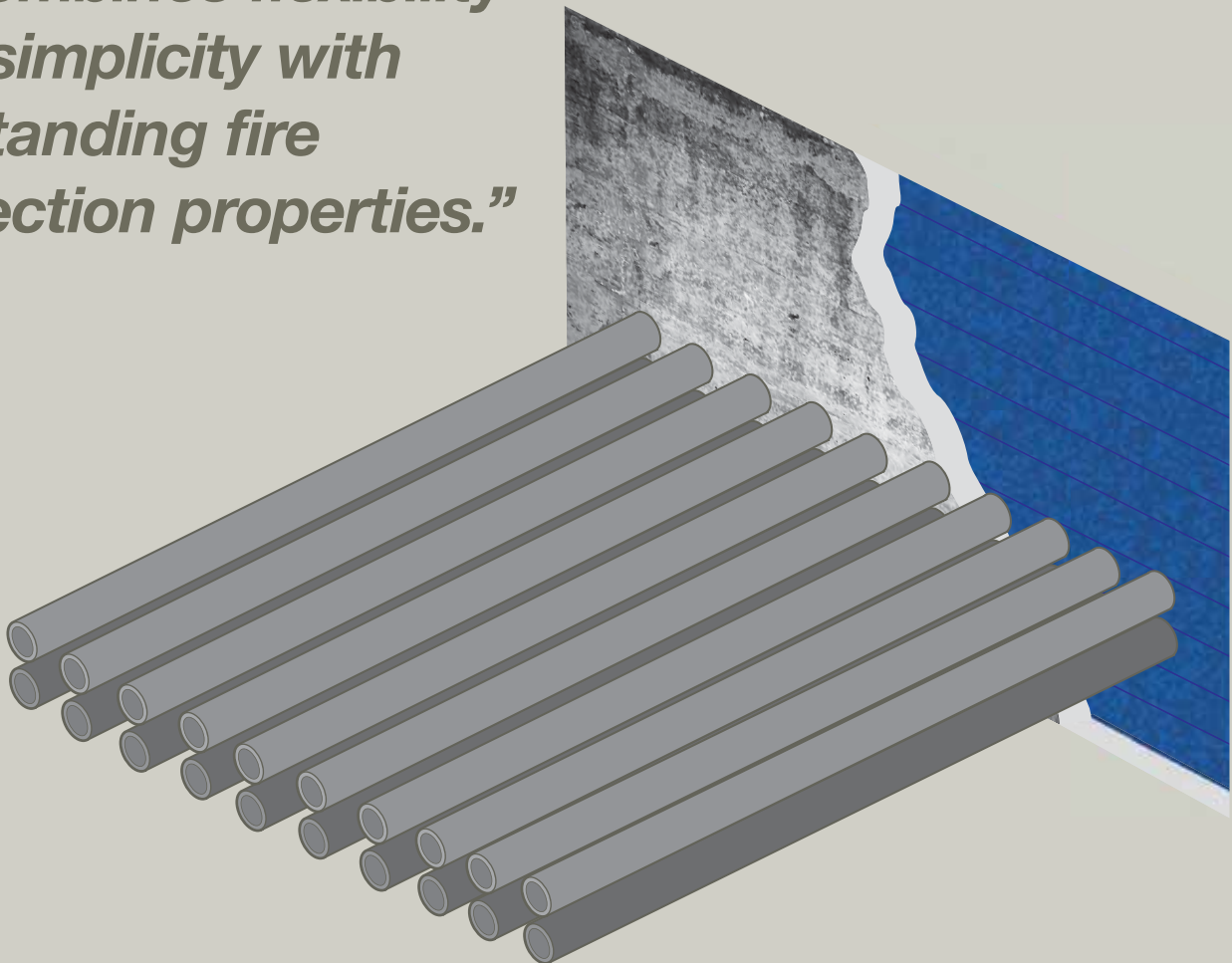


# ACTIFOAM<sup>®</sup> FIRESTOP

Cable and Pipe Fire-Stopping System.



*“...combines flexibility  
and simplicity with  
outstanding fire  
protection properties.”*



THORNE &  
**DERRICK**  
INTERNATIONAL

Thorne & Derrick  
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[www.powerandcables.com](http://www.powerandcables.com)

# Features.



## **Flexibility and simplicity**

ACTIFOAM is designed for fireproof ducting of cables in building and industrial applications. The ACTIFOAM system combines flexibility and simplicity with outstanding fire protection properties. Closed cell foam rubber sheets can be sized to suit any variety of service types passing through any size wall or floor opening.

## **Two designs, one purpose**

CSD's frame design is combined with ACTIFOAM to create an extremely high level of fire resistance, in a format that is simple to install and easy to regularly disassemble - ideal for applications where routing or re-routing of cables is common place.

## **Outstanding performance**

The purpose of ACTIFOAM technology is to ensure that during a fire the rubbers, thermoplastics and compounds used for the seal will produce such an amount of fire retardant material that major deformations or displacements in the services or structure are effectively accommodated.

As a result, the penetration will remain fire tight. The higher the temperature, the more fire retardant material will be produced.

## **Tested to the limit**

ACTIFOAM is an expanding rubber that fills any cavities or gaps in constructions, offering a perfect fire seal.

ACTIFOAM has been extensively tested to guarantee low smoke and low toxic gas production, to such a high level; it has been approved for use in areas where low smoke and low toxicity products are a life saving necessity. ACTIFOAM provides up to 2 hours fire protection and 2 hours insulation in accordance with the new BSEN1366-3 (will soon become mandatory).

## **A seal against water, gas & cold smokes**

ACTIFOAM is a closed cell rubber so it will not absorb moisture, making it suitable for use outdoors or in harsh environments. In addition, with the application of CSD's FIWA (or NOFIRNO) sealant, the system provides a seal against water, gas or cold smoke, to pressures in excess of 1.5 bar. ACTIFOAM really is the seal for all applications and all environments.

