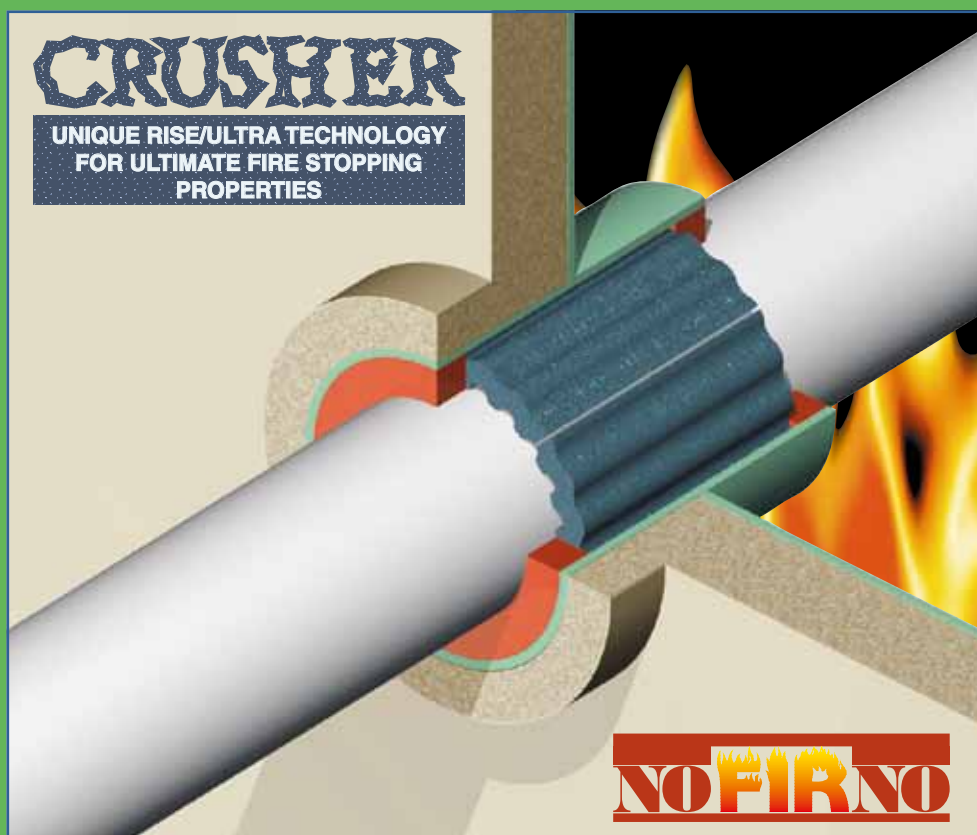
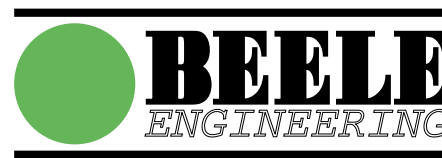


INSTALLATION INSTRUCTIONS RISE®/ULTRA SEALING SYSTEM FOR PLASTIC PIPE TRANSITS



TESTED TO IMO RESOLUTION A.754(I8);
FIRE RESISTANCE AO-A60
EC (MED) CERTIFICATE
MED-B-5068 ISSUED BY DNV



PLEASE ALSO REFER TO THE STAMPED INSTALLATION DRAWINGS ATTACHED TO OUR MED AND TYPE APPROVAL CERTIFICATES

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brochure code	: rise/ultra/installation/en/mar



RISE®/ULTRA - SINGLE PLASTIC PIPE TRANSIT SEALING SYSTEM

CRUSHER® type C-FIT



Note: maximum continuous service temperature of the CRUSHERS® not to exceed 70 °C. Consult our technical support department in case of higher operating temperatures.

CRUSHER® type WRAP



Note: maximum continuous service temperature of the CRUSHERS® not to exceed 70 °C. Consult our technical support department in case of higher operating temperatures.



article number 50.0102

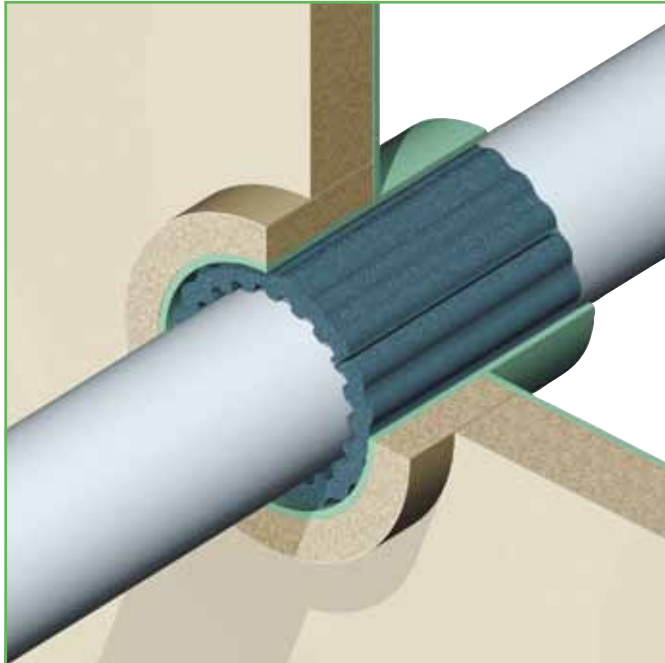
NOFIRNO® is a paste-like compound which is simple to use. NOFIRNO® has a balanced viscosity and can be applied overhead. After applying the sealant, it can be smoothed by means of a wet cloth or by hand. Because the sealant adheres very tightly, the cloth and hands should be wetted with water before use to prevent sealant from sticking to them.

Shelf life is 12 months when stored properly. Since we have no control on storage, we can only guarantee for 6 months.

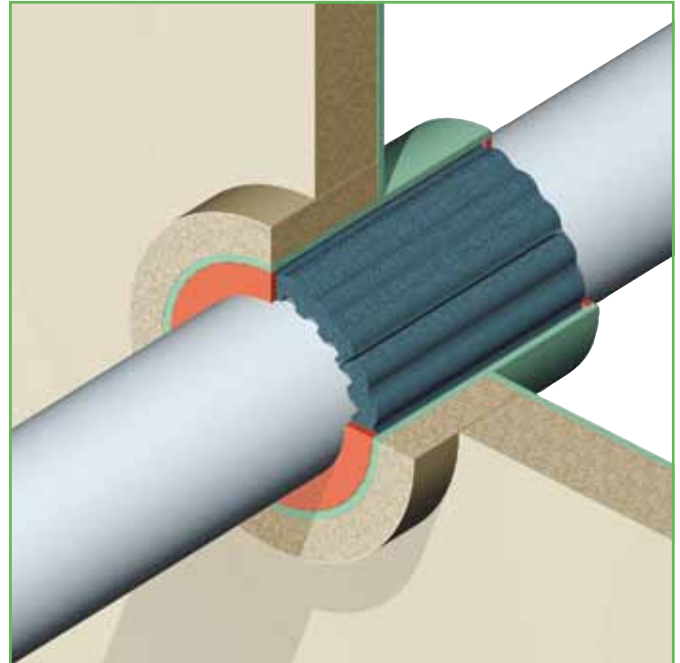
plastic pipe OD	crusher® type	conduit opening	crusher® length	article number
16	37/16	37.2	140	80.2800
18	37/18	37.2	140	80.2801
20	37/20	37.2	140	80.2802
25	37/25	37.2	140	80.2803
32	54/32	54.5	140	80.2804
40	54/40	54.5	140	80.2805
50	82/50	82.5	140	80.2806
63	82/63	82.5	140	80.2807
75	107/75	107.1	140	80.2808
90	131/90	131.7	140	80.2809
110	159/110	159.3	140	80.2810
125	159/125	159.3	140	80.2811
140	207/140	207.3	160	80.2812
160	207/160	207.3	160	80.2813
16	37/16	37.2	170	80.2840
18	37/18	37.2	170	80.2841
20	37/20	37.2	170	80.2842
25	37/25	37.2	170	80.2843
32	54/32	54.5	170	80.2844
40	54/40	54.5	170	80.2845
50	82/50	82.5	170	80.2846
63	82/63	82.5	170	80.2847
75	107/75	107.1	170	80.2848
90	131/90	131.7	170	80.2849
110	159/110	159.3	170	80.2850
125	159/125	159.3	170	80.2851
140	207/140	207.3	190	80.2852
160	207/160	207.3	190	80.2853
16	35/16	35.9	140	80.2900
18	35/18	35.9	140	80.2901
20	41/20	41.1	140	80.2902
25	41/25	41.1	140	80.2903
32	53/32	53.9	140	80.2904
40	53/40	53.9	140	80.2905
50	80/50	80.7	140	80.2906
63	80/63	80.7	140	80.2907
75	105/75	105.3	140	80.2908
90	130/90	130.8	140	80.2909
110	155/110	155.2	140	80.2910
125	155/125	155.2	140	80.2911
140	202/140	202.7	160	80.2912
160	202/160	202.7	160	80.2913
16	35/16	35.9	170	80.2940
18	35/18	35.9	170	80.2941
20	41/20	41.1	170	80.2942
25	41/25	41.1	170	80.2943
32	53/32	53.9	170	80.2944
40	53/40	53.9	170	80.2945
50	80/50	80.7	170	80.2946
63	80/63	80.7	170	80.2947
75	105/75	105.3	170	80.2948
90	130/90	130.8	170	80.2949
110	155/110	155.2	170	80.2950
125	155/125	155.2	170	80.2951
140	202/140	202.7	190	80.2952
160	202/160	202.7	190	80.2953
wrap 1000x140x2.5 mm				80.2512
wrap 1000x160x2.5 mm				80.2513
wrap 1000x170x2.5 mm				80.2514
wrap 1000x190x2.5 mm				80.2515
wrap 1000x210x2.5 mm				80.2516

