

**PFISTERER**



## SICON

Connectors with Stepless Shear-Off Bolts



**THORNE &  
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INTERNATIONAL

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# SICON

## The Right Connection for All Conductors

For years now, bolted clamps, connectors and cable lugs have been gaining ground - with good reason. Bolted connectors offer technical and practical advantages that compression technology cannot match.

### Simple Installation with Standard Tools

SICON bolted connectors are installed directly onto the ends of the conductor with a standard allen key. The innovative design of the stepless shear bolt allows installation regardless of the conductor type. Thanks to the special design of the bolt, optimal contact force is always achieved.

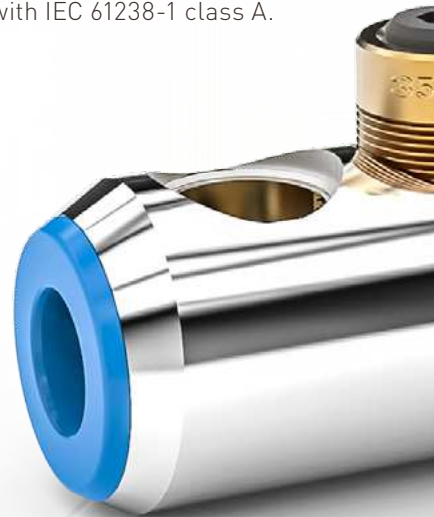
### Easy to Install

All SICON connectors can be easily installed, even under tight spots. The bolt shears off smoothly when it is tightened. The remains stay in the tool and can be safely disposed of. The bolt always shears off at the top edge of the connector body. This way, there are no sharp protrusions. All edges of the connector body are rounded.

### Cost-Effective Thanks to Versatility

Every SICON connector covers a wide x-section range. This way, you always have the right connectors with you on site. And even if during repair work it is unclear what type of conductors must be connected and in which condition are they in, SICON is the right choice.

SICON connectors are electrically/mechanically type-tested in accordance with IEC 61238-1 class A.



Extensive product range:  
SICON provides the right connector for any application.

### SICON Customized

PFISTERER also manufactures SICON shear bolt connectors to meet individual customer requirements. Our experts will carry out all the necessary consultation, dimensioning, engineering, pilot production, testing and series production.



## SICON Bolt Prevents Installation Errors

The patented SICON bolt was developed without predetermined shear-off points. This means that the full load capacity of the thread is always used, thus ensuring perfect contact pressure. A friction disc on the tip of the bolt ensures that the conductor strands are not damaged.



## All Conductors are Optimally Connected

SICON connectors can be used independently of the conductor material, type, voltage level and current. No matter whether aluminum or copper, solid or stranded – the conductor is always connected with perfect contact pressure. For aluminum conductors, this means with a contact force up to 30% higher than of conventional connectors. The transverse grooves in the clamping channel break through the oxidation layers and reliably establish the contact.



Always the right connector: Large ranges ensure high flexibility at the construction site.

### Benefits

- Reliable connection for all conductors
- Optimal contact force for all conductors
- No damage to individual strands
- Installation with standard tools
- Ideal for all type of joints or termination
- Wide application range

### SICON in Numbers

- Conductor cross-section: 10-630 mm<sup>2</sup>
- Conductor material: aluminum, copper (all common types)



Always the right choice: SICON combines all conductor designs and materials safely and reliably.

## Covering Caps

- Cover up completely the entire bore countersinks
- Restore a full cylindrical shape

**No sharp edges - which eliminates possible damages of the joint body.**

## Stepless Shear-Off Bolt

- No predetermined shear-off points
- Always full load capacity of the thread
- No time consuming rework necessary

