

ORIFICE PLATE ASSEMBLY

OPA Series



DESCRIPTION

The Orifice Plate Assembly is the simplest Differential Pressure instrument for flow measurement, used in many applications.

Among the primary Flow Elements, the orifice plates are the most common solution.

FEATURES

- Complete production control fully integrated inside the company and highly competent local suppliers.
- Qualified welders and welding procedures compliant with ASME IX and EN ISO 15614.
- Completely customizable on client's needs thanks to the support of our technical and sales departments.
- Over 60 years company experience with instruments installed in the entire world.
- Long working life ensured by high quality materials.

PROS	CONS
Suitable for a wide range of fluids, gases and vapours	Relatively high permanent pressure loss
Wide range of operating conditions and dimensions	Range limited to the quadratic relationship between DP and Flow
Easy construction and installation	
Low price	

APPLICATIONS

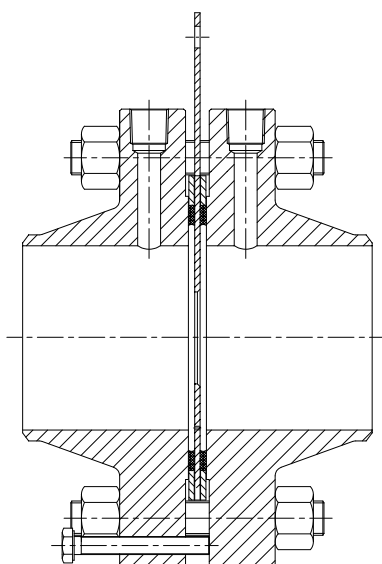
- Oil & Gas plants, Refineries
- Chemical and petrochemical plants
- WATER / GAS treatment and distribution
- Power generation

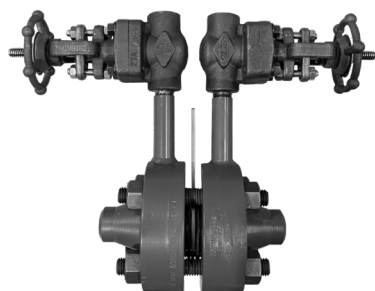
TYPICAL PERFORMANCES

- Range: $1 \div 4$ ($1 \div 5$)
- Max. Pressure and Temperature, allowed by used materials
- Accuracy: $\pm 1 - 2\%$ of F.S.
- Repeatability: $\pm 0.1\%$

ACCESSORIES ON REQUEST

- Orifice Plate only, Annular Chamber, Monolithic Disc
- Spacer Ring, Condensing pots
- Nipples and Valves, Fittings
- Manifold and Differential Pressure Transmitter
- Spare parts





TECHNICAL SPECIFICATIONS

USE	Liquids, Gases, Vapors	
DIMENSIONS	ND 2" – 40" / DN 50 ÷ 1000, if according to ISO 5167	
DESIGN	Flow Calculation	According to ISO-5167-2, ASME MFC-3M / ISO TR15377 / AGA-3, API-Ch.14
	Construction	According to ANSI B16.36
	Pressure Taps Option	On Flange / Corner Taps / "Radius Taps" / "Pipe Taps"
	Type of Orifice Plate	Concentric Square Edge / Quarter circle* / Conical entrance* / Eccentric / Segmental
OPTIONS	Design according to standard project requirements: ENI / SNAM / SHELL / UOP / NUOVO PIGNONE / ARAMCO / EIL and others	
ARRANGEMENTS	ANSI/ASME - Flanges ANSI B16.5 / ASME B 16.47 A-B / API 6B – 6BX	
	EN-PN - Flanges EN-1092-1 / UNI 2223 / DIN	
	Annular Chamber between Flanges, or Monolithic Orifice between Flanges ANSI / EN-UNI-DIN	
RATING	ANSI/ASME - 150, 300, 600, 1500, 2500	
	EN-PN - 10, 16, 25, 40, 63, 100	
PROCESS CONNECTION	Flow Element side	ANSI/ASME - RF, FF, RTJ with sealing surface AARH 125 ÷ 250, 63
		EN-PN - Type 01, 11, 12 with sealing surface Type A, B1 and B2
	Pipe side	ANSI/ASME - WN, SO, SW, THD, LWN, LJ
		EN-PN - Type 01, 11, 12
INSTRUMENT CONNECTION	Pressure Taps type: NPT-F / SW / PE / BW / Flanged	
OTHER OPTIONS	Our technical and commercial departments are available to discuss any variation or customization not mentioned in this catalogue	

* Suitable for viscous fluids, when Reynolds number is low

MATERIALS

GENERAL	As per project specifications, however mainly according to ANSI/ASME/AISI code or according to EN/UNI/DIN codes. Certificates with requirements like NACE MR-0175 e MR-0103 /ISO 15156, Dual grade, and PED. Others to be evaluated on request.
ORIFICE FLANGE	A105N, A350-LF2, A182-F11 -F22 -F5 -F9 -F91, A182-F316 -F304 -F321 F347, Duplex – Super Duplex, Alloy 825 /625. Others on request
ORIFICE PLATE	AISI 316 /304 /321 /347, Duplex – Super Duplex, Monel, Hastelloy B/C, Alloy 825 /625. Others on request
BOLTS & NUTS	A194-B7/2H, A320-L7/7, A193-B16/7, A193-B8/8, Monel, Nichel Alloy. Others on request. Coatings: PTFE coated, Galvanizing / Hot Dip Galvanizing
JACK SCREW	As Bolts
GASKETS	Spiral Wound: according to project specifications
	Flat: Aramidic Fiber / PTFE / Graphite
	RTJ - octagonal: Soft iron / St. Steel, or according to project specifications
	Others on request



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