all dimensions in mm

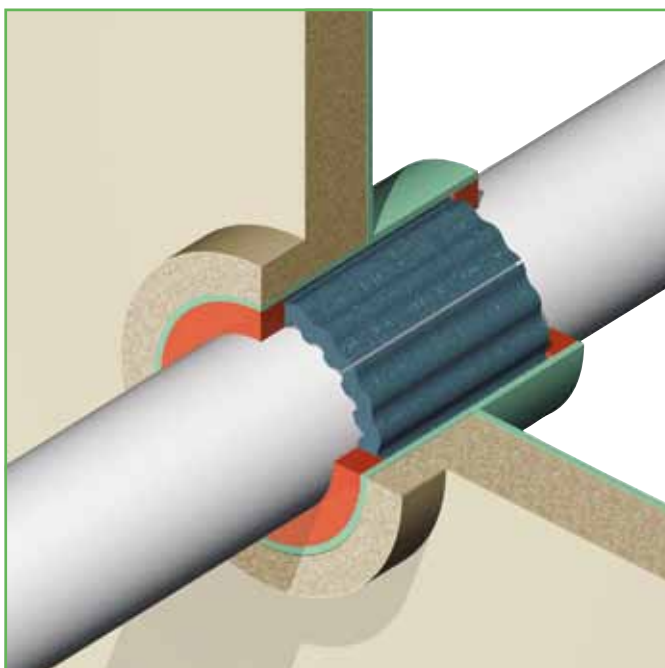
RISE®/ULTRA - SINGLE PLASTIC PIPE TRANSIT SEALING SYSTEM



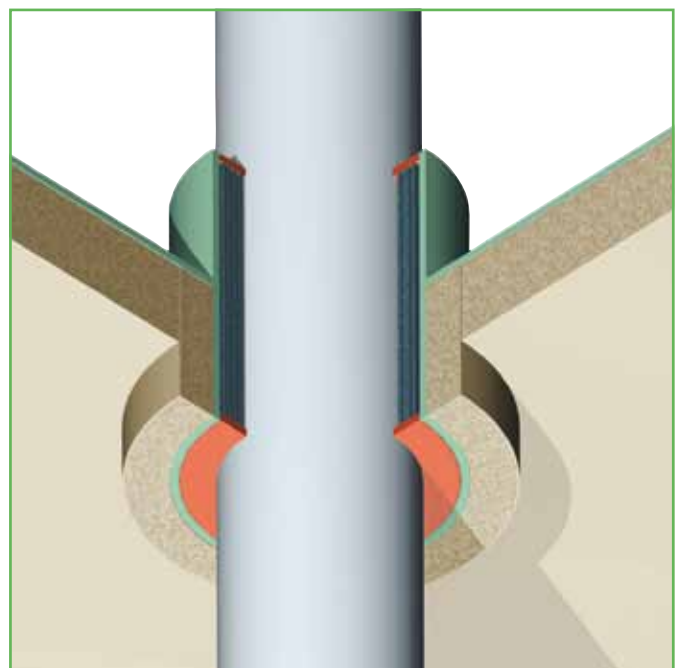
Several options are available with the RISE®/ULTRA crushers. The most simple and cost effective solution is a fitting C-FIT crusher applied in a conduit sleeve with an exact ID for a tight fit. This application is for **fire-rated only** penetrations.



For air and smoke tight penetrations, a non-fitting crusher can be used (although fitting is preferred). Note: Limitations on the air gap between crusher and wall of the conduit. NOFIRNO® sealant with a thickness of minimum 5 mm to be applied at both sides.



For gas and watertight penetrations, a fitting C-FIT crusher is applied in a conduit sleeve with an exact ID for a tight fit. NOFIRNO® sealant with a thickness of minimum 20 mm to be applied at both sides. Note: water tightness dependent on adhesion of the sealant to the plastic pipe.



Instead of RISE®/ULTRA crushers, RISE®/ULTRA wraps can be used. It is recommended to always apply NOFIRNO® sealant to prevent the crusher from falling out of the conduit. Note: the RISE®/ULTRA wraps are 2.5 thick and have to be wrapped to the required thickness.



RISE®/ULTRA - SINGLE PLASTIC PIPE TRANSIT SEALING SYSTEM

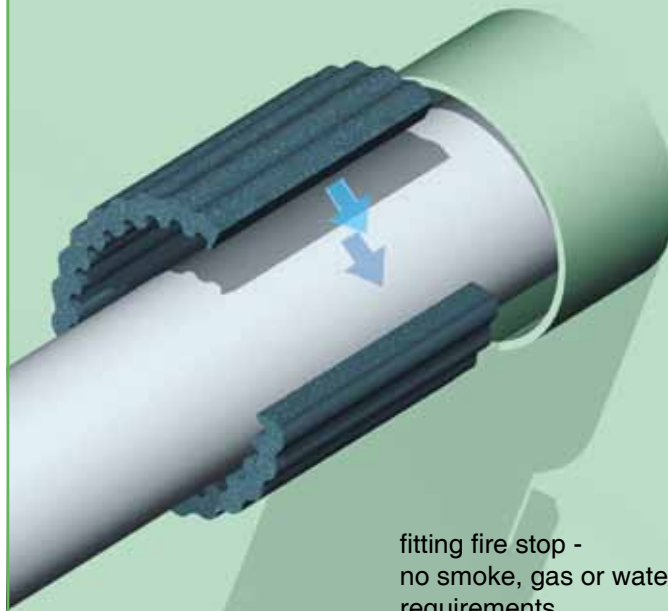
1) To obtain optimum performance at low cost, it is advisable to select the appropriate size of the conduit opening based on the type of crusher to be used according to the tables on page 1.
The fitting RISE®/ULTRA C-FIT crusher, which is split lengthwise, is folded around the ducted plastic pipe in front of the conduit sleeve.

CRUSHER

2) In case of a tight fitting crusher, the outside of the crusher and the inner wall of the conduit should be treated with CSD® lubricant for ease of installation.
Push the crusher into the conduit sleeve.

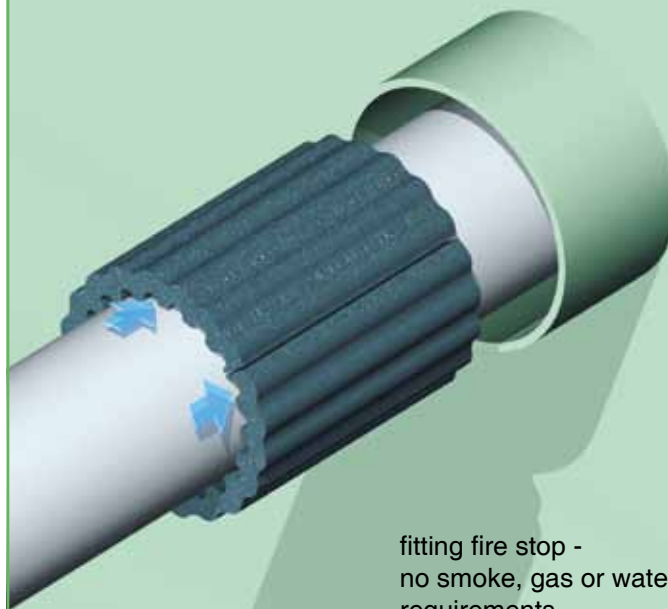
CRUSHER

Ask about our bolt-on (split or non-split) collars which can be supplied with the RISE®/ULTRA Crushers as a turn-key kit.



fitting fire stop -
no smoke, gas or watertight
requirements

Note: maximum continuous service temperature of the CRUSHERS® not to exceed 70 °C. Consult our technical support department in case of higher operating temperatures.



fitting fire stop -
no smoke, gas or watertight
requirements

RISE®/ULTRA - SINGLE PLASTIC PIPE TRANSIT SEALING SYSTEM

3) Check for a tight fit.
For “fire-rated only” penetrations, it is not mandatory to apply a sealant. It will be obvious that a tight fit is in such cases a must to hold the crusher in place.
In case of a non-fitting crusher, the danger exists that the crusher might fall out of the penetration.

