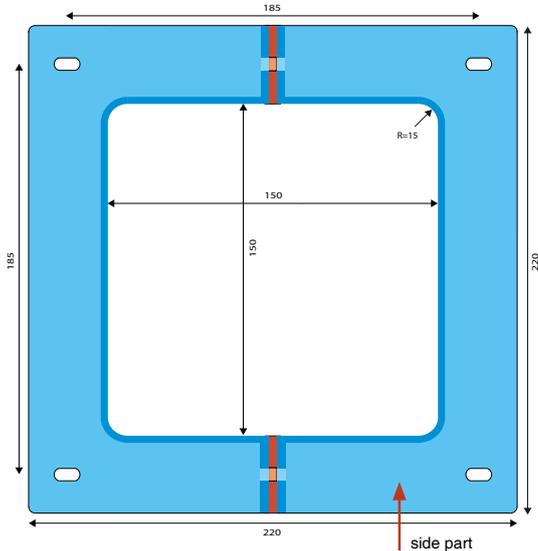
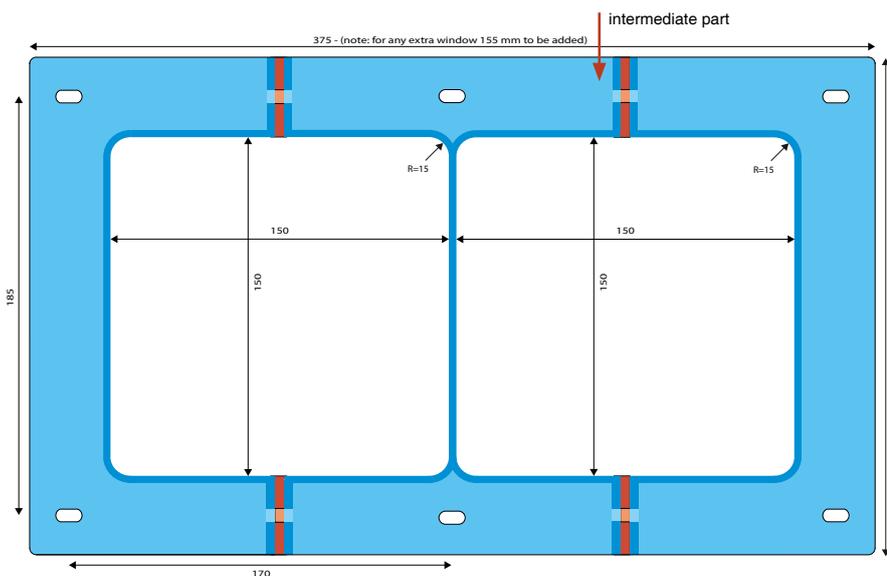


RISWAT® GAS & WATERTIGHT SEALING SYSTEM FOR EXISTING MULTI-CABLE PENETRATIONS



In many instances, it may be impossible to remove the leaking penetration seal through which cables or pipes have been ducted. For this purpose, the CSD® split frames have been developed. The sections of the frame can be placed around the ducted cables/pipes and connected to each other by placing a NOFIRNO® gasket between the flanges and bolted together. The frame is then fixed to the wall with a NOFIRNO® split gasket between the frame and the wall. With the developed intermediate parts, multi-frames can be assembled to larger sizes.

