	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang 3B-G1</b>	270	3	48.000	<b>5408971</b>
<b>isFang 3B-G2</b>	340	3	60.400	<b>5408972</b>
<b>isFang 3B-G3</b>	430	3	76.600	<b>5408973</b>
<b>isFang 3B-G4</b>	500	3	75.000	<b>5408905</b>

V2A Stainless steel, grade 304 /pc.

- For fastening on one, two, three or four FangFix concrete bases with tripod stand

## Concrete block for FangFix-System 16 kg

Type	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.

**BET** Concrete /100 pc.

- 16 kg stone of Ø 365 mm, high level of stability
- Concrete, frost-resistant
- Stackable



## Base for FangFix system 16 kg for mounting the isFang tripod

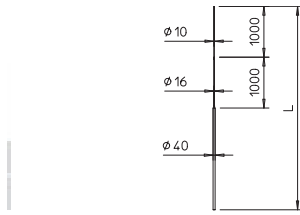
Type	Nominal size Ø mm	Dimension D mm	Pack. pcs	Weight kg/100 pcs.	Item No.

**PP** Polypropylene /100 pc.

- Edge protection with through hole
- For mounting isFang-3B threaded rod and FangFix concrete block F-FIX-S16



### isFang air-termination rod



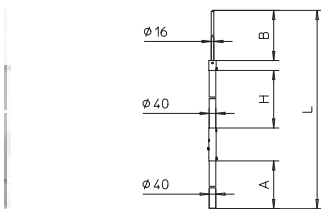
Type	Dimension B mm	Dimension D mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 3B-4000</b>	2000	1000	4000	1	400.000	<b>5402864</b>
<b>101 3B-4500</b>	2500	1000	4500	1	480.000	<b>5402866</b>
<b>101 3B-5000</b>	3000	1000	5000	1	550.000	<b>5402868</b>
<b>101 3B-5500</b>	3000	1500	5500	1	630.000	<b>5402870</b>
<b>101 3B-6000</b>	4000	1000	6000	1	700.000	<b>5402872</b>
<b>101 3B-6500</b>	4500	1000	6500	1	780.000	<b>5402874</b>
<b>101 3B-7000</b>	5000	1000	7000	1	850.000	<b>5402876</b>
<b>101 3B-7500</b>	5500	1000	7500	1	930.000	<b>5402878</b>
<b>101 3B-8000</b>	5500	1000	8000	1	1,000.000	<b>5402880</b>

Alu Aluminium

/pc.

- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- Tapered air-termination rod
- Suitable for 40 mm isFang tripod stand and isFang support systems

### Insulated air-termination rod



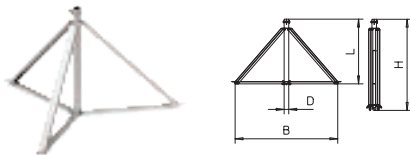
Type	Dimension A mm	Dimension H mm	Dimension B mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang 4000 AL</b>	1240	1500	1000	4000	1	580.000	<b>5408943</b>
<b>isFang 6000 AL</b>	3340	1500	1000	6000	1	600.000	<b>5408947</b>
<b>isFang 4000</b>	1240	1500	1000	4000	1	680.000	<b>5408942</b>
<b>isFang 6000</b>	3340	1500	1000	6000	1	680.000	<b>5408946</b>

GFK Fibre-glass-reinforced plastic

/pc.

- For isolated creation of air-termination systems
- Suitable for isFang air-termination rod stands, type isFang 3B-100/150
- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- For mounting on the building structure with isFang support
- Fastening of the OBO isCon® conductor possible using accessories

### isFang air-termination rod stand



Type	Dimension B mm	Dimension D Ø mm	Dimension L mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang 3B-100 AL</b>	1000	40	600	885	1	380.000	<b>5408966</b>
<b>isFang 3B-150 AL</b>	1500	40	900	1275	1	560.000	<b>5408967</b>
<b>isFang 3B-100</b>	1000	40	600	885	1	620.000	<b>5408968</b>
<b>isFang 3B-150</b>	1500	40	900	1275	1	950.000	<b>5408969</b>

V2A Stainless steel, grade 304 Alu Aluminium

/pc.