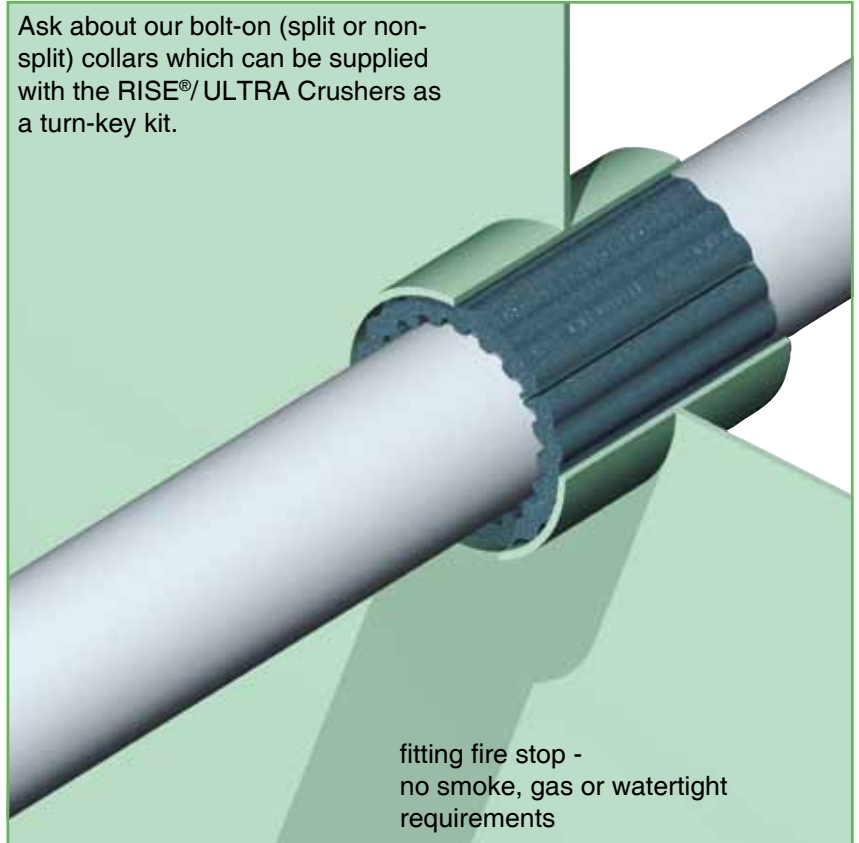
Our advice is to always apply sealant in order to avoid this problem.

CRUSHER

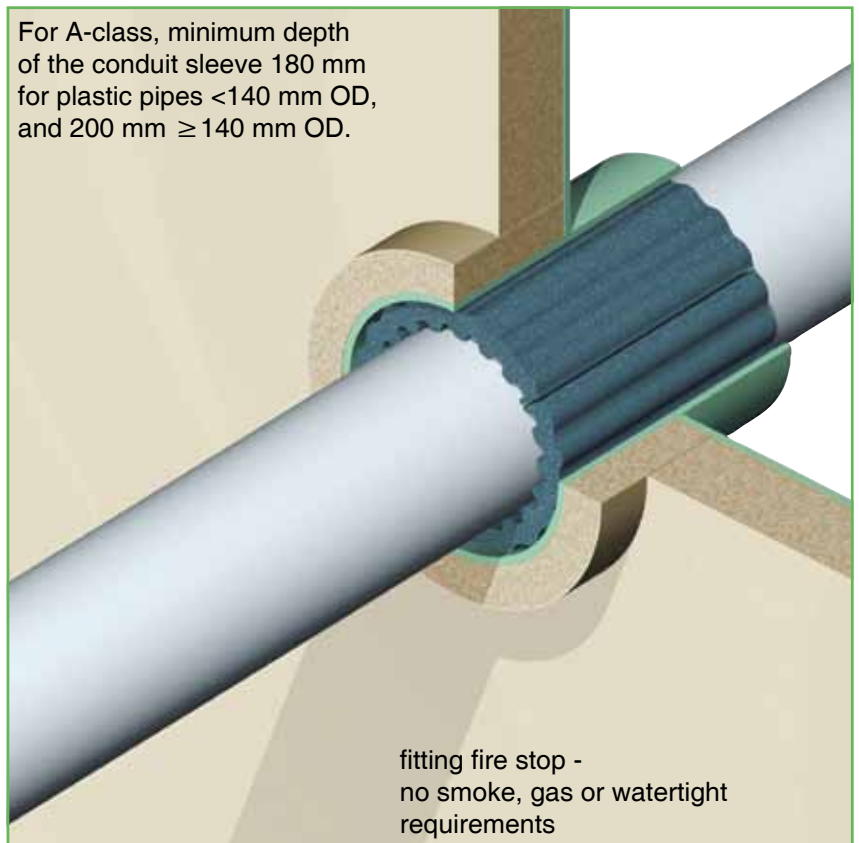
4) For A-class penetrations, the conduit sleeve needs to be insulated only at the insulated side of the bulkhead or the lower side of the deck.
The ducted pipe does not need to be insulated.

CRUSHER

Ask about our bolt-on (split or non-split) collars which can be supplied with the RISE®/ ULTRA Crushers as a turn-key kit.



For A-class, minimum depth of the conduit sleeve 180 mm for plastic pipes <140 mm OD, and 200 mm ≥ 140 mm OD.



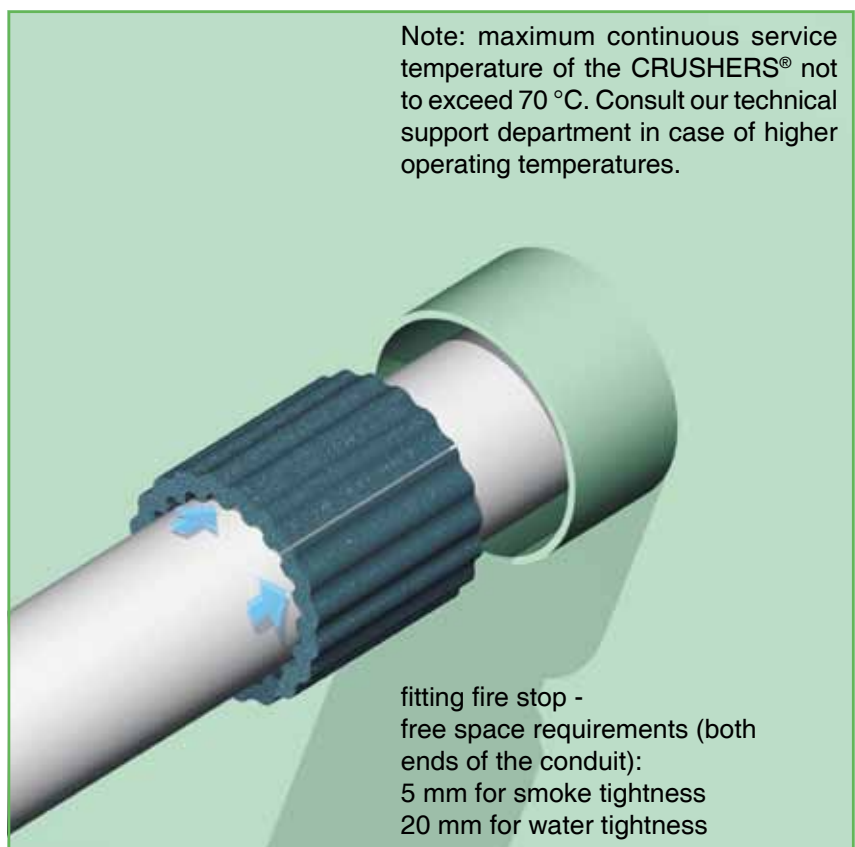
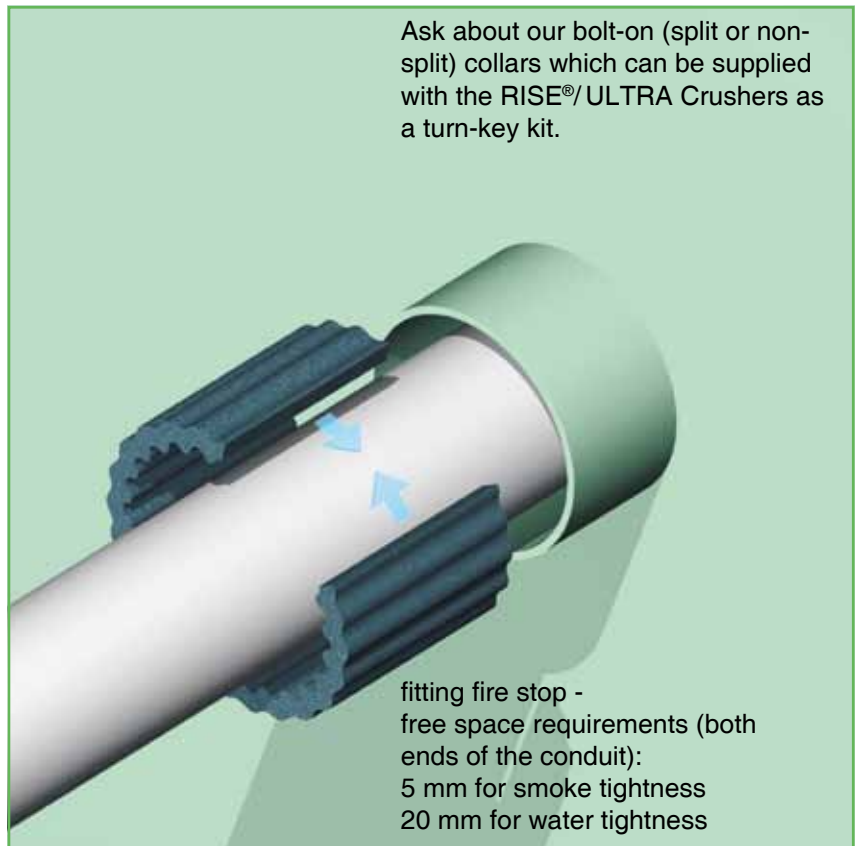


RISE®/ULTRA - SINGLE PLASTIC PIPE TRANSIT SEALING SYSTEM

1) To obtain optimum performance at low cost, it is advisable to select the appropriate size of the conduit opening based on the type of crusher to be used according to the tables on page 1. The RISE®/ULTRA C-FIT crusher, which is split lengthwise, is folded around the ducted plastic pipe in front of the conduit sleeve.



