

Butterfly Valve Type 57-TA (Automatic Type)

Features

- High durability and flow characteristics.
- Plastic body ensures excellent corrosion resistance
- Easy switching from lever type to gear type or automatic valve.
- Options are easily removable/ replaceable and can be mounted later. (except POSITIONER)



Basic specifications

- Valve Type : Butterfly Valve Type 57-TA
- Size : 40mm (1 1/2") - 350mm (14")
- Body Material : U-PVC (Conforming to ASTM D1784 Cell Classification 12454A)
PP (Conforming to ASTM D4101 Cell Classification PP0210B67272)
PVDF (Conforming to ASTM D3222 Cell Classification Type II)
- Seal Material / Seat : EPDM, FKM etc.
- Connection / Wafer : JIS B2220 10K, JIS B2220 5K, DIN/EN1092-1, ANSI B16.5

	FLUID TEMPERATURE °C {°F}	MAXIMUM WORKING PRESSURE (NORMAL TEMPERATURE) MPa {psi}	
		40mm — 250mm	300mm, 350mm
U-PVC	0 ~ 50 { 30~120 }	1.0 {150}	0.75 {110}
PP	-20 ~ 80 { -5~175 }	1.0 {150}	0.75 {110}
PVDF	-20 ~ 120 { -5~250 }	1.0 {150}	0.75 {110}

Note: The maximum working pressure is the value including the water hammer pressure
Be careful that the maximum working pressure is not exceeded during use

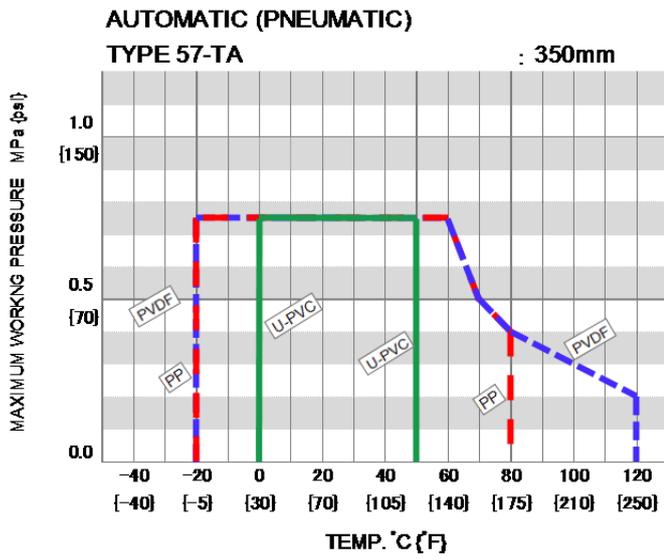
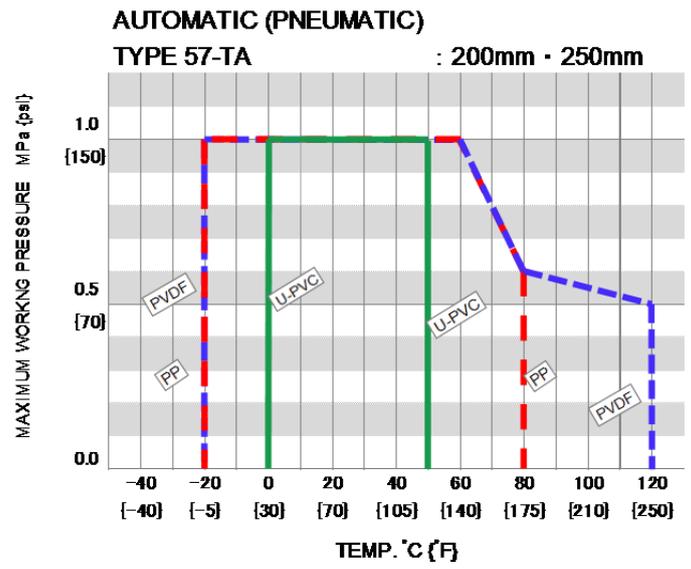
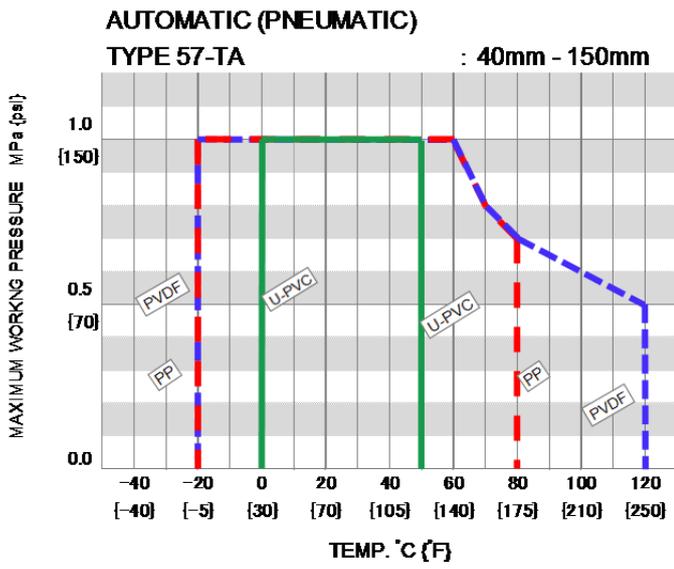
- * Concerning the allowable pressure for each temperature and material, see the technical documents at the next page of this sheet.

