

FIBRAIN FOBP

NEW CLOSURES

Numerous possibilities of network connections



PATENT PENDING

FIBRAIN 





PATENT PENDING



✓ **VARIOUS**
OPTIONS

✓ **MODULARITY**

✓ **NUMEROUS APPLICATIONS**
IN DIFFERENT WORKING
CONDITIONS

✓ **EASY AND FAST**
INSTALLATION

1.

Basic information

FOBP closure is used to make connections and protect fiber optic connections in numerous applications.

Fiber optic closures are specifically designed for connecting optic routes as well for branchings. Fibrain FOBP closure can be placed in aerial applications or wall-mounted in the manholes.

FOBP closure is available in two options:

- **thermic sealing** of cable ports
- **thermo-mechanic sealing** of cable ports

Thermic option is equipped with 4 round ports for single cables (cut) of max. diameter 20mm, 8 oval ports for single cables of max. diameter 10mm and one round port designed for uncut cables of 25mm diameter.

Thermo-mechanicooption is equipped with 2 round ports with multiple inserts for single cables (cut) of max. diameter 20mm, 8 oval ports for single cables of max. diameter 10mm and one oval port designed for uncut cables of 25mm diameter.

Maximum closure capacity is 144 fibers or 288 fiber depending on the option chosen. Therefore, there is a possibility to equip the closure with extra 9 or 18 -port adapter field. The closure can be widely used in all kinds of architecture of FTTx telecommunication system.

I. Basic information

- ✓ **Two heights of dome**
- ✓ **Two different bases**
- ✓ **Optional and additional equipment**
 - pressure relief valve
 - grounding
 - cable handles
 - commutation field
- ✓ **Temperature range:**
-40°C to +70°C
- ✓ **Housing material:**
PP strengthened with fiber glass
- ✓ **IP68 protection**





Technical specification

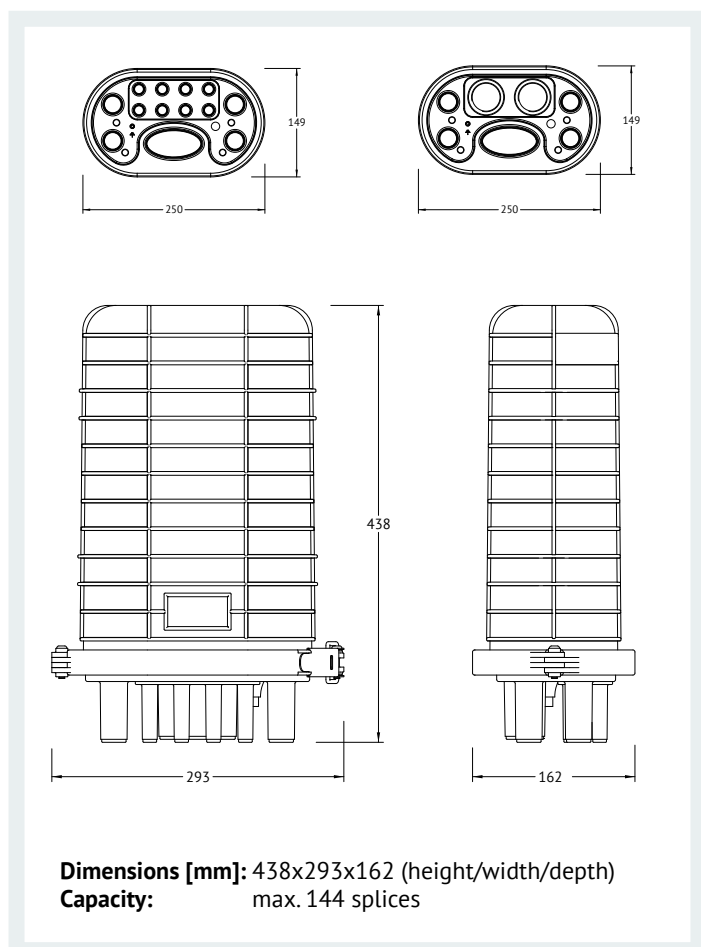
DANE TECHNICZNE	FOBP-144	FOBP-288
Max. number of fibers	144	288
Max. number of splices	144	288
Max. number of splice trays	12	24
Range of cable diameter for 4 round ports [mm]	6 – 20	
Range of cable diameter for an oval port [mm]	8 – 25	
Range of cable diameter for 8 oval ports – thermic option [mm]	3 – 10	
Range of cable diameter for 2 mechanic ports with multiple inserts - thermo-mechanical option [mm]	3-6 mm, 6-8 mm, 8-10 mm, flat cable 8.3x4.6 mm, aerial membrane insert for any diameters	
Max. number of cable entries	13*	13*
Dimensions (SxWxG) [mm]	293x438x162	293x568x162
Leakproofness of ports	thermic or thermo-machanic	thermic or thermo-machanic
Adapter panel	9x SC SX	18x SC SX
Type of entrance cables	Duct cable, aerial cables, drop cables	
IP protection	IP68	
Operating temperature	-40°C to +70°C	

* – without membrane insert

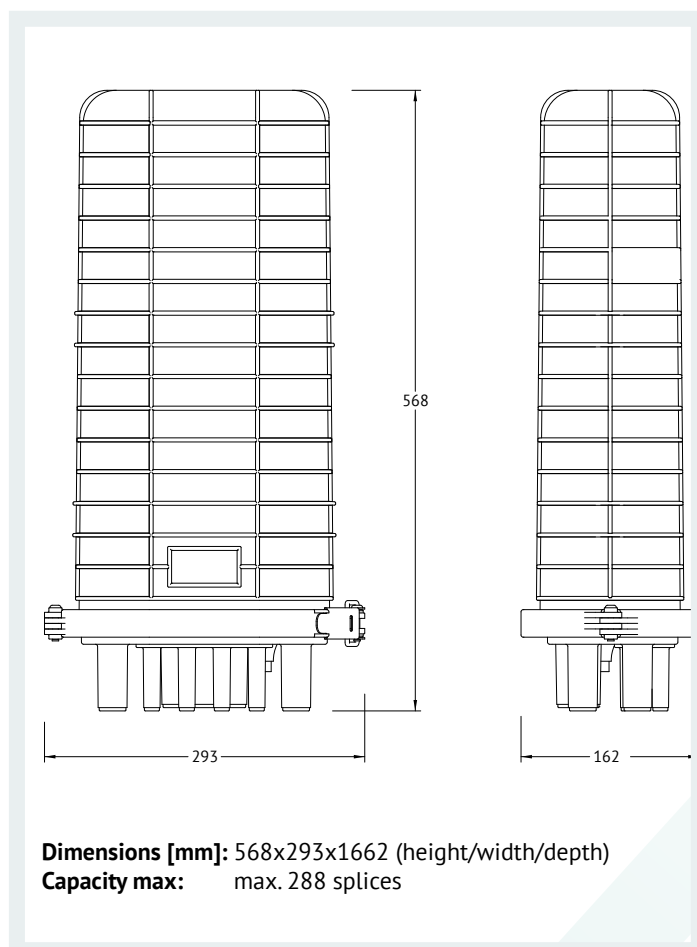


Dimensions

FOBP-144



FOBP-288



IV. Base options

THERMIC



LINE PORTS

Cable diameter: max. 20 mm (4x) + oval (1x)

CUSTOMER PORTS (8X)

