

Workshop under authorization
by American Petroleum Institute
of the indication.

FULL BORE, FULL JACKETED BALL VALVE

HISAKA BALL VALVES

■ HJ5 ■ HJ5-TD ■ HJ5-TS
■ HJ5-AD ■ HJ5-AS

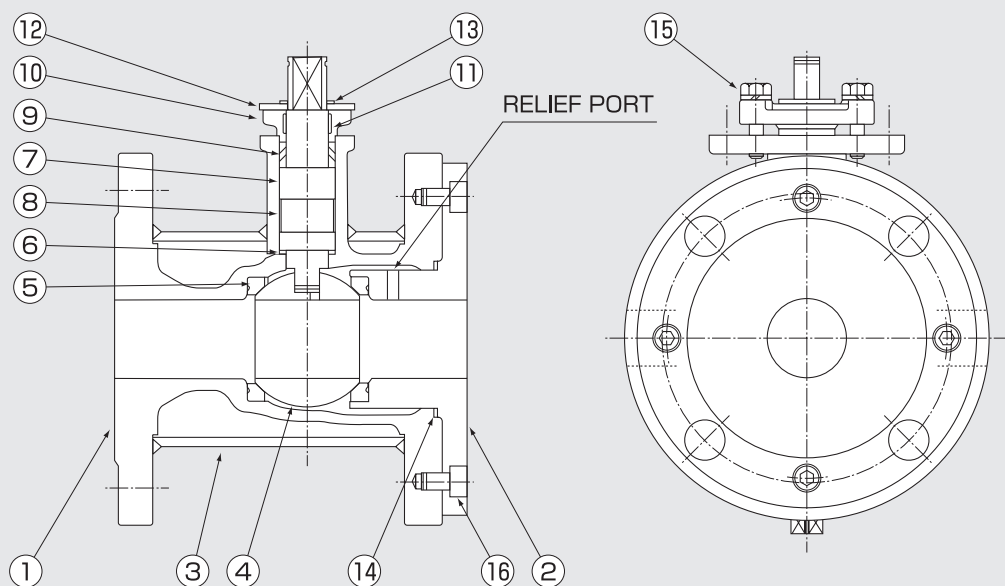
HISAKA WORKS, LTD.

2-WAY JACKET BALL VALVE (MODEL:HJ5)

FEATURES

1. MODEL"HJ5"Jacket Ball Valve is only full bore design. Therefore there are not pressure loss and accumulated fluid in the cavity of body. And full jacket design is able to keep the fluid temperature completely.
2. There is a relief port to prevent expansion for accumulated fluid in the cavity of body. These special design was developed safety measurement by our long experience in many kinds of industrial field, therefore it is possible to prevent various trouble in customer side.
3. Almost of parts are same with our standard model.(Model:HF5). Therefore it is available to be supplied to customer soon.
4. MODEL"HJ5" is 1-way direction design. At the time of piping work, please be careful flow direction. And Flow direction of valve will be assembled high pressure side to low pressure side, to suit mark"→". If assembled for wrong direction, it happened to leakage.

