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Installation instructions for Joint Closure NC-450 OPGW 48F



Joint closure with accessories.



Joint closure installed.

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Features

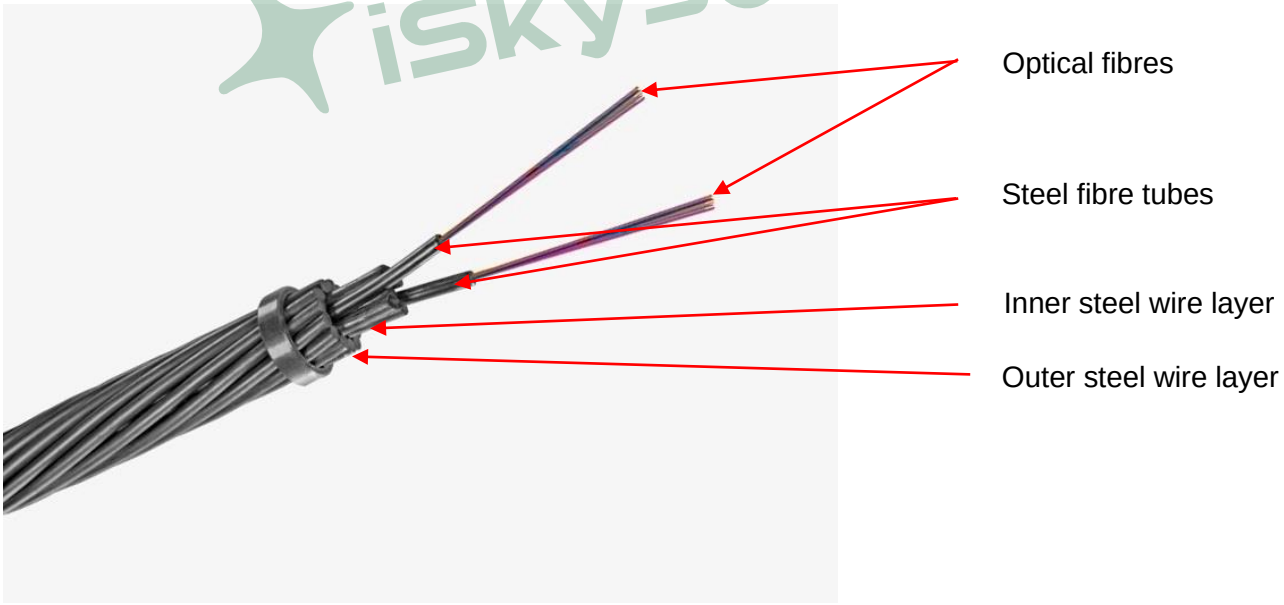
- Design based on NC-450 48F joint closure
- Suitable for jointing and splitting different type of OPGW cables
- Including three inlets for OPGW cables and one inlet with 23 mm inner diameter for duct cables and direct buried cables
- Capacity for splicing up to 48 fibres
- Size: 450 x Ø 115 mm

Accessories

- Heat-shrinkable sleeves (48/12 mm, 34/8 mm and 20/6 mm) for sealing cable inlets
- Heat-shrinkable plugs (25/8 mm) for sealing unused cable inlets
- Steel cable tie 5 x 200 mm
- Corrugated cable clamps
- Protective tube Ø 6/4 mm
- Hose clamps 7-9 mm
- Splice sleeve holders for 48 splice protection sleeves
- Pack of silica gel for moisture absorption
- Cleaning tissue
- Sandpaper P120 200x250 mm
- Pole/wall bracket NC-450

OPGW (OPtical Ground Wire)