Certificate / Approval

PED, ABS, NSF/ANSI61

“For details of applicable products, please consult us.”

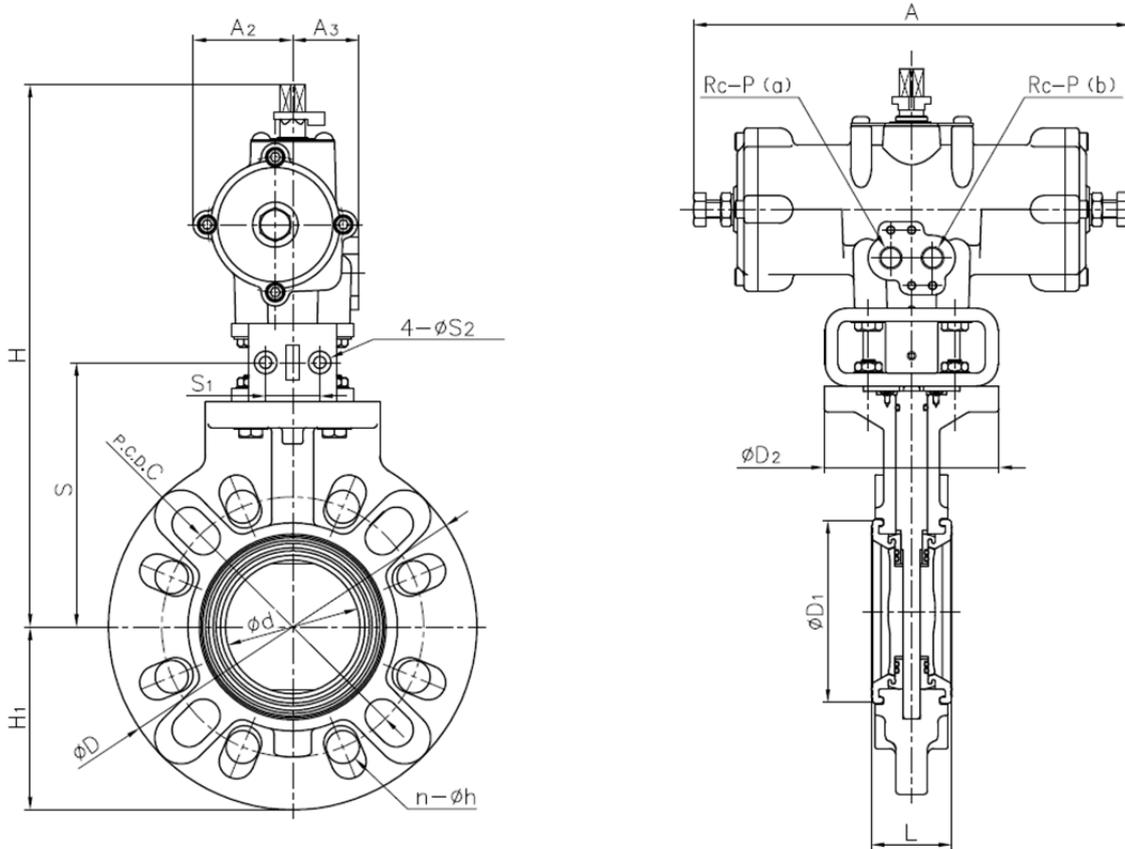
Working pressure vs. Temperature



Note : Make sure that the temperature and pressure are within the working range during operation.
(If the tolerance range is exceeded during use, the valve may be damaged.)

