True Union Diaphragm Valve Type AI (Pneumatic Type)

Features

- Near-Linear flow characteristics
- Maximum working pressure of 1.0MPa excellent open/close durability to withstand more than 500,000 cycles of opening and closing.
- For the air to open type, two spec types (1.0MPa and 0.7MPa) are available.
- All-plastic design ensures excellent corrosion resistance.

Basic specifications

- Valve Type			:	True Union Diaphragm Valve Type AI
- Size			:	15 mm - 50 mm (1/2 inch – 2 inch)
- Body Material			:	U-PVC (Conforming to ASTM D1784 Cell Classification 12454A)
			:	C-PVC (Conforming to ASTM D1784 Cell Classification 23567-A)
			:	PP (Conforming to ASTM D4101 Cell Classification PP0210B67272)
			:	PVDF (Conforming to ASTM D3222 Cell Classification Type II)
- Seal Material	/	Diaphragm	:	EPDM, PTFE
		O-Ring	:	EPDM, FKM
- Connection	/	Socket	:	JIS, DIN, ASTE D2466 SCH80, BS 4346
		Threaded	:	Rc, Rp, NPT
		Spigot	:	DIN

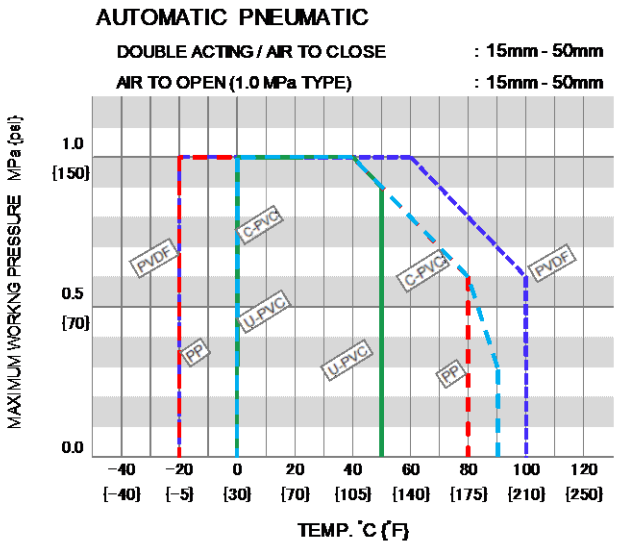
Body Material	Fluid Temperature ℃ { ℉ }	Maximum working pressure (Normal temperature) MPa { psi }	Connection method		
			SOCKET	SPIGOT	THREADED
U-PVC	0 ~ 60 { 30~140 }	1.0 { 150 }	○	○	○
C-PVC	0 ~ 90 { 30~195 }	1.0 { 150 }	○	-	○
PP	-20 ~ 90 { -5~195 }	1.0 { 150 }	○	○	○
PVDF	-40 ~ 120 { -40~250 }	1.0 { 150 }	○	○	○

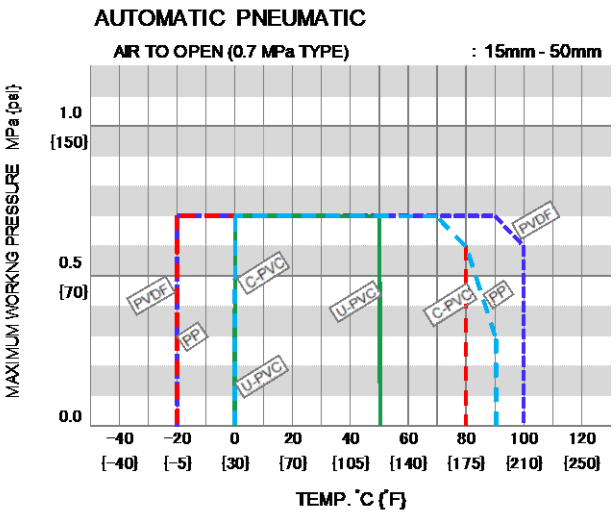
Note: The maximum working pressure is the value including the water hammer pressure. Be careful that the maximum working pressure is not exceeded during use.

* Concerning the allowable pressure for each temperature, material and actuator type, see the technical documents at the end of this catalog.

* The diaphragm may become loose due to temperature changes during long storage, operation stop or while in use. Check the conditions and then retighten the bolts and nut between the bonnet and the body to the "bonnet tightening torque". (Failure to do so may cause fluid leakage.)