# Benefits.



*“Low smoke and toxicity index and up to 2 hours fire protection.”*

## *Suitable for outdoor environments*

High levels of fire resistance

No fibre migration

Age tested in excess of 50 years

Remains mechanically intact

Thermal protection

Lowest smoke and toxicity materials

Long term protection against fire and heat

Ducting of additional cables is very simple

Lower maintenance costs

Aesthetic finish

***Easy to install***



# Extensive test programme.



Offering 2 hour fire protection for both integrity and insulation, ACTIFOAM has been tested in accordance with the most stringent fire test procedure, BSEN1366-3 (will soon become mandatory). With the addition of a FIWA (or NOFIRNO) layer, the system also becomes gastight and watertight.

BSEN1366-3 European Fire Test  
– 2 hour fire protection (will soon become mandatory)

Lloyds Register witnessed  
– 1.5 bar pressure test

TNO Efectis Laboratory – Age Testing to 50 years with no deterioration in performance

Def Stan 02-711 Low Smoke Index (formerly NES711)

Def Stan 02-713 Low Toxicity Index (formerly NES713)

ISO 4589-3 – High Temperature Index

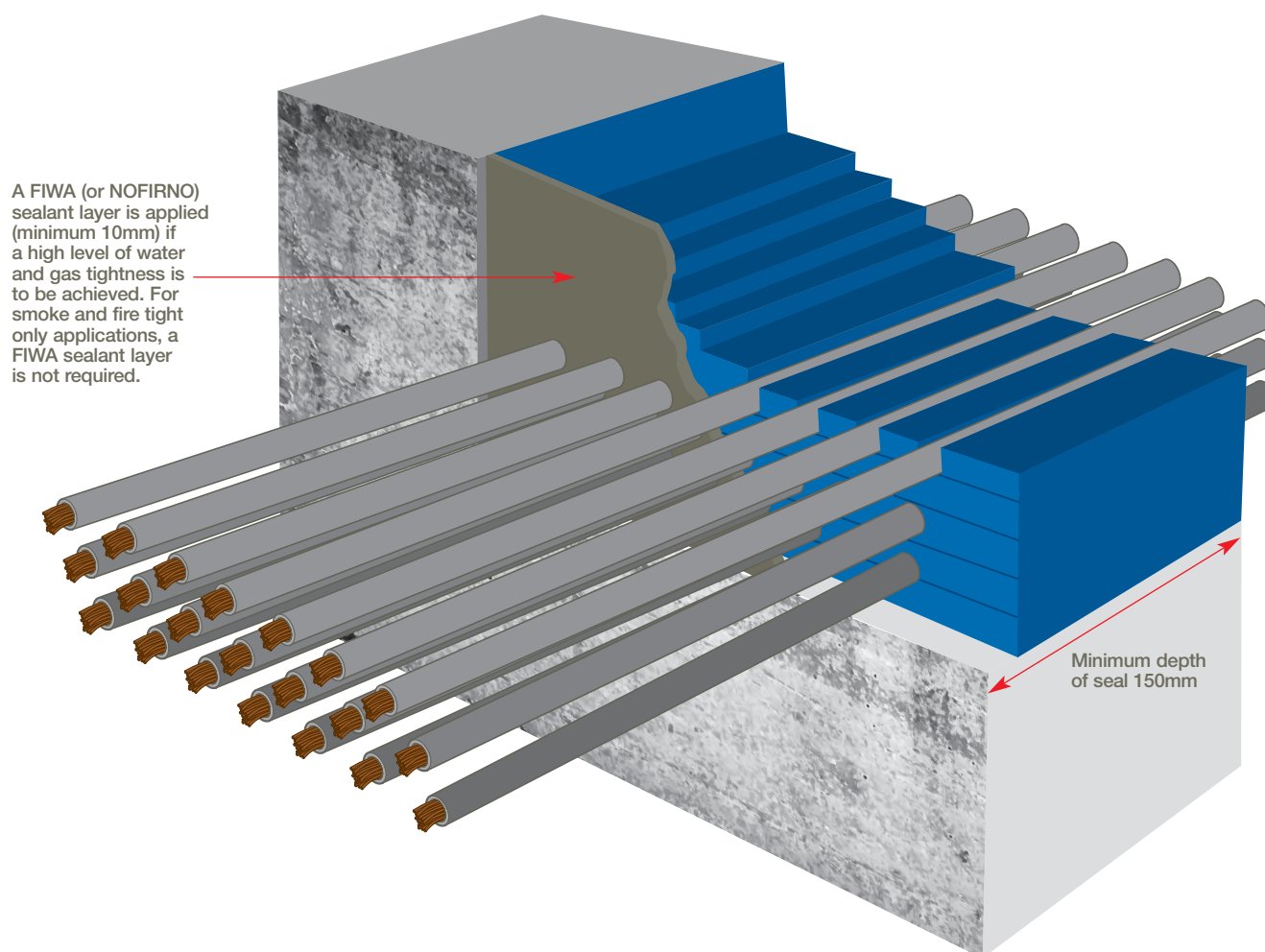
ISO 4589-2 – High Oxygen Index

BS476 Part 20:1987

# Innovative technology.

## ACTIFOAM Firestop System.

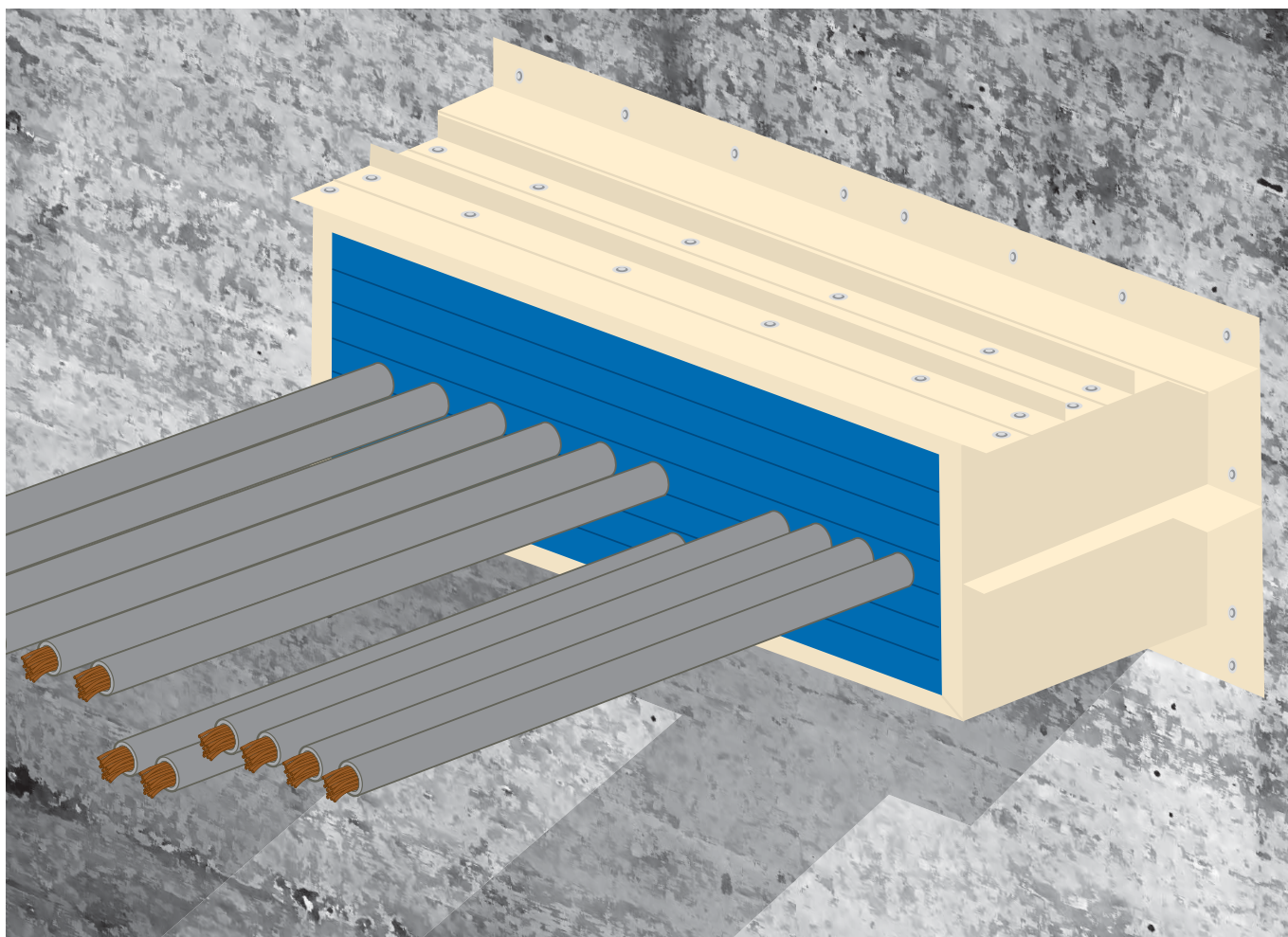