Product dimension

[DOUBLE ACTING]



■ JIS, DIN (Unit: mm)

mm	inch	d	L	D	D ₁	D ₂	H	H ₁	A	A ₂	A ₃	S	S ₁	S ₂	P	JIS 5K			JIS 10K			DIN PN10				
																C	n	h	C	n	h	C	n	h		
40	1 1/2	45	39	150	71	100	263	75	210	46	36	117.5	32	7	1/4	40	1 1/2	95	4	15	105	4	19	110	4	18
50	2	56	42	165	81	100	273	83	210	46	36	127.5	32	7	1/4	50	2	105	4	15	120	4	19	125	4	18
65	2 1/2	69	46	185	95	100	298	93	250	57	38	137.5	32	7	1/4	65	2 1/2	130	4	15	140	4	19	145	4	18
80	3	77	46	211	105	100	313	106	250	57	38	152.5	32	7	1/4	80	3	145	4	19	150	8	19	160	8	18
100	4	102	56	238	134	100	361	119	292	71	45	167.5	32	7	1/4	100	4	165	8	19	175	8	19	180	8	18
125	5	129	66	255	169	140	413	128	362	85.5	57	185.5	42	9	1/4	125	5	200	8	19	210	8	23	210	8	18
150	6	150	71	285	190	140	428	143	362	85.5	57	200.5	42	9	1/4	150	6	230	8	19	240	8	23	240	8	22
200	8	195	87	350	242	140	493	175	440	90	60	-	-	-	1/4	200	8	280	8	23	290	12	23	295	8	22
250	10	250	112	421	302	180	584	211	532	113	68	-	-	-	1/4	250	10	345	12	23	355	12	25	350	12	22
300	12	303	129	488	360	235	641	244	532	113	68	-	-	-	1/4	300	12	390	12	23	400	16	25	400	12	22
350	14	351	129	539	393	235	732	270	664	139	85	-	-	-	3/8	350	14	435	12	25	445	16	25	460	16	22

■ ANSI (Unit: inch)