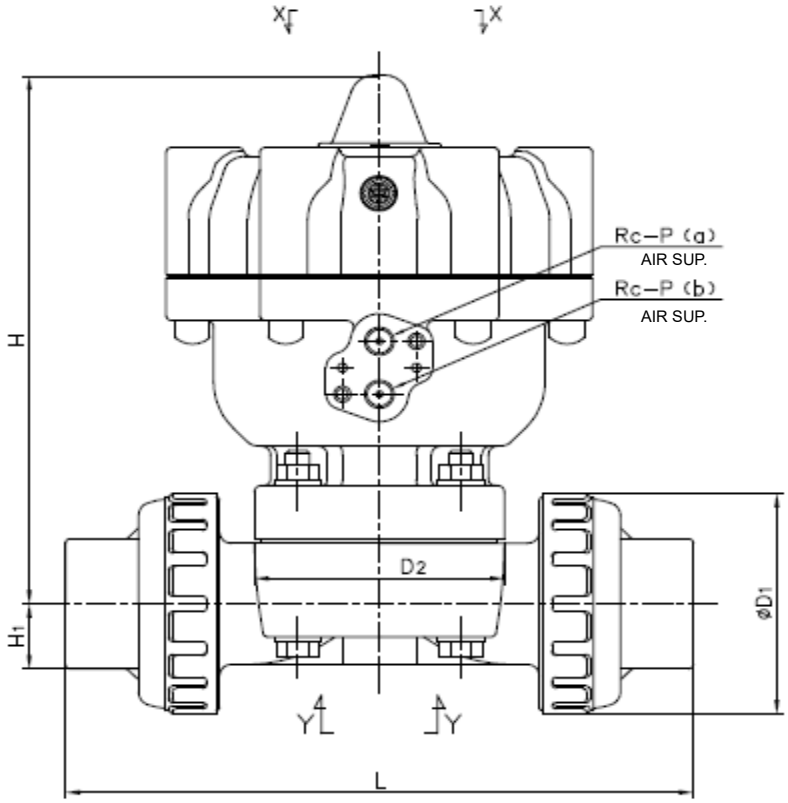
Working pressure vs. Temperature



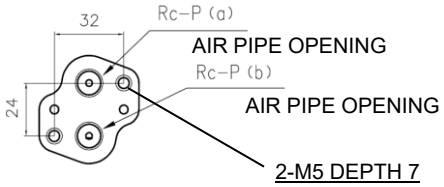


Note : Make sure that the temperature and pressure are within the working range during operation.
(If the tolerance range is exceeded during use, the valve may be damaged.)

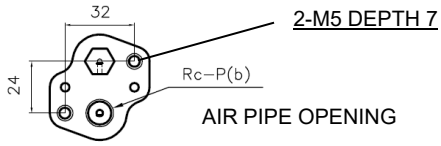
Product dimension



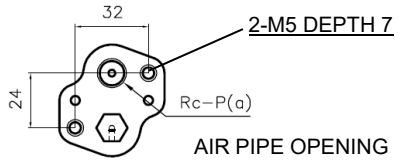
AIR PIPE OPENING
(For Double Acting)

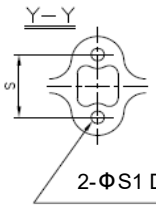


AIR PIPE OPENING
(For Air to Open)



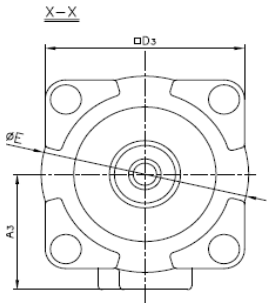
AIR PIPE OPENING
(For Air to Close)



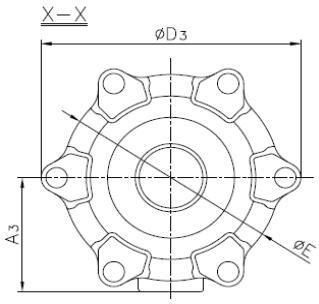


(ENSAT FITTING MOUNTING HOLE)

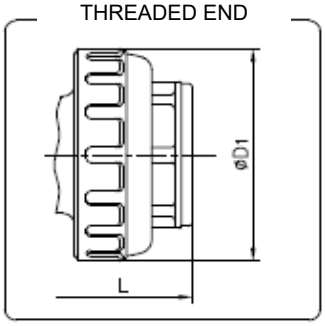
SIZE 15 – 32 mm



SIZE 40 , 50 mm



THREADED END



■ JIS, DIN (Unit: mm)

mm	D_2	D_3	E	H		H_1	A_3		S	S_1	S_2	P	JIS		
				DOUBLE ACTING AIR TO OPEN(0.7MPa) AIR TO CLOSE	AIR TO OPEN (1.0MPa)		DOUBLE ACTING	AIR TO OPEN AIR TO CLOSE					SOCKET L	THREADED L	
													U-PVC C-PVC	U-PVC C-PVC	PP PVDF
15	54X66	91	94	145	145	19.5	55	67	25	7	13	1/4	134	128	128
20	60X74	91	94	153	153	17.5	55	67	25	7	13	1/4	156	148	148
25	67X80	100	102	161	161	18.5	60	72	25	7	13	1/4	186	172	172
32	67X80	100	102	165	165	22.5	60	72	25	7	13	1/4	200	188	188
40	108X108	184	154	238	238	27.5	85	97	45	9	15	1/4	271	245	245
50	123X123	184	154	254	278	36	85	97	45	9	15	1/4	303	281	278

DIN							
SOCKET L		THREADED L		SPIGOT L		SPIGOT t	
U-PVC C-PVC	PP PVDF	U-PVC C-PVC	PP PVDF	U-PVC C-PVC	PP PVDF	PP	PVDF
128	125	128	128	150	150	2.5	1.9
147	141	148	148	172	172	2.7	1.9
172	164	172	172	195	195	3.0	2.4
188	177	188	188	212	212	3.7	2.4
246	231	245	245	276	276	4.6	3.0
294	274	281	278	308	307	5.8	3.0

■ ANSI (Unit: inch)

