

- For use in hazardous areas Ex zones 1 and 2 (gases, vapours, mists) as well as Ex zones 21 and 22 (dusts)
- Tested according to explosion group IIB
- Time-saving installation – no need to deactivate systems/areas for welding or drilling works



Installed on a StSt pipe



DEHN + SÖHNE

DECLARATION OF MANUFACTURER

Product: Pipe clamp for explosive zones

Product description: Part No. 540 821
Part No. 540 801
Part No. 540 803
Part No. 540 805
Part No. 540 810

Manufacturer: DEHN + SÖHNE GmbH + Co.KG.
Hans-Dehn-Str. 1
92318 Neumarkt i.d.OPf., Germany

Application:

The pipe clamp for explosive zones is used for connecting pipes of different materials and diameters to the lightning equipotential bonding structure in explosive atmospheres.

Lightning currents are discharged without formation of sparks as specified in the technical data sheet.

We herewith confirm that the pipe clamp for explosive zones is suitable for the use in explosive zones 1 and 2 (gas, vapour, mist) and explosive zones 21 and 22 (combustible dust) in connection with the installation instructions, Publication No. 1599, "Pipe Clamp for explosive zones" and is tested according to explosion group IIB.

Pipe clamps for explosive zones have no own potential source of ignition (mechanical device) and are thus not subject to the European directive 94/9/EG.

Therefore certification according to the European directive 94/9/EG is **not legally admissible** and **not necessary** with respect to explosion protection.



Dr.-Ing. Ralph Brocke
Director R&D

Neumarkt i.d.OPf., 12 Okt. 2009

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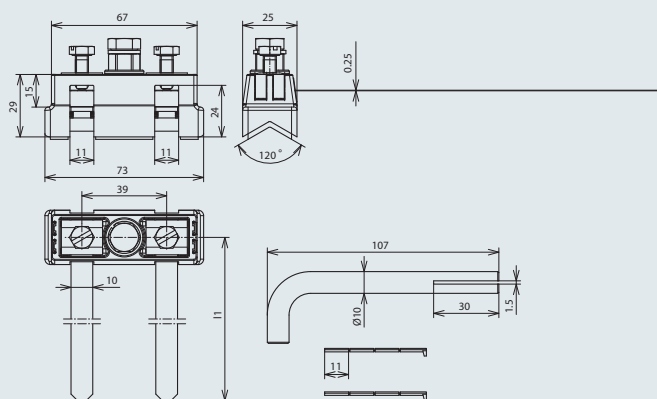
Pipe clamp for electrical contacting of pipes in hazardous areas for implementing of lightning equipotential bonding according to IEC/EN 62305-3 (EN 62305-3)

So far equipotential bonding and lightning equipotential bonding of pipes in explosion-hazardous areas has been implemented by means of welded or threaded bushing connections. Using clamps was only permitted if evidence of no ignition sparking in case of lightning current loading was provided. Such proof has now been rendered for a pipe clamp by DEHN. In compliance with and tested according to EN 50164-1 title English: Lightning Protection Components (LPC) - Part 1: Requirements for connection components in a potentially explosive atmosphere (clamps and connectors), the sample passed the test for no occurrence of ignition sparks at a lightning current loading of up to 50 kA (10/350 µs). This novel, patented pipe clamp for hazardous areas not only ensures the safe electrical contact by means of two contact clips, but also the adequate mechanical fixing by an electrically insulated clamping body.

The Ex pipe clamp provides following connection possibilities

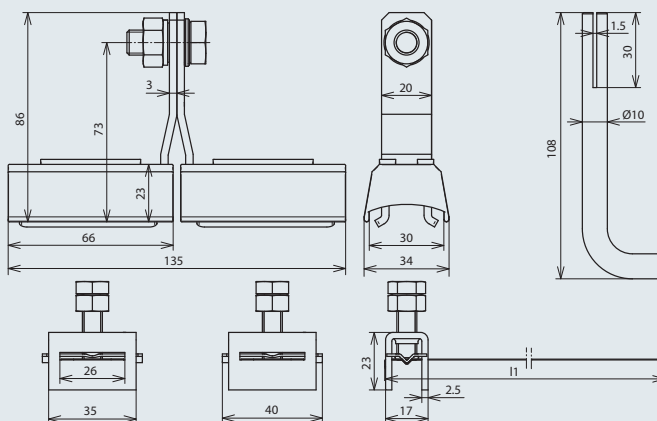
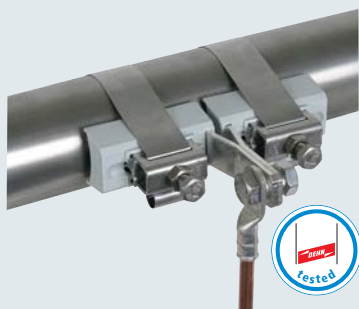
- Round conductors made of Cu, St/tZn, Al, StSt with Ø8 mm or stranded copper conductors, cross section 16-35 mm², with E-Cu crimping cable lug (DIN 46235)
- Flat copper conductors with minimum dimensions of 20x2.5 mm and a bore of Ø10.5 mm