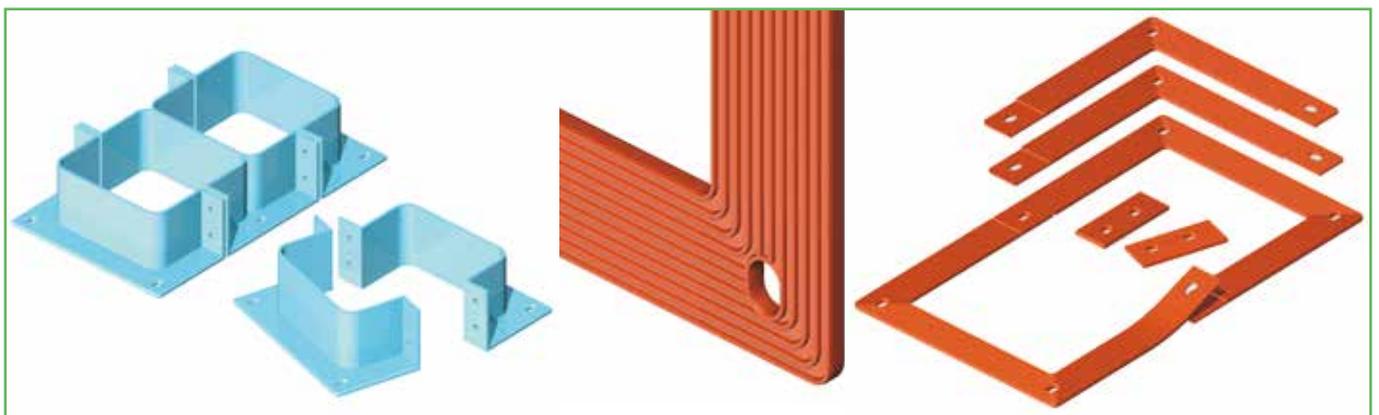
After the frame has been installed, the RISWAT® sealing system can be applied. The depth of the frames is 80 mm which accommodates 60 mm RISWAT® insert and filler sleeves. The remaining 20 mm is used for applying a 20 mm layer of either DRIFIL® or NOFIRNO® sealant.

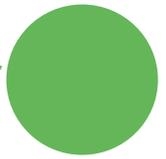


side part frame	60.9500
intermediate part	60.9501
frame 1x150 complete	60.9510
frame 2x150 complete	60.9511
frame 3x150 complete	60.9512
gasket flanges	51.9500
gasket side part 1x150	51.9501
gasket side part nx150	51.9502
extension gasket nx150	51.9503
gasket 1x150 complete	51.9510
gasket 2x150 complete	51.9511
gasket 3x150 complete	51.9512

The CSD® split flanged frames are made of an impact resistant plastic. The design is modular and can be easily assembled to multi-bay units for larger existing penetrations. Frames with an internal dimension of 250 mm are in development.

The NOFIRNO® rubber has excellent weathering properties, UV and Ozone resistance and long term behaviour. The NOFIRNO® gaskets have a special profiling to exclude the need for excessive compression and the need for retightening from time to time.





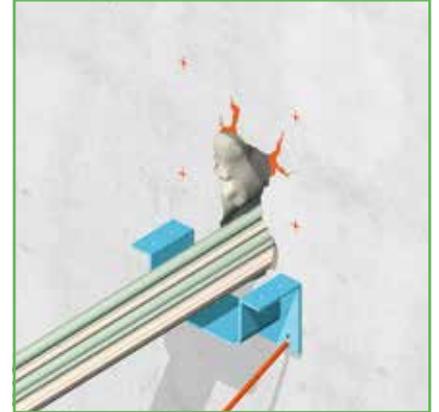
RISWAT® GAS & WATERTIGHT SEALING SYSTEM FOR EXISTING MULTI-CABLE PENETRATIONS



1) Occasionally it is impossible to remove an existing seal in an opening. In this case, just remove the protruding portion of the seal and utilize a CSD® split flanged frame and the RISWAT® system.



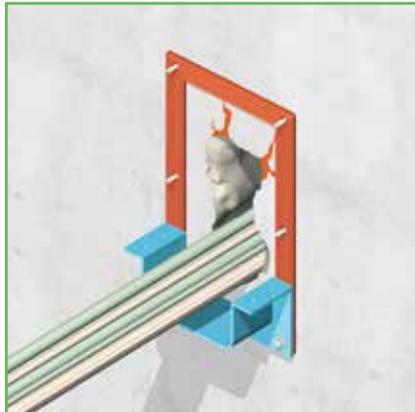
2) If there are large irregularities in the wall around the opening, they should be locally smoothed with DRIFIL® or NOFIRNO® sealant. NOFIRNO® sealant has highest mechanical properties.



3) The CSD® split flanged frames are made of impact resistant plastic. Attachment holes are marked off on the wall or floor, corresponding to the pattern of holes in the CSD® split flanged frame.



