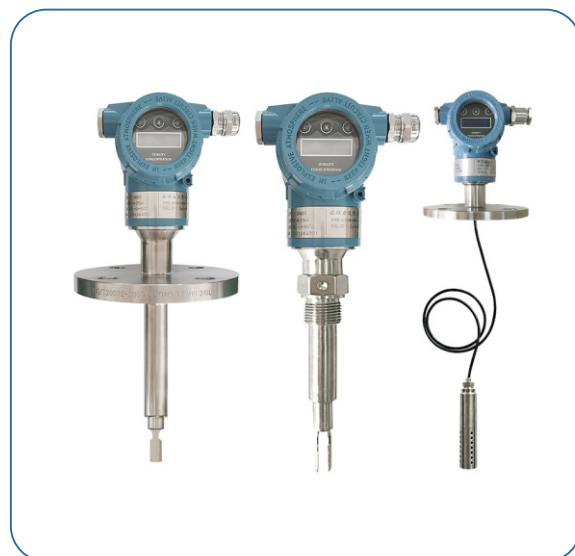


DTS500 SERIES

TUNING FORK DENSITY METER

FEATURES

- ⊙ Real-time, continuous online measurement
- ⊙ Handles small solids and gas bubbles
- ⊙ Maintenance-free, long service life
- ⊙ Compact, durable design for direct installation
- ⊙ High accuracy, stable under varying temperature and pressure
- ⊙ Suitable for slurry, acid/alkali, solvent, and mixed liquids



INTRODUCTION

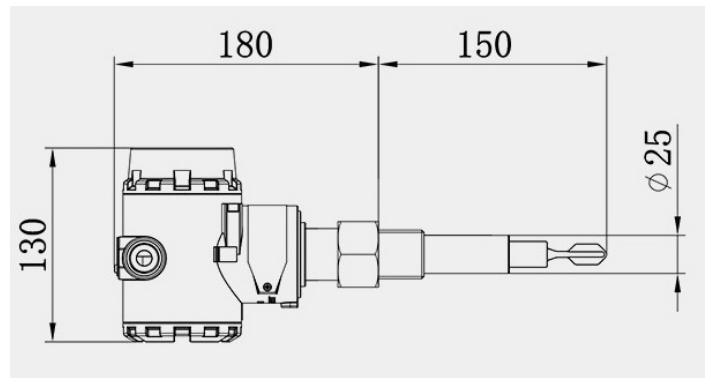
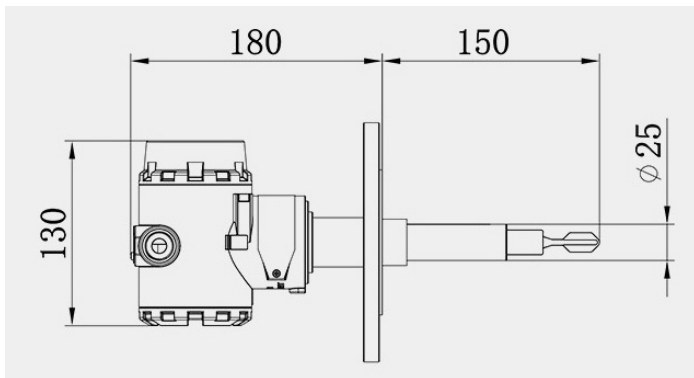
The DWEL DTS500 Series Tuning Fork Density Meter is designed for accurate, real-time, and continuous measurement of liquid density and concentration in a wide range of industrial processes. It is widely used in applications such as lime slurry, desulfurization slurry, ammonia solution, ethanol, acid and alkali liquids, as well as in pharmaceutical, chemical, food processing, petroleum and gas production, beverage manufacturing, laboratory research, liquid storage monitoring, and water treatment.

Using advanced tuning fork vibration technology, the DTS500 provides stable and precise readings that are minimally affected by temperature and pressure changes, and it tolerates small amounts of solid particles and gas bubbles, making it ideal for challenging process conditions.