- Example OPGW cable structure



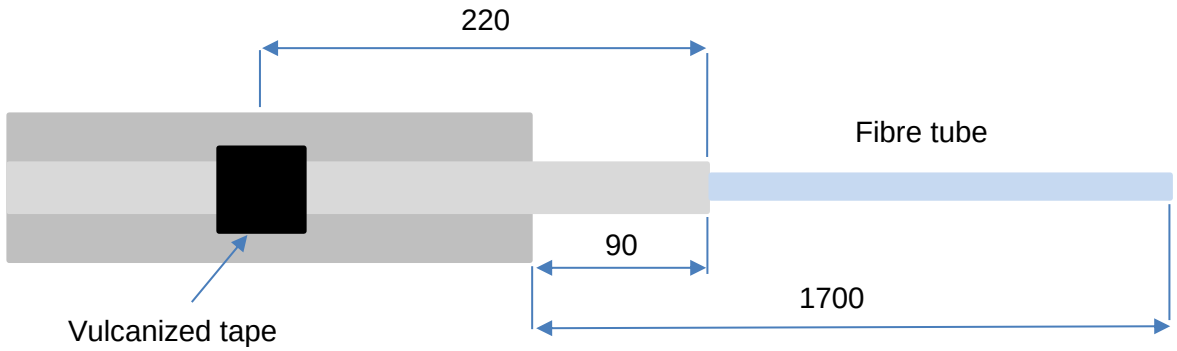
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Step-by-step installation

- Start cable preparation by putting both biggest and smallest heat-shrinkable sleeves into the OPGW cables.
- Strip the OPGW cable according instructions below:



Bind outer steel wires together by using tape approximately 600 mm from the end of the wires and then open the stranding of the wires. Bend outer layer wires apart from the inner layer wires.

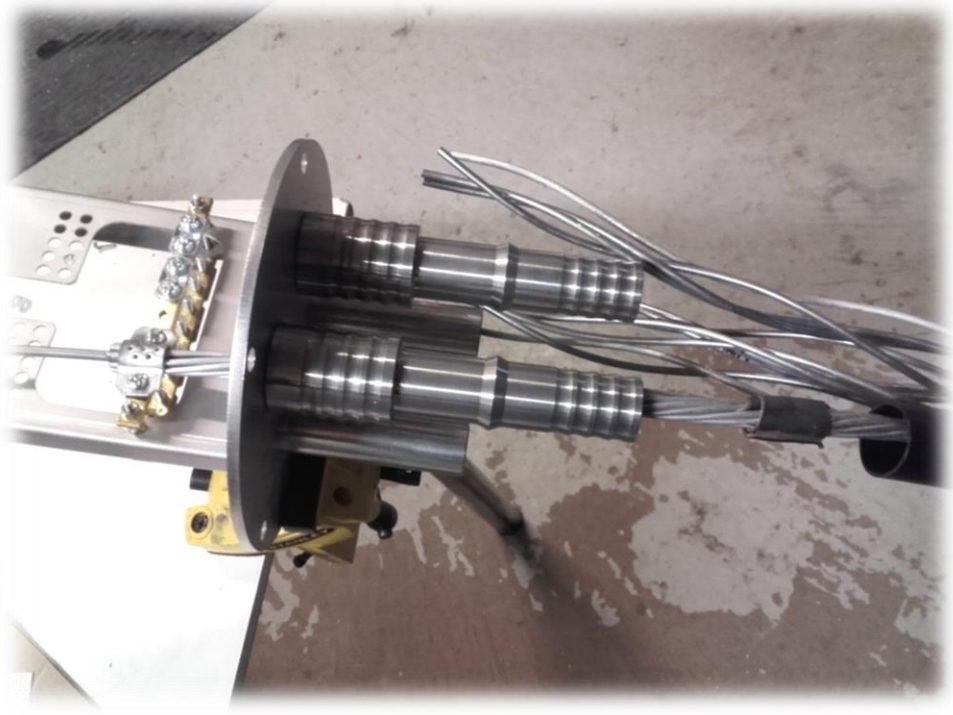
Put a narrow strip of vulcanized tape one turn at approximately 220 mm distance back from the inner layer wires. Please note that the vulcanized tape is not yet included in the accessories of the joint closure.

Push the OPGW fibre tube and the inner layer wires inside the joint closure so far that the wires reach the grounding and mounting bar below the splice tray. Attach the inner layer wires to the grounding and mounting bar wit the corrugated cable clamp provided with the joint closure.

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Install the smaller heat-shrinkable sleeve to it's place. First end of the sleeve should reach the fist protrusion of the OPGW inlet in the joint closure and another end over the previously installed vulcanized tape. When the heat-shrinkable sleeve is heated, the vulcanized tape below melts onto the wires of the inner layer preventing water and moisture getting inside the joint closure.



