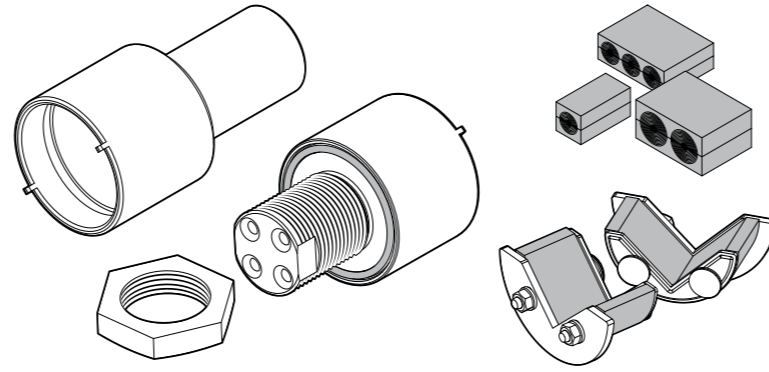


# Installation instructions

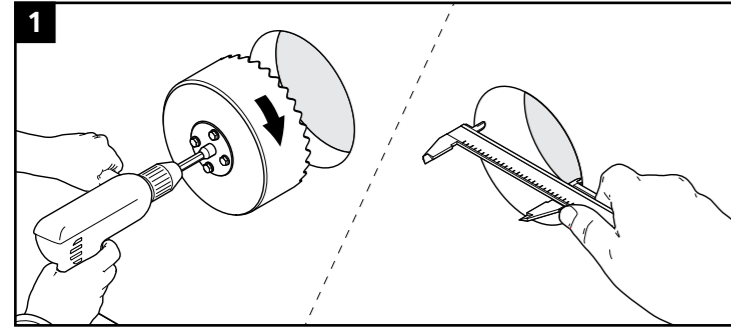
## Roxtec WGS ES

### with Roxtec C RO frame and CM modules

#### for non-metallic fiber optic cables

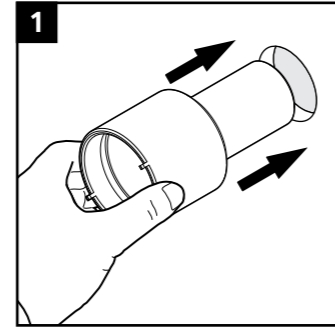


### Aperture

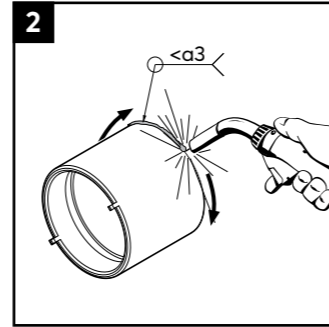


1 Make or verify an aperture according to the drawing of the solution.

### Installation of a welded sleeve



1 Insert the sleeve.



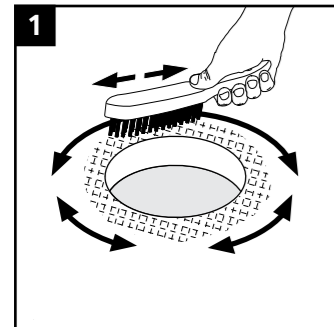
2 Make a gas-tight and watertight weld all around.

### Technical data

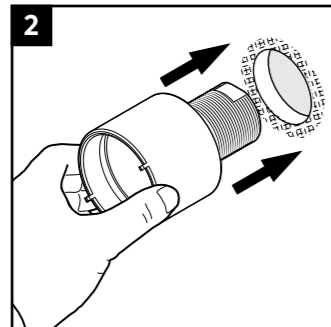
Torque and tool data valid for C RO frame.