Type EX BRS 27

Clamping range Ø6-26.9 mm ($\frac{3}{4}$ ")

Part No.	540 821
Lightning impulse current (10/350 µs) Cu Ø6-12 mm (I_{imp})	10 kA
Lightning impulse current (10/350 µs) Cu Ø12-26.9 mm ($\frac{3}{4}$ ") (I_{imp})	20 kA
Lightning impulse current (10/350 µs) Cu Ø26.9 mm ($\frac{3}{4}$ ") (I_{imp})	25 kA
Lightning impulse current (10/350 µs) St/tZn Ø17.2-26.9 mm ($\frac{3}{4}$ ") (I_{imp})	25 kA
Lightning impulse current (10/350 µs) StSt Ø6-12 mm (I_{imp})	10 kA
Lightning impulse current (10/350 µs) StSt Ø12-26.9 mm ($\frac{3}{4}$ ") (I_{imp})	12 kA
Lightning impulse current (10/350 µs) StSt Ø26.9 mm ($\frac{3}{4}$ ") (I_{imp})	25 kA
Terminal	M8
Clamping range pipe Ø	6-26.9 ($\frac{3}{4}$ ") mm
Material of clamping body	polyamide
Material of grip head/tensioning strap	StSt
Material of contact clip	Ms/gal Sn
Standard	EN 50164-1

Type EX BRS 90 / 300 / 500

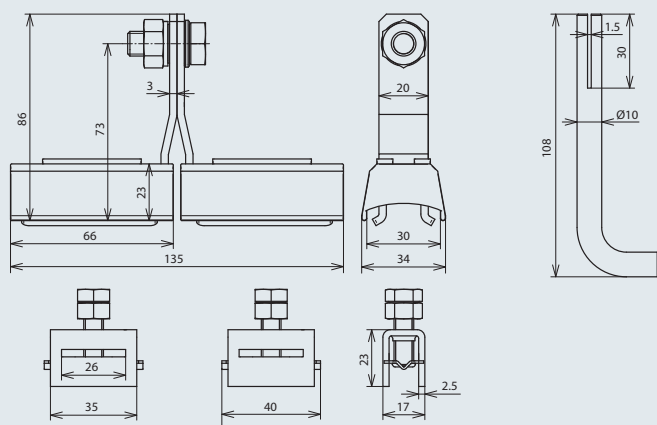
Type EX BRS 90 Part No. 540 801 clamping range Ø26.9 mm ($\frac{3}{4}$ ") to 88.9 mm (3")

Type EX BRS 300 Part No. 540 803 clamping range Ø88.9 mm (3") to 300 mm and

Type EX BRS 500 Part No. 540 805 clamping range Ø300 to 500 mm

Part No.	540 801	540 803	540 805
Lightning impulse current (10/350 µs) Cu (I_{imp})	50 kA	50 kA	—
Lightning impulse current (10/350 µs) St/tZn (I_{imp})	50 kA	50 kA	—
Lightning impulse current (10/350 µs) St/blank (I_{imp})	—	—	50 kA
Lightning impulse current (10/350 µs) StSt (I_{imp})	25 kA	50 kA	50 kA
Terminal	M10	M10	M10
Clamping range pipe Ø	26.9 ($\frac{3}{4}$ ") - 88.9 (3") mm	88.9 (3") - 300 mm	300 - 500 mm
Material of clamping body	polyamide	polyamide	polyamide
Material of grip head/tensioning strap	StSt	StSt	StSt
Material of contact clip	Cu/gal Sn	Cu/gal Sn	Cu/gal Sn
Standard	EN 50164-1	EN 50164-1	EN 50164-1

Separate clamping body



For use with endless tensioning strap (Part No. 540 901)
Clamping ranges Ø26.9 mm ($\frac{3}{4}$ ") to 500 mm

Part No.	540 810
Lightning impulse current (10/350 µs) Cu (I_{imp})	50 kA
Lightning impulse current (10/350 µs) St/tZn (I_{imp})	50 kA
Lightning impulse current (10/350 µs) StSt (I_{imp})	25 kA
Terminal	M10
Clamping range pipe Ø	26.9 ($\frac{3}{4}$ ") - 500 mm
Material of clamping body	polyamide
Material of grip head/tensioning strap	StSt
Material of contact clip	Cu/gal Sn
Standard	EN 50164-1

More details in installation instructions No. 1599.