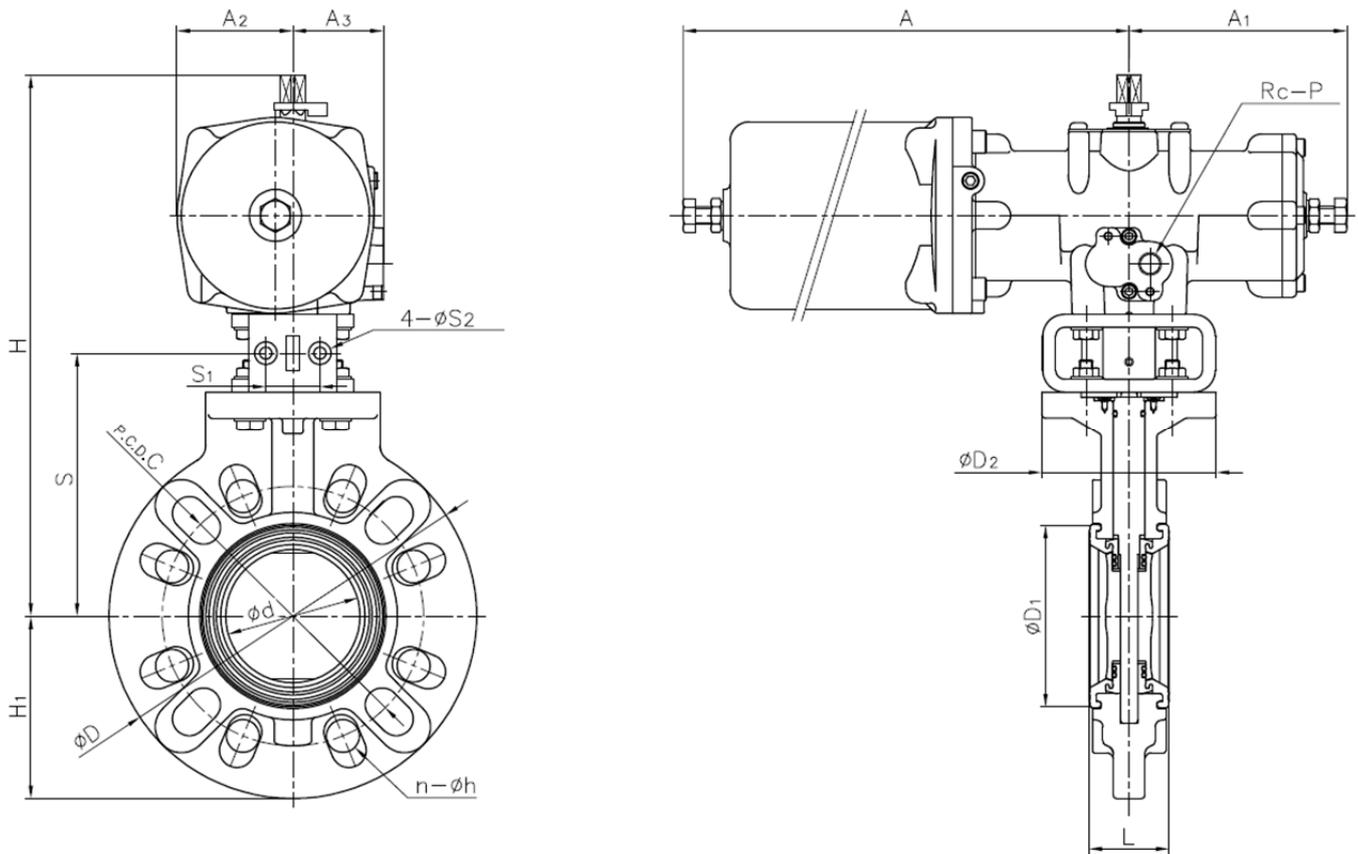
inch	mm	d	L	D	D ₁	D ₂	H	H ₁	A	A ₂	A ₃	S	S ₁	S ₂	P	ANSI Class 150		
																C	n	h
1 1/2	40	1.77	1.54	5.91	2.80	3.94	10.35	2.95	8.27	1.81	1.42	4.63	1.26	0.28	1/4	3.88	4	0.62
2	50	2.20	1.65	6.50	3.19	3.94	10.75	3.27	8.27	1.81	1.42	5.02	1.26	0.28	1/4	4.75	4	0.75
2 1/2	65	2.72	1.81	7.28	3.74	3.94	11.73	3.66	9.84	2.24	1.50	5.41	1.26	0.28	1/4	5.50	4	0.75
3	80	3.03	1.81	8.31	4.13	3.94	12.32	4.17	9.84	2.24	1.50	6.00	1.26	0.28	1/4	6.00	4	0.75
4	100	4.02	2.20	9.37	5.28	3.94	14.21	4.69	11.50	2.80	1.77	6.59	1.26	0.28	1/4	7.50	8	0.75
5	125	5.08	2.60	10.04	6.65	5.51	16.26	5.04	14.25	3.37	2.24	7.30	1.65	0.35	1/4	8.50	8	0.88
6	150	5.91	2.80	11.22	7.48	5.51	16.85	5.63	14.25	3.37	2.24	7.89	1.65	0.35	1/4	9.50	8	0.88
8	200	7.68	3.43	13.78	9.53	5.51	19.41	6.89	17.32	3.54	2.36	-	-	-	1/4	11.75	8	0.88
10	250	9.84	4.41	16.57	11.89	7.09	22.99	8.31	20.94	4.45	2.68	-	-	-	1/4	14.25	12	1.00
12	300	11.93	5.08	19.21	14.17	9.25	25.24	9.61	20.94	4.45	2.68	-	-	-	1/4	17.00	12	1.00
14	350	13.82	5.08	21.22	15.47	9.25	28.82	10.63	26.14	5.47	3.35	-	-	-	3/8	18.75	12	1.12

