



ORIFICE FLANGE 681

SPECIFICATION

NOMINAL PIPE SIZE : 40mm(1-1/2")~350mm(14")
FLANGE RATING : ANSI 150, 300, or 600lb RF
 JIS 10, 20, 30 kg/cm² RF
FLANGE MATERIAL : 304S.S., 316S.S., SF45, Carbon steel etc.
PIPE CONNECTION : Slip-on welding for ANSI 150lb or JIS 10K
 Weld-neck type for ANSI 150lb, 300lb, 600lb or JIS 10K, 20K, 30K
TAPS CONNECTION : 1/2"NPT (F) or pipe adapter welded
MATERIAL OF BOLTS / NUTS : 304S.S. or special specified
GASKET MATERIAL : Non-asbestos sheet; 1.5mm^t or special specified

MODEL SELECTION

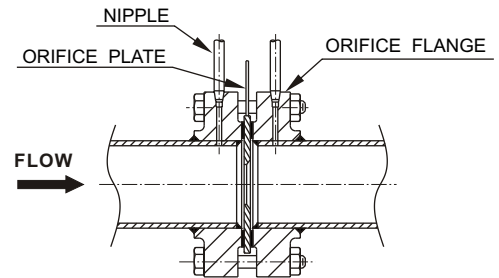
ITEM	CODE	SPECIFICATION
MODEL	681A	Slip-on welding type orifice flange
	681B	Weld-neck type orifice flange
	681C	To be specified
CONNECTION OF LEAD PIPE	-0	1/2"NPT (F)
	-1	With Nipple 1/2"NPT
	-2	With Nipple for welding
	-3	To be specified
FLANGE MATERIAL	0	304S.S.
	1	316S.S.
	2	To be specified
MATERIAL OF BOLTS / NUTS	0	Not required
	1	SCM3 / S45C
	2	304S.S.
	3	316S.S.
	4	To be specified
GASKET MATERIAL	-A	Not required
	-B	Non - Asbestos sheet
	-C	Vortex gasket (Non - Asbestos)
	-D	To be specified
FLANGE CONNECTION	A	ANSI / JPI
	B	JIS
	C	DIN
	D	To be specified
PRESSURE RATING OF FLANGE	A	150lb / 10K / PN16
	B	300lb / 20K / PN25
	C	To be specified
OPTIONAL	A	Not required
	B	With epoxy / PU coating
	C	To be specified
PIPING SIZE (See Table 1)	-020	3/4" (20 mm)
	-500	20" (500 mm)
	-XXX	To be specified

FLANGE TAP SYSTEM

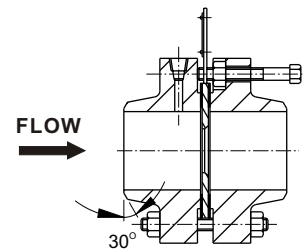
681 series Orifice Flange is used in low / medium pressure system for measuring the flow of liquid, gas, vapor or steam. Pipe sizes from 40~350mm are available. Orifice Flange is completed if it assemblies with orifice plate. Then, the differential pressure output, which will be sent to receiver, can be detected from H / L tap for measuring the flow.

