



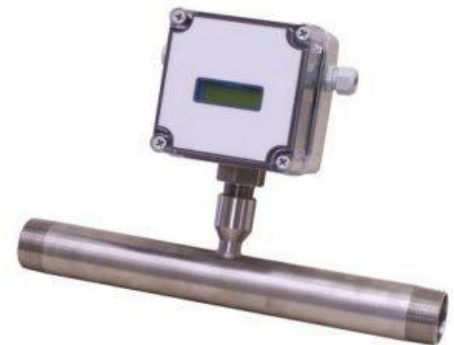
Model: IN-TMFM (For Neutral Gases)

PTMF Series Thermal Mass Flow Meter

Catalog

Features

- ◆ Measuring the mass flow or volume flow of gas;
Do not need to do temperature and pressure compensation.
- ◆ Wide range: 0.5Nm/s~100Nm/s for gas.
- ◆ Good vibration resistance .
- ◆ Easy installation.Can realize hot-tap installation and maintenance.
- ◆ Dual power(12 V DC / 230 V DC) available.
- ◆ Inhouse Caliberation & Services.
- ◆ Insertion with anti flush-out design for high pressure,more safety;



Model- INS-TMFM
(For Neutral Gases)



Model:- IN-RD-TMFM (For
Neutral Gases)



Model:IN-R-SS-TMFM
(For Chlorine & Ammonia)



Model:-
IN-R-SS-TMFM
(For Chlorine/
Ammonia)



Introduction

What is a Thermal Mass Flow Meter?

A thermal mass flow meter is a precision instrument that measures gas mass flow and is used in various industries with a wide range of applications.

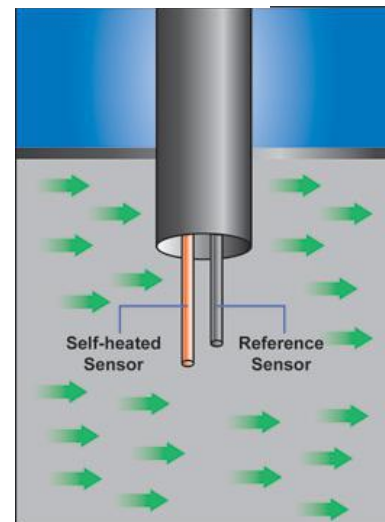
Working Principle

The thermal mass meter measures gas flow based upon the concept of convective heat transfer.

Either in-line flow bodies or insertion-style probes of the meter support two sensors that interface with the gas being measured. In the case of the Sage meter, the sensors are resistance temperature detectors (RTDs), consisting of extremely durable reference-grade platinum windings clad in a protective 316 SS or Hastelloy C sheath.

One of the sensors is heated by an integrated circuit and functions as the flow sensor, while a second detector acts as the reference sensor, and determines the gas temperature. The Sage proprietary circuitry maintains a continuous overheat between the flow and reference sensor. As gas flows by the heated sensor, flowing gas molecules transport heat away from the sensor and as a result, the sensor cools and the energy is lost. The circuit balance is disrupted, and the temperature difference ΔT between the heated RTD and the reference sensor has been altered. Within a second, the circuit restores the lost energy by heating the flow sensor, to adjust the overheat temperature.

The electrical power required to sustain this overheat denotes the mass flow signal.





Precision Flow Control Instruments

Technical Data

Description	Specifications
Measuring Medium	Various of Gas (Except acetylene)
Pipe Size	DN10-DN4000mm
Velocity	0.1-100Nm/s
Accuracy	+/-1~2.5%
Working Temperature	Sensor:- 0 t+ 60 degC Transmitter:-0 to+60 degC
Working Pressure	Insertion Sensor:medium pressure ≤ 1.0 Mpa Flanged Sensor:medium pressure ≤ 1 Mpa Special pressure please double check
Power Supply	Compact type: 12VDC or 220VAC, Power consumption Remote type:220VAC,Power consumption
Response Time	1s
Output	Optional:-4-20mA(optoelectronic isolation,maximum load 500 Ω),Pulse RS485(optoelectronic isolation) and HART
Alarm Output	Optional:-1-2 line Relay, Normally Open state, 10A/220V/AC or 5A/30V/DC
Sensor Type	Standard Insertion, Hot-tapped Insertion and Flanged
Construction	Compact and Remote
Pipe Material	Carbon Steel, Stainless Steel,Plastic etc. For Chlorine & Corrosive Gases (SS316L)
Display	2 lines LCD Flow Rate : 4 Digits Totalizer: 8 Digits (Non Resettable)
Protection	IP65