ACTUATOR SELECTION CHART *

SIZE	ACTUATOR TYPE
40mm (1 1/2 inch)	TA2A-050D
50mm (2 inch)	
65mm (2 1/2 inch)	TA2A-063D
80mm (3 inch)	
100mm (4 inch)	TA2A-080D
125mm (5 inch)	TA2A-100D
150mm (6 inch)	
200mm (8 inch)	TA2A-125D
250mm (10 inch)	TA2A-160D
300mm (12 inch)	
350mm (14 inch)	
	TA-200D

*For detailed specifications, see page 6.

[AIR TO OPEN, AIR TO CLOSE]



■ JIS, DIN (Unit: mm)

mm	inch	d	L	D	D ₁	D ₂	H	H ₁	A	A ₁	A ₂	A ₃	S	S ₁	S ₂	P	JIS 5K			JIS 10K			DIN PN10				
																	C	n	h	C	n	h	C	n	h		
40	1 1/2	45	39	150	71	100	263	75	240	105	53	50	117.5	32	7	1/4	40	1 1/2	95	4	15	105	4	19	110	4	18
50	2	56	42	165	81	100	273	83	240	105	53	50	127.5	32	7	1/4	50	2	105	4	15	120	4	19	125	4	18
65	2 1/2	69	46	185	95	100	298	93	288	125	66.5	52	137.5	32	7	1/4	65	2 1/2	130	4	15	140	4	19	145	4	18
80	3	77	46	211	105	100	313	106	288	125	66.5	52	152.5	32	7	1/4	80	3	145	4	19	150	8	19	160	8	18
100	4	102	56	238	134	100	361	119	341	146	82.5	59	167.5	32	7	1/4	100	4	165	8	19	175	8	19	180	8	18
125	5	129	66	255	169	140	413	128	417	181	103	71	185.5	42	9	1/4	125	5	200	8	19	210	8	23	210	8	18
150	6	150	71	285	190	140	428	143	417	181	103	71	200.5	42	9	1/4	150	6	230	8	19	240	8	23	240	8	22
200	8	195	87	350	242	140	493	175	542	220	118.5	74	-	-	-	1/4	200	8	280	8	23	290	12	23	295	8	22
250	10	250	112	421	302	180	584	211	658	266	149	82	-	-	-	1/4	250	10	345	12	23	355	12	25	350	12	22
300	12	303	129	488	360	235	641	244	658	266	149	82	-	-	-	1/4	300	12	390	12	23	400	16	25	400	12	22
350	14	351	129	539	393	235	732	270	943	332	182	118	-	-	-	3/8	350	14	435	12	25	445	16	25	460	16	22

■ ANSI (Unit: inch)

inch	mm	d	L	D	D ₁	D ₂	H	H ₁	A	A ₁	A ₂	A ₃	S	S ₁	S ₂	P	ANSI Class 150		
																	C	n	h
1 1/2	40	1.77	1.54	5.91	2.80	3.94	10.35	2.95	9.45	4.13	2.09	1.97	4.63	1.26	0.28	1/4	3.88	4	0.62
2	50	2.20	1.65	6.50	3.19	3.94	10.75	3.27	9.45	4.13	2.09	1.97	5.02	1.26	0.28	1/4	4.75	4	0.75
2 1/2	65	2.72	1.81	7.28	3.74	3.94	11.73	3.66	11.34	4.92	2.62	2.05	5.41	1.26	0.28	1/4	5.50	4	0.75
3	80	3.03	1.81	8.31	4.13	3.94	12.32	4.17	11.34	4.92	2.62	2.05	6.00	1.26	0.28	1/4	6.00	4	0.75
4	100	4.02	2.20	9.37	5.28	3.94	14.21	4.69	13.43	5.75	3.25	2.32	6.59	1.26	0.28	1/4	7.50	8	0.75
5	125	5.08	2.60	10.04	6.65	5.51	16.26	5.04	16.42	7.13	4.06	2.80	7.30	1.65	0.35	1/4	8.50	8	0.88
6	150	5.91	2.80	11.22	7.48	5.51	16.85	5.63	16.42	7.13	4.06	2.80	7.89	1.65	0.35	1/4	9.50	8	0.88
8	200	7.68	3.43	13.78	9.53	5.51	19.41	6.89	21.34	8.66	4.67	2.91	-	-	-	1/4	11.75	8	0.88
10	250	9.84	4.41	16.57	11.89	7.09	22.99	8.31	25.91	10.47	5.87	3.23	-	-	-	1/4	14.25	12	1.00
12	300	11.93	5.08	19.21	14.17	9.25	25.24	9.61	25.91	10.47	5.87	3.23	-	-	-	1/4	17.00	12	1.00
14	350	13.82	5.08	21.22	15.47	9.25	28.82	10.63	37.13	13.07	7.17	4.65	-	-	-	3/8	18.75	12	1.12