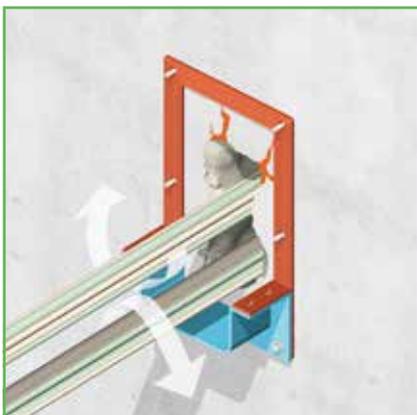
4) After drilling the attachment holes and positioning the anchoring bolts, place the NOFIRNO® gasket parts over the anchoring bolts against the wall.



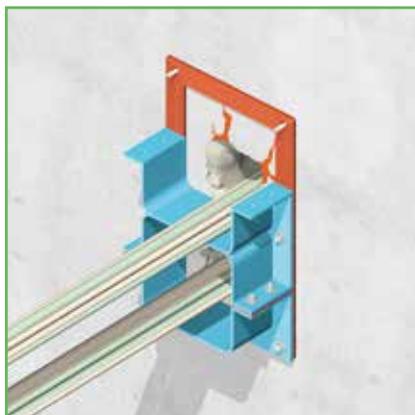
5) The split flanged frame is disassembled, and the lower part secured finger-tight against the wall. Both the CSD® frames and NOFIRNO® gaskets have oval holes for ease of adjustment.



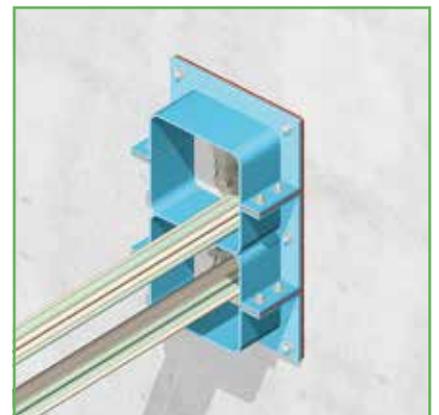
6) Place the NOFIRNO® gaskets on the connector flanges of the CSD® split flanged frame.



7) If utilizing multi-bay frames, separate the cables and place them in the bay where watertight sealing is most easiest. This may depend on the play in the cable set.

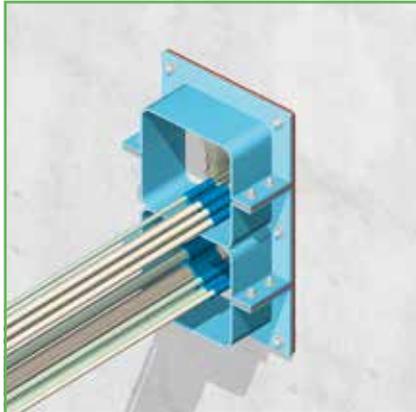


8) Position the intermediate element of the frame over the anchor bolts against the wall, and then fix the element to the previously positioned frame. Secure the intermediate element finger-tight against the wall.

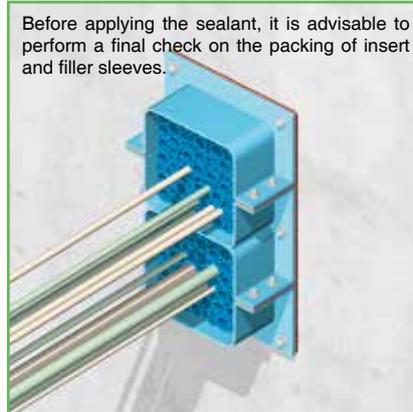


9) In the same way, place the upper part on the intermediate part. Tighten the bolts on the connector flanges. Note: no excessive forces needed. Finally, all the nuts on the anchoring bolts should be firmly tightened.

RISWAT® GAS & WATERTIGHT SEALING SYSTEM FOR EXISTING MULTI-CABLE PENETRATIONS



10) RISWAT® insert sleeves are applied around each cable. The insert sleeves are split lengthwise. Push the sleeves into the frame in such a way as to leave about 20 mm free space at the front.