Folding tripod stand for screwless installation of free-standing air-termination rods with a diameter of 40 mm, e.g. for OBO isCon® conductors. Roof slope to max. 5 degrees. Incl. Rd 8–10 crossbar for rapid round conductor fastening. The concrete plinth and threaded rods are to be ordered separately.

### Stand for FangFix Junior system



Type	Length mm	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>F-FIX-JUNIOR</b>	1000	10	10	32.000	<b>5403308</b>

Alu Aluminium

/pc.

- Incl. aluminium air-termination rod 1,000 mm long (Ø 10 mm)
- Quick mounting of the air-termination rod in the base using plug technology
- With Vario quick connector 249

## Air-termination rod for FangFix-Junior

Type	Length mm	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 J1000</b>	1000	10	10	21.800	<b>5401970</b>
<b>Alu</b> Aluminium /100 pc.					

- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- Ø 10 mm, aluminium
- Without thread
- Suitable for use in FangFix-Junior



## Base for FangFix Junior

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>F-FIX-BASIS</b>	10	3.790	<b>5403324</b>
<b>PP</b> Polypropylene /pc.			

- For mounting Ø 10 mm air-termination rods up to an overall length of 1,000 mm
- Quick installation of air-termination rod in base using plug-in system
- Quick and easy installation



## Air-termination tip

Type	Fit mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>120 A</b>	Rd 8-10	10	2.500	<b>5405068</b>
<b>Zn</b> Die-cast zinc /100 pc.				
<b>G</b> Electrogalvanised				

- To be used for Rd 8–10 (corrosion protection)
- With cylinder bolt M6 x 10
- Made of die-cast zinc, bolts made of hot-galvanised steel



## Tapered pipe air-termination rod

Type	Length mm	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 VL1500</b>	1500	10/16	10	38.000	<b>5401980</b>
<b>101 VL2000</b>	2000	10/16	10	55.000	<b>5401983</b>
<b>101 VL2500</b>	2500	10/16	10	72.000	<b>5401986</b>
<b>101 VL3000</b>	3000	10/16	10	88.000	<b>5401989</b>
<b>101 VL3500</b>	3500	10/16	10	105.000	<b>5401993</b>
<b>101 VL4000</b>	4000	10/16	10	120.000	<b>5401995</b>
<b>Alu</b> Aluminium /100 pc.					

- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- From a free length of > 2.5 m, an additional fastening, e.g. insulated spacer is recommended
- Last metre is tapered from Ø 16 mm to Ø 10 mm, material: AlMgSi
- Matches stand system FangFix



## Stand for FangFix system 16 kg

Type	Fit mm	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>F-FIX-16</b>	Rd 8	373	1	1,732.500	<b>5403200</b>
<b>F-FIX-16B</b>	Rd 8	373	54	1,732.500	<b>5403205</b>
<b>BET</b> Concrete /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 air-termination rod using anchors
- Concrete, frost-resistant
- The FangFix stone can be stacked



## Stand for FangFix system 10 kg



Type	Fit mm	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>F-FIX-10</b>	Rd 8	295	1	1,058.000	<b>5403103</b>
<b>F-FIX-10B</b>	Rd 8	295	72	1,058.000	<b>5403110</b>

**BET** Concrete

/100 pc.

- System consists of FangFix stone with base and clamp
- FangFix clamp made of VA; lightning current tested with 100 kA (10/350)
- 10 kg stone of Ø 289 mm, high level of stability
- Quick and easy mounting of air-termination rod using anchors
- Concrete, frost-resistant
- The FangFix stone can be stacked

## Air-termination rod, one end rounded



Type	Length mm	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 ALU-1000</b>	1000	16	10	55.000	<b>5401771</b>
<b>101 ALU-1500</b>	1500	16	10	81.000	<b>5401801</b>
<b>101 ALU-2000</b>	2000	16	10	109.000	<b>5401836</b>
<b>101 ALU-2500</b>	2500	16	10	136.000	<b>5401852</b>
<b>101 ALU-3000</b>	3000	16	5	162.000	<b>5401879</b>

**Alu** Aluminium

/100 pc.

- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- From a free length of > 2.5 m, an additional fastening, e.g. insulated spacer is recommended
- Ø 16 mm, aluminium
- For stand system with M16 internal thread

## Air-termination rod, one end rounded with connection strap



Type	Length mm	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 A-L100</b>	1000	16	10	160.000	<b>5402808</b>
<b>101 A-L150</b>	1500	16	10	240.000	<b>5402859</b>

**St** Steel

**FT** Hot-dip galvanised

/100 pc.

- With thread M16 x 20
- With connecting strap
- Including pre-mounted connector type 5001 DIN for round conductor Rd 8-10
- For stands with female thread M16

## Stand 16 kg with female thread



Type	Nominal size Ø mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 B2-16 M16</b>	364	M16	1	1,600.000	<b>5402958</b>

**BET** Concrete

/100 pc.

- Weight 16 kg
- From frost-resistant concrete
- Female thread M16
- Recommended air-termination rod length max. 3.0 m, depending on wind load zone

## Stand 6.9 kg with female thread



Type	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 ST</b>	M16	4	690.000	<b>5402891</b>

**BET** Concrete

/100 pc.

- Weight 6.9 kg
- From frost-resistant concrete
- Female thread M16
- Recommended air-termination rod length max. 1.0 m

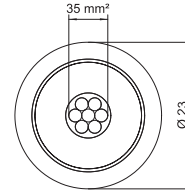


### isCon® conductor



Type	Colour	Cross-section mm <sup>2</sup>	Nominal size Ø mm	Equivalent separation distance m	Pack. m	Weight kg/100 m	Item No.
isCon 750 SW	Black	35	23	0.75	25	69.400	5408002
isCon 750 SW	Black	35	23	0.75	100	69.400	5408004
isCon 750 SW	Black	35	23	0.75	250	69.400	5408006

price/100 m



Please refer to the mounting instructions for information on routing the OBO isCon® conductor.

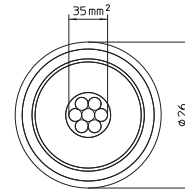
- Highly voltage-resistant, insulated conductor
- Floating discharge-free
- For maintenance of the separation distance according to IEC 62305
- Tested according to IEC 62561-1 (VDE 0185-561-1) with 150 kA
- Equivalent separation distance  $s \leq 0.75$  m (air) and  $s \leq 1.5$  (solid material)
- Halogen-free
- Can be used in potentially explosive areas Ex zone 1/2 and 21/22 when taking the current mounting instructions into account

### isCon® conductor in light grey



Type	Colour	Cross-section mm <sup>2</sup>	Nominal size Ø mm	Equivalent separation distance m	Pack. m	Weight kg/100 m	Item No.
isCon 750 LGR	Light grey	35	26	0.75	25	86.800	5407995
isCon 750 LGR	Light grey	35	26	0.75	100	86.800	5407997

price/100 m



Please refer to the mounting instructions for information on routing the OBO isCon® conductor.

- Highly voltage-resistant, insulated conductor
- Floating discharge-free
- For maintenance of the separation distance according to IEC 62305
- Tested according to IEC 62561-1 (VDE 0185-561-1) with 150 kA
- Equivalent separation distance  $s \leq 0.75$  m (air) and  $s \leq 1.5$  (solid material)
- Can be used in potentially explosive areas Ex zone 1/2 and 21/22 when taking the current mounting instructions into account
- Suitable for routing in the earth
- Can be painted in different colours
- Halogen-free

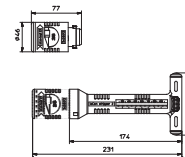
### Stripping tool for isCon conductor

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
isCon stripper 2	23	1	33.000	5408013

PA/PE Polyamide/Polyethylene

/pc.

Stripping tool to remove the insulation of OBO isCon® conductor.



### Connection element

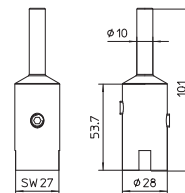


Type	Dimension D Ø mm	Fit mm	Pack. pcs	Weight kg/100 pcs.	Item No.
isCon connect	23	10	2	21.500	5408022

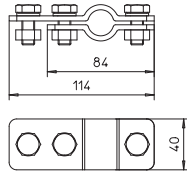
V2A Stainless steel, grade 304

/pc.

