

## DIFFERENTIAL PRESSURE DEVICE ORIFICE PLATES WITH FLANGE TAPPINGS

DATA SHEET

FVC

Tapping of differential pressure is done by orifice plates with flange taps. So that differential pressure can be tapped from points located 25.4mm away from both sides of the orifice plate, the pressure tapping pipe is equipped to the flange section.

It is used to measure liquid, steam, gas, etc. The orifice plate is designed for easy removal.



### SPECIFICATIONS

- Type:** Flange taps
- Calculation standard:** According to JIS Z 8762-1995 [ISO 5167-1:1991]
- Nominal pipe size:** 25A to 400A
- Main material:** Flange; JIS SF440A, SUS304, \*SUS316  
Plates with tab handle; JIS SUS304, SUS316
- Gasket:** Valqua; (Refer to table 1)
- Connection method:** Connection flange; JIS 10, 20, 30, 40, \*63K RF  
ANSI 150, 300, 400, 600, \*900LB RF \*900, \*1500LB RJ  
Pressure tapping holes; Rc1/2 (PT1/2 internal thread) or NPT1/2
- Working conditions:** Max. pressure; 3MPa{30.59kgf/cm<sup>2</sup>} or less  
Temperature range; -10 to 300°C (depends on the kind of fluid)

[ These orifice plates can be manufactured for nominal pipe sizes up to 1000mm. ]

### CODE SYMBOLS

1	2	3	4	5	6	7	8	9	10	11	12	13	Description
F	V	C	0				3	-	0				Pipe size (A)
				0	2	5							Enter pipe size in 5th to 7th digits
				3	5	0							Application
									0				General use
									S				Material of orifice plates
									W				SUS304 (JIS)
													SUS316 (JIS)
													Material of flange
									F				SF440A (JIS)
									S				SUS304 (JIS)
									W				SUS316 (JIS)
									Y				None
													Flange standard
									J				JIS 10K RF
									K				JIS 20K RF
									L				JIS 30K RF
									M				JIS 40K RF
									*N				JIS 63K RF
									A				ANSI 150LB RF
									B				ANSI 300LB RF
									C				ANSI 400LB RF
									D				ANSI 600LB RF
									*E				ANSI 900LB RF
									*F				ANSI 900LB RJ
									*G				ANSI 1500LB RJ
									*H				ANSI 2500LB RJ
													Treatment
									Y				Without
									(1) A				Oil-repulsion treatment

<Table 1 >

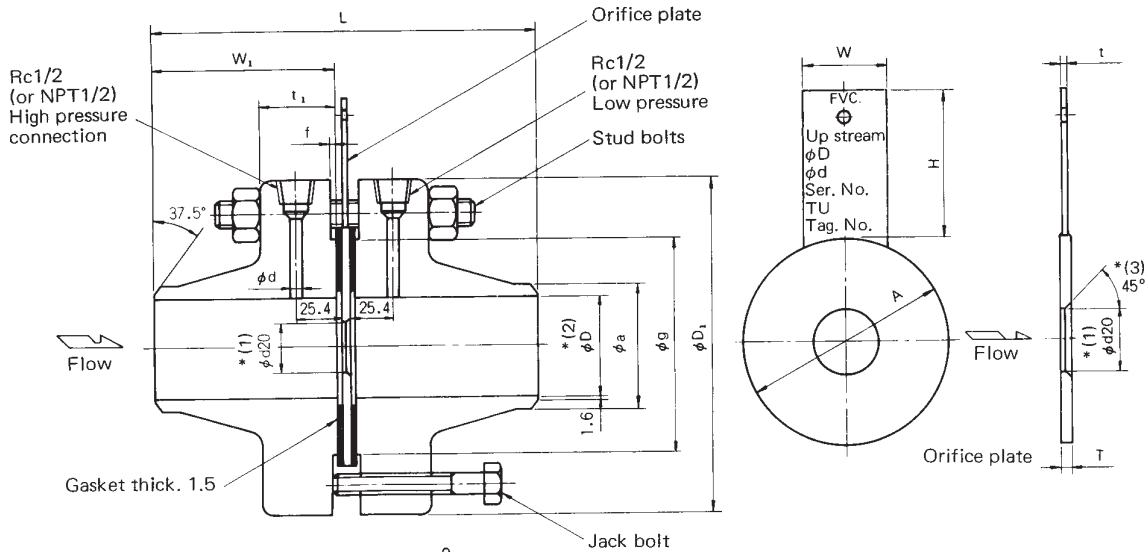
Type	Application	Rating (about)
No. 6500AC (Non-asbestos)	General use	3MPa, 100°C
No. 7020 (Teflon)	For no oil treatment	1.5MPa, 200°C
No. GF300 (Graphite compound)	For high temp. high press. *	3MPa, 230°C
No. 6596V (Pure graphite)	For high temp. high press. *	20MPa, 400°C