Name	Aperture dimension Ø (mm)	For cable/pipe Ø (mm)	Torque (Nm)	Tool size (mm)
WGS ES 18GHz/4 AISI316	34 – 40	3 – 5	~ 4	3
WGS ES 10GHz/4 AISI316	42 – 45	3 – 9	~ 4	3
WGS ES 10GHz/9 AISI316	60 – 63	3.5 – 9	~ 5	10
WGS ES 6GHz/4 AISI316	48 – 58	3.5 – 14	~ 5	10
WGS ES 1GHz/4 AISI316	48 – 58	3.5 – 15	~ 5	10
WGS ES 18GHz/4 W AISI316	34 – 48	3 – 5	~ 4	3
WGS ES 10GHz/4 W AISI316	37 – 48	3 – 9	~ 4	3
WGS ES 10GHz/9 W AISI316	51 – 68	3.5 – 9	~ 5	10
WGS ES 6GHz/4 W AISI316	49 – 68	3.5 – 14	~ 5	10
WGS ES 1GHz/4 W AISI316	49 – 68	3.5 – 15	~ 5	10

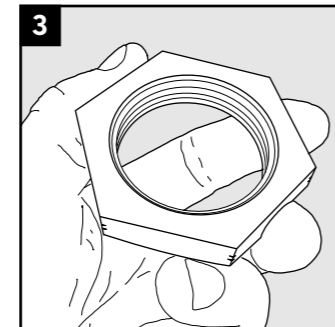
### Installation of a bolted sleeve



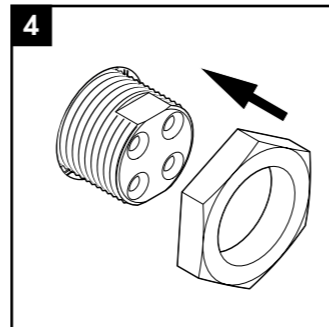
1 The area corresponding to the conductive gasket shall be conductive.



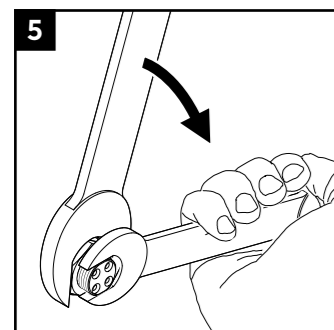
2 Insert the sleeve into the aperture.



3 The flat side of the nut shall face the structure.

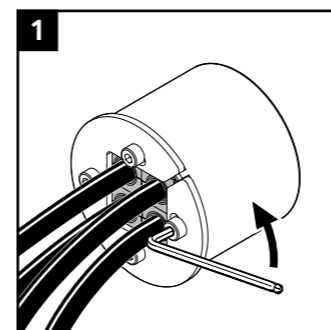


4 Thread on the nut. If vibration is present, the use of threadlocker is recommended.

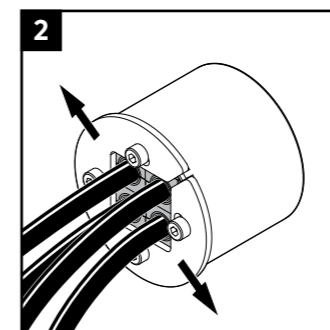


5 Tighten the nut. Prevent the sleeve from rotating by using a counterhold.

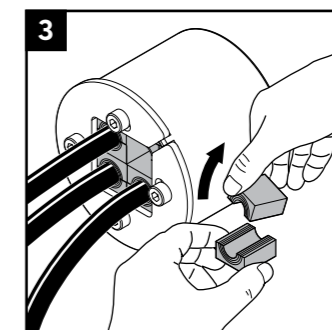
### Disassembly and reinstallation



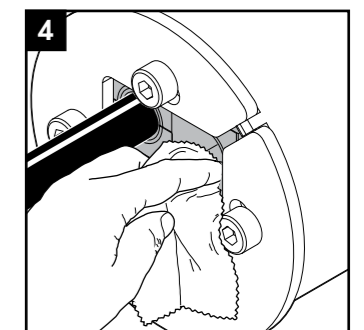
1 Untighten the bolts crosswise in small steps.