DESIGN DRAWING



TEST PRESSURE

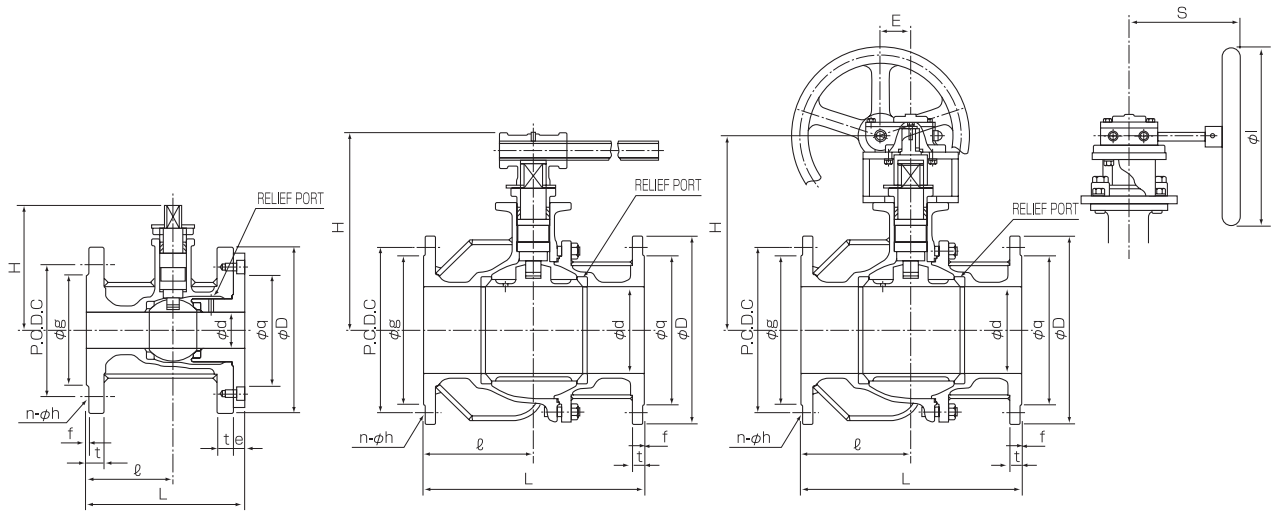
	JIS 10K	CLASS 150
SHELL	2.06 MPa (A.T.P)	2.93MPa (W.T.P)
SEAT	0.59 MPa (A.T.P)	0.59 MPa (A.T.P)
JACKET	1.47 MPa (A.T.P)	1.47 MPa (A.T.P)
	JIS 20K	CLASS 300
SHELL	5.00MPa (W.T.P)	7.55MPa (W.T.P)
SEAT	0.59MPa (A.T.P)	0.59MPa (A.T.P)
JACKET	1.47 MPa (A.T.P)	1.47 MPa (A.T.P)

※Please contact us in case of JIS20K/CLASS 300

NAME OF PARTS AND MATERIAL

NO.	Name of Parts	Qty	Material			Remark
1	Body	1	SCS13A ASTM CFB	SCS14A ASTM CF8M	SCS16A ASTM CF3M	
2	Body Cap	1	SCS13A ASTM CFB	SCS14A ASTM CF8M	SCS16A ASTM CF3M	
3	Jacket	1	SS 400 ASTM A283			Paint
4	Ball	1	SUS304 SCS13A	SUS316 SCS14A	SUS316L SCS16A	
5	Ball Seat	2	MAXTITE PTFE			
6	Thrust Bearing	1	R.PTFE			
7	Stem	1	SUS304 AISI 304	SUS316 AISI 316	SUS316L AISI 316L	
8	Stem Bearing	1	PTFE			
9	Gland Paking	1set	PTFE			
10	Gland Cap	1	SCS13A ASTM CFB	SCS16A ASTM CF3M	SCS16A ASTM CF3M	
11	Gland Bearing	1	PTFE			
12	Stop Plate	1	SUS 304 AISI 304			
13	Snap Ring	1	SUS 304 AISI 304			
14	Gasket	1	PTFE			
15	Bolt, Spring Washer	2	SUS 304 AISI 304			
16	Socket Head Bolt	1set	SUS 304 AISI 304			

