

334A

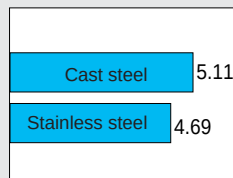
Valve nominal size

80 to 600mm

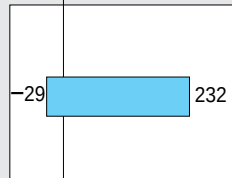
Max. working pressure MPa

Working temperature range °C

0



0



FS Fire safe certification to API607 4th Ed.



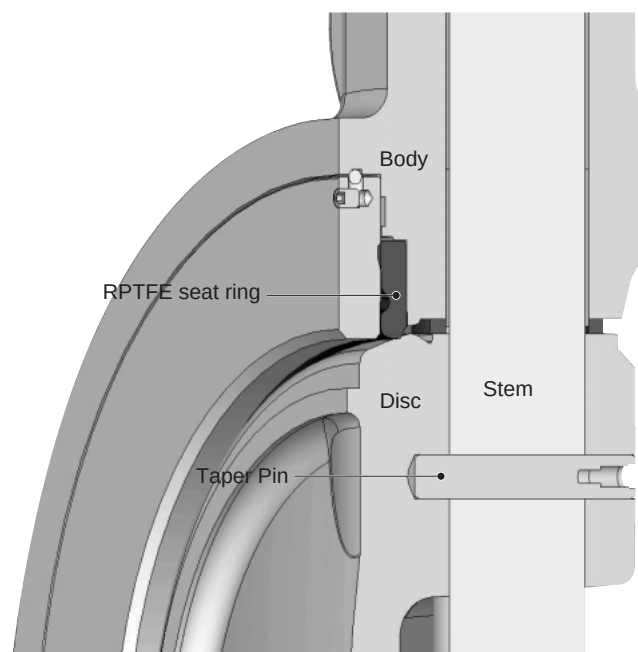
Double offset geometry

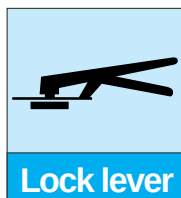
The axis of disc rotation is double offset to the seat ring. When the disc rotates, it unseats at a small turning angle by its cam effect. This prevents seat wear and provides reliable sealing performance over long periods.

Applications

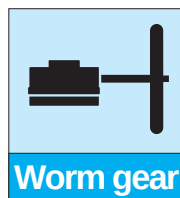
General hydrocarbon, chemical process, steam, and gas applications.

RPTFE as standard

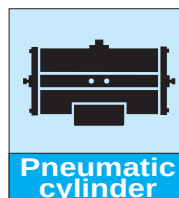




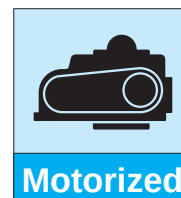
Lock lever



Worm gear



Pneumatic cylinder



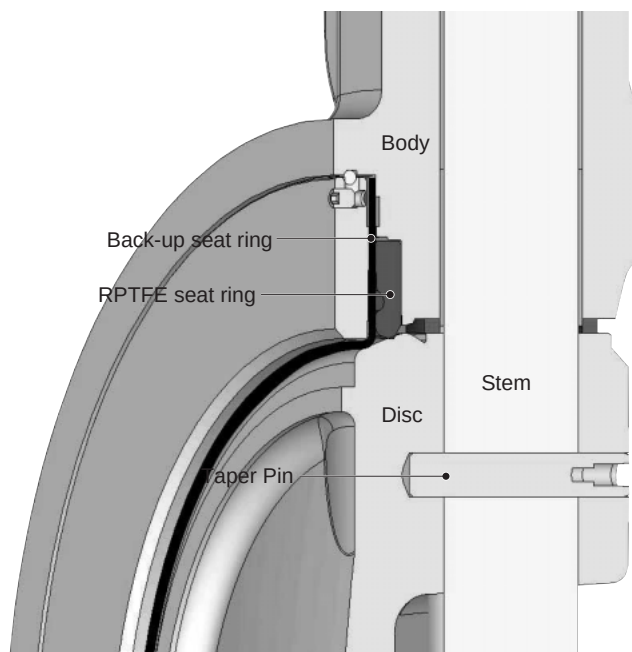
Motorized

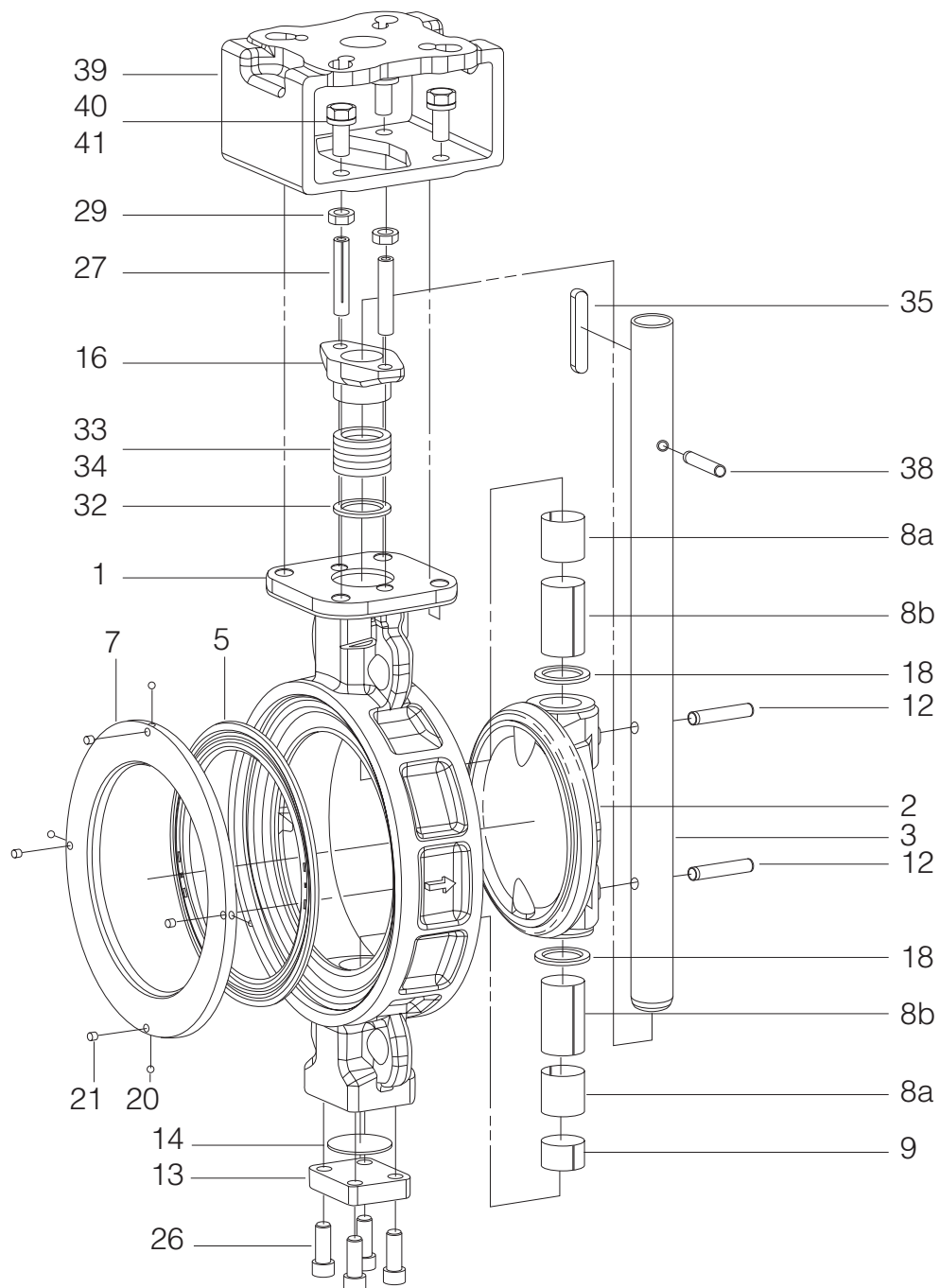
334A Standard specifications

Body Style		Wafer, Lugged, Double flanged**	
Valve nominal size		80, 100, 150, 200, 250, 300, 350, 400, 450, 500, 600mm	
Applicable flange standard		ASME B 16.5/JPI(API) class 150, 300, JIS10/16/20/30K, BS4504 PN10/16/25/40, DIN NP10/16/25/40	
Face-to-face dimensions		API609 Category B, Class 150/300	
Seat leakage		ISO 5208 RATE A (Zero leakage), API598, JPI 7S-39	
Flow direction		i-direction (Recommended flow direction : Pressrue to shaft side)	
Test pressure	Body Hydrostatic test	1.5 times of rating pressure	
	Seat leakag	7 bar (Air) or 110% of rating pressure (Hydrostatic)	
temperature range		-29 to 232 degrees C	
Standard materials	Body	A216 WCB	A351 CF8M
	Disc	A351 CF8M	
	Stem	SUS420J2	630SS+H1150
	Seat ring	RPTFE	
	Gland packing	Exfoliated graphite	

* A double-flange type can also be ordered.