Cable diameter: 3-10 mm

THERMO-MECHANIC



LINE PORTS

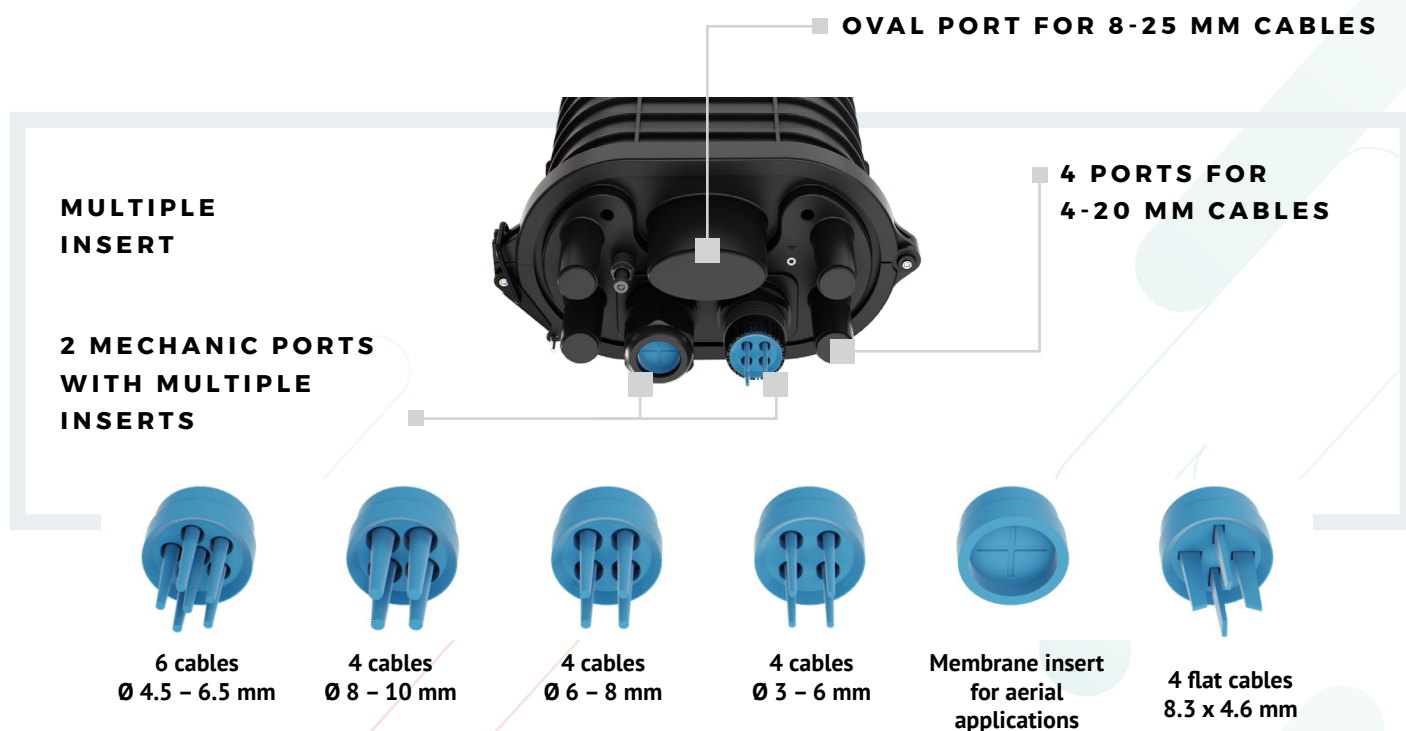
Cable diameter: max. 20 mm (4x) + oval (1x)

CUSTOMER PORTS (2X4)

Cable diameter/dimensions: 3-6, 6-8, 8-10, 8.3x4.6 mm

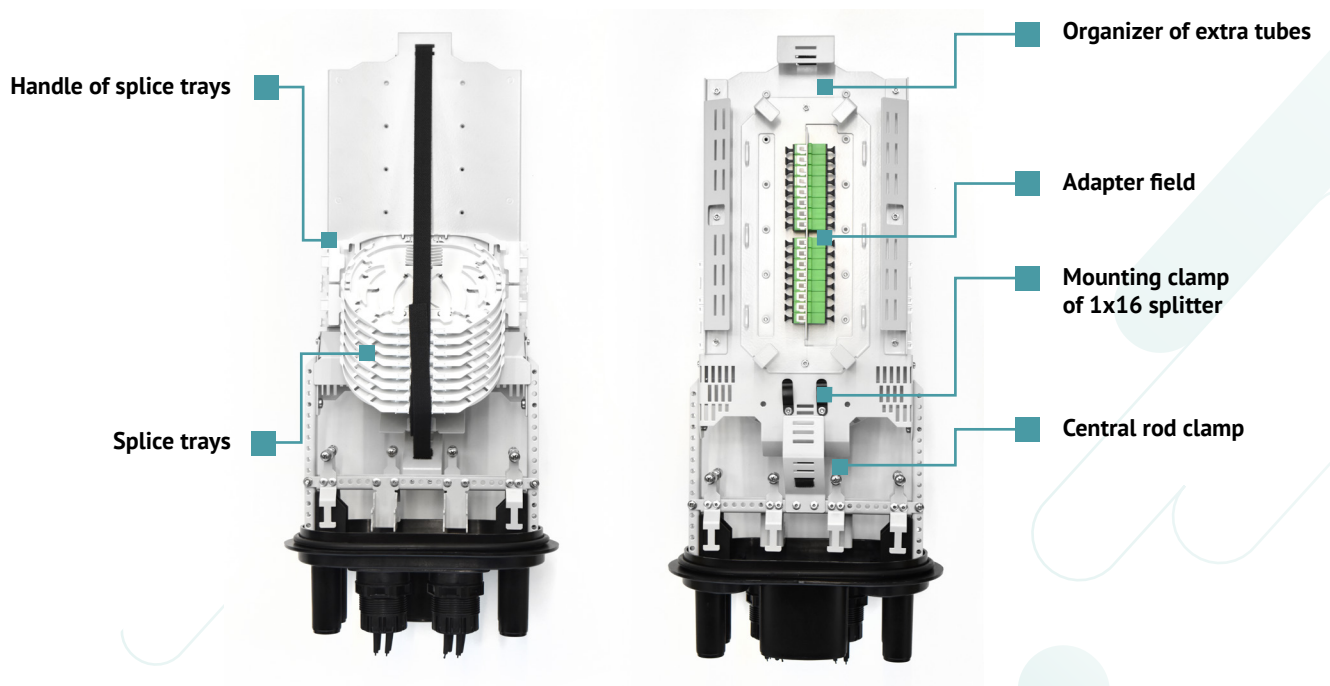
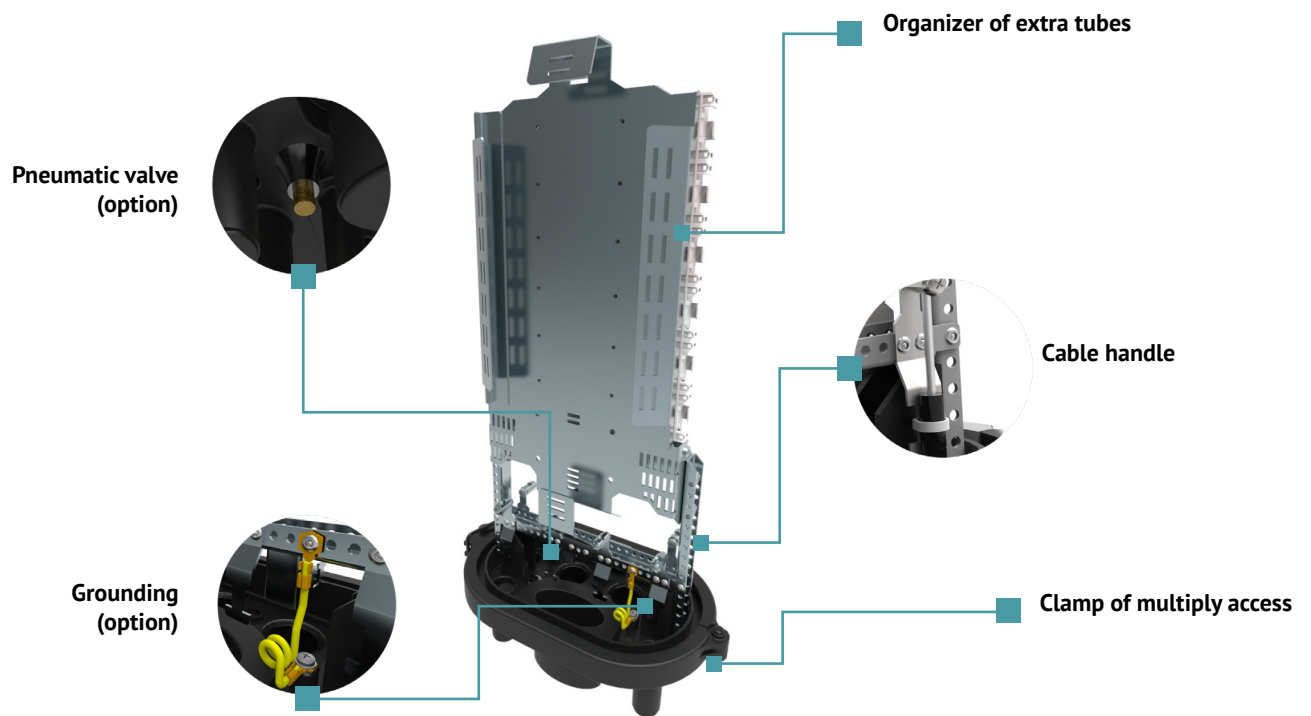
Membrane insert for various cable diameters