SPECIFICATIONS

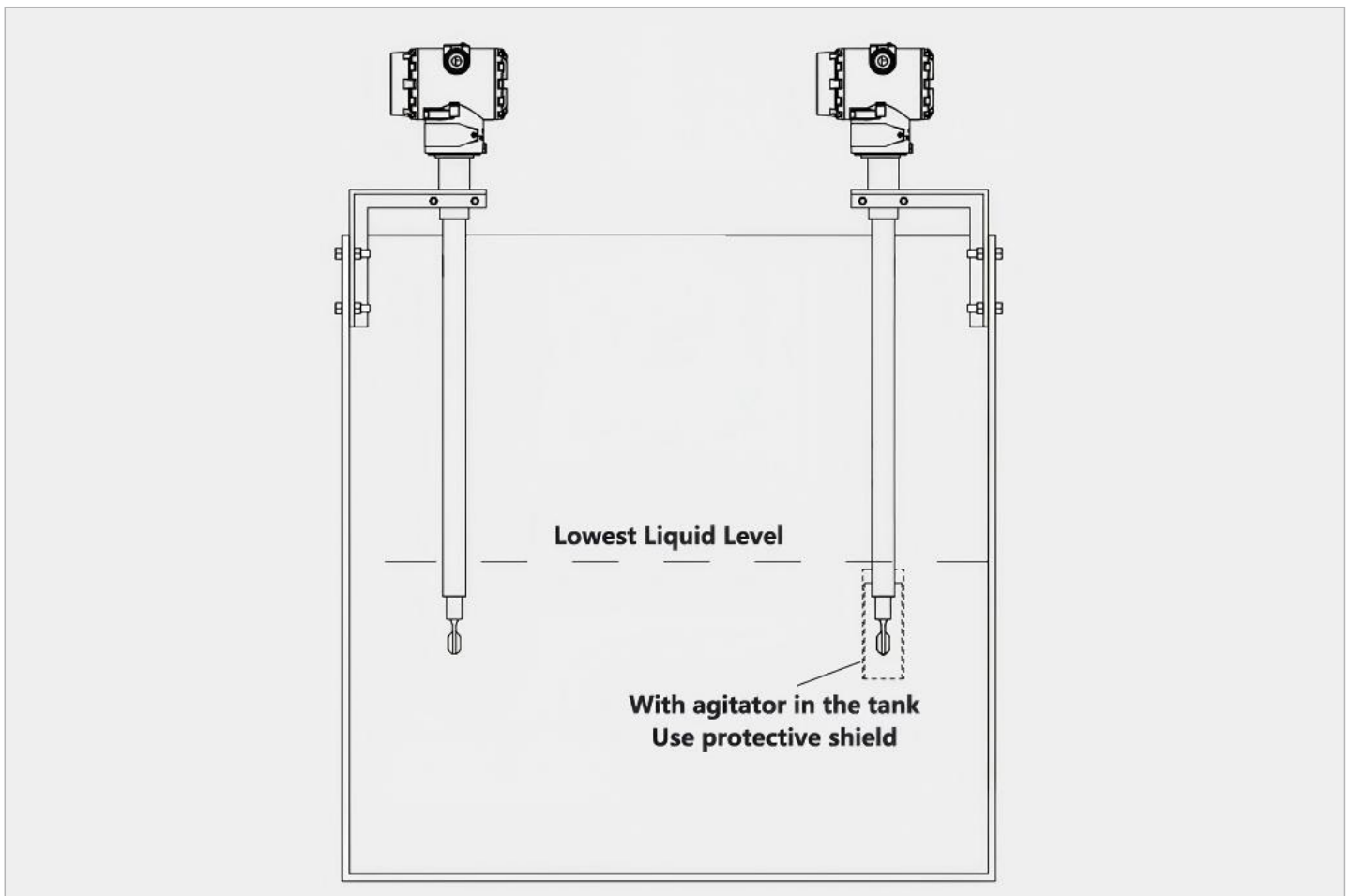
Density range	0-3g/cm ³
Accuracy	0.2% or 0.001g/cm ³
Resolution	0.0001g/cm ³
Output signal	4-20mA+ HART/ RS485/MODBUS
Power supply	24VDC/220VAC
Installation type	Thread, Flange, Clamp on
Temperature	-10~120°C
Working pressure	≤6MPa(Max 20MPa)
Fork material	SS316L, Hastelloy C22, PTFE, Tantalum, Others on request
Insertion depth	150mm, Up to 4 meters
Protection	IP65