334A Fire safe seat (Option)





334A Bare shaft parts list

■334A Bare shaft parts list-150Lb

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Stem	1	
5	Seat ring	1	
7	Seat ring retainer	1	
8a	Bearing a	0	600mm
		1	300mm
		2	80mm to 150mm, 500mm
		3	200mm
		4	250mm, 350mm
		6	400mm, 450mm
8b	Bearing b	0	400mm, 450mm
		1	80mm, 100mm, 200mm, 250mm, 350mm
		2	150mm, 500mm
		3	300mm
		4	600mm
9	Bearing spacer	1	
12	Taper pin	2	80mm to 300mm
		3	350mm to 600mm
13	Bottom cover	1	
14	Bottom gasket	1	
16	Gland plate spigot	1	
18	Space ring	2	
20	Ball	2	80mm, 100mm
		4	150mm to 600mm
21	Set screw	2	80mm, 100mm
		4	150mm to 600mm
26	Hexagon hole bolt	4	
27	Gland bolt	2	
29	Hexagon nut	2	
32	Packing retainer	1	
33	Gland packing a	3	
34	Gland packing b	2	
35	Key	0	80mm to 150mm
		1	200mm to 600mm
38	Spring pin	1	
39	Column	1	
40	Hexagon bolt	4	
41	Spring washer	4	

■334A Bare shaft parts list-300Lb

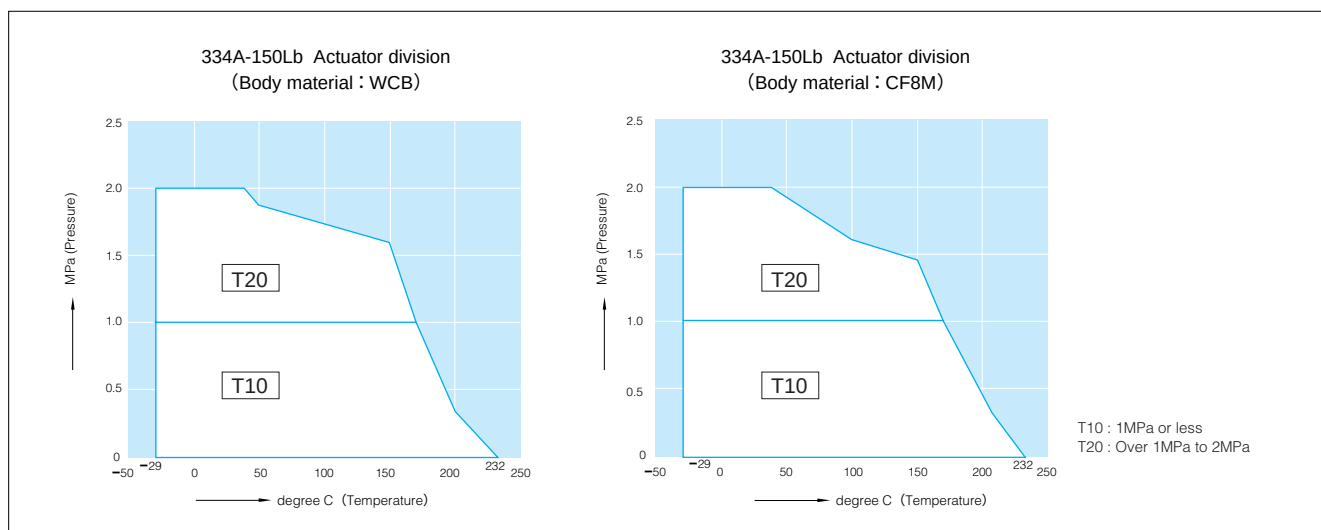
No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Stem	1	
5	Seat ring	1	
7	Seat ring retainer	1	
8a	Bearing a	2	
8b	Bearing b	1	80mm to 150mm
		2	200mm to 600mm
9	Bearing spacer	1	
12	Taper pin	2	80mm to 200mm
		3	250mm to 600mm
13	Bottom cover	1	
14	Bottom gasket	1	
16	Gland plate spigot	1	
18	Space ring	2	
20	Ball	2	80mm, 100mm
		4	150mm to 600mm
21	Set screw	2	80mm, 100mm
		4	150mm to 600mm
26	Hexagon hole bolt	4	
27	Gland bolt	2	
29	Hexagon nut	2	
32	Packing retainer	1	
33	Gland packing a	3	
34	Gland packing b	2	
35	Key	0	80mm to 150mm
		1	200mm to 600mm
38	Spring pin	1	
39	Column	1	
40	Hexagon bolt	4	
41	Spring washer	4	

334A Actuator selection chart

■334A-150Lb

Type	Model	Category	Size (mm / inch)																		
			80	100	150	200	250	300	350	400	450	500	600								
			3	4	6	8	10	12	14	16	18	20	24								
Lock lever	1T	T10	1T-2																		
		T20																			
Worm gear	2U,2K	T10	2U-2		2U-3	2U-4	2K (SBWG01)	2K (SBWG02)	2K (SBWG03)	2K (SBWG03-1S)	2K (SBWG04-1S)	2K (SBWG05-1S)									
		T20																			
Double-action pneumatic	3E,3A	T10	K170		K370	K700	TGA-125	TGA-125	TGA-140	TGA-140	TGA-160	TGA-160	TGA-180	TGA-180	TGA-200	TGA-200	TGA-220	TGA-220	TGA-220	TGA-220	TGA-250
		T20																			
Single-action pneumatic	3G,3F 3U,3K	T10	K370S	K700S	TG-12S	TG-12S	TG-14S	TG-14S	TG-20S	TG-20S	TG-20S	TG-20S	TG-20S	TG-20S	TG-20S	TG-20S	TG-20S	TG-20S	TG-20S	TG-20S	TG-20S
		T20																			
Single phase moter	4I	T10	4I - 1	4I - 2	4I - 2.5	4I - 3	4I - 3	4I - 4	4I - 4	4I - 4	4I - 4	4I - 4	4I - 4	4I - 4	4I - 4	4I - 4	4I - 4	4I - 4	4I - 4	4I - 4	4I - 4
		T20																			
Three phase moter	4J,4L	T10	SRJ-010	SRJ-020	SRJ-020	SRJ-060	SRJ-1	SRJ-1	SRJ-2	SRJ-2	SRJ-2	SRJ-2	SRJ-2	SRJ-2	SRJ-2	SRJ-2	SRJ-2	SRJ-2	SRJ-2	SRJ-2	SRJ-2
		T20																			

