

Ring type joint orifice plate

Model : F300

Spec. sheet no. FD03-01

Description

A holding ring assembly is a combination of a holder ring and an orifice plate designed for Ring type joint(RTJ) flanges of ANSI or JPI specifications. The holding ring has a function of holding the orifice plate and also a function as a gasket to prevent leakage of the process fluid.

This metallic sealing system is applicable to a fluid of high temperature and high pressure, the pressure tapping system is normally the flange tap type.

EAC



Specification

Orifice bore type

Concentric square edged orifice
Quadrant edged orifice

Flow calculation standards

ISO 5167-1 and 2 2003
AGA-3
ASME MFC-3M and 14M
JIS Z 8762
BS 1042

Flange ratings

ANSI class 600, 900, 1500Lb and 2500Lb
Ring type joint (RTJ)

Pressure taps

Flange taps

Plate thickness

3, 6, 9, 12 mm and Over

Tap handle

Welded to ring

Holding ring

Riveted to plate
Types : Octagonal or oval

Drain and vent hole

Per ASME/ISA recommendations
Not drilled for orifice bores smaller than 25.4 mm

Markings

Upstream side of tab handle stamped with "Upstream" and with Bore type and size, Line size, Tag number and Flange rating

Special markings

Special marking may be furnished to meet Specific requirement

Materials

Plate : 304SS and 316L SS
Holding ring : Soft Iron, 304SS and 316SS
Rivets : 304SS and 316SS
Tab Handle : 304SS and 316SS

Nominal pipe sizes available

Orifice bore type	Pipe size	Pipe diameter given in the applicable standards
Concentric square edge	1½" ~ 14"	40 ~ 350 mm
Quadrant edge	1½" ~ 6"	40 ~ 150 mm

WISE[®]

Main order

Ordering information

1. Base model

F300 Ring type joint orifice plate

2. Line size

A01	1/2"	J01	15A
A02	3/4"	J02	20A
A03	1"	J03	25A
A04	1 1/2"	J04	40A
A05	2"	J05	50A
A06	3"	J06	80A
A07	4"	J07	100A
A08	6"	J08	150A
A09	8"	J09	200A
A10	10"	J10	250A
A11	12"	J11	300A
A12	14"	J12	350A
A13	16"	J13	400A
A14	18"	J14	450A
A15	20"	J15	500A
A16	24"	J16	600A
ZZZ	Other		

3. Connection

A21	150Lb RTJ	J21	10K RTJ
A22	300Lb RTJ	J22	16K RTJ
A23	600Lb RTJ	J23	20K RTJ
A24	900Lb RTJ	J24	30K RTJ
A25	1500Lb RTJ	J25	40K RTJ
A26	2500Lb RTJ	J26	63K RTJ
ZZZ	Other		

4. Element type

1	Concentric
2	Quadrant
3	Conditioning
4	Eccentric
5	Segmental
O	Other

5. Element material

6	316L SS
O	Other

6. Ring gasket material

1	Soft Iron
4	304SS
6	316SS
O	Other

7. Drain / Vent hole

D	Drain hole
V	Vent hole
N	None (Bore size < 25.4 mm or Required)

8. Option

C	Calibration test
O	Other
N	None

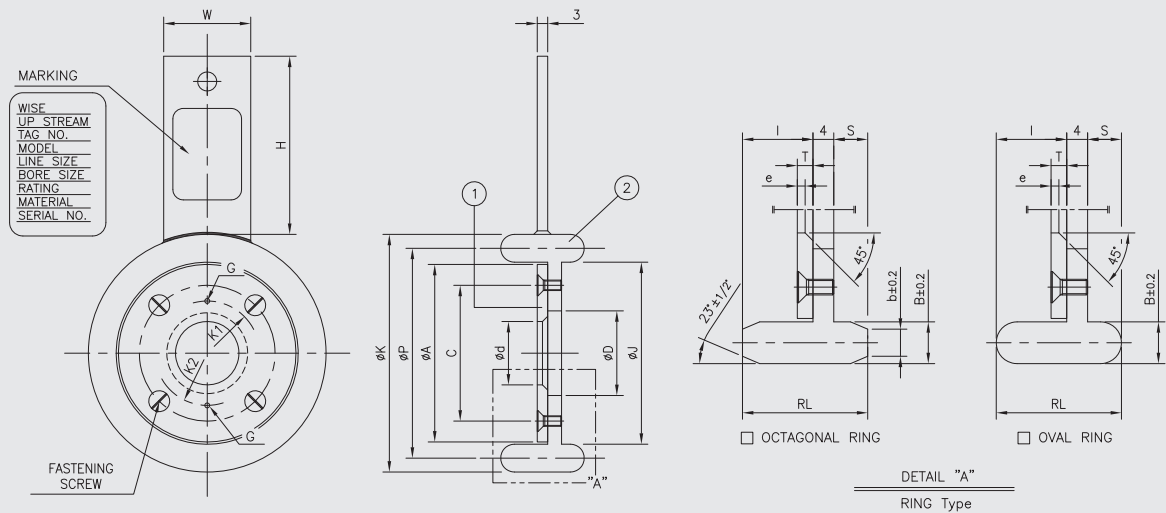
Sample ordering code

1	2	3	4	5	6	7	8
F300	A01	A21	1	6	1	D	C



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Dimension (1/2)



