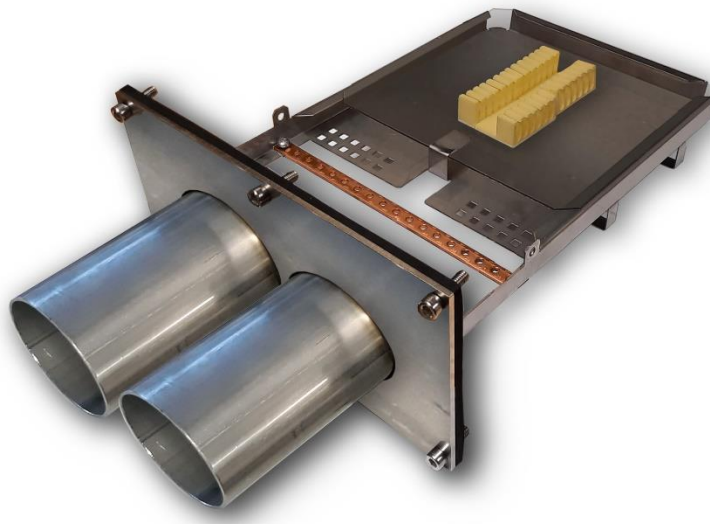


### NAF mini 48/96 general joint closure Installation instructions for microduct cables



#### Introduction

NAF Mini 48/96 GJC is a joint closure which can be directly buried, placed in a manhole or a cabinet. It is used for jointing and branching fiber optic cables.

### Features of the joint closure

- The case is so called butt joint consisting of an inner part with splice tray and a protective cover.
- The capacity of the closure is for 48 splices, but it is possible to add another splice tray to the housing so that the capacity can be doubled. The upper splice tray is hinged.
- If only one splice tray is used, the height of the splice tray can be adjusted, depending on the needs of the installation situation.
- Underneath the splice tray are fixed guides for uncut tubes containing fibers
- Suitable for different types of fiber optic cable structures, as well as for microduct projects, where, in addition to small microduct cables, microducts are also brought into the joint closure.
- The closure can be used for mid span access.
- The closure can be buried in the ground.
- The flange has two oval pass-throughs.
- When direct buried cables are used, the sealing is done with shrinks or with mechanical cable glands. When microducts are used, the sealing is done with mechanical cable glands.
- Mechanical cable glands are available separately:

#### Max. cable count and max. outer diameter

- 2 x 20 mm (7263240)
  - 4 x 15 mm (7263241)
  - 2 x 15 mm + 4 x 10 mm (7263242)
  - 6 x 10 mm (7263243)
- 
- External dimensions 391 x 180 x 94 mm
  - Material is acid-proof stainless steel.
  - IP 68. Designed and manufactured in Finland.

The materials included in the joint closure for microduct cables:

- Screw-on splice tray including two 24-fiber splice holders.
- Equipment bag:
  - o Extra 24-fiber splice holder, 1 pc
  - o Grounding connectors, 6 pcs
  - o Fixing screws, 12 kpl
  - o Grounding connector M6-16 mm<sup>2</sup>, 1 pc
  - o Cable ties 2x100 mm, 12 pcs
  - o Cleaning wipe, 1 pc
  - o Silica gel bag 25 g, 1 pc

### What to do before installing the closure

If the microduct of the extended cables cannot be brought all the way to the closure without extending them, gas-tight connectors must be used in the joints of the microducts, see the pictures below.



Gas-tight connector for 7/3.5 mm microducts. When choosing the connector, attention should be paid to the outer diameter of the microduct!



Gas-tight connector for 14/10 mm microducts. When choosing the connector, attention should be paid to the outer diameter of the microduct!

Before connecting microducts, thoroughly clean their ends and cut off the ends of the tubes with cut-off tools developed for this purpose, photos below. Similarly, carefully clean the ends of the microducts inside the closure and cut the ends straight before installing the mechanical cable glands.



Cut-off tool for 14/10 mm microducts



Cut-off tool for 7/3.5 mm microducts

### Installation of the joint closure with microduct cables

#### Preparation of cables for joint closure installation

Clean the cables and mark the starting points for the peeling and peel the cables.

The peeling lengths for different cable types are as follows:

- Cables with a central tube structure (FY...): The length to be peeled is 100 cm.
- Multi Loose Tube cables (FZ...): The peeling length is 160 cm

Installation of microduct cables of the backbone network into the joint closure.