CABLE GROMMETS IN A THERMO-MECHANIC BASE

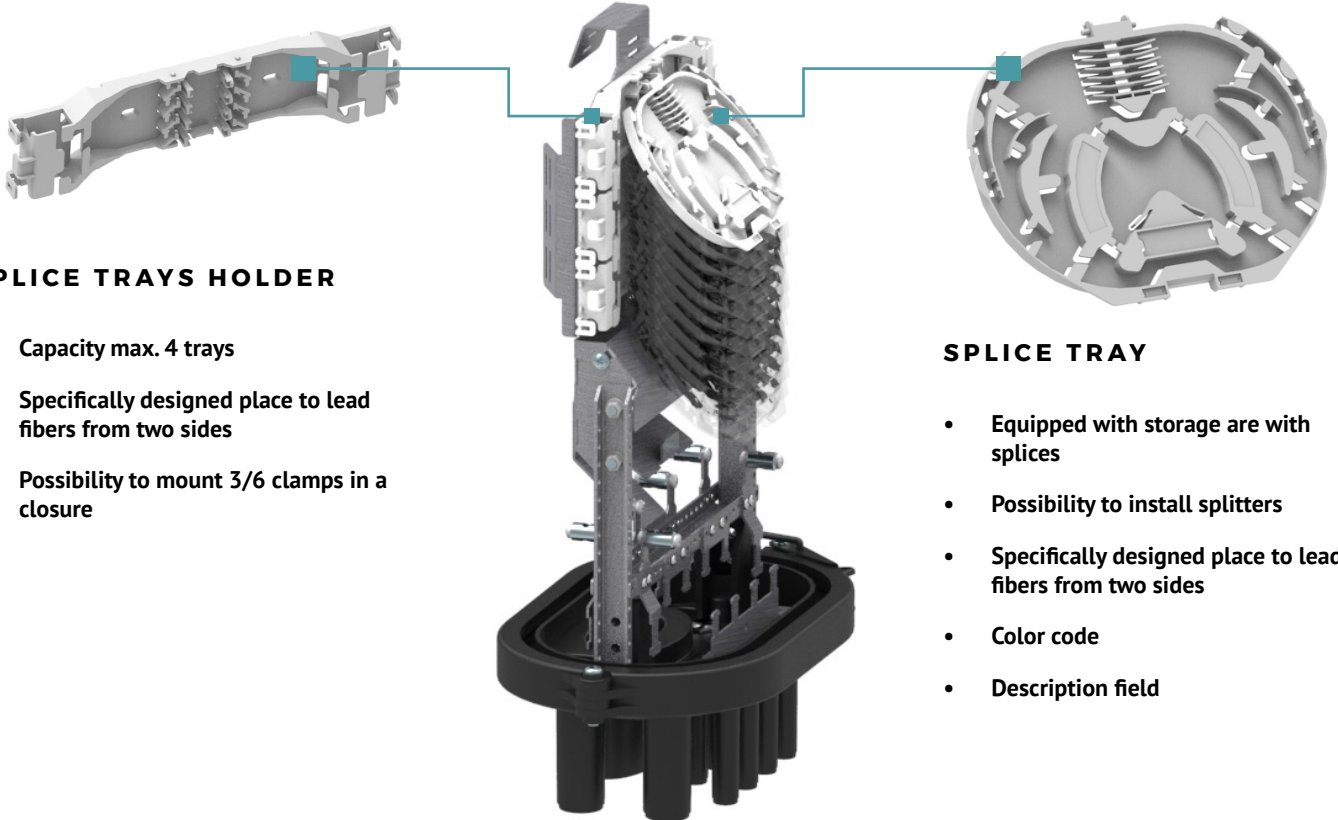


V.

Inter-organization



V. Inter-organization



SPlice TRAYS HOLDER

- Capacity max. 4 trays
- Specifically designed place to lead fibers from two sides
- Possibility to mount 3/6 clamps in a closure

SPlice TRAY

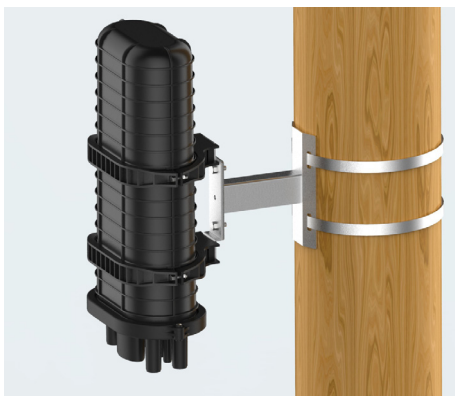
- Equipped with storage are with splices
- Possibility to install splitters
- Specifically designed place to lead fibers from two sides
- Color code
- Description field