Where cables are in trunking, ACTIFOAM is used to fill any available voids around cable bundles and trunking. Where cables run through on tray, ACTIFOAM is applied in between cables. Cable separation to correspond with cable diameter (small cables can be bundled to a max bundle of 35mm).



Test standards	Fire resistance integrity	Fire resistance insulation
BSEN1366-3	2 hrs	2 hrs

# ACTIFOAM Firestop System with Frames.

Where the depth of wall is less than 150mm, or in areas where cables are regularly ran or re-routed, the ACTIFOAM Firestop system with frame, which is bolted to the face of the wall or floor, is the ideal flexible and aesthetic solution.



Test standards	Fire resistance integrity	Fire resistance insulation
BSEN1366-3	2 hrs	2 hrs



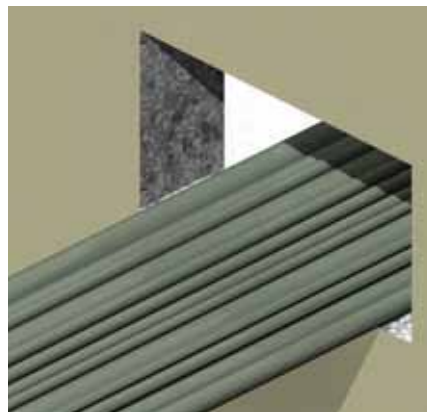
# Installation.

## ACTIFOAM Firestop System.



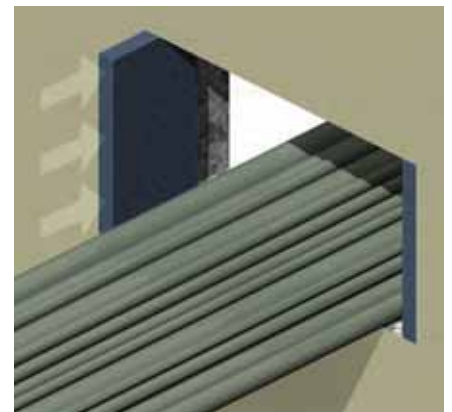
### Step 1

If the walls inside the conduit opening exhibit large irregularities, they should be locally smoothed with FIWA (or NOFIRNO) fireproof sealant to obtain sufficient smoke tightness.



### Step 2

The cables can be ducted through the conduit opening in random order. It is important that they are not pulled too tight in order not to hamper their separation.

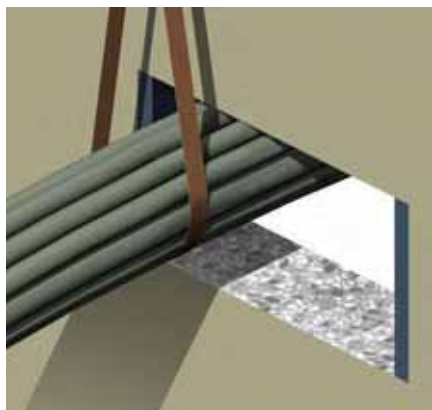


### Step 3

ACTIFOAM rubber sheets are cut into strips fitting to the size of the walls inside the conduit opening. For this purpose ACTIFOAM sheets with a thickness of 25mm are used.

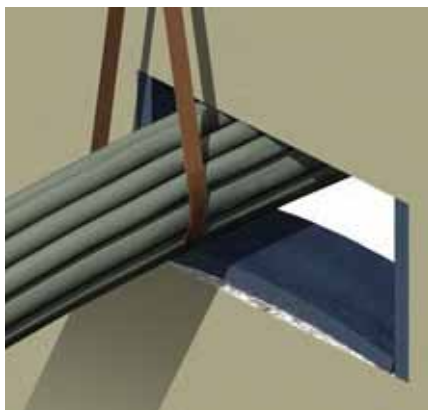
# ...continued.

