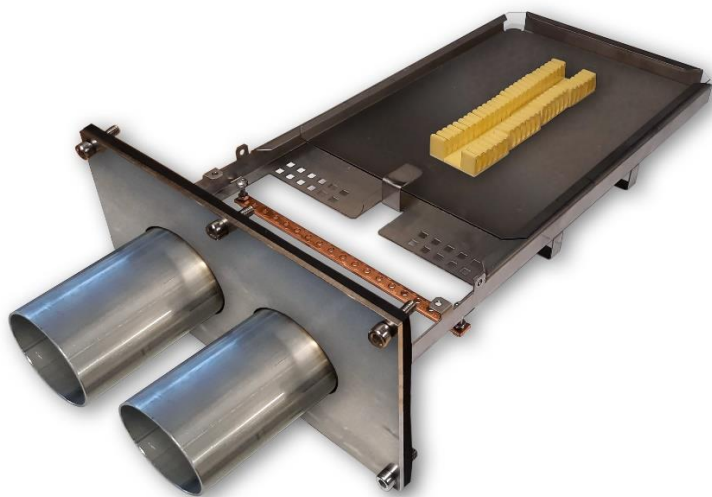


NAF general joint closure 96/192 Installation instruction



Introduction

NAF GJC 96/192 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 96 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.
- External dimensions 498 x 235 x 125 mm
- Material is acid-proof stainless steel.
- IP 68. Designed and manufactured in Finland.
- Product code with cable shrinks 7269477 and without shrinks 7269482.

The materials included in the joint closure with cable shrinks:

- Protective cover and flange with oval pass-throughs
- Screw-on splice tray including four 24-fiber splice holders.
- Cable shrinks 56/16 – 250 mm, 2 pcs
- Heat-shrink cap 56/26 – 125 mm, 1 pc
- Equipment bag:
 - o Branch block, 2 pcs
 - o Extra 24-fiber splice holder, 1 pc
 - o Grounding connectors, 8 pcs
 - o Fixing screws, 16 pcs
 - o Grounding connector M6-16 mm², 1 pc
 - o Grounding wire with connector, 2 pcs
 - o Corrugated arc clips, 2 pcs
 - o Cable ties 2x100 mm, 12 pcs
 - o Cleaning wipe, 1 pc
 - o Silica gel bag 25 g, 1 pc

The installation of direct buried cables to the joint closure

Preparation of cables for joint closure installation

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

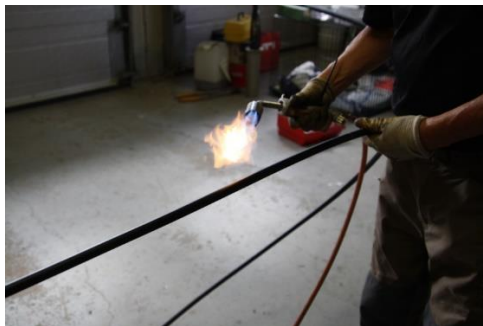
If you are installing FTTH cables with central tube structure like FYO2PMU, FYO2PMU Mini or FYO2RMU 3,5 kN **DO NOT CUT THE CENTRAL TUBES at this point!**

The peeling lengths for different cable types are as follows:

- Backbone cables: The length to be peeled is 200 cm in direct joints, regardless of the cable type.
- FTTH cables: The length to be peeled is 120 cm regardless of the cable type.
- Mid span access to backbone cables: : The length to be peeled is 400 cm regardless of the cable type.

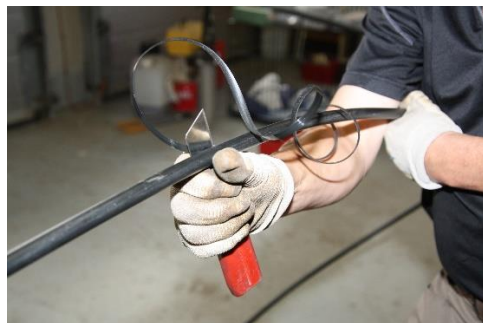
Peel the cables.

Instructions for peeling different types of direct buried cables can be found on the cable manufacturers' websites, but here are a few points for stripping cables. In addition, a few instructions for joint closure installation are included.



The peeling of FZVD2PMU Flex direct buried cable.

Clean the cable from any dirt and heat the cable sheath over the entire length to be peeled. This makes peeling easier, as the cable sheath material is HDPE, which is harder material than the LDPE traditionally used in outdoor cables.



If cables with corrugated steel plates and steel wires are installed (FYOVD2PMU, FZVD2PMU Flex, FYMVD2PMU-FT), peel the cable sheath along the entire peeling length from the grooves on the steel wires, or for about 30 cm from the beginning of the peeling point.



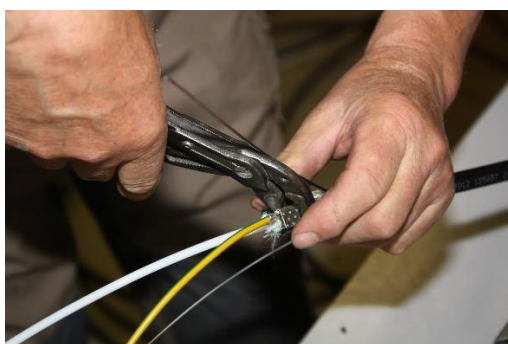
Dig out the steel wires. Cut the steel wires at a length of about 10 to 15 cm.