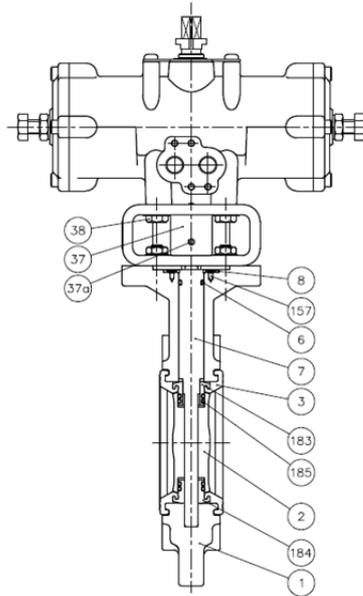
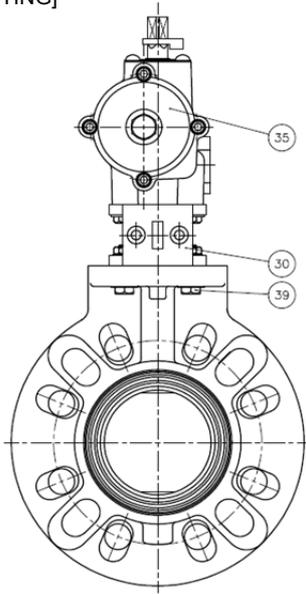
ACTUATOR SELECTION CHART *

SIZE	ACTUATOR TYPE
40mm (1 1/2 inch)	TA2A-050R
50mm (2 inch)	
65mm (2 1/2 inch)	TA2A-063R
80mm (3 inch)	
100mm (4 inch)	TA2A-080R
125mm (5 inch)	
150mm (6 inch)	TA2A-100R2
200mm (8 inch)	
250mm (10 inch)	TA2A-125R2
300mm (12 inch)	
350mm (14 inch)	TA2A-160R2
350mm (14 inch)	TA-200R

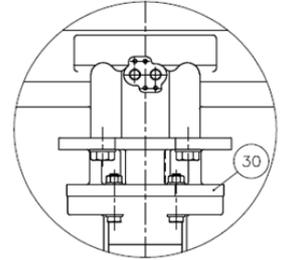
*For detailed specifications, see page 6.

Parts list

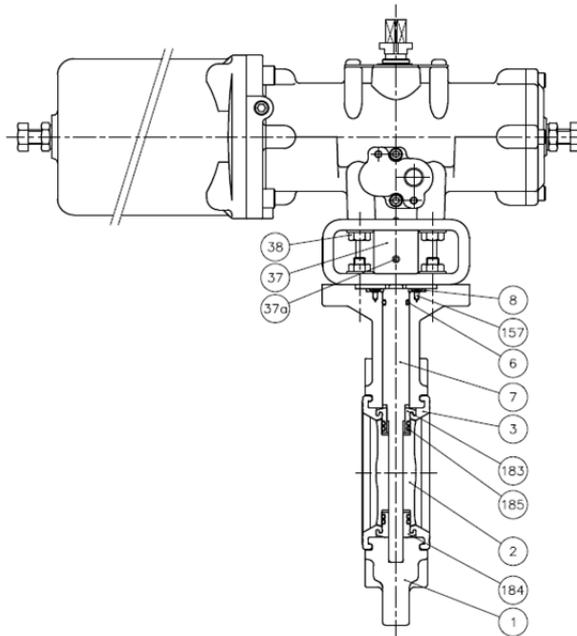
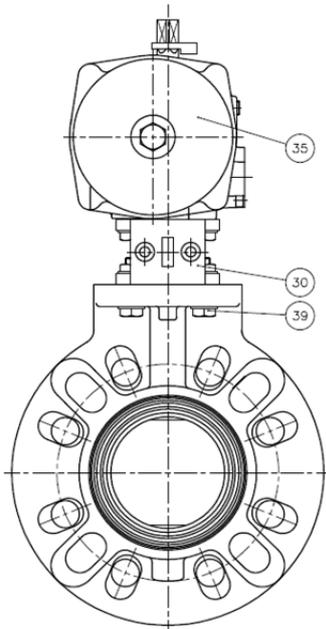
[DOUBLE ACTING]