DIMENSION

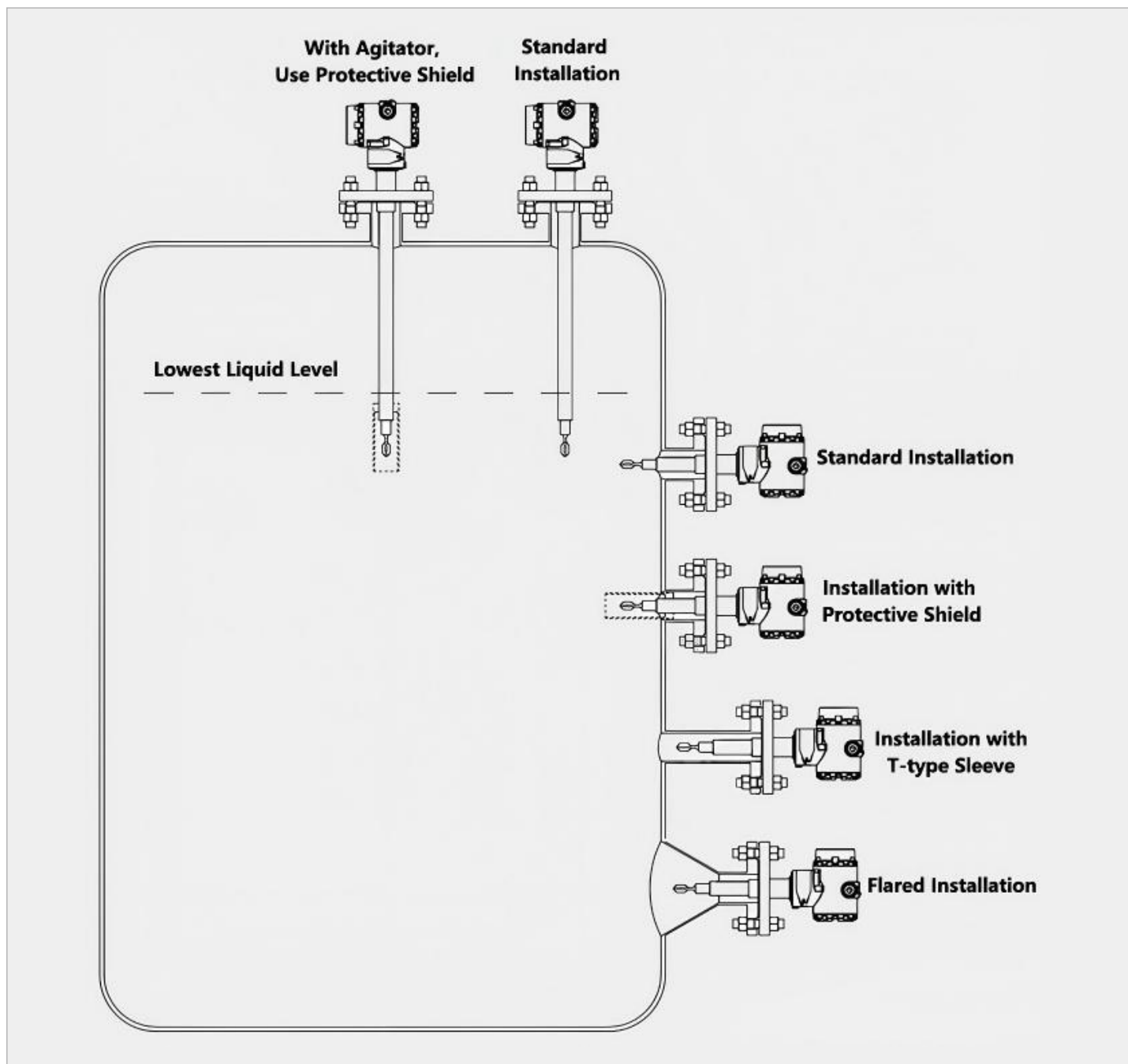


INSTALLATION

Installation on open tank or open pool



When installing on an open tank or open pool, use a bracket for fixation. The tuning fork sensor must be positioned below the lowest liquid level for proper measurement. When there is an agitator in the open tank or pool, a protective shield is required. For this type of installation, the tuning fork insertion rod is relatively long, the maximum length can be up to 4 meters.