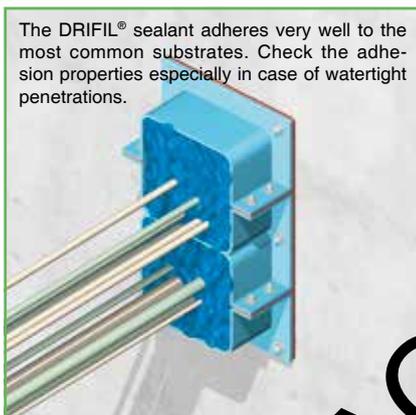
Before applying the sealant, it is advisable to perform a final check on the packing of insert and filler sleeves.

11) The remaining free space in the conduit is filled with RISWAT® filler sleeves type 27/4 and 18/12. The whole set of insert and filler sleeves should fit tightly into the conduit to provide sufficient mechanical stability.



Use our professional sealant guns. Hand fatigue is prevented and optimum flow of the sealant is obtained.

12) A 40 mm thick layer of DRIFIL® sealant is applied. Clean and dry the conduit opening and the cables thoroughly, and remove any dirt, rust or oil residues before applying the sealant.



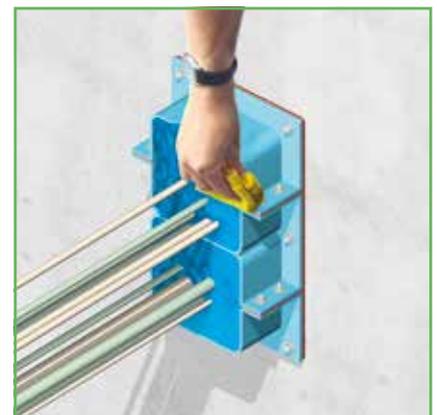
The DRIFIL® sealant adheres very well to the most common substrates. Check the adhesion properties especially in case of watertight penetrations.

13) The conduit should be overfilled with DRIFIL® sealant, because some sealant will be pushed between and into the empty filler sleeves during further finishing. This will contribute to obtain higher tightness ratings.



People with sensitive skin should use gloves when working with DRIFIL®.

14) To smooth the surface of the DRIFIL® sealant layer, a cloth is sprayed with water. This prevents the sealant from sticking to the cloth. Note: do not use soap water!

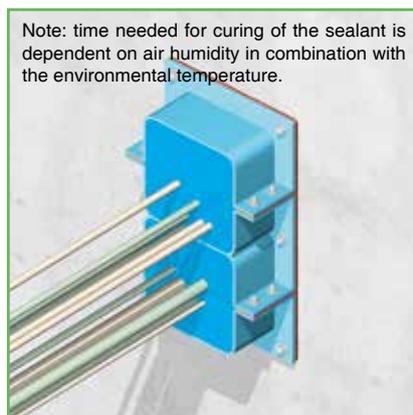


15) The cloth is then used to press down the sealant layer. People with sensitive skin should use gloves when working with DRIFIL®. Please refer to the Safety Data Sheet for more information.



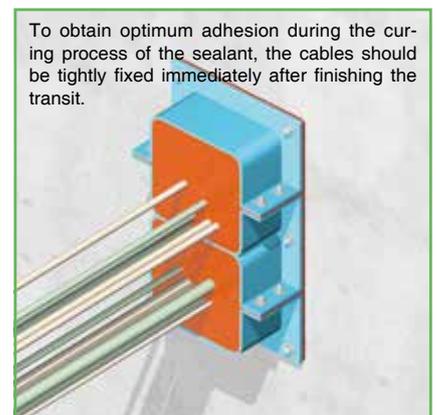
People with sensitive skin should use gloves when working with DRIFIL®.

16) The surface can be further smoothed by hand. Just wet the hand thoroughly with soap and water. No dirty hands when working with DRIFIL® and a very neat surface is the result.



Note: time needed for curing of the sealant is dependent on air humidity in combination with the environmental temperature.