DRAWING

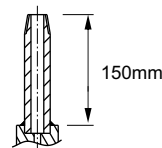
681A



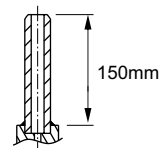
681B



681□-1



681□-2



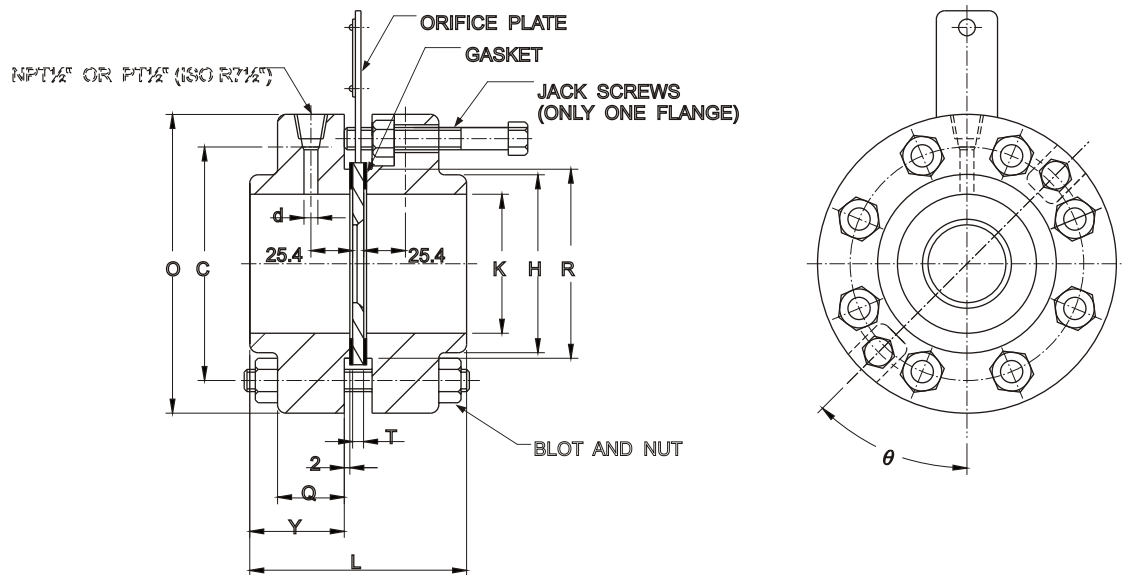
PIPING SIZE

Table 1

CODE	PIPING SIZE	CODE	PIPING SIZE
- 040	1-1/2" (40 mm)	- 150	6" (150 mm)
- 050	2" (50 mm)	- 175	7" (175 mm)
- 065	2-1/2" (65 mm)	- 200	8" (200 mm)
- 080	3" (80 mm)	- 250	10" (250 mm)
- 100	4" (100 mm)	- 300	12" (300 mm)
- 125	5" (125 mm)	- 350	14" (350 mm)
- 400	16" (400 mm)	- 450	18" (450 mm)
- 500	20" (500 mm)	- ***	To be specified

DIMENSIONS FOR 681A

UNIT : (mm)



For ANSI 150lb RF FLANGE

(Unit : mm)

Nominal Pipe size (mm)	O.D. of Flange	Thickness of Flange	O.D. of Hub at Welding Point	O.D. of Pipe	ID of Flange	Length of each Hub	Diam. of Tap	Diam. of Raised Face	Diam. of Bolt Circle	Number of Bolt	Bolt Size	Position for Jack Screw	Total Length
	O	Q	H		K	Y	d	R	C	N		θ	L
40	127	40	64	48.6	49.1	46	6.5	73	98.5	4	1/2	72°	95+T
50	152	40	76	60.5	61.1	46	6.5	92	120.5	4	5/8	72°	95+T
65	178	40	92	76.3	77.1	46	6.5	105	139.5	4	5/8	72°	95+T
80	190	40	108	89.1	90	46	10	127	152.5	8	5/8	45°	95+T
90	216	40	120	101.6	102.6	46	10	140	178	8	5/8	45°	95+T
100	229	40	134	114.3	115.4	46	13	157	190.5	8	5/8	45°	95+T
125	254	40	160	139.8	141.2	46	13	186	216	8	3/4	45°	95+T
150	279	40	188	165.2	166.6	46	13	216	241.5	8	3/4	45°	95+T
200	343	40	236	216.3	218	46	13	270	298.5	12	3/4	30°	95+T
250	406	40	292	267.4	269.5	50	13	324	362	12	7/8	30°	103+T
300	483	40	346	318.5	321	52	13	381	432	16	7/8	22.5°	107+T
350	533	40	386	355.6	358.1	54	13	413	476	16	1	22.5°	111+T