Precision Flow Control Instruments

Phone Nos: 8007731918 Email:info@massflow.in



Flow Range

Flow Range in m3/hr With Reference to Air. For Other Gas It Will Change(Nm3/h)

Size	Min Velocity (Nm/s)	Max Velocity (Nm/s)	Min Flow (Nm3/h)	Max Flow (Nm3/h)
10	0.1	100	0.028274334	28.27433385
15	0.1	100	0.063617251	63.61725116
20	0.1	100	0.113097335	113.0973354
25	0.1	100	0.176714587	176.7145866
32	0.1	100	0.289529179	289.5291786
40	0.1	100	0.452389342	452.3893416
50	0.1	100	0.706858346	706.8583463
65	0.1	100	1.194590605	1194.590605
80	0.1	100	1.809557366	1809.557366
100	0.1	100	2.827433385	2827.433385
125	0.1	100	4.417864664	4417.864664
150	0.1	100	6.361725116	6361.725116
200	0.1	100	11.30973354	11309.73354
250	0.1	100	17.67145866	17671.45866
300	0.1	100	25.44690047	25446.90047
350	0.1	100	34.63605897	34636.05897
400	0.1	100	45.23893416	45238.93416
450	0.1	100	57.25552605	57255.52605
500	0.1	100	70.68583463	70685.83463
600	0.1	100	101.7876019	101787.6019
700	0.1	100	138.5442359	138544.2359
800	0.1	100	180.9557366	180955.7366
900	0.1	100	229.0221042	229022.1042
1000	0.1	100	282.7433385	282743.3385

Note: We also Offer Flow Meters in Mass Flow Rates in Kg/hg

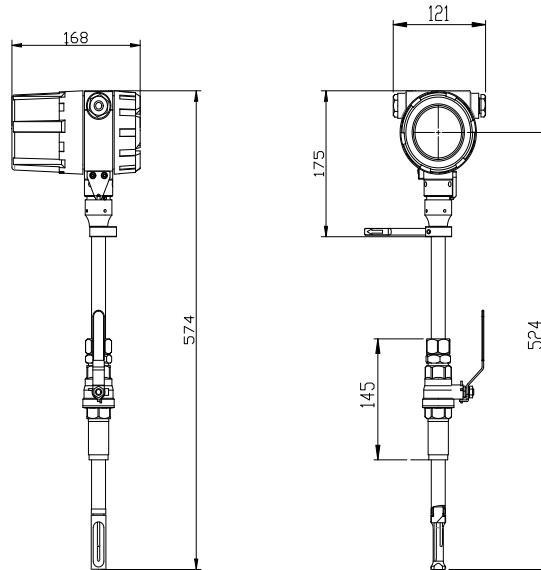




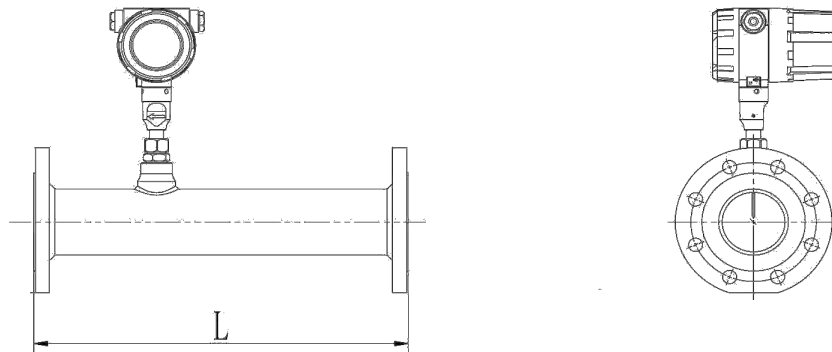
Precision Flow Control Instruments

Dimension

Insertion type



Flange type



Nominal Diameter	Pipeline Length
DN	L
15	280
20	280
25	280
32	350
40	350
50	350
65	400
80	400
100	500

Note: We Offer Customised Flow Solutions. So Mostly The Dimensions Can Be Changed As Required.



