

OPTOTEC <i>NTET Group</i>	Tipo documento <i>Document Type</i>	Numero-Rev: O.IO.IA.0102-01	
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NGB1



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1 INTRODUCTION

FOCUS NGB line, designed with simple and innovative design appealing and linear look, properly to PON and FTTH needs. Reliable and able to match the highest international quality standard (IEC 61753) in order to operate in C (controlled) – G (outside) – A (aerial) categories. Suitable both for internal (buildings, technical rooms...) and external application (wall, pole, cabinet, pedestal...), they can be used in dust and water presence. The full selection of available accessories allows the management of different types of cables and fibers (G.652 and G.657 standards), besides the possibility to obtain different versions for splicing only or both patch and splice. By using FOCUS SAM modules it is possible to match different splice capacity, applying both mechanical (FIBERCLIP) and heat-shrinkable (FIBERTERM) splice protections. FOCUS NGB series is featured by a variety of lock security systems against accidental or unauthorized openings. NGB1 box is supplied with latch assembly only (default). Triangular key or hex key or metallic key lock systems available upon request.

APPLICATION

Access network subscriber termination
 Optical distribution premises box
 TLC - FTTH - PON networks

TECHNICAL FEATURES

Reliable – international standards
 Multifunctional – patch, splice or both
 Compact – highest performance in minimum space
 Multitasking – internal and external application
 Easy installation – simple and with a full accessories' selection
 Flexible – customized
 Approachable - costs/benefits

NGB1 size (mm):

- Width: 165
- Height: 255
- Depth: 110



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2 KIT CONTENT

The splice only box in the NGB1 SL versions allow to splice a high fiber amount in a small space. Compact, functional, quick and easy to install, they represent the safest and most versatile solution in the FTTX networks. There are two version of this NGB size1, one with Storage Loop for midspan uncut cable and the other without. A full accessories set for the management of the input and output optical cables is available.

2.1 NGB1-SL (with area for uncut cable loop)

NGB1-SL-72H

NGB Box - size 1 - SPLICE and cable LOOP space. This box includes 6 trays RHD with holder H for FIBERTERM splices - (Splices per tray: 12 - Tot. splices per box: 72)

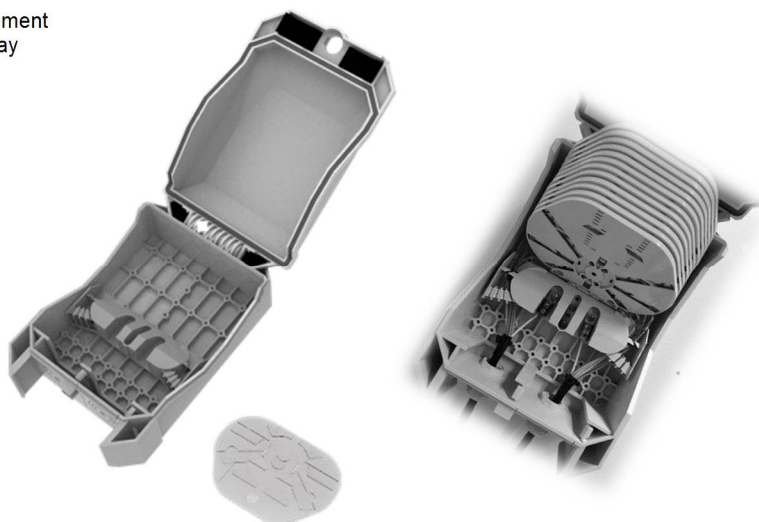
NGB1-SL-72C

NGB Box - size 1 - SPLICE and cable LOOP space. This box includes 6 trays RHD with holder C for FIBERCLIP splices - (Splices per tray: 12 - Tot. splices per box: 72)



2.2 NGB1-S

NGB Box - size 1 - SPLICE only. This box includes arrangement cable entry system and 1 Universal Cover for 1 High Density tray



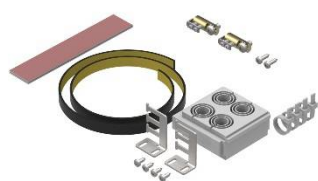
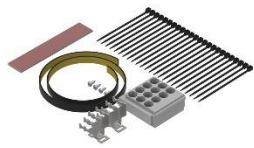
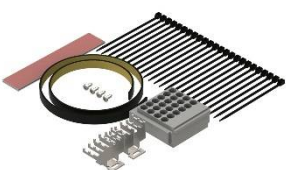
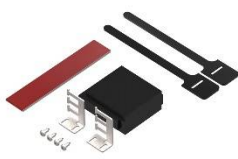
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3 OPTIONAL KIT