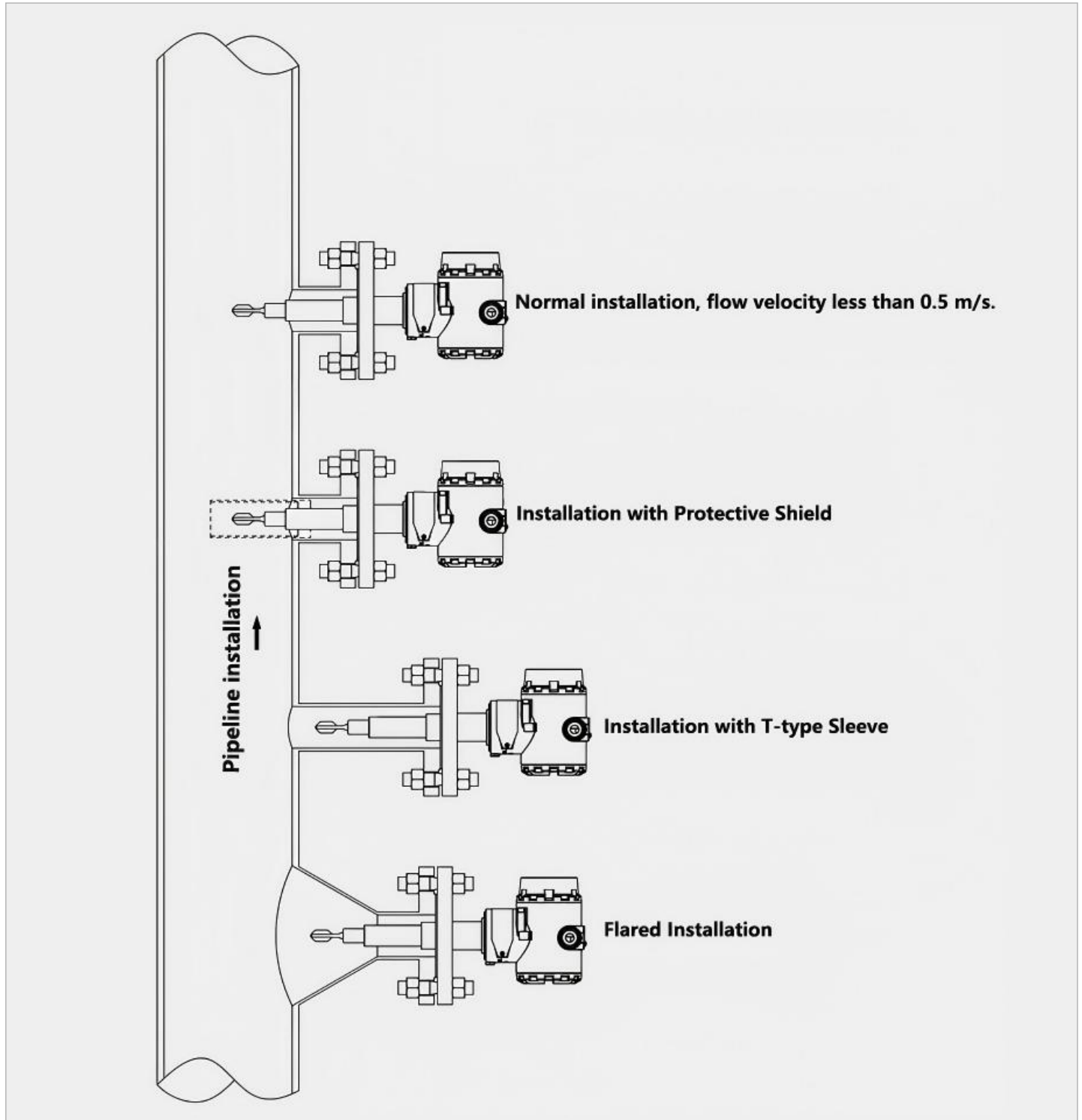


A. When installed on the top of a closed tank, the tuning fork should be below the liquid level. Use a protective shield if there is an agitator. For tanks with small top openings, ensure proper alignment. If a longer insertion is needed, use a flanged mounting pipe.

