Vinidex by aliaxis

FRIATEC

Quick Installation Guide

FRIALEN Electrofusion Fittings

Procedure

1. Clean pipe of rough contaminations.
Use minimum 90% isopropyl - Do not reuse wipe.

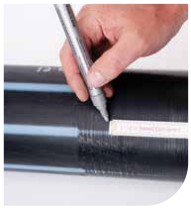
2. Mark the insertion depth and fusion zone.

3. Remove the oxide layer of the pipe using a rotary peeler tool. Handscraping is not permitted.

4. Chamfer the raw edges on the outside and inside. Remove any chips from the pipe interior by deburring.

5. If required, restore the roundness of irregular/oval pipes using rounding clamps.

6. Wipe the pipe surface again to remove any loose or foreign material using minimum 90% isopropyl wipes. Use a new 90% isopropyl wipe to clean the fitting interior after removing from the bag. Once isopropyl evaporates mark the insertion depth again.



7. Insert the pipe up to the marking, do not jam. Ensure a tension-free assembly of the component parts.

8. Scan the fitting barcode and traceability code with smartphone using either the FRIALEN or WorkFlow apps.

9. Information is passed onto the fusion unit.
Start fusion process.
Document fusion process on the pipe. Respect CT.

Diameter (mm)	Cooling time in minutes for couplers and fittings		
	CT Up to which the joint may be moved	Up to the pressurisation up to 8 bar	Up to the pressurisation > 8 bar
20 - 32	5	8	10
40 - 63	7	15	25
75 - 110	10	30	40
125 - 140	15	35	45
160 - 225	20	60	75

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FRIALEN RED SNAP

Tapping Tees & Valves

1. Clean pipe of rough contaminations. Use minimum 90% isopropyl - Do not reuse wipe.

2. Mark the saddle area and fusion zone.

3. Remove the oxide layer from the pipe surface using the peeler tool.

4. Clean the pipe surface and the fitting fusion area with minimum 90% isopropyl - Do not reuse wipe. Let evaporate, mark fusion zone again.

5. Assemble the fitting. Tighten the screws cross-wise until saddle and bottom section align. Proof for tight fit of the saddle on pipe.

6. Scan the fitting barcode and traceability code with smartphone using either the FRIALEN or WorkFlow apps.

7. Information is passed from the smartphone to the fusion unit via Bluetooth. Start fusion process. Document fusion process on the pipe. Respect CT. Watch cooling time!

8. Fuse branch pipeline with FRIALEN® -Safety fitting according to assembly instructions.

9. Observe cooling times before tapping

Diameter (mm)	Cooling time in minutes for FRIALEN® saddle parts	
	Up to the pressurisation THROUGH THE OUTLET	Up to the pressurisation up to 8 bar
40 - 63	15	20
75 - 110	20	30
140 - 160	30	45
180 - 225	50	60

Remove blanking plug. Turn the drill down up to the lower stop using the matching FRIALEN® activating key and turn anti-clockwise up to the upper stop.

10. Turn down the FRIALEN® activating key until the collar of the plug slightly touches the front face of the drill spigot. Afterwards turn back the plug half a turn to relieve the O-Ring tension. We recommend closing the tapping dome with a fusion cap K.

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Additional Information

THINGS WORTH KNOWING ABOUT FRIALEN®-SAFETY FITTINGS AND THIS PRODUCT RANGE

Quality/Certification

FRIALEN-Safety Fittings and FRIAFIT Couplers are subject to constant quality checks under stringent inspection guidelines, which are part of our comprehensive Quality Management System which is certified to EN ISO 9001:2008.

The FRIALEN/FRIAFIT-Safety Fittings range and our FRIATOOLS hardware are designed to be compatible. We reserve the right to change product details in the catalogue at any time. This is an ongoing commitment with product improvement and product line enhancements taking place continously. Our continuous quality controls cover FRIALEN/FRIAFIT Safety Fittings, our FRIATOOLS equipment and the quality of the fused joint as a result of the combination of these two components. The operation and functional safety of fusion control units devices from other manufacturers are not subject to our specifications and checks. When installing fittings please follow our installation instructions and the operating instructions for the tooling used.FRIALEN-Safety Fittings and FRIAFIT Couplers are subject to constant quality checks under stringent inspection guidelines, which are part of our comprehensive Quality Management System which is certified to EN ISO 9001:2008.

DVGW Certification/Fusability

FRIALEN Safety Fittings can be fused with SDR 17.6 pipes (s min = 3 mm) to 11 in accordance with DIN 8074, ISO 4437, ISO 4427, EN 1555 and EN 12201. Other SDR sizes on request.

