

**PFISTERER**



LV- AND MV-NETWORKS

# SICON

**The first cable connector system  
with stepless shear bolts.**

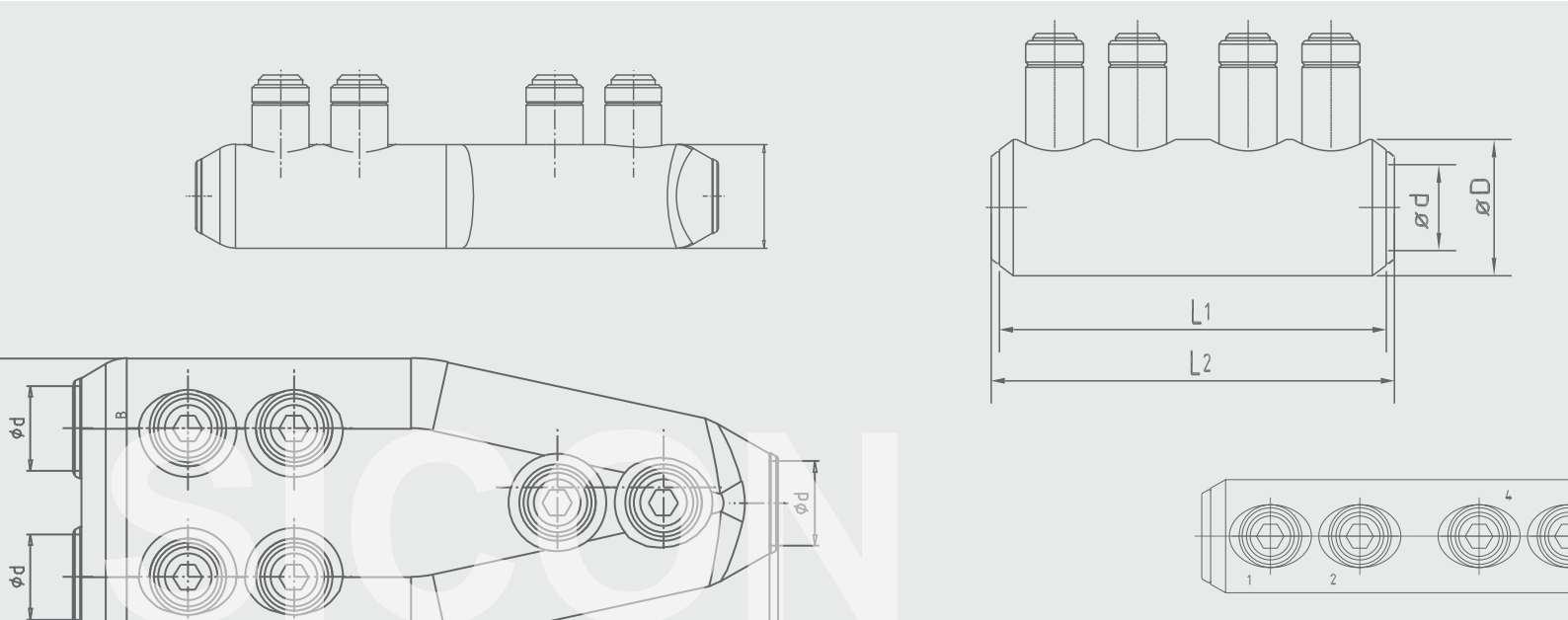


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# THE POWER CONNECTION

CABLE SYSTEMS | COMPONENTS | OVERHEAD LINES | RAILWAY CATENARY SYSTEMS



## The Better is the Enemy of the Good.

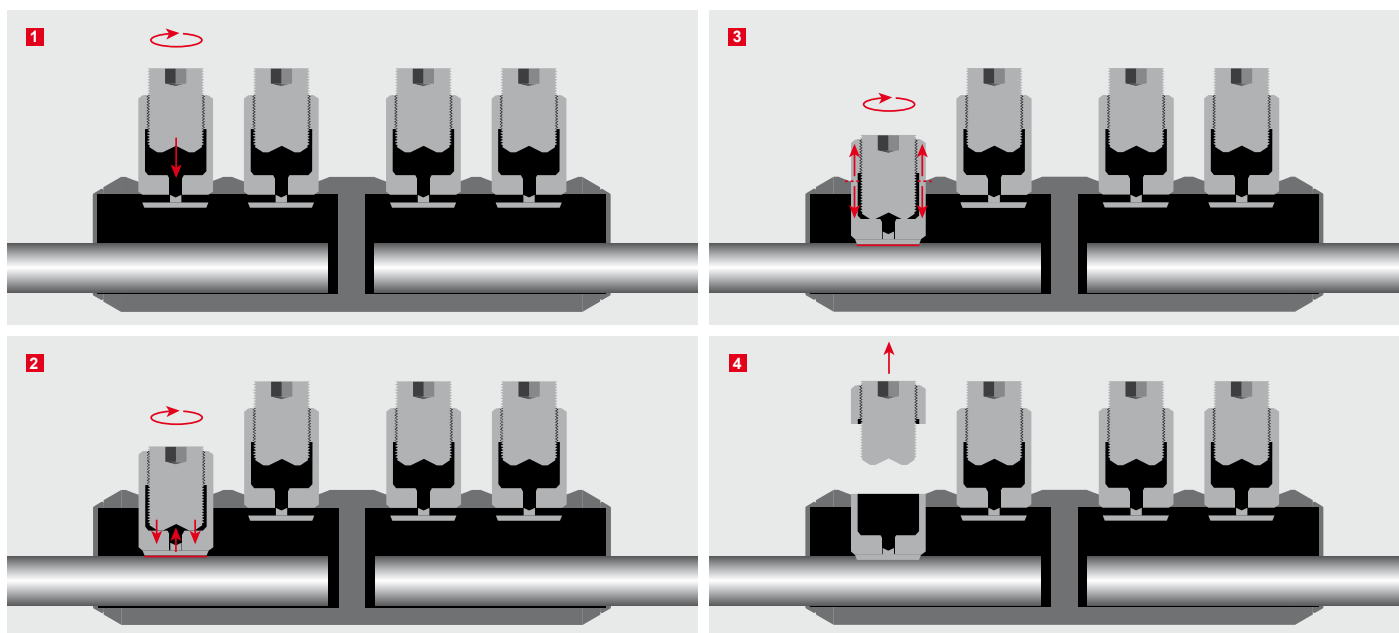
Terminals, connectors and cable lugs using screw technology have been on the advance for years. And with good reason. Bolted connections offer technical and practical advantages that compression connections cannot provide. For instance, a large cross-section range and easy handling. This clamping technology perfectly complements the new multi-range cable accessories. Fitting requires only a simple tool.

**Until now, the “multi-stage shear bolt” has been the state of the art in screw technology.** The design strength of the multi-stage shear bolt - the integral predetermined breaking points - is at the same time its decisive weakness. Each breaking point forms a discontinuity in the load-bearing thread, and the maximum clamping force cannot be achieved. A further disadvantage: The stages must be very accurately matched to the conductor of the cable-used - otherwise the bolt will break at the wrong position.

**New from PFISTERER: Stepless shear bolts.** Special design feature: No predetermined breaking points in the thread. This ensures the optimum thread load for any range of cross-sections. The bolt always breaks even with the surface of the clamp body - nothing protrudes, and nothing has to be filed to make the sleeve fit.