2) Push the crusher into the conduit sleeve in such a way as to leave about 5 mm, alternatively 20 mm free space, depending on the application, at the front and back side.



RISE[®]/ULTRA - SINGLE PLASTIC PIPE TRANSIT SEALING SYSTEM

3) For airtight penetrations, a NOFIRNO[®] sealant layer with thickness min. 5 mm is applied at both sides of the penetration.

For watertight penetrations the sealant layer has to be 20 mm thick at both sides of the penetration.

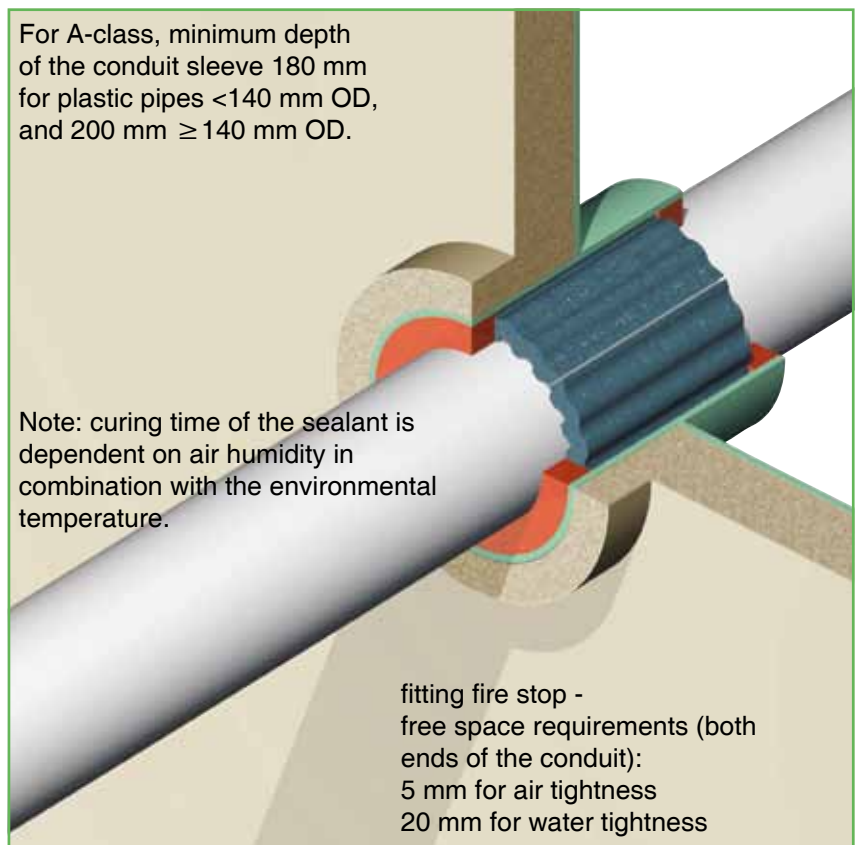
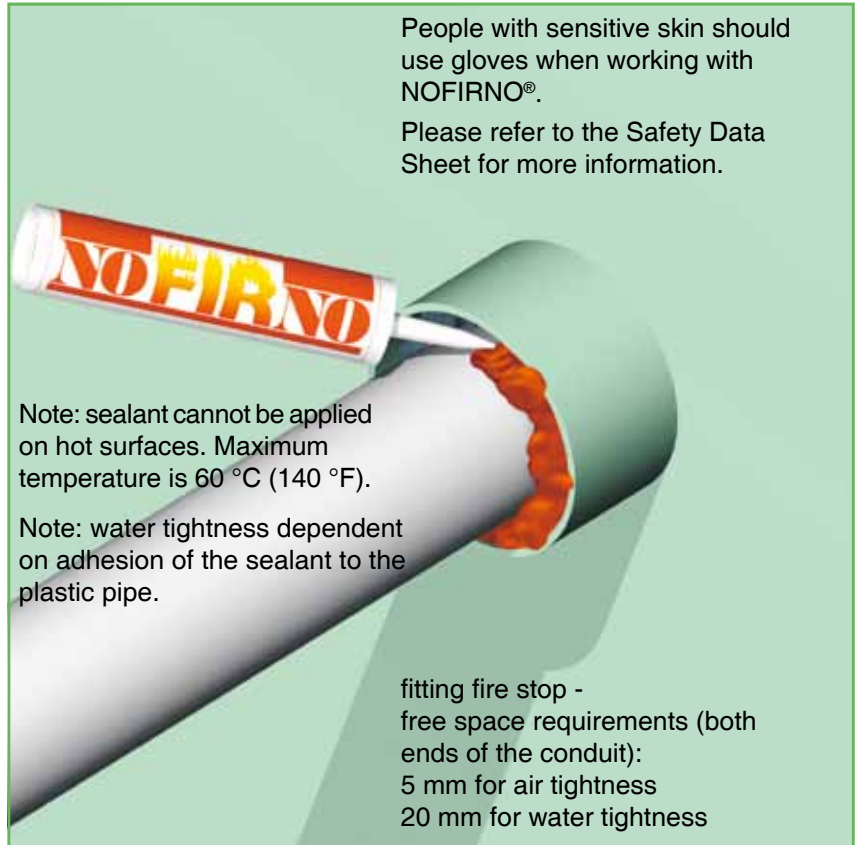
Clean and dry the inside of the conduit sleeve and the outside of the plastic pipe thoroughly, removing any dirt, rust or oil/lubricant residues before applying the sealant.

CRUSHER

4) For A-class penetrations, the conduit sleeve needs to be insulated only at the insulated side of the bulkhead or the lower side of the deck. The ducted pipe does not need to be insulated.

For the approved air gap between the crusher and the conduit sleeve, refer to Type Approval Certificates. For watertight penetrations a fitting crusher is preferred.

CRUSHER





RISE®/ULTRA - SINGLE AND MULTI-PLASTIC PIPE TRANSIT SEALING SYSTEM

CRUSHER® type C-FIT



Note: maximum continuous service temperature of the CRUSHERS® not to exceed 70 °C. Consult our technical support department in case of higher operating temperatures.

plastic pipe OD	crusher® type	crusher® length	article number
16	30/16	140	80.2720
18	30/18	140	80.2721
20	40/20	140	80.2722
25	40/25	140	80.2723
32	50/32	140	80.2724
40	50/40	140	80.2725
50	70/50	140	80.2726
63	80/63	140	80.2727
75	100/75	140	80.2728
90	125/90	140	80.2729
110	150/110	140	80.2730
125	160/125	140	80.2731
140	180/140	140	80.2732
160	200/160	140	80.2733
wrap 1000x140x2.5 mm			80.2512
wrap 1000x210x2.5 mm			80.2516

NOFIRNO® filler sleeves



filler sleeves are supplied non-split

The NOFIRNO® rubber grade has excellent properties and will not be consumed by the fire. The NOFIRNO® sealant immediately forms a protective layer and char when exposed to flames, in this way protecting the filling of the penetration seal.

The thermal insulation is very high because of the air volume inside the penetration. The air is tightly enclosed by the sealant layer at both sides even when one side is exposed to the fire. The NOFIRNO® system has been subjected to A-0, H-0 and even Jet Fires without being severely affected. Due to the superb behaviour of our various systems, the NOFIRNO® sealing system can be easily combined with RISE®.

The NOFIRNO rubber is absolutely HALOGEN FREE (tested according to Naval Engineering Standard NES 713: Issue 3). Furthermore, the NOFIRNO rubber has a low smoke index (NES 711: Issue 2: 1981) and a high oxygen index (ISO 4589-2: 1996).

NOFIRNO® filler sleeve	sleeve length	article number
18/12 single	140	80.5002
18/12 multi	140	80.5052
27/19 single	140	80.5012
27/19 multi	140	80.5062

Especially for larger oversized plastic pipe penetrations, the multi-filler sleeves offer an advantage when filling the cavity between the conduit sleeve/frame and the ducted plastic pipe that is sleeved with a crusher. The sets are very flexible and can be easily wrapped around the crusher around the ducted plastic pipe. Furthermore, single filler sleeves can be torn off easily. The NOFIRNO® rubber has a good, long lasting memory, enabling a tight fit of the sleeves inside the conduit. This improves the overall mechanical stability of the sealing system during service life.