B. The tuning fork should not be completely enclosed. In closed tanks, pressure or condensation may affect measurement accuracy. Select the installation method based on site conditions:

- * Normal conditions: top installation
- * No agitation: deeper insertion allowed
- * With agitation: use protective shield
- * Strong agitation or flow: side installation recommended

Pipeline Installation

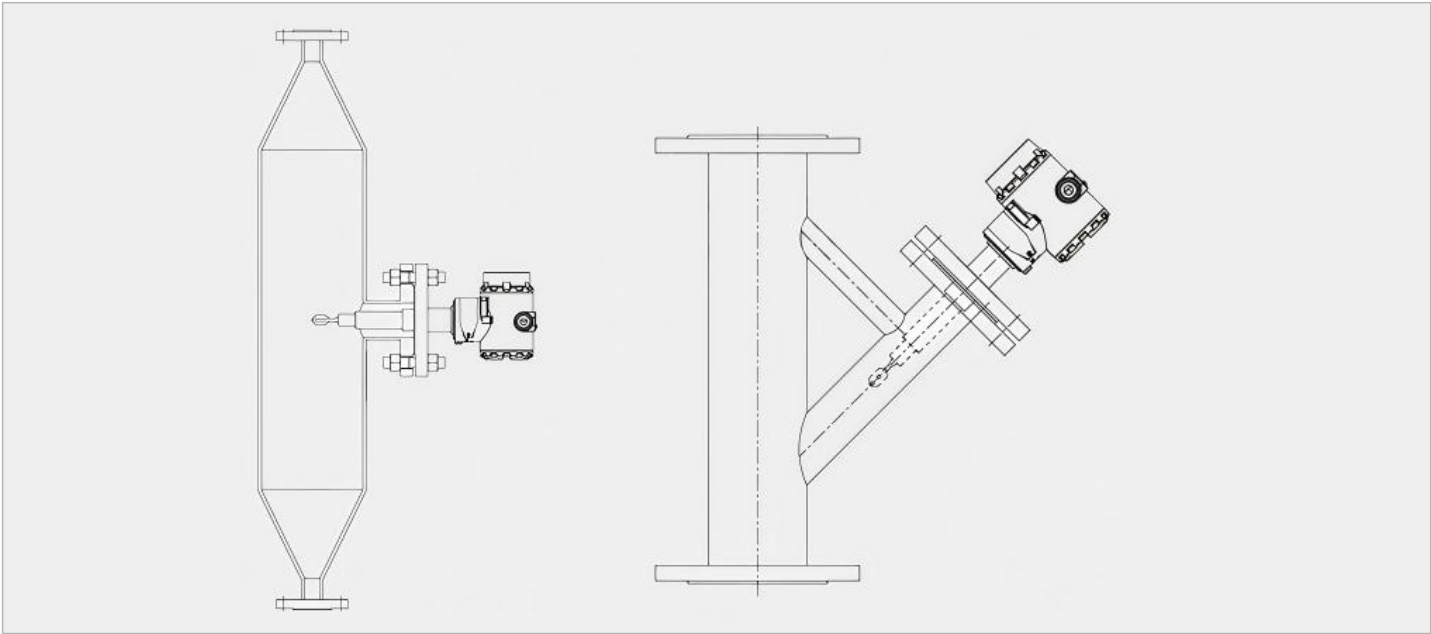


For pipeline installation, when the flow velocity is below 0.5 m/s, the tuning fork probe can be directly inserted into the pipeline.

When the flow velocity exceeds 0.5 m/s and there is no sediment, a protective cover or T-type sleeve should be used, with the tuning fork probe installed inside the cover or sleeve.

If sediment is present, a flared (horn-type) installation should be adopted.

In all cases, the opening of the tuning fork must be positioned vertically to prevent sediment or air bubbles from accumulating on the fork.



When the main pipeline diameter is small, a reducer installation can be used, as shown in the left figure. When the pipeline flow velocity is high and there is sediment or air bubbles, the installation shown in the right figure should be adopted. The right-side components can be provided as accessories and are typically used in flue gas desulfurization lime slurry density measurement applications.

ORDER FORMAT

DTS500 - 3503LCR150

Structure	Model
Integrated type	DTS500
Split type	DTS510

Range	Code
0-1g/cm ³	1
0-2g/cm ³	2
0-3g/cm ³	3

Installation	Code
Flange DN50	50
Flange DN80	80
Thread G1	G1
Thread G1.5	G15
Hygienic 1.5"	H1
Hygienic 2"	H2
Others on request	

Wetted material	Code
SS304	S4
SS316L	3L
Hastelloy C	HC
316L+PTFE	F4
Tantalum	TA

Insertion length	Code
Integrated type	
150mm	150
...	...
4000mm	4000
Split type(Cable length)	
1 meter	1M
...	...
8 meters	8M

Output signal	Code
4-20mA	C
RS485	R
4-20mA+RS485	CR
4-20mA+HART	CH