334A Pressure -Tempreture

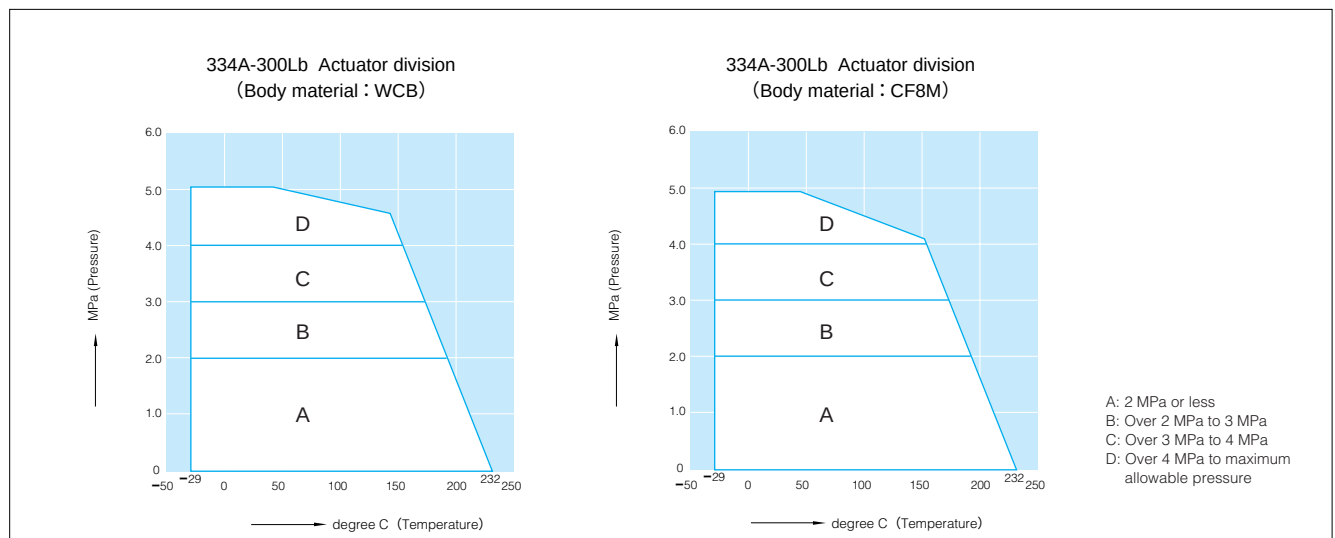


334A Actuator selection chart

334A-300Lb

Type	Model	Category	Size (mm /inch)																							
			80	100	150	200	250	300	350	400	450	500	600													
			3	4	6	8	10	12	14	16	18	20	24													
Lock lever	1T	A	1T-2																							
		B																								
		C																								
		D																								
Worm gear	2U,2K	A	2U-2		2U-3	2U-4	2K (SBWG01)	2K (SBWG02)	2K (SBWG03)	2K (SBWG03-1S)	2K (SBWG04-1S)		2K (SBWG05-1S)													
		B																								
		C																								
		D																								
Double-action pneumatic	3E,3A	A	K170		K370	K700	TGA-125	TGA-125		TGA-140		TGA-160	TGA-180	TGA-200												
		B																								
		C																								
		D																								
Single-action pneumatic	3G,3F 3U,3K	A	K370S	K700S	TG-12S	TG-14S	TG-20S																			
		B																								
		C																								
		D																								
Single phase moter	4I	A	4I - 1		4I - 2	4I - 2.5		4I - 3	4I - 4																	
		B																								
		C																								
		D																								
Three phase moter	4J,4L	A	SRJ-010		SRJ-020		SRJ-020		SRJ-060		SRJ-1		SRJ-1		SRJ-2		MGH4+LTKD-02-0.75Kw		MGH4+LTKD-02-0.75Kw		MGH5+LTKD-02-0.75Kw		MGH5+LTKD-05-0.75Kw		MGH5+LTKD-05-1.5Kw	
		B																								
		C																								
		D																								

334A Pressure rating

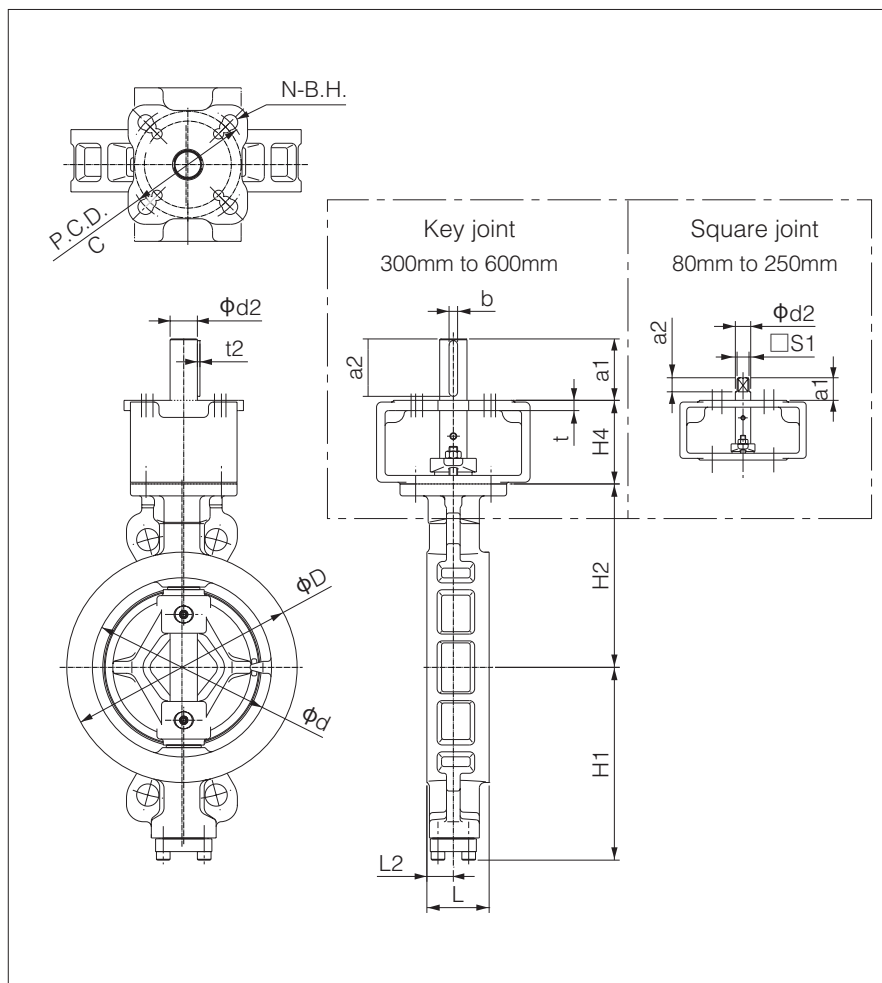


334A Bare shaft dimension

■150Lb

Nominal size		Dimension (mm)														Top Flange type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	L ₂	H ₁	H ₂	a ₁	a ₂	$\square S_1$	ϕd_2	b	t ₂	H ₄	t		
80	3	86.5	128	48	20	118	127	26.5	16.5	14	18	—	—	70	8	F07,F10	8
100	4	112	158	54	22	147	149	26.5	20	16	20	—	—	70	8	F07,F10	10.7
150	6	160	216	57	23	186	190	26.5	20	18	22	—	—	98	12	F10,F12,F14	18.9
200	8	210	270	64	26.5	201	209.2	37	30	22	26	—	—	98	12	F10,F12,F14	25.6
250	10	260	324	71	29	254	253	37	34	24	30	—	—	98	12	F10,F12,F14	39
300	12	310	382	81	36	283	280.5	72	67	—	32	10	3	98	12	F10,F12,F14	49
350	14	347	415	92	37	313	301	72	67	—	37	10	3	125	16	F14,F16	73
400	16	402	473	102	40	348	350	86	81	—	42	12	3	125	16	F14,F16	101
450	18	446	534	114	46	394	383.6	86	81	—	45	14	3.5	125	16	F14,F16	145
500	20	497	586	127	55	421	409.2	86	81	—	52	16	4	125	16	F14,F16	179
600	24	600	694	154	70	481	473	116	111	—	60	18	4	150	20	Special A, Special B	304

