

Variable LPG Installation Kit

Installation guide



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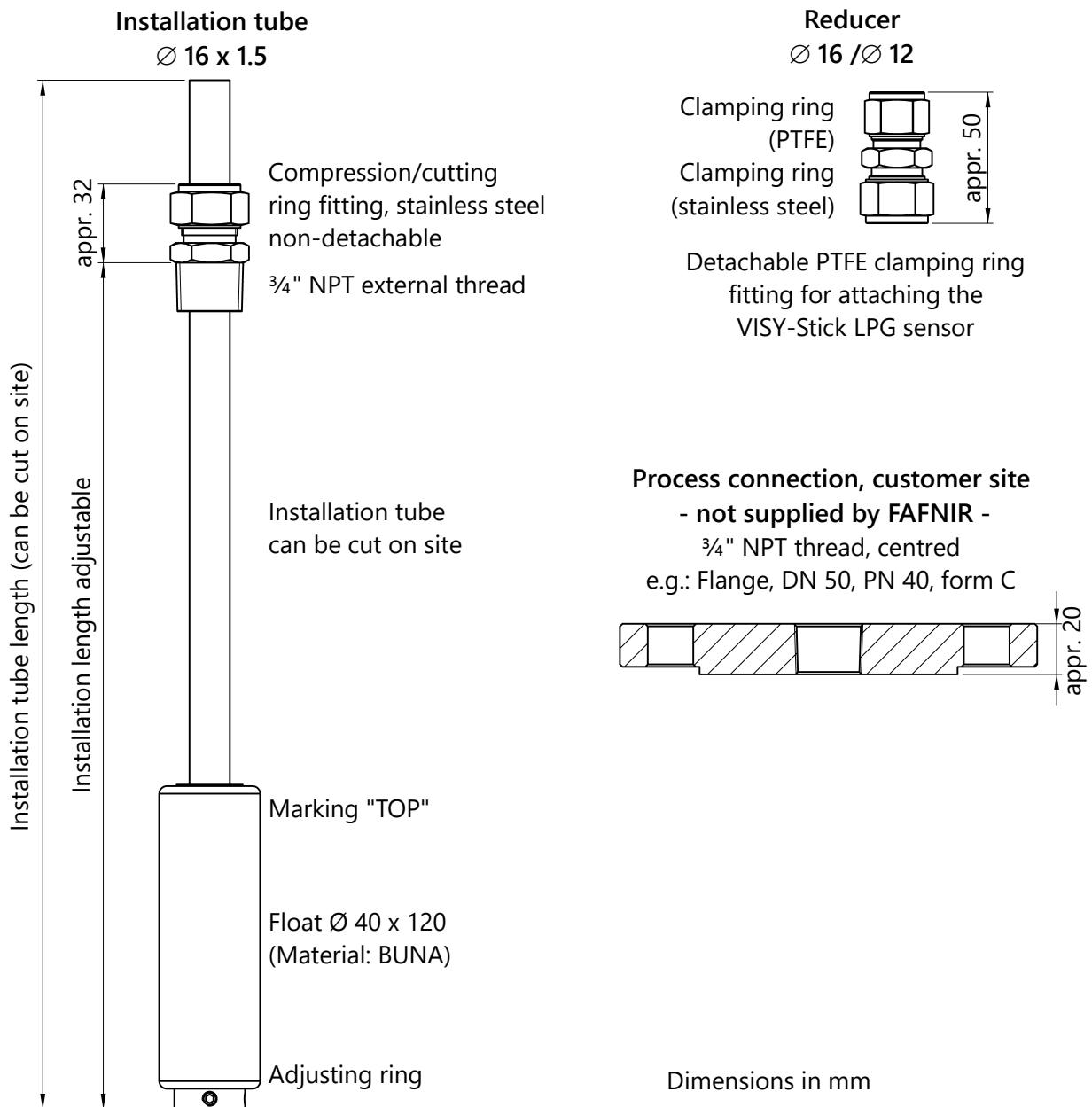
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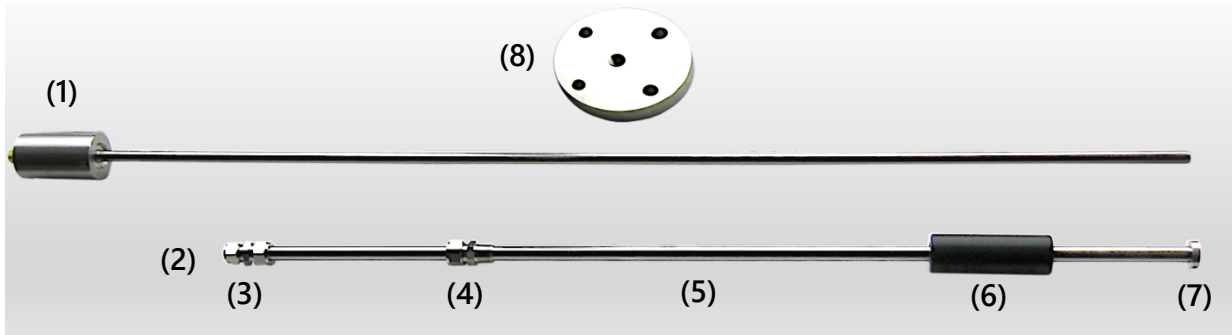
1 Design

