

## INNOGAZ High Volume Tapping Tee QUICK REFERENCE INSTALLATION INSTRUCTIONS

Assembly of Pressure Tapping Tees  
HVTT 4x2 IPS - 8x2 IPS for  
Pipes PE2406 - PE2708 - PE3408 - PE4710

### Observe the further applicable documents

This brief instruction is part of the technical documentation for this product.  
Other applicable documents are:

- Innogaz General Installation Guide
- Technical Data sheets
- Operation instructions for tools

Any deviations from the Innogaz General Installation Guide or a failure to observe the safety instructions can cause death, serious injuries or damages to properties.

### Intended use and areas of application

Innogaz fittings are used for fused joints at pressure pipes made of high density & medium density polyethylene in gas distribution systems with a wall thickness ranging from SDR 17 to 11. Other SDR range on request.  
Innogaz Electrofusion fittings are tested and approved according to ASTM F1055, ASTM D2513, and CSA B137.4.1 for a maximum operating pressure up to 128 psi (Gas).

Innogaz fittings are suitable for installation in ambient temperatures ranging from -22°F to 120°F (-30°C to 50°C) and operating temperatures from -22°F to 140°F (-30°C to 60°C).

### Obligations of the installer

All persons involved in the installation of Innogaz Electrofusion fittings should

- be qualified fusion fitting operators
- strictly observe this brief instruction used in conjunction with company approved electrofusion installation procedure

### Transport and storage

- in original packed conditions
- UV-protected
- transport and storage temperature from 32°F up to 122°F (0°C up to 50°C)

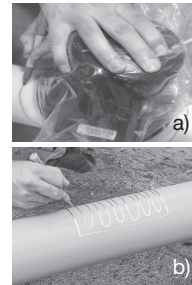
Observe safety advice in the detailed assembly instructions contained in the Innogaz General Installation Guide.

1. Clean pipe of rough contaminations.



2. Mark the saddle area.

With fitting in bag, position over pipe, using marker trace out line of saddle fusion. Be generous in this initial estimate.



3. Remove the oxide layer from the pipe surface using a scraper tool. Marked scraping area should exceed fitting perimeter by ½" (12mm).

Use appropriate tool to remove min .006" (.15 mm) to max of .01" (.25mm) for ≤ 2" IPS and .014" (.35mm) for ≥ 3" IPS



4. Clean the surfaces to be fused with the prescribed cleaning agent, let evaporate. Mark fusion zone again.

Remove fitting from protective bag, inspect the underside for contamination. Cleaning may be necessary.

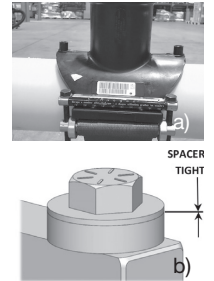


5. Assemble the fitting. Using HVTT chain clamp or 10 x use belt strap.

**Chain clamp**- Assemble loose, tighten until lockwashers secure.

**Belt Strap**- Tighten until stops in contact with fitting saddle.

See also on back page.



6. Connect the fusion unit with the fitting, read in the barcode and start fusion process.



7. Document fusion parameters on the pipe. Watch cooling time!



8. Fuse branch pipeline fitting according to assembly instruction.



9. Observe cooling times before tapping!  
Remove Cap and inspect for proper position of cap O-ring. Re apply grease if necessary.



10. Turn the cutter down to the lower stop using the hex wrench and then turn anti-clockwise to the upper stop, continue an additional ¼ turn. Some leakage from the upper stop after this operation is normal.



11. Install and tighten cap using nylon belt wrench. The tapping tee stack is sealed when the cap is properly installed.



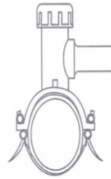
## Fusion parameter table saddle fittings

Fitting	Clamp time minutes	Rough handling time minutes	Before applying pressure time minutes	Before tapping time in minutes	Fusion time at 23C / 74F seconds	Fusion time at -30C / -22F seconds	Fusion time at 50C / 122F seconds
4 IPS HVTT	15	SAME	SAME	SAME	138	175	119
6 IPS HVTT	15	SAME	SAME	SAME	143	187	124
8 IPS HVTT	15	SAME	SAME	SAME	143	202	124

### Re-Useable Strap Underclamp Tool - Type 1

Insert the part of the tool with the screws on each lip of tapping tee and tighten all screws alternatively until contact of the distance pieces with the lips. Once the cooling time has elapsed remove the underclamp tool and remove figure corresponding to the number of times the strap has been used.