■150Lb 80mm to 600mm



■Top flange type dimension list

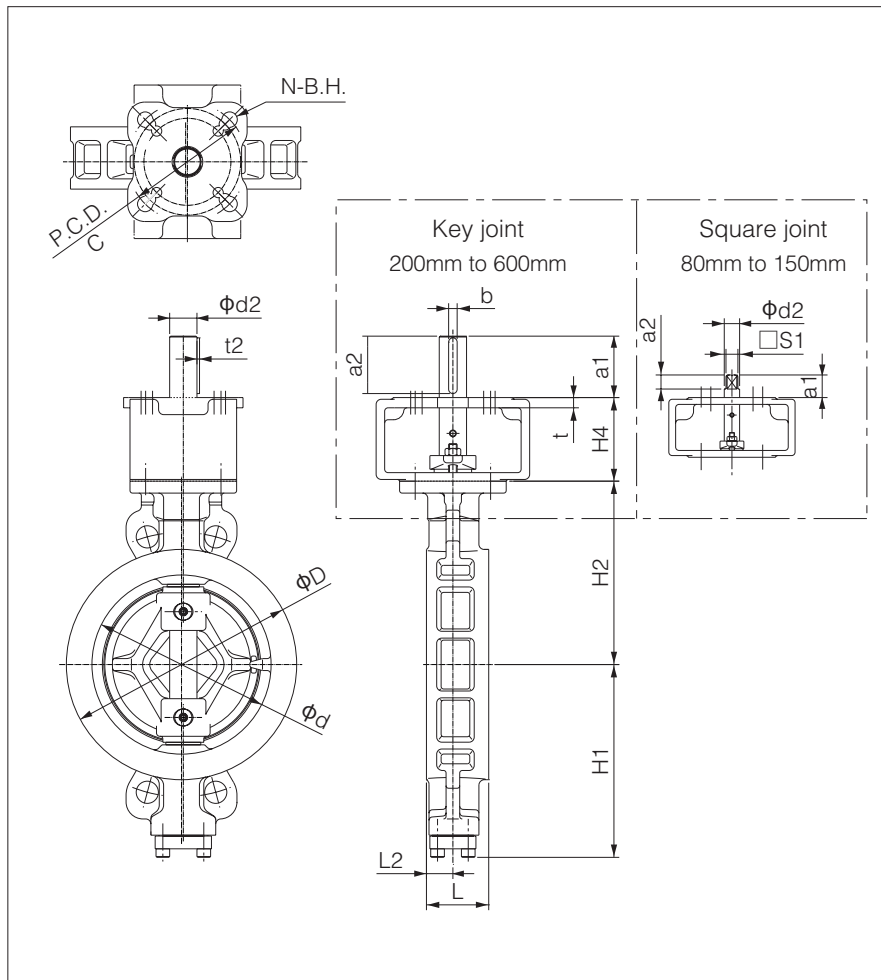
Flange type	P.C.D. C	N	B.H.
F07	70	4	10
F10	102	4	12
F12	125	4	14
F14	140	4	18
F16	165	4	22
F25	254	8	18
Special A	220	4	22
Special B	254	8	22

334A Bare shaft dimension

300Lb

Nominal size		Dimension (mm)														Approx. Mass (kg)	
mm	inch	Φd	ΦD	L	L ₂	H ₁	H ₂	a ₁	a ₂	□S ₁	Φd ₂	b	t ₂	H ₄	t		Top Flange type
80	3	86.5	128	48	20	118	127	26.5	16.5	14	18	—	—	70	8	F07,F10	8
100	4	112	158	54	22	147	149	26.5	20	16	20	—	—	70	8	F07,F10	10.7
150	6	160	216	59	24	192	187	37	30	22	26	—	—	98	12	F10,F12,F14	21.4
200	8	210	270	73	31	226	215	72	67	—	32	10	3	98	12	F10,F12,F14	32
250	10	260	326	83	36	260	253	72	67	—	37	10	3	125	16	F14,F16	60
300	12	310	385	92	42	292	294.5	86	81	—	42	12	3	125	16	F14,F16	83
350	14	347	420	117	52	338	326	86	81	—	45	14	3.5	125	16	F14,F16	113
400	16	402	476	133	61.5	376	364	86	81	—	52	16	4	125	16	F14,F16	157
450	18	446	536	149	70	402	394.5	116	111	—	60	18	4	150	20	F25, Special A	231
500	20	497	590	159	75	431	426.5	116	111	—	65	18	4	150	20	F25, Special A	283
600	24	600	701	181	84	504	496	136	131	—	70	20	4.5	150	20	Special A, Special B	433

300Lb 80mm to 600mm



Top flange type dimension list

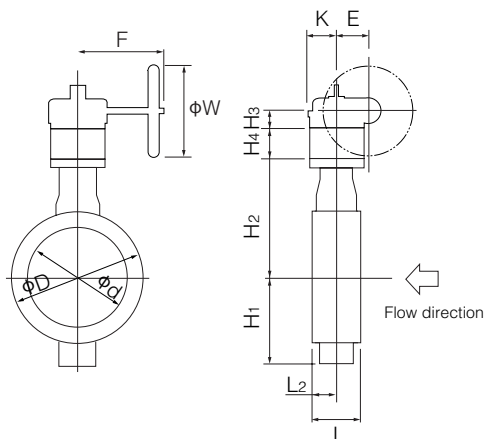
Flange type	P.C.D. C	N	B.H.
F07	70	4	10
F10	102	4	12
F12	125	4	14
F14	140	4	18
F16	165	4	22
F25	254	8	18
Special A	220	4	22
Special B	254	8	22

Worm gear type-150Lb 334A-2U (80 to 300mm) / 334A-2K (350 to 600mm)

150Lb

Nominal size		Dimension (mm)												Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	L ₂	H ₁	H ₂	H ₃	H ₄	E	K	F	ϕW		
80	3	86.5	128	48	20	118	127	34.5	70	44	74	173.5	160	2U-2	12.5
100	4	112	158	54	22	147	149	34.5	70	44	74	173.5	160	2U-2	15
150	6	160	216	57	23	186	190	41.5	98	67	90	198	200	2U-3	27
200	8	210	270	64	26.5	201	209.2	41.5	98	67	90	198	200	2U-3	34
250	10	260	324	71	29	254	253	48	98	87.5	90	222.5	280	2U-4	55
300	12	310	382	81	36	283	280.5	48	98	87.5	90	222.5	280	2U-4	65
350	14	347	415	92	37	313	301	52	125	75	113	252	370	SBWG-01	79
400	16	402	473	102	40	348	350	63	125	91.5	113	310	450	SBWG-02	123
450	18	446	534	114	46	394	383.6	63	125	113	113	343	550	SBWG-03	173
500	20	497	586	127	55	421	409.2	63	125	113	113	343	550	SBWG-03	207
600	24	600	694	154	70	481	473	85	150	32.7	200	422	710	SBWG-04-1S	363

334A-2U/2K



ウォームギヤ (2U/2K) 取付け方向

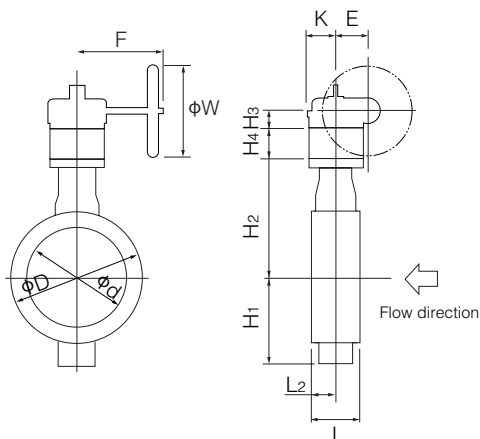
リテーナ側 弁棒側 2UA / 2KA	リテーナ側 弁棒側 2UB / 2KB	リテーナ側 弁棒側 2UC / 2KC	リテーナ側 弁棒側 2UD / 2KD
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Worm gear type-300Lb 334A-2U (80 to 200mm) / 334A-2K (250 to 600mm)