NGBKIT to multiple seal for many cables

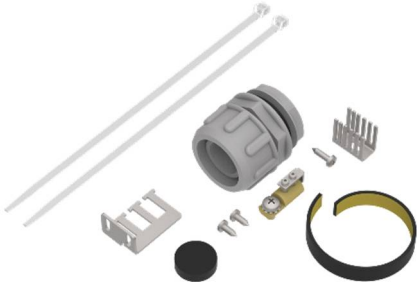
NGBKIT-PG16-6X4 CABLE GLAND PG 16 FOR 6 CABLES Ø 4 mm 	NGBKIT-PG29-4X10 CABLE GLAND PG 29 FOR 4 CABLES Ø 10 mm 
NGBKIT-PG29-2X13 CABLE GLAND PG 29 FOR 2 CABLES Ø 13 mm 	

NGBKIT devices for microcable and patchords cold sealing

NGBKIT-MCS-4X20 MULTIPLE CABLE SEAL GASKET MADE OF SILICON RUBBER FOR 4 CABLES OR 2 UNCUT CABLES Ø 20 mm 	NGBKIT-MCS-12X10 MULTIPLE CABLE SEAL GASKET MADE OF SILICON RUBBER FOR 12 CABLES Ø 10 mm 
NGBKIT-MCS-24X6 MULTIPLE CABLE SEAL GASKET MADE OF SILICON RUBBER FOR 24 CABLES Ø 6 mm 	NGBKIT-MCS-PATCHCORD BLOCK GASKET OF POLYURETHANE FOAM BLOCK 48 PATCHCORDS CAPACITY 

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NGBKIT to single seal for tube or cable

NGBKIT-CABLE CLAMP-20CC CABLE GLAND SINGLE SEAL FOR 1 CORRUGATED TUBE $\varnothing$ 20 mm 	NGBKIT-CABLE CLAMP-25CC CABLE GLAND SINGLE SEAL FOR 1 CORRUGATED TUBE $\varnothing$ 25 mm 
NGBKIT-PG21-25 TUBE CABLE GLAND PG29 SINGLE SEAL FOR 1 TUBE $\varnothing$ 25 mm 	NGBKIT-PG11-05-10 CABLE GLAND PG11 SINGLE SEAL FOR 1 CABLE $\varnothing$ 5~10 mm 
NGBKIT-PG16-10-14 CABLE GLAND PG16 SINGLE SEAL FOR 1 CABLE $\varnothing$ 10~14 mm 	NGBKIT-PG21-13-18 CABLE GLAND PG21 SINGLE SEAL FOR 1 CABLE $\varnothing$ 13~18 mm 

NGBKIT Pole Mounting Kit

NGBKIT-PMK 
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4 PRELIMINARY OPERATIONS

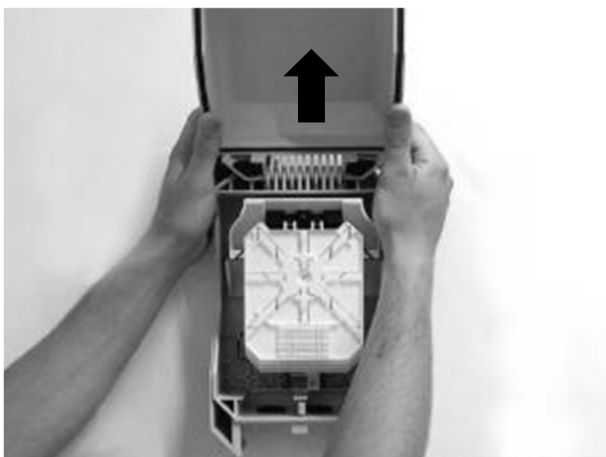
4.1 BOX OPENING



Approach the sliding latches on the cover and open the box.

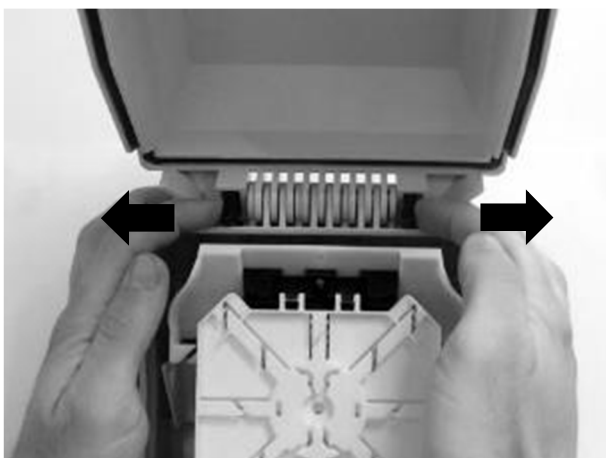


Extract the stoppers to keep open the cover.



If necessary, pull and remove the cover from the base.

4.2 BOX CLOSING



Rotate the stoppers to keep close the cover.



