

**SBI CONNECTORS** has developed an adjustable connector that allows angular connections between aluminum busbars from 60° to 180°.

**Adjustable connector solution avoids bending or welding busbars in the substation and makes installation work faster, easier and more cost effective.**

## CURRENT SOLUTION

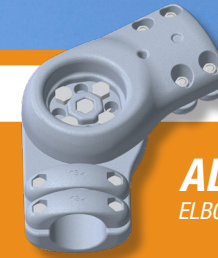
### Disadvantages of the current solution

- ✘ Angled busbar connections in most of the substations are obtained either by bending the tube or by welding an aluminum sphere to join the tubes.
- ✘ Welding operation must be made on site, difficult to perform due to the precision required, the weather conditions and construction site constraints.
- ✘ Bending busbar operation must be done at the manufacturing plant using a special aluminum alloy and heat treatment. This special manufacturing process increase the product cost. Special transport for bending busbars is also an additional expense.



**SBI CONNECTORS**  
by SICAME GROUP

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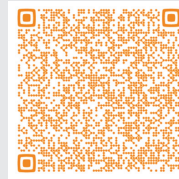
**NEW**

**ADJUSTABLE CONNECTOR**  
ELBOW CONNECTOR FOR BUSBAR FROM 60° TO 180°

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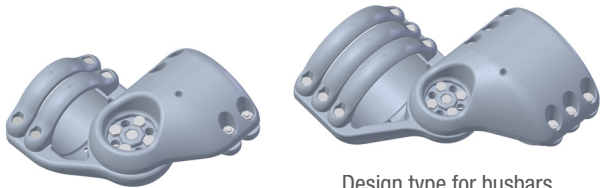
YOUR SPECIALIST IN ELECTRICAL CONNECTIONS



**NEW SBI SOLUTION**

**Elbow connector for busbar from 60° to 180°**

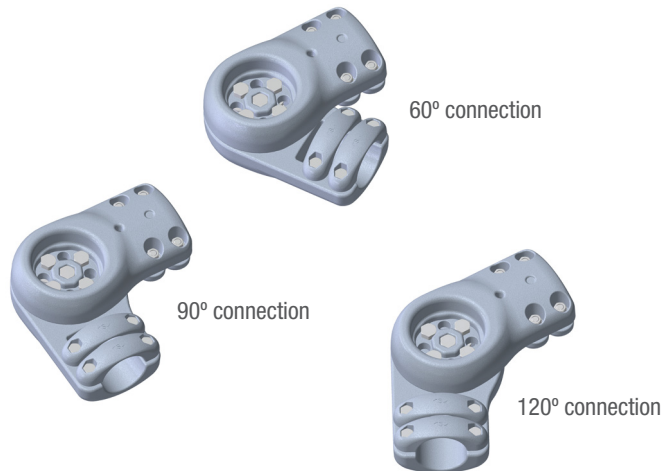
- ✓ Adjustable on site.
- ✓ Easy and fast installation
- ✓ Cost effective.



