ifm electronic

Installation instructions
T piece for sensors with G½ hygienic fitting

efector160

UK

E43316
E43317
E43318

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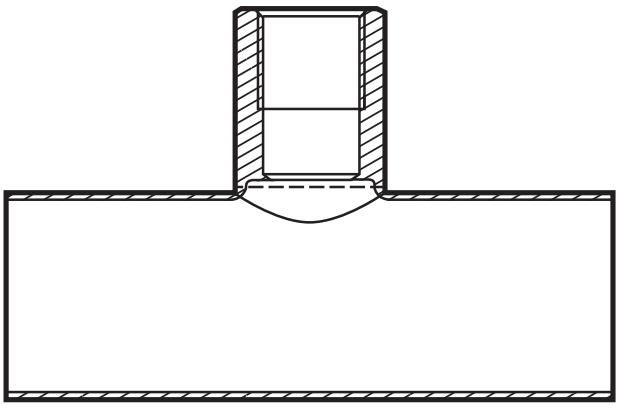


Contents

1 Basic notes

For use in hygienic areas: Adhere to the applicable EHEDG guideline and the documentation of the respective sensor.

The T pieces are approved to the Pressure Equipment Directive for the following max. operating pressures:

- DN25 (order no. E43316): max. 40 bar
- DN40 (order no. E43317): max. 25 bar
- DN50 (order no. E43318): max. 20 bar

- The welding operation must be carried out by authorised personnel.
- It must be carried out carefully and according to state-of-the-art technology.
- During welding and the following cooling phase the sensor must not be in place.
- The surfaces must be free from any soiling.
- Welding tools must be suitable for the material of the adapter and the wall.

2 Functions and features

The T piece simplifies the installation of sensors with a G½ hygienic fitting in existing pipe systems. Using this ensures a hygienic integration of the corresponding sensor. At the same time the required welding operation is reduced to orbital welding at the two pipe ends.

To avoid malfunction and damage of the corresponding sensor: The probe length must be much smaller than the pipe diameter! Also note:

- The available pipe cross-section is restricted by the probe of the installed sensor.
- Minimum distances (see operating instructions of the installed unit).

Pressure Equipment Directive (PED):
The T pieces comply with of the Pressure Equipment Directive and are designed and manufactured for group 2 fluids in accordance with the sound engineering practice.