The Variable LPG Installation Kit has been developed for FAFNIR sensors to measure the level in LPG tanks without having to mount the sensor in the tank. Instead, an installation tube is installed in the tank to hold the sensor for level measurement. The sensor can therefore be inserted or removed from the the installation tube at any time without having to open the tank.

The Variable LPG Installation Kit consists of an installation tube with LPG float (BUNA), a compression/cutting ring fitting (non-detachable) with 3/4" NPT external thread for process connection, and a reducer with a PTFE compression fitting (detachable) for fixing the measuring sensor (VISY-Stick LPG sensor), see figure below:



2 Prerequisites



- VISY-Stick LPG Sensor (1), without process connection, without float.
- Variable LPG installation kit (2), consisting of: Installation tube (5), PTFE compression fitting (3), compression/cutting ring fitting with $\frac{3}{4}$ " NPT fitting (4), float (6), and adjusting ring (7).
- Flange/process connection (8), with $\frac{3}{4}$ " NPT female thread or reduction, not included in FAFNIR's scope of supply.
- Pipe cutter for stainless steel if needed to shorten the installation tube, not included in FAFNIR's scope of supply.

3 Installation

3.1 Assembly of the Installation Tube

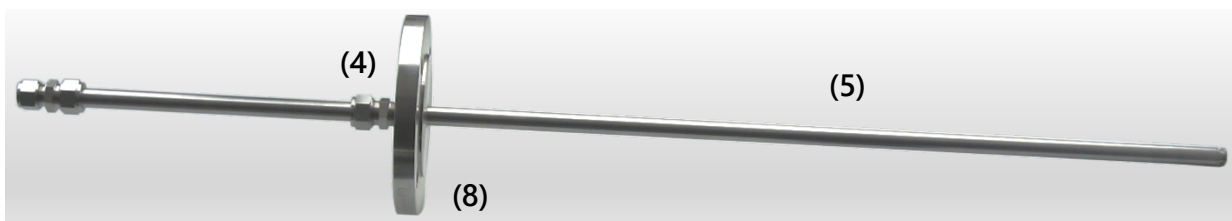
- (1) Remove the adjusting ring (7) from the bottom of the installation tube (5) and remove the float (6).



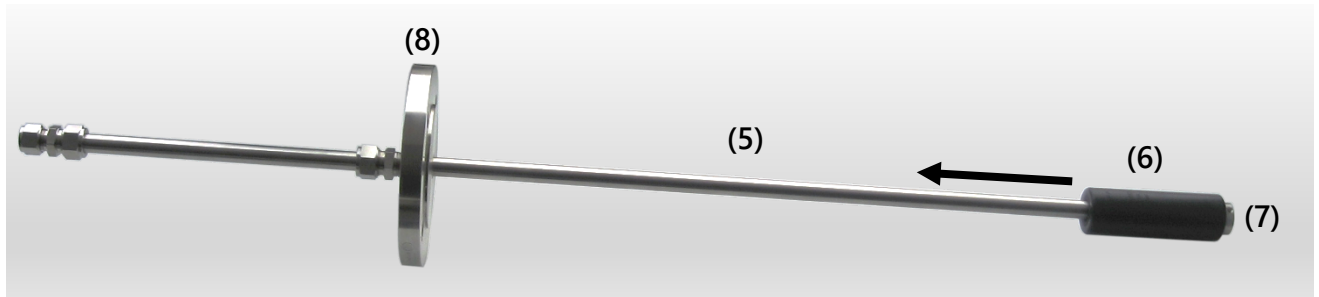
- (2) Push the installation tube (5) through the flange / process connection (8) and screw in the $\frac{3}{4}$ " NPT fitting (4); use a reducer if the thread is larger than $\frac{3}{4}$ ".



Do not tighten the NPT cutting ring fitting (4) yet. The installation tube (5) must still be movable.



- (3) Push the float (6) on the installation tube (5) and reinstall the adjusting ring (7) at the lower end of the installation tube.



Make sure that the adjusting ring (7) is fixed.