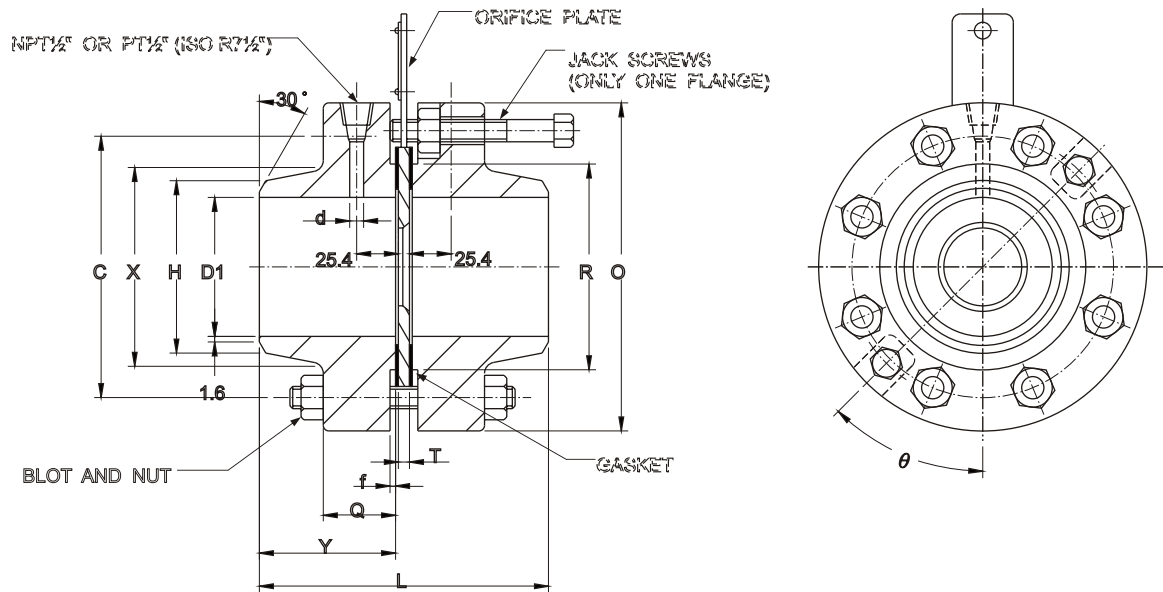
For JIS 10K RF FLANGE

(Unit : mm)

Nominal Pipe size (mm)	O.D. of Flange	Thickness of Flange	O.D. of Hub at Welding Point	O.D. of Pipe	ID of Flange	Length of each Hub	Diam. of Tap	Diam. of Raised Face	Diam. of Bolt Circle	Number of Bolt	Bolt Size	Position for Jack Screw	Total Length
	O	Q	H		K	Y	d	R	C	N		θ	L
40	140	40	64	48.6	49.1	46	6.5	85	105	4	M16	72°	95+T
50	155	40	76	60.5	61.1	46	6.5	100	120	4	M16	72°	95+T
65	175	40	92	76.3	77.1	46	6.5	120	140	4	M16	72°	95+T
80	185	40	108	89.1	90	46	10	130	150	8	M16	45°	95+T
90	195	40	120	101.6	102.6	46	10	140	160	8	M16	45°	95+T
100	210	40	134	114.3	115.4	46	13	155	175	8	M16	45°	95+T
125	250	40	160	139.8	141.2	46	13	185	210	8	M20	45°	95+T
150	280	40	188	165.2	166.6	46	13	215	240	8	M20	45°	95+T
200	330	40	236	216.3	218	46	13	265	290	12	M20	30°	95+T
250	400	40	292	267.4	269.5	50	13	325	355	12	M22	30°	103+T
300	445	40	346	318.5	321	52	13	370	400	16	M22	22.5°	107+T
350	490	40	386	355.6	358.1	54	13	415	445	16	M22	22.5°	111+T

DIMENSIONS FOR 681B

UNIT : (mm)



For JIS 20K RF FLANGE

(Unit : mm)