Screw-on termination of the connection for the isCon® conductor. Including heat-shrinkable sleeve and screw lock.



## Potential connection

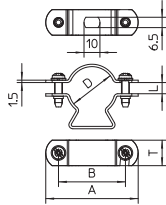


Type	Fit mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon PAE</b>	∅ 17-25mm	2	36.500	<b>5408036</b>
V2A Stainless steel, grade 304 /pc.				

Potential connection

- To avoid floating discharges on the isCon® conductor
- With sprung discs to protect screws against loosening

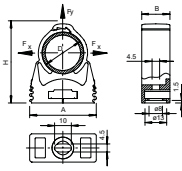
## VA cable bracket



Type	Dimension D ∅ mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon H VA</b>	23	50	2.850	<b>5408056</b>
<b>isCon H 26 VA</b>	26	20	3.400	<b>5408064</b>
V2A Stainless steel, grade 304 /pc.				

- For isCon® conductor for mounting on roof/wall structures
- With sprung discs to protect the screws against loosening

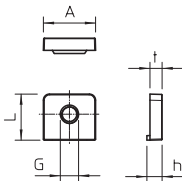
## starQuick cable bracket PA



Type	Colour	Dimension D mm	Dimension A mm	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>SQ-20 SW</b>	Jet black	23	29	17	50	0.848	<b>2146164</b>
<b>SQ-25 LGR</b>	24 - 28	Light grey			50	0.970	<b>2146207</b>
PP Polypropylene PA Polyamide /100 pc.							

Cable brackets for isCon® conductors for mounting on the building structure. Can also be used in the first 1.5 m. Can be arranged next to each other. Made from a UV and weather-resistant polyamide.

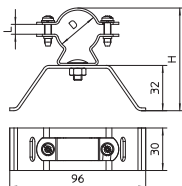
## starQuick nut M6



Type	Colour	Thread	Dimension L mm	Dimension h mm	Dimension t mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>SQ M6</b>	Light grey	M6	15	5	4	100	0.070	<b>2146509</b>
PC Polycarbonate /100 pc.								

The starQuick nut was developed especially for the starQuick clip. Simply push into the intended opening of the clip. The nut is captive in the clip. Suitable for M6 threads.

## VA cable bracket with tightening strap



Type	Dimension D ∅ mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon HS VA</b>	23	10	25.200	<b>5408052</b>
<b>isCon HS 26 VA</b>	26	10	25.900	<b>5408068</b>
V2A Stainless steel, grade 304 /pc.				

- For isCon® conductor for pipe mounting
- Including 2 m tightening strap
- Cable bracket with sprung discs to protect the screws against loosening

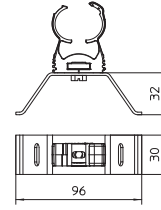
### PA cable bracket with tightening strap

Type	Colour	Dimension	Dimension D Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon HS 26 PA</b>	Light grey	ø 26mm	26	10	23.200	<b>5408066</b>

PA Polyamide

/pc.

For isCon® conductor for pipe mounting including 2 m tightening strap.



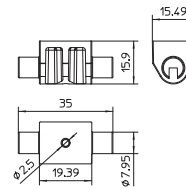
### Adapter for flat roof cable holder

Type	Colour	Fit mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>165 MBG UH</b>	Black	Rd 8	25	0.254	<b>5218882</b>

PP Polypropylene

/pc.

- Universal adapter with drill hole Ø 2.5 mm
- E.g. for OBO Golden Sprint screw, type 4758 4 x L (L = depending on application)
- For fastening to 165/MBG



### M-Quick cable bracket PA

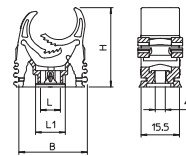


Type	Clamping range D mm	Pull- out value N	Colour	Shipping box pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>M-Quick M32 LGR</b>	25 - 32	60	Light grey	600	50	1.390	<b>2153734</b>

PA Polyamide

/100 pc.