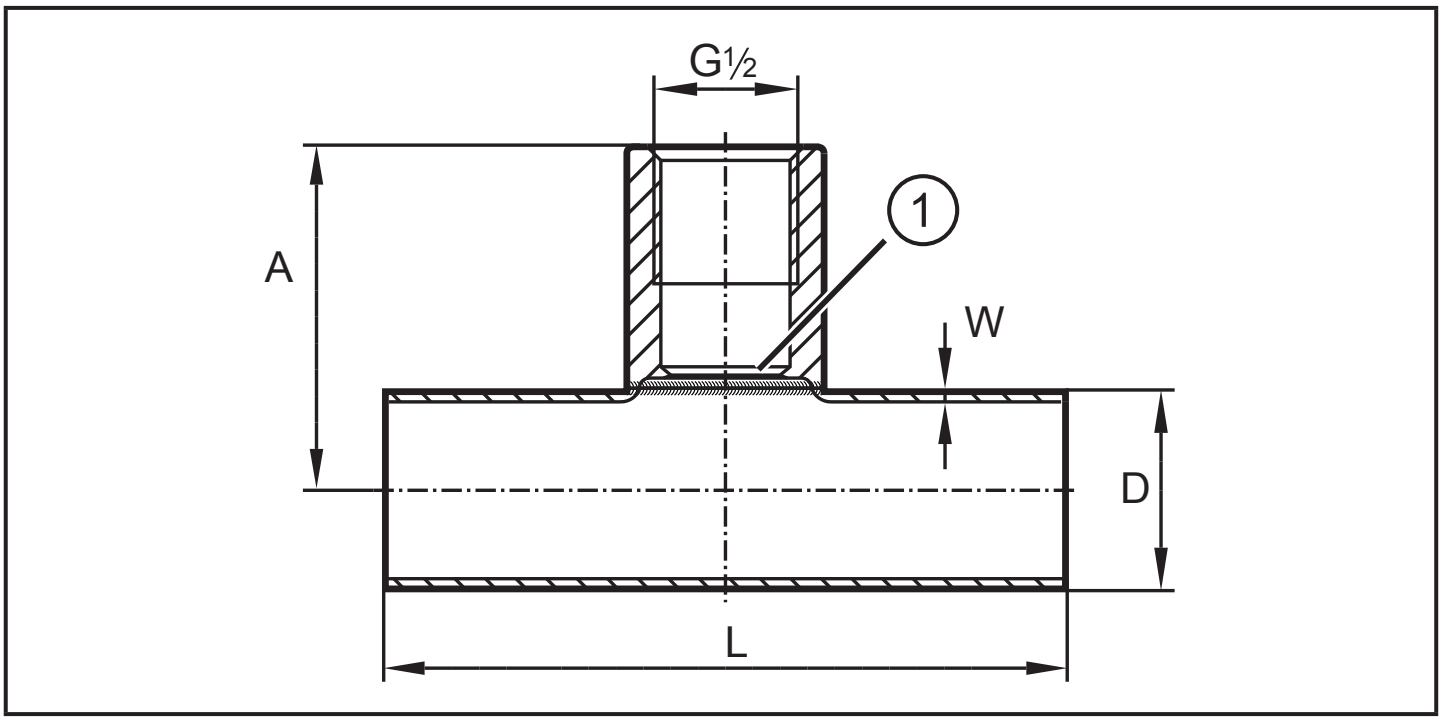
3 Preparations

The pipe ends are prepared for orbital welding.

- ▶ Remove protective covers.
- ▶ Check for rectangularity, freedom from burrs and chamfers.
- ▶ The T piece must be free from any soiling and damage.
- ▶ In case of hygienic requirements take the appropriate measures to obtain a hygienic weld seam such as exact alignment of the pipe ends to avoid gaps or linear misalignment.
- ▶ If possible, screw a welding mandrel (order no. E43314) into the adapter which provides optimum heat dissipation and protection of the sealing edge.

4 Welding operation

- The power of the welding equipment must be adapted to the thickness of the wall.
- In case of hygienic requirements take the appropriate measures to obtain a hygienic weld seam, in particular:
  - choice of the suitable welding method,
  - selection of the suitable welding parameters, etc.
- The sealing edge of the adapter (see position number 1 in the drawing below) must not be damaged by weld spatter or similar.



1: Sealing edge

DN	A	L	D	W
25	52.5 (± 0.6)	100 (± 0.5)	29 (± 0.12)	1.5 (± 0.1)
40	59.5 (± 0.6)	120 (± 0.5)	41 (± 0.15)	1.5 (± 0.1)
50	66.5 (± 0.6)	140 (± 0.5)	53 (± 0.25)	1.5 (± 0.1)

All dimensions in the drawing above in mm, tolerance indications in brackets.

5 After welding

▶ Let the adapter cool down.

▶ For hygienic applications: Check the quality of the weld seam. It must meet the applicable requirements for a hygienic weld seam, in particular:

- full weld penetration
- no annealing colours / gaps / cracks / porosities
- no increased surface roughness
- no protruding outwards
- no sagging inwards
- no inclusions

▶ If used: remove the welding mandrel.

▶ The thread and sealing edge must be free from welding slag.

If the sealing edge of the adapter is damaged, the adapter can no longer be used. In this case:

▶ Remove the adapter and weld in a new one.

6 Installation of the sensor

Temperature sensor TAxxxx	Level sensor LMxxxx
▶ Lightly grease the contact areas between the sensor and the adapter using a lubricating paste. The paste must be suitable and approved for the application and compatible with the elastomers used.	▶ Lightly grease the thread of the sensor using a lubricating paste. The paste must be suitable and approved for the application and compatible with the elastomers used. ▶ If required: Slide the supplied O-ring (material: FPM) over the thread onto the sensor. The O-ring seals the area on the back between the sensor and the adapter.

▶ Screw the unit into the adapter until it is hand-tight.
Avoid damage to the sealing areas.

If the unit can only be screwed into the thread with great resistance, do not force but:

▶ Remove the adapter and weld in a new one.

▶ Tighten the unit using a spanner.

On the tightening torque → operating instructions of the unit screwed in.

Too much torque may impair the seal.

More information at www.ifm.com