You can split the sheath and the corrugated steel plate underneath the sheath with ST-OCS splitting tool. In this case, with the blade of the splitting tool, the sheathing is split from the grooves of the steel wires. This should be done on each side.



Bend the cable slightly to separate the halves of the cable at the peeling point. Pull the cable halves apart while taking care not to damage the fiber tubes. Cut off the halves of the sheath so that the remaining pieces are about 3 cm long. Cut off the reinforcements under the sheathing.



Scrape off the white ribbon under the armoring from one of the sheath halves and the plastic layer on the surface of the armoring.

Flatten the end of the cable sheath with pliers and squeeze the connector of the grounding wire onto that half of the sheath

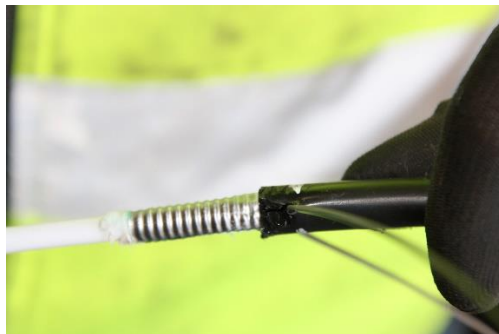


Protect the connector of the grounding wire with insulation tape. After that squeeze the sheath halves against each other and tape them together.



Another method of peeling is to split the sheathing with a knife from the grooves of the steel wires at a length of about 20 cm.

N.B. In this case, only the outer sheath of the cable is split, but the steel plate under the sheathing should remain intact.

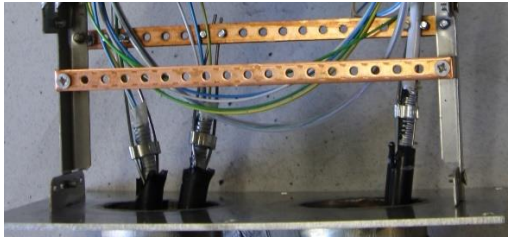


Heat the sheath, starting from the point where the cable is peeled, at a length of about 10 cm, and remove the halves of the sheathing from the corrugated steel plate. Cut off the steel damper and the reinforcements under it 3–5 cm from the starting point of peeling. Pull the sheath away from the end of the cable.

Before installing the cables, if necessary, change the position of the splice tray in height so that the position of the splice tray is optimal for the installation of fibers.

Carefully clean the cable sheaths from the starting points of the peelings backwards at a length of about 30 cm.

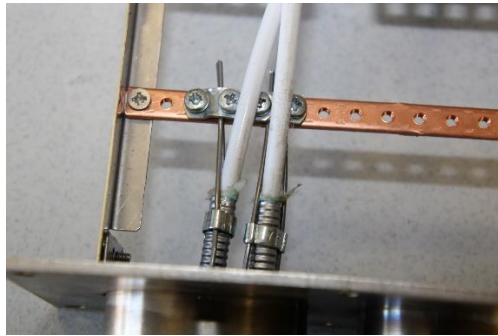
Thread a shrink or shrinks over the cables, place branch blocks at the base of the shrinks, and direct the ends of the cables inside the casing.



Attach the steel wires or central elements of the cables and grounding wires to the grounding rail of the case.

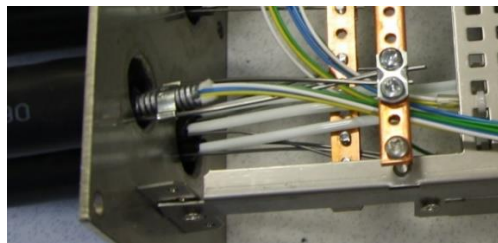
If you are installing cables with a central loose tube structure, e.g. FYO2PMU, FYO2PMU Mini, cable center tubes can be directed directly to the splice tray. Otherwise, first take the fiber tubes under the splice tray, and from there on to the splice tray.

If you are installing cables with a central loose tube structure such as FYOVD2PMU, using SPA-U installation kit, guide the fibers under the splice tray on to it.



Connect all metal parts of the cables to the mounting rail on the case.

You can connect the corrugated steel plate to the mounting rail with the help of steel wires using an Oetiker hose tensioner, using a grounding wire or a corrugated arc fastener.



The corrugated steel sheath of the FZVD2PMU Flex cable is connected to the grounding rail with the help of an Oetiker hose clamp. It connects the steel sheath and the wires. The Wires are then connected to the grounding rail.



Heat the shrinks into place, starting the heating from the flange of the joint closure.

Once you have completed the shrinkage along the length of the pass-throughs, stop heating and wait for the shrinks to cool off.

If you shrink continuously, the shrinks will start to drain off the pass-throughs.



Finally, check that glue is visible and evenly distributed from the ends of the shrinks and the branch block. If the glue is not evenly visible at the end of the shrink, the shrinkage is poorly done!

