ORIFICE PLATE WITH RING
MODEL : F200 SERIES

WISE®

DESCRIPTION

Orifice Ring Assemblies are used for flow measurement of smaller or medium sized pipes at lower pressures each assembly consists of one orifice plate and two orifice rings, differential pressures are taken out in a corner tap system.

Orifice Block, which are of a unit-construction type and provide higher pressure ratings than the Orifice Ring Assemblies, also are available.

SPECIFICATION

ORIFICE BORE TYPE -
Concentric Square Edged Orifice
Quadrant Edged Orifice
Minimum quadrant edged orifice diameter 4.5mm
Minimum quadrant edged radius 0.5mm

FLOW CALCULATION STANDARDS -
ISO 5167
JIS Z8762
AGA 3, 8
General Application
L.K Spink

FLANGE RATINGS -
JIS 5, 10, 16, 20
ANSI (or JPI) 150 lb, 300 lb
(Note: ANSI and JPI ring dimensions are identical)

PRESSURE TAPS -
Corner taps

PLATE THICKNESSES -
3, 6, 9, 12mm

TAB HANDLE -
Welded to orifice plate

PRESSURE TAP NIPPLES -
15mm (1/2 inch) Sch 40, 80
Length : 150mm
Tap Connections : PT 1/2 or NPT male,
Socket weld, Butt weld or Flange.(Flange rating to be the same as the of the process pipeline)

DRAIN AND VENT HOLE -
Per ASME recommendations
Not drilled for orifice bores smaller than 25.4mm

MARKINGS -
Upstream side of tab handle stamped “UPSTREAM” and with bore type and size, line size, tag number, quadrant edge radius and flange rating.

SPECIAL MARKINGS -
Special marking may be furnished to meet special requirements

MATERIALS -
Ring and Pressure Tap Nipple : 304SS, 316SS
Plate : 304SS, 316LSS, MONEL, other
Tab Handle : 304SS, 316LSS

GASKET -
Material : Asbestos, Non-Asbestos, Teflon
Thickness : 1.5mm, 2.0mm, 3.0mm

ORIFICE ORDERING INFORMATION

(Plate with Ring)

F200

TYPE
P2 : Orifice Plate with Ring

LINE SIZE

JIS (mm)	ANSI (inch)	DIN (mm)	JIS (mm)	ANSI (inch)	DIN (mm)
J015 : 15A	A001 : 1/2B	D015 : 15A	J250 : 250A	A012 : 10B	D250 : 250A
J020 : 20A	A002 : 3/4B	D020 : 20A	J300 : 300A	A013 : 12B	D300 : 300A
J025 : 25A	A003 : 1B	D025 : 25A	J350 : 350A	A014 : 14B	D350 : 350A
J040 : 40A	A004 1 1/2B	D040 : 40A	J400 : 400A	A015 : 16B	D400 : 400A
J050 : 50A	A005 : 2B	D050 : 50A	J450 : 450A	A016 : 18B	D450 : 450A
J065 : 65A	A006 2 1/2B	D065 : 65A	J500 : 500A	A017 : 20B	D500 : 500A
J080 : 80A	A007 : 3B	D080 : 80A	J600 : 600A	A018 : 24B	D600 : 600A
J100 : 100A	A008 : 5B	D100 : 100A	J700 : 700A	A019 : 28B	D700 : 700A
J125 : 125A	A009 : 5B	D125 : 125A	J800 : 800A	A020 : 32B	D800 : 800A
J150 : 150A	A010 : 6B	D150 : 150A	J000 : 1000A	A021 : 40B	D000 : 1000A
J200 : 200A	A011 : 8B	D200 : 200A	XXXX : OHTER		

BORE TYPE
C : Concentric Edge
Q : Quadrant Edge
E : Eccentric
S : Segmental

FLANGE RATING

JIS	ANSI	DIN
J010 : JIS 10K	A010 : ANSI 150#	P010 : PN10
J016 : JIS 16K	A020 : ANSI 300#	P016 : PN16
J020 : JIS 20K	A030 : ANSI 600#	P025 : PN25
J030 : JIS 30K	A040 : ANSI 900#	P040 : PN40
J040 : JIS 40K	A050 : ANSI 1500#	
J063 : JIS 63K	A060 : ANSI 2500#	