HJ5 JIS 10k/CLASS 150 DIMENSION OF MANUAL VALVE



15A~125A

150A·200A

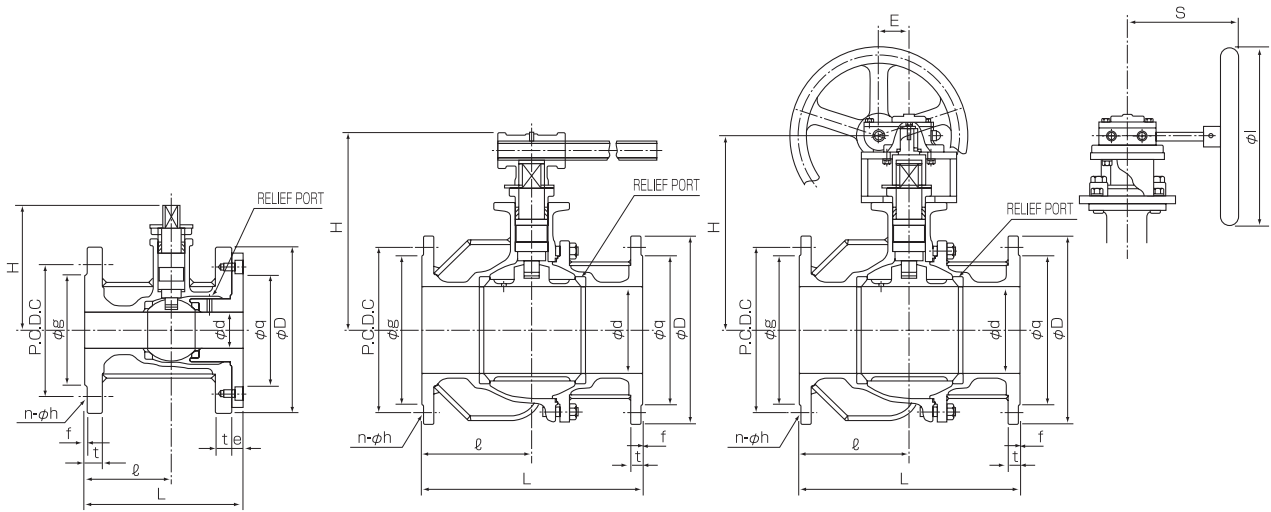
200A~300A

SIZE	d	L	H	ℓ	HANDLE LENGTH	D	g	c	n	h	t	f	e	FLANGE RATING & SIZE	WEIGHT(Kg)
15A	13	108	94	52	120	140	81	105	4	19	16	2	9	40A JIS 10K	6
1/2B						127	73.2	98.6	4	16	14.3	1.6	9	1½ ^B CLASS 150	
20A	19	117	97	61	120	140	81	105	4	19	16	2	9	40A JIS 10K	6.5
3/4B						127	73.2	98.6	4	16	14.3	1.6	9	1½ ^B CLASS 150	
25A	25	127	113	68	150	155	96	120	4	19	16	2	9	50A JIS 10K	8.5
1B						152	91.9	120.6	4	20	15.8	1.6	9	2 ^B CLASS 150	
40A	38	165	133	90	200	175	116	140	4	19	18	2	12	65A JIS 10K	13
1-1/2B						178	104.6	139.7	4	19	17.6	1.6	12	2½ ^B CLASS 150	
50A	51	178	153	97	250	185	126	150	8	19	18	2	12	80A JIS 10K	15.5
2B						191	127	152.4	4	20	19.1	1.6	12	3 ^B CLASS 150	
65A	64	190	174	102	300	210	151	175	8	19	18	2	12	100A JIS 10K	21
2-1/2B						229	157.2	190.5	8	19	24	1.6	12	4 ^B CLASS 150	
80A	76	203	194	107	350	250	182	210	8	23	20	2	15	125A JIS 10K	31
3B						254	186	215.9	8	22	24	1.6	15	5 ^B CLASS 150	
100A	102	229	220	121	400	280	212	240	8	23	22	2	15	150A JIS 10K	46
4B						279	215.9	241.3	8	22	25.5	1.6	15	6 ^B CLASS 150	
125A	127	320	330	177	700	330	262	290	12	23	22	2	24	200A JIS 10K	80
5B						343	269.7	298.4	8	22	28.5	1.6	24	8 ^B CLASS 150	
150A	152	394	350	197	1000	330	262	290	12	23	22	2	—	200A JIS 10K	95
6B						343	269.7	298.4	8	23	28.5	1.6	—	8 ^B CLASS 150	
200A	203	457	415	228	1500	400	324	355	12	25	24	2	—	250A JIS 10K	150
8B						406	319.8	361.9	12	26	30.5	1.6	—	10 ^B CLASS 150	