Precision Flow Control Instruments

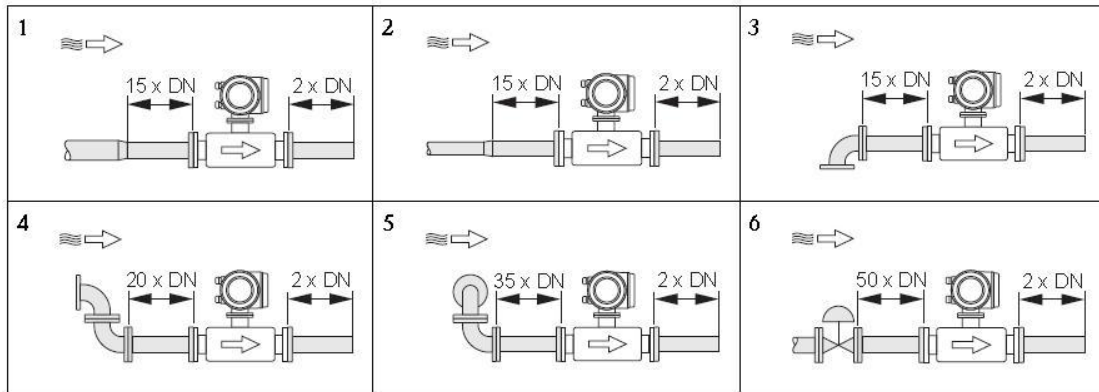
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Precision Flow Control Instruments

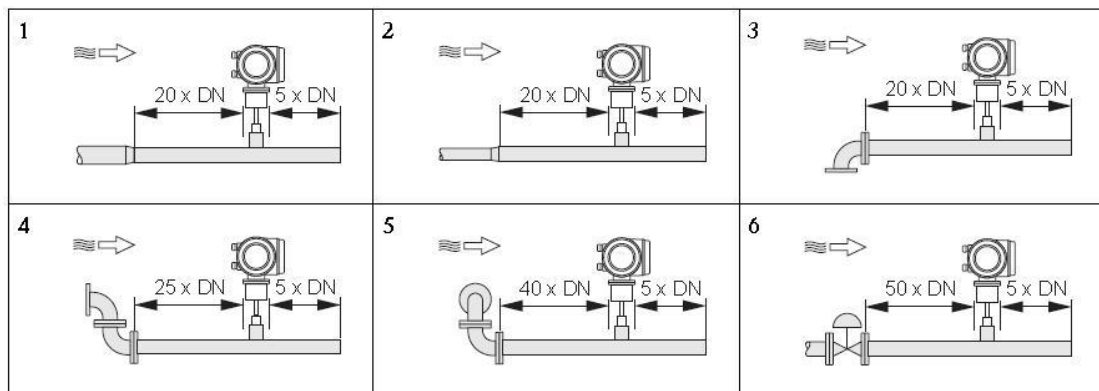
Installation Notice (without flow conditioner)

Flange type



1 = Reduction, 2 = Expansion, 3 = 90° elbow or T-piece,
4 = 2 × 90° elbow, 5 = 2 × 90° elbow (3-dimensional), 6 = Control valve.

Insertion type



1 = Reduction, 2 = Expansion, 3 = 90° elbow or T-piece,
4 = 2 × 90° elbow, 5 = 2 × 90° elbow (3-dimensional), 6 = Control valve or pressure regulator.



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↳ CALIBRATION ABILITY

We own **Critical Sonic Nozzle Gas Calibration Device** which is the most advanced technology for gas calibration. It can be used for the calibration of thermal mass flow meter, vortex flow meter, gas turbine flow meter, precision vortex flow meter etc.