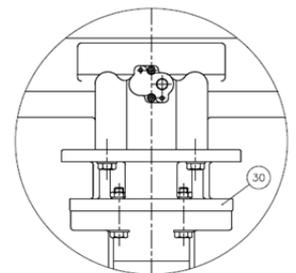
The Shape of Stand
200mm (8") – 350mm (14")



[AIR TO OPEN, AIR TO CLOSE]



The Shape of Stand
200mm (8") – 350mm (14")



PART NO./NAME	QTY	MATERIAL
1 BODY	1	BODY DISC / SEAT BUSH
2 DISC	1	U-PVC PP
183 SEAT BUSH (A)	1	PP PP
184 SEAT BUSH (B)	1	PVDF PVDF
3 SEAT	1	
6 O-RING (C)	1	EPDM, FKM, etc.
185 O-RING (I)	4	
7 STEM	1	STAINLESS STEEL
8 STEM HOLDER (A)	1	PP
157 STEM SCREW (F)	4	STAINLESS STEEL

PART NO./NAME	QTY	MATERIAL
30 STAND	1	PPG Used for Size 40-150mm CAST ALUMINIUM ALLOY Used for Size 200-350mm (Epoxy Coat.)
35 ACTUATOR	1	ALUMINIUM ALLOYS DIE CASTINGS Used for Size 40-300mm (Meromin Baking Coat.) CAST IRON Used for Size 350mm (Acryl Coat.)
37 JOING (A)	1	COPPER ALLOY
37A SCREW (C)	1	STAINLESS STEEL
38 BOLT (E)	4Sets	STAINLESS STEEL
39 BOLT, NUT (A)	4	STAINLESS STEEL

Compatible Actuator

Horizontal actuator can reduce piping space.

Options are easily removable/replaceable and can be mounted later (except positioner).

Air piping is compatible with NAMUR standard.

BASIC SPECIFICATIONS

DOUBLE ACTING	ACTUATOR TYPE									UNIT
	TA2A-0402D	TA2A-050D	TA2A-063D	TA2A-080D	TA2A-100D	TA2A-125D	TA2A-160D	TA-200D	TW-250D	
ANGLE ADJUSTMENT	No angle adjustment is available.	±5°								
OPERATING PRESSURE	0.4-0.7									MPa
AIR CONSUMPTION	0.5	0.9	1.7	3.2	6.6	13.3	27.1	56.8	99	N/OPEN & CLOSE (0.4 MPa)
AIR SUPPLY BORE	Rc1/8	Rc1/4					Rc3/8			

AIR TO OPEN AIR TO CLOSE	ACTUATOR TYPE								UNIT	
	TA2A-0402R	TA2A-050R	TA2A-063R	TA2A-080R	TA2A-100R2	TA2A-125R2	TA2A-160R2	TA-200R		
ANGLE ADJUSTMENT	No angle adjustment is available.	±5°								
OPERATING PRESSURE	0.4-0.7								MPa	
AIR CONSUMPTION	0.8	1.7	3.3	6.1	12.8	21.6	42.7	68.4	N/OPEN & CLOSE (0.4 MPa)	
AIR SUPPLY BORE	Rc1/4	Rc1/4					Rc3/8			

OPTION COMBINATION

COMBINATION NO.	1	2	3	4	5	6	7	8	9
SOLENOID VALVE *1	○	—	—	○	○	—	○	—	—
FILTER REGULATOR	—	—	—	○	—	—	○	—	○
SPEED CONTROLLER *2	⊙	○	—	⊙	⊙	○	⊙	—	—
LIMIT SWITCH *3	—	—	○	—	○	○	○	—	—
POSITIONER (E/P, P/P)	—	—	—	—	—	—	—	○	○

*1 Equipped with a built-in speed controller and bypass valve.

