

# Selection guide for slide-on tools

## Selection guide for slide-on tools to gas cushion installation method for joints

### 1. Introduction

The following application guide will help you easily select the necessary tool components for single applications according to the particular cable dimensional data. Complete tool sets to cover a wide range of cable dimensions and voltages are also available; please consult the Brugg Cables e-Catalogue.



Fig. 1: installation with gas cushion method

### 2. Basic slide-on assembly tool set

The basic assembly tool set is required for the set-up of joint silicone bodies from 72.5 kV up to 550 kV. The tool set consists of a joint body carrier, spindle guide rods and some small assembly parts.

#### 2.1 Carrier for silicone joint bodies

The carrier is used to safely deposit joint bodies during the set-up process.



Fig. 2: Carrier for silicone joint bodies

Applicable for all voltage levels the carrier can be flexibly adapted to the different sizes of silicone joint bodies.

#### 2.2 Spindle for silicone joint bodies

The spindle is used to insert slide-on rings onto the silicone joint bodies. The tool set consists of a base plate, threaded rods in different lengths according to the joint body size and a cover with threaded screws.

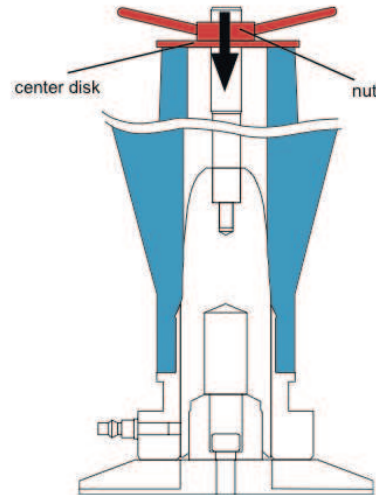


Fig. 3: Spindle for silicone joint bodies

The Basic slide-on assembly tool set is available in two sizes over insulation diameter:

Set 1: 56 – 109 mm

Set 2: 99 – 129 mm

Please refer the Brugg Cables e-Catalogue for ordering information and technical data.

## Assembly of silicone parts

### 3. Selection of single slide-on components

The slide-on components are required for the installation of the joint body dependent on the particular cable dimensions. For proper installation four slide-on components are required, one slide-on ring with gas valve, two slide-on cones and one conductor ring.



Fig. 4: Single slide-on components

#### 3.1 Selection of slide-on ring

The slide-on ring with integrated valve allows the gas injection underneath silicone joint bodies during the slide-on installation process. The proper ring size is selected according to the diameter of the outer semi-conductive layer of the cable where the joint body must be brought into parking position. For the selection please attend following rule:

$$D_i = D_{sc} + \begin{matrix} \text{min.1 mm} \\ \text{max.5 mm} \end{matrix}$$

$D_i$  = Inner diameter of necessary slide-on ring

$D_{sc}$  = Diameter over outer semi conductive layer of the cable



Fig. 5: Slide-on rings with gas valve

The slide on rings are available in 18 sizes. Please refer the Brugg Cables e-Catalogue for ordering information and technical data.

#### 3.2 Selection of slide-on cones

For the installation process two slide-on cones are needed.

**Cone A** is required for the basic assembly tool to help the insertion of the slide-on ring over the joint body. The proper size of the necessary cone A is therefore selected according to the inner diameter of the selected slide-on ring with gas valve. For the selection of cone A please attend following rule:

$$D_A = D_i - 1 \text{ mm}$$

$D_A$  = Diameter of necessary cone A

$D_i$  = Inner diameter of selected slide-on ring

**Cone B** is required to guide the joint body onto the prepared cable end. The selection of the cone B is according to the diameter over cable insulation of the prepared cable end.

$$D_{insul} \leq D_B < D_i$$

$D_B$  = Diameter of necessary cone B

$D_i$  = Inner diameter of selected slide-on ring

$D_{insul}$  = Diameter over cable insulation

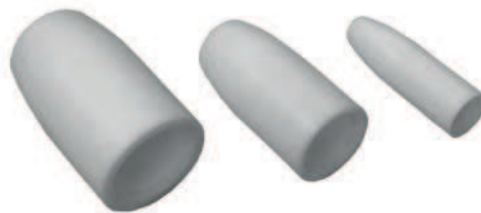


Fig. 6: Slide-on cones

The slide on cones are available in 21 sizes. Please refer the Brugg Cables e-Catalogue for ordering information and technical data.

## Assembly of silicone parts

### 3.3 Selection of conductor ring

The conductor ring is required to fix the slide-on cone B onto the prepared cable end. The proper size of the conductor ring is selected according to the diameter of the cable conductor of the prepared cable end. For the selection please attend following rule:

$$D_{ring} > D_{cond} + 2 \text{ mm}$$

$D_{ring}$  = Diameter of conductor ring

$D_{cond}$  = Diameter over cable conductor

Note: Please attend the necessary thread size of the conductor ring according to the selected slide-on cone.



Fig. 7: Conductor rings

The conductor rings are available in 16 sizes. Please refer the Brugg Cables e-Catalogue for ordering information and technical data.

### 4 Complete slide-on device sets

Complete sets are offered to simplify the selection of slide-on components. These sets contain, for defined cable dimensions, a basic assembly tool set plus all the single components required for a proper installation.



Fig. 8: Complete set in a robust wooden box

The complete slide-on device sets are available in two sizes over insulation diameter:

Set 1: 56 – 109 mm

Set 2: 99 – 129 mm

Please refer the Brugg Cables e-Catalogue for ordering information and technical data.