

HIGH PRECISION MEASURING TUBE

Complete metering tube for an easy on-site installation and for a highly accurate flow measurement

GENERAL DATA

- Standards: ISO 5167-1&2, ASME MFC-3M or ISO/TR 15377
- Mounting of the primary element between flanges⁽¹⁾:
 - o ISO PN 2.5 to 420
 - o ASME 150# to 2500#
 - o Others: upon request
- Weld-end (BW) or flanged connection⁽¹⁾
- Material:
 - o Standard: stainless steel 304L / 316L
 - o Others⁽¹⁾: according to your application
- Fluid: liquid, gas, steam
- Pipes from ϕ 25 to 300 mm (for easy assembling)
- Overall measurement accuracy $\leq 1\%$
- Repeatability of measurement: 0.1 %



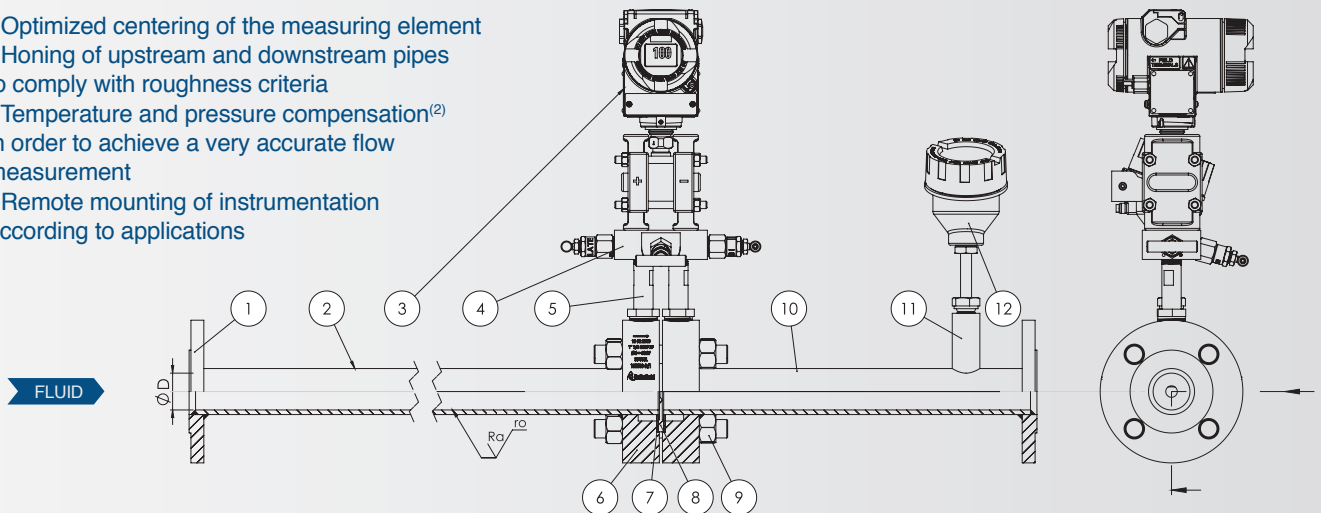
pressure taps⁽¹⁾

MARK	DESIGNATION	MARK	DESIGNATION
1	Flat flange	7	Gasket
2	Upstream pipe	8	Orifice plate**
3	Differential pressure transmitter	9	Bolts
4	Manifold	10	Downstream pipe
5	Connecting tube	11	Nipple
6	Annular chamber*	12	Temperature sensor

* flange mounting also possible

** all types of orifice plates (as well as nozzles) can be mounted in a metering tube

- Optimized centering of the measuring element
- Honing of upstream and downstream pipes to comply with roughness criteria
- Temperature and pressure compensation⁽²⁾ in order to achieve a very accurate flow measurement
- Remote mounting of instrumentation according to applications



TECHNICAL CHARACTERISTICS - according to the primary element considered

Orifice plates	See corresponding technical datasheet	p 10 to 15
Nozzles		p 19 to 20
Upstream and downstream straight lengths, pipe roughness and circularity, centering of the measuring element ⁽¹⁾		p 72 to 78

ACCESSORIES

Temperature sensor	Sensor mounted on the downstream pipe	p 41
Multivariable differential pressure transmitter ⁽²⁾	This transmitter enables the correction of density of gases as a function of temperature and pressure	p 52

⁽¹⁾ For more details, see «Technical information» section on page 54.

⁽²⁾ The density of gases and steam is variable depending on their temperature and pressure. Compensation is essential for an accurate measurement.