NOFIRNO® multi-filler sleeves



filler sleeves are supplied non-split, single and multi (set of 10)

NOFIRNO® is a paste-like compound which is simple to use. NOFIRNO® has a balanced viscosity and can be applied overhead. After applying the sealant, it can be smoothed by means of a wet cloth or by hand. Because the sealant adheres very tightly, the cloth and hands should be wetted with water before use to prevent sealant from sticking to them.

Shelf life is 12 months when stored properly. Since we have no control on storage, we can only guarantee for 6 months.

article number 50.0102



RISE®/ULTRA - SINGLE PLASTIC PIPE TRANSIT SEALING SYSTEM

1) Select the appropriate size of the crusher to be used, based on the OD of the ducted plastic pipe, according to the tables on page 7.

The RISE®/ULTRA C-FIT crusher, which is split lengthwise, is folded around the ducted plastic pipe in front of the conduit sleeve.

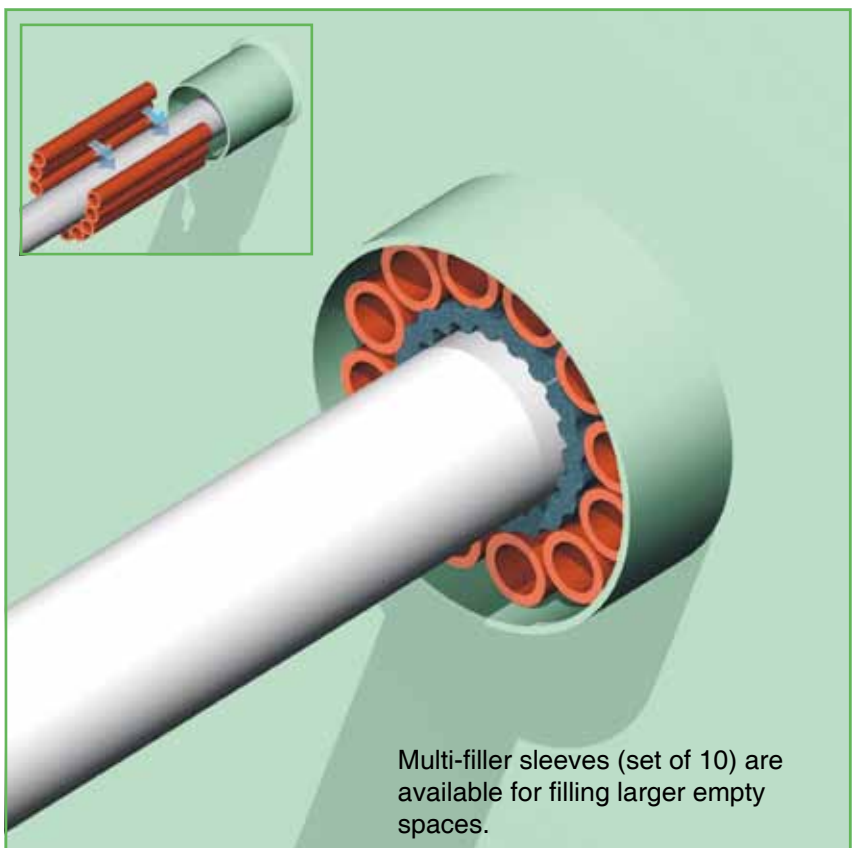
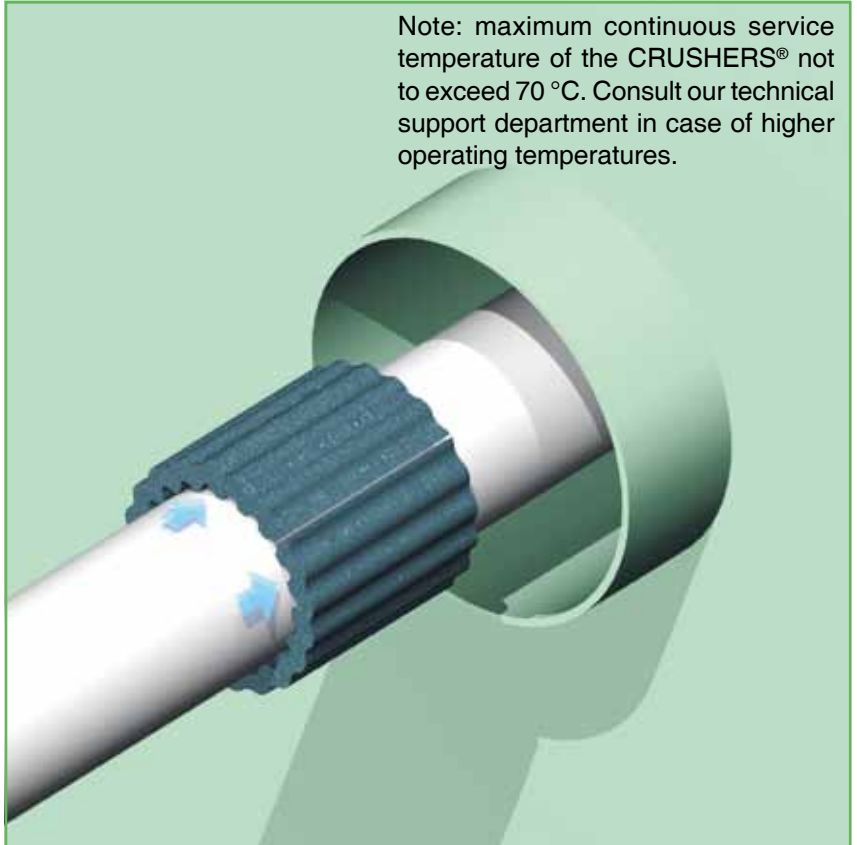
CRUSHER

2) Push the crusher into the conduit sleeve in such a way as to leave about 20 mm free space at the front and back side.

The remaining free space in the conduit is filled with NOFIRNO® filler sleeves. NOFIRNO® multi-filler sleeves are especially useful for packing single pipe penetrations. The multi-set can be wrapped around smallest service pipes.

CRUSHER

Note: maximum continuous service temperature of the CRUSHERS® not to exceed 70 °C. Consult our technical support department in case of higher operating temperatures.



Multi-filler sleeves (set of 10) are available for filling larger empty spaces.



RISE®/ULTRA - SINGLE PLASTIC PIPE TRANSIT SEALING SYSTEM

3) A 20 mm thick layer of NOFIRNO® sealant is applied at each side of the conduit.

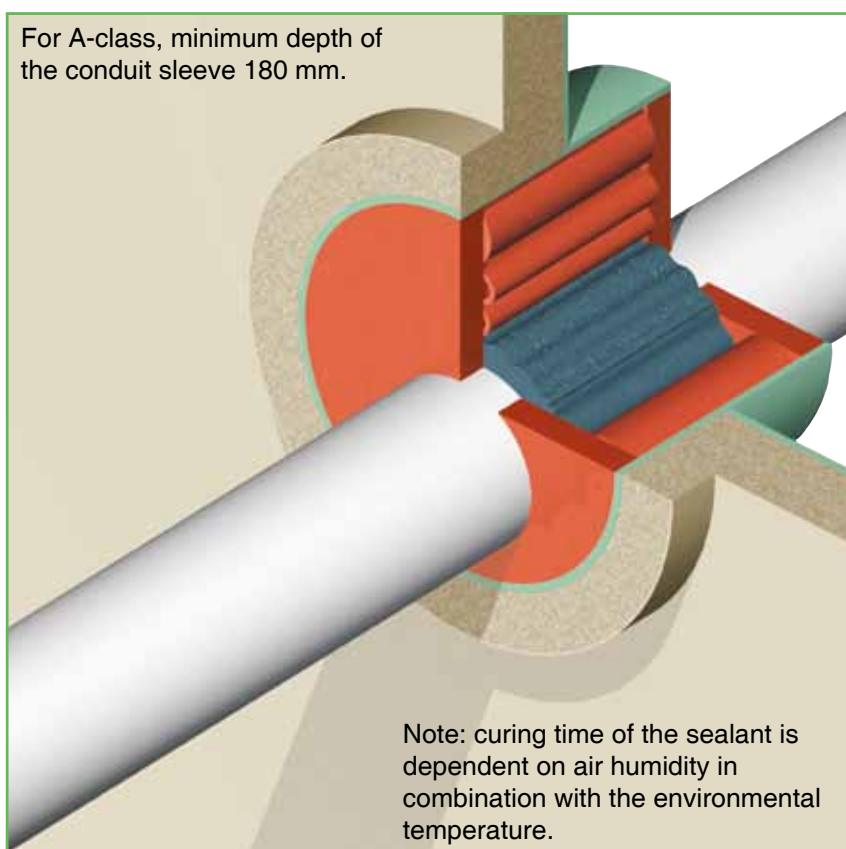
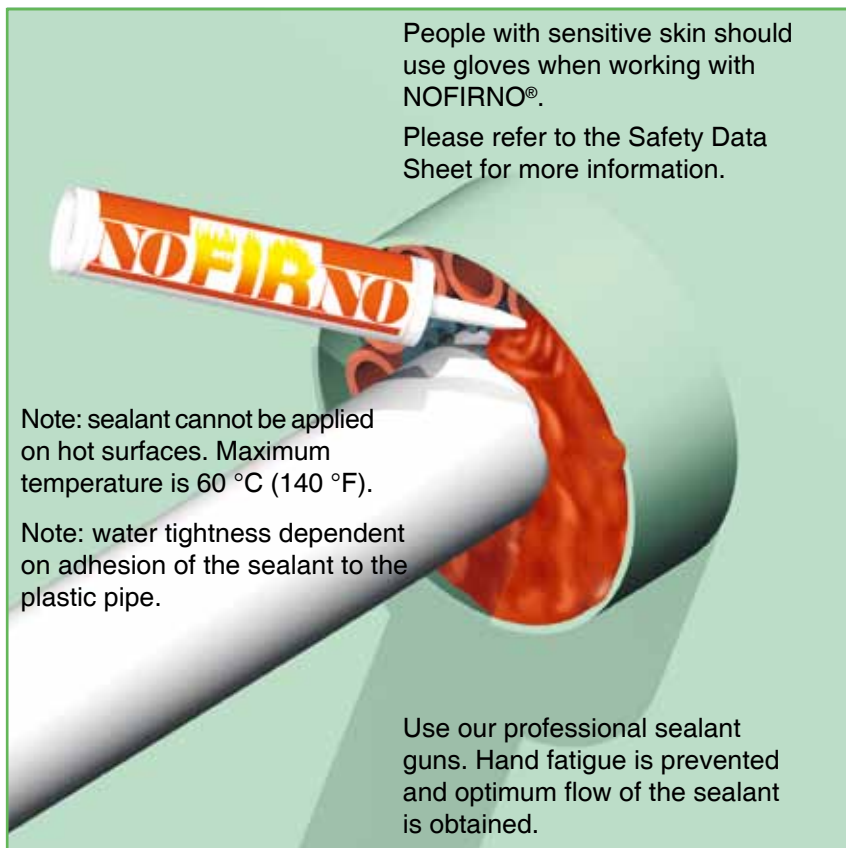
Clean and dry the inside of the conduit sleeve and the outside of the plastic pipe thoroughly, removing any dirt, rust or oil/lubricant residues before applying the sealant.