VI. Installation

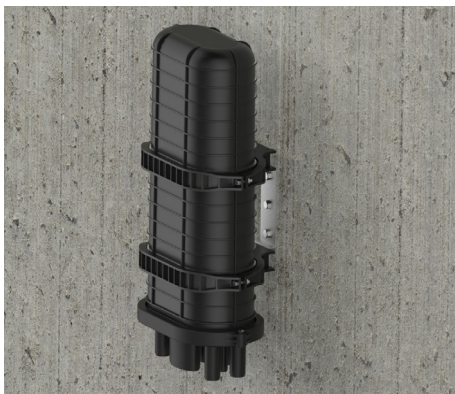
- ✓ Fast installation
- ✓ No need to use specialist tools
- ✓ Wide range of installing adapters



Mounting on steel tapes on poles

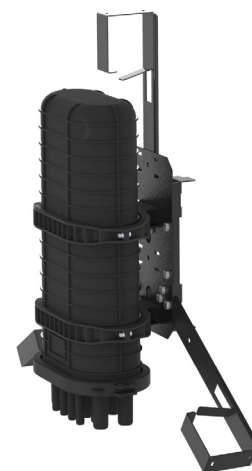
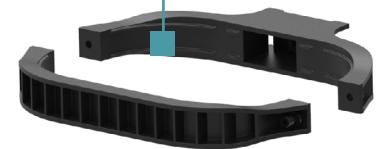


Mounting with distances on poles (option)



Mounting with the use of mounting adapter on wall

MOUNTING CLAMP



Reserve frame – versatile construction for 144F i 288F (option)

VII. FIBRAIN FOBP closures – construction variations

Brainstorming, teamwork and a multi-step design process contributed to expansion of our product portfolio offer, in particular Fiber Distribution with a new series of Fibrain FOBP closures. At the very beginning of our work, there was a plan to create a closure with a defined capacity, configuration, input ports or one

Construction, capacity

Infographics that were presented in the first part of the article facilitated familiarization with a new group of closures. Nevertheless, it is worth to add a few extra words about the most important advantages of FOBP closures.

While we were developing and implementing a new FOBP family of closures our specialists focused primarily on broad application possibilities in all kinds of FTTx architecture. Therefore, the closure is available in two sizes, which enables users to make 144 or 288 connections between the optical fibers, as well as manage

Entry ports

Due to different operators' requirements and installers' preferences, the series of FOBP closures is available in two types of bases - at least initially because further subtypes are already in development stage! FOBP series is based on the thermally sealed and hybrid option, where we have entry ports of thermally sealed cables, as well as mechanic ports to install multiple inserts for cable entries. It is worth pointing out the fact that regardless of the base type we have the same high degree of protection level, that is IP68 !

Multiple inserts are available in different kinds and types. Starting from the aerial membrane inserts which enable users to put several cables of different diameters at the same time or blind mechanic port that is not used in the initial stage of network operation up to inserts with specified configurations of number and diameter of entered cables. Installation, replacement or introduction of additional mechanic port is very simple and doesn't require any additional tools.

type of seals placed on the cables. Then, the concept, guidelines and operating parameters led us to the implementation of FOBP family, which is characterized by wide range of applications, features, and possibilities.

and install optical splitters. It will be also possible to create customized configurations of closures fitted in the subscriber units while maintaining the aesthetic features and appropriate dimensions.

In addition, regardless of size, the closure is characterized by design that ensures users to have multiple access, which translates into possibility of further closure development during its use.



Picture. Closure base with mechanic port inserts – a lot of possibilities and cable constructions that can be placed inside!

It is also worth noting that the mechanic entry ports have a number of additional advantages over conventional thermic ports. First of all, drop cables have got small diameters, which in turn cause problems in using the thermic method of sealing - why? Firstly, because when welding heat-shrinkable casings we have to be very careful not to damage cable by too high temperature. In addition, as we already mentioned about simple installation, it is worth to underline that in case of mechanic ports, we don't need additional equipment such as heat guns, welders or burner („Oh my God, nightmare!“ thought cables with 2-6 mm diameter!). Secondly - the installation can be performed in any conditions, without electricity.

Another important thing relates to the amount of time of our installer – properly shrunk heat shrunk tube needs time and attention, while the mechanic ports not as you can change the cables much faster - which in turn translates into lower operating costs.

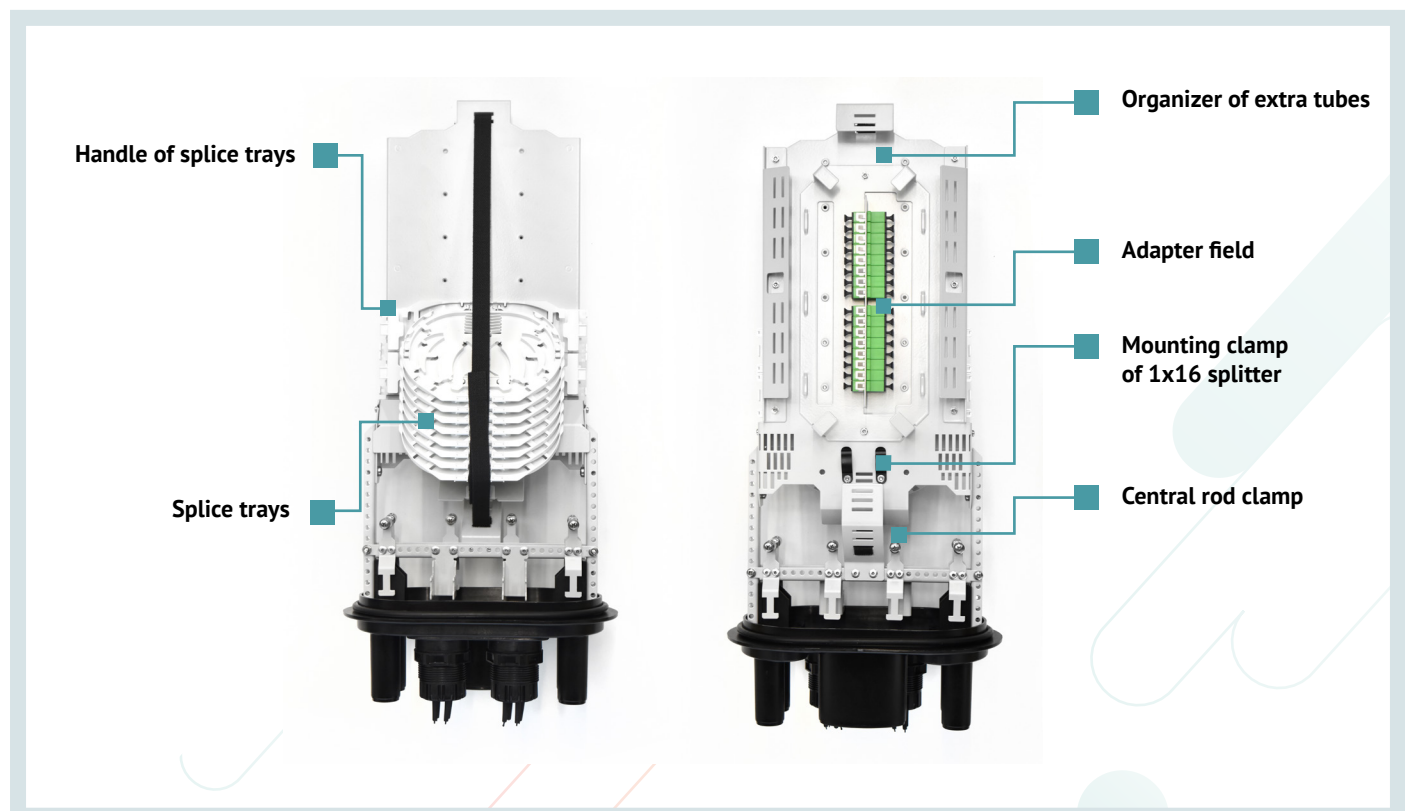


Picture. Aerial membrane insert – inserts which enable users to put several cables of different diameters at the same time or blind unused mechanic port that is not used