SIZE	d	L	H	I	E	S	ℓ	WORM GEAR	D	g	c	n	h	t	f	FLANGE RATING & SIZE	WEIGHT(Kg)
200A	203	457	412	600	71	288	228	AB550N	400	324	355	12	25	24	2	250A JIS 10K	
8B									406	323.8	361.9	12	26	30.5	1.6	10 ^B CLASS 150	
250A	254	533	461	800	86	305	266	AB800N	490	413	445	16	25	26	3	350A JIS 10K	
10B									535	412.8	476.2	16	29	35.5	1.6	14 ^B CLASS 150	
300A	305	610	547	800	130	387	305	AB1950N	560	475	510	16	27	28	3	400A JIS 10K	
12B									597	469.9	539.8	16	29	37	1.6	16 ^B CLASS 150	

WEIGHT (SCS)

HJ5 JIS20k/CLASS 300 DIMENSION OF MANUAL VALVE



15A~125A

150A·200A

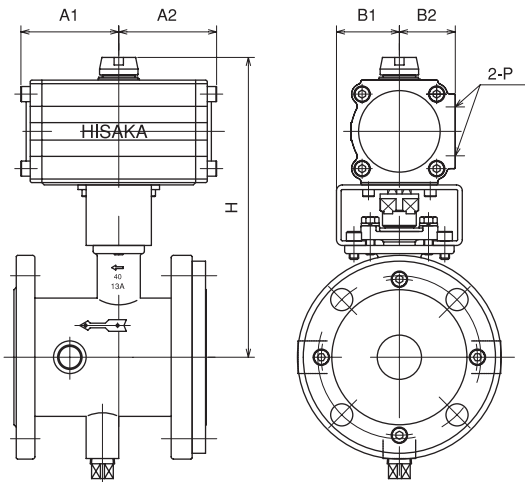
200A~300A

SIZE	d	L	H	ℓ	HANDLE LENGTH	D	g	c	n	h	t	f	e	FLANGE RATING & SIZE	WEIGHT(kg)
15A															
1/2B															
20A															
3/4B															
25A															
1B															
40A															
1-1/2B															
50A															
2B															
65A															
2-1/2B															
80A															
3B															
100A															
4B															
125A															
5B															
150A															
6B															

SIZE	d	L	H	I	E	S	ℓ	WORM GEAR	D	g	c	n	h	t	f	FLANGE RATING & SIZE	WEIGHT(kg)
200A																	
8B																	
250A																	
10B																	

DIMENSION OF ON-OFF VALVE (HJ5)

■ HJ5-AD (DOUBLE ACTING)



■ DOUBLE ACTING ACTUATOR <JIS 10K/CLASS 150>

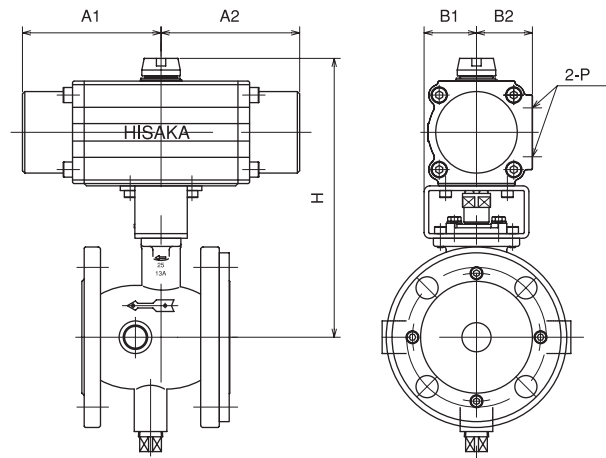
SIZE	H	A1	A2	B1	B2	P	ACTUA-TOR	WEIGHT(kg)
15A	1/2B	198	62	62	45	38	Rc(PT1/8) AD05N	7.5
20A	3/4B	201	62	62	45	38	Rc(PT1/8) AD05N	8
25A	1B	211	62	62	45	38	Rc(PT1/8) AD05N	10
40A	1-1/2B	258	84	84	54	48	Rc(PT1/4) AD07N	16
50A	2B	277	84	84	54	48	Rc(PT1/4) AD07N	19
65A	2-1/2B	346	138	132	78	60	Rc(PT1/4) AD08	29
80A	3B	363	138	132	78	60	Rc(PT1/4) AD08	39
100A	4B	424	170	164	83	73	Rc(PT1/4) AD10	58
125A	5B	579	224	216	110	89	Rc(PT3/8) AD13	107
150A	6B	599	224	216	110	89	Rc(PT3/8) AD13	122

