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ORIFICE PLATE FLOW METER

Orifice plate is used for flow rate measuring in pipe systems. With orifice plate, pressure drop is created. Based on the magnitude of pressure drop, flow rate can be calculated. Orifice plate calculator can be used for both liquids and gases. Fluid is considered as in-compressible, so density (ρ) and temperature (T) are constant through tube. Also, gas is considered as ideal.



All-in-one type
orifice flowmeter
(Finished Product)



Standard orifice plate
(Component)



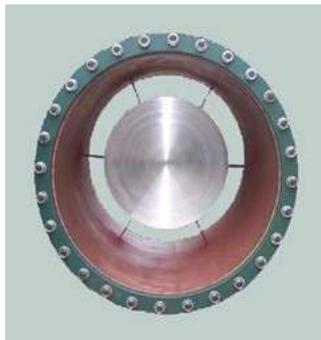
Semi-finished Product



Round Seg metal orifice plate
(Component)



Semi-finished product



Ring-type orifice plate
(Component)



Eccentric Orifice plate



High pressure lens orifice
plate (Component)

Suitable for liquids, gases and steam applications in line sizes from DN15 to DN200 and at pressures up to 100 bar, it combines all the major components needed for an orifice plate installation in one assembly. This eliminates the need for users to design, source and install a separate manifold, transmitter and impulse piping, typically cutting the cost of installation and commissioning.

The all-in-one design also offers enhanced accuracy and a faster speed of response, with no problems caused by issues such as long or blocked impulse lines, or impaired signals due to condensation in gas system impulse lines or gas bubbles in liquid lines. The Compact Orifice Flow meter Series is designed for closed loop control and general purpose monitoring applications. This design lowers the total installed cost of DP Flow measurement points eliminating the need for fittings, impulse tubing, valves, adapters and manifolds by providing a single device packaged together for simplified installation. By integrating pressure transmitters with the Compact Orifice primary element, we deliver the highest performing Flow meters which arrive assembled, calibrated, pressure tested, and ready to install.

The Conditioning Compact Orifice is ideal for applications with limited pipe run. Only requiring 2 pipe diameters from an upstream disturbance (double elbows, valves, reducers), the Conditioning Compact Orifice delivers $\pm 0.5\%$ accuracy.

Savings in excess of 50% can be realized when compared to a traditional orifice plate installation.

- Reduced straight pipe run

- Less expensive than an orifice plate installation

- Accurate and repeatable

- Centering mechanism

- Based on ASME / ISO corner tap design

In addition to the Conditioning Compact Orifice, an orifice plate offering is available with the Conditioning Orifice Plate technology and provides the same accuracy and performance you achieve with the Compact design.

Throttling device is a differential pressure flow meter sensors, with the differential pressure transmitter and display devices (or computer) supporting the use, enabling the measurement of fluid flow and achieve the accumulation, display and control. Because of its simple structure, easy installation, the use of reliable and suitable for a wide range of (standard throttling device diameter measurements available from 50mm-12mm, a special application of throttle device can also be as small as 20mm diameter as large as 3000mm; measuring temperatures of up to 550°C pressure up to 40Mpa: measured the types of media is greater) and standard throttling device also has no separate calibration of the advantages of industrial automation control flow measurements during the course of one of the main instruments.

Our company not only the production of conventional structure, throttling device, but also produce changes in the scope to meet the on-site a large number of process flow throttling device may change orifice throttling device.

Selection for Example :

Type	Orifice Flow meter
Accuracy	$\pm 0.5\%$
Body material	316L
Wetted material	316L
Seal material	PTFE
Structure	Orifice plate , valves ,diff-pressure
Output	4-20mA with HART
Display	LCD flow rate, total flow
Power supply	24VDC
Pressure	Max 16BAR
Temperture	10—300 centigrade
Connection	G-standard Flange

Other info just for reference:

Throttling applies to pipe (DNmm) applicable to diameter ratio of B (d / D) for the Reynolds number ReD application characteristics of discharge coefficient uncertainty Ec% Design Standards C. Access Standard Orifice ring chamber pressure 50-500 0.2-0.75 ≥ 4000 for cleaning medium in which GD structure suitable for high temperature and pressure conditions, flow measurements 0.6-0.75% ISO5167GB/T2624-93

Clamping ring 50-500 0.2-0.75 easy-to-remove dirt, can be used for small cleaning fluid flow measurement.

Inclined drilling-type 450-1000 0.2-0.75

Standard Orifice Flange pressure measuring 50-1000 0.2-0.75 ≥ 4000 easy-to-remove dirt, suitable for a variety of media, 0.6-0.75 ISO5167GB/T2624-93

Path to take pressure away from the standard orifice plate 50-1000 0.2-0.75 ≥ 4000 easy-to-remove dirt, apply a variety of media, 0.6-0.75 ISO5167GB/T2624-93

C. access standard nozzle pressure (ISA1982 nozzle) 50-500 0.3-0.8 7 * 10 * 4-10 * 7 pressure loss, long life, especially for steam flow measurement 0.8-1.2% ISO5167GB/T2624-93

Long diameter nozzle 50-630 0.2-0.8 10 * 4-10 * 7 pressure loss, long life, LGP-type long-necked nozzle assembly suitable for high-parameter water and steam flow measurement of 2.0% ISO5167GB/T2624-93

Classical Venturi tube machining type 100-800 0.2-0.8 2 * 10 * 5-10 * 6 pressure loss is small, less than the required straight pipe orifice, nozzle 1.0% ISO5167GB/T2624-93

Thick welded iron style 200-1200 (2000) 0.4-0.7 2 * 10 * 5-10 * 6 1.5% ISO5167GB/T2624-93

Venturi nozzle 65-500 0.316-0.77 1.5 * 10 * 5-2 * 10 * 6 pressure loss is small, less than the required straight pipe orifice, nozzle 1.2-1.75% ISO5167GB/T2624-93.