Inter-organization

Internal organizer of FOBP closures also deserves a little more of our attention and further description. It isn't any mystery that properly thought-out organization of internal connections, place-

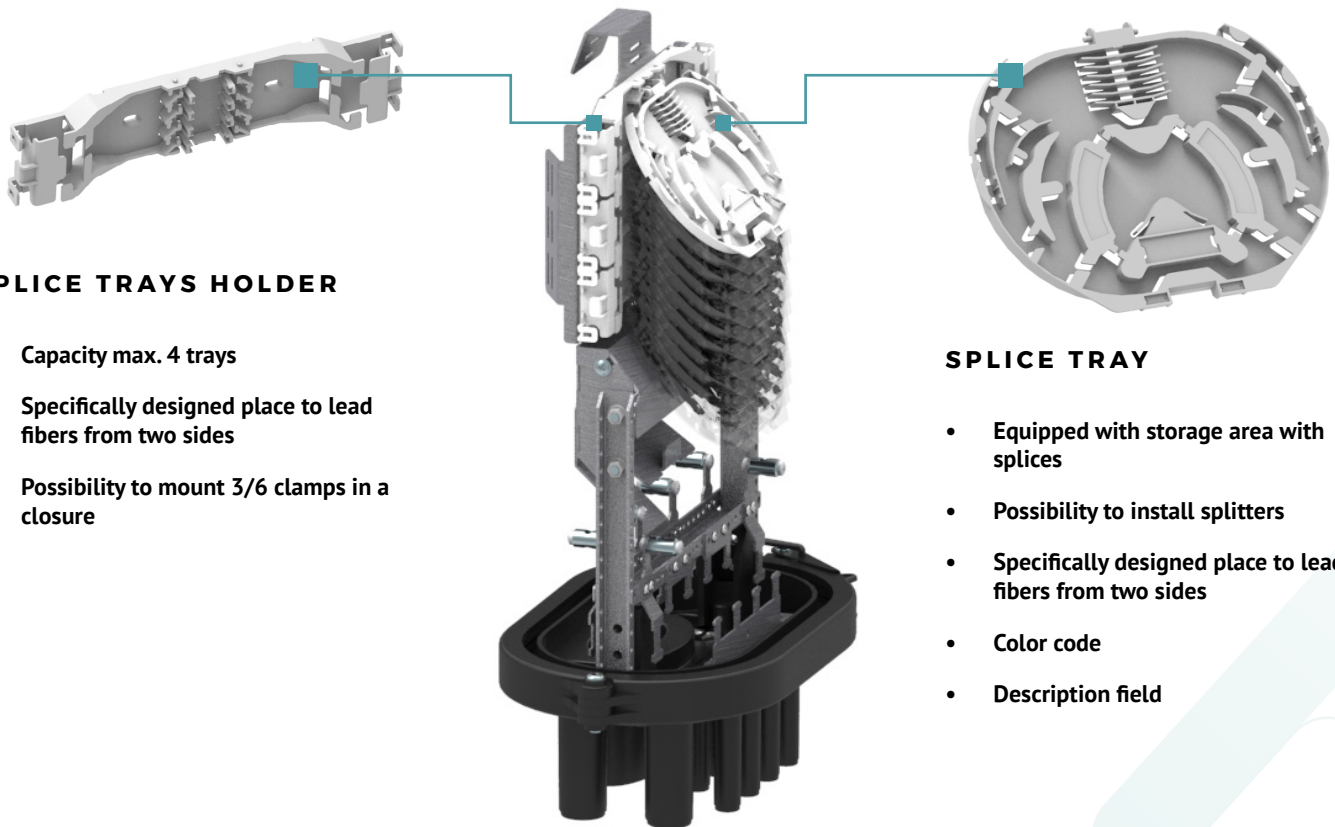
ment of cable tubes, fiber management and additional opportunities are the second half of success of a new product.



Inter-organization

For this reason, the internal body of FOBP family gives a number of possibilities. Let's start from the beginning – cables are mounted with the use of designed clamps, including central rod clamps that provide us with safe installation and protect them from sliding out, which in turn protects the closure against unsealing. A separate section of the organizer supply tubes, optional adapter field and a large amount of space for fiber management are the main advantages of the FOBP family. Depending on the installation place, cable type and the needs of a given project, the grounding tripwire or pressure valve can be easily mounted to control sealing.

The inter body can be equipped with properly selected number of splice trays that are mounted on clamps with max. capacity up to 4 trays each. These clamps also have specifically designed place to lead fibers, assure inside order and facilitate further expansion of closure by eliminating disorder of fibers that is often compared to „spaghetti effect“.



SPlice TRAYS HOLDER

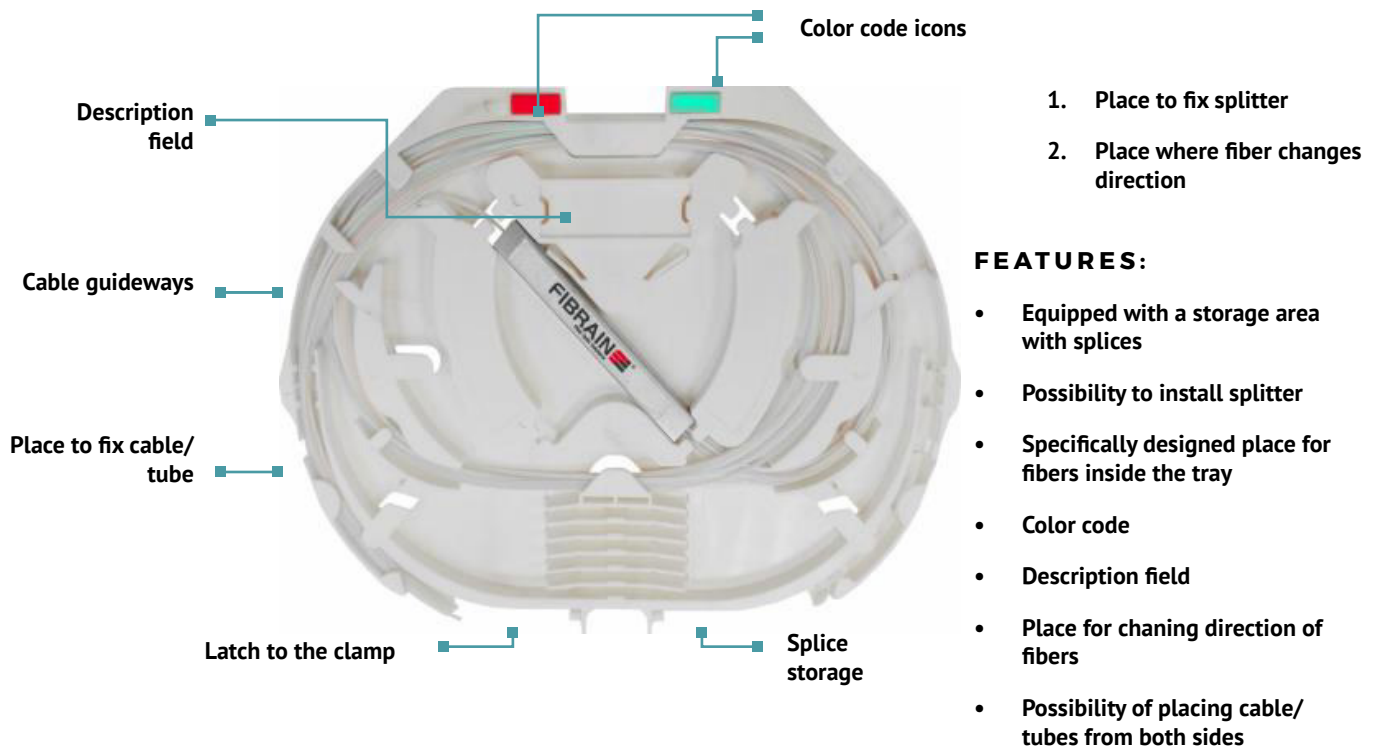
- Capacity max. 4 trays
- Specifically designed place to lead fibers from two sides
- Possibility to mount 3/6 clamps in a closure