300Lb

Nominal size		Dimension (mm)												Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	L ₂	H ₁	H ₂	H ₃	H ₄	E	K	F	ϕW		
80	3	86.5	128	48	20	118	127	34.5	70	44	74	173.5	160	2U-2	12.5
100	4	112	158	54	22	147	149	34.5	70	44	74	173.5	160	2U-2	15
150	6	160	216	59	24	192	187	41.5	98	67	90	198	200	2U-3	29
200	8	210	270	73	31	226	215	48	98	87.5	90	222.5	280	2U-4	48
250	10	260	326	83	36	260	253	52	125	75	113	252	370	SBWG-01	72
300	12	310	385	92	42	292	294.5	63	125	91.5	113	310	450	SBWG-02	104
350	14	347	420	117	52	338	326	63	125	113	113	343	550	SBWG-03	141
400	16	402	476	133	61.5	376	364	63	125	31.5	113	363	550	SBWG-03-1S	190
450	18	446	536	149	70	402	394.5	85	150	32.7	200	422	710	SBWG-04-1S	306
500	20	497	590	159	75	431	426.5	85	150	32.7	200	422	710	SBWG-04-1S	358
600	24	600	701	181	84	504	496	87	150	72.7	200	476	710	SBWG-05-1S	531

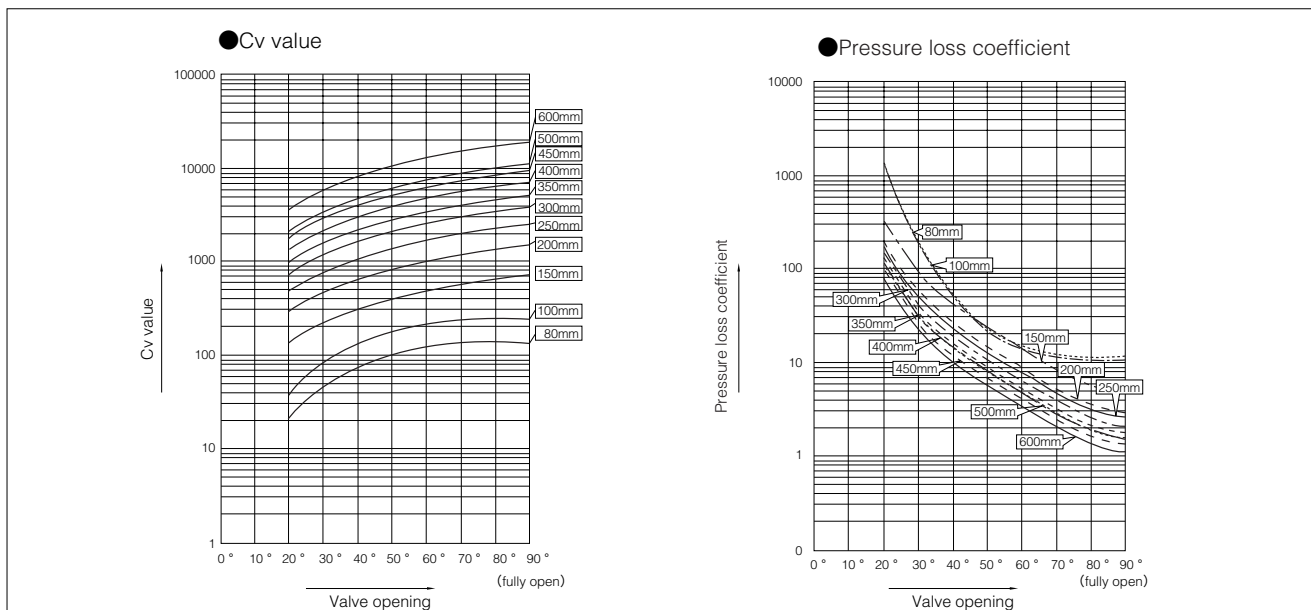
334A-2U/2K



2U/2K Installation direction

Retainer side Stem side 2UA/2KA	Retainer side Stem side 2UB/2KB	Retainer side Stem side 2UC/2KC	Retainer side Stem side 2UD/2KD
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334A-150Lb Cv value and pressure loss coefficient



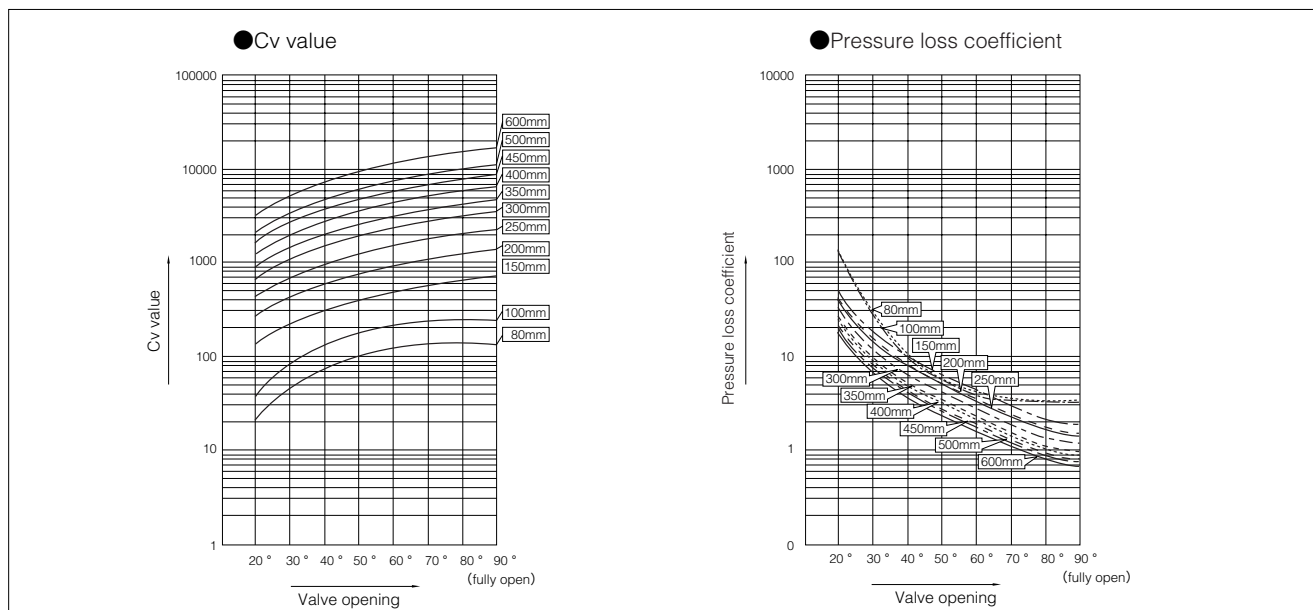
334A -150Lb Cv value

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
80	3	22	47	77	104	124	134	135	136
100	4	38	83	135	184	219	236	238	240
150	6	140	231	310	385	471	573	677	729
200	8	295	488	655	814	995	1211	1430	1540
250	10	479	792	1063	1321	1615	1966	2321	2500
300	12	747	1236	1659	2061	2519	3066	3621	3900
350	14	1002	1657	2225	2765	3378	4112	4856	5230
400	16	1379	2281	3063	3806	4651	5661	6685	7200
450	18	1835	3035	4075	5064	6188	7533	8895	9580
500	20	2146	3549	4764	5920	7235	8806	10399	11200
600	24	3583	5925	7955	9885	12080	14703	17362	18700

334A -150Lb Pressure loss coefficient

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
80	3	171.94	36.33	13.53	7.29	5.15	4.44	4.36	4.30
100	4	162.53	34.34	12.78	6.90	4.87	4.20	4.12	4.07
150	6	56.98	20.83	11.56	7.49	5.01	3.38	2.43	2.09
200	8	39.21	14.34	7.95	5.15	3.45	2.33	1.67	1.44
250	10	35.71	13.06	7.24	4.69	3.14	2.12	1.52	1.31
300	12	30.16	11.03	6.12	3.96	2.65	1.79	1.28	1.11
350	14	26.31	9.62	5.34	3.46	2.31	1.56	1.12	0.97
400	16	23.67	8.66	4.80	3.11	2.08	1.41	1.01	0.87
450	18	21.41	7.83	4.34	2.81	1.88	1.27	0.91	0.79
500	20	24.20	8.85	4.91	3.18	2.13	1.44	1.03	0.89
600	24	18.16	6.64	3.68	2.39	1.60	1.08	0.77	0.67