CRUSHER

4) For A-class penetrations, the conduit sleeve needs to be insulated only at the insulated side of the bulkhead or the lower side of the deck. The ducted pipe does not need to be insulated.

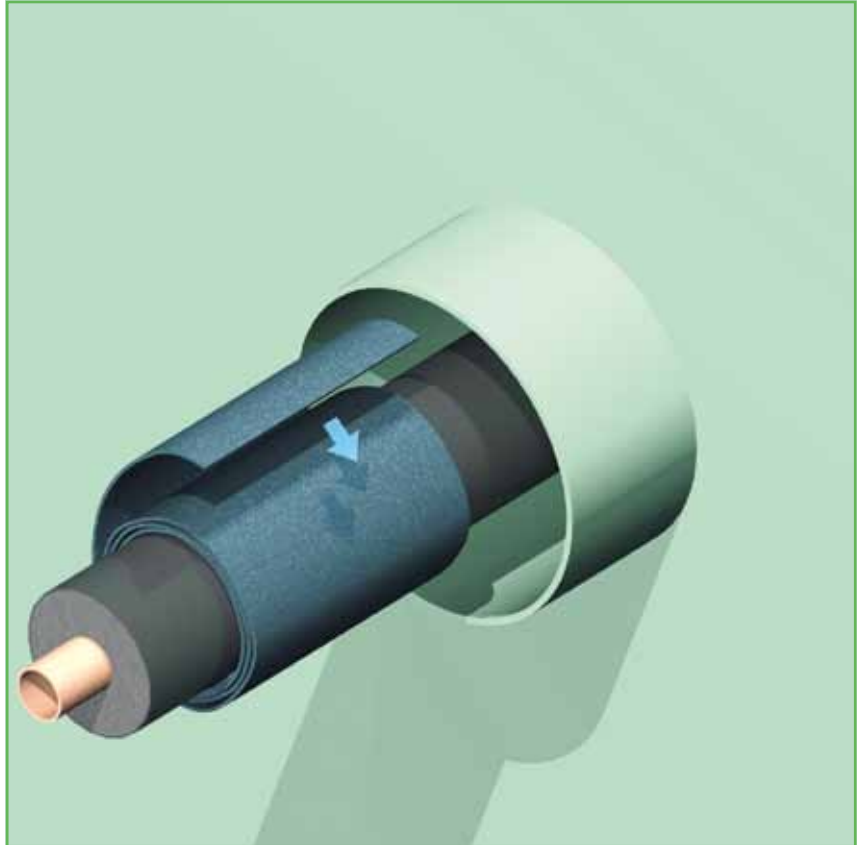
Also applicable for off centre ducted pipes.

CRUSHER



RISE®/ULTRA - PRE-INSULATED PIPE TRANSIT SEALING SYSTEM

1) For fire rated penetrations of pre-insulated pipes (for instance for chilled water lines), by applying RISE®/ULTRA there is now no need to remove the insulation inside the penetration. This prevents condensation problems.



CRUSHER

2) A RISE®/ULTRA sheet 210mm wide, 2.5 mm thick is wrapped around the thermal insulation to the required thickness and then pushed over the insulation into the conduit sleeve. The system can be used for both insulated steel and copper pipes.

Push the crusher wrap into the conduit sleeve in such a way as to leave about 20 mm free space at the front and back side.



CRUSHER



RISE®/ULTRA - PRE-INSULATED PIPE TRANSIT SEALING SYSTEM

3) Layer(s) of NOFIRNO® filler sleeves have to be applied around the crusher. See the certified drawings. A minimum 20 mm thick layer of NOFIRNO® sealant is applied at each side of the conduit.

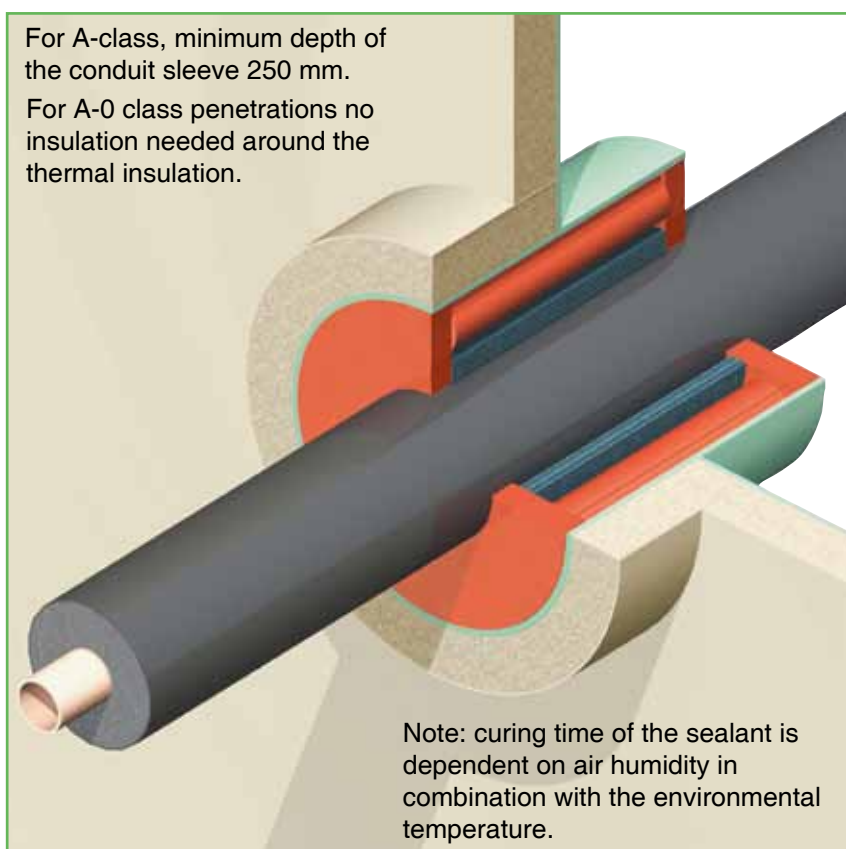
Clean and dry the conduit sleeve inside and the surface of the thermal insulation thoroughly and remove any dirt, rust or oil/ lubricant residues before applying the sealant.

CRUSHER

4) For A-class penetrations, the conduit sleeve needs to be insulated only at the insulated side of the bulkhead or at the lower side of the deck. The ducted pipe has to be insulated around the thermal insulation according to the specifications on the certified drawings.

Note: not approved for water tight partitions. In these cases the thermal insulation has to be interrupted.

