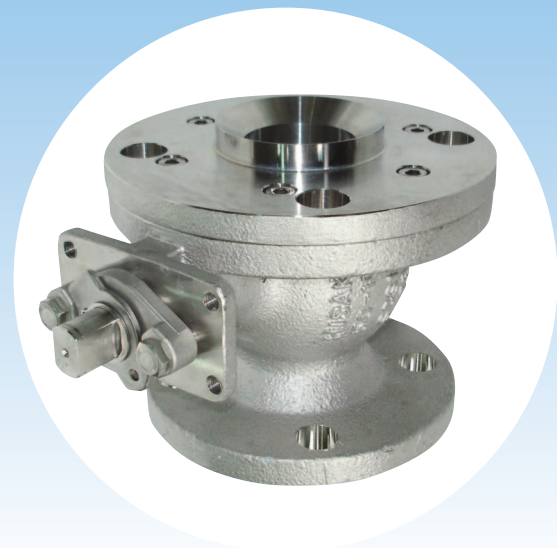


Workshop under authorization
by American Petroleum Institute
of the indication.

FULL BORE, TANK BOTTOM BALL VALVE HISAKA BALL VALVES

■ TB5	■ TB5-AD	■ TB5-AS
■ TB5-TD	■ TB5-TS	

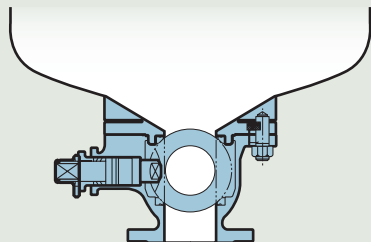
HISAKA WORKS, LTD.

TANK BOTTOM BALL VALVE model:TB5

FEATURES

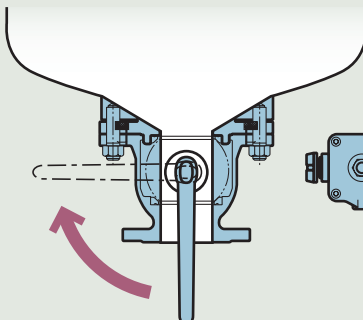
MODEL:TB5 was developed for Tank bottom application. And it exceed for discharging, churning and operation performance, compare with flash valve, gate valve and globe valve.

1 Churning Performance



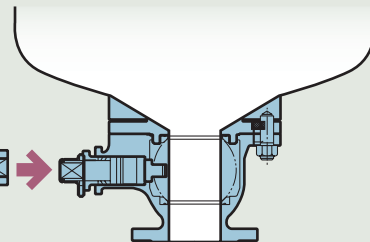
- Part of ball surface is almost flat with bottom line of tank. The accumulated fluid is so little, and possible to churn the fluid uniformity.

2 Discharging & Operativity



- Realized easy operation for quarter rotating by hand lever operation at narrow space like tank bottom.
- Fluid is discharged smoothly and high speed by full bore design. And realized to get efficiency.

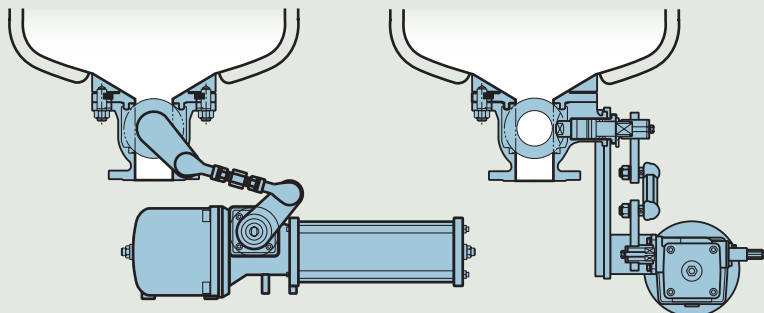
3 Compact design・Easy Automatization



- Compact designed AD-AS actuator cylinder is available to use at narrow space.
- Automatization is that assemble actuator and yoke set to the valve only, un-necessary to remove the Gland Bolt.