WEIGHT(SCS)

■ DOUBLE ACTING ACTUATOR <JIS 20K/CLASS 300>

SIZE	H	A1	A2	B1	B2	P	ACTUA-TOR	WEIGHT(kg)
15A	1/2B							
20A	3/4B							
25A	1B							
40A	1-1/2B							
50A	2B							
65A	2-1/2B							
80A	3B							
100A	4B							
125A	5B							

■ HJ5-AS (SINGLE ACTING)



■ SINGLE ACTING ACTUATOR <JIS 10K/CLASS 150>

SIZE	H	A1	A2	B1	B2	P	ACTUA-TOR	WEIGHT(kg)
15A	1/2B	227	119	119	45	48	Rc(PT1/4) AS07N	9.5
20A	3/4B	230	119	119	45	48	Rc(PT1/4) AS07N	10
25A	1B	240	119	119	45	48	Rc(PT1/4) AS07N	12
40A	1-1/2B	304	213	197	70	60	Rc(PT1/4) AS08	20
50A	2B	323	213	197	70	60	Rc(PT1/4) AS08	22

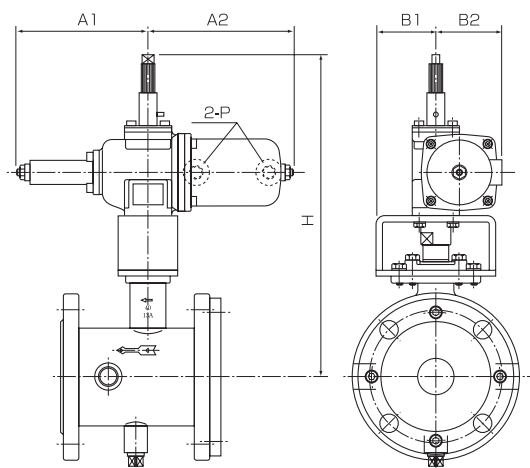
WEIGHT(SCS)

■ SINGLE ACTING ACTUATOR <JIS 20K/CLASS 300>

SIZE	H	A1	A2	B1	B2	P	ACTUA-TOR	WEIGHT(kg)
15A	1/2B							
20A	3/4B							
25A	1B							
40A	1-1/2B							

DIMENSION OF ON-OFF VALVE (HJ5)

■ HJ5-TD (DOUBLE ACTING)