### Advantages

- Up to 30 % increased contact force compared with conventional type terminals
- Bolt base plate for uniform friction and increased contact force
- Nothing protrudes, no need for filing
- Full utilisation of the thread loading for any size of conductor
- No special tool needed
- Smooth breakage of the shear bolt simplifies tightening process
- The remains of the bolt stay on the tool and can be disposed safely
- Suitable for fine-stranded Class 5 cables



## SICON - the first stepless shear bolt.

- 1** A standard hexagon key is used to screw a threaded stud into the hole in the stepless thrust bolt. The force closure is not interrupted by any steps or notches in the bolt.
- 2** As the SICON bolt is screwed in, the pressure plate at the base of the bolt breaks away. The bolt now turns on this plate; unlike with conventional bolts, no tip friction occurs on the conductor. The bolt's torque generates the contact pressure almost independently of the conductor material. This way, significantly higher contact pressures are achieved with aluminium conductors and even fine stranded conductors are not damaged.
- 3** The SICON bolt continues to turn until the shear torque is reached. The thrust bolt is tensioned as it is screwed in and, on reaching the shear torque, it stretches axially and breaks off. Compared with conventional shear bolts, the bolt breaks very smoothly, with virtually no jerking.
- 4** The SICON bolt always breaks even with the surface of the clamp body. This ensures that the minimum possible protrusion is achieved every time irrespective of the size of the conductor to be connected.





# No predetermined breaking points, no weak points.

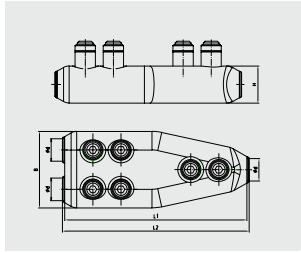
## Technical features

- Large clamping range: 10 - 95 mm<sup>2</sup>;  
25 - 150 mm<sup>2</sup>; 50 - 240 mm<sup>2</sup>; 95 - 300 mm<sup>2</sup>;  
185 - 400 mm<sup>2</sup>; 300 - 630 mm<sup>2</sup>  
(others on request)
- Conductor channels with transverse grooves  
and protection against conductor oxidation
- Blind hole designed as pressure-resistant oil  
barrier for oil cable
- Contact technology type-tested electrically  
and mechanically to IEC 61238-1
- Compact design: rounded edges and  
flat transitions, suitable for slide-on and  
shrink sleeves
- Suitable for aluminium- and copper  
conductors
- Centric cable guide with different  
centring sleeves



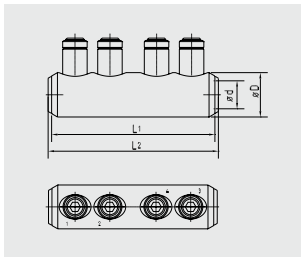
# Technical data.

## Tap connectors



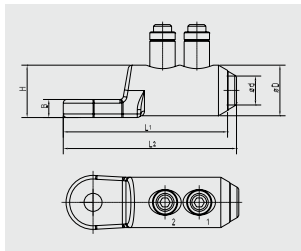
| No.<br>(Al + Cu) | mm <sup>2</sup> | mm <sup>2</sup> | mm <sup>2</sup> | mm <sup>2</sup> | mm <sup>2</sup> | mounting<br>hole | across<br>flats | No. of<br>bolts | L1<br>mm | DØ<br>mm | dØ<br>mm |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|----------|----------|----------|
| 332 447 010      | 50 – 240        | 50 – 185        | 50 – 185        | 50 – 150        | 50 – 240        | –                | SW 6            | 6               | 162      | 68/33    | 20       |