Design type for busbars from Ø 80 to 180mm

Design type for busbars from Ø 200 to 400mm

**MOST USUAL ANGLE CONFIGURATIONS**



60° connection

90° connection

120° connection

# ADJUSTABLE CONNECTOR

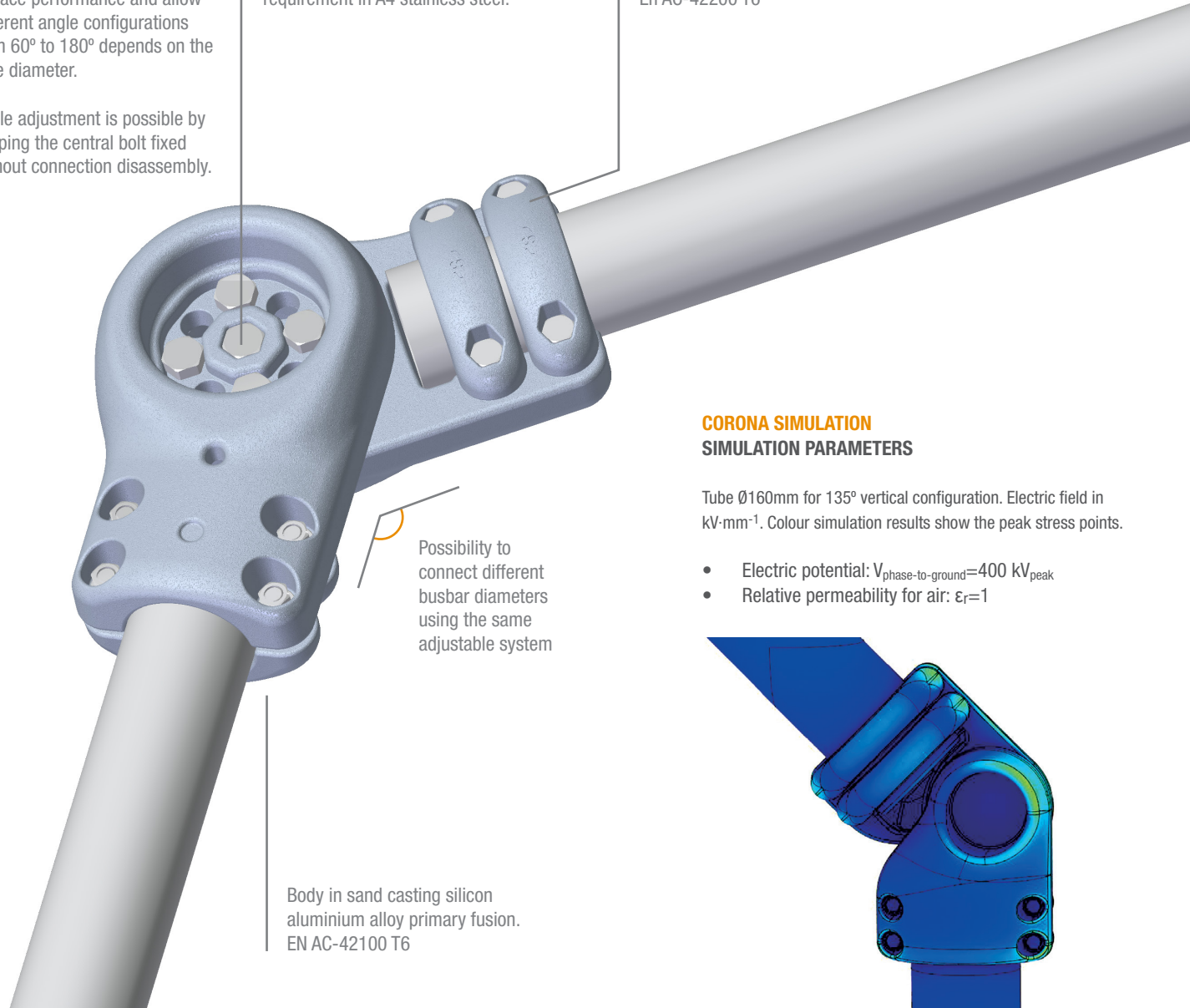
## ELBOW CONNECTOR FOR BUSBAR FROM 60° TO 180°

Special adjustable system with **5 bolts** that assure a right contact surface performance and allow different angle configurations from 60° to 180° depends on the tube diameter.

Angle adjustment is possible by keeping the central bolt fixed without connection disassembly.

Screw, washer and hexagonal nut A2 stainless steel. Available under requirement in A4 stainless steel.

Caps in gravity casting silicon aluminium alloy primary fusion. En AC-42200 T6



Possibility to connect different busbar diameters using the same adjustable system

Body in sand casting silicon aluminium alloy primary fusion. EN AC-42100 T6

*Easy installation  
Adjustable on site  
Cost effective*

**CORONA SIMULATION  
SIMULATION PARAMETERS**

Tube Ø160mm for 135° vertical configuration. Electric field in  $kV\cdot mm^{-1}$ . Colour simulation results show the peak stress points.

- Electric potential:  $V_{\text{phase-to-ground}}=400\text{ kV}_{\text{peak}}$
- Relative permeability for air:  $\epsilon_r=1$