\*Non-standard

Notes:

- (1) Designate material SUS304, SUS316 (code S or W) for orifice plates and flanges in case of oil-repulsion treatment  
(2) \* : Non-standard

OUTLINE DIAGRAM (Unit:mm)



- Notes: \*(1) "d20" is a hole diameter at 20°C.  
 Refer to calculation sheet.  
 \*(2) For "D", refer to the calculation sheet.  
 \*(3) When nominal diameter is more than 150A, no chamfering is required.

For JIS 10K flange

Size		L	W <sub>1</sub>	D <sub>1</sub>	g	a	t <sub>1</sub>	f	d	Bolts	
A	B									Q'ty	Size
25	1	165	80	125	70	34.0	38.1	1	4	4	M16
32	1 1/4	165	80	135	80	42.7	38.1	2	4	4	M16
40	1 1/2	171	83	140	85	48.6	38.1	2	4	4	M16
50	2	171	83	155	100	60.5	38.1	2	4	4	M16
65	2 1/2	178	86	175	120	76.3	38.1	2	4	4	M16
80	3	178	86	185	130	89.1	38.1	2	6	8	M16
100	4	186	90	210	155	114.3	38.1	2	6	8	M16
125	5	196	95	250	185	139.8	38.1	2	8	8	M20
150	6	206	100	280	215	155.2	38.1	2	8	8	M20
200	8	227	110	330	265	216.3	38.1	2	12	12	M20
250	10	237	115	400	325	267.4	38.1	2	12	12	M22
300	12	247	120	445	370	318.5	38.1	3	12	16	M22
350	14	267	130	490	475	355.6	38.1	3	12	16	M22
400	16	267	130	560	475	406.4	38.1	3	12	16	M24

For JIS 20K flange

Size		L	W <sub>1</sub>	D <sub>1</sub>	g	a	t <sub>1</sub>	f	d	Bolts	
A	B									Q'ty	Size
25	1	165	80	125	70	34.0	38.1	1	4	4	M16
32	1 1/4	165	80	135	80	42.7	38.1	2	4	4	M16
40	1 1/2	171	83	140	85	48.6	38.1	2	4	4	M16
50	2	171	83	155	100	60.5	38.1	2	4	8	M16
65	2 1/2	178	86	175	120	76.3	38.1	2	4	8	M16
80	3	178	86	200	135	89.1	38.1	2	6	8	M20
100	4	186	90	225	160	114.3	38.1	2	6	8	M20
125	5	196	95	270	195	139.8	38.1	2	8	8	M22
150	6	206	100	305	230	165.2	38.1	2	8	12	M22
200	8	227	110	350	275	216.3	38.1	2	12	12	M22
250	10	237	115	430	345	267.4	38.1	2	12	12	M24
300	12	247	120	480	395	318.5	38.1	3	12	16	M24
350	14	271	132	540	440	355.6	40	3	12	16	M30
400	16	283	138	605	495	406.4	46	3	12	16	M30