- Multi-quick metric
- Simple fastening
- Secure locking
- Radial arrangement
- Simplified storage
- Universally applicable



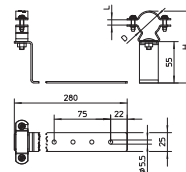
### VA roof cable holder, sloping roof

Type	Installation height mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon H280 VA</b>	55	25	16.100	<b>5408047</b>
<b>isCon H280 26 VA</b>	55	25	16.900	<b>5408074</b>

V2A Stainless steel, grade 304

/pc.

- For routing of the isCon® conductor on pitched roofs
- Cable bracket with sprung discs to protect the screws against loosening



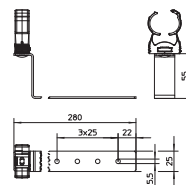
### PA roof cable holder, sloping roof

Type	Colour	Dimension	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon H280 PA</b>	Black	280mm	25	13.950	<b>5408049</b>
<b>isCon H280 26 PA</b>	Light grey	280mm	25	14.060	<b>5408072</b>

PA Polyamide

/pc.

To route the isCon® conductor on pitched roofs.



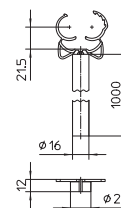
### Spacer

Type	Clamping range D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon DH</b>	23 - 26	2	41.400	<b>5408043</b>

GFK Fibre-glass-reinforced plastic

/pc.

For stand-off installation of the isCon® conductor in the area of the connection, incl. reducing sleeve for mounting on FangFix concrete block 10 Kg.



## Insulated air-termination rod for inner-routed isCon conductor with side exit

Type	Dimension D Ø mm	Dimension A mm	Dimension H mm	Dimension B mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang IN-A 4000</b>	50	1325	1500	1000	4000	1	535.000	<b>5408938</b>
<b>isFang IN-A 6000</b>	50	3325	1500	1000	6000	1	835.000	<b>5408940</b>
<b>isFang IN-A 8000</b>	50	5335	1500	1000	8000	1	1,385.000	<b>5408888</b>
<b>isFang IN-A10000</b>	50	6000	1733	2000	10000	1	1,540.000	<b>5408890</b>

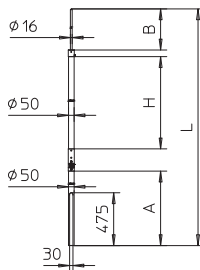
**GFK** Fibre-glass-reinforced plastic

/pc.

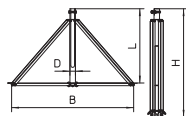
- For installation of the OBO isCon® conductor in the pipe
- With side conductor outlet matching isFang air-termination rod stand with side outlet, type isFang 3B-A
- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- Inclusive connection element (type isCon IN connect)
- Inclusive potential connection (type IsCon In PAE)



### Dimensions



## isFang air-termination rod stand with side exit



Type	Dimension B mm	Dimension D Ø mm	Dimension L mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang 3B-100-A</b>	1026	50	600	885	1	610.000	<b>5408930</b>
<b>isFang 3B-150-A</b>	1500	50	900	1275	1	950.000	<b>5408932</b>
<b>isFang 3B-250-A</b>	2900	50	1450	2055	1	2,500.000	<b>5408902</b>

**V2A** Stainless steel, grade 304

/pc.

- Screwless installation of freestanding air-termination rods as well as insulated air-termination rods with 50 mm diameter
- e.g. for internal OBO isCon® conductor
- Roof slope to max. 5 degrees
- Incl. Rd 8–10 crossbar for quick round conductor fastening
- Concrete plinths as well as threaded rods should be ordered separately

## Insulated air-termination rod for inner-routed isCon conductor

Type	Dimension D Ø mm	Dimension A mm	Dimension H mm	Dimension B mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang IN 4000</b>	50	1325	1500	1000	4000	1	535.000	<b>5408934</b>
<b>isFang IN 6000</b>	50	3325	1500	1000	6000	1	835.000	<b>5408936</b>
<b>isFang IN 8000</b>	50	5335	1500	1000	8000	1	1,315.000	<b>5408868</b>
<b>isFang IN 10000</b>	50	6000	1733	2000	10000	1	1,540.000	<b>5408870</b>

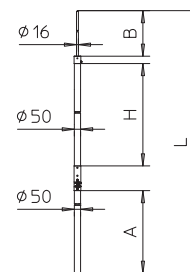
**GFK** Fibre-glass-reinforced plastic

/pc.