■ DOUBLE ACTING ACTUATOR <JIS 10K/CLASS 150>

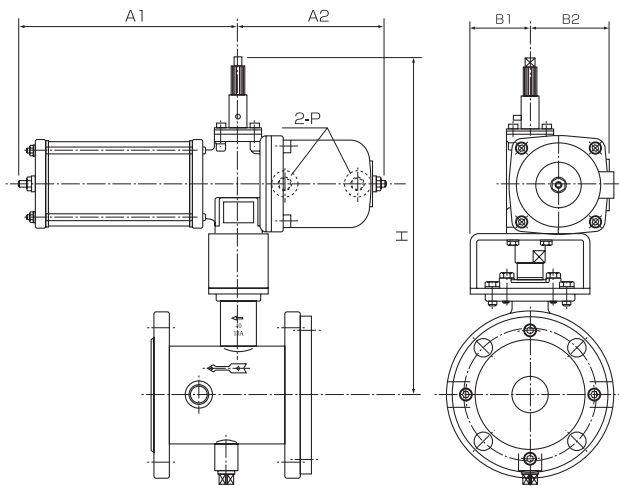
SIZE	H	A1	A2	B1	B2	P	ACTUA-TOR	WEIGHT(kg)
15A	1/2B	284	99	120	52	43	Rc(PT1/4) TD1	9
20	3/4B	287	99	120	52	43	Rc(PT1/4) TD1	10
25A	1B	297	99	120	52	43	Rc(PT1/4) TD1	12
40A	1-1/2B	327	134	151	63	47	Rc(PT1/4) TD2	18
50A	2B	371	171	200	70	87	Rc(PT1/4) TD3	25
65A	2-1/2B	394	171	200	78	87	Rc(PT1/4) TD3	31
80A	3B	450	224	257	81	112	Rc(PT1/4) TD4	50
100A	4B	477	224	257	83	112	Rc(PT1/4) TD4	65
125A	5B	597	272	315	110	152	Rc(PT3/8) TD5	124
150A	6B	617	272	315	120	149	Rc(PT3/8) TD5	139
200A	8B	741	338	372	150	188	Rc(PT3/8) TD6	240
250A	10B	853	426	478	140	225	Rc(PT3/4) TD7	
300A	12B	1001	571	633	175	306	Rc(PT3/4) TD8	

WEIGHT (SCS)

■ DOUBLE ACTING ACTUATOR <JIS 20K/CLASS 300>

SIZE	H	A1	A2	B1	B2	P	ACTUA-TOR	WEIGHT(kg)
15A	1/2B							
20A	3/4B							
25A	1B							
40A	1-1/2B							
50A	2B							
65A	2-1/2B							
80A	3B							
100A	4B							
125A	5B							
150A	6B							

■ HJ5-TS (SINGLE ACTING)



■ SINGLE ACTING ACTUATOR <JIS 10K/CLASS 150>

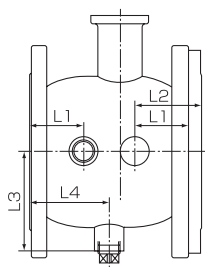
SIZE	H	A1	A2	B1	B2	P	ACTUA-TOR	WEIGHT(kg)
15A	1/2B	297	204	122	52	71	Rc(PT1/4) TS1	11
20A	3/4B	300	204	122	52	71	Rc(PT1/4) TS1	12
25A	1B	310	204	122	52	71	Rc(PT1/4) TS1	14
40A	1-1/2B	344	231	154	57	82	Rc(PT1/4) TS2	22
50A	2B	397	320	197	70	102	Rc(PT1/4) TS3	33
65A	2-1/2B	420	320	197	78	102	Rc(PT1/4) TS3	39
80A	3B	493	436	265	81	135	Rc(PT1/4) TS4	70
100A	4B	520	436	265	83	135	Rc(PT1/4) TS4	85
125A	5B	651	567	329	110	184	Rc(PT3/8) TS5	172
150A	6B	671	567	329	120	184	Rc(PT3/8) TS5	187
200A	8B	829	657	393	150	233	Rc(PT3/8) TS6	350
250A	10B	845	862	515	144	304	Rc(PT3/4) TS7	
300A	12B	955	1003	704	175	390	Rc(PT3/4) TS8	

WEIGHT (SCS)

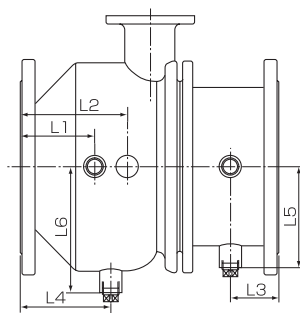
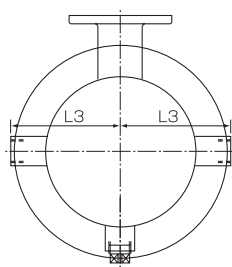
■ SINGLE ACTING ACTUATOR <JIS 20K/CLASS 300>