**The optimal shear off torque will always be reached automatically.**

## Centering Rings

- "One-click" fast installation
- Centered position of small conductors

**Minimizes voltage stress at transition from connector body to cable insulation.**

## Short Connector Length

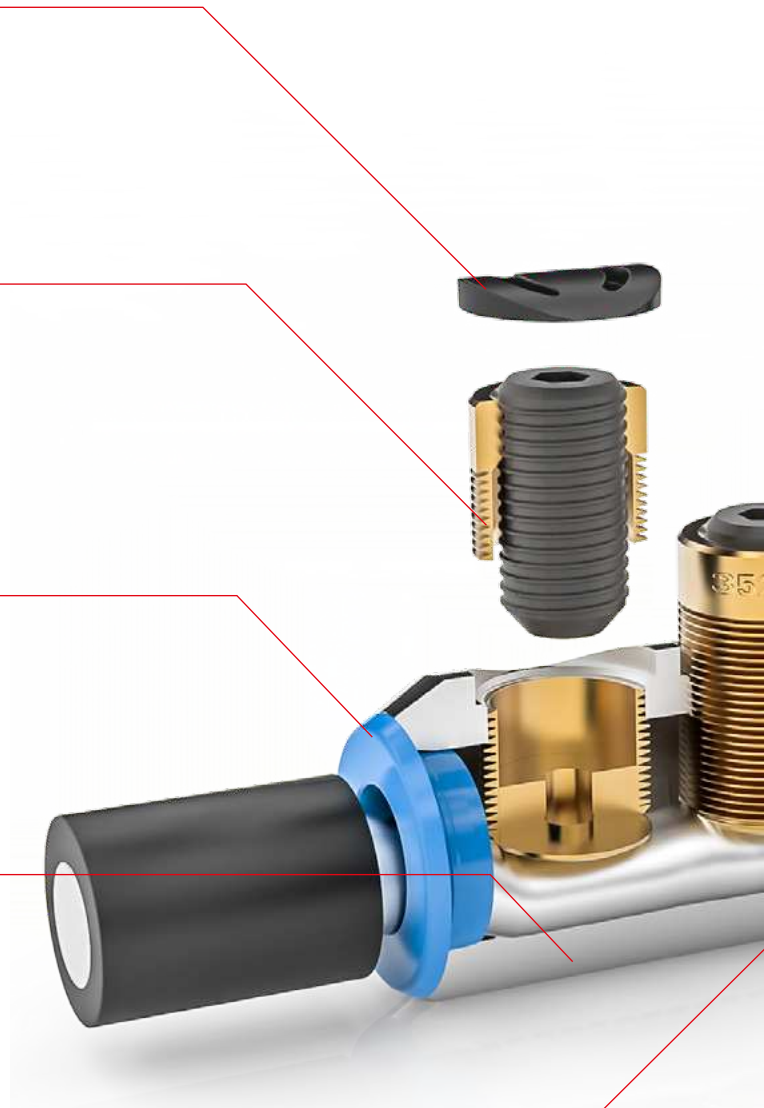
- Easier centering in the middle of the stress control area

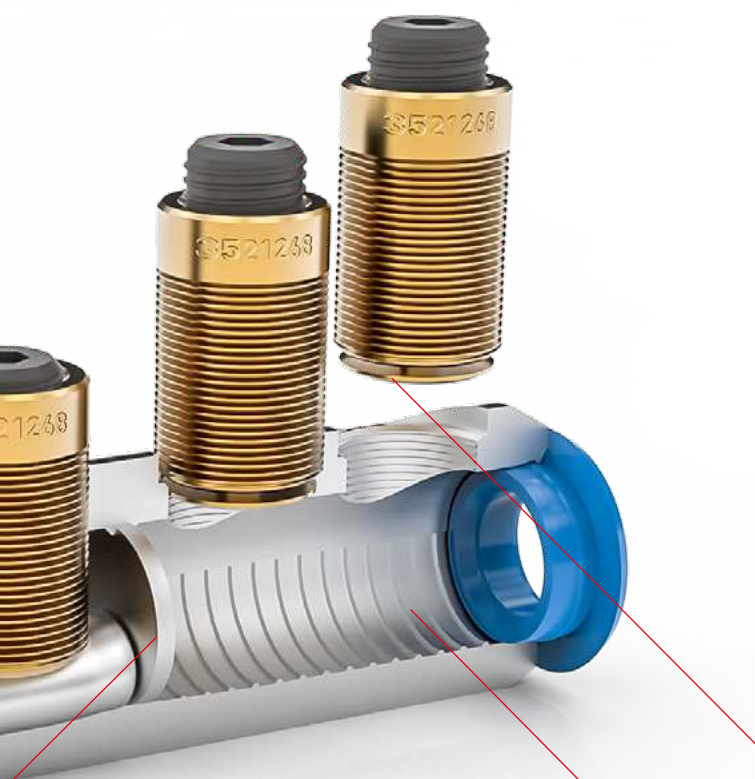
**Fits into shorter joints, bigger application range.**