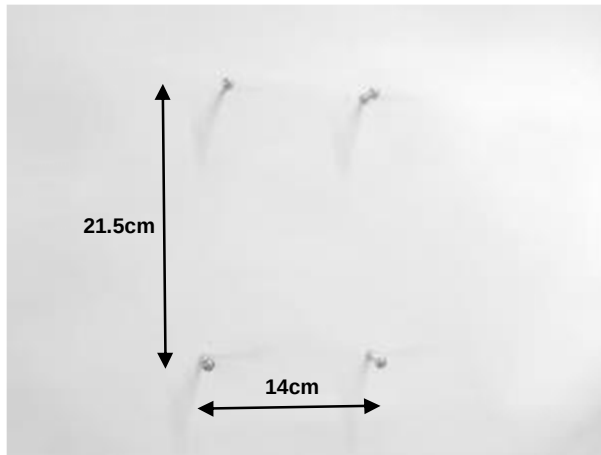
Approach the sliding latches on the cover and open the box..

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4.3 WALL MOUNTING



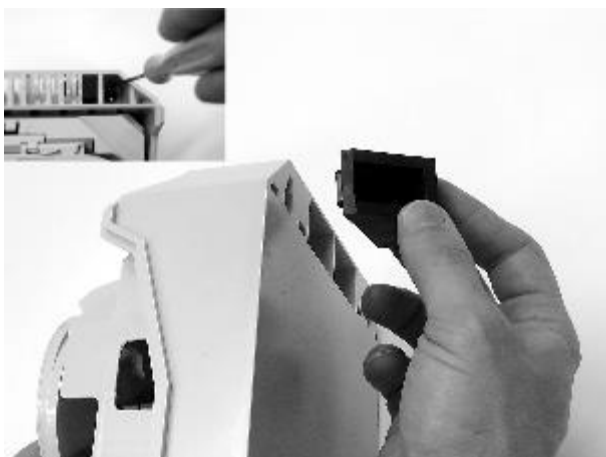
Pull and remove the cover from the base. Put the box against the wall and mark the 4 points for the holes. **Note: leave at least 30cm of free height from the top of the box necessary to open and/or remove the cover.**



Drill the wall making four $\varnothing 6$ mm holes and install the anchors.

4.4 POLE MOUNTING

NOTE: It's necessary optional kit pn. 2506810 NGBKIT-PMK Suitable for NGB1 and NGB2 boxes



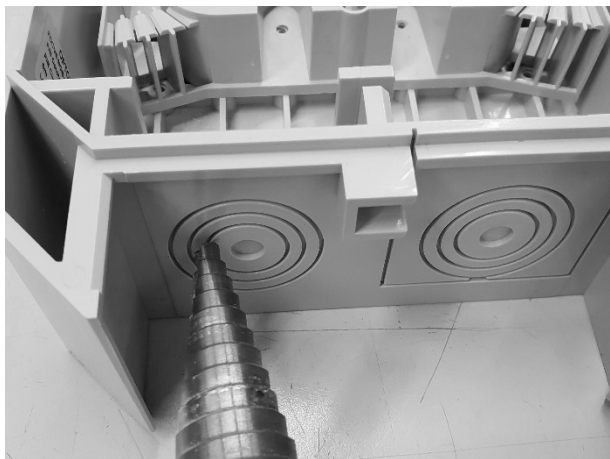
Remove cover and install 4 brackets with the screws in kit.



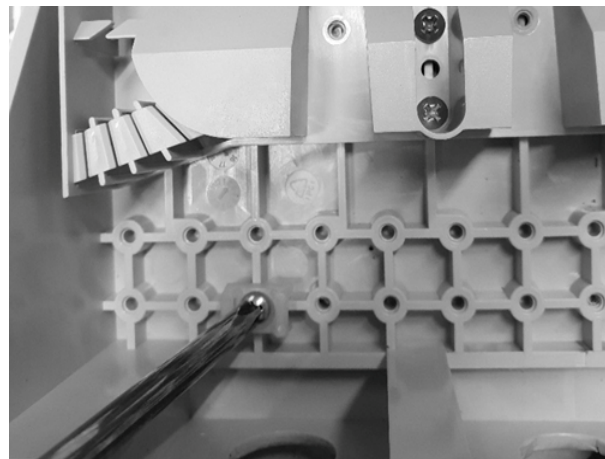
Fix on pole with tie wraps (not included). Place cover and rotate 2 stoppers to close box.

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5 SEALING KIT INSTALLATION



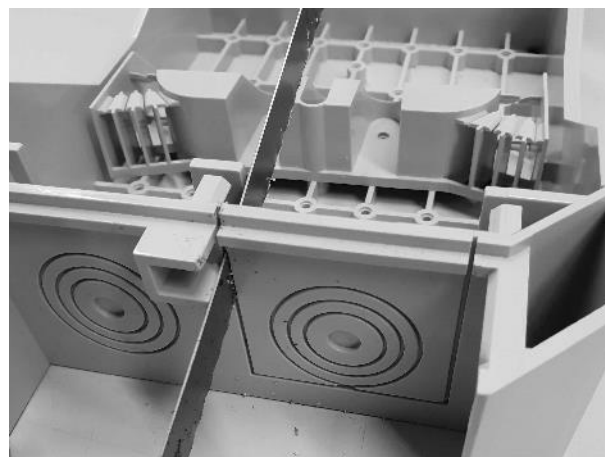
In case of **cable gland installation**, open the port choosing the appropriate diameter according with the selected PG gland. Be careful to drill the box in the right position in order to align the cable to the internal strength member/cable fixation.