## ACTIFOAM Firestop System.



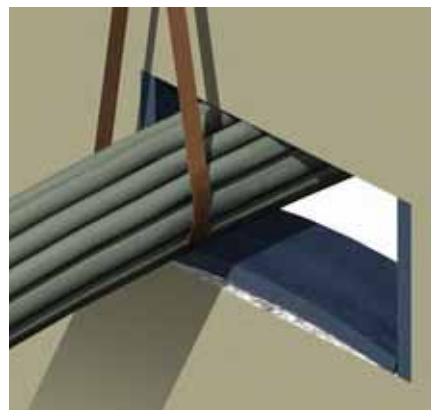
### Step 4

The ACTIFOAM rubber sheets should fit snugly in the conduit opening to ensure a tight fit against the walls. This is important to avoid smoke penetrating between the sheets and the wall.



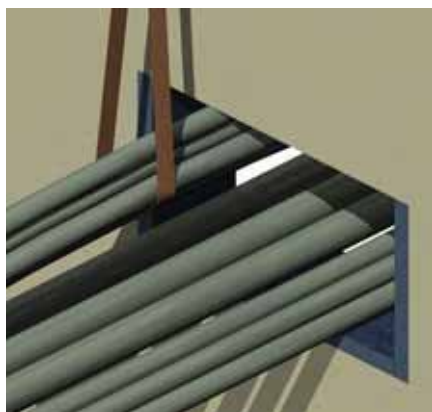
### Step 5

An ACTIFOAM rubber sheet must also be placed in the conduit opening underneath the layer of cables. A band is placed around the cable bundle to lift the bundle of cables.



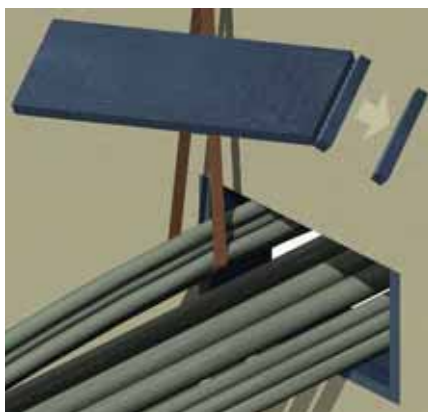
### Step 6

A slightly oversized strip of ACTIFOAM rubber with a thickness of 25mm is placed inside the conduit opening underneath the cables. The sheet will be compressed by the weight of the cables.



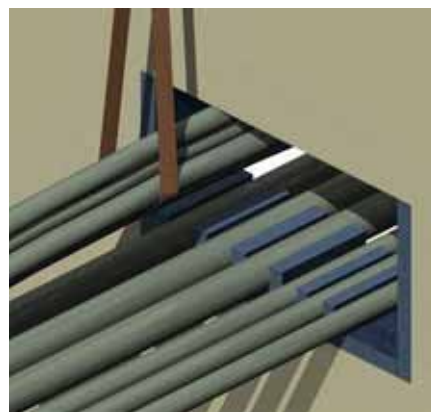
### Step 7

One layer of cables is spread out on the ACTIFOAM rubber sheet at the bottom of the conduit opening. The other cables are lifted to make room for further finishing to the first layer.



### Step 8

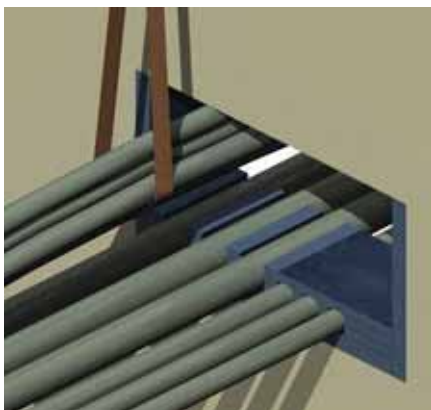
For full cable separation, square profiles are torn off the pre-slit ACTIFOAM rubber sheets. The sizes of the profiles should be equivalent to the cable diameters.



### Step 9

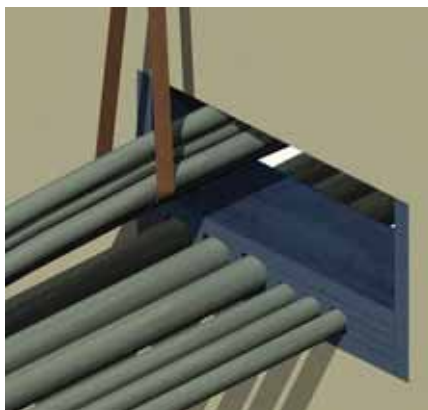
Profiles are slit in sizes of 10x10, 15x15, 20x20 and 25x25mm. This enables an easy fit for corresponding cable sizes. Cables larger than 25mm should be separated by a minimum of 25mm.





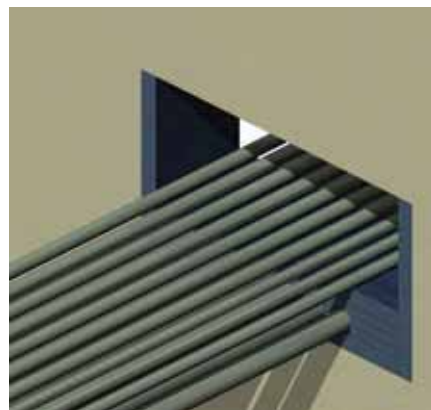
### Step 10

Adjacent to the first layer of cables and profiles, one or more extra sheets of ACTIFOAM rubber is fitted to create a level layer for further filling the conduit opening.