PLATE MATERIAL
4 : 304SS
6 : 316LSS
T : Titanium
M : Monel
O : Other

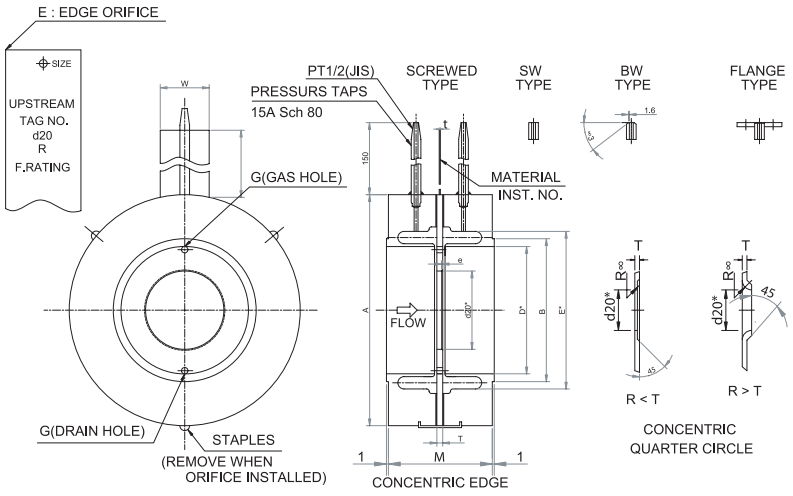
RING MATERIAL
4 : 304SS
6 : 316LSS
0 : Other

DRAIN / VENT
D : Drain
V : Vent
N : None

OPTION
1 : Nipple (75L + 150L)
2 : Nipple (150L + 150L)
3 : Tap Valve
N : None

F200	P2	A005	C	A020	6	4	V	2

DIMENSION



※ d20 : ORIFICE DIA.AT 20˚C : REFER TO ORIFICE CALCULATED SHEET

D : INSIDE DIA OF RING
E : INSIDE DIA OF GASKET

RING ORIFICES FOR JIS 5K FLANGE

UNIT : mm

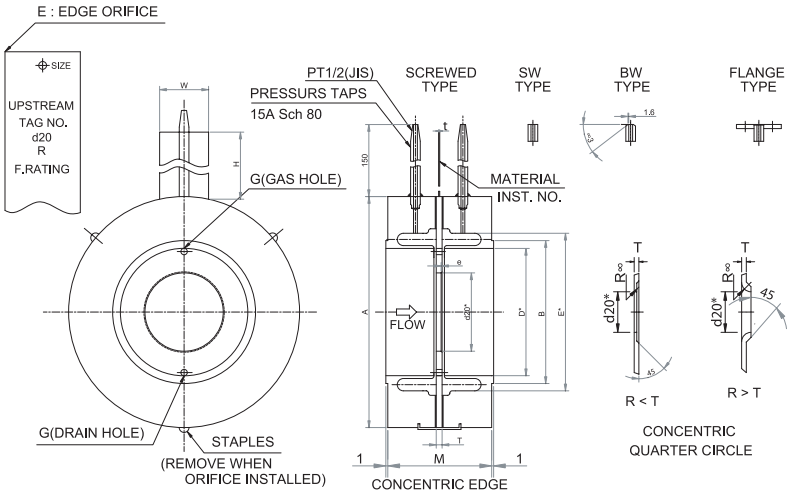
NOMINAL PIPE SIZE	OUTSIDE DIAM. OF RINGS AND PLATE A	DIAM OF GASKET STAY B	THICKNE -SS OF EDGS e	DIAM OF HOLE G	FACE TO FACE M	THICKNE -SS OF PLATE T	WIDTH OF TAB HANDLE W	HIGHT OF TAB HANDLE H	THICKNE -SS OF TAB HANDLE t
15	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-
25	65	33	0.2~0.4	-	75	2	25	95	2
32	78	42	0.3~0.5	1.6	75	2	25	95	2
40	83	48	0.3~0.5	1.6	75	2	25	95	2
50	93	60	0.5~0.8	1.6	75	2	25	95	2
65	118	73	0.5~0.8	1.6	75	3	32	95	2
80	129	88	0.5~0.8	1.6	75	3	32	95	2
90	139	101	0.5~0.8	1.6	75	3	32	95	2
100	149	114	0.8~1.2	1.6	75	3	38	105	2
125	184	141	0.8~1.2	1.6	75	3	38	105	2
150	214	168	0.8~1.2	1.6	75	3	38	105	2
175	240	196	1.5~2.0	1.6	76	4	38	105	2
200	260	219	1.5~2.0	1.6	76	4	38	105	2
225	285	246	1.5~2.0	1.6	76	4	38	105	2
250	325	273	e = T	2.0	76	4	44	120	3
300	370	323	e = T	2.5	76	4	44	120	3