4 Link type

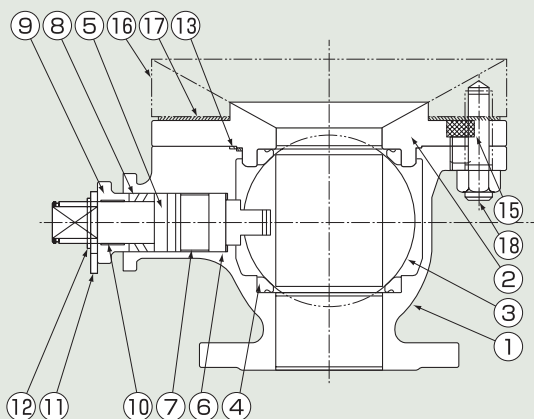
- In case of interfere the jacket of tank and actuator, link type actuator suitable to use. This Link position is able to change position arbitrary.



5 Others

- The attaching valve to the tank is completed by welding tank pad to the tank.
- Packing parts are same with Hisaka's standard model "HF5". Therefore it is realized quick supply and easy for maintenance.

CONSTRUCTION DRAWING



TEST PRESSURE

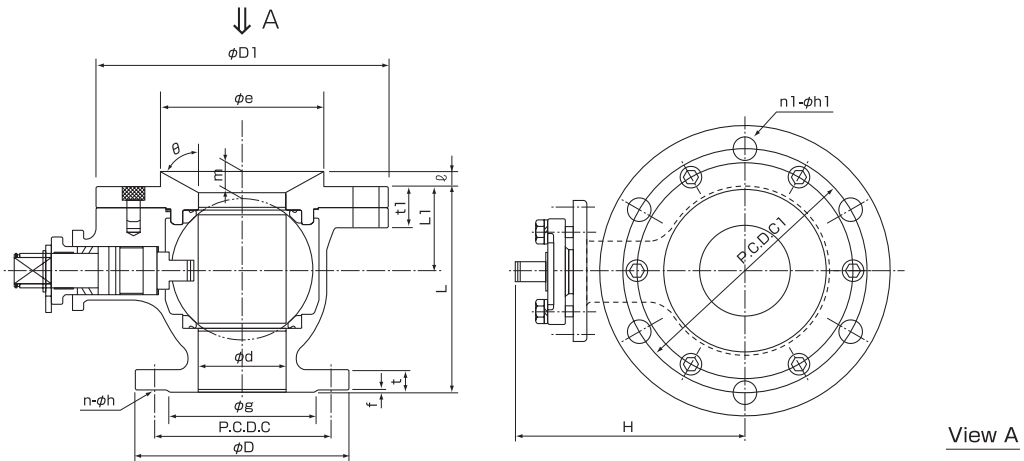
	JIS 10K	CLASS 150
SHELL	2.1 MPa (A.T.P)	2.93MPa (W.T.P)
SEAT	0.59 MPa (A.T.P)	0.59 MPa (A.T.P)

NAME OF PARTS & MATERIAL

No.	Name of Parts	Q'ty	Material			Remark
1	Body	1	SCS13A ASTM CF8	SCS14A ASTM CF8M	SCS16A ASTM CF3M	
2	Body Cap	1	SCS13A ASTM CF8	SCS14A ASTM CF8M	SCS16A ASTM CF3M	
3	Ball	1	SCS13A ASTMCF8	SUS316/SCS14A AISI316/ASTMCF8M	SUS316L/SCS16A AISI316L/ASTMCF3M	
4	Ball Seat	2	MAXTITE PTFE			
5	Stem	1	SUS304 AISI304	SUS316 AISI316	SUS316L AISI316L	
6	Thrust Bearing	1	PTFE			
7	Stem Bearing	1	PTFE			
8	Gland Paking	1set	PTFE			
9	Gland Cap	1	SCS13A ASTM CF8	SCS16A ASTM CF3M	SCS16A ASTM CF3M	
10	Gland Bearing	1	PTFE			
11	Stop Plate	1	SUS 304 AISI 304			
12	Snap Ring	1	SUS 304 AISI 304			
13	Gasket	1	PTFE			
14	Bolt, Spring Washer	2	SUS 304 AISI 304			
15	Socket Head Bolt	1set	SUS 304 AISI 304			
16	Tank pad	1	SUS304 AISI304	SUS316 AISI316	SUS316L AISI316L	
17	Gasket	1	PTFE			
18	Stud Bolt & Nut	1set	SUS 304 AISI 304			