FRIALEN Saddle components/Fittings ≤ d 63 can only be used with pipes ≤ SDR 11.

Please also note the details on the Fitting Barcode and further mandatory markings on the product for each SDR level which can be fused.

FRIALEN Safety Fittings can be used with pipes made of PE 100, PE 80, PE 63, PE 50 in accordance with DIN 8074/75, EN 1555-2, EN 12201-2, ISO 4437 and ISO 4427, PE-Xa in accordance with DIN 16892/93, PE-LD in accordance with DIN 8072/73. A melt flow rate of MFR 190/5 in the range of 0.2 to 1.7 g/10 min applies to PE pipes. For components with MFR < 0.20 then you will need to confirm that it is suitable. We would recommend the use of pipes with a limited diameter tolerance range, tolerance class B. PE-LD pipes can be fused at an ambient temperature of > 0 °C.

Check instructions for compatibility of another SDR or seek our technical advice.

FRIALEN-Safety Fittings and FRIAFIT-Couplers are made of PE 100 and fulfil the requirements of EN 1555-3, EN 12201-3, ISO 4427-3 and ISO 4437-3, as well as DVGW test specifications. FRIALEN-Safety Fittings and FRIAFIT-Couplers can be processed with FRIAMAT fusion devices at an ambient temperatures between - 10 °C and + 45 °C.

For connections between different materials, the material or system specific standards and assembly guidelines also apply.

For case by case restrictions when installing, and working with FRIALEN/FRIAFIT Safety Fittings in general, please read our assembly instructions. Our office-based customer support staff will be glad to answer any questions you may have.

Pressure loading capacity

The pressure loading capacity of FRIALEN/FRIAFIT-Safety Fittings made of PE 100 dependent on the SDR (Standard Dimension Ratio) marking.

$$SDR = \frac{\text{Pipe outside diameter d}}{\text{Pipe wall thickness s}}$$

The contributory factors for this are the latest revised standards DIN EN 1555, DIN EN 12201, DIN 8074 and DIN 8075, taking the design factor C into account (calculation coefficient for components made of PE). This gives the following pressure stages:

Fitting material: PE 100	Water	Gas
SDR level	maximum operating pressure in bar at C = 1,25	maximum operating pressure in bar at C = 2
17	10	5
11	16	10
9	20	-
7.4	25	-

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Fusion process

FRIALEN-Fittings are fuseable by Universal fusion units, e.g. FRIAMAT. The fusion parameter will be transferred automati-cally from the barcode on the fitting.

39.5V processing

Most of the FRIALEN-Fittings are fusable by electrofusion units with a constant output voltage of 39.5V by manual input of the fusion time. The fusion time is stated on the barcode label. By using older electrofusion units the allowed processing range is limited to an ambient temperature between -5°C and +35°C. The stated fusion time is to be used for the complete temperature range. Please find a list with suitable fittings on our homepage www.frialen.com.

Fusion process

FRIALEN-Couplers/Elbows/T-Pieces/Transition fittings.

The cooling times given on the barcode (CT), are the times after fusing for which the fused joint must not be disturbed.

Longer cooling times should be allowed before pressurisation. When doing this please read our assembly instructions.

FRIALEN-Fittings/Valves/Saddles.

The cooling times given on the barcode (CT) are the times before which the fused joint should not be tapped.

A pressure test of the saddle joint/outgoing line can be carried out before the end of the cooling period for the fused joint. When doing this please read our assembly instructions.

Processing

Processing must be carried out in accordance with our assembly instructions, which may also be downloaded from www.frialen.com/www.frialen-xl.com. This webpage will also give you further information on products and processes, certificates and publications.

FRIALEN saddle parts Top-Loading

The dimension information, including the value in brackets, shows the authorized assembly and fusion size range for the saddle part. In some cases, the standard application range is limited by technical restrictions (e.g. drill length/pipe wall thickness or tap diameter/ diameter of shut-off saddles). For other areas of application, suitability must be assessed.

Technical hints for processing or use may be attached to the product and must be strictly observed.

Technical Information

The technical details in this product guide are not comprehensive. You can find detailed information on our data sheets, which can also be downloaded from www.frialen.com/ www.frialen-xl.com.

Update/Technical Progress

All details are valid as at the time to print. We reserve the right to make changes which are in the interests of technical progress. We do not accept liability for any matters arising as a result of printing errors and/ or omissions.

Brand Names

For easier reading, the product guide dispenses with the symbols ® and ™ in continuous text. The following trademarks are registered: FRIALEN®, FRIALOC®, FRIAFIT®, FRIATOOLS®, FRIAMAT®, Sentry GS®, BAIO®, Rilsan® as well as Gas-Stop™.

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