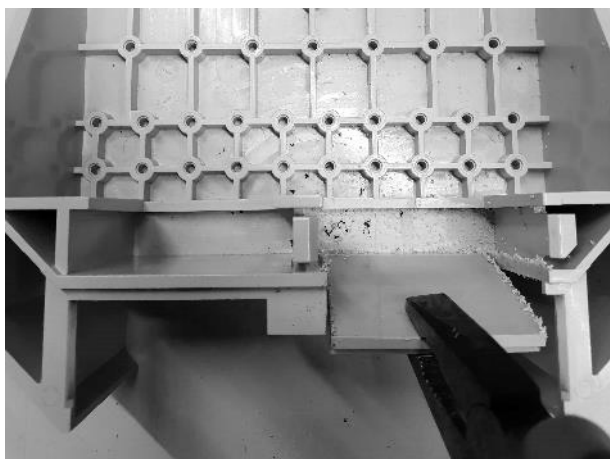
Screw the tie-wrap saddle in the illustrated position. Install the cable gland. Remove 1.30m of the cable jacket leaving 5cm of the strength member (when available). Protect the cable transition by foam and fix to the saddle by the tie-wrap.



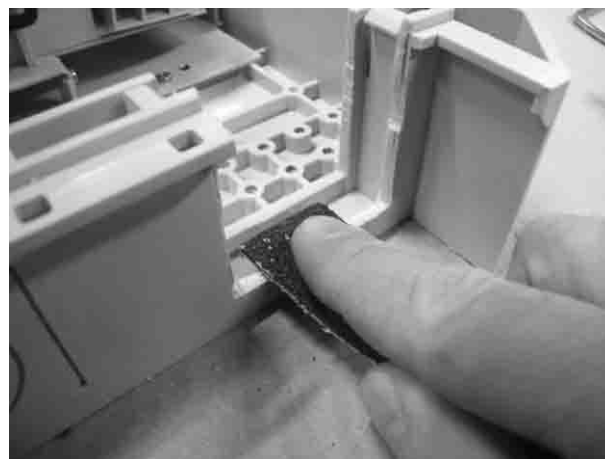
Route the fibre modules and the fibres as showed in the picture (NGB1-S). Fix the strength member (when possible) as depicted.



In case of **multi cable seal block installation**, use a hacksaw to cut the 2 vertical engravings of the rectangular port to be used.



Remove the wall of the rectangular port with the help of tongs.



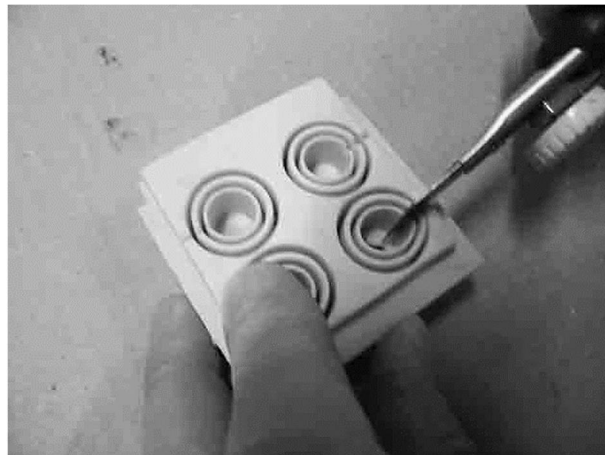
Remove sharp edges on the cutting profile using sandpaper.

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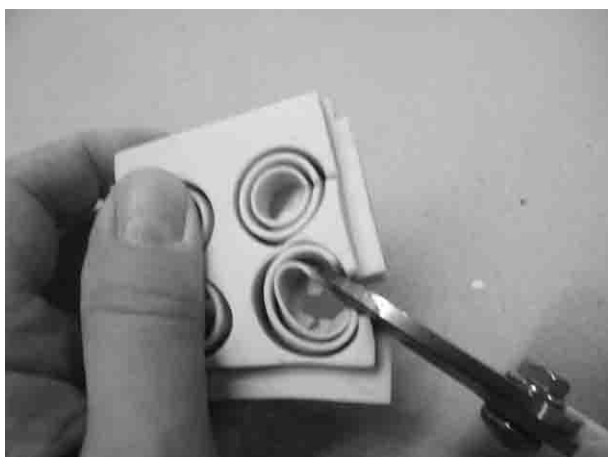
5.1 Looped cables (Only for NGB1-SL) - FOCUS-NGBKIT-MCS-4X20