OPTIONAL DEVICE

TB5 JIS10K/CLASS 150 DIMENSION OF MANUAL VALVE

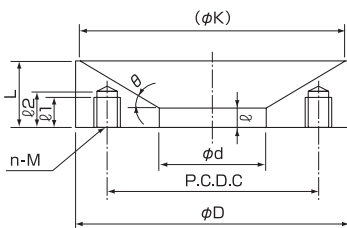


View A

SIZE	d	L	L1	H	D1	e	θ	C1	n1	h1	t1	ℓ	m	☆	D	g	C	n	h	t	f	FLANGE RATING	WEIGHT (kg)
25A	25	109	33	103	140	48	45	105	4	15	22	9	20.5	150	125	67	90	4	19	14	1	JIS 10K	5.5
1B															108	50.8	79.2	4	16	11.2	1.6	CLASS 150	
40A	38	125	40	127	155	60	40	120	4	17	25	13	21	200	140	81	105	4	19	16	2	JIS 10K	8
1-1/2B															127	73.2	98.6	4	16	14.3	1.6	CLASS 150	
50A	51	133	44	143	175	76	50	140	4	19	26	12	15	250	155	96	120	4	19	16	2	JIS 10K	10.5
2B															152	91.9	120.6	4	19	15.8	1.6	CLASS 150	
65A	64	153	61	168	210	114	60	175	6	17	30	14	24	300	175	116	140	4	19	18	2	JIS 10K	18
2-1/2B															178	104.6	139.7	4	19	17.6	1.6	CLASS 150	
80A	76	174	71	192	250	140	60	210	6	21	36	12	23	350	185	126	150	8	19	18	2	JIS 10K	28
3B															190	127	152.4	4	19	19.1	1.6	CLASS 150	
100A	102	186	78	212	280	166	60	240	6	23	39	19	19	400	210	151	175	8	19	18	2	JIS 10K	39
4B															229	157.2	190.5	8	19	24	1.6	CLASS 150	
125A	127	245	95	329	330	217	70	290	8	23	40	25	22	700	250	182	210	8	23	20	2	JIS 10K	62
5B															254	186	215.9	8	22	24	1.6	CLASS 150	
150A	152	302	105	349	400	269	70	355	10	23	44	25	13.5	1000	280	212	240	8	23	22	2	JIS 10K	89
6B															279	215.9	241.3	8	22	25.5	1.6	CLASS 150	
200A	203	351	122	408	445	320	70	400	12	23	54	35	3	1500	330	262	290	12	23	22	2	JIS 10K	165
8B															343	269.7	298.4	8	22	28.5	1.6	CLASS 150	
250A	254	418	149	410	490	358	70	445	18	23	26	37	11.5	—	400	324	355	12	25	24	2	JIS 10K	
10B															406	323.8	362	12	26	30.5	1.6	CLASS 150	
300A	305	545	240	465	620	459	70	565	18	25	30	40	44	—	445	368	400	16	25	24	3	JIS 10K	
12B															483	381	431.8	12	26	32	1.6	CLASS 150	