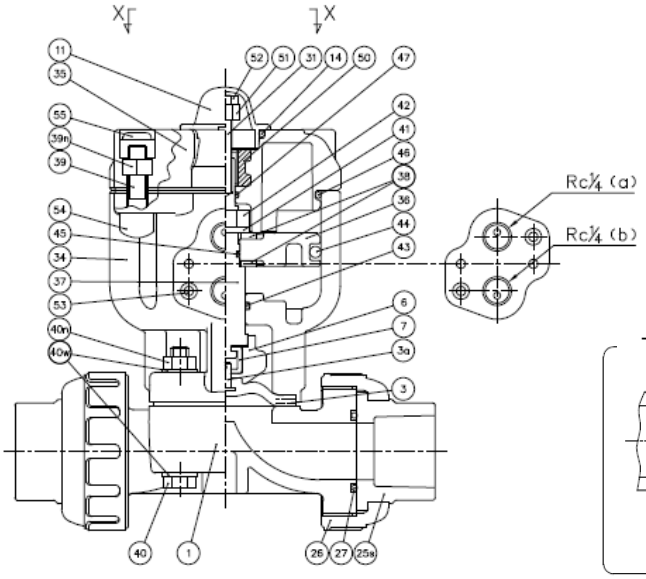
inch	mm	D_1	D_2	D_3	E	H		H_1	A_3		S	S_1	S_2	P	ANSI			
						DOUBLE ACTING AIR TO OPEN(0.7MPa) AIR TO CLOSE	AIR TO OPEN (1.0MPa)		DOUBLE ACTING	AIR TO OPEN AIR TO CLOSE					SOCKET		THREADED	
															U-PVC C-PVC	PP PVDF	U-PVC C-PVC	PP PVDF
1/2	15	1.89	2.13X2.60	3.58	3.70	5.71	5.71	0.77	2.17	2.64	0.98	0.28	0.51	1/4	5.47	5.43	5.04	5.04
3/4	20	2.36	2.36X2.91	3.58	3.70	6.02	6.02	0.69	2.17	2.64	0.98	0.28	0.51	1/4	6.18	6.09	5.83	5.83
1	25	2.76	2.64X3.15	3.94	4.02	6.34	6.34	0.73	2.36	2.83	0.98	0.28	0.51	1/4	7.32	7.24	6.77	6.77
1 1/4	32	3.23	2.64X3.15	3.94	4.02	6.50	6.50	0.89	2.36	2.83	0.98	0.28	0.51	1/4	7.95	7.80	7.40	7.40
1 1/2	40	3.94	4.25X4.25	7.24	6.06	9.37	9.37	1.08	3.35	3.82	1.77	0.35	0.59	1/4	10.47	10.28	9.65	9.65
2	50	4.17	4.84X4.84	7.24	6.06	10.00	10.94	1.42	3.35	3.82	1.77	0.35	0.59	1/4	11.54	11.54	11.06	10.95

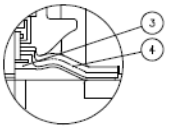
ACTUATOR SELECTION CHART

SIZE	ACTUATOR TYPE				
	DOUBLE ACTING	AIR TO OPEN (0.7MPa TYPE)	AIR TO OPEN (1.0MPa TYPE)	AIR TO OPEN (1.0MPa TYPE)	AIR TO CLOSE
		DIAPHRAGM COMMON	PTFE DIAPHRAGM	EPDM DIAPHRAGM	
15mm (1/2inch)	AI-1DA	AI-1AO	AI-1AO-P	AI-1AO-E	AI-1AS
20mm (3/4inch)	AI-2DA	AI-2AO	AI-2AO-P	AI-2AO-E	AI-2AS
25mm (1inch)	AI-3DA	AI-3AO	AI-3AO-P	AI-3AO-E	AI-3AS
32mm (1 1/4inch)					
40mm (1 1/2inch)	AI-4DA	AI-4AO	AI-4AO-P	AI-4AO-E	AI-4AS
50mm (2inch)	AI-5DA	AI-5AO	AI-5AO-P	AI-5AO-E	AI-5AS

Parts list

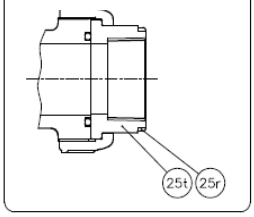
AUTOMATIC [PNEUMATIC] DOUBLE ACTING: SIZE 15 - 32 mm





In case material of diaphragm is PTFE

THREADED END

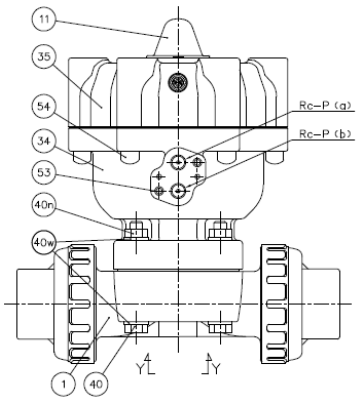


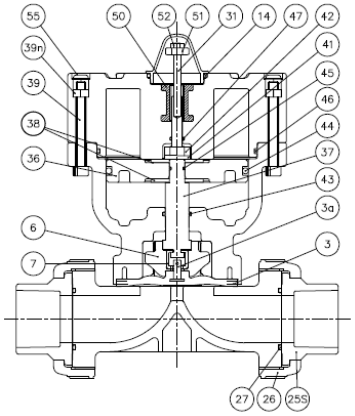
	PART NO./NAME	QTY	MATERIAL
1	BODY	1	PVC, C-PVC, PP, PVDF
25s	END CONNECTOR (SOCKET END)	2	
25t	END CONNECTOR (THREADED END)	2	
26	UNION NUT	2	
3	DIAPHRAGM	1	EPDM, PTFE, Others
3a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL
4	CUSHION	1	EPDM Used for PTFE Diaphragm
6	COMPRESSOR	1	PVDF
7	JOINT	1	STAINLESS STEEL
11	GAUGE COVER	1	PC
14	O-RING (No.14)	1	EPDM
27	O-RING (No.27)	2	EPDM, Others

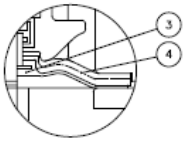
	PART NO./NAME	QTY	MATERIAL
31	INDICATOR ROD	1	STAINLESS STEEL
34	CYLINDER BODY	1	PPG
35	CYLINDER COVER	1	PPG
36	PISTON	1	PPG
37	STEM FOR PNEUMATIC ACTUATOR	1	COPPER ALLOY
38	WASHER (No.38)	2	STAINLESS STEEL
39	HEXAGON SOCKET HEAD CAP SCREWS	4	STAINLESS STEEL
39n	NUT (No.39)	4	STAINLESS STEEL
40	BOLT (No.40)	4	STAINLESS STEEL
40w	WASHER (No.40)	8	STAINLESS STEEL
40n	NUT (No.40)	4	STAINLESS STEEL
41	SPRING WASHER	1	STAINLESS STEEL
42	NUT (No.42)	1	STAINLESS STEEL