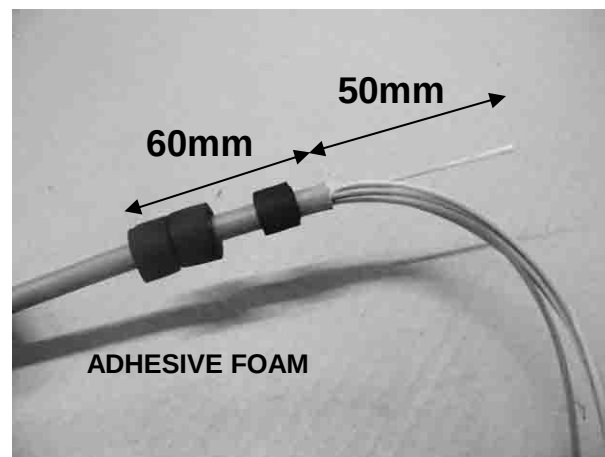
FOCUS-NGBKIT-MCS-4X20 Multi cable seal for 4 single or 1 looped cable having $\varnothing \leq 20\text{mm}$.



Cut the 2 sides of the block following the horizontal engravings. Use always the 2 ports at the bottom (1 and 2).



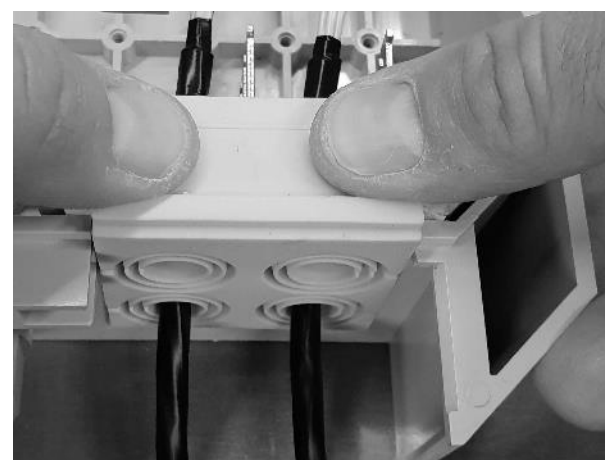
For cables with $\varnothing \leq 12\text{mm}$ cut and peel only the smaller ring. For cables with $\varnothing \leq 20\text{mm}$ cut and peel both.



The window cut needed for the installation in the box is 4m. Prepare the heads of the looped cable as shown.

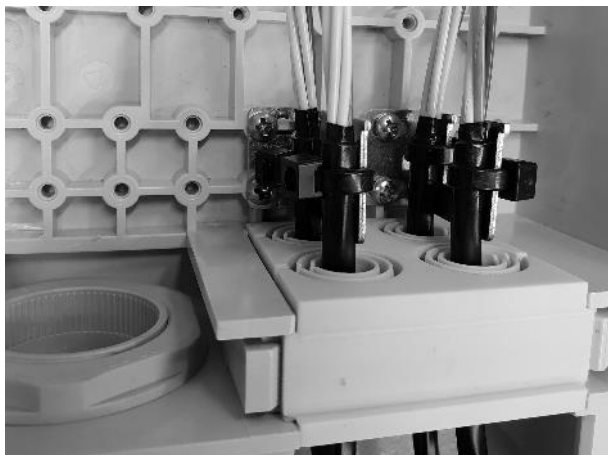


Use the foam to fill the gap between the jacket of the cable and the port of the block. Install the cable into the block.

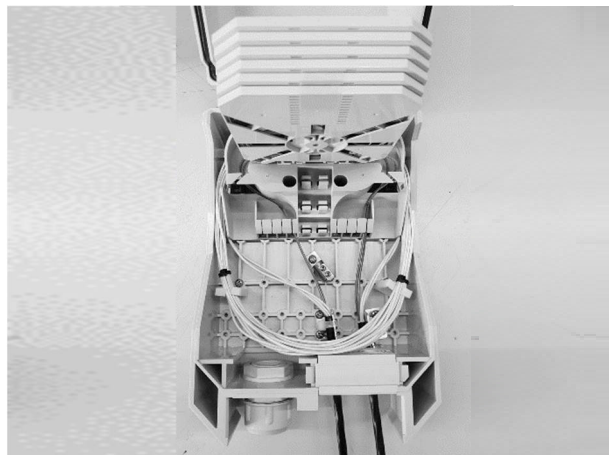


Push the block into the port of the box until the 2 lateral latches snap. If necessary, align the brackets to the cable prior to completely install the block.

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Install the strength members of the cable into the connectors and fix the cable to the brackets by foam and tie-wraps.



Identify and keep separate the tubes to be spliced. Make a loop with the rest of the tubes and bundle using tie wraps. Choose the according to the pitch of lay direction change of used cable. Window cut max 2.1 m.