☆ : LENGTH OF HAND LEVER

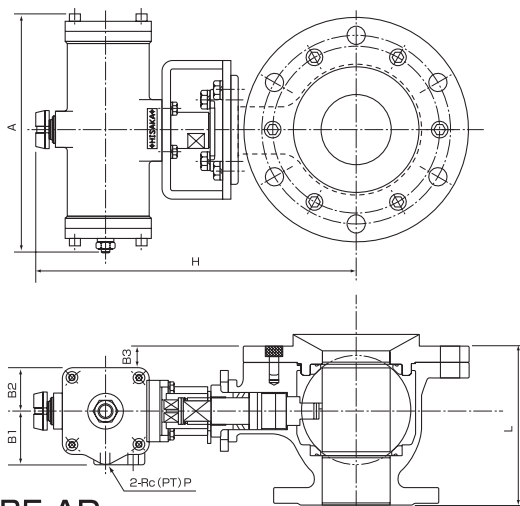
TANK PAD



SIZE	D	(K)	d	C	L	ℓ	ℓ 1	ℓ 2	n	M	θ	Gasket	Stud Bolt & Nut	
25A	1B	140	136.5	48.2	105	32.5	7	14	17	4	M12	30	t2×φ72×φ49	M12×55L×14S/20S
40A	1-1/2B	155	152.0	60.2	120	37.5	11	17	20	4	M14	30	t2×φ84×φ61	M14×60L×17S/20S
50A	2B	175	171.5	76.2	140	37.5	10	17	19.5	4	M16	30	t2×φ104×φ77	M16×65L×17S/22S
65A	2-1/2B	210	207.7	114.2	175	39	12	17	20	6	M14	30	t2×φ135×φ115	M14×65L×17S/20S
80A	3B	250	247.6	140.2	210	41	10	18	20.5	6	M18	30	t2×φ163×φ141	M18×77L×18S/25S
100A	4B	280	277.1	166.2	240	49	17	23	27	6	M20	30	t2×φ195×φ167	M20×85L×23S/30S
125A	5B	330	327.2	217.3	290	43	23	22	26	8	M20	20	t2×φ243×φ218	M20×90L×22S/30S
150A	6B	400	395.7	269.3	355	46	23	25	29	10	M20	20	t2×φ295×φ270	M20×95L×25S/30S
200A	8B	445	438.4	320.3	400	55	33.5	30	35	12	M20	20	t3×φ364×φ321	M20×105L×25S/35S
250A	10B	490	484.7	358.3	445	58	35	30	35	16	M20	20	t3×φ423×φ359	M20×75L×25S/25S
300A	12B	620	596.7	459.3	565	65	40	35	42	18	M22	20	t3×φ541×φ460	M22×85L×30S/30S