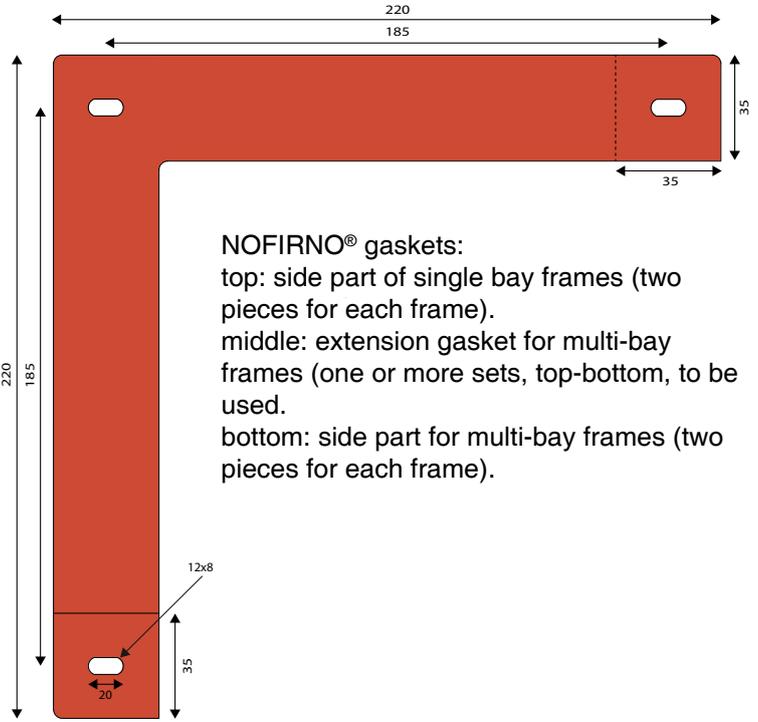
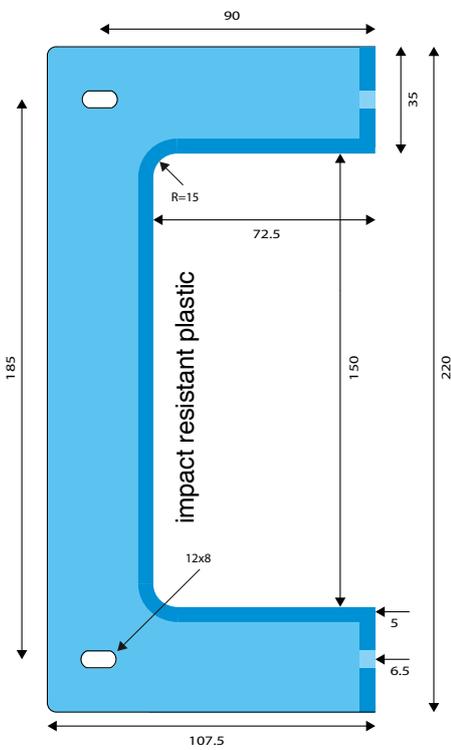
17) After smoothing is finished, a last check should be taken to ensure sealant is applied in between the cables, especially in penetrations with larger amounts of cables. For adding cables see page 29.



To obtain optimum adhesion during the curing process of the sealant, the cables should be tightly fixed immediately after finishing the transit.