334A-300Lb Cv value and pressure loss coefficient



334A -300Lb Cv value

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
80	3	22	47	77	104	124	134	135	136
100	4	38	83	135	184	219	236	238	240
150	6	139	230	309	384	470	572	675	727
200	8	270	446	599	744	909	1106	1306	1407
250	10	436	720	967	1202	1469	1787	2111	2273
300	12	677	1120	1503	1868	2283	2778	3281	3533
350	14	909	1503	2018	2508	3065	3730	4405	4744
400	16	1249	2065	2773	3445	4210	5125	6052	6518
450	18	1664	2751	3694	4590	5609	6828	8062	8683
500	20	2122	3510	4712	5855	7155	8710	10285	11077
600	24	3245	5366	7205	8953	10941	13317	15725	16937

334A -300Lb Pressure loss coefficient

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
80	3	136.34	28.81	10.73	5.78	4.08	3.52	3.46	3.41
100	4	132.53	28.00	10.43	5.62	3.97	3.43	3.36	3.31
150	6	50.60	18.50	10.27	6.65	4.45	3.00	2.15	1.86
200	8	41.42	15.14	8.40	5.44	3.64	2.46	1.76	1.52
250	10	39.20	14.33	7.95	5.15	3.45	2.33	1.67	1.44
300	12	32.47	11.87	6.59	4.27	2.86	1.93	1.38	1.19
350	14	26.30	9.62	5.33	3.45	2.31	1.56	1.12	0.97
400	16	23.93	8.75	4.86	3.14	2.11	1.42	1.02	0.88
450	18	21.72	7.94	4.41	2.85	1.91	1.29	0.92	0.80
500	20	20.45	7.48	4.15	2.69	1.80	1.21	0.87	0.75
600	24	18.27	6.68	3.71	2.40	1.61	1.08	0.78	0.67

334A Applicable flange standard table

150Lb Wafer type

Nominal size		ASME/JPI 50Lb	JIS 10K	JIS 16/20K	BS4504(DIN) PN 10	BS4504(DIN) PN 16
mm	inch					
80	3	○※1	D※2	D※2	D※2	D※2
100	4	D※2	D※2	D※2	D※2	D※2
150	6	D※2	D※2	D※2	D※2	D※2
200	8	D※2	D※2	D※2	D※2	D※2
250	10	D※2	D※2	D※2	D※2	D※2
300	12	D※2	D※2	D※2	D※2	D※2
350	14	D※2	D※2	D※2	D※2	D※2
400	16	D※2	D※2	D※2	D※2	D※2
450	18	T	T	T	T	T
500	20	T	T	T	T	T
600	24	T	T	T	T	T

※1 : Can be used without flange drilling.

※2 : There are 2 upper drilling holes for 50mm and 80mm to 250mm types, and a total of 4 drilling holes, 2 upper and 2 lower, for 300mm to 400mm types.

D: With flange drilling

T: With flange tapping

○: Can be used without flange drilling.

150Lb Lugged type

Nominal size		ASME/JPI 150Lb	JIS 10K	JIS 16/20K	BS4504(DIN) PN 10	BS4504(DIN) PN 16
mm	inch					
80	3	T	T※1	T※1	T※1	T※1
100	4	T※1	T※1	T※1	T※1	T※1
150	6	T	T	T※1	T	T
200	8	T	X	T※1	T	T※1
250	10	T	T	T	T	T
300	12	T	X	T※1	T	T
350	14	T	X	X	X	X
400	16	T	T	T	T	T
450	18	T	X	X	X	X
500	20	T	T	T	T	T
600	24	T	X	T※1	T	T

※1 : Use 300Lb body. In this case, 300Lb body of 150mm or more in the nominal size must note that 150Lb body and the face-to-face dimension are different.

※ : Please consult with us regarding drilling holes for the lugged type.

T: With flange tapping

X: A special wooden form is required.

334A Applicable flange standard

■300Lb Wafer type

Nominal size		ASME/JPI 300Lb	JIS20K	JIS30K	BS4504(DIN) PN25	BS4504(DIN) PN40
mm	inch					
80	3	D※ ¹	D※ ¹	D※ ¹	D※ ¹	D※ ¹
100	4	D※ ¹	D※ ¹	D※ ¹	D※ ¹	D※ ¹
150	6	D※ ¹	D※ ¹	D※ ¹	D※ ¹	D※ ¹
200	8	D※ ¹	D※ ¹	D※ ¹	D※ ¹	D※ ¹
250	10	T	D※ ¹ /T	D※ ¹ /T	D※ ¹ /T	D※ ¹ (T)
300	12	T	T	T	T	T
350	14	T	T	T	T	T
400	16	T	T	T	T	T
450	18	T	T		T	T
500	20	T	T		T	T
600	24	T	T		T	T

※1: There are 2 upper drilling holes for 80 mm and 100 mm types, and a total of 4 drilling holes, 2 upper and 2 lower, for 150 mm, 200 mm and 250 mm types.

D/T: With drill hole or tapping.

D : With flange drilling

T : With flange tapping

■300Lb Lugged type

Nominal size		ASME/JPI 300Lb	JIS20K	JIS30K	BS4504(DIN) PN25	BS4504(DIN) PN40
mm	inch					
80	3	T	T	T	T	T
100	4	T	T	T	T	T
150	6	T	T	T	X	X
200	8	T	T	T	T	T
250	10	T	X	X	X	X
300	12	T	T	T	T	T
350	14	T	X	X	X	X
400	16	T	X	X	X	X
450	18	T	X		X	X
500	20	T	X		X	X
600	24	T	T		X	X

※ Please consult with us regarding drilling holes for the lugged type.

T : With flange tapping

X : A special wooden form is required.

334A-300Lb/150Lb Applicable pipe list in case

Nominal size		JIS (STPG)			ANSI B36.1		
mm	inch	Sch#40	Sch#60	Sch#80	Sch#40	Sch#60	Sch#80
80	3	○	○	○	○	X	○
100	4	○	○	○	○		○
150	6	○	○	○	○		○
200	8	○	○	○	○	○	○
250	10	○	○	○	○	○	○
300	12	○	○	○	○	○	○
350	14	○	○	○	○	○	○
400	16	○	○	○	○	○	○
450	18	○	○	○	○	○	○
500	20	○	○	○	○	○	○
600	24	○	○	○	○	○	○

※ Determine the appropriateness of using other pipes according to the minimum internal pipe diameter indicated in the following table.

334A Minimum internal diameters of piping

Nominal size		Minimum internal diameters of piping	
mm	inch	150Lb	300Lb
80	3	73	73
100	4	93	93
150	6	138	138
200	8	186	185
250	10	226	225
300	12	268	267
350	14	310	306
400	16	354	347
450	18	402	394
500	20	444	438
600	24	535	533

※ The gap between the disc edge and the pipe is smallest at the stem side flange face when all nominal sizes are fully open.
 ※ Because the above gap is calculated with the pipe considered as extending up to the flange end, the value will differ depending on the way the pipe and flange are welded.

334A Piping gasket

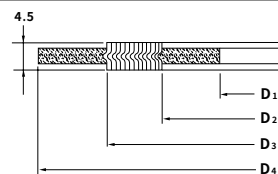
- * In case of sheet gasket Any standard can be used.
 * In case of spiral gasket
 For API, JPI, ANSI flange Any standard gaskets with inner/outer ring can be used.
 For JIS flange Use special spiral gasket shown below.

●334A Special spiral gasket flange size

呼 び 径		D ₁	D ₂	D ₃	D ₄								
					ASME JPI		JIS			BS4504			
					Class 150	Class 300	10K	16/20K	30K	PN10	PN16	PN25	PN40
80	3	89	97	120	136	148	134	140	150	144	144	144	144
100	4	115	124	145	174	180	159	165	172	164	164	170	170
150	6	166	178	205	222	250	220	237	249	220	220	226	226
200	8	217	227	256	279	307	270	282	294	275	275	286	293
250	10	268	278	315	339	362	332	354	360	330	331	343	355
300	12	319	339	370	409	422	377	404	418	380	386	403	420
350	14	256	369	403	450	485	422	450	463	440	446	460	477
400	16	406	420	457	514	539	484	508	524	491	498	517	549
450	18	458	472	517	549	596	539	573	—	541	558	567	574
500	20	508	523	567	606	654	594	628	—	596	620	627	631
600	24	610	626	672	717	774	700	734	—	698	737	734	750

※ Using 334A gasket for size 300, 350mm.
 Using TOMOE 300 series for other.