2 Push brackets to the sides.

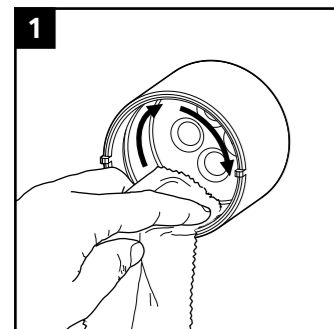


3 Remove modules needed.

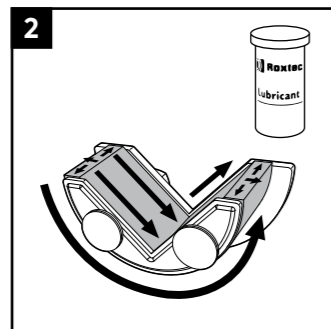


4 Clean exposed sealing surfaces. Continue the reinstallation.

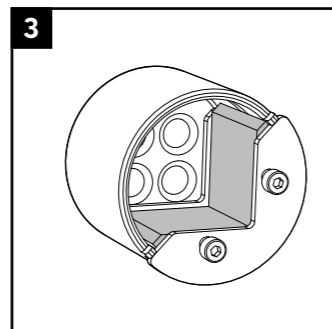
## Installation of C RO frame



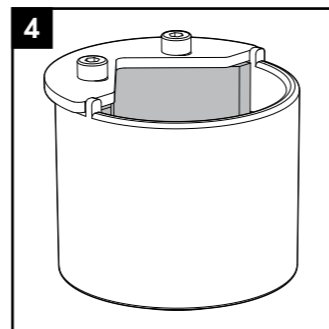
1 Clean the sealing surface.



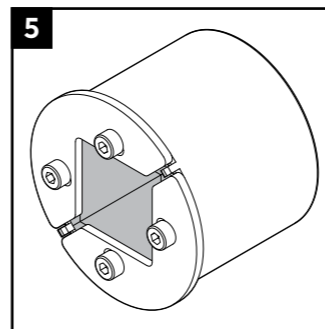
2 Lubricate all sealing surfaces of the rubber parts with Roptec Lubricant.



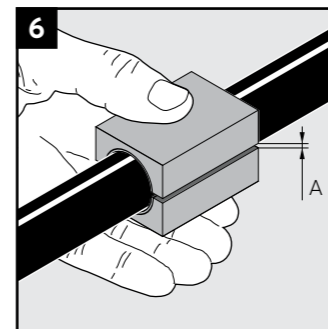
3 Insert a frame half.



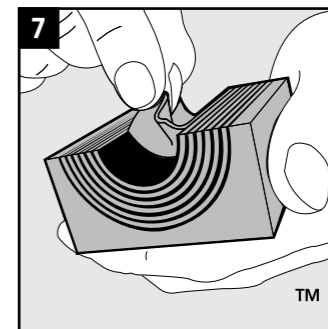
4 The tabs of the sleeve will position the frame.



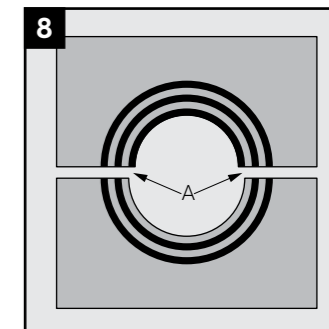
5 Insert the corresponding frame half.



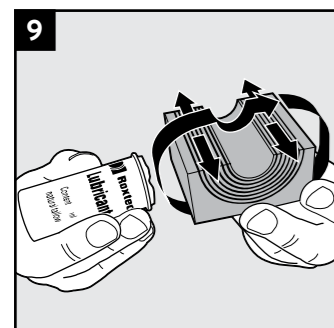
6 Achieve a 0.1-1.0 mm (A) gap between the two halves when held against the fiber optic cable.



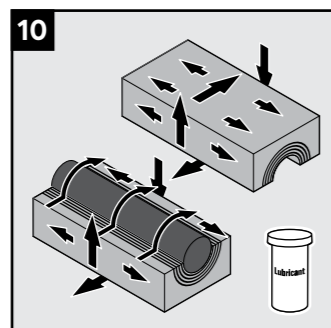
7 Adapt the modules by peeling of layers.



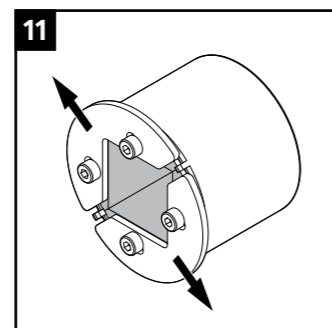
8 The number of layers may not differ (A) by more than one between the corresponding module halves.



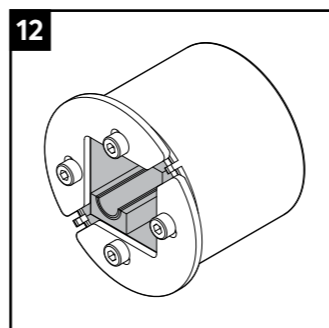
9 Lubricate all sealing surfaces on the modules.