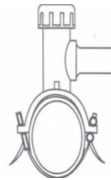
THE SAME UNDERCLAMP CAN BE USED 10 TIMES



### Re-Useable Strap Underclamp Tool - Type 2

Insert the buckle on one lip of the tapping tee and insert the part with the screws on the other lip. Tighten alternatively all screws until contact of the distance pieces with the lip. Once the cooling time has elapsed remove the underclamp tool and remove figure corresponding to the number of times the strap has been used.

THE SAME UNDERCLAMP CAN BE USED 10 TIMES



## Joint Acceptance Criteria

### NOTICE

The described sequence of the processes is absolutely to be adhered to.

Ensure the pipe was scraped properly and a minimum of .006" (.15 mm) wall thickness but not more than .01" (.25mm) for ≤ 2" IPS and .014" (.35mm) for ≥ 3" IPS of the wall thickness was removed.

1. Ensure fitting is installed within marked saddle area markings.
2. Ensure fitting was aligned and secured during the fusion and cooling cycles.
3. Ensure the proper fusion cycle was completed with no interruption or error code from the electrofusion control box.
4. Ensure the proper cooling time was followed.
5. Ensure there is no "outflow" anywhere around the base of the fitting. If there are visible signs of "outflow", the fitting must be replaced. Outflow is defined as any material visible beyond the fitting when viewed from a 90 degree angle.
6. Check the pop-up indicators were acceptable and meet the criteria stated in the procedures.

On all FRIALEN and INNOGAZ electrofusion fittings, movement of the fusion indicator is only a witness that a fusion cycle has been done. This indicator is under no circumstances the proof of a proper joint. Any movement of the fusion indicator(s) is just a visual verification that energy / heat during the fusion were in place.

In case of no movement, confirm the following:

- all steps in the preparation of the joint (scraping, cleaning & clamping) have been respected
- a visual check to ensure no melt outflow is present

### ⚠ WARNING!

Fusion with escaping media is not permissible.

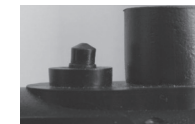
- no errors are shown on the fusion unit display

Provided this criteria are met, the fusion joint may be accepted and subject to normal pressure test requirements.

Limited or no movement



Normal movement



Above normal movement



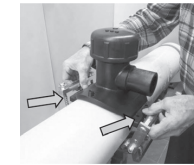
Outflow



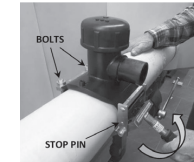
### NOTICE

Any fusion not meeting the Joint Acceptance criteria above must be cut out and replaced accordingly.

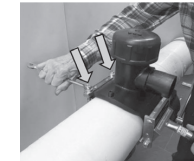
## OEM/Kerotest - Clamping Device - HVTT Instructions



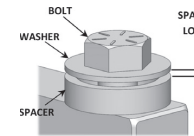
1. After the pipe has been scraped, hook both ends of the clamping device into the holes on the lip of the tapping tee.



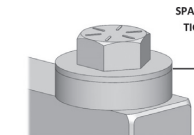
2. Close the clamping device by pulling the handle upwards until the stop-pin is contacted. If the handle can't be closed, loosen the bolts on the side opposite to the handle until it can be closed fully.



3. Alternately tighten each bolt on the side opposite the handle (see steps 4 and 5).



4. Observe the gap between the washer and spacer and check if the spacer can spin under the washer, as you tighten the bolt.



5. Continue to tighten the bolt until the gap between washer and spacer is closed, and the spacer can no longer spin under the washer.

6. After the cables are attached to the fitting and just prior to fusion, check again to ensure the spacers cannot spin under the washers. It is common for the polyethylene to relax somewhat and the spacers may loosen. If loose, re-tighten the bolts until the spacers cannot turn, then immediately perform the electrofusion.

7. Once the fusion has begun, do not touch the bolts or disturb the clamping device. Do not disturb or attempt to remove the clamping device until the fusion is complete and the specified cooling time has elapsed.

8. Remove the clamping device from the tapping tee by loosening the bolts and opening the handle.