## Oil Stop

- Ensures proper conductor positioning
- Eliminates oil leakage when connecting oil impregnated conductors

**Accommodates transition applications from polymeric to oil impregnated conductors.**





## Universal Application

- Covers a wide cross section range
- All conductor designs
- For aluminum and copper conductors

**Reduces inventory and prevents accidental use of wrong connector.**

### Copper



### Aluminum



## Installation with Standard Tools

- Ratched and appropriate hexagonal socket
- Impact wrench

**Easy installation.**



## Transverse Grooves

- Breaks through oxidation layers
- Higher tensile strength
- Higher cross-line conductivity of stranded conductors, increased current flow from inner to outer strands

**Ensures low contact resistance and long term reliability.**

## Friction Disc

- Independent contact force of aluminum and copper conductors
- Higher contact force
- No damage of single strands

**Reliable and good electrical contact.**

## SICON Application Range

### Split Connector

This split connector can be used in installations where it is difficult to install the connector on the conductor. The connector comes apart in 2 pieces and allows easy installation. The 2 pieces are then bolted together in the middle to form one connector again. Typical uses are PILC to PILC 3/C joints and any tight spot where it is difficult to bend the cable.



### Branch Connector

The branch connector can be used to join 3 different conductors regardless of size or material. These are typically used when joining two main lines and then running a tap or a branch. These can be used in heat shrink, cold shrink and hand-taped joints.



### Cable Lug

PFISTERER SICON bolted cable lugs enable you to connect the cable ends of electrical devices with a bolt or a stud. **Standard cable lugs** are used in cable terminations for indoor and outdoor applications and can be used in both heat shrink and cold shrink accessories.