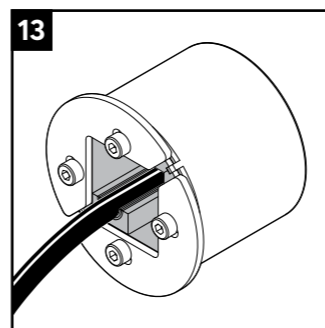
10 Lubricate the sealing surfaces of the spare modules. Do not remove the core.



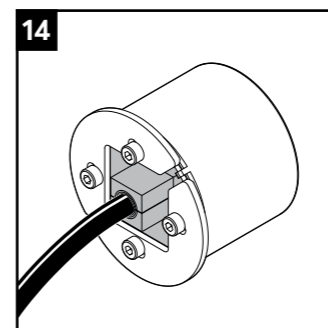
11 Pull apart the brackets.



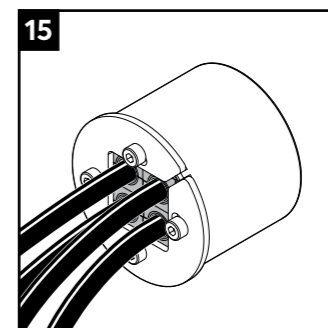
12 Insert a module half.



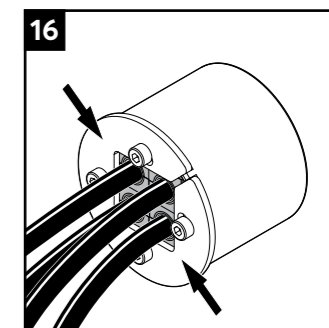
13 Insert a fiber optic cable.



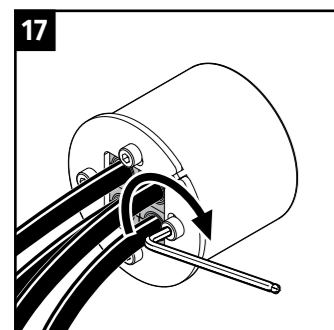
14 Insert the corresponding module half.



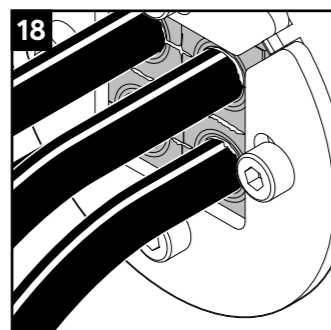
15 Fill up the rest of the transit.



16 Push the brackets towards the middle.



17 Tighten the bolts crosswise in small steps to the specified torque.



18 Protruding excess lubricant is a sign of good compression



19 Check additional documentation, if applicable.

### Tools

- Allen key (not included)
- Spanners (not included)

### Note

- Always use the lubricant supplied with this product.
- Approvals or certificates may include amendments or limitations related to this application.
- For optimum reliability, wait 24 hours or longer after installation before exposing the fiber optic cables to strain or pressure.
- Fiber optic cables shall go straight through the frame.
- The latest version of this and related documents are found at [roxtec.com](http://roxtec.com).

### Disclaimer

The Roptec cable entry sealing system ("the Roptec system") is a modular-based system of sealing products consisting of different components. Each and every one of the components is necessary for the best performance of the Roptec system. The Roptec system has been certified to resist a number of different hazards. Any such certification, and the ability of the Roptec system to resist such hazards, is dependent on all components that are installed as a part of the Roptec system. Thus, the certification is not valid and does not apply unless all components installed as part of the Roptec system are manufactured by or under license from Roptec ("authorized manufacturer"). Roptec gives no performance guarantee with respect to the Roptec system, unless (i) all components installed as part of the Roptec system are manufactured by an authorized manufacturer and (ii) the purchaser is in compliance with (a), and (b), below.

(a) During storage, the Roptec system or part thereof, shall be kept indoors in its original packaging at room temperature.

(b) Installation shall be carried out in accordance with Roptec installation instructions in effect from time to time.

The product information provided by Roptec does not release the purchaser of the Roptec system, or part thereof, from the obligation to independently determine the suitability of the products for the intended process, installation and/or use.

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