## Connectors with blind hole



|             |           |           |           |           |           |   |      |   |     |    |      |
|-------------|-----------|-----------|-----------|-----------|-----------|---|------|---|-----|----|------|
| 332 601 010 | 10 – 95   | 10 – 95   | 50 – 95   | 35 – 70   | 10 – 95   | – | SW 5 | 2 | 65  | 24 | 13   |
| 332 607 010 | 25 – 150  | 25 – 150  | 35 – 120  | 35 – 120  | 25 – 150  | – | SW 5 | 2 | 68  | 28 | 16,3 |
| 332 593 010 | 25 – 150  | 25 – 150  | 35 – 120  | 35 – 120  | 25 – 150  | – | SW 5 | 4 | 102 | 28 | 16,3 |
| 332 592 010 | 50 – 240  | 50 – 185  | 50 – 185  | 50 – 150  | 50 – 240  | – | SW 6 | 4 | 126 | 33 | 20   |
| 332 614 010 | 50 – 240  | 50 – 240  | 50 – 240  | 50 – 240  | 50 – 240  | – | SW 6 | 4 | 126 | 35 | 21   |
| 332 602 010 | 95 – 400  | 95 – 300  | 95 – 240  | 95 – 240  | 95 – 300  | – | SW 8 | 4 | 140 | 38 | 24   |
| 332 617 010 | 185 – 500 | 185 – 400 | 185 – 240 | 185 – 240 | 185 – 400 | – | SW 8 | 6 | 170 | 42 | 26   |
| 332 603 010 | 300 – 800 | 300 – 630 | –         | 300 – 400 | 300 – 630 | – | SW 8 | 6 | 230 | 52 | 33,3 |

## Screw cable lugs



|             |           |           |           |           |           |      |      |   |     |    |      |
|-------------|-----------|-----------|-----------|-----------|-----------|------|------|---|-----|----|------|
| 332 604 010 | 10 – 95   | 10 – 95   | 50 – 95   | 35 – 70   | 10 – 95   | 13   | SW 5 | 1 | 70  | 24 | 13   |
| 332 599 010 | 25 – 150  | 25 – 150  | 35 – 120  | 35 – 120  | 25 – 150  | 13   | SW 5 | 2 | 91  | 28 | 16,3 |
| 332 595 010 | 50 – 240  | 50 – 185  | 50 – 185  | 50 – 150  | 50 – 240  | 13   | SW 6 | 2 | 115 | 33 | 20   |
| 332 595 011 | 50 – 240  | 50 – 185  | 50 – 185  | 50 – 150  | 50 – 240  | 16,5 | SW 6 | 2 | 115 | 33 | 20   |
| 332 605 010 | 95 – 400  | 95 – 300  | 95 – 240  | 95 – 240  | 95 – 300  | 13   | SW 8 | 2 | 120 | 38 | 24   |
| 332 605 011 | 95 – 400  | 95 – 300  | 95 – 240  | 95 – 240  | 95 – 300  | 16,5 | SW 8 | 2 | 120 | 38 | 24   |
| 332 625 010 | 185 – 500 | 185 – 400 | 185 – 240 | 185 – 240 | 185 – 400 | 13   | SW 8 | 3 | 138 | 42 | 26   |
| 332 625 011 | 185 – 500 | 185 – 400 | 185 – 240 | 185 – 240 | 185 – 400 | 16,5 | SW 8 | 3 | 138 | 42 | 26   |
| 332 606 010 | 300 – 800 | 300 – 630 | –         | 300 – 400 | 300 – 630 | 16,5 | SW 8 | 3 | 180 | 50 | 33,3 |

Axial bolted cable lugs on request.

## Accessories



|             |                                                                                                                                                                                                                                   |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 305 917 001 | Cordless impact screwdriver for trouble-free assembly of screwed connectors and terminal lugs, comes with replacement battery, charger, tool set (Allen nut SW 5, SW 6, SW 8, load-carrying nut SW 8, SW 10, SW 13, SW 16, SW 19) |
| 305 917 106 | Replacement hex socket for the cordless impact screwdriver 1/2", SW 6 bit length 9 mm                                                                                                                                             |
| 305 917 107 | Replacement hex socket for the cordless impact screwdriver 1/2", SW 6 bit length 19 mm                                                                                                                                            |

|             |                                 |
|-------------|---------------------------------|
| 331 901 900 | Holding arm for screw connector |
|-------------|---------------------------------|

Subject to change as required by technical progress. Other designs available on request.

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