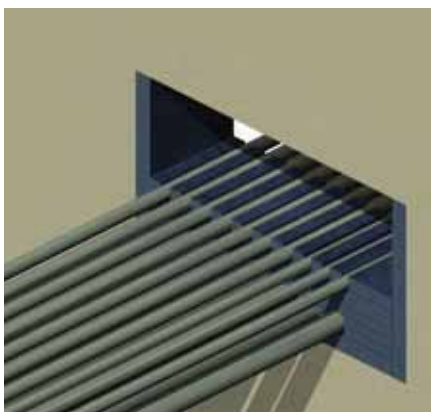
### Step 11

An intermediate ACTIFOAM rubber sheet is inserted in the conduit opening on top of the levelled first layer. The thickness of the intermediate layer is dependent on the maximum cable diameter.



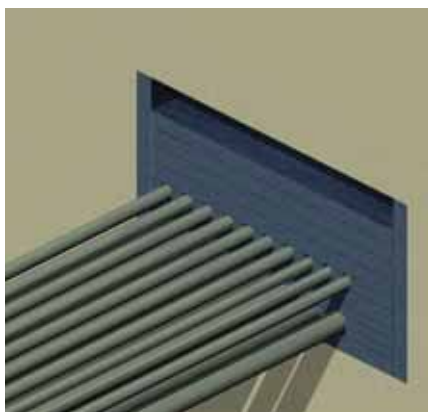
### Step 12

The next layer of cables is spread out on the ACTIFOAM intermediate rubber sheet. As indicated before, the cables should not be pulled too tight to enable this.



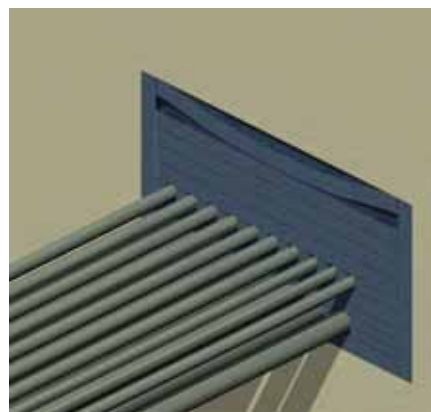
### Step 13

In the same way and as with the first layer of cables, the cables are separated with the ACTIFOAM pre-slit profiles and levelled with one or more ACTIFOAM sheets.



### Step 14

The remaining space is filled with one or more ACTIFOAM sheets. All sheets should fit tightly in the conduit opening to obtain a fair degree of smoke tightness.

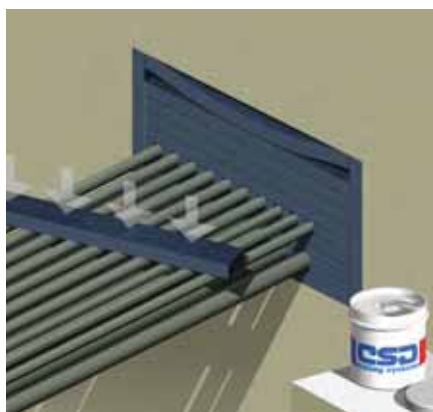


### Step 15

Due to better sliding of greased rubber on rubber and for final finishing, an ACTIFOAM sheet must be inserted between the top layers of ACTIFOAM sheets.

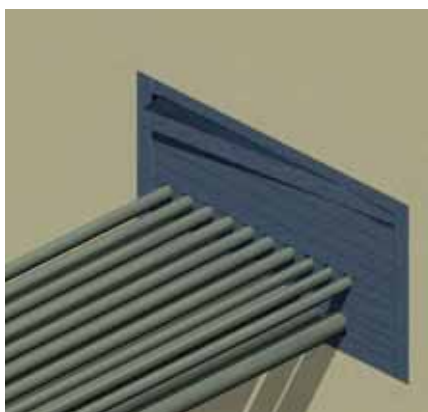
# ...continued.

## ACTIFOAM Firestop System.



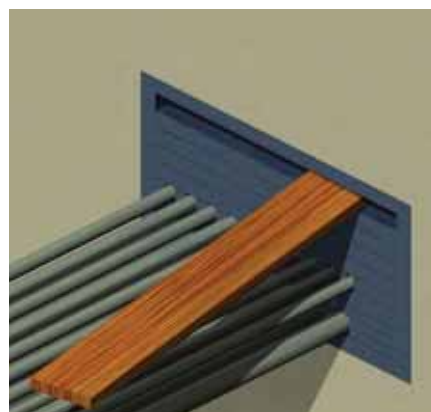
### Step 16

Compression of the filling is necessary to obtain stability. For this purpose it is easier to insert a couple of strips instead of sheets. The strips are greased all around with CSD lubricant.



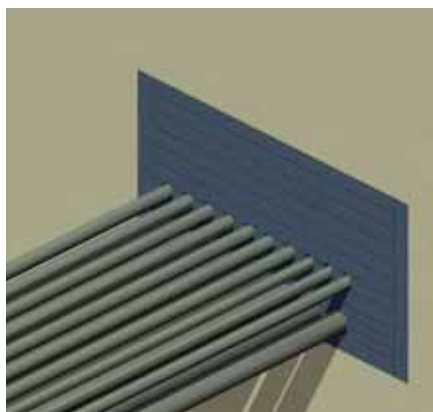
### Step 17

The first strip is inserted into the opening between the layers by hand. For a wall thickness of 150mm, it is advisable to cut three strips 50mm wide to enable easier insertion.



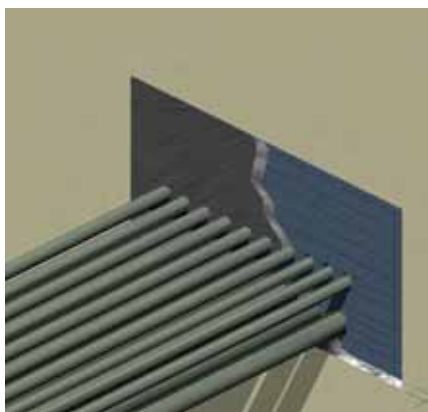
### Step 18

A piece of wood is used to push the strips tightly into the opening between the ACTIFOAM rubber sheets. The use of strips instead of sheets makes this much easier to do.