Remark : In case a minute leakage of gas (less than 100PPm) becomes a problem, please inquire of our business charge.



●Commercially available spiral gaskets (with inner and outer ring)

Nominal size		ASME/JPI	JIS			BS4504
mm	inch	150/300Lb	10K	16K/20K	30K	PN10, 16, 25, 140
80	3	○	○	○	×	○
100	4	○	×	○	×	○
150	6	○	×	×	×	×
200	8	○	×	×	×	×
250	10	○	×	×	×	×
300	12	○	×	○	×	×
350	14	○	×	×	×	○
400	16	○	×	×	○	○
450	18	○	×	×	—	○
500	20	○	×	×	—	○
600	24	○	×	×	—	○

○: Can be use, ×: Can not be used, —: No Standard

34A Applicable gasket standard table for piping

Nominal size		Joint sheet and RPTFE solid gasket (t≤2mm)				“ PTFE mold type gasket VALQUA or NICHIASU	
		ASME/JPI	JIS		BS4504	ASME/JPI	JIS
mm	inch	150/300Lb	10K, 16K, 20K	30K	PN10,16,25,40	150/300Lb	10K, 16K, 20K
80	3	○	○	○	○	○	○
100	4	○	○	○	○	○	○
125	5	○	○	○	○	○	○
150	6	○	○	○	○	○	○
200	8	○	○	○	○	○	○
250	10	○	○	○	○	○	○
300	12	○	○	○	○	○	○
350	14	○	○	○	○	○	○
400	16	○	○	○	○	○	○
450	18	○	○	—	○	○	○
500	20	○	○	—	○	○	○
600	24	○	○	—	○	○	○

*All standard joint seats and Teflon® cut gaskets can be used.

*Only VALQUA flawless gaskets (Part No.: 7030/7031/7035) and NICHIASU PTFE cushion gaskets (Part No.: 9010/9011) can be used as Teflon® mold gaskets.
(Products from other manufacturers cannot be used due to their dimensions.)

334A Piping bolts and nuts sizes

■150Lb Wafer type

Nominal size		ASME/JPI class150			JIS10K		
mm	inch	Setting bolts	Long bolts	Nuts	Setting bolts	Long bolts	Nuts
80	3	—	4- 5/8-11UNC×160	8	—	8-M16×145	16
100	4	—	8- 5/8-11UNC×160	16	—	8-M16×145	16
150	6	—	8- 3/4-10UNC×175	16	—	8-M20×170	16
200	8	—	8- 3/4-10UNC×185	16	—	12-M20×180	24
250	10	—	12- 7/8-9UNC×205	24	—	12-M22×190	24
300	12	—	12- 7/8-9UNC×220	24	—	16-M22×200	32
350	14	—	12- 1-8UNC ×245	24	—	16-M22×215	32
400	16	—	16- 1-8UNC ×260	32	—	16-M24×240	32
450	18	8-1 1/8-8UN×140 (24×16)	12-1 1/8-8UN ×285	32	8-M24×120 (21×14)	16-M24×250	40
500	20	8-1 1/8-8UN×145 (24×16)	16-1 1/8-8UN ×300	40	8-M24×120 (21×14)	16-M24×260	40
600	24	8-1 1/4-8UN×150 (24×16)	16-1 1/4-8UN ×345	40	8-M30×135 (24×16)	20-M30×310	48

Nominal size		JIS16K			JIS20K		
mm	inch	Setting bolts	Long bolts	Nuts	Setting bolts	Long bolts	Nuts
80	3	—	8-M20 ×160	16	—	8-M20 ×160	16
100	4	—	8-M20 ×170	16	—	8-M20 ×170	16
150	6	—	12-M22 ×175	24	—	12-M22 ×190	24
200	8	—	12-M22 ×190	24	—	12-M22 ×200	24
250	10	—	12-M24 ×210	24	—	12-M24 ×220	24
300	12	—	16-M24 ×220	32	—	16-M24 ×230	32
350	14	—	16-M30 (P3) ×250	32	—	16-M30 (P3) ×260	32
400	16	—	16-M30 (P3) ×275	32	—	16-M30 (P3) ×285	32
450	18	8-M30 (P3) ×140 (24×16)	16-M30 (P3) ×285	40	8-M30 (P3) ×150 (24×16)	16-M30 (P3) ×300	40
500	20	8-M30 (P3) ×145 (24×16)	16-M30 (P3) ×300	40	8-M30 (P3) ×155 (24×16)	16-M30 (P3) ×315	40
600	24	8-M36 (P3) ×160 (30×20)	20-M36 (P3) ×355	48	8-M36 (P3) ×170 (30×20)	20-M36 (P3) ×365	48

Nominal size		BS4504 PN10*			BS4504 PN16*		
mm	inch	Setting bolts	Long bolts	Nuts	Setting bolts	Long bolts	Nuts
80	3	—	8-M16×145	16	—	8-M16×145	16
100	4	—	8-M16×155	16	—	8-M16×155	16
150	6	—	8-M20×170	16	—	8-M20×170	16
200	8	—	8-M20×180	16	—	12-M20×180	24
250	10	—	12-M20×190	24	—	12-M24×200	24
300	12	—	12-M20×200	24	—	12-M24×220	24
350	14	—	16-M20×210	32	—	16-M24×230	32
400	16	—	16-M24×230	32	—	16-M27×250	32
450	18	8-M24×115 (21×14)	16-M24×250	40	8-M27×125 (22×14)	16-M27×265	40
500	20	8-M24×115 (21×14)	16-M24×260	40	8-M30×140 (24×16)	16-M30×285	40
600	24	8-M27×120 (22×14)	16-M27×310	40	8-M33×150 (27×18)	16-M33×330	40

334A Piping bolts and nuts sizes

150Lb Lugged type (All taps)

Nominal size		ASME/JPI class 150		JIS10K		JIS16K	
mm	inch	Setting bolts	Nuts	Setting bolts	Nuts	Setting bolts	Nuts
80	3	8- 5/8-11UNCX 85 (13X 8)	8	16-M16X75 (13X 8)	16	16-M20X 85 (17X11)	16
100	4	16- 5/8-11UNCX 85 (13X 8)	16	16-M16X75 (13X 8)	16	16-M20X 90 (17X11)	16
150	6	16- 3/4-10UNCX 95 (17X11)	16	16-M20X90 (17X11)	16	—	—
200	8	16- 3/4-10UNCX100 (17X11)	16	—	—	—	—
250	10	24- 7/8- 9UNCX115 (19X12)	24	24-M22X105 (19X12)	24	24-M24X115 (21X14)	24
300	12	24- 7/8- 9UNCX115 (19X12)	24	—	—	—	—
350	14	24- 1-8UNCX125 (21X14)	24	—	—	—	—
400	16	32- 1-8UNCX125 (21X14)	32	32-M24X115 (21X14)	32	32-M30 (P3) X140 (24X16)	32
450	18	32-1 1/8-8UN X140 (24X16)	32	—	—	—	—
500	20	40-1 1/8-8UN X145 (24X16)	40	40-M24X125 (21X14)	40	40-M30 (P3) X150 (24X16)	40
600	24	40-1 1/4-8UN X160 (24X16)	40	—	—	—	—

Nominal size		JIS20K		BS4504 PN10*		BS4504 PN16*	
mm	inch	Setting bolts	Nuts	Setting bolts	Nuts	Setting bolts	Nuts
80	3	16-M20X 85 (17X11)	16	16-M16X 75 (17X11)	16	16-M16X 75 (13X 8)	16
100	4	16-M20X 90 (17X11)	16	16-M16X 75 (17X11)	16	16-M16X 75 (13X 8)	16
150	6	—	—	16-M20X 90 (17X11)	16	16-M20X 90 (17X11)	16
200	8	—	—	16-M20X 95 (17X11)	16	—	—
250	10	24-M24X125 (21X14)	24	24-M20X105 (17X11)	24	24-M24X115 (21X14)	24
300	12	—	—	24-M20X105 (17X11)	24	24-M24X115 (21X14)	24
350	14	—	—	—	—	—	—
400	16	32-M30 (P3) X145 (24X16)	32	32-M24X115 (21X14)	32	32-M27X125 (22X14)	32
450	18	—	—	—	—	—	—
500	20	40-M30 (P3) X155 (24X16)	40	40-M24X120 (21X14)	40	40-M30X140 (24X16)	40
600	24	—	—	40-M27X125 (22X14)	40	40-M33X150 (27X18)	40

Note: Bolt/Nut material: SNB7/S45C

Please use a nut with a height that is 100% of the screw diameter.