SPlice TRAY

- Equipped with storage area with splices
- Possibility to install splitters
- Specifically designed place to lead fibers from two sides
- Color code
- Description field

Moreover, the same splice trays guarantee easy access to perform connections. SCM-B oval trays used in the closure provide mounting of the splitters and changing the direction of leading fibers (possibility of coiling fiber in the so-called „eight shape“). In addition, each of the splice tray can be marked with colored icons,

compatible with the tubes that are inside the closure. Thus, we gain full transparency. In addition, we find comfortable and large description field and specifically designed place for fibers inside the tray.



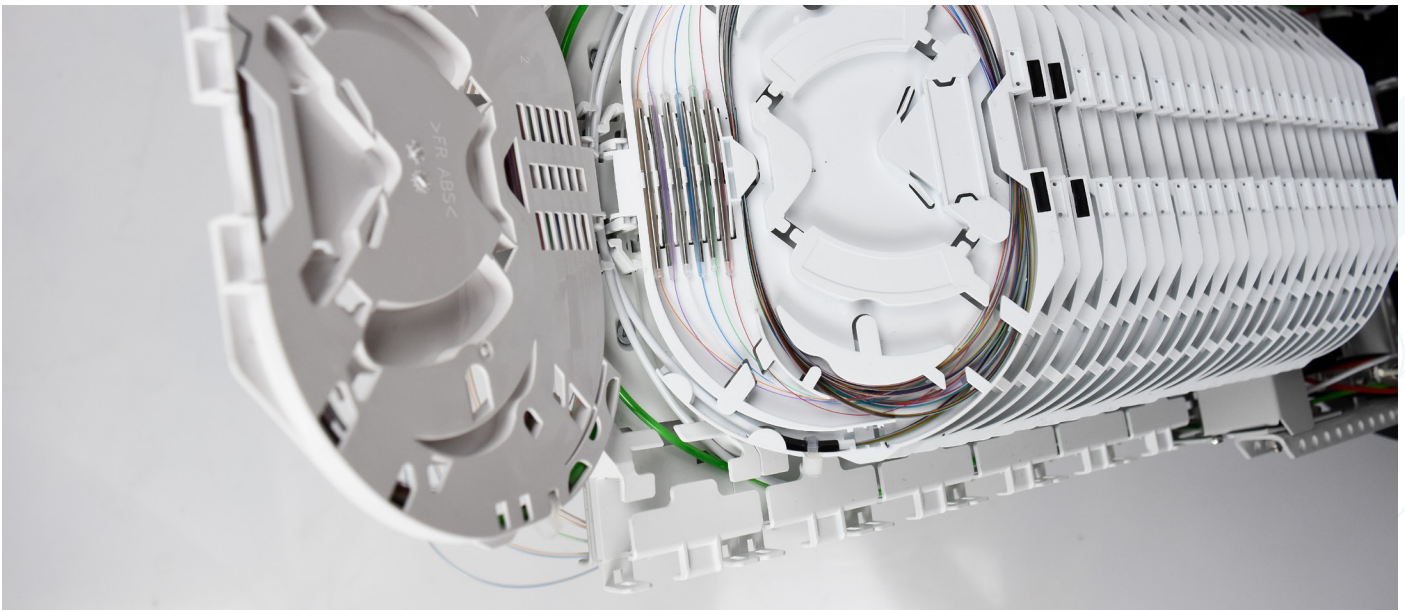
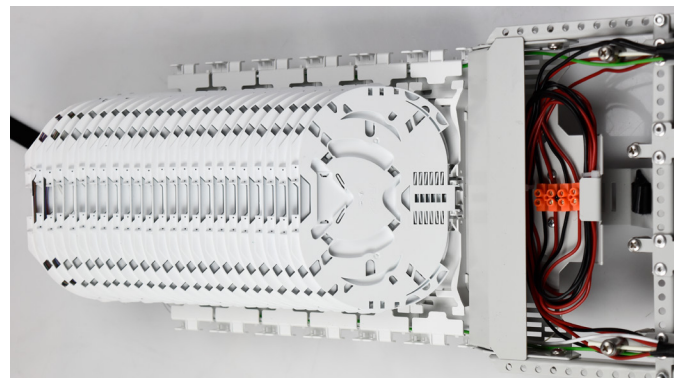
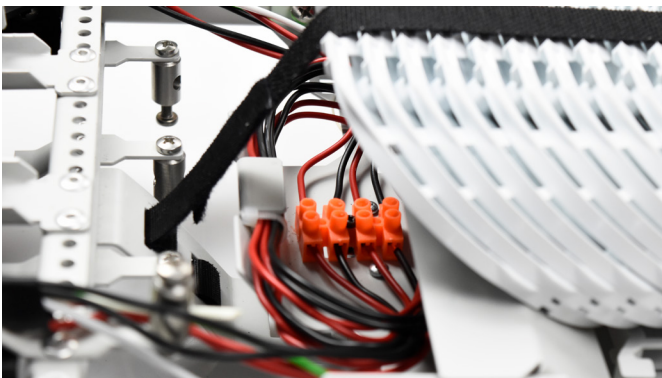
It is also worth to underline that the latch construction guarantees fast and easy mounting in the clamp.