Nominal Pipe size (mm)	O.D. of Flange	Thickness of Flange	O.D. of Hub at Welding Point	Diam. of Hub	Length of each Hub	Diam. of R.F. of Flange	Height of R.F. of Flange	Diam. of Tap Holes	Diam. of Bolt Circle	Number of Bolt	Bolt Size	Position for Jack Screw	Total Length
	O	Q	H	X	Y	R	f	d	C	N		θ	L
40	140	40	48.6	66	68	85	2	6.5	105	4	M16	72°	139+T
50	155	40	60.5	80	70	100	2	6.5	120	8	M16	45°	143+T
65	175	40	76.3	104	75	120	2	6.5	140	8	M16	45°	153+T
80	200	40	89.1	117	77	135	2	10	160	8	M20	45°	157+T
90	210	40	101.6	130	76	145	2	10	170	8	M20	45°	155+T
100	225	40	114.3	142	78	160	2	13	185	8	M20	45°	159+T
125	270	40	139.8	172	86	195	2	13	225	8	M22	45°	175+T
150	305	40	165.2	202	99	230	2	13	260	12	M22	30°	201+T
200	350	40	216.3	252	98	275	2	13	305	12	M22	30°	199+T
250	430	40	267.4	312	109	345	2	13	380	12	M24	30°	221+T
300	480	40	318.5	364	115	395	3	13	430	16	M24	22.5°	233+T
350	540	40	355.6	408	126	440	3	13	480	16	M30	22.5°	255+T

For JIS 30K RF FLANGE

(Unit : mm)

Nominal Pipe size (mm)	O.D. of Flange	Thickness of Flange	O.D. of Hub at Welding Point	Diam. of Hub	Length of each Hub	Diam. of R.F. of Flange	Height of R.F. of Flange	Diam. of Tap Holes	Diam. of Bolt Circle	Number of Bolt	Bolt Size	Position for Jack Screw	Total Length
	O	Q	H	X	Y	R	f	d	C	N		θ	L
40	160	40	48.6	70	75	90	2	6.5	120	4	M20	72°	159+T
50	165	40	60.5	84	77	105	2	6.5	130	8	M16	45°	163+T
65	200	40	76.3	104	88	130	2	6.5	160	8	M20	45°	185+T
80	210	40	89.1	118	89	140	2	10	170	8	M20	45°	187+T
90	230	40	101.6	130	89	150	2	10	185	8	M22	45°	187+T
100	240	40	114.3	142	88	160	2	13	195	8	M22	45°	185+T
125	275	40	139.8	172	93	195	2	13	230	8	M22	45°	195+T
150	325	40	165.2	202	104	235	2	13	275	12	M24	30°	217+T
200	370	42	216.3	254	109	280	2	13	320	12	M24	30°	227+T
250	450	48	267.4	312	129	345	2	13	390	12	M30	30°	267+T
300	515	52	318.5	366	141	405	3	13	450	16	M30	22.5°	291+T
350	560	54	355.6	406	147	450	3	13	495	16	M30	22.5°	303+T

DIMENSIONS FOR 681B

UNIT : (mm)

For ANSI (or JPI) 150lb RF FLANGE

(Unit : mm)

Nominal Pipe size (inch)	O.D. of Flange O	Thickness of Flange Q	O.D. of Hub at Welding Point H	Diam. of Hub X	Length of each Hub Y	Diam. of R.F. of Flange R	Height of R.F. of Flange f	Diam. of Tap Holes d	Diam. of Bolt Circle C	Number of Bolt N	Bolt Size	Position for Jack Screw θ	Total Length L
1-1/2	127	40	48.6	65	83	73	1.6	6.5	98.5	4	1/2	72°	169+T
2	152	40	60.5	78	83	92	1.6	6.5	120.5	4	5/8	72°	169+T
2-1/2	178	40	76.3	90	86	105	1.6	6.5	139.5	4	5/8	72°	175+T
3	190	40	89.1	108	86	127	1.6	10	152.5	4	5/8	72°	175+T
3-1/2	216	40	101.6	122	86	140	1.6	10	178	8	5/8	45°	175+T
4	229	40	114.3	135	90	157	1.6	13	190.5	8	5/8	45°	183+T
5	254	40	139.8	164	90	186	1.6	13	216	8	3/4	45°	183+T
6	279	40	165.2	192	102	216	1.6	13	241.5	8	3/4	45°	207+T
8	343	40	216.3	246	111	270	1.6	13	298.5	8	3/4	45°	225+T
10	406	40	267.4	305	111	324	1.6	13	362	12	7/8	30°	225+T
12	483	40	318.5	365	121	381	1.6	13	432	12	7/8	30°	245+T
14	533	40	355.6	400	130	413	1.6	13	476	12	1	30°	263+T
16	597	40	406	457	130	470	1.6	13	546	16	1	22.5°	260+T
18	635	40	457	505	140	533	1.6	13	578	16	1 1/8	22.5°	280+T
20	698	42	508	559	144	584	1.6	13	635	20	1 1/8	18°	288+T

