

KABIR INSTRUMENTS & TECHNOLOGY

Orifice Plates & Flange Assemblies



KiT offers a complete range of Orifice plates for a variety of flow conditions for mounting between flanges for Carrier Rings and with RJ Plate Holders for mounting between RJ Flanges.

KiT Orifice Flange Assemblies are made to AGA/ASME recommendations and are reliable means to flow measurement. Assemblies to other international Standards viz. ISO, BS, DIN etc. are also available.

KiT Orifice flanges cover complete range of sizes pressure rating upto ASA 2500 of ANSI B16.36 as standard and dimensions as per other major international standard viz. - APL, MSS, BS and DIN etc. are also available on request. These flanges are available in various types such as Weld neck, Slip on, Screwed with facing FF, RJ, TG etc various types of tapping available are viz. Flange, Corner and D-D/2.

KiT Orifice Flange Assemblies are supplied ready to install in pipelines complete with Studs, Nuts, Jack Bolts, Gaskets and Drain Plugs. **KiT** Orifice Flanges are manufactured in broad variety of materials to ASTM Standards viz.

Flanges	: CARBON STEEL / ASTM A105 / ASTM A182 / ASTM A350 / SS304/ SS304L /
	SS316 / SS316L / PP / PTFE
Orifice Plate	: SS304/SS304L/SS316/SS316L/MONEL/HAST ALLOY/PP/PTFE
	Other Material On Request
Studs & Nuts	: MS/SS/ASTM A193 Gr. B7/A194 Gr. 2h
Gaskets	: SPIRAL WOUND/CAF/PTFE/AF120
	Fasteners & Gaskets of other material specification available on request

Available Options

Orifice Plate With WNRF Flange Assembly **Orifice Plate With SORF Flange Assembly**

DESIGN STANDARDS

DESIGN :- Confirming to ISA RP 3.2, DN 1952, BS 1042, ISO-5167

ORIFICE BORE :- Confirming to ISO 5167 / BS 1042 / RW Miller / L. K. SPINK / AGE – 3

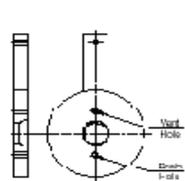
ACCURACY :- Within +/- 1 %

VENT / DRAIN :- Vent OR Drain holes are provided as per customer's requirement. Not drilled for Orifice Bore smaller than 25.4 mm.

ORIFICE FLANGE ASSEMBLY COMPONENTS

(i) **MAIN LINE ORIFICE PLATE** : - There are various types of Orifice Plates.

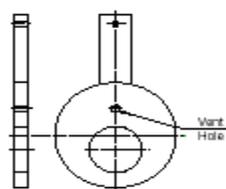
(A) **SQUARE EDGED CONCENTRIC** : -



**SQUARE EDGED
CONCENTRIC**

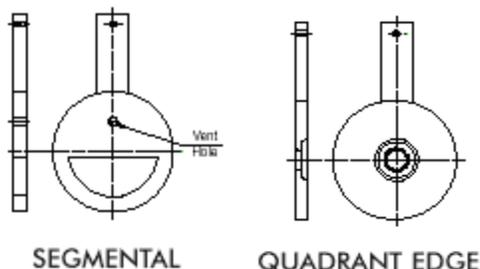
These are commonly used for Flow Measurement. Its main features are simple structure, high accuracy & ease of installation & replacement. These are used for clean liquids, Gases & Steam applications when the Reynolds number

(B) **ECCENTRIC** : -



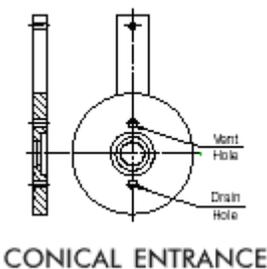
ECCENTRIC

These are commonly used for Liquids containing solid particles that are likely to sediment OR for vapors likely to deposit water condensate. This Orifice Plate is used with its eccentric bore bottom flush with the bottom of the piping inside surface so that the sedimentation of such inclusions can be avoided. Similarly for Gases OR vapors it may

(C) SEGMENTAL: - (D) QUADRANT EDGE: -

These are commonly used for measurements where solids are entrained in a gas OR liquid flow stream

These are principally used for measuring of low Reynolds number (i.e. between 2,000 to 10,000) as the inlet edge of the bore of this Orifice Plate is rounded to a quarter circle.

(E) CONICAL ENTRANCE :-

These are principally used for measuring of viscous fluids where the Reynolds number is very low (i.e. between 80 to 2,000)

PRESSURE TAPPINGS :- There are three types of Pressure Tappings are used.

CORNER TAPPING: - These are mainly used for line sizes from 1 ½" to 12".

FLANGE TAPPING: - These are mainly used for line sizes from 2" to 20".

D & D/2 TAPPING: - These are mainly used for line sizes from 20" TO 24".

- (ii) **GASKETS, STUDS, NUTS & JACK SCREW** :- For details please refer the Material of Construction section.

MATERIALS OF CONSTRUCTION

Orifice Plate :- 316SS, 304SS, P.P.
Orifice Flange :- M.S., 316SS, P.P.
Carrier Ring :- M.S., 316SS, P.P.
Gasket :- CAF as per IS: 2712 Gr.0/1, SS Spiral Wound + CAF, SS Spiral Wound + Grafoil, SS Spiral Wound + PTFE as standard. Other materials available on request.
Studs :- ASTM A193 Gr.87/A-104 Gr.2H as standard. Other materials available on request.
Nuts :- ASTM A193 Gr.87/A-104 Gr.2H as standard. Other materials available on request.
Jack Screw :- Carbon Steel / (C1038 heat treated).