**Centered cable lugs** are mainly used in separable connectors. Cable lugs with **2-hole palms** are also available.







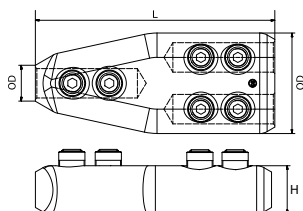
## Product Selection Guide

| Connector cross-section (mm <sup>2</sup> )  | L (mm) | OD (mm) | l (mm) | H (mm) | x (mm) | z (mm) | Hex Size | Part No. (Al + Cu) |
|---|--------|---------|--------|--------|--------|--------|----------|--------------------|
| <b>Bolted Connector (MC-OS)</b>   |        |         |        |        |        |        |          |                    |
| 10 - 95   | 59     | 24      |        |        |        |        | 5        | 332 601 012        |
| 16 - 150  | 89     | 28      |        |        |        |        | 5        | 332 593 012        |
| 50 - 240  | 112    | 33      |        |        |        |        | 6        | 332 592 012        |
| 50 - 240 sector   | 112    | 35      |        |        |        |        | 6        | 332 614 012        |
| 50 - 300  | 124    | 35      |        |        |        |        | 6        | 332 632 012        |
| 95 - 300  | 132    | 38      |        |        |        |        | 8        | 332 602 012        |
| 185 - 400   | 171    | 42      |        |        |        |        | 8        | 332 617 012        |
| 240 - 500   | 198    | 52      |        |        |        |        | 8        | 332 640 012        |
| 300 - 630   | 208    | 52      |        |        |        |        | 8        | 332 603 012        |
| <b>Standard Cable Lug</b>   |        |         |        |        |        |        |          |                    |
| 10 - 95   | 70     | 24      | 30     | 9      | 13     | 56     | 5        | 332 604 012        |
| 10 - 95   | 70     | 24      | 30     | 9      | 8.5    | 56     | 5        | 332 604 022        |
| 25 - 150  | 91     | 28      | 32     | 10     | 13     | 75     | 5        | 332 599 012        |
| 50 - 240  | 112    | 33      | 40     | 14     | 13     | 93.5   | 6        | 332 595 012        |
| 50 - 240  | 112    | 33      | 40     | 14     | 16.5   | 93.5   | 6        | 333 595 022        |
| 95 - 300  | 122    | 38      | 40     | 14     | 13     | 101    | 8        | 332 605 012        |
| 95 - 300  | 122    | 38      | 40     | 14     | 16.5   | 101    | 8        | 332 605 022        |
| 185 - 400   | 143.5  | 42      | 42     | 14     | 13     | 119.5  | 8        | 332 625 012        |
| 185 - 400   | 143.5  | 42      | 42     | 14     | 16.5   | 119.5  | 8        | 332 625 022        |
| 300 - 630   | 172    | 52      | 50     | 17     | 13     | 142    | 8        | 332 606 022        |
| 300 - 630   | 172    | 52      | 50     | 17     | 16.5   | 142    | 8        | 332 606 012        |
| <b>Cable Lug (MCL) – Two Mounting Holes with Mounting Hole Distance 44.5 mm [y]</b> |        |         |        |        |        |        |          |                    |
| 16 - 150  | 149    | 28      | 85     | 10     | 14.2   | 86.6   | 5        | 332 599 052        |
| 50 - 240  | 160.5  | 33      | 85     | 14     | 14.2   | 98.1   | 6        | 332 595 052        |
| 95 - 300  | 171.5  | 38      | 85     | 14     | 14.2   | 109.1  | 8        | 332 605 052        |
| 185 - 400   | 191    | 42      | 85     | 14     | 14.2   | 127.6  | 8        | 332 625 052        |
| 240 - 500   | 212.5  | 52      | 85     | 17     | 14.2   | 148.1  | 8        | 332 920 052        |
| 300 - 630   | 212.5  | 52      | 85     | 17     | 14.2   | 148.1  | 8        | 332 606 052        |
| <b>Branch Connector (BMC)</b>   |        |         |        |        |        |        |          |                    |
| 50 - 240  | 140    | 30/68   |        | 33     |        |        | 6        | 332 447 012        |
| <b>Split Connector (SPLIT-MC)</b>   |        |         |        |        |        |        |          |                    |
| 50 - 300  | 158    | 35      |        |        |        |        | 6        | 332 974 012        |
| <b>Repair Connector (RMC-OS)</b>  |        |         |        |        |        |        |          |                    |
| 185 - 400   | 446    | 42      |        |        |        |        | 8        | 332 617 062        |

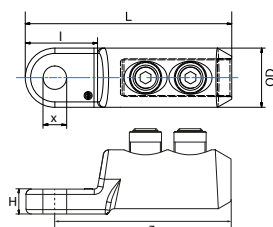
Others are available by special request

## Technical Drawings

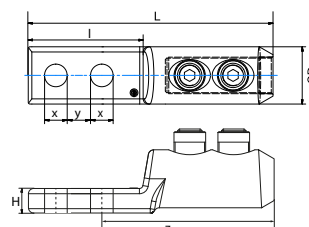
Branch Connector



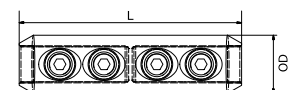
Standard Cable Lug



Cable Lug



Bolted Connector





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The PFISTERER Group, which also includes LAPP Insulators, is amongst the world's leading specialist equipment and system suppliers in the energy infrastructure industry. Around 2,700 employees develop, produce and distribute components and complete solutions for the particularly sensitive interfaces in modern energy networks. With a complete range of products and services, the PFISTERER Group provides customised solutions for the complete transmission chain from low and medium to high and ultra-high voltage. Everything from a single source. Worldwide For our customers, that means: the best possible solutions for all their requirements – now and in the future.