ORIFICE HOLDING RING DIMENSIONS (900Lb)

SIZE (inch)	WIDTH of FLAT OCTAGONAL RING	HEIGHT of RING	WIDTH of RING			P.C.D of SCREW	OUTSIDE DIAM. of RING	P.C.D of RING	INSIDE DIAM. of RING	HANDLE		FASTENING SCREW	RING No.
	b	B	RL	S	I	C	K	P	J	W	H		
1	5.2	8	24	6.5	13.5	29	58.8	50.8	42.8	25	120	M3 * 7L * 4EA	R16
1 1/2	5.2	8	24	6.5	13.5	47	76.3	68.3	60.3	25	120	M3 * 7L * 4EA	R20
2	7.7	11.1	26	7.5	14.5	71	106.4	95.3	84.2	25	160	M3 * 7L * 4EA	R24
2 1/2	7.7	11.1	26	7.5	14.5	83	119.1	108	96.9	25	160	M3 * 7L * 4EA	R27
3	7.7	11.1	26	7.5	14.5	93	134.9	123.8	112.7	25	160	M4 * 7L * 4EA	R31
4	7.7	11.1	26	7.5	14.5	119	160.3	149.2	138.1	38	160	M4 * 7L * 4EA	R37
5	7.7	11.1	26	7.5	14.5	150	192.1	181	169.9	38	160	M4 * 7L * 4EA	R41
6	7.7	11.1	26	7.5	14.5	181	222.3	211.1	200.1	38	190	M4 * 7L * 4EA	R45
8	7.7	11.1	26	7.5	14.5	227	281	269.9	258.8	38	190	M6 * 7L * 6EA	R49
10	7.7	11.1	29	7.5	14.5	281	335	323.9	312.8	38	210	M6 * 10L * 6EA	R53
12	7.7	11.1	29	7.5	14.5	338	392.1	381	369.9	38	240	M6 * 10L * 6EA	R57
14	10.5	15.9	34	10	20	372	435	419.1	403.2	38	240	M6 * 10L * 6EA	R62
16	10.5	15.9	37	11.5	21.5	423	485.8	469.9	454	38	260	M6 * 10L * 6EA	R66
18	11.1	19.1	40	11.5	24.5	483	552.5	533.4	514.3	38	260	M6 * 13L * 6EA	R70
20	12.3	19.1	40	11.5	24.5	534	603.3	584.2	565.1	38	290	M6 * 13L * 6EA	R74
24	17.3	25.4	45	14	27	635	717.6	692.2	666.8	38	290	M6 * 13L * 6EA	R78

ORIFICE PLATES DIMENSIONS (900Lb)

SIZE (inch)	O.D of PLATE	THICKNESS of PLATES	THICKNESS of EDGE	DIAM. of HOLE	
	A	T	e	G	K1/K2
1	41	3	0.5	—	—
1 1/2	59	3	0.7	1.6	*
2	83	3	0.8	1.6	*
2 1/2	95	3	0.8	1.6	*
3	111	3	0.8	1.6	*
4	137	3	1.6	1.6	*
5	168	3	1.6	1.6	*
6	199	3	1.6	1.6	*
8	257	3	3	1.6	*
10	311	6	3	2	*
12	368	6	3	2.5	*
14	402	6	3	2.5	*
16	453	6	6	3	*
18	513	9	6	3	*
20	564	9	6	3	*
24	665	9	6	3	*

Dimension (2/2)

ORIFICE HOLDING RING DIMENSIONS (1500Lb)