5.2 Drop cables

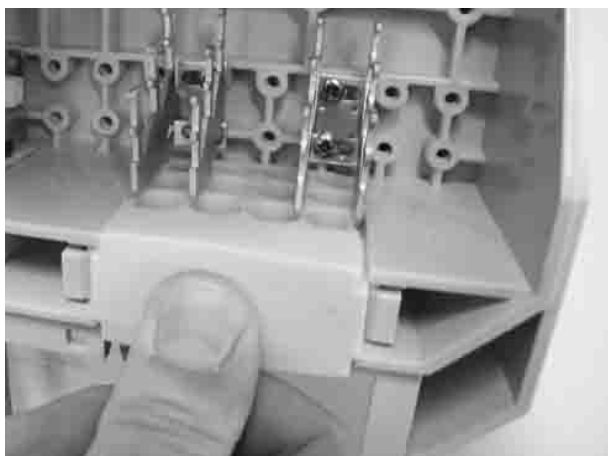
5.2.1 Drop cables - FOCUS-NGBKIT-MCS-4X20



Follow the procedure in 5.1.1. In this case it is possible to install up to four drop cables. (NGB1-S two cables only in the lower positions). Installed cables in this case shall be fixed by foam and tie-wraps only.

When remove the rings, if necessary for small cables, fill the gap among the hole of the block and the cable jacket using adhesive foam.

5.2.2 Drop cables - FOCUS-NGBKIT-MCS-12X10 (NGB1-SL only)

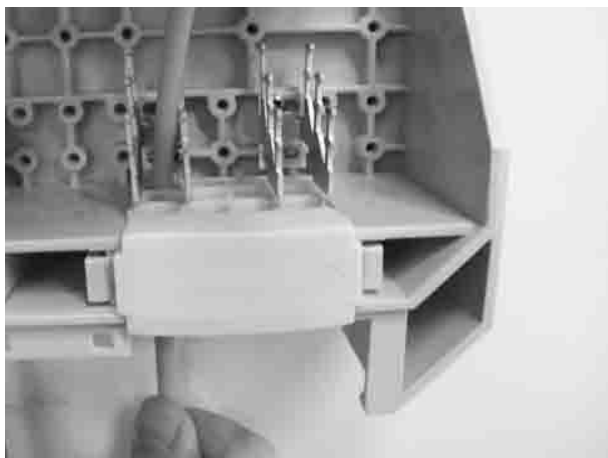


Install the 2 brackets and the block. Align the brackets so that they are tangent to the holes of the block.



Pierce the selected hole prior to install the cable. Start the installation always from the bottom of the block.

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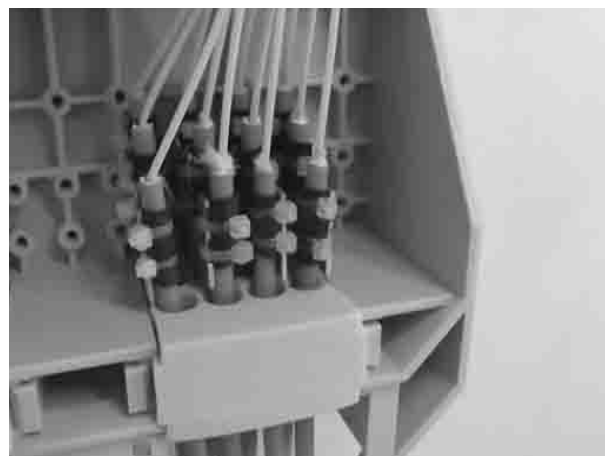
Push the cable through the hole inside the box. The required cable length for splicing is 2m.



Mark the cable at the end of the corresponding bracket. Remove the outer jacket, strength members and Kevlar.

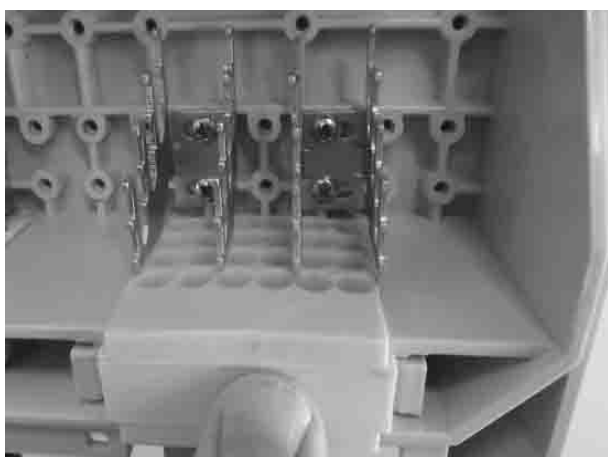


Fix the cable at the bracket using slices of foam and tie-wraps. Install the loose tubes into the tube holder.