- For installation of the OBO isCon® conductor in the pipe
- For mounting on the building structure with isFang support
- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- Inclusive connection element (type isCon IN connect)
- Inclusive potential connection (type isCon In PAE)



### Dimensions



## Potential connection for installation in the insulated air-termination rod isFang IN

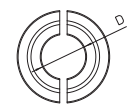
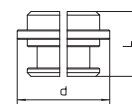


Type	Dimension D Ø mm	Dimension d mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon IN PAE</b>	23	49.9	35	1	5.900	<b>5408031</b>

**Alu** Aluminium

/pc.

- To avoid surface discharges on the isCon® conductor
- Installation takes place after the first 1.5 metres in the insulated air-termination rod type isFang IN



## Connection element for installation in the insulated air-termination rod isFang IN

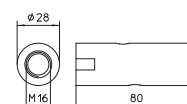


Type	Dimension D Ø mm	Thread	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon IN connect</b>	23	M16	1	27.800	<b>5408024</b>

**V2A** Stainless steel, grade 304

/pc.

- Screw-on termination of the connection for the isCon® conductor
- Connection and installation of the cable in the insulated air-termination rod
- Tested up to 150 kA (lightning protection Class II)



## Insulated air-termination rod



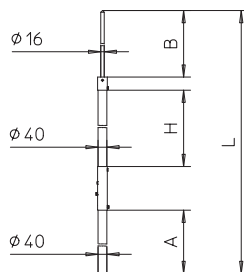
Type	Dimension A mm	Dimension H mm	Dimension B mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang 4000 AL</b>	1240	1500	1000	4000	1	580.000	<b>5408943</b>
<b>isFang 6000 AL</b>	3340	1500	1000	6000	1	600.000	<b>5408947</b>
<b>isFang 4000</b>	1240	1500	1000	4000	1	680.000	<b>5408942</b>
<b>isFang 6000</b>	3340	1500	1000	6000	1	680.000	<b>5408946</b>

**GFK** Fibre-glass-reinforced plastic

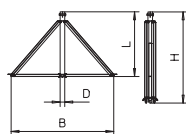
/pc.

- For isolated creation of air-termination systems
- Suitable for isFang air-termination rod stands, type isFang 3B-100/150
- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- For mounting on the building structure with isFang support
- Fastening of the OBO isCon® conductor possible using accessories

### Dimensions



## isFang air-termination rod stand



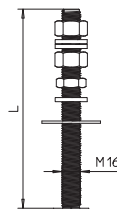
Type	Dimension B mm	Dimension D Ø mm	Dimension L mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang 3B-100 AL</b>	1000	40	600	885	1	380.000	<b>5408966</b>
<b>isFang 3B-150 AL</b>	1500	40	900	1275	1	560.000	<b>5408967</b>
<b>isFang 3B-100</b>	1000	40	600	885	1	620.000	<b>5408968</b>
<b>isFang 3B-150</b>	1500	40	900	1275	1	950.000	<b>5408969</b>

**V2A** Stainless steel, grade 304 **Alu** Aluminium

/pc.

Folding tripod stand for screwless installation of free-standing air-termination rods with a diameter of 40 mm, e.g. for OBO isCon® conductors. Roof slope to max. 5 degrees. Incl. Rd 8–10 crossbar for rapid round conductor fastening. The concrete plinth and threaded rods are to be ordered separately.

## isFang-3B threaded rod



Type	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang 3B-G1</b>	270	3	48.000	<b>5408971</b>
<b>isFang 3B-G2</b>	340	3	60.400	<b>5408972</b>
<b>isFang 3B-G3</b>	430	3	76.600	<b>5408973</b>
<b>isFang 3B-G4</b>	500	3	75.000	<b>5408905</b>

**V2A** Stainless steel, grade 304

/pc.