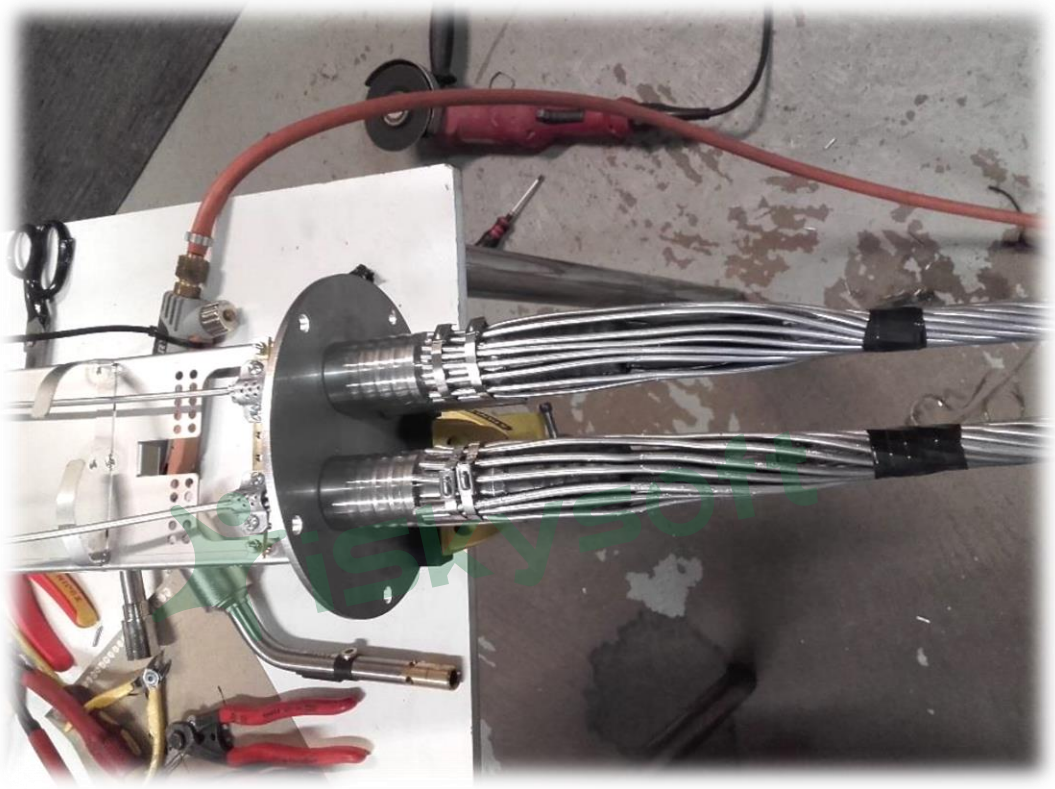
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Bend the outer layer wires as evenly as possible over the inlet and lock them with the steel cable ties provided with the joint closure. If the measuring of the wires have been done successfully, the ends of the wires will touch the inner protrusion of the inlet.

Tighten and cut the wires preferably with a special tool, as it can be used to both tighten the wires properly and cut them nicely close of the steel cable ties. If such a tool is not available, it is necessary to bend wire ends against the inlet to avoid breaking the heat-shrinkable sleeve that will be installed on them.



Outer wire layer locked to the inlet.

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Install the outer heat-shrinkable sleeves.



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Seal unused cable inlets carefully by using 25/8mm heat-shrinkable plugs.

Cut the OPGW fibre tube located below the splice tray by using a special tool and bend the outer part of the tube. When fibre tube breaks, pull the cut part out of the OPGW tube gently and straightly out to prevent the fibers touching sharp edges of the OPGW tube ends.

Clean the fibers carefully by using solvent detergent, like Solmaster TL-2 or similar.

Insert the fibers into the Ø 6/4 mm protective tube provided with the joint closure. Be careful and ensure that the fibres are not touching sharp edges of the OPGW tube ends.

Push the protective tube onto the OPGW tube at 2-3 cm length and lock the protective tube to the OPGW steel tube with the hose clamp provided with the joint closure. The length of the protective tube is 70 cm and it's already adapted for this purpose, so it does not need cutting or measuring before installation.

Guide the another end of the protective tube to the top of the splice tray and fasten it by using cable ties.