Still more and more – guess what do I have inside – said fiber optic closure

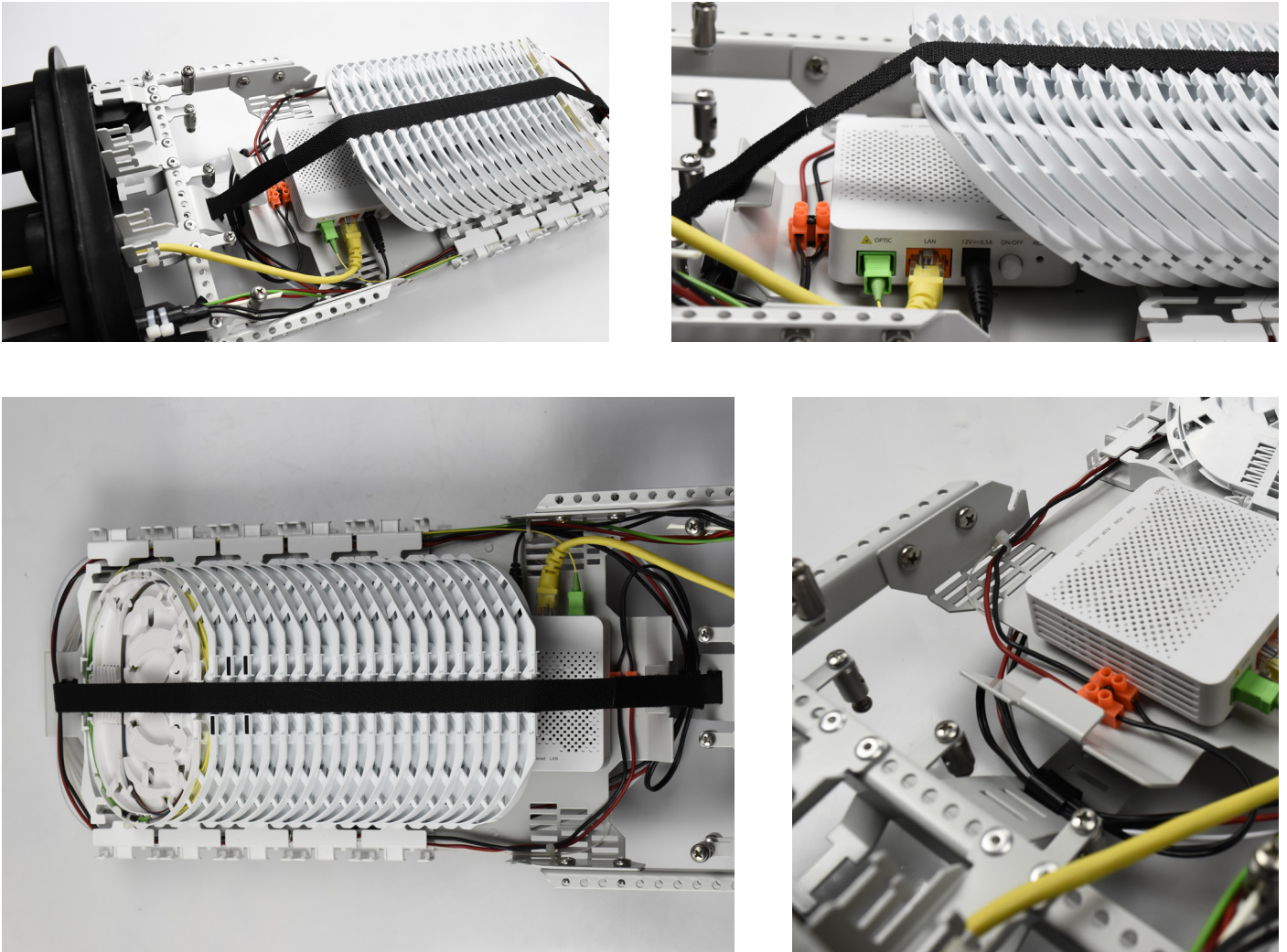
Inter dome offers us a lot of advantages. Let's start from the beginning- cable mounting performed by numerous clamps including the ones of central rods. Thus, the installation is solid and safe as well as protected against unsealing. The separated section of the extra tubes organizer, optional adapter field and large space to manage fibers – these are main advantages of FOBP closures. Depending on the installation place, cable type and specific needs of the project, it is possible to install a grounding tripwire or a pneumatic valve to control unsealing

Inter dome can be also equipped with specifically selected number of splice trays that are mounted on clamps up to 4 trays.

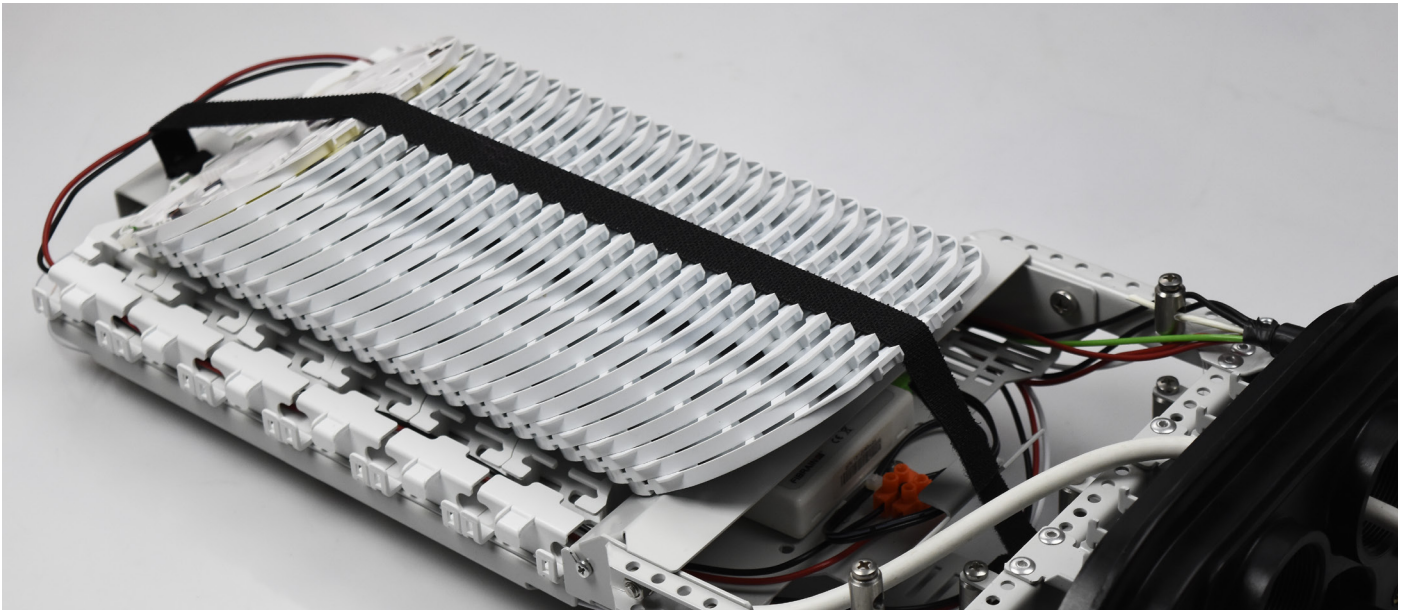
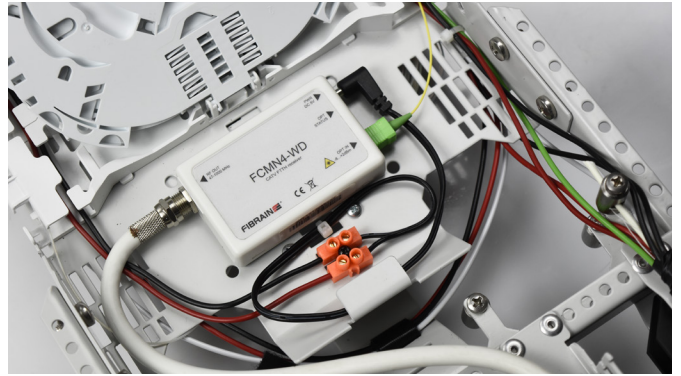
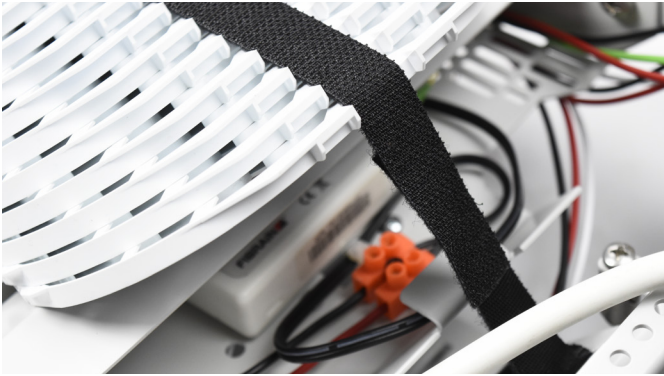
These clamps are also equipped with place on its side to lead fibers and maintain order. Therefore, the further expansion of the closure is easier and disorder of fibers – known as „spaghetti effect” is eliminated.