	PART NO./NAME	QTY	MATERIAL
43	O-RING (No.43)	1	NBR
44	O-RING (No.44)	1	NBR
45	O-RING (No.45)	1	NBR
46	O-RING (No.46)	1	NBR
47	O-RING (No.47)	1	NBR
50	INSERTED METAL OF CYLINDER COVER	1	STAINLESS STEEL
51	STOPPER FOR PNEUMATIC ACTUATOR	1	STAINLESS STEEL
52	NUT (No.52)	1	STAINLESS STEEL
53	INSERTED METAL OF CYLINDER BODY	2	STAINLESS STEEL
54	CAP FOR HEXAGON SOCKET HEAD CAP SCREW	4	PVC
55	CAP	4	EPDM Blue
25r	RING FOR END CONNECTOR (THREADED END)	2	Used for C-PVC Body. Threaded End : 15mm-25mm

AUTOMATIC [PNEUMATIC] DOUBLE ACTING: SIZE 40,50 mm

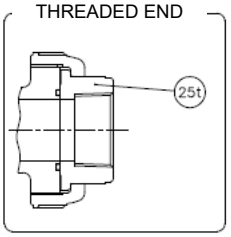






In case material of
Diaphragm is PTFE

THREADED END

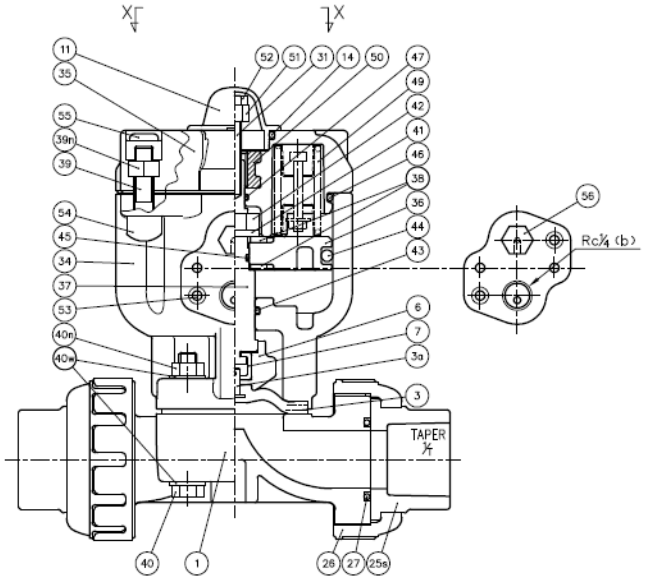


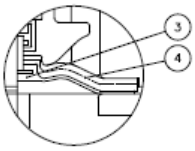
	PART NO./NAME	QTY	MATERIAL
1	BODY	1	PVC, C-PVC, PP, PVDF
25s	END CONNECTOR (SOCKET END)	2	
25t	END CONNECTOR (THREADED END)	2	
26	UNION NUT	2	
3	DIAPHRAGM	1	EPDM, PTFE, Others
3a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL
4	CUSHION	1	EPDM Used for PTFE Diaphragm
6	COMPRESSOR	1	PVDF
7	JOINT	1	STAINLESS STEEL
11	GAUGE COVER	1	PC
14	O-RING (No.14)	1	EPDM

	PART NO./NAME	QTY	MATERIAL
27	O-RING (No.27)	2	EPDM, Others ( )
31	INDICATOR ROD	1	STAINLESS STEEL
34	CYLINDER BODY	1	PPG
35	CYLINDER COVER	1	PPG
36	PISTON	1	PPG
37	STEM FOR PNEUMATIC ACTUATOR	1	COPPER ALLOY
38	WASHER (No.38)	2	STAINLESS STEEL
39	BOLT (No.39)	6	STAINLESS STEEL
39n	NUT (No.39)	6	STAINLESS STEEL
40	BOLT (No.40)	4	STAINLESS STEEL
40w	WASHER (No.40)	8	STAINLESS STEEL
40n	NUT (No.40)	4	STAINLESS STEEL
41	SPRING WASHER	1	STAINLESS STEEL
42	NUT (No.42)	1	STAINLESS STEEL

	PART NO./NAME	QTY	MATERIAL
43	O-RING (No.43)	1	NBR
44	O-RING (No.44)	1	NBR
45	O-RING (No.45)	1	NBR
46	O-RING (No.46)	1	NBR
47	O-RING (No.47)	1	NBR
50	INSERTED METAL OF CYLINDER COVER	1	STAINLESS STEEL
51	STOPPER FOR PNEUMATIC ACTUATOR	1	STAINLESS STEEL
52	NUT (No.52)	1	STAINLESS STEEL
53	INSERTED METAL OF CYLINDER BODY	2	STAINLESS STEEL
54	CAP FOR HEXAGON SOCKET HEAD CAP SCREWS	6	PVC
55	CAP	6	EPDM Blue

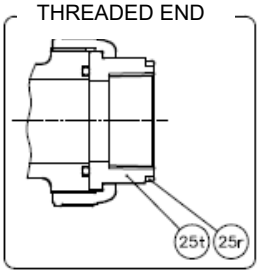
AUTOMATIC [PNEUMATIC] AIR TO OPEN: SIZE 15 - 32 mm [PN0.7, PN1.0]