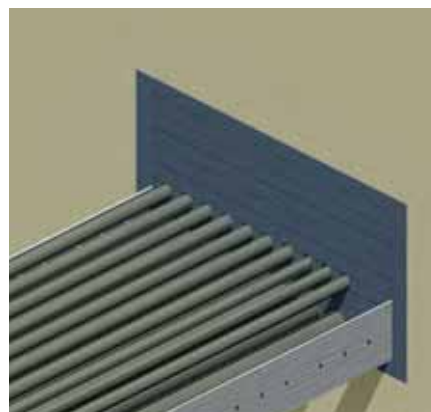
### Step 19

The finished ACTIFOAM multi-cable penetration. Officially fire tested according to BSEN 1366-3 (NEN 6069) for 2 hours in an aerated concrete wall 150mm thick.



### Step 20

In case the penetration has to be not only fire safe but also gas and water tight, the ACTIFOAM foam rubber filling can be covered with a layer of FIWA (or NOFIRNO) sealant to a minimum thickness of 10mm.

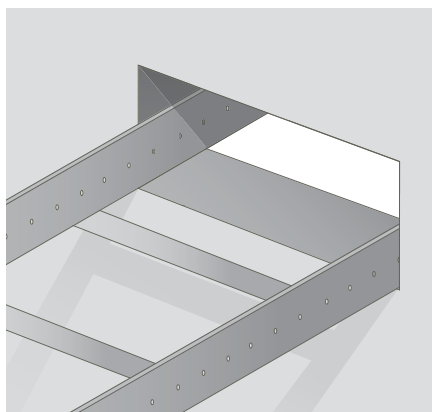


### Step 21

It is not necessary to interrupt the cable tray. ACTIFOAM allows, if required, the tray to be passed through the conduit opening. ACTIFOAM sheets are placed around the cable tray.

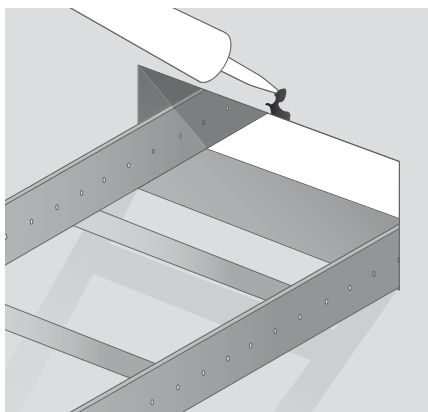
# Installation.

## ACTIFOAM Firestop System (with frames).



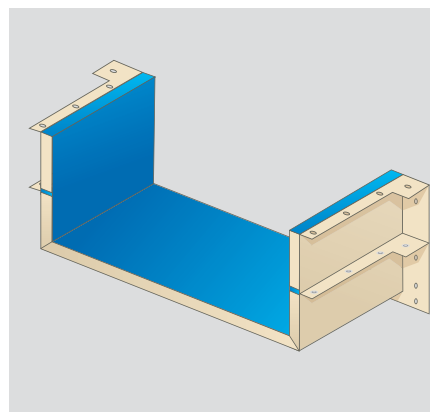
### Step 1

The conduit opening has to be 25mm smaller all around than the inner dimensions of the FIRESTOP. This will keep the rubber pads against the walls inside the FIRESTOP in place during fire exposure.



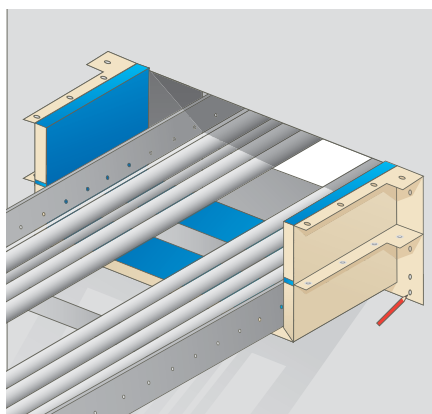
### Step 2

If the wall around the conduit opening exhibits large irregularities, they should be locally smoothed with FIWA (or NOFIRNO) fire safe sealant. This is to prevent smoke emission between the FIRESTOP and the wall.



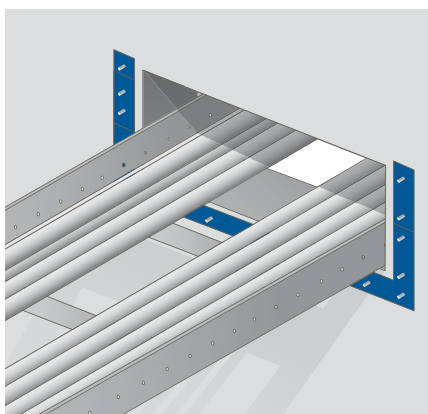
### Step 3

Remove the attachment bracket and the cover of the FIRESTOP. Remove all ACTIFOAM rubber pads with the exception of the bottom layer and the layers against the side walls of the casing.



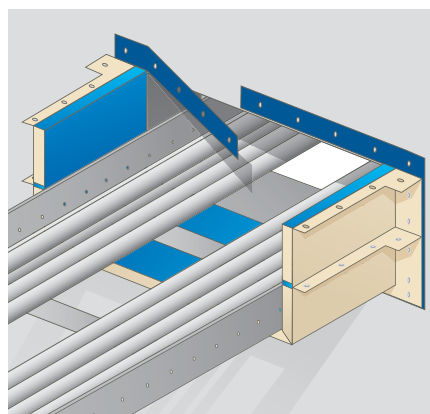
### Step 4

The casing is used as a template to mark off the attachment holes. The ACTIFOAM rubber pads against the inside walls of the FIRESTOP are 25mm thick and should be flush with the conduit opening.



### Step 5

Then drill the holes for the anchoring bolts. After the bolts have been positioned, push all parts of the fire resistant FRR/HF gasket over the anchoring bolts and lay them against the wall.



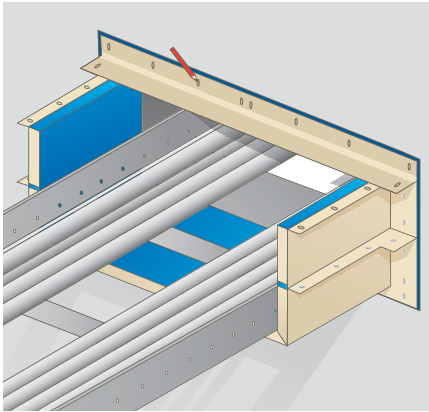
### Step 6

The casing containing the bottom layer of ACTIFOAM rubber pads and the rubber pads against the side walls, is pushed over the anchoring bolts against the wall and firmly tightened.