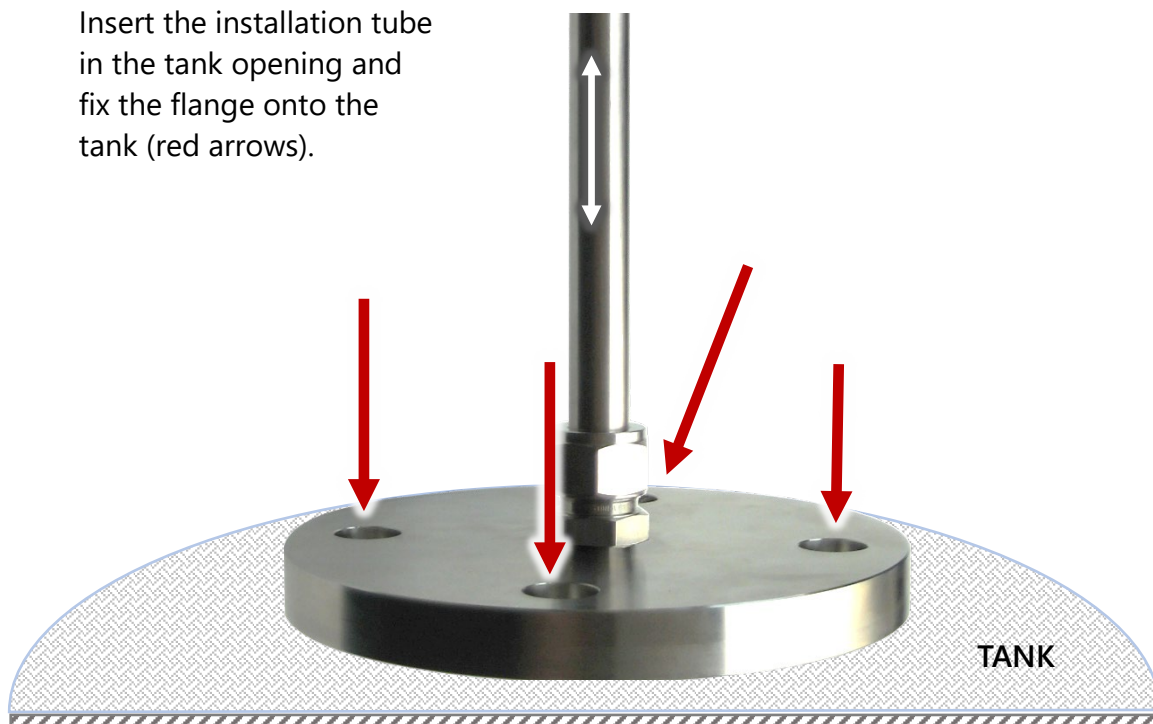


Make sure that the float (6) points with the TOP mark towards the flange (8).



ELECTROSTATIC HAZARD: When using a plastic float in potentially explosive areas, it must be ensured during installation, operation and maintenance work that the float cannot ignite due to friction or electrostatic charge.

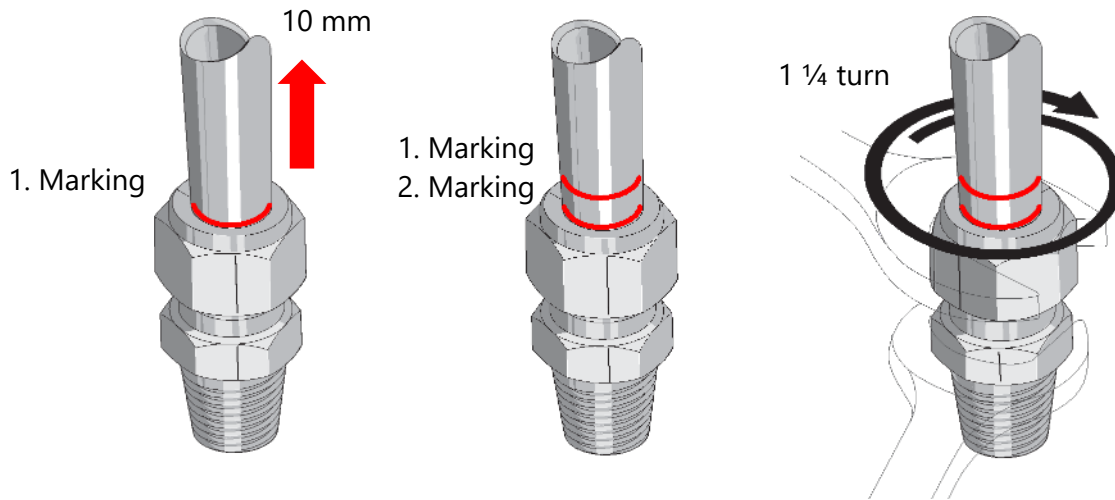
- (4) Insert the installation tube in the tank opening and fix the flange onto the tank (red arrows).