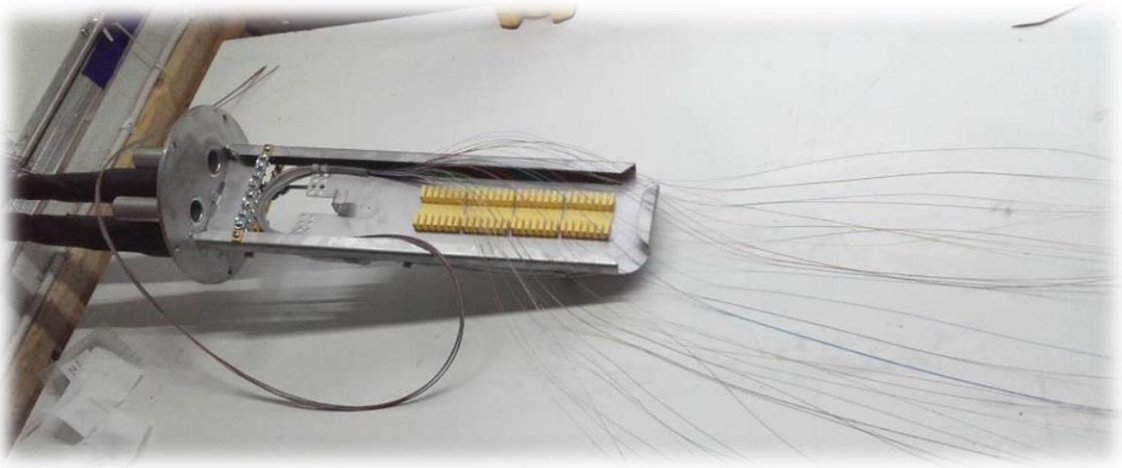


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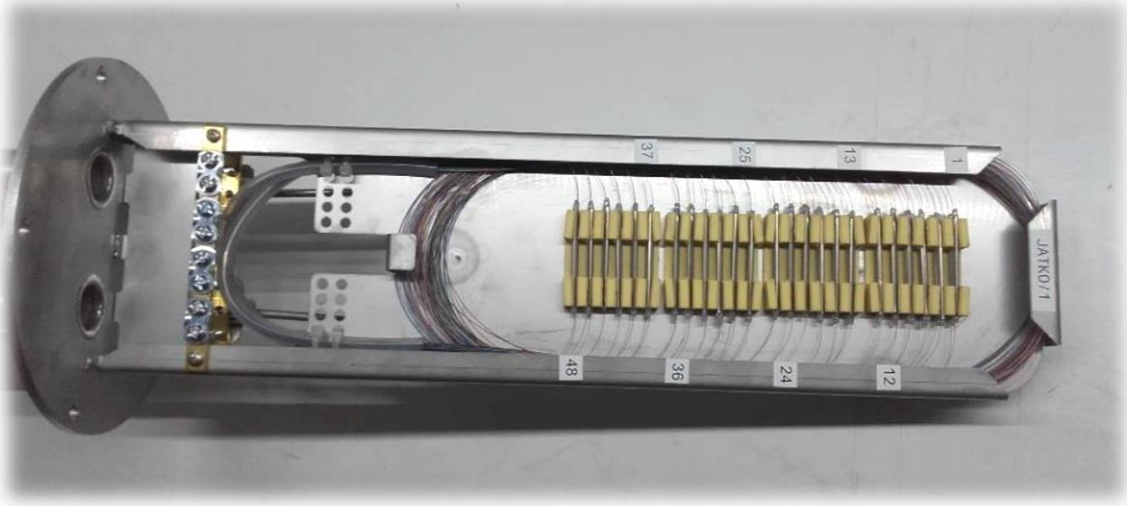
Arrange the splice sleeve holders provided with the joint closure to the suitable locations. Separate fibre groups from each other and make sure that fibers are clean before splicing them.



Measure the fibers in groups on the splice tray so that each group makes one round on the splice tray by following it's edges and then guide fibers to the splice sleeve holder in accordance with the color coding.

Splice fibers in groups by using fusion splicing machine. After splicing each group, guide fibers on the splice tray and insert splice protection sleeves to the splice sleeve holders carefully in accordance with the color coding.

Add cable and fibre information to the splice tray.



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Put a pack of silica gel in the joint closure and push splice tray into closure so that the pack of silica gel remains below the splice tray.

Close the joint closure and tighten the bolts using moderate force. Make sure that the flange is properly sealed.

Install the joint closure to desired location by using the pole/wall bracket.



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