Accessory for Pipe Clamps for Hazardous Areas

Tensioning Strap

Part No.	540 901
Material	StSt
Dimension of strap (l x w x d)	25x0.3 mm
Length	100 m

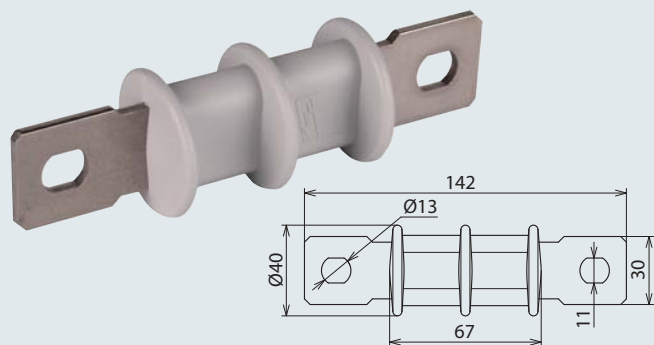




For indirect connection of an overhead line roof pole to the external lightning protection system

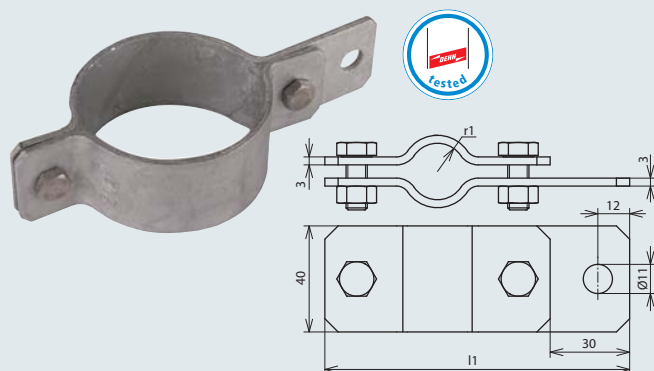
- For indirect connection of an overhead line roof pole to the external lightning protection system
- Corrosion-resistant stainless steel connections

The DSFS spark gap allows to indirectly connect an overhead line roof pole to the external lightning protection system



Typ	DSFS
Part No.	920 000
100% lightning impulse sparkover voltage (1.2/50 µs) (U_{imp})	~ 25 kV
Nominal discharge current (8/20 µs) (I_n)	25 kA
Degree of protection	IP 54
Power frequency sparkover voltage (50 Hz) (U_{aw})	~ 10 kV
Material (connection)	StSt
Connection	slot Ø13x11 mm
Enclosure material	plastic

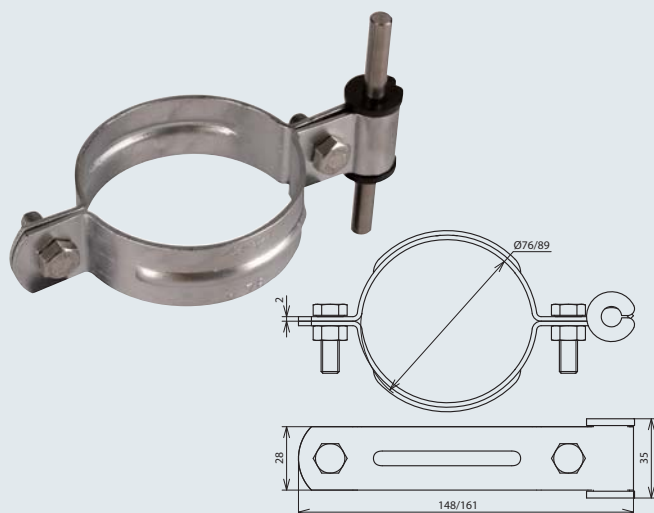
Pipe Clamps for Roof Poles



Pipe clamp to connect the protective spark gap to the overhead line roof pole

Part No.	410 212	410 300
Clamping range of pipe	76.1 mm	88.9 mm
Clamping range Ø pipe	2 1/2"	3"
Material	St/tZn	St/tZn
Bore Ø	11 mm	11 mm
Screw	M8x20 mm	M8x20 mm
Material of screw/nut	St/tZn	St/tZn
Dimension (l1 x r1)	169x38 mm	182.5x44.5 mm
Standard	EN 50164-1	EN 50164-1

Conductor Holders for Roof Poles



Conductor holder for fixing of round conductors at overhead line roof poles, insulated clamp bush

Part No.	425 076	425 089
Clamping range Ø pipe	76 mm	89 mm
Material	St/tZn	St/tZn
Conductor holder support Rd	8-10 mm	8-10 mm
Conductor leading	fixed	fixed
Screw	M8x20 mm	M8x20 mm
Material of screw/nut	StSt	StSt



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.