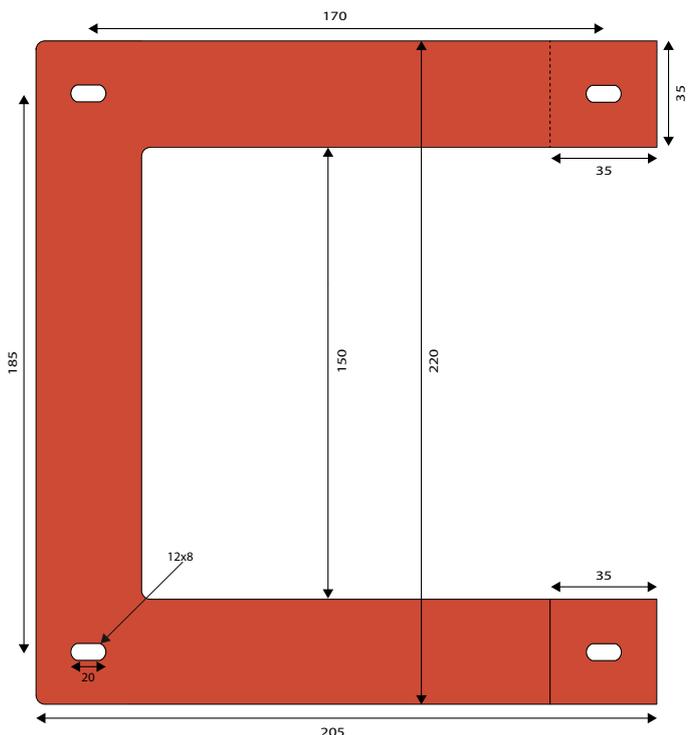
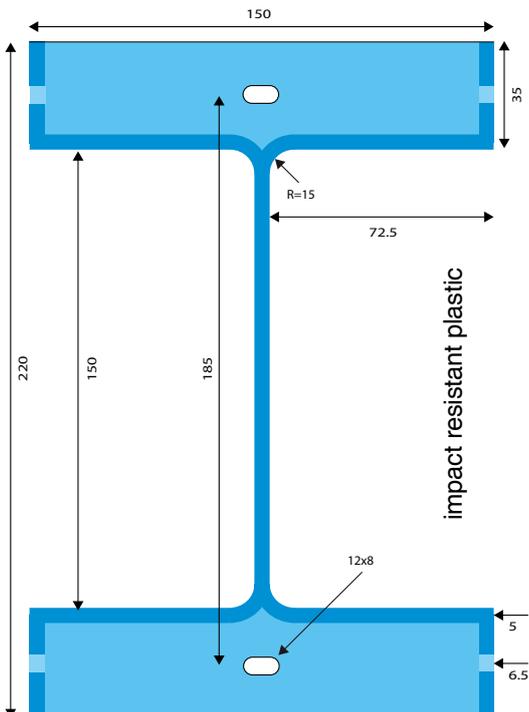
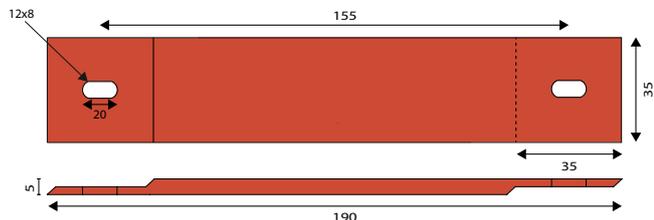
18) For optimized mechanical stability and to obtain higher pressure ratings, NOFIRNO® sealant can be used in place of DRIFIL® sealant. NOFIRNO® sealant has optimum mechanical properties.

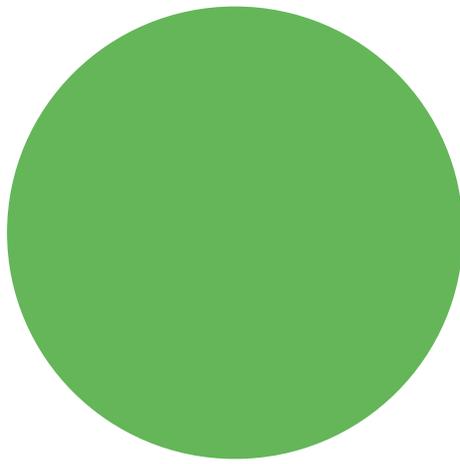
RISWAT® GAS & WATERTIGHT MULTI-CABLE TRANSIT SEALING SYSTEM



NOFIRNO® gaskets:
 top: side part of single bay frames (two pieces for each frame).
 middle: extension gasket for multi-bay frames (one or more sets, top-bottom, to be used).
 bottom: side part for multi-bay frames (two pieces for each frame).

CSD® split flanged frames:
 top: side part of single bay frames
 bottom: intermediate part for multi-bay frames (one or more intermediate parts to be used for larger frame combinations).





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**BEELE ENGINEERING:
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FOR OVER 40 YEARS**



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www.rise-systems.com, www.rise-nofirno.com, www.riswat.com and www.slipsil.com)**