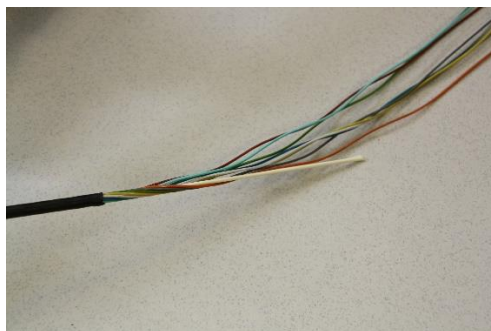
Take out the mechanical cable gland 4 x 15 mm. Loosen the screws on the gland and remove the plugs from the openings where the microducts and cables will come.



Spray silicone spray on the screws of the mechanical cable gland and on the screw holes on the back, so that the acid-steel fixing screws do not get stuck.

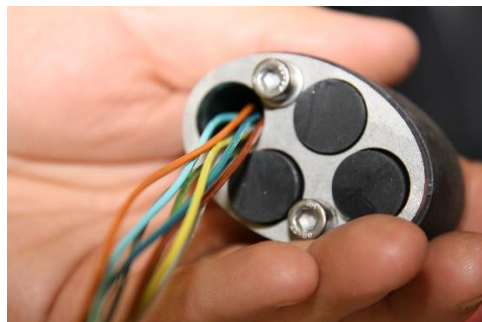
Clean the cables thoroughly from the starting point of peeling backwards for a length of about 30 cm. Peel the cables.

Instructions for peeling different types of microduct cables can be found on cable manufacturers' websites, but here are a few things to know about it. In addition, a few instructions for installing the joint closure are included.



Multi loose tube microduct cable peeled.

The central element of the cable shown in the picture can be cut off at the base of the sheath.

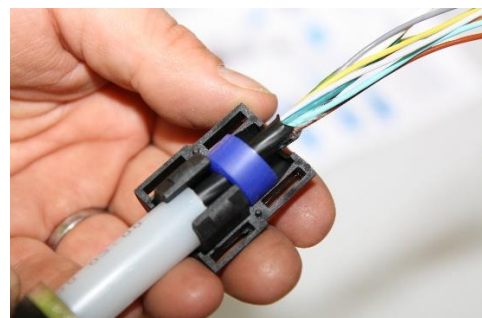


Push the fiber tubes of the cables and the microducts that protect the cables through the holes in the mechanical cable gland.

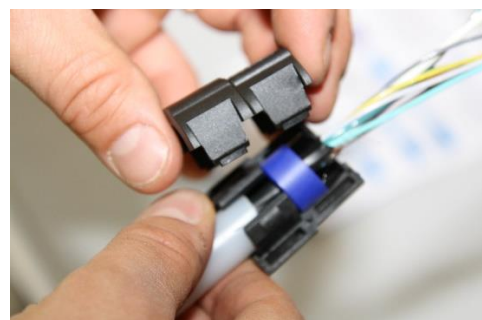
Route the cables with microducts inside the closure.



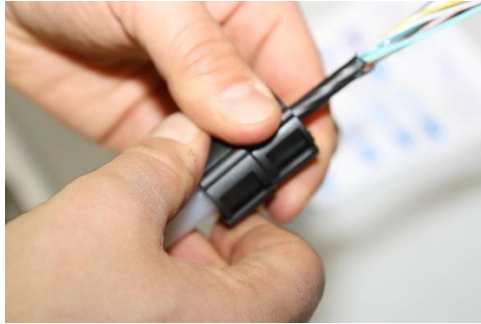
Push the mechanical cable gland with microducts and cables inside the oval grommet of the joint closure to a depth of 5–15 mm and tighten the screws enough to hold the mechanical cable gland in place. N.B. Always tighten the screws by hand to prevent the screws or their counterparts from breaking.



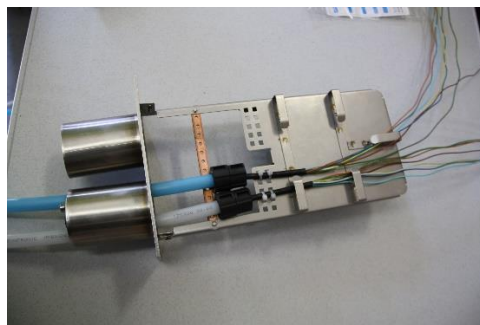
Install the gaskets at the ends of the microducts.