*2 ⊙ indicates solenoid valve-dedicated type.

*3 When using the limit switch at 1 to 100 mA or 5 to 30V, contact our sales office in your area.

OPTION LIST	MANUFACTURER	BASIC SPECIFICATIONS
SOLENOID VALVE NAMUR	KONAN	<ul style="list-style-type: none"> • WATER PROOF, EXPLOSION PROOF • POWER SOURCE AC100V, AC110V, AC200V, AC220V, DC24V
FILTER REGULATOR	KONAN	
SPEED CONTROLLER	KONAN	* Since a solenoid valve has a built-in wxhaust valve, when a solenoid valve is mounted, no speed controller is necessary.
BYPASS VALVE (SPEED CONTROLLER)	KONAN	
LIMIT SWITCH BOX	KONAN	• WATER PROOF
LIMIT SWITCH	AZBIL (formerly YAMATAKE)	• WATER PROOF - EXPLOSION PROOF - OPEN: 1PC, CLOSE: 1PC, OPEN/CLOSE: 2PC
PROXIMITY SWITCH	AZBIL (formerly YAMATAKE)	• OPEN: 1PC, CLOSE: 1PC, OPEN/CLOSE: 2PC
POSITIONER	YTC	<ul style="list-style-type: none"> • E/P: INPUT SIGNAL CURRENT DC 4-20 mA • P/P: INPUT SIGNAL AIR PRESSURE 0.02 - 0.1 MPa
MANUAL OPERATION LEVER	ASAHI YUKIZAI	
MANUAL OVERRIDE	KONAN	
FULL OPENING ADJUSTMENT (OPENING DEGREE ADJUSTING BOLT)	ASAHI YUKIZAI	
SPECIAL PAINTING (ACTUATOR ONLY)	KONAN	• EPOXY PAINT, POLYURETHANE PAINT
SPECIAL FITTING	ASAHI YUKIZAI	• SUS304

Product weight list (reference)

TYPE 57 AUTOMATIC TYPE TA (standard)

Unit : kg

mm	inch	DOUBLE ACTING			AIR TO OPEN / AIR TO CLOSE		
		U-PVC	PP	PVDF	U-PVC	PP	PVDF
40	1 1/2	2.8	2.6	3.0	4.5	4.3	4.7
50	2	3.0	2.7	3.2	4.7	4.4	4.9
65	2 1/2	4.0	3.7	4.3	6.8	6.5	7.1
80	3	4.2	3.9	4.5	7.0	6.7	7.3
100	4	6.1	5.6	6.6	11.2	10.7	11.7
125	5	11.1	10.3	12.2	21.0	20.2	22.1
150	6	11.9	11.0	13.3	21.8	20.9	23.2
200	8	18.6	17.0	21.1	36.8	35.2	39.3
250	10	32.5	29.9	36.1	64.5	62.9	69.1
300	12	41.7	37.5	47.5	74.7	70.5	80.5
350	14	96.1	91.6	103	196	192	203

Product model code list

ACTUATION	TYPE	ACTUATOR TYPE	ACTION	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE
A	57	K	*	*	*	W	*	***
∴	∴	∴	∴	∴	∴	∴	∴	∴
A AUTOMATIC VALVE	57 TYPE 57	K TYPE TA	F DOUBLE ACTING G AIR TO OPEN S AIR TO CLOSE	U U-PVC P PP F PVDF	E EPDM V FKM	W WAFER	1 10K 5 5K D DIN A ANSI	040 40mm ∴ 350 350mm

Installation, Operation and Maintenance Manual

"For details of Installation, Operation and Maintenance, please refer IOM at below link"

http://www.asahi-yukizai.co.jp/en/product/mt_pdf/a_automatic_valve_3_01.pdf