The bolt length calculation is based on use of a 4.5 mm thick spiral gasket.

The flange thickness calculation is based on the standard steel flange thickness.

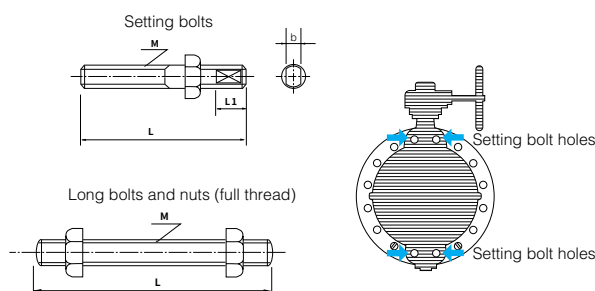
* Mark: The flange thickness calculation is based on the welding neck flange thickness.

Quantities shown are for one valve.

Examples

Setting bolts: 8 - M16 × 75 (13 × 8)

Long bolts: 4 - M16 × 145



334A Piping bolts and nuts sizes

■300Lb Wafer

Nominal size		ASME/JPI class300			JIS20K		
mm	inch	Setting bolts	Long bolts	Nuts	Setting bolts	Long bolts	Nuts
80	3	—	8- 3/4-10UNC×175	16	—	8-M20 ×160	16
100	4	—	8- 3/4-10UNC×185	16	—	8-M20 ×170	16
150	6	—	12- 3/4-10UNC×200	24	—	12-M22 ×190	24
200	8	—	12- 7/8-9UNC×235	24	—	12-M22 ×200	24
250	10	8-1-8UNC×125 (21×14)	12- 1-8UNC×260	32	8(0)-M24 ×110 (21×14)	8(12)-M24 ×230	24
300	12	8-1 1/8-8UN×135 (24×16)	12-1 1/8-8UN ×285	32	8-M24 ×120 (21×14)	12-M24 ×240	32
350	14	8-1 1/8-8UN×145 (24×16)	16-1 1/8-8UN ×315	40	8-M30 (P3) ×140 (24×16)	12-M30 (P3) ×285	32
400	16	8-1 1/4-8UN×155 (24×16)	16-1 1/4-8UN ×345	40	8-M30 (P3) ×140 (24×16)	12-M30 (P3) ×315	32
450	18	8-1 1/4-8UN×155 (24×16)	20-1 1/4-8UN ×365	48	8-M30 (P3) ×145 (24×16)	16-M30 (P3) ×335	40
500	20	8-1 1/4-8UN×160 (24×16)	20-1 1/4-8UN ×380	48	8-M30 (P3) ×150 (24×16)	16-M30 (P3) ×350	40
600	24	8-1 1/2-8UN×190 (30×20)	20-1 1/2-8UN ×430	48	8-M36 (P3) ×175 (30×20)	20-M36 (P3) ×385	48

Nominal size		JIS30K		
mm	inch	Setting bolts	Long bolts	Nuts
80	3	—	8-M20 ×170	16
100	4	—	8-M22 ×190	16
150	6	—	12-M24 ×210	24
200	8	—	12-M24 ×240	24
250	10	8 (0) -M30 (P3) ×135 (24×16)	8 (12) -M30 (P3) ×275	24
300	12	8-M30 (P3) ×145 (24×16)	12-M30 (P3) ×285	32
350	14	8-M30 (P3) ×155 (24×16)	12-M30 (P3) ×315	32
400	16	8-M36 (P3) ×170 (30×20)	12-M36 (P3) ×355	32

Nominal size		BS4504(DIN)NP25			BS4504(DIN)NP40		
mm	inch	Setting bolts	Long bolts	Nuts	Setting bolts	Long bolts	Nuts
80	3	—	8-M16×155	16	—	8-M16 ×155	16
100	4	—	8-M20×170	16	—	8-M20 ×170	16
150	6	—	8-M24×190	16	—	8- M24×190	16
200	8	—	12-M24×210	24	—	12-M27×230	24
250	10	8(0)-M27×115 (22×14)	8(12)-M27×230	24	8(0)-M30×125 (24×16)	8(12)-M30×250	24
300	12	8-M27×115 (22×14)	12-M27×250	32	8-M30×125 (24×16)	12-M30×270	32
350	14	8-M30×135 (24×16)	12-M30×285	32	8-M33×150 (27×18)	12-M33×310	32
400	16	8-M33×145 (27×18)	12-M33×310	32	8-M36×160 (30×20)	12-M36×340	32
450	18	8-M33×145 (27×18)	16-M33×330	40	8-M36×160 (30×20)	16-M36×355	40
500	20	8-M33×150 (27×18)	16-M33×350	40	8-M39×170 (32×21)	16-M39×375	40
600	24	8-M36×170 (30×20)	16-M36×380	40	8-M45×200 (36×24)	16-M45×430	40

334A Piping bolts and nuts sizes

■ 300 Lb Lugged (fully-tapped)

Nominal size		ASME/JPI class300		JIS20K		JIS30K	
mm	inch	Setting bolts	Nuts	Setting bolts	Nuts	Setting bolts	Nuts
80	3	16-3/4-10UNC×90 (17×11)	16	16-M20× 85 (17×11)	16	16-M20× 85 (17×11)	16
100	4	16-3/4-10UNC×90 (17×11)	16	16-M20× 85 (17×11)	16	16-M22×100 (19×12)	16
150	6	24-3/4-10UNC×95 (17×11)	24	24-M22×100 (19×12)	24	24-M24×110 (21×14)	24
200	8	24-7/8-9UNC×110 (19×12)	24	24-M22×100 (19×12)	24	24-M24×115 (21×14)	24
250	10	32- 1-8UNC×125 (21×14)	32	—	—	—	—
300	12	32-1 1/8-8UN×135 (24×16)	32	32-M24×110 (21×14)	32	32-M30 (P3) ×140 (24×16)	32
350	14	40-1 1/8-8UN×145 (24×16)	40	—	—	—	—
400	16	40-1 1/4-8UN×160 (24×16)	40	—	—	—	—
450	18	48-1 1/4-8UN×160 (24×16)	48	—	—	—	—
500	20	48-1 1/4-8UN×160 (24×16)	48	—	—	—	—
600	24	48-1 1/2-8UN×190 (30×20)	48	48-M36 (P3) ×170 (30×20)	48	—	—

Nominal size		BS4504(DIN)NP25		BS4504(DIN)NP40	
mm	inch	Setting bolts	Nuts	Setting bolts	Nuts
80	3	16-M16× 75 (13× 8)	16	16-M16× 75 (13× 8)	16
100	4	16-M20× 85 (17×11)	16	16-M20× 85 (17×11)	16
150	6	—	—	—	—
200	8	24-M24×110 (21×14)	24	24-M27×115 (22×14)	24
250	10	—	—	—	—
300	12	32-M27×115 (24×14)	32	32-M30×115 (24×16)	32
350	14	—	—	—	—
400	16	—	—	—	—
450	18	—	—	—	—
500	20	—	—	—	—
600	24	—	—	—	—

Note: Bolt/Nut material: SNB7/S45C

Please use a nut with a height that is 100% of the screw diameter.

The bolt length calculation is based on use of a 4.5 mm thick spiral gasket.

The flange thickness calculation is based on the standard steel flange thickness.

Quantities shown are for one valve.

250 mm bolt quantities are indicated as follows: The quantity outside the brackets applies when the setting bolt holes are tapped and the values inside the brackets apply when the setting bolt holes are drilled.

Examples

Setting bolts: 8 - M16 × 75 (13 × 8)

N
M
L
b
L1

Long bolts: 4 - M16 × 145

N
M
L