When installing the gasket, make sure that the gasket is securely closed and tight.

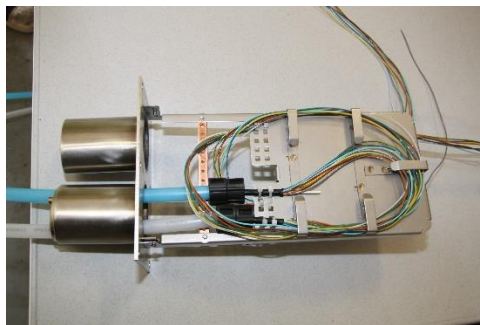


Adjust the length of the cables and microducts in the closure so that the ends of the microducts with gaskets come between the mounting rail and the splice tray.



Secure the cable sheaths with cable ties to the splice tray.

The gaskets come between the mounting rail and the splice tray



Wrap the fiber tubes below the splice tray and from there to the top level of the splice tray.

### Installation of subscriber microduct cables into the joint closure

Take out the mechanical cable gland 6 x 10 mm. Loosen the screws on the gland and remove the plugs from the openings where the microducts and cables will come.

Spray silicone spray on the screws of the mechanical cable gland and on the screw holes on the back, so that the acid-steel fixing screws do not get stuck.





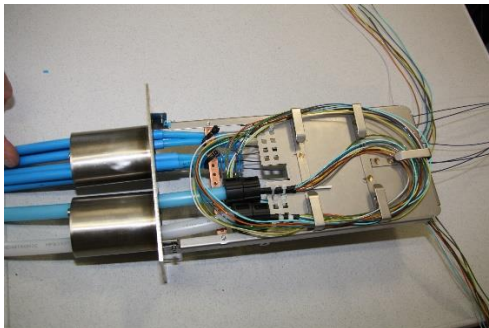
Push the fiber tubes of the cables and the microducts that protect the cables through the holes in the mechanical cable gland.

Install the gaskets at the ends of the microducts.



Push the mechanical cable gland with microducts and cables inside the oval grommet.

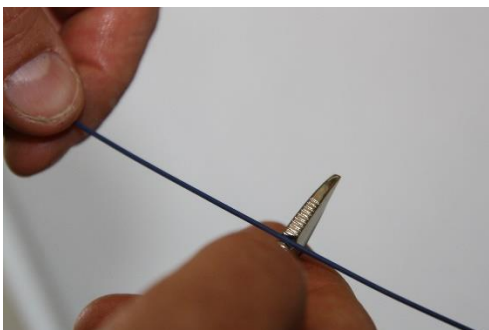
Push the mechanical cable gland with microducts and cables inside the oval grommet of the joint closure to a depth of 5–15 mm and tighten the screws enough to hold the mechanical cable gland in place.



Route the FTTH cables directly on to the splice tray.

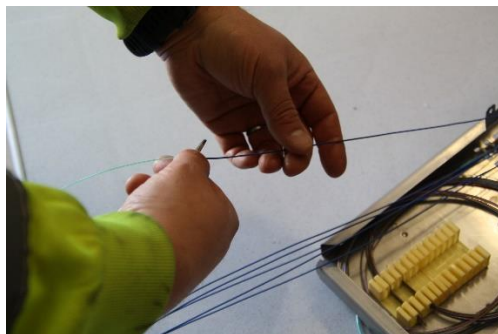
Add subscriber IDs to FTTH cables at the root of gaskets.

Attach the microduct with cable ties to the mounting rail.