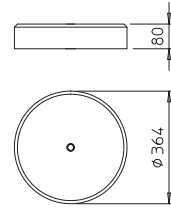
- For fastening on one, two, three or four FangFix concrete bases with tripod stand

### Concrete block for FangFix-System 16 kg

Type	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>F-FIX-S16</b>	365	1	1,700.000	<b>5403227</b>

**BET** Concrete /100 pc.

- 16 kg stone of Ø 365 mm, high level of stability
- Concrete, frost-resistant
- Stackable

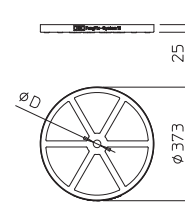


### Base for FangFix system 16 kg for mounting the isFang tripod

Type	Nominal size Ø mm	Dimension D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>F-FIX-B16 3B</b>	373	25	10	15.800	<b>5403238</b>

**PP** Polypropylene /100 pc.

- Edge protection with through hole
- For mounting isFang-3B threaded rod and FangFix concrete block F-FIX-S16

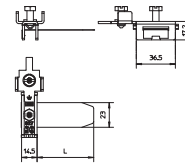


### Potential connection clamp for mounting on isFang

Type	Fit mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>927 2 6-K</b>	3/8-4"	10	5.500	<b>5057599</b>

**V2A** Stainless steel, grade 304 /100 pc.

Potential connection for isCon® conductor for mounting on insulated air-termination rods of type isFang.



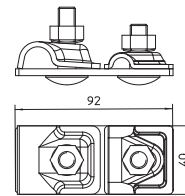
### Connection plate for one isCon® conductor



Type	Dimension	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon AP1-16 VA</b>	16x8-10mm	1	27.400	<b>5408026</b>

**V2A** Stainless steel, grade 304 /pc.

Connection plate to connect an isCon® conductor with air-termination rod Ø 16 mm, tested up to 150 kA (lightning protection class II)



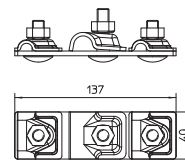
### Connection plate for two isCon® conductors



Type	Dimension	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon AP2-16 VA</b>	16x8-10mm	1	39.500	<b>5408028</b>

**V2A** Stainless steel, grade 304 /pc.

Connection plate to connect two isCon® conductors with air-termination rod Ø 16 mm, tested up to 150 kA (lightning protection class II)



### Cable tie



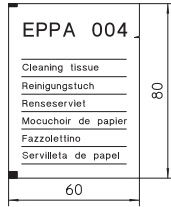
Type	Dimension B mm	Dimension L mm	Dimension t mm	Max. bundle Ø mm	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>565 7.6x380 SWUV</b>	7.6	380	2	105	Black	100	0.533	<b>2331924</b>

**PA** Polyamide /100 pc.

Cable ties are used for quick, uncomplicated fixing or bundling of cables and pipes to cable support systems or other mounting structures.



## Cleaning cloth



Type	Width mm	Length mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon EPPA 004</b>	140	200	50	0.420	<b>5408060</b>

Z-PP-P Cellulose-polypropylene paper /100 pcs.

- Cellulose polypropylene paper with abrasive sections, folded multiple times
- Doused with 2.8 ml impregnation solution
- For cleaning the external jacket of the OBO isCon® conductor

## Information panel

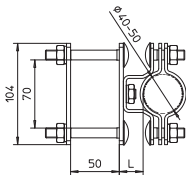


Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isCon HWS</b> —	1	2.000	<b>5408058</b>

PS Polystyrene /pc.

- Label: "NOTE! Insulated lightning protection with the OBO isCon® system. Only a lightning protection specialist may carry out changes"
- To label the lightning protection system
  - Self-adhesive and with 4 fastening holes  $\varnothing$  6.5 mm

## isFang support for corner pipe mounting, 50 x 50 mm

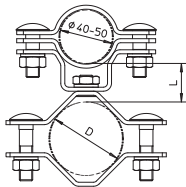


Type	Dimen- sion D Ø mm	Dimen- sion L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang TS50x50</b> —	—	30	2	82.000	<b>5408964</b>

V2A Stainless steel, grade 304 /pc.

- Fastening clip to fasten the insulated support pipes on the structure to be protected or for construction-side corner pipes of 50x50 mm.

## isFang support for pipe mounting, $\varnothing$ 50–60 mm

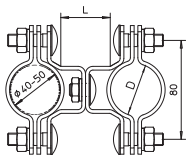


Type	Dimen- sion D Ø mm	Dimen- sion L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang TS50-60</b>	60	30	2	76.000	<b>5408960</b>

V2A Stainless steel, grade 304 /pc.