CRUSHER

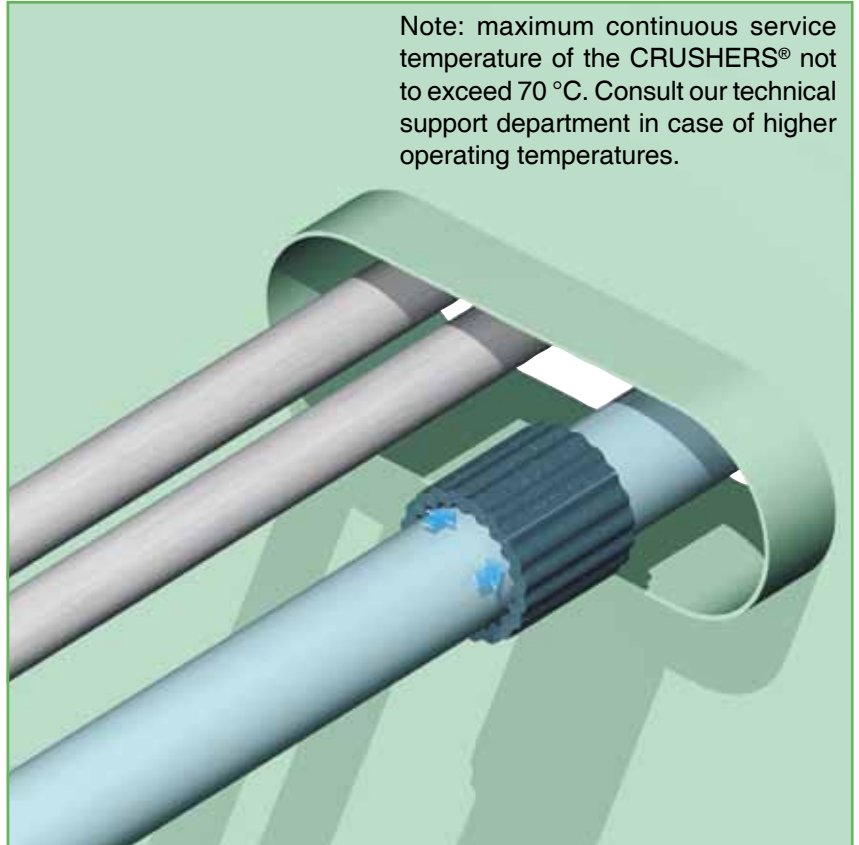


RISE®/ULTRA - MULTI-PLASTIC/METALLIC PIPE TRANSIT SEALING SYSTEM

1) Make sure that the minimum space between the metallic pipe(s) and the wall of the conduit sleeve is in accordance with the minimum allowed distance as certified.

Place a fitting RISE®/ULTRA crusher around the ducted plastic pipe(s).

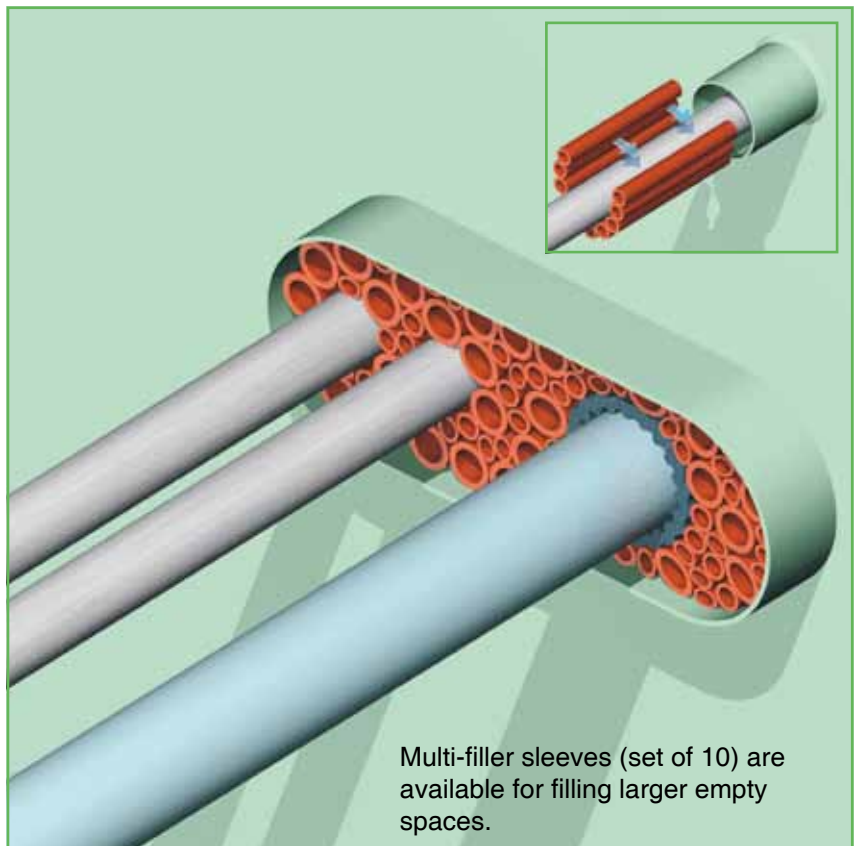
Note: maximum continuous service temperature of the CRUSHERS® not to exceed 70 °C. Consult our technical support department in case of higher operating temperatures.



CRUSHER

2) Push the crusher into the conduit sleeve in such a way as to leave about 20 mm free space at the front and back side.

The remaining free space in the conduit is filled with NOFIRNO® filler sleeves. For ease of filling, the filler sleeves are also supplied in multi-sets of 10 pieces. The ratio 27/19 to 18/12 should be about 2:1.



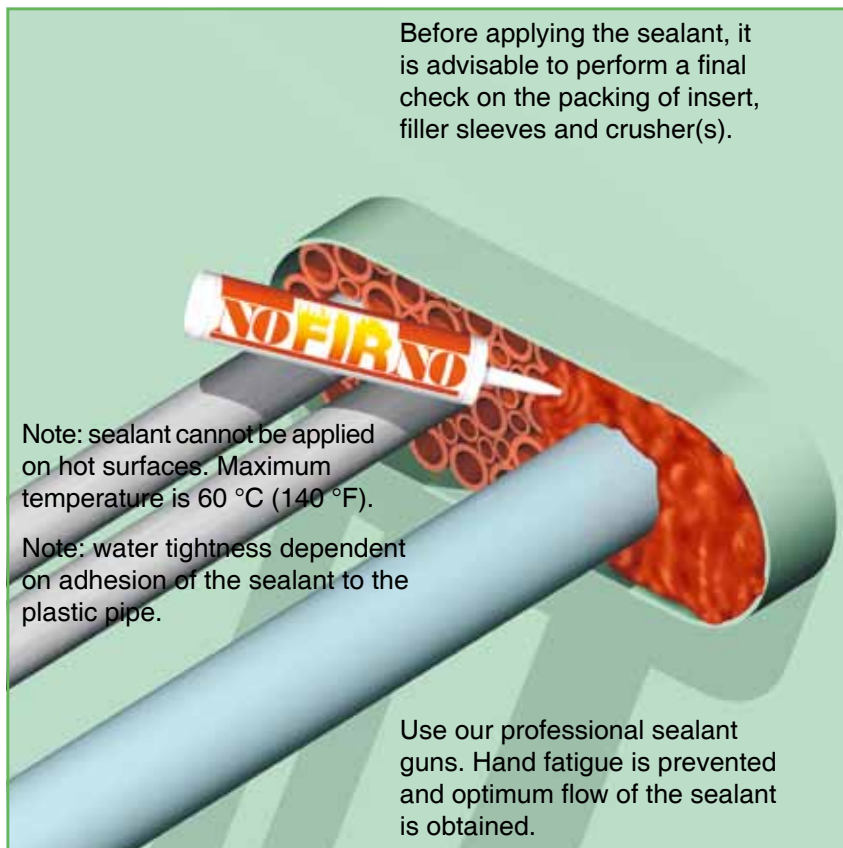
Multi-filler sleeves (set of 10) are available for filling larger empty spaces.

CRUSHER



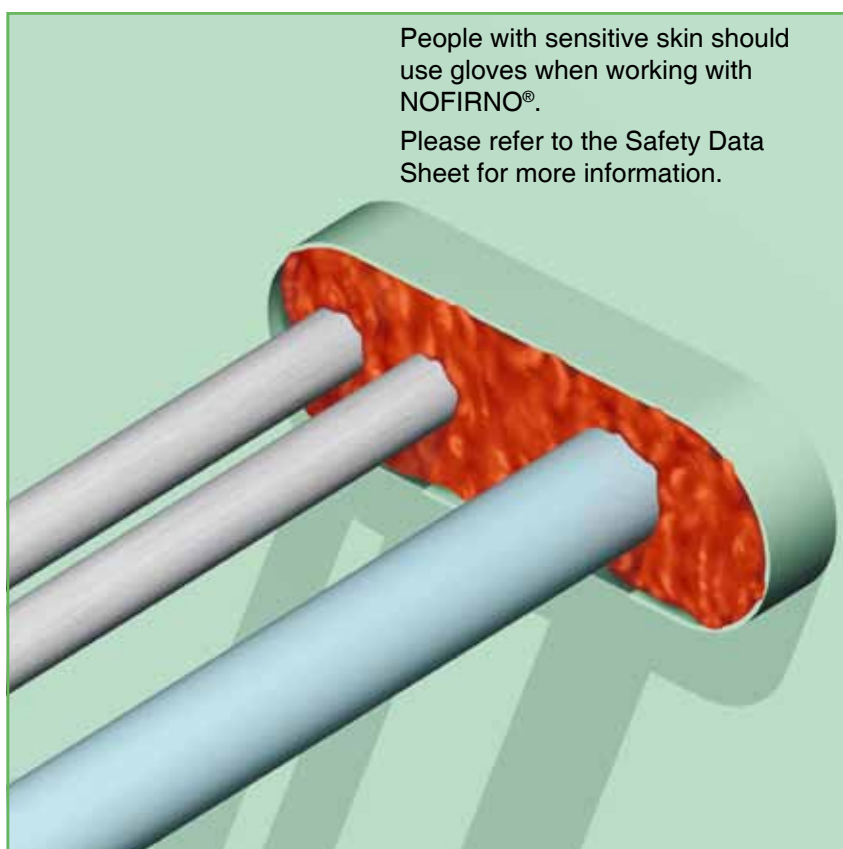
RISE®/ULTRA - MULTI-PLASTIC/METALLIC PIPE TRANSIT SEALING SYSTEM

3) A 20 mm thick layer of NOFIRNO® sealant is applied at each side of the conduit. Clean and dry the conduit opening and the pipes thoroughly, and remove any dirt, rust or oil residues before applying the sealant.



