Rheonics Density & Viscosity Meters

INSTALLATION GUIDELINE

Installation of EHEDG Approved Products

rheonics

inline process
density and viscosity
monitoring

GLOBAL SUPPORT

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1 SR-Sensor series

The Type SR sensor must be installed according to the requirements given in EHEDG Guidelines 8, 10 and 37 [1-3]. That is to install the sensor according to the following guidelines

1. Sensor must be mounted in a self-draining orientation
2. In tanks, the sensor must be positioned to be directly assessed and wetted for cleaning and be installed flush to the process area
3. For tee piece installations, the ratio between upstand (L) and the diameter$(D - d)$ shall be $(D - d)/L \geq 1$, (see figure 2)
4. For welded adapters, the food contact surface must be smooth and the welding done according to EHEDG guideline 9 and 35 [4-5]
5. Suitable pipe couplings and process connections with applicable gaskets must be applied according to the EHEDG position paper. Rheonics supports:
   - DIN11853-1/2/3
   - DIN11864-1/2/3
   - DIN 11851 in combination with ASEPTO-STAR k-flex upgrade gaskets
   - ISO 2852, DIN 32676, BS 4825 Part 3 in combination with Tri-Clamp seals
   - ISO 2853, BS 4825 Part 4 in combination with T-seals
   - VARINLINE® tank flange type T and P with EPDM O-Ring in size B,F,N,G
6. The device has been developed for cleaning in place (CIP) applications and need not be dismantled for cleaning.

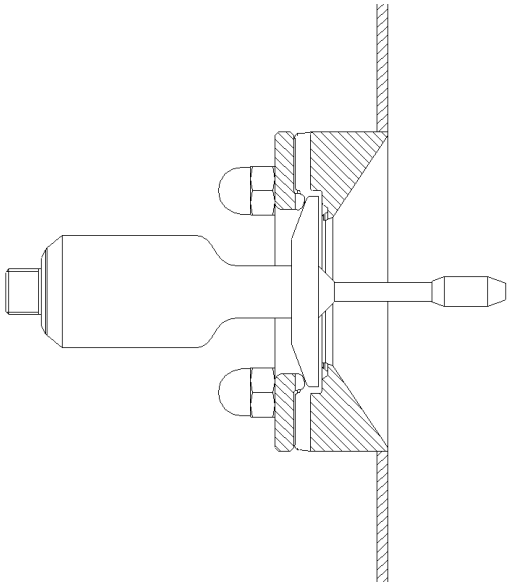

Figure 1: Example of an installation on a tank using or flush sensor design with a flush type weld-on connector.

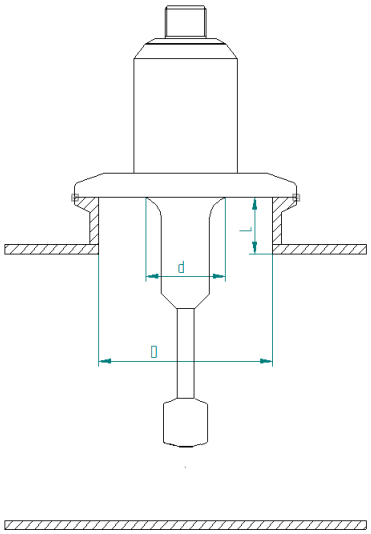

Figure 2: Example of an installation in a Tee piece. the ratio between upstand (L) and the diameter$(D - d)$ shall be $(D - d)/L \geq 1$

7. The flow around the SRD tip must be parallel, axial or anything between the two (angle a in figure 4 $0° \geq a \geq 90°$). Perpendicular flow must be avoided because it hinders the cleaning process, as shown in figure 3.
   The SRD-tip is not visible post installation. To ensure the correct orientation of the tip, there is a black dot on the M12 connector indicating the long axis of the SRD-tip (figure 4).

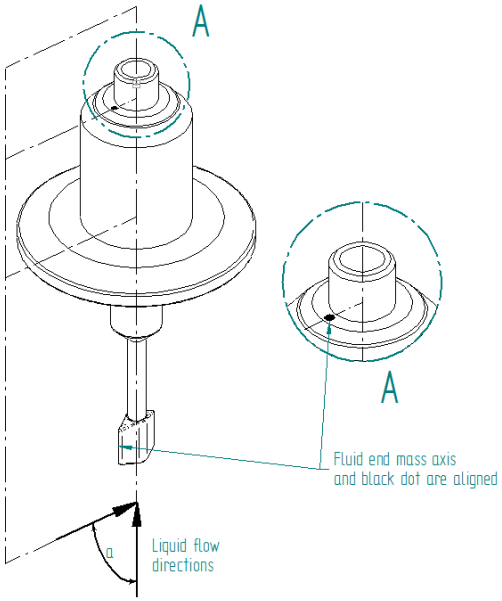

Figure 3: The black dot on the M12 connector indicates the long axis on the SRD tip for proper installation.

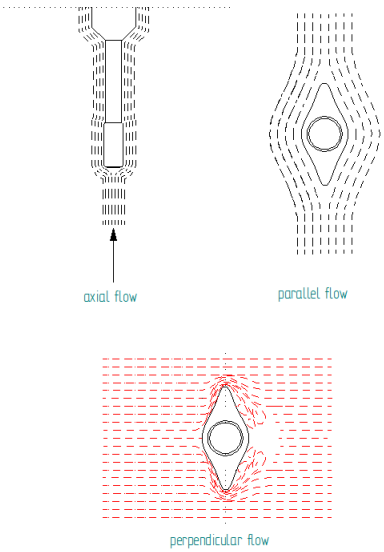

Figure 4: Permitted flow patterns are parallel flow and axial flow, or any flow direction between the two. Perpendicular flow patterns are not permitted because the recirculation zones hinders cleaning.

References:

[1] EHEDG Guideline: Doc 8: HYGIENIC DESIGN PRINCIPLES

[2] EHEDG Guideline: Doc 10: HYGIENIC DESIGN OF CLOSED EQUIPMENT FOR PROCESSING OF LIQUID FOOD

[3] EHEDG Guideline: Doc 37: HYGIENIC DESIGN AND APPLICATION OF SENSORS

[4] EHEDG Guideline: Doc 9: WELDING STAINLESS STEEL TO MEET HYGIENIC REQUIREMENTS

[5] EHEDG Guideline: Doc 35: HYGIENIC WELDING OF STAINLESS STEEL TUBING IN THE FOOD PROCESS INDUSTRY