For JIS 30K flange

Size		L	W <sub>1</sub>	D <sub>1</sub>	g	a	t <sub>1</sub>	f	d	Bolts	
A	B									Q'ty	Size
25	1	171	83	130	70	34.4	38.1	1	4	4	M16
32	1 1/4	173	84	140	80	43.1	38.1	2	4	4	M16
40	1 1/2	177	86	160	90	49.1	38.1	2	4	4	M20
50	2	177	86	165	105	61.0	38.1	2	4	8	M16
65	2 1/2	186	90	200	130	76.9	38.1	2	4	8	M20
80	3	186	90	210	140	89.7	38.1	2	6	8	M20
100	4	190	92	240	160	115.1	38.1	2	6	8	M22
125	5	210	102	275	195	140.7	38.1	2	8	8	M22
150	6	210	102	325	235	166.2	38.1	2	8	8	M24
200	8	231	112	370	280	217.5	42	2	12	12	M24
250	10	243	118	450	345	268.7	48	2	12	12	M30
300	12	267	130	515	405	320.0	52	3	12	16	M30
350	14	295	144	560	450	357.2	54	3	12	16	M30
400	16	307	150	630	510	408.3	60	3	12	16	M36

For JIS 40K flange

Size		L	W <sub>1</sub>	D <sub>1</sub>	g	a	t <sub>1</sub>	f	d	Bolts	
A	B									Q'ty	Size
25	1	171	83	130	70	34.4	38.1	1	4	4	M16
32	1 1/4	173	84	140	80	43.1	38.1	2	4	4	M16
40	1 1/2	177	86	160	90	49.1	38.1	2	4	4	M20
50	2	177	86	165	105	61.0	38.1	2	4	8	M16
65	2 1/2	186	90	200	130	76.9	38.1	2	4	8	M20
80	3	186	90	210	140	89.7	38.1	2	6	8	M20
100	4	190	92	250	165	115.1	38.1	2	6	8	M22
125	5	214	104	300	200	140.7	40	2	8	8	M24
150	6	222	108	355	240	166.6	44	2	8	12	M30
200	8	247	120	405	290	217.5	50	2	12	12	M30
250	10	259	126	475	355	268.7	56	2	12	12	M30
300	12	283	138	540	410	320.0	60	3	12	16	M36
350	14	315	154	585	455	357.2	64	3	12	16	M36
400	16	327	160	645	515	409.3	70	3	12	16	M36

For JIS 10K, 20K, 30K, 40K orifice plates

Size		A				H	W	T	t
A	B	10K	20K	30K	40K				
25	1	74	74	79	79	95	25	2	2
32	1 1/4	84	84	89	89	95	25	2	2
40	1 1/2	89	89	100	100	95	25	2	2
50	2	104	104	114	114	95	25	2	2
65	2 1/2	124	124	140	140	95	32	3	2
80	3	134	140	150	150	95	32	3	2
100	4	159	165	173	183	105	38	3	2
125	5	190	203	208	226	105	38	3	2
150	6	220	238	251	265	105	38	3	2
200	8	270	283	296	315	105	38	4	2
250	10	333	356	360	380	120	44	4	2
300	12	378	406	420	434	120	44	4	3
350	14	423	450	465	479	120	44	4	3
400	16	486	510	524	534	120	44	4	3

## ORDERING INFORMATION

1. Code symbols
2. Kind, composition and density of fluid
3. Temperature, pressure, relative humidity and viscosity  
(heat insulation index for gas) of fluid
4. Flow rate (maximum, normal, minimum)
5. Instrument scale
6. Inside diameter (measured value) and material of piping
7. Type and maximum differential pressure (for exciting instrument)  
of transmitter to be connected
8. Permanent pressure loss and other restricted items
9. Calculation standard can be calculated for JIS Z 8762-1969.  
(When ordering, please specify the above items in the specification  
sheet.)

⚠ Caution on Safety

\*Before using this product, be sure to read its instruction manual in advance.

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