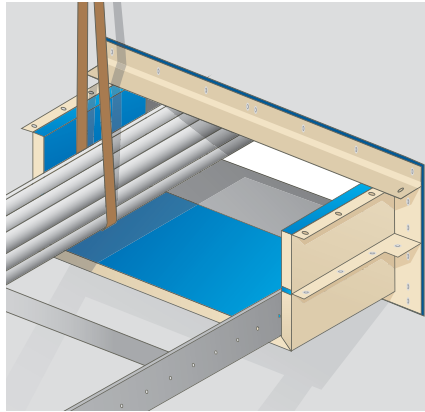
# ...continued.

## ACTIFOAM Firestop System (with frames).



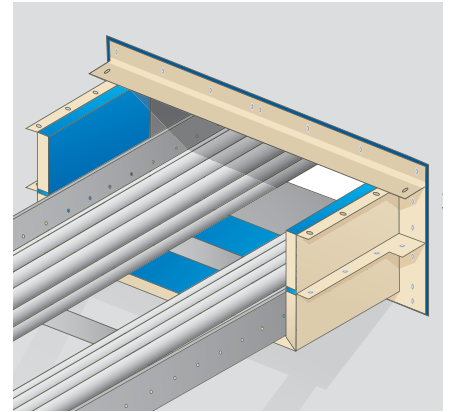
### Step 7

Position the attachment bracket on the casing against the wall and mark off the attachment holes. If necessary, the holes in the upper parts of the gasket can also be used for this purpose.



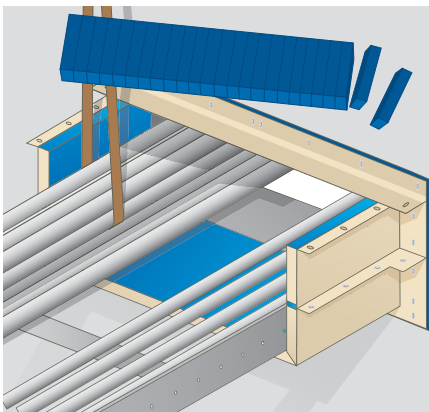
### Step 8

After drilling, position the anchoring bolts and the attachment bracket. Do not tighten the bracket firmly, in order to facilitate insertion of the top layer of rubber pads later during installation.



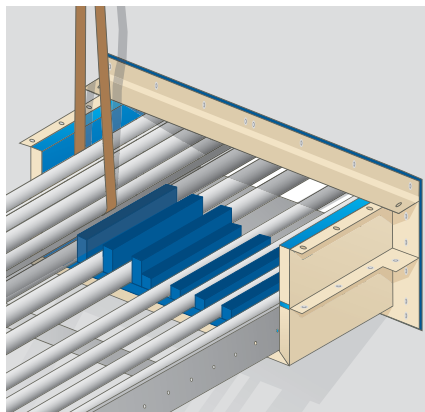
### Step 9

In case of larger amounts of cables, a band is placed around the cable bundle to lift the bundle of cables. ACTIFOAM rubber pads are placed in the FIRESTOP underneath the layer of cables.



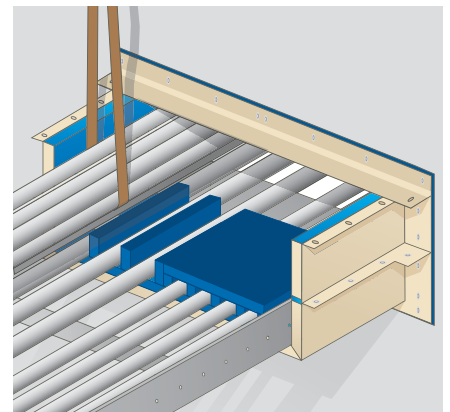
### Step 10

A layer of cables is spread out. For proper cable separation, square profiles are torn off the pre-slit ACTIFOAM rubber sheets. The sizes of the profiles should be equivalent to the cable diameters.



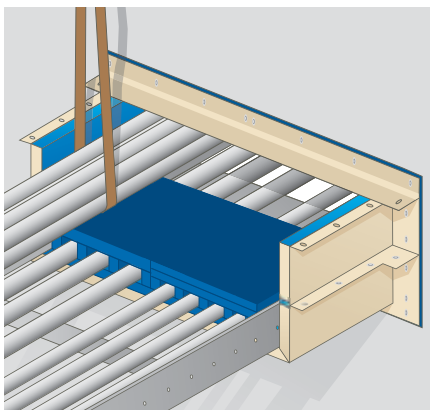
### Step 11

Profiles are slit in sizes of 10x10, 15x15, 20x20 and 25x25mm. This enables an easy fit for corresponding cable sizes. Cables larger than 25mm should be separated by a minimum of 25mm.



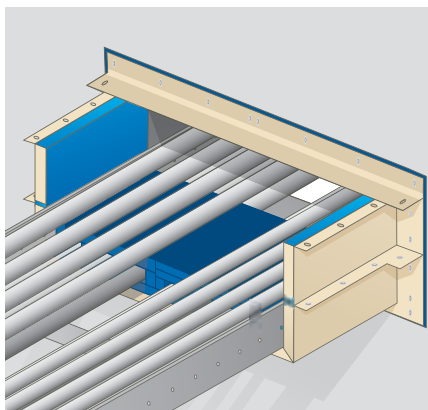
### Step 12

Adjacent to the first layer of cables and profiles, one or more extra sheets of ACTIFOAM rubber is fitted to create a level layer for further filling the FIRESTOP.



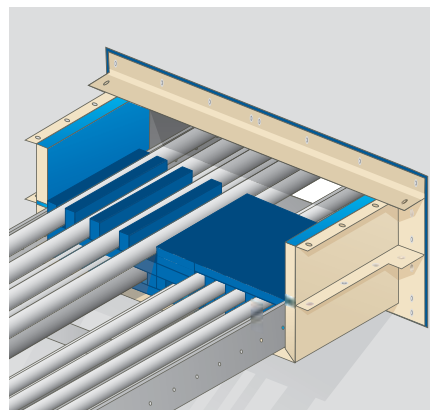
### Step 13

A layer of intermediate ACTIFOAM rubber pads is inserted in the FIRESTOP on top of the levelled first layer. The thickness of the intermediate layer is dependent on the maximum cable diameter.