SIZE	H	A1	A2	B1	B2	P	ACTUA-TOR	WEIGHT(kg)
15A	1/2B							
20A	3/4B							
25A	1B							
40A	1-1/2B							
50A	2B							
65A	2-1/2B							
80A	3B							
100A	4B							
125A	5B							
150A	6B							

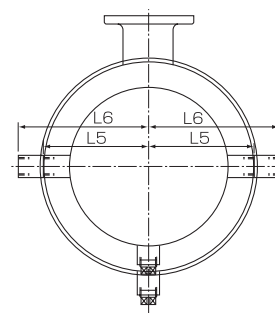
DIMENSION OF NOZZLE (HJ5)



15A~125A



150A



■ JIS10K/CLASS 150

SIZE		L1	L2	L3	L4	S×L
mm	IN					
15	1/2	49	58	67	—	Rp(PS) 1/2×36
20	3/4	46	55	75	54	Rp(PS) 1/2×36
25	1	46	55	81	59	Rp(PS) 1/2×36
40	1 1/2	48	60	87	76	Rp(PS) 1/2×36
50	2	58	70	100	83	Rp(PS) 1/2×36
65	2 1/2	58	70	112	90	Rp(PS) 1/2×36
80	3	64	79	129	94	Rp(PS) 3/4×40
100	4	76	91	148	107	Rp(PS) 3/4×40
125	5	90	114	174	148	Rp(PS) 3/4×40

■ JIS20K/CLASS 300

SIZE		L1	L2	L3	L4	S×L
mm	IN					
15	1/2					
20	3/4					
25	1					
40	1 1/2					
50	2					
65	2 1/2					
80	3					
100	4					
125	5					

SIZE		L1	L2	L3	L4	L5	L6	S×L
mm	IN							
150	6	112	162	74	137	161	200	Rp(PS) 3/4×40
200	8	140	180	90	160	192	244	Rp(PS) 3/4×40

SIZE		L1	L2	L3	L4	L5	L6	S×L
mm	IN							
150A	6							
200A	8							

※STANDARD SPEC. SCREW SOCKET (available flange connection)

DIMENSION OF GASKET FOR PIPING FLANGE (HJ5)

PLEASE USE GASKET FOR PIPING FLANGE AS FOLLOWING DIMENSION

■ FOR JIS 10K

VALVE SIZE	O.D.	I.D.	THICKNESS
15A× 40A	φ89	φ22	3
20A× 40A	φ89	φ28	3
25A× 50A	φ104	φ35	3
40A× 65A	φ124	φ49	3
50A× 80A	φ134	φ61	3
65A×100A	φ159	φ77	3
80A×125A	φ190	φ90	3
100A×150A	φ220	φ115	3
125A×200A	φ270	φ141	3
150A×200A	φ270	φ167	3
200A×250A	φ333	φ218	3
250A×350A	φ423	φ270	3
300A×400A	φ486	φ321	3

■ FOR CLASS 150

VALVE SIZE	O.D.	I.D.	THICKNESS
1/2 ^B ×1 1/2 ^B	φ85	φ22	3
3/4 ^B ×1 1/2 ^B	φ85	φ28	3
1 ^B ×2 ^B	φ103	φ34	3
1 1/2 ^B ×2 1/2 ^B	φ122	φ49	3
2 ^B ×3 ^B	φ135	φ61	3
2 1/2 ^B ×4 ^B	φ173	φ77	3
3 ^B ×5 ^B	φ196	φ90	3
4 ^B ×6 ^B	φ221	φ116	3
5 ^B ×8 ^B	φ277	φ143	3
6 ^B ×8 ^B	φ277	φ170	3
8 ^B ×10 ^B	φ338	φ220	3
10 ^B ×14 ^B	φ449	φ275	3
12 ^B ×16 ^B	φ449	φ326	3