SIZE (inch)	WIDTH of FLAT on OCTAGONAL RING	HEIGHT of RING	WIDTH of RING			P.C.D of SCREW	OUTSIDE DIAM. of RING	P.C.D of RING	INSIDE DIAM. of RING	HANDLE		FASTENING SCREW	RING No.
			RL	S	I					W	H		
1	5.2	8	24	6.5	13.5	28	58.8	50.8	42.8	25	120	M3 * 7L * 4EA	R16
1 1/2	5.2	8	24	6.5	13.5	46	76.3	68.3	60.3	25	120	M3 * 7L * 4EA	R20
2	7.7	11.1	26	7.5	14.5	70	106.4	95.3	84.2	25	160	M3 * 7L * 4EA	R24
2 1/2	7.7	11.1	26	7.5	14.5	82	119.1	108	96.9	25	160	M3 * 7L * 4EA	R27
3	7.7	11.1	26	7.5	14.5	105	147.6	136.5	125.4	25	160	M4 * 7L * 4EA	R35
4	7.7	11.1	26	7.5	14.5	130	173	161.9	150.8	38	160	M4 * 7L * 4EA	R39
5	7.7	11.1	28	8.5	15.5	162	204.8	193.7	182.6	38	160	M4 * 7L * 4EA	R44
6	8.7	12.7	28	8.5	15.5	178	223.9	211.1	198.5	38	190	M4 * 7L * 4EA	R46
8	10.5	15.9	31	10	17	222	285.8	269.9	254	38	190	M6 * 7L * 6EA	R50
10	10.5	15.9	34	10	20	276	339.8	323.9	308	38	210	M6 * 10L * 6EA	R54
12	14.8	22.2	39	12.5	22.5	326	403.2	381	358.8	38	240	M6 * 10L * 6EA	R58
14	17.3	25.4	42	14	24	361	444.5	419.1	393.7	38	240	M6 * 10L * 6EA	R63
16	19.8	28.6	47	16.5	26.5	409	498.5	469.9	441.3	38	260	M6 * 10L * 6EA	R67
18	19.8	28.6	47	15	28	472	562	533.4	504.8	38	260	M6 * 13L * 6EA	R71
20	22.3	31.8	48	15.5	28.5	520	616	584.2	552.4	38	290	M6 * 13L * 6EA	R75
24	24.8	34.9	50	16.5	29.5	625	727.1	692.2	657.3	38	290	M6 * 13L * 6EA	R79

ORIFICE PLATES DIMENSIONS (1500Lb)

SIZE (inch)	O.D of PLATE	THICKNESS of PLATES	THICKNESS of EDGE	DIAM. of HOLE	
				G	K1/K2
1	41	3	0.5	—	—
1 1/2	59	3	0.7	1.6	*
2	83	3	0.8	1.6	*
2 1/2	95	3	0.8	1.6	*
3	124	3	0.8	1.6	*
4	149	3	1.6	1.6	*
5	181	3	1.6	1.6	*
6	197	3	1.6	1.6	*
8	253	3	3	1.6	*
10	307	6	3	2	*
12	357	6	3	2.5	*
14	392	6	3	2.5	*
16	440	6	6	3	*
18	503	9	6	3	*
20	551	9	6	3	*
24	656	9	6	3	*

ORIFICE HOLDING RING DIMENSIONS (2500Lb)

SIZE (inch)	WIDTH of FLAT on OCTAGONAL RING	HEIGHT of RING	WIDTH of RING			P.C.D of SCREW	OUTSIDE DIAM. of RING	P.C.D of RING	INSIDE DIAM. of RING	HANDLE		FASTENING SCREW	RING No.
			RL	S	I					W	H		
1	5.2	8	24	6.5	13.5	38	68.3	60.3	52.3	25	120	M3 * 7L * 4EA	R18
1 1/2	7.7	11.1	26	7.5	14.5	57	93.7	82.6	71.5	25	120	M3 * 7L * 4EA	R23
2	7.7	11.1	26	7.5	14.5	76	112.7	101.6	90.5	25	160	M3 * 7L * 4EA	R26
2 1/2	8.7	12.7	28	8.5	15.5	84	123.8	111.1	98.4	25	160	M3 * 7L * 4EA	R28
3	8.7	12.7	28	8.5	15.5	94	139.7	127	114.3	25	160	M4 * 7L * 4EA	R32
4	10.5	15.9	31	10	17	121	173.1	157.2	141.3	38	160	M4 * 7L * 4EA	R38
5	12.3	19.1	34	11.5	18.5	151	209.6	190.5	171.4	38	160	M4 * 7L * 4EA	R42
6	12.3	19.1	34	11.5	18.5	189	247.7	228.6	209.5	38	190	M4 * 7L * 4EA	R47
8	14.8	22.2	36	12.5	19.5	225	301.6	279.4	257.2	38	190	M6 * 7L * 6EA	R51
10	19.8	28.6	44	15	25	282	371.5	342.9	314.3	38	210	M6 * 10L * 6EA	R55
12	22.3	31.8	45	15.5	25.5	342	438.2	406.4	374.6	38	240	M6 * 10L * 6EA	R60

ORIFICE PLATES DIMENSIONS (2500Lb)

SIZE (inch)	O.D of PLATE	THICKNESS of PLATES	THICKNESS of EDGE	DIAM. of HOLE	
				G	K1/K2
1	51	3	0.5	—	—
1 1/2	70	3	0.7	1.6	*
2	89	3	0.8	1.6	*
2 1/2	97	3	0.8	1.6	*
3	113	3	0.8	1.6	*
4	140	3	1.6	1.6	*
5	170	3	1.6	1.6	*
6	208	3	1.6	1.6	*
8	256	3	3	1.6	*
10	313	6	3	2	*
12	373	6	3	2.5	*