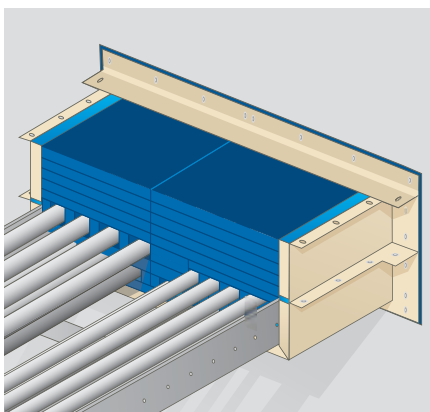
### Step 14

The next layer of cables is spread out on the layer of ACTIFOAM intermediate rubber pads. It is most important that the cables are not pulled too tight to enable this.



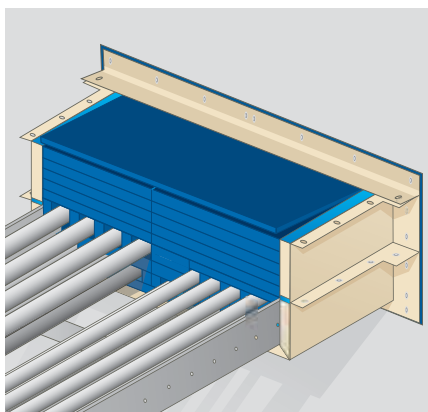
### Step 15

In the same way as with the first layer of cables, the cables are separated with the ACTIFOAM pre-slit profiles and levelled with one or more ACTIFOAM sheets. Take care for a tight fit.



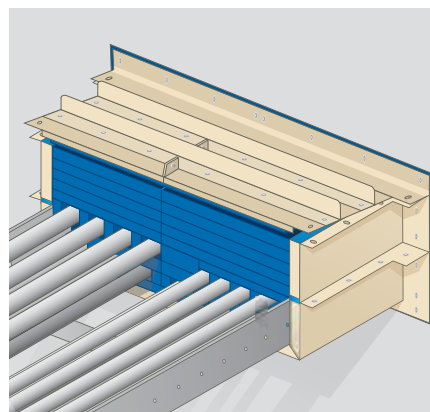
### Step 16

The remaining space is filled with layers of ACTIFOAM pads. The filling should be flush with the top side of the FIRESTOP casing. For this purpose the pads are available 10, 15, 20 and 25mm thick.



### Step 17

On top of the filling, overfill pads to a minimum of 10mm should be placed. They are pushed below the attachment bracket. The bracket has not been tightened firmly yet, in order to leave sufficient play.

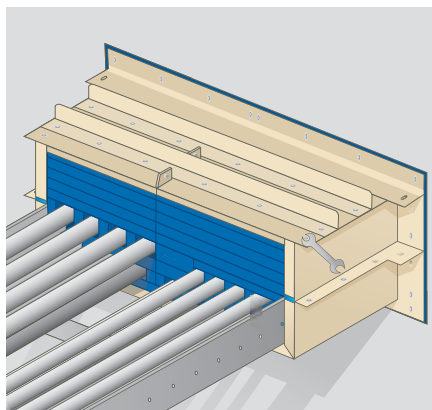


### Step 18

Place the cover on the FIRESTOP casing and fit the attachment bolts in the holes. The attachment bolts are long enough to put the nuts on easily despite the overfill of 10mm inside the FIRESTOP.

# ...continued.

## ACTIFOAM Firestop System (with frames).



Foam rubber is supplied in sheets with a thickness from 10 up to 25mm.

**ACTIFOAM  
FIRESTOP**

Sheets are delivered in sizes:

500x500x10mm	
500x500x15mm	1000x500x15mm
500x500x20mm	1000x500x20mm
500x500x25mm	1000x500x25mm

They can easily be cut to size with a sharp knife.

### Step 19

Tighten the attachment bolts firmly. With respect to mechanical stability and tightness, it is very important to check if the overfill is sufficient to obtain an optimum compressibility.

Sheets and pre-slit sheets are delivered in sizes:

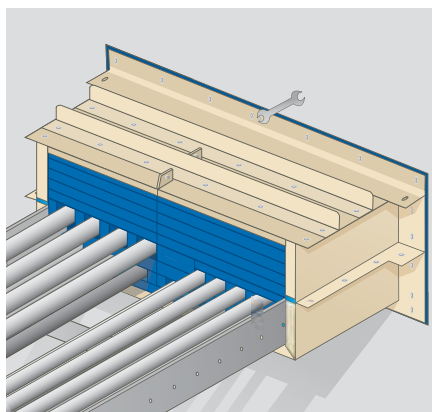
**ACTIFOAM  
FIRESTOP**

300x100x10mm	600x100x10mm
300x100x15mm	600x100x15mm
300x100x20mm	600x100x20mm
300x100x25mm	600x100x25mm

300x150x10mm	600x150x10mm
300x150x15mm	600x150x15mm
300x150x20mm	600x150x20mm
300x150x25mm	600x150x25mm

300x200x10mm	600x200x10mm
300x200x15mm	600x200x15mm
300x200x20mm	600x200x20mm
300x200x25mm	600x200x25mm

300x250x10mm	600x250x10mm
300x250x15mm	600x250x15mm
300x250x20mm	600x250x20mm
300x250x25mm	600x250x25mm



### Step 20

Place rings and nuts on all the remaining anchor bolts and tighten the attachment bolts of the attachment bracket firmly.

The **10mm thick sheets** have 30 (60) pre-cut profiles 10x10mm.  
The **15mm thick sheets** have 20 (40) pre-cut profiles 15x15mm.  
The **20mm thick sheets** have 15 (30) pre-cut profiles 20x20mm.  
The **25mm thick sheets** have 12 (24) pre-cut profiles 25x25mm.

The profiles can easily be torn off.



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