

# ORIFICE FLANGES AND ORIFICE PLATE

All the NEW-FLOW orifice unions are manufactured according to the software by Flow Soft inc. The following is a list of commonly used standards and references used in flow measurement calculations:

- Flow Measurement Engineering Handbook. 2nd edition. R.W. Miller.
- Principles and practice of Flow Meter Engineering. 9th edition. L.K. Spink.
- Fluid Meters, Their Theory and Application. 6th edition, Howard S. Bean.
- Measurement of Fluid Flow in Pipes Using Orifice, Nozzle, and Venturi, ASME MFC-3M-1985.
- Measurement of fluid flow by means of pressure differential devices-Orifice plates, inserted in circular cross section conduits running full, ISO 5167-2-2003.
- Orifice Metering of Natural Gas and Other Related Hydrocarbon Fluids, AGA Report 3, API 2000,2003.

## Technical Data

**Orifice Plate Series:** Restriction plate. Concentric orifice plate.

- Quadrant edge orifice plate.
- Conical entrance orifice plate. Large and small orifice plate.
- Eccentric orifice plate. Segmental orifice plate. Ring-joint orifice plate.
- Screw type ring-joint orifice plate. Corner type plate.

**Orifice Tap Series:** (a) flange taps. radius or D-D/2 taps, vena contract taps. and pipe taps.

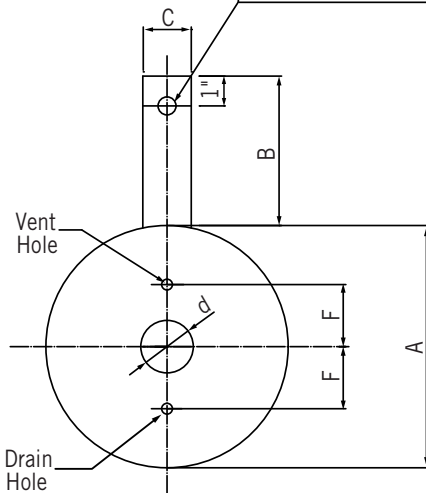
(b) corner tap-individual pressure tap and annular slot design.

**Orifice Flange Series:** 1. Raised face (RF type) 2. Ring-Joint (RJ type) 3. Slip-on (SO type) 4.Thread type

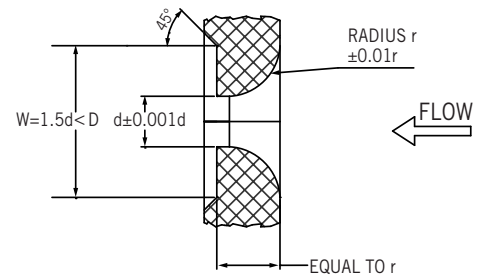


## PADDLE TYPE ORIFICE PLATE

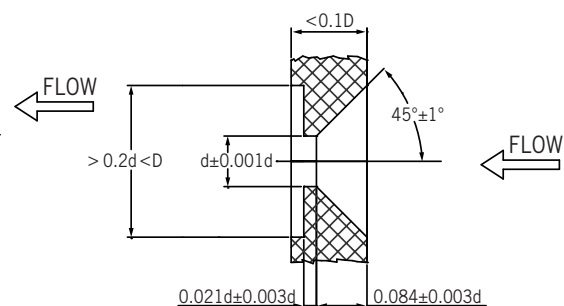
1/4" HOLE FOR 1/2" THRU 2" SIZE  
3/8" HOLE FOR 2 1/2" THRU 12" SIZE  
1/2" HOLE FOR 14" THRU 24" SIZE  
3/4" HOLE FOR 26 SIZE AND LARGER