In case material of
Diaphragm is PTFE

THREADED END

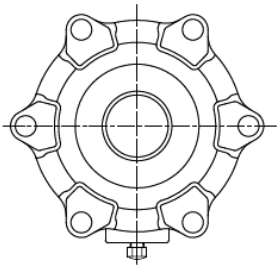


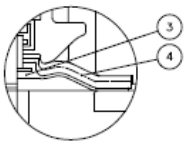
	PART NO./NAME	QTY	MATERIAL
1	BODY	1	PVC, C-PVC, PP, PVDF
25s	END CONNECTOR (SOCKET END)	2	
25t	END CONNECTOR (THREADED END)	2	
26	UNION NUT	2	
3	DIAPHRAGM	1	EPDM, PTFE, Others
3a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL
4	CUSHION	1	EPDM Used for PTFE Diaphragm
6	COMPRESSOR	1	PVDF
7	JOINT	1	STAINLESS STEEL
11	GAUGE COVER	1	PC
14	O-RING (No.14)	1	EPDM
27	O-RING (No.27)	2	EPDM, Others
31	INDICATOR ROD	1	STAINLESS STEEL
34	CYLINDER BODY	1	PPG
35	CYLINDER COVER	1	PPG

	PART NO./NAME	QTY	MATERIAL
36	PISTON	1	PPG
37	STEM FOR PNEUMATIC ACTUATOR	1	COPPER ALLOY
38	WASHER (No.38)	2	STAINLESS STEEL
39	HEXAGON SOCKET HEAD CAP SCREWS	4	STAINLESS STEEL
39n	NUT (No.39)	4	STAINLESS STEEL
40	BOLT (No.40)	4	STAINLESS STEEL
40w	WASHER (No.40)	8	STAINLESS STEEL
40n	NUT (No.40)	4	STAINLESS STEEL
41	SPRING WASHER	1	STAINLESS STEEL
42	NUT (No.42)	1	STAINLESS STEEL
43	O-RING (No.43)	1	NBR
44	O-RING (No.44)	1	NBR
45	O-RING (No.45)	1	NBR
46	O-RING (No.46)	1	NBR
47	O-RING (No.47)	1	NBR

	PART NO./NAME	QTY	MATERIAL
49	SPRING UNIT	-	SWOSC-V etc
50	INSERTED METAL OF CYLINDER COVER	1	STAINLESS STEEL
51	STOPPER FOR PNEUMATIC ACTUATOR	1	STAINLESS STEEL
52	NUT (No.52)	1	STAINLESS STEEL
53	INSERTED METAL OF CYLINDER BODY	2	STAINLESS STEEL
54	CAP FOR HEXAGON SOCKET HEAD CAP SCREWS	4	PVC
55	CAP	4	EPDM PN0.7:Red PN1.0:Blue
56	NIPPLE	1	COPPER ALLOY
25r	RING FOR END CONNECTOR (THREADED END)	2	STAINLESS STEEL Used for C-PVC Body. Threaded End : 15mm-25mm

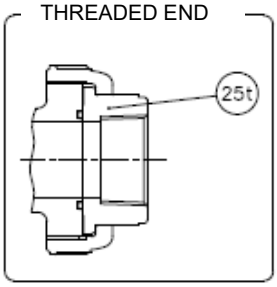
AUTOMATIC [PNEUMATIC] AIR TO OPEN: SIZE 40,50 mm [PN0.7, PN1.0]