Make sure that the installation tube is still movable (white arrow).

- (5) Carefully push down the installation tube until it touches the bottom of the tank.

(6) Mark this 1. position on the installation tube (1. Marking), see figure below:



(7) Push the installation tube 10 mm up (safety distance to the tank bottom) and mark this 2. position on the installation tube with a 2. Marking below the 1. Marking.



If the installation tube has no safety distance to the tank bottom, it may be bent or damaged when tightened.

(8) Turn the union nut of the cutting ring fitting at the 2nd. Marking hand-tight first.

(9) Hold the fitting body and fix the cutting ring fitting with a 1 ¼ clockwise turn of the union nut.



After the fixing, the cutting ring fitting can no longer be dismantled.



After tightening the cutting ring fitting the tank is sealed.

3.2 Shortening the Installation Tube (optional)



After installation, the installation tube should only protrude approx. 150 mm above the flange. If it's longer, it can be shortened accordingly on site.



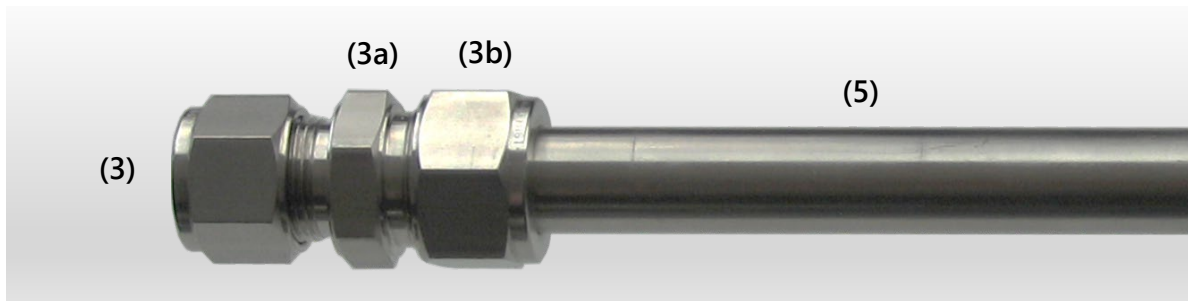
The sensor must be able to stand on the bottom of the installation tube.



Observe the following Safety Mounting Instructions:

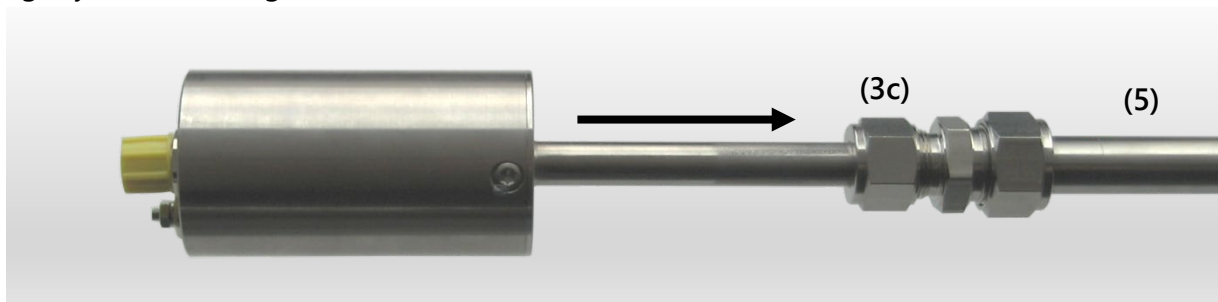
- When shortening, only use pipe cutters for stainless steel.
- Make sure that no dirt particles get into the installation tube.
- Protect the installation tube against bending.

- (1) Remove the PTFE compression fitting (3) from the top of the installation tube (5).
- (2) Shorten the installation tube to the desired length.
- (3) Deburr, clean and remove any dirt particles from the tube.
- (4) Push the PTFE compression fitting (3) back on and fix the fitting body (3a) with the union nut (3b) to the installation tube.



3.3 Fixing the measuring sensor (VISY-Stick LPG)

Carefully push the sensor into the compression fitting (3) on the installation tube (5) until it lightly touches the ground. Fix the sensor with the PTFE screw connection (3c).



4 Offset settings with VISY-Setup

For the VISY-X tank level measurement, an offset of 18 mm (safety distance 10 mm + bottom of installation tube 8 mm) must be entered in VISY-Setup and LPG selected as the product quality.



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