Concentric Orifice Plate

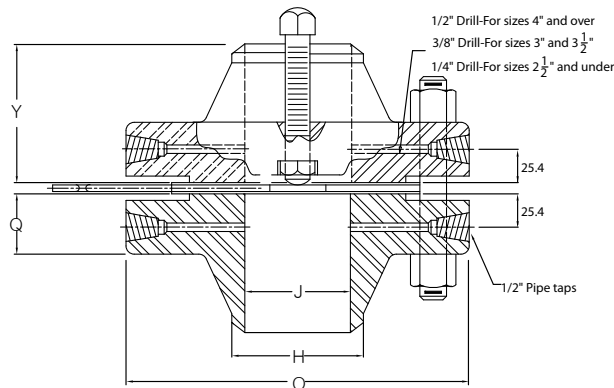


Quadrant Edge Orifice Plate



Conical Entrance Orifice Plate

## 300LB. -400LB. ANSI B16.5 FORGED STEEL WELDING NECK ORIFICE FLANGES



**RAISED FACE (RF TYPE)**

unit:mm

300 LB.														
NOMINAL PIPE SIZE	OUTSIDE DIAM OF FLANGE	THICKNESS OF FLANGES	DIAM. OF HUB	LENGTH THROUGH HUB	DIAM. OF BORE	DIAM. OF RAISED FACE	DEPTH OF JACK SCREW SLOT	JACK SCREW SIZE	NUMBER OF BOLT HOLES	DIAM. OF HOLES	DIAM. OF BOLTS	LENGTH OF BOLTS	BOLT CIRCLE	APPROX. WEIGHT UNION lb.
		O	Q	H	Y	J								
1	123.8	38.1	33.5	82.6	26.7	71.4	9.5	Two extra carbon steel bolts are furnished to be used as jack screws.	4	27.0	15.9	101.6	88.9	8.2
1½	155.6	38.1	48.3	85.7	40.9	93.7	12.7		4	30.2	19.1	107.9	114.3	11.4
2	165.1	38.1	60.5	85.7	52.6	109.5	9.5		8	27.0	15.9	101.6	127.0	12.2
2½	190.5	38.1	73.2	88.9	62.7	128.6	12.7		8	30.2	19.1	107.9	149.2	15.8
3	209.6	38.1	88.9	88.9	78.0	147.6	12.7		8	30.2	19.1	107.9	168.3	19.5
4	254.0	38.1	114.3	92.7	102.4	179.4	12.7		8	30.2	19.1	107.9	200.0	29.9
6	317.5	38.1	168.4	100.0	154.2	247.7	12.7		12	22.2	19.1	107.9	269.8	48.1
8	381.0	41.1	219.2	111.1	203.0	304.8	15.9		12	25.4	22.2	107.9	330.2	69.0
10	444.5	47.8	273.1	174.5	254.5	358.8	19.1		16	28.6	25.4	139.7	387.4	98.0
12	520.7	50.8	323.9	130.2	304.8	419.1	22.2		16	31.8	28.6	139.7	450.9	148.5
14	584.2	53.8	355.6	142.9	366.6	482.6	22.2		20	31.8	28.6	152.4	514.4	203.3
16	647.7	57.2	406.1	146.1	387.4	536.6	25.4		20	34.9	31.8	165.1	571.5	270.5
18	711.2	60.5	457.2	158.8	438.2	593.7	25.4		24	34.9	31.8	165.1	628.6	336.4
20	774.7	63.5	508.0	161.9	489.0	650.9	25.4		24	34.9	31.8	177.8	685.8	402.6
24	914.4	69.9	609.6	168.3	593.1	771.5	31.8		24	42.3	38.1	190.5	812.8	595.2

400 LB.														
NOMINAL PIPE SIZE	OUTSIDE DIAM OF FLANGE	THICKNESS OF FLANGES	DIAM. OF HUB	LENGTH THROUGH HUB	DIAM. OF BORE	DIAM. OF RAISED FACE	DEPTH OF JACK SCREW SLOT	JACK SCREW SIZE	NUMBER OF BOLT HOLES	DIAM. OF HOLES	DIAM. OF BOLTS	LENGTH OF BOLTS	BOLT CIRCLE	APPROX. WEIGHT UNION lb.
		O	Q	H	Y	J								
1	123.8	44.5	33.5	82.6	To be specified by purchaser.	71.4	9.5	47.6	4	27.0	15.9	120.7	88.9	8.2
1½	155.6	44.5	48.3	85.7		93.7	12.7	57.2	4	30.2	19.1	127.0	114.3	11.4
2	165.1	44.5	60.5	85.7		109.5	9.5	47.6	8	30.2	15.9	120.7	127.0	12.3
2½	191.5	44.5	73.2	88.9		128.6	12.7	57.2	8	30.2	19.1	127.0	149.2	15.9
3	209.6	44.5	88.9	88.9		147.6	12.7	57.2	8	30.2	19.1	127.0	168.3	19.5
4	254.0	44.5	114.3	88.9		157.2	6.4	57.2	8	25.4	22.2	139.7	200.0	37.2
6	317.5	47.5	168.4	103.2		215.9	12.7	88.9	12	25.4	22.2	158.8	269.9	61.7
8	381.0	54.1	219.2	117.5		269.5	12.7	88.9	12	28.6	25.4	171.5	330.2	96.7
10	444.5	60.2	273.1	123.8		323.9	12.7	101.6	16	31.8	28.6	193.7	387.4	140.3
12	520.7	63.5	323.9	136.5		381.0	12.7	101.6	16	34.9	31.8	203.2	450.9	194.8
14	584.2	67.1	355.6	149.2		412.8	12.7	108.3	20	34.9	31.8	209.6	514.4	251.5
16	647.7	69.9	406.0	152.4		469.9	12.7	108.3	20	38.1	34.9	222.3	571.5	320.0
18	711.2	72.9	457.2	165.1		533.4	12.7	44.3	24	38.1	34.9	234.9	628.7	391.8
20	774.7	76.2	508.0	168.3		584.2	12.7	120.7	24	41.3	38.1	247.7	685.8	483.9
24	914.4	82.6	609.6	174.6		692.2	12.7	127.0	24	47.6	44.5	279.4	812.8	706.0