For ANSI (or JPI) 300lb RF FLANGE

(Unit : mm)

Nominal Pipe size (inch)	O.D. of Flange O	Thickness of Flange Q	O.D. of Hub at Welding Point H	Diam. of Hub X	Length of each Hub Y	Diam. of R.F. of Flange R	Height of R.F. of Flange f	Diam. of Tap Holes d	Diam. of Bolt Circle C	Number of Bolt N	Bolt Size	Position for Jack Screw θ	Total Length L
1-1/2	156	40	48.6	70	86	73	1.6	6.5	114.5	4	3/4	72°	175+T
2	165	40	60.5	84	86	92	1.6	6.5	127	8	5/8	45°	175+T
2-1/2	190	40	76.3	100	89	105	1.6	6.5	149	8	3/4	45°	181+T
3	210	40	89.1	117	89	127	1.6	10	168	8	3/4	45°	181+T
3-1/2	229	40	101.6	133	89	140	1.6	10	184	8	3/4	45°	181+T
4	254	40	114.3	146	92	157	1.6	13	200	8	3/4	45°	187+T
5	279	40	139.8	178	100	186	1.6	13	235	8	3/4	45°	203+T
6	318	40	165.2	206	100	216	1.6	13	270	12	3/4	30°	203+T
8	381	42	216.3	260	112	270	1.6	13	330	12	7/8	30°	227+T
10	444	48	267.4	321	118	324	1.6	13	387.5	16	1	22.5°	239+T
12	521	51	318.5	375	131	381	1.6	13	451	16	1-1/8	22.5°	265+T
14	584	54	355.6	425	143	413	1.6	13	514.5	20	1-1/8	18°	289+T

For ANSI (or JPI) 600lb RF FLANGE

(Unit : mm)

Nominal Pipe size (inch)	O.D. of Flange O	Thickness of Flange Q	O.D. of Hub at Welding Point H	Diam. of Hub X	Length of each Hub Y	Diam. of R.F. of Flange R	Height of R.F. of Flange f	Diam. of Tap Holes d	Diam. of Bolt Circle C	Number of Bolt N	Bolt Size	Position for Jack Screw θ	Total Length L
1-1/2	156	40	48.6	70	92	73	6.4	6.5	114.5	4	3/4	72°	193+T
2	165	40	60.5	84	92	92	6.4	6.5	127	8	5/8	45°	193+T
2-1/2	190	40	76.3	100	95	105	6.4	6.5	149	8	3/4	45°	199+T
3	210	40	89.1	117	95	127	6.4	10	168	8	3/4	45°	199+T
3-1/2	229	42	101.6	133	95	140	6.4	10	184	8	7/8	45°	199+T
4	273	45	114.3	152	108	157	6.4	13	216	8	7/8	45°	225+T
5	330	51	139.8	189	121	186	6.4	13	266.5	8	1	45°	251+T
6	356	55	165.2	222	124	216	6.4	13	292	12	1	30°	257+T
8	419	62	216.3	273	140	270	6.4	13	349	12	1-1/8	30°	289+T
10	508	70	267.4	343	159	324	6.4	13	432	16	1-1/4	22.5°	327+T
12	559	74	318.5	400	162	381	6.4	13	489	20	1-1/4	18°	333+T
14	603	77	355.6	432	171	413	6.4	13	527	20	1-3/8	18°	351+T

NOTE : Please contact our sales division for particular ordering specification excluding above described dimensions.

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The specifications are subject to change without prior notice.