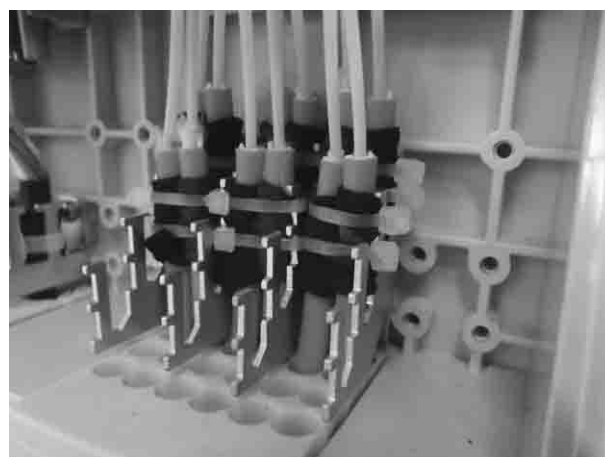


Fill the block by proceeding per rows.

5.2.3 Drop cables - FOCUS-NGBKIT-MCS-24X6 (NGB1-SL only)



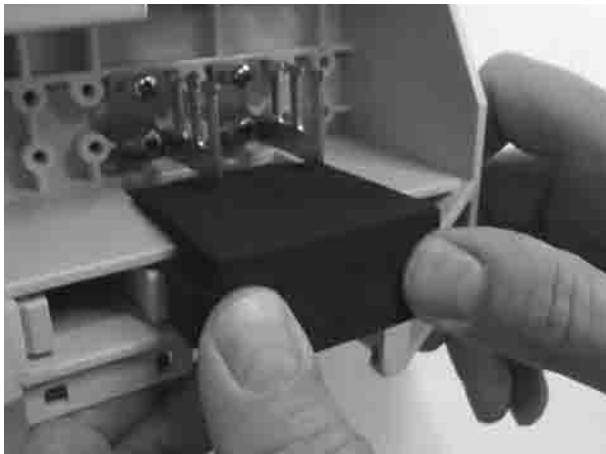
Install the 2 brackets and the block. Align the brackets so that they are tangent to the holes of the block.



Install the cables as described in the previous section.

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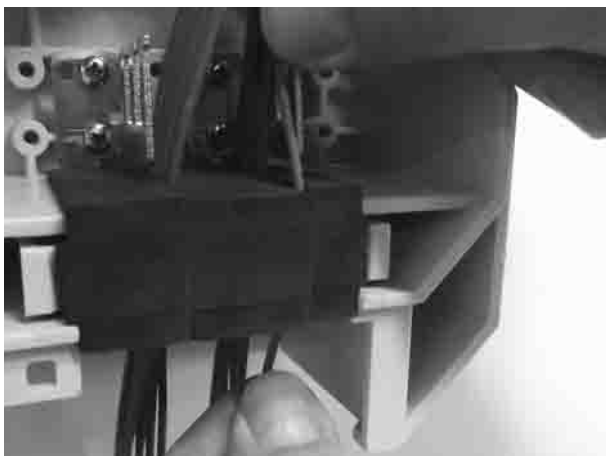
5.2.4 Drop cables - FOCUS-NGBKIT-MCS-PATCHCORD BLOCK (NGB1-SL only)



For the outgoing patchcords, install the **FOCUS-NGBKIT-MCS-PATCHCORD BLOCK**.

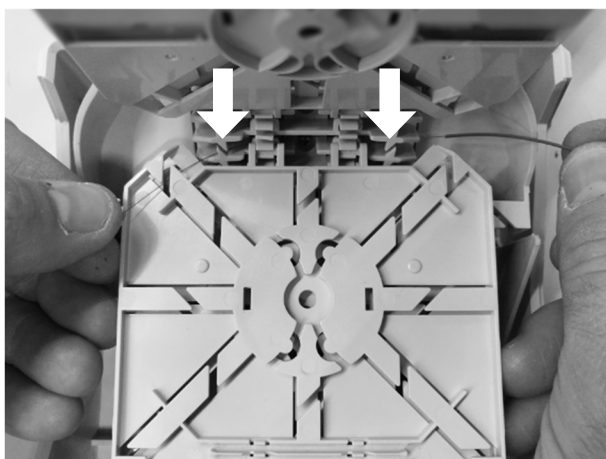


Make perpendicular cuts on the foam block following the 2 brackets.

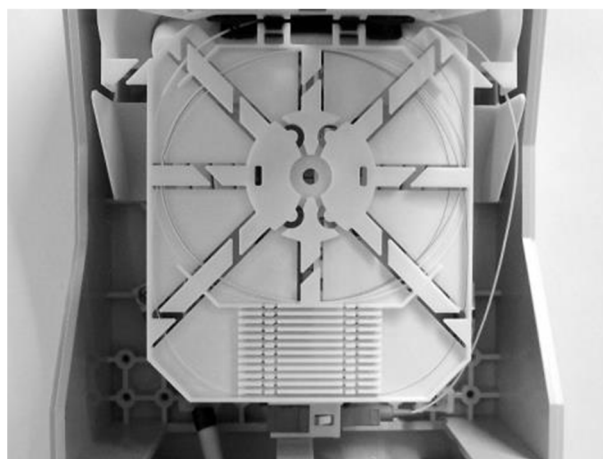


Push the patchcords through the cuts of the foam block.

