

Insertion Mass Flow Meters



MFI Series Insertion Mass Flow Meters

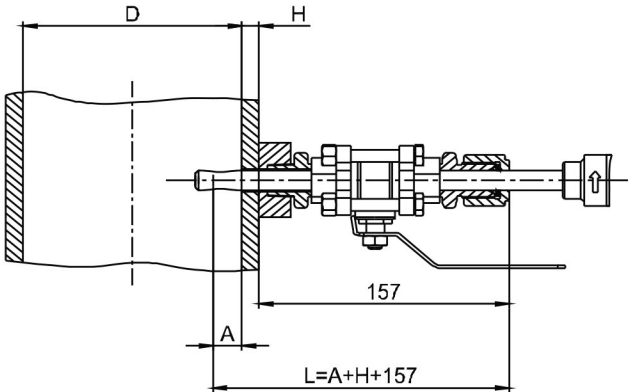
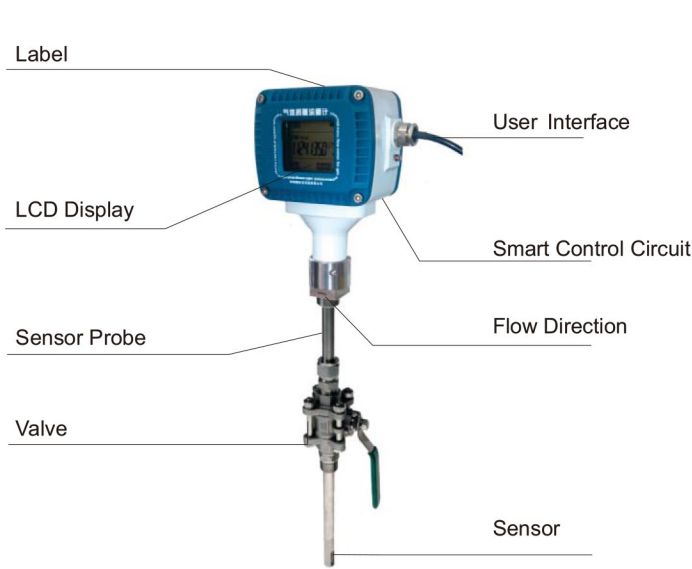
The Products

MFI series insertion mass flow meters are designed for gas monitoring and control in a large pipe line where installation of an in-line flow meter is either difficult or costly. The insertion meters are equipped with a self-sealed valve and hence provide a solution that only requires minimal interruption to the normal working circumstance. The suggested starting metering DN is 150 mm and above. All of the insertion meters have an accuracy of (1.5+0.5FS)% or better depending on the requests. The meters can work at an environment of -20 to 60 °C and pressure up to 1.5 MPa. Applications include but not limited to oxygen, nitrogen, methane, and compressed air flow monitoring for manufacture process control.

Features

- Highly sensitive, measuring as low as 0.01 Nm/sec, and as high as 65 Nm/sec
- Directly sense mass flow using thermal mass flow principle
- Proprietary MEMS sensor design for better reliability
- Standard 8 ~ 24Vdc power supply
- Low pressure loss reducing energy cost
- Industrial standard communication ports for easy networking and remote control

Insertion Probe Length



Calculation of the insertion depth L:

$L = A + H + 157, A=1/8D$

where D is pipe diameter and H is pipe wall thickness

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DN (mm)	Insertion Depth (mm)	Probe Length (mm) (H= pipe wall thickness)	Full Length (mm)	Full Scale Flow (Nm³/hr)	Min Flow (Nm³/hr)
80	11	174+H	250;D=14; Ball valve=15	1000	10
100	13	176+H		1600	16
125	16	179+H		2500	25
150	20	183+H		3500	35
200	26	189+H		6500	65
250	33	196+H		10000	100
300	40	203+H		15000	150
350	46	209+H		20000	200
400	53	216+H		25000	250
450	60	223+H		32000	320
500	66	229+H	325;D=14; Ball valve=15	40000	400
600	80	243+H		55000	550
700	93	256+H		75000	750
800	106	269+H		100000	1000
900	119	282+H		130000	1300
1000	132	295+H	400;D=19; Ball valve=20	160000	1600
1100	146	308+H		200000	2000
1200	159	335+H		230000	2300
1300	172	349+H		270000	2700
1400	186	362+H		320000	3200
1500	199	375+H		360000	3600
1600	212	388+H		400000	4000

Specifications

Accuracy	± (1.5 + 0.5 FS)%
Flow Range	0.01 ~ 65 Nm/sec (e.g. DN150: 0.6 ~ 3500 Nm³/hr)
Environment	Temperature: -20 ~ + 60°C; Humidity: <95%RH (No icing or condensation).
Flow channel	80 ~ 1600 mm
Display	Flow rate, accumulated flow
Interface	4 ~ 20 mA; RS485; Pulse
Calibration	Air @ 20 °C; 101.325 kPa
Protection	Ip65

Note: the above parameters are applicable at 20°C and 101.325kPa.

Product Selection

In addition to the models listed, we can also provide customized products that are tailored to customers' very needs. For further information, please contact manufacturer. The meters are made by referencing to: ISO-14511; CE Directives: EN61000-6-1 EN61000-6-2