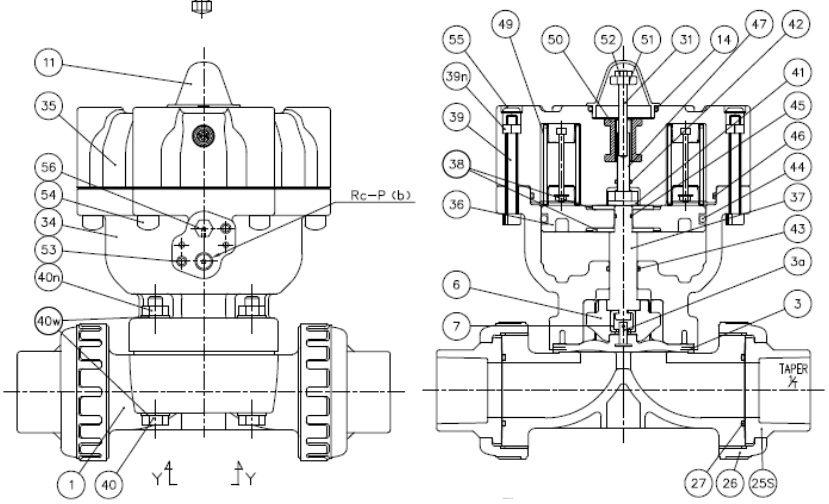




In case material of
Diaphragm is PTFE

THREADED END





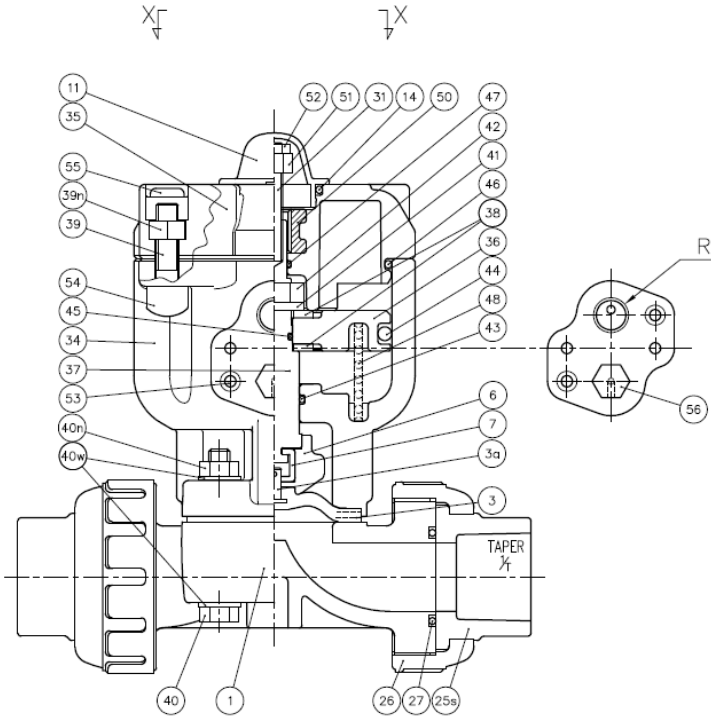
DATASHEET

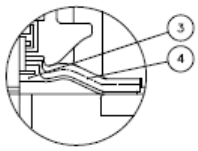
	PART NO./NAME	QTY	MATERIAL
1	BODY	1	PVC, C-PVC, PP, PVDF
25s	END CONNECTOR (SOCKET END)	2	
25t	END CONNECTOR (THREADED END)	2	
26	UNION NUT	2	
3	DIAPHRAGM	1	EPDM, PTFE, Others
3a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL
4	CUSHION	1	EPDM Used for PTFE Diaphragm
6	COMPRESSOR	1	PVDF
7	JOINT	1	STAINLESS STEEL
11	GAUGE COVER	1	PC
14	O-RING (No.14)	1	EPDM
27	O-RING (No.27)	2	EPDM, Others
31	INDICATOR ROD	1	STAINLESS STEEL

	PART NO./NAME	QTY	MATERIAL
34	CYLINDER BODY	1	PPG
35	CYLINDER COVER	1	PPG
36	PISTON	1	PPG
37	STEM FOR PNEUMATIC ACTUATOR	1	COPPER ALLOY
38	WASHER (No.38)	2	STAINLESS STEEL
39	BOLT (No.39)	6	STAINLESS STEEL
39n	NUT (No.39)	6	STAINLESS STEEL
40	BOLT (No.40)	4	STAINLESS STEEL
40w	WASHER (No.40)	8	STAINLESS STEEL
40n	NUT (No.40)	4	STAINLESS STEEL
41	SPRING WASHER	1	STAINLESS STEEL
42	NUT (No.42)	1	STAINLESS STEEL
43	O-RING (No.43)	1	NBR
44	O-RING (No.44)	1	NBR

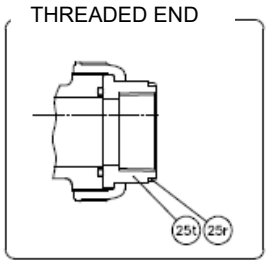
	PART NO./NAME	QTY	MATERIAL
45	O-RING (No.45)	1	NBR
46	O-RING (No.46)	1	NBR
47	O-RING (No.47)	1	NBR
49	SPRING UNIT	-	SWOSC-V etc. 2" (PN1.0):SWOSC-B etc.
50	INSERTED METAL OF CYLINDER COVER	1	STAINLESS STEEL
51	STOPPER FOR PNEUMATIC ACTUATOR	1	STAINLESS STEEL
52	NUT (No.52)	1	STAINLESS STEEL
53	INSERTED METAL OF CYLINDER BODY	2	STAINLESS STEEL
54	CAP FOR HEXAGON SOCKET HEAD CAP SCREWS	6	PVC
55	CAP	6	EPDM PN0.7:Red PN1.0:Blue
56	NIPPLE	1	COPPER ALLOY

AUTOMATIC [PNEUMATIC] AIR TO CLOSE: SIZE 15 - 32 mm





In case material of
Diaphragm is PTFE

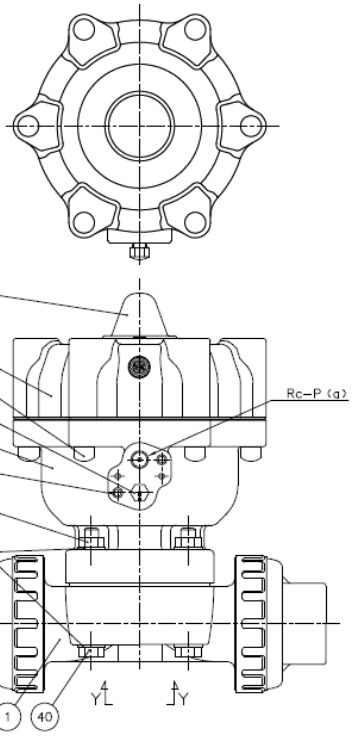


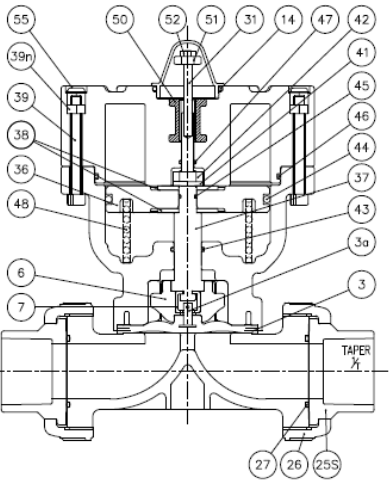
	PART NO./NAME	QTY	MATERIAL
1	BODY	1	PVC, C-PVC, PP, PVDF
25s	END CONNECTOR (SOCKET END)	2	
25t	END CONNECTOR (THREADED END)	2	
26	UNION NUT	2	
3	DIAPHRAGM	1	EPDM, PTFE, Others
3a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL
4	CUSHION	1	EPDM Used for PTFE Diaphragm
6	COMPRESSOR	1	PVDF
7	JOINT	1	STAINLESS STEEL
11	GAUGE COVER	1	PC
14	O-RING (No.14)	1	EPDM
27	O-RING (No.27)	2	EPDM, Others

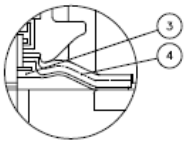
	PART NO./NAME	QTY	MATERIAL
31	INDICATOR ROD	1	STAINLESS STEEL
34	CYLINDER BODY	1	PPG
35	CYLINDER COVER	1	PPG
36	PISTON	1	PPG
37	STEM FOR PNEUMATIC ACTUATOR	1	COPPER ALLOY
38	WASHER (No.38)	2	STAINLESS STEEL
39	HEXAGON SOCKET HEAD CAP SCREWS	4	STAINLESS STEEL
39n	NUT (No.39)	4	STAINLESS STEEL
40	BOLT (No.40)	4	STAINLESS STEEL
40w	WASHER (No.40)	8	STAINLESS STEEL
40n	NUT (No.40)	4	STAINLESS STEEL
41	SPRING WASHER	1	STAINLESS STEEL
42	NUT (No.42)	1	STAINLESS STEEL
43	O-RING (No.43)	1	NBR
44	O-RING (No.44)	1	NBR