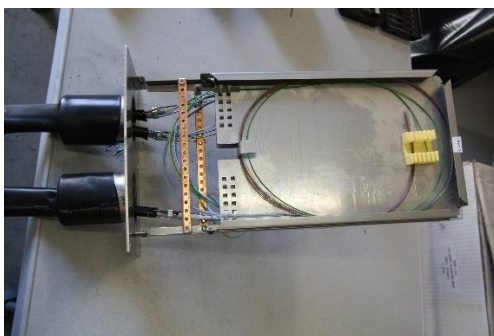


You cannot bring only one cable through the oval pass-through if you are using heat-shrinks. A short piece of another cable must be placed beside the cable. A heat-shrink cap must be placed at the end of the short cable, so that water can't get through.

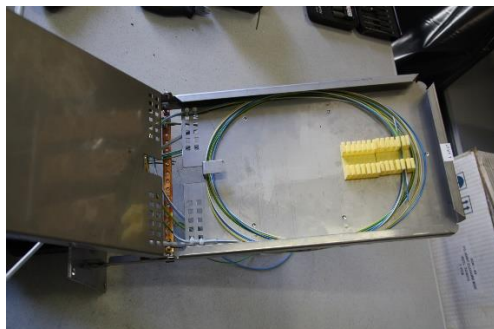


Tie the cables leaving the pass-throughs together on the outside of the shrinks with cable ties, and a little further away, tie all the cables into a single bundle to avoid any damage to the pass-throughs when handling the cables.

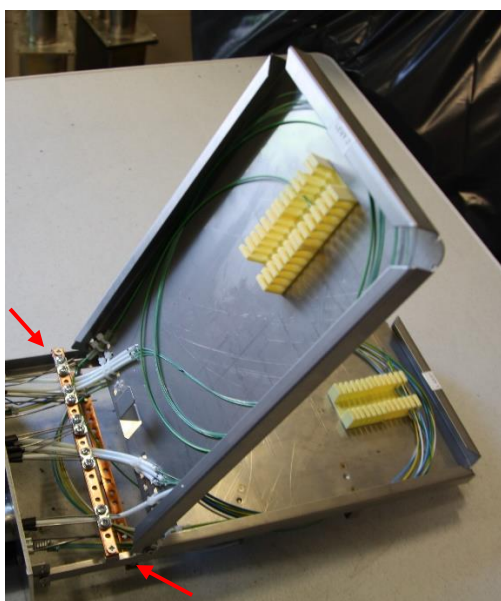
Peel the fiber tubes brought onto the splice tray or trays, clean the fibers thoroughly from gel and attach the fiber tubes to the splice tray or trays.



Lay out the fibers on the splice tray and cut off their excess lengths.



If the joint closure you are using has two splice trays, always place the direct extensions on the lower splice tray and the fibers to be branched on the upper splice tray.

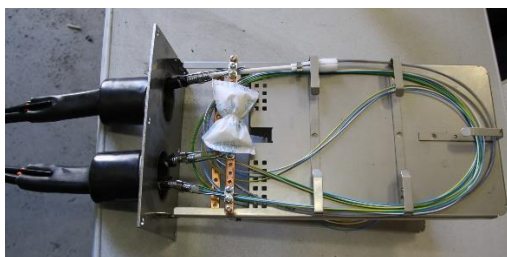


When there are two splice trays in the joint closure, you can rotate and lock the upper tray in an upright position when handling or splicing the fibers on the lower splice tray.

You can lock the upper splice tray by tightening the screws

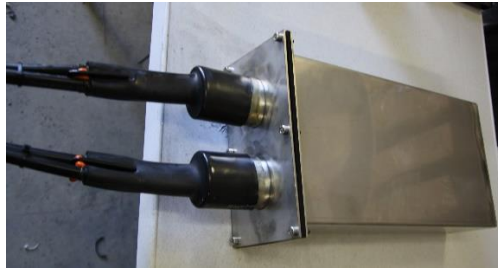
Splice the fibers.

Add the necessary markings to the splice tray(s).



Before closing the joint closure, attach the silica gel to the ground rail of the closure.

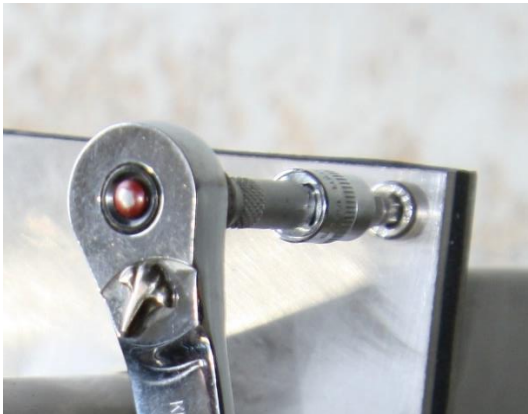
In the picture can be seen fiber tubes of a multi loose tube cable and fibers of a central loose tube cable in a SPA-U installation kit. They are taken from under the splice tray on to it.



Close the joint closure.



Attach the grounding connector under one of the screws in the case.



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.