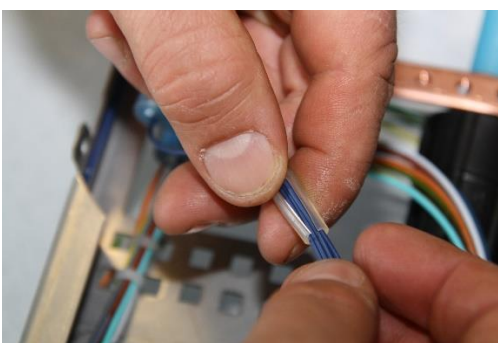
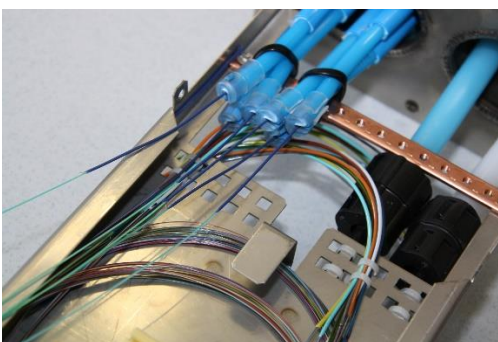
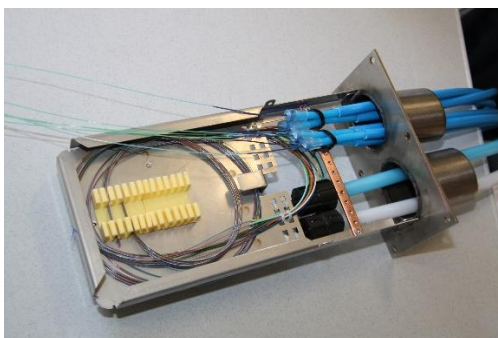


Peel the FTTH cables.

Instructions for peeling FTTH microcables from different manufacturers are usually available from manufacturers' website. The images show Hexatronic FTTH microduct cables and a scissor-shaped peeling tool supplied by Hexatronic.



Peeling of FTTH microduct cable.

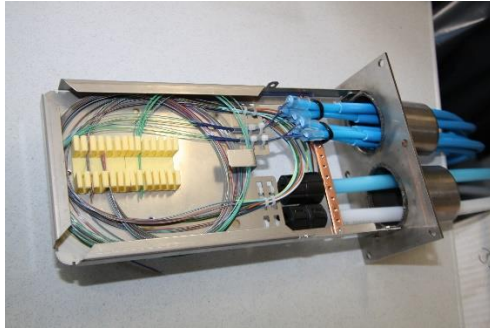


If fiber bundles with an outer diameter of about 1 mm are brought into the closure, thread a short silicone tube into the cables to protect the fibers from being compressed by cable tie.

Attach the cable bundles to the splice tray.



### Installing and placing the spliced fibers on the splicing tray and closing the closure



Place the fibers of the backbone and subscriber cables on the splice tray and cut off the extra lengths of the fibers.

Splice the fibers.

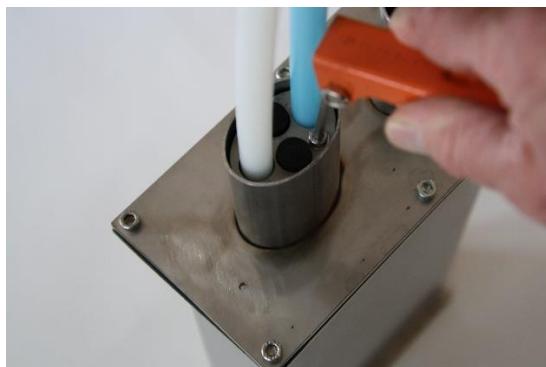
Add the necessary markings to the splice tray or trays.

Before closing the joint closure, attach the silica gel bag in the equipment bag to the mounting rail of the closure.



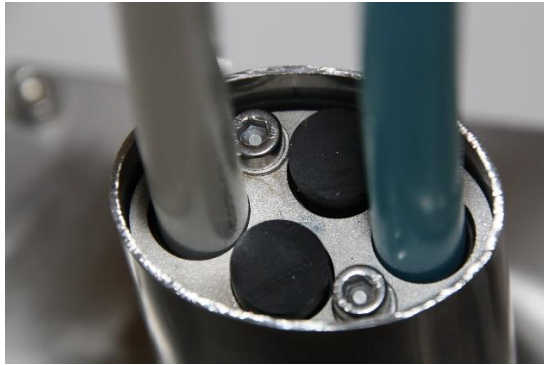
Close the joint closure.

If you use a cordless drill or a cordless screwdriver to tighten the screws, then finally use a hand tool to make sure that the joint closure is properly closed.



Tighten the screws of the mechanical cable gland evenly, i.e., first each one until they tighten a little. Also check that the grommet is straight.

After this, do the final tightening but avoid over-tightening the screws.



Suitable tightening is when a little sealing material appears around the microducts and at the edges of the oval shaped pass-trough.