CRUSHER

4) The conduit should be overfilled with NOFIRNO® 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.



CRUSHER

RISE®/ULTRA - MULTI-PLASTIC/METALLIC PIPE TRANSIT SEALING SYSTEM

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

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

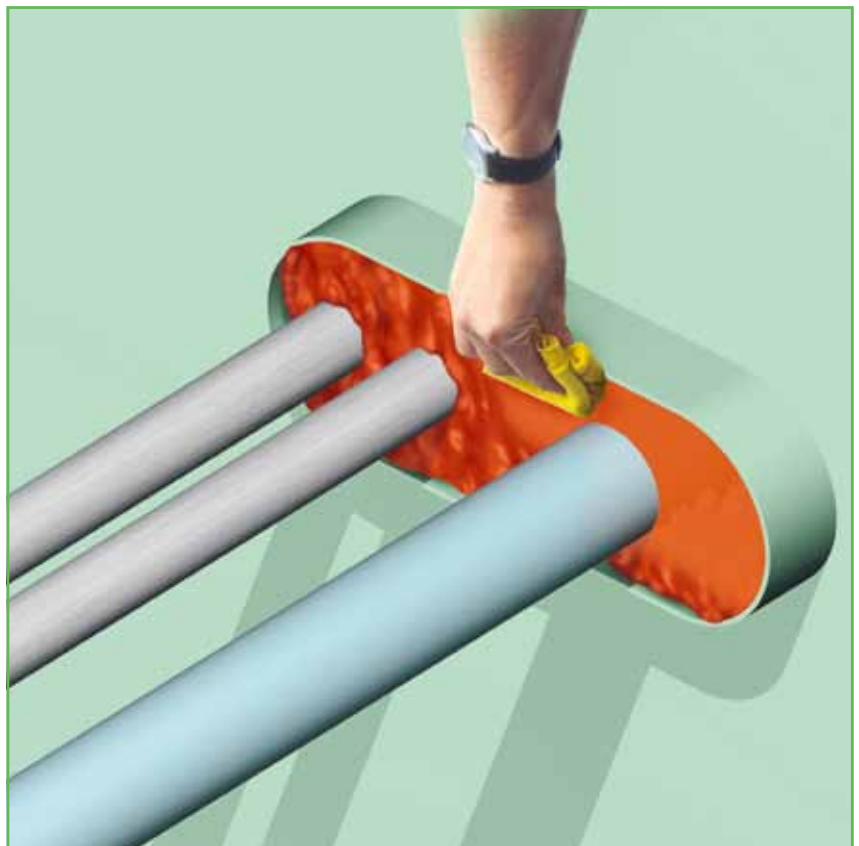
Please refer to the Safety Data Sheet for more information.



CRUSHER

6) The cloth is then used to press down the sealant layer.

People with sensitive skin should use gloves when working with NOFIRNO®. Please refer to the Safety Data Sheet for more information.

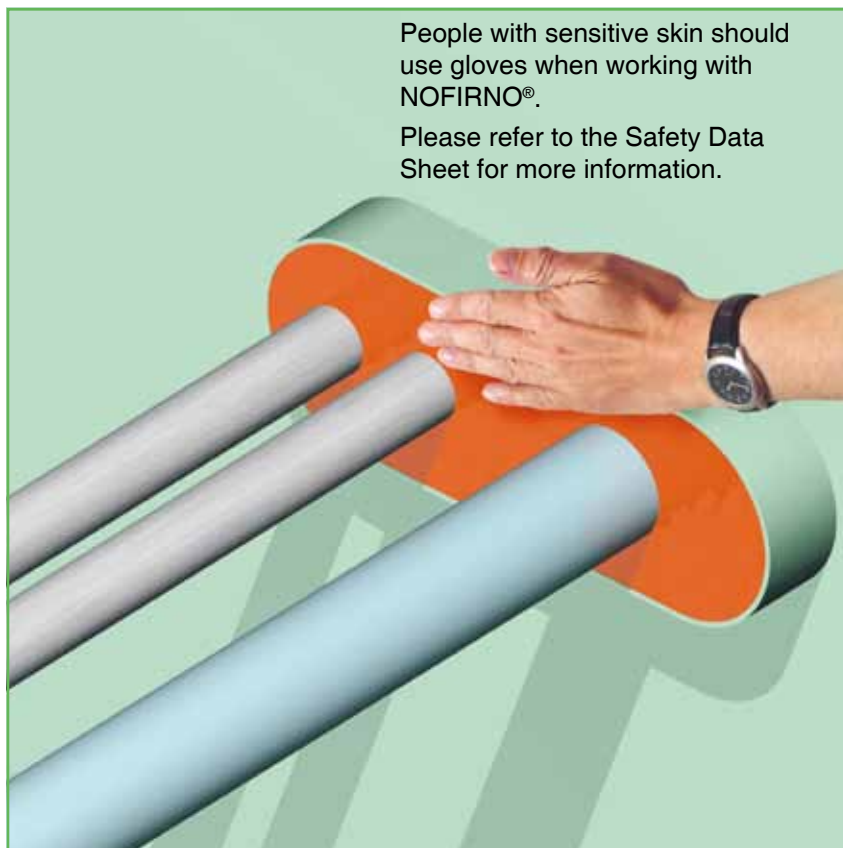


CRUSHER



RISE®/ULTRA - MULTI-PLASTIC/METALLIC PIPE TRANSIT SEALING SYSTEM

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

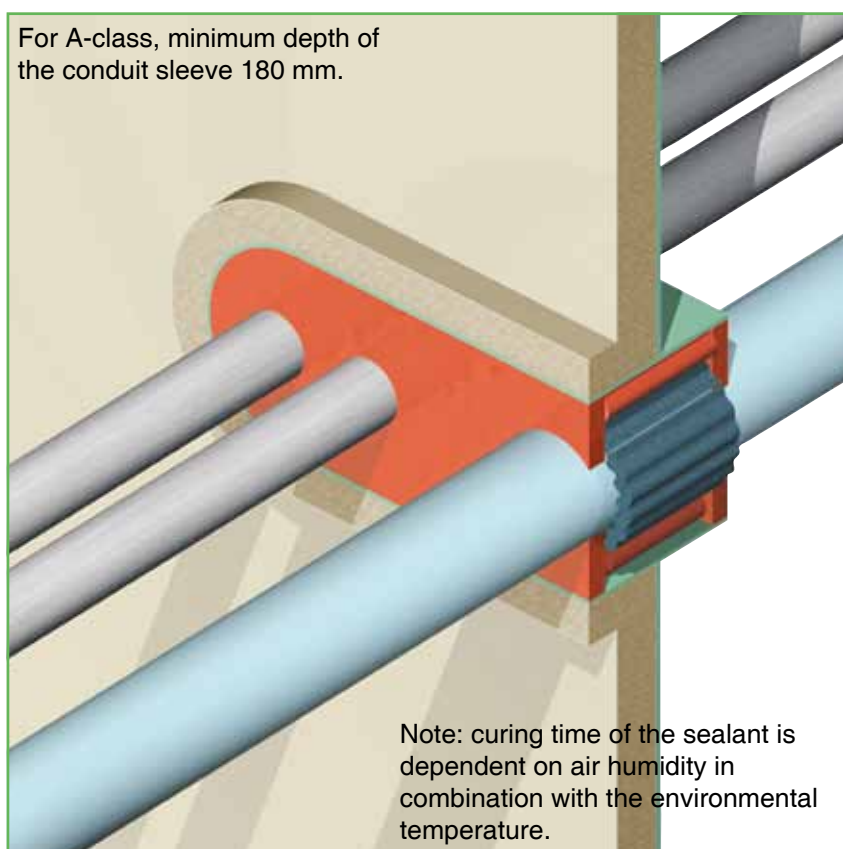


CRUSHER

8) For A-class penetrations, the conduit sleeve needs to be insulated only at the insulated side of the bulkhead or the lower side of the deck.

The ducted plastic pipe(s) do not need to be insulated.

The ducted metallic pipe(s) have to be insulated according to the specifications on the certified drawings.



CRUSHER