6 NGB1-SL FIBRE MANAGEMENT INSTALLATION



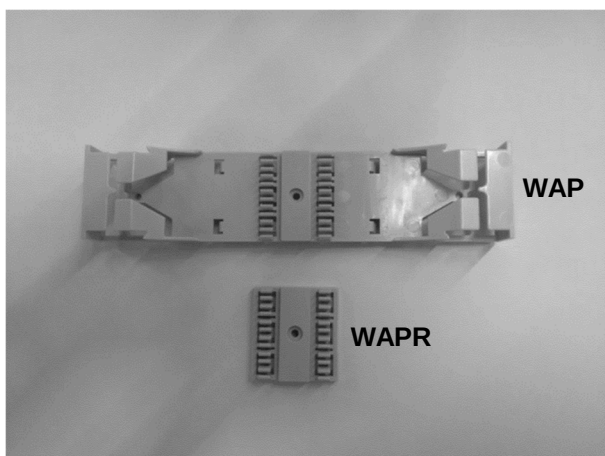
Insert the bare fiber into the channel,



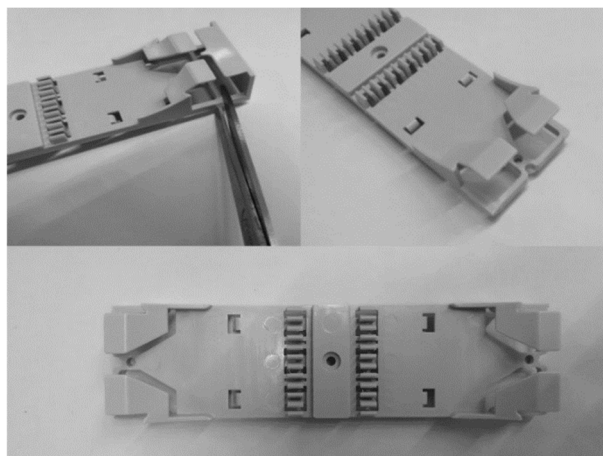
Splice the fibres and hold the splice protection.
Properly route and storage the fiber into the tray

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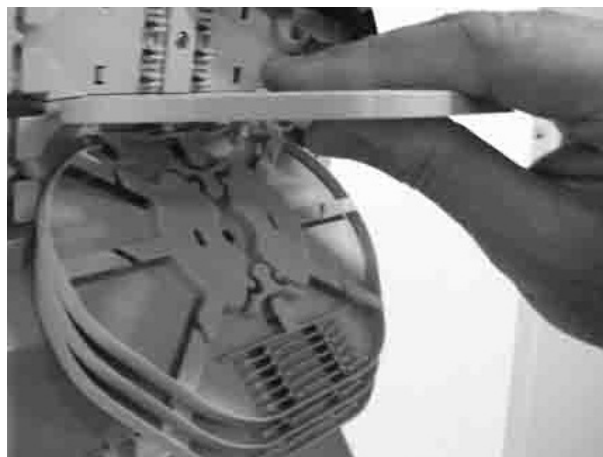
7 NGB1-S FIBRE MANAGEMENT INSTALLATION



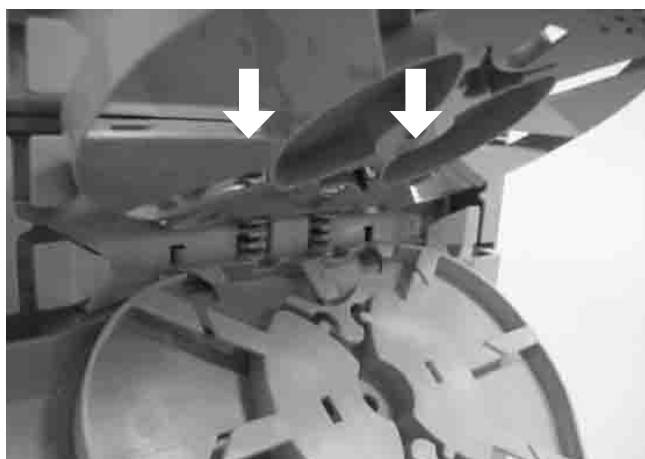
Usually order WAP-R reduced trays holder to install in NGB1-S boxes.
When needed, you can reduce a standard WAP trays holder as showed in the here above picture



Install the wraparound groove plate directly on the base of the box using the self tapping screw supplied with the box.



Place a tray in the wraparound groove plate by pushing the tray perpendicularly into the hinge until it snaps. In case of 4mm or 6mm height trays mount one organizer on each hinge.



In case of 9mm height tray mounting on groove plates leave always one hinge open between two consecutive trays.

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