- Tightening strap clip to fasten the insulated support pipes on the structure to be protected or for construction-side pipes of  $\varnothing$  50–60 mm.

## isFang support for pipe mounting, $\varnothing$ 40–50 mm

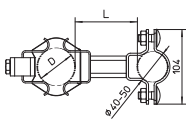


Type	Dimen- sion D Ø mm	Dimen- sion L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang TS40-50</b>	50	40	2	90.000	<b>5408958</b>

V2A Stainless steel, grade 304 /pc.

- Tightening strap clip to fasten the insulated support pipes on the structure to be protected or for construction-side pipes of  $\varnothing$  40–50 mm.

## isFang support for spaced pipe mounting, $\varnothing$ 50–300 mm



Type	Dimen- sion D Ø mm	Dimen- sion L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang TR100 100</b>	300	100	2	95.500	<b>5408955</b>
<b>isFang TR100 200</b>	300	200	2	121.000	<b>5408957</b>
<b>isFang TR100 300</b>	300	300	2	146.000	<b>5408959</b>

V2A Stainless steel, grade 304 /pc.

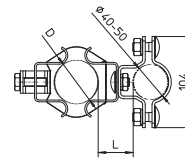
- Tightening strap clip to fasten the insulated support pipes on the structure to be protected or for construction-side pipes of  $\varnothing$  50–300 mm.



### isFang support for pipe mounting, ø 50–300 mm

Type	Dimension D Ø mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang TR100</b>	300	40	2	77.000	<b>5408956</b>
V2A Stainless steel, grade 304 /pc.					

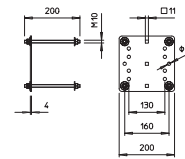
Tightening strap clip to fasten the insulated support pipes on the structure to be protected or for construction-side pipes of ø 50–300mm.



### Mounting set for T support

Type	Dimension 200x200mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang TW200 Set</b>	200x200mm	2	188.600	<b>5408914</b>
V2A Stainless steel, grade 304 /pc.				

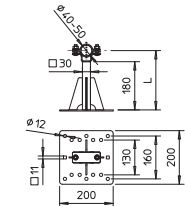
- Set for mounting isFang TW200 onto double T support
- Suitable for double T support, e.g. widths 100, 120



### Support for wall mounting, 200 mm spacing

Type	Dimension D Ø mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang TW200 12</b>	50	200	2	240.000	<b>5408910</b>
V2A Stainless steel, grade 304 /pc.					

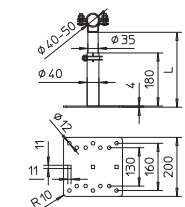
Fastening clip to fasten the insulated support pipes on the structure to be protected or on the wall.



### isFang support for wall mounting, 200–300 mm spacing

Type	Dimension D Ø mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang TW200</b>	—	300	2	230.000	<b>5408954</b>
V2A Stainless steel, grade 304 /pc.					

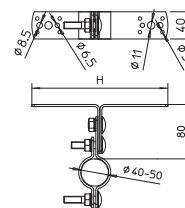
Fastening clip to fasten the insulated support pipes on the structure to be protected or on the wall.



### isFang support for wall mounting, 80 mm spacing

Type	Dimension D Ø mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang TW80</b>	—	80	2	63.000	<b>5408950</b>
V2A Stainless steel, grade 304 /pc.					

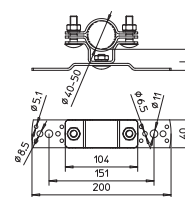
Fastening clip to fasten the insulated support pipes on the structure to be protected or on the wall.



### isFang support for wall mounting, 30 mm spacing

Type	Dimension D Ø mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>isFang TW30</b>	—	30	2	62.000	<b>5408952</b>
V2A Stainless steel, grade 304 /pc.					

Fastening clip to fasten the insulated support pipes on the structure to be protected or on the wall.



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- The internal lightning protection system
- Equipotential bonding systems
- Overvoltage protection systems
- Current standards
- New selection and planning aids
- Examples





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