■ FOR JIS 20K

VALVE SIZE	O.D.	I.D.	THICKNESS
15A× 40A			
20A× 40A			
25A× 50A			
40A× 65A			
50A× 80A			
65A×100A			
80A×125A			
100A×150A			
125A×200A			
150A×200A			
200A×250A			

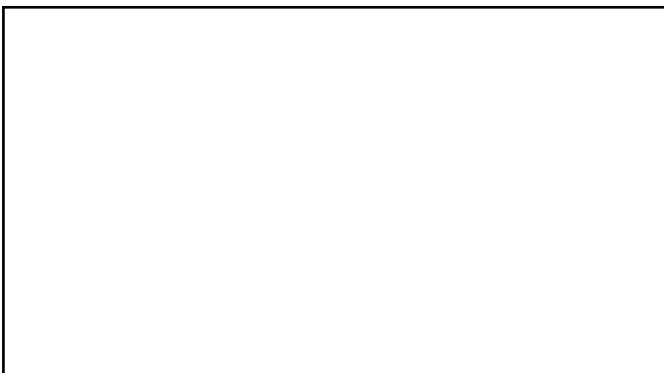
■ FOR CLASS 300

VALVE SIZE	O.D.	I.D.	THICKNESS
1/2 ^B ×1 1/2 ^B			
3/4 ^B ×1 1/2 ^B			
1 ^B ×2 ^B			
1 1/2 ^B ×2 1/2 ^B			
2 ^B ×3 ^B			
2 1/2 ^B ×4 ^B			
3 ^B ×5 ^B			
4 ^B ×6 ^B			
5 ^B ×8 ^B			
6 ^B ×8 ^B			
8 ^B ×10 ^B			

FOR PROPER USE OF HISAKA BALL VALVE

Following points must be considered in order to use HISAKA ball valves in a proper way.

1. Do not allow the slurry (dirts in the pipe, welding slag, rust, etc.) to enter into the standard valve. If the slurry thrust into the ball seat or causes damage on it, the leakage or defective function may result.
Install the valve only after the through cleaning is made inside the pipe.
If the liquid containing the slurry is to be supplied, exchange the standard valve with the valve for slurry use.
2. Do not use the standard valve to the liquid which shows a large temperature fluctuation. If the high temperature liquid is supplied to the low temperature condition, the liquid inside the valve body shows the heat expansion, forming the high pressure. In such a case, the leakage or defective function may be caused.
Either reduce the temperature fluctuation or exchange with the valve having the relief port in the above case.
3. Do not apply undue force (as caused by one-side tightening of bolts, the tightening against a large gap, etc.) or vibration to the valve. Otherwise, the leakage or faulty function may happen. Observe the piping dimensions as instructed and arrange the support for a heavy valve.
4. Bolts and nuts are loosened in some cases due to the vibration during the transport. Therefore, check the tightening condition before use. If found Loose, retighten the bolts.
5. Special treatment is necessary, if the valve is used for oxygen or hydrogen service. Please clarify the detail of operation condition and fluid.
6. The flow direction of fluid is designated in certain valves. The reverse flow may cause the leakage. Install the valves as instruction, if the flow direction is designated.
7. At the time of disassembling the automatic valve, do not disassemble the pneumatic cylinder if the pressure still remains inside. Otherwise, the parts pop out. disassemble it only after the air is purged.
8. Do not disassemble the pneumatic cylinder of spring back type.
If it is to be disassembled under unavoidable circumstances, exchange the end cap set bolt with the long bolt before disassembling. Otherwise, the spring may jump out what is dangerous.
9. Make the working test once a month or so, automatic valve is kept out of operation over a long period.
10. In case of using the teflon seat valve only for ON-OFF operation, the interim opening position deforms the seat and the leakage is caused.
11. If you have any question or requirement about our product, please contact us or our local sales agent.



- ISO 14001 CERTIFIED FACTORY
- ISO 9001 CERTIFIED FACTORY
- HIGH PRESSURE GAS AUTHORISED FACTORY
- API CERTIFIED FACTORY

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