	PART NO./NAME	QTY	MATERIAL
45	O-RING (No.45)	1	NBR
46	O-RING (No.46)	1	NBR
47	O-RING (No.47)	1	NBR
48	SPRING	1	SPRING STEEL (SWOSM-
50	INSERTED METAL OF CYLINDER COVER	1	STAINLESS STEEL
51	STOPPER FOR PNEUMATIC ACTUATOR	1	STAINLESS STEEL
52	NUT (No.52)	1	STAINLESS STEEL
53	INSERTED METAL OF CYLINDER BOD	2	STAINLESS STEEL
54	CAP FOR HEXAGON SOCKET HEAD CAP SCREWS	4	PVC
55	CAP	4	EPDM PN0.7:Red PN1.0:Blue
56	NIPPLE	1	COPPER ALLOY
25r	RING FOR END CONNECTOR (THREADED END)	2	STAINLESS STEEL Used for C-PVC Body. Threaded End : 15mm-25mm

AUTOMATIC [PNEUMATIC] AIR TO CLOSE: SIZE 40,50 mm

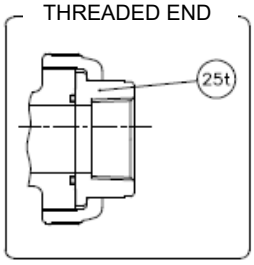






In case material of
Diaphragm is PTFE

THREADED END



PART NO./NAME		QTY	MATERIAL
1	BODY	1	PVC, C-PVC, PP, PVDF
25s	END CONNECTOR (SOCKET END)	2	
25t	END CONNECTOR (THREADED END)	2	
26	UNION NUT	2	
3	DIAPHRAGM	1	EPDM, PTFE, Others
3a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL
4	CUSHION	1	EPDM Used for PTFE Diaphragm
6	COMPRESSOR	1	PVDF
7	JOINT	1	STAINLESS STEEL
11	GAUGE COVER	1	PC
14	O-RING (No.14)	1	EPDM
27	O-RING (No.27)	2	EPDM, Others
31	INDICATOR ROD	1	STAINLESS STEEL

PART NO./NAME		QTY	MATERIAL
34	CYLINDER BODY	1	PPG
35	CYLINDER COVER	1	PPG
36	PISTON	1	PPG
37	STEM FOR PNEUMATIC ACTUATOR	1	COPPER ALLOY
38	WASHER (No.38)	2	STAINLESS STEEL
39	BOLT (No.39)	6	STAINLESS STEEL
39n	NUT (No.39)	6	STAINLESS STEEL
40	BOLT (No.40)	4	STAINLESS STEEL
40w	WASHER (No.40)	8	STAINLESS STEEL
40n	NUT (No.40)	4	STAINLESS STEEL
41	SPRING WASHER	1	STAINLESS STEEL
42	NUT (No.42)	1	STAINLESS STEEL
43	O-RING (No.43)	1	NBR

PART NO./NAME		QTY	MATERIAL
44	O-RING (No.44)	1	NBR
45	O-RING (No.45)	1	NBR
46	O-RING (No.46)	1	NBR
47	O-RING (No.47)	1	NBR
48	SPRING	1	SPRING STEEL (SWOSM-B)
50	INSERTED METAL OF CYLINDER COVE	1	STAINLESS STEEL
51	STOPPER FOR PNEUMATIC ACTUATOR	1	STAINLESS STEEL
52	NUT (No.52)	1	STAINLESS STEEL
53	INSERTED METAL OF CYLINDER BODY	2	STAINLESS STEEL
54	CAP FOR HEXAGON SOCKET HEAD CAP SCREWS	6	PVC
55	CAP	6	EPDM Blue
56	NIPPLE	1	COPPER ALLOY

Diaphragms except EPDM and PTFE are available in FKM, VIFLON®C (FKM-C), VIFLON®F (FKM-F), CPE, CSM, NBR and IIR when required.
The shape and appearance of assembly differ a little with nominal size compared to this drawing.

Compatible Actuator

Has sufficient durability to withstand 500,000 cycles of opening/closing.
Can be used in limited piping space.
All-plastic body ensures excellent corrosion resistance.

BASIC SPECIFICATIONS

DOUBLE ACTING	ACTUATOR TYPE					UNIT
	AV-1DA	AV-2DA	AV-3DA	AV-4DA	AV-5DA	
OPERATING PRESSURE	0.4-0.6					MPa
AIR CONSUMPTION	0.89		1.29	4.35	4.80	Nl/OPEN & CLOSE (0.4MPa)
	1.07		1.55	5.22	5.76	Nl/OPEN & CLOSE (0.5MPa)
	1.25		1.80	6.09	6.72	Nl/OPEN & CLOSE (0.6MPa)
AIR SUPPLY BORE	Rc1/4					

AIR TO OPEN (0.7Mpa)	ACTUATOR TYPE					UNIT
	AV-1AO	AV-2AO	AV-3AO	AV-4AO	AV-5AO	
OPERATING PRESSURE	0.4-0.6					MPa
AIR CONSUMPTION	0.35		0.49	1.73	1.98	Nl/OPEN & CLOSE (0.4MPa)
	0.42		0.59	2.08	2.37	Nl/OPEN & CLOSE (0.5MPa)
	0.49		0.69	2.52	2.77	Nl/OPEN & CLOSE (0.6MPa)
AIR SUPPLY BORE	Rc1/4					