RING ORIFICES FOR JIS 10K FLANGE

UNIT : mm

NOMINAL PIPE SIZE	OUTSIDE DIAM. OF RINGS AND PLATE A	DIAM OF GASKET STAY B	THICKNE -SS OF EDGS e	DIAM OF HOLE G	FACE TO FACE M	THICKNE -SS OF PLATE T	WIDTH OF TAB HANDLE W	HIGHT OF TAB HANDLE H	THICKNE -SS OF TAB HANDLE t
15	58	21	0.2~0.3	-	75	2	25	95	2
20	63	27	0.2~0.4	-	75	2	25	95	2
25	74	33	0.2~0.4	-	75	2	25	95	2
32	84	42	0.3~0.5	1.6	75	2	25	95	2
40	89	48	0.3~0.5	1.6	75	2	25	95	2
50	104	60	0.5~0.8	1.6	75	2	25	95	2
65	124	73	0.5~0.8	1.6	75	3	32	95	2
80	134	88	0.5~0.8	1.6	75	3	32	95	2
90	144	101	0.5~0.8	1.6	75	3	32	95	2
100	159	114	0.8~1.2	1.6	75	3	38	105	2
125	190	141	0.8~1.2	1.6	75	3	38	105	2
150	220	168	0.8~1.2	1.6	75	3	38	105	2
175	245	196	1.5~2.0	1.6	76	4	38	105	2
200	270	219	1.5~2.0	1.6	76	4	38	105	2
225	290	246	1.5~2.0	1.6	76	4	38	105	2
250	333	273	e = T	2.0	76	4	44	120	3
300	378	323	e = T	2.5	76	4	44	120	3

DIMENSION



※ d20 : ORIFICE DIA.AT 20∞C : REFER TO ORIFICE CALCULATED SHEET

D : INSIDE DIA OF RING

E : INSIDE DIA OF GASKET

RING ORIFICES FOR JIS 16K 20K FLANGE

UNIT : mm

NOMINAL PIPE SIZE	OUTSIDE DIAM. OF RINGS AND PLATE A	DIAM OF GASKET STAY B	THICKNE _SS OF EDGS e	DIAM OF HOLE G	FACE TO FACE M	THICKNE _SS OF PLATE T	WIDTH OF TAB HANDLE W	HIGHT OF TAB HANDLE H	THICKNE _SS OF TAB HANDLE t
15	58	21	0.2~0.3	-	75	2	25	95	2
20	63	27	0.2~0.4	-	75	2	25	95	2
25	74	33	0.2~0.4	-	75	2	25	95	2
32	84	42	0.3~0.5	1.6	75	2	25	95	2
40	89	48	0.3~0.5	1.6	75	2	25	95	2
50	104	60	0.5~0.8	1.6	75	2	25	95	2
65	124	73	0.5~0.8	1.6	75	3	32	95	2
80	140	88	0.5~0.8	1.6	75	3	32	95	2
90	150	101	0.5~0.8	1.6	75	3	32	95	2
100	165	114	0.8~1.2	1.6	75	3	38	105	2
125	203	141	0.8~1.2	1.6	75	3	38	105	2
150	238	168	0.8~1.2	1.6	75	3	38	105	2
200	283	219	1.5~2.0	1.6	76	4	38	105	2
250	356	273	e = T	2.0	76	4	44	120	3
300	406	323	e = T	2.5	76	4	44	120	3

RING ORIFICES FOR JIS ANSI JPI 150 Lb FLANGE

UNIT : mm

NOMINAL PIPE SIZE	OUTSIDE DIAM. OF RINGS AND PLATE A	DIAM OF GASKET STAY B	THICKNE _SS OF EDGS e	DIAM OF HOLE G	FACE TO FACE M	THICKNE _SS OF PLATE T	WIDTH OF TAB HANDLE W	HIGHT OF TAB HANDLE H	THICKNE _SS OF TAB HANDLE t
1/2	-	-	-	-	-	-	-	-	-
3/4	-	-	-	-	-	-	-	-	-
1	66.7	33	0.2~0.4	-	75	2	25	95	2
1 1/4	76.2	42	0.3~0.5	1.6	75	2	25	95	2
1 1/2	85.7	48	0.3~0.5	1.6	75	2	25	95	2
2	104.8	60	0.5~0.8	1.6	75	2	25	95	2
2 1/2	123.8	73	0.5~0.8	1.6	75	3	32	95	2
3	136.5	88	0.5~0.8	1.6	75	3	32	95	2
3 1/2	161.9	101	0.5~0.8	1.6	75	3	32	95	2
4	174.6	114	0.8~1.2	1.6	75	3	38	105	2
5	196.9	141	0.8~1.2	1.6	75	3	38	105	2
6	222.3	168	0.8~1.2	1.6	75	3	38	105	2
8	279.4	219	1.5~2.0	1.6	76	4	38	105	2
10	339.7	273	e = T	2.0	76	4	44	120	3
12	409.6	323	e = T	2.5	76	4	44	120	3