Picture 1. FOBP hybrid configuration – two utilities Cu + FO – one construction, one cable, faster installation time



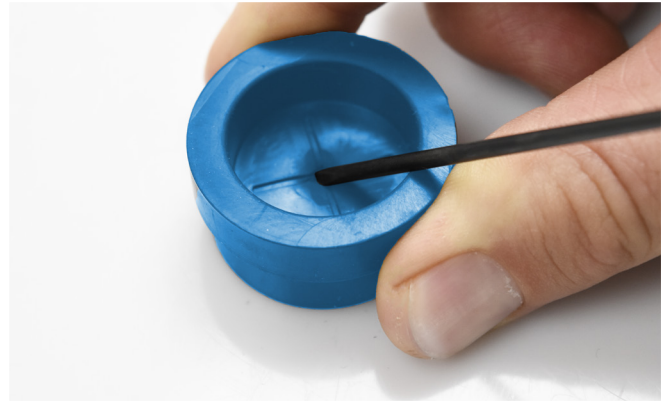
Picture 2. Installation of the hybrid cable and subscriber unit Dasan H665 in FOBP closure



Picture 3. Optical micro-receiver of CATV FTTH with RF output

Closure development

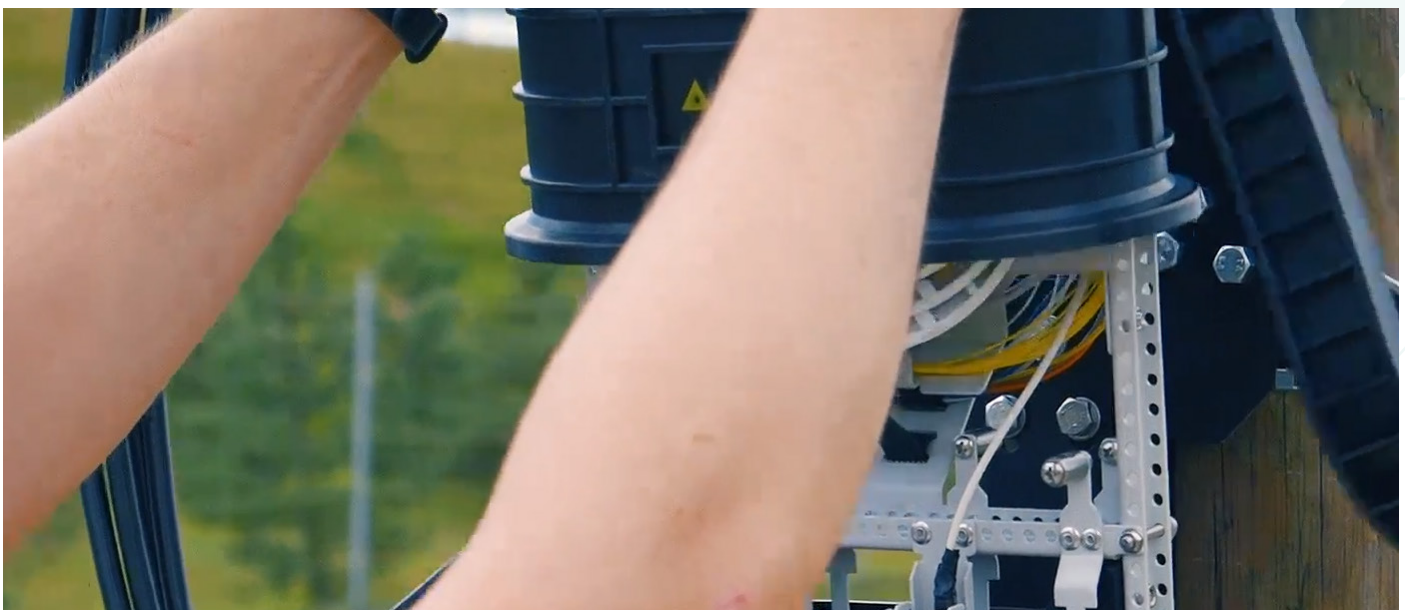
FOBP closures are equipped with clamp that guarantees fast access to the interior part as well as multiple openings and closings of closure. Therefore, the gasket placed on the outer part of the base protects the closure against unsealing and in case of its damage can be easily replaced. Therefore, the gasket is blue which facilitates the control of its placement.



Picture. FOBP closure development

As we can easily predict, the inter organizer can be also equipped with extra clamps, and a system of specially designed place for fibers/tubes that was mentioned before eliminates the needs to uncoil other stock. In case of mounting extra splice trays- it only takes 1-2 seconds, as it has a latch type of construction. Therefore, the closure which we are going to develop is already installed on the pole or inside manhole. Then, there are 2 possibilities, we can either pop the inside organizer out while the cover is mounted

or demount the cover (in this case it is necessary to order FOBP closure with clamp that can be mounted at the bottom part).



Picture 3. The cover of FOBP closure installed on a reserve frame

Equipment, additional accessories

The closure is delivered with a set of adapters and accessories, which are necessary for the mounting. Certainly, during ordering stage we have the choice to select appropriate number of splice trays, adapter field and insert type of mechanic port.

Summary

Fibrain fiber optic closures guarantee a lot of connection possibilities in the telecommunication networks. They are available in several options – taking into account maximal capacity, a type of seal, which translate into various applications in different environment and fast installation.

But, we can order separate elements anytime. Additional accessories of FOBP closure can also function as common purpose reserve frame for 144 and 288F closures and distances on pole.

To sum up, FOBP closures have broad application in all kinds of FTTx telecommunication systems. We kindly encourage you to get to know other materials – technical specification and a short film available on FIBRAIN TV that present a wide range of advantages of our new product series.

And last but not least, we would like to tell you one thing – that is not the end of FOBP fiber optic closures. We have already started working on new ideas relating to closure capacities and additional accessories!

Summary

MODULARITY

- the concept of LEGO's blocks as all elements fit to each other
- 2 various covers
- Splice trays that can be

EASY INSTALLATION & OPERATION

- No need to use specialist tools
- Description field
- Color code
- Specifically designed place for extra cables/tubes/fibers

UNIVERSALITY

- 2 different bases designed for different applications

GROUNDING

- Possibility to equip with grounding kit

PNEUMATIC VALVE

- Possibility of equipping with a pneumatic valve to control unsealing

RESERVE FRAME

- General-purpose construction for 144F and 288F closures

PANEL OF ADAPTERS

- Possibility of equipping with panel of adapters:
- 9x S.C. SX for FOBP 144F closure
- 18x S.C. SX for FOBP 288F closure

WORKING TEMPERATURE

- Temperature range: -40°C to +70°C

SOLID HOUSING

- Housing material: PP strenghtened with glass fiber