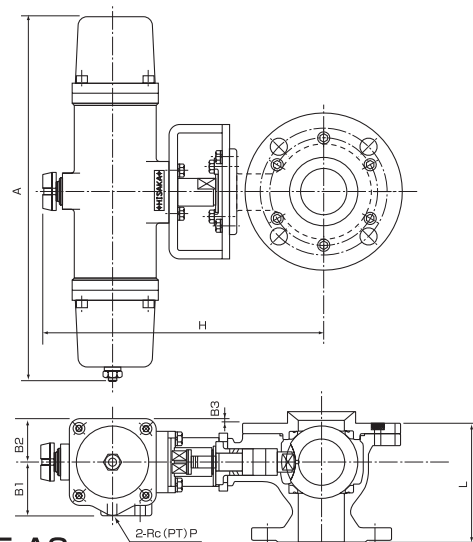
※TANK PAD IS SAME WIHT FOR TB3

TB5 DIMENSION OF ON-OFF VALVE



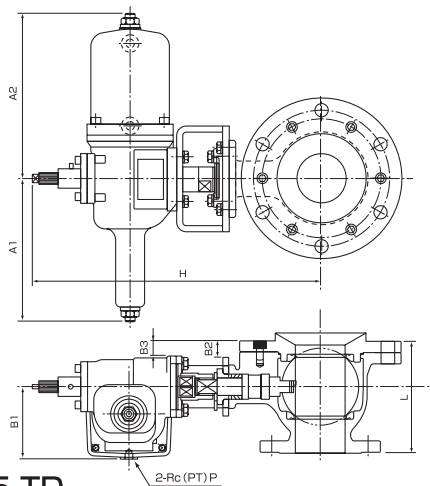
TB5-AD

SIZE	L	H	A	B1	B2	B3	P	ACTUATOR	WEIGHT
25A 1B	109	201	124	38	32	1	1/8	ADO5N	6.5
40A 1-1/2B	125	252	168	48	42	2	1/4	ADO7N	10.5
50A 2B	133	267	168	48	42	2	1/4	ADO7N	13
65A 2-1/2B	153	340	270	60	49	12	1/4	AD08	25
80A 3B	174	361	270	60	49	22	1/4	AD08	34
100A 4B	186	416	334	73	60	18	1/4	AD10	49
125A 5B	245	579	440	89	75	20	3/8	AD13	85
150A 6B	302	599	440	89	75	30	3/8	AD13	112



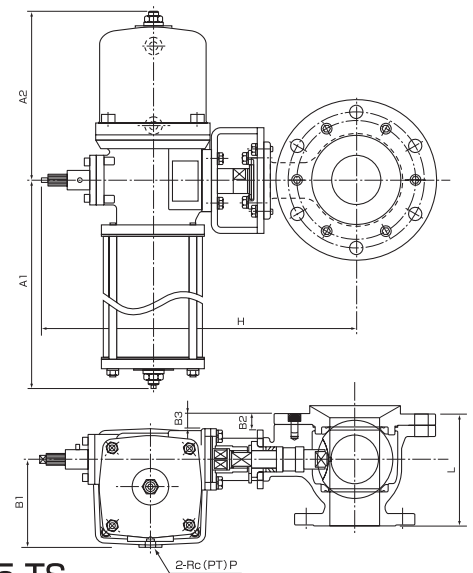
TB5-AS

SIZE	L	H	A	B1	B2	B3	P	ACTUATOR	WEIGHT
25A 1B	109	230	238	48	42	9	1/4	AS07N	8.5
40A 1-1/2B	125	298	410	60	49	9	1/4	AS08	14
50A 2B	133	313	410	60	49	5	1/4	AS08	17



TB5-TD

SIZE	L	H	A1	A2	B1	B2	B3	P	ACTUATOR	WEIGHT
25A 1B	109	287	99	120	55	8	—	1/4	TD1	8.5
40A 1-1/2B	125	321	134	151	70	10	—	1/4	TD2	12.5
50A 2B	133	361	171	200	87	9	—	1/4	TD3	20
65A 2-1/2B	153	388	171	200	87	23	—	1/4	TD3	27
80A 3B	174	448	224	257	112	—	23	1/4	TD4	46
100A 4B	186	469	224	257	112	—	30	1/4	TD4	56
125A 5B	245	597	272	315	149	20	—	3/8	TD5	101
150A 6B	302	617	272	315	149	30	—	3/8	TD5	128
200A 8B	351	734	338	372	188	37	—	3/8	TD6	250
250A 10B	418	855	426	478	225	—	44	3/8	TD7	
300A 12B	545	935	426	478	225	—	135	3/8	TD7	



TB5-TS

SIZE	L	H	A1	A2	B1	B2	B3	P	ACTUATOR	WEIGHT
25A 1B	109	300	204	122	71	—	6	1/4	TS1	10.5
40A 1-1/2B	125	338	231	154	82	10	—	1/4	TS2	16.5
50A 2B	133	387	320	197	102	9	—	1/4	TS3	27
65A 2-1/2B	153	414	320	197	102	23	—	1/4	TS3	35
80A 3B	174	491	436	265	135	—	23	1/4	TS4	66
100A 4B	186	512	436	265	135	—	30	1/4	TS4	76
125A 5B	245	651	567	329	184	20	—	3/8	TS5	150
150A 6B	302	671	567	329	184	30	—	3/8	TS5	176
200A 8B	351	822	657	393	233	—	25	3/8	TS6	360
250A 10B	418	845	862	515	304	—	44	3/8	TS7	
300A 12B	545	925	862	515	304	—	135	3/8	TS7	

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