AIR TO OPEN (1.0Mpa)	ACTUATOR TYPE					UNIT
	AV-1AO-P/E *	AV-2AO-P/E *	AV-3AO-P/E *	AV-4AO-P/E *	AV-5AO-P/E *	
OPERATING PRESSURE	0.5-0.6					MPa
AIR CONSUMPTION	0.42		0.59	2.08	2.37	Nl/OPEN & CLOSE (0.5MPa)
	0.49		0.69	2.43	2.76	Nl/OPEN & CLOSE (0.6MPa)
AIR SUPPLY BORE	Rc1/4					

* P : PTFE Diaphragm E : EPDM Diaphragm

AIR TO CLOSE	ACTUATOR TYPE					UNIT
	AV-1AS	AV-2AS	AV-3AS	AV-4AS	AV-5AS	
OPERATING PRESSURE	0.4-0.6					MPa
AIR CONSUMPTION	0.54		0.79	2.63	2.82	Nl/OPEN & CLOSE (0.4MPa)
	0.65		0.95	3.15	3.38	Nl/OPEN & CLOSE (0.5MPa)
	0.76		1.11	3.68	3.95	Nl/OPEN & CLOSE (0.6MPa)
AIR SUPPLY BORE	Rc1/4					

OPTION COMBINATION

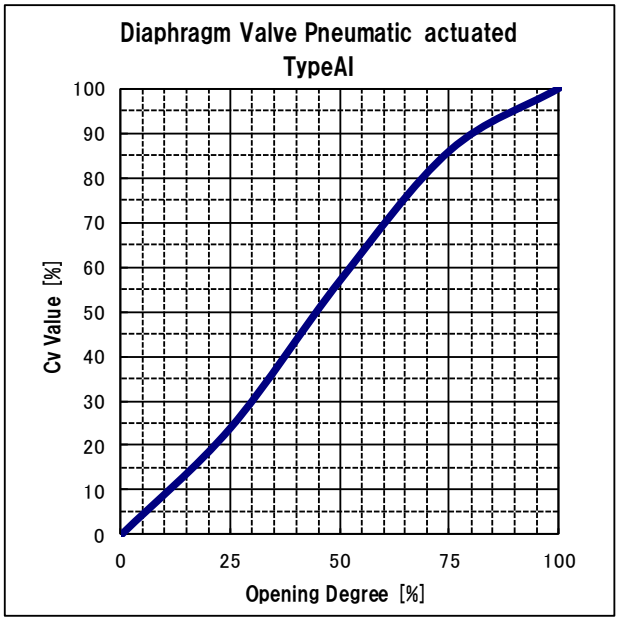
COMBINATION NO.	1	2	3	4	5	6	7	8	9
SOLENOID VALVE	○	–	–	○	○	–	○	–	–
FILTER REGULATOR	–	–	–	○	–	–	○	–	○
SPEED CONTROLLER *1	◎	○	–	◎	◎	○	◎	–	–
LIMIT SWITCH *2	–	–	○	–	○	○	○	–	–
POSITIONER (E/P,P/P)	–	–	–	–	–	–	–	○	○

*1 ◎ indicated solenoid valve-dedicated type.

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

OPTION LIST	MANUFACTURER	BASIC SPECIFICATIONS
SOLENOID VALVE NAMUR	KONAN	▪ 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 exhaust valve, when a solenoid valve is mounted, no speed controller is necessary.
BYPASS VALVE (SPEED CONTROLLER)	KONAN	
LIMIT SWITCH BOX	Rotech	▪ WATER PROOF
LIMIT SWITCH	AZBIL (formerly YAMATAKE)	▪ WATER PROOF, EXPLOSION PROOF ▪ OPEN: 1pc, CLOSE: 1pc, OPEN/CLOSE: 2pcs
POSITIONER	YTC	▪ E/P: INPUT SIGNAL CURRENT DC 4-20 mA ▪ P/P: INPUT SIGNAL AIR PRESSURE 0.02 - 0.1 MPa
MANUAL OVERRIDE	ASAHI YUKIZAI	
FULL OPENING ADJUSTMENT	ASAHI YUKIZAI	

Cv value for each opening degree



FULL-OPEN Cv VALUE

mm	15	20	25	32	40	50
inch	1/2	3/4	1	1 1/4	1 1/2	2
FULL-OPEN Cv VALUE	4.8	7.2	10	11	26	48

Product weight

TRUE UNION TYPE AI [AUTOMATIC PNEUMATIC TYPE AI]

Unit : kg

mm	inch	DOUBLE ACTING				AIR TO OPEN (0.7MPa TYPE)				AIR TO OPEN (1.0MPa TYPE)				AIR TO CLOSE			
		U-PVC	C-PVC	PP	PVDF	U-PVC	C-PVC	PP	PVDF	U-PVC	C-PVC	PP	PVDF	U-PVC	C-PVC	PP	PVDF
15	1/2	0.9	0.9	0.8	0.9	1.1	1.1	0.9	1.1	1.1	1.2	1.0	1.2	1.0	1.0	0.9	1.0
20	3/4	1.1	1.2	1.0	1.2	1.3	1.4	1.2	1.4	1.4	1.4	1.2	1.4	1.2	1.3	1.1	1.3
25	1	1.4	1.4	1.2	1.5	1.6	1.7	1.5	1.7	1.7	1.7	1.5	1.8	1.4	1.5	1.3	1.6
32	1 1/4	1.6	1.7	1.4	1.8	1.8	1.9	1.6	2.0	1.9	2.0	1.7	2.0	1.7	1.8	1.5	1.8
40	1 1/2	3.7	3.8	3.4	3.9	4.6	4.7	4.3	4.8	4.7	4.9	4.4	4.9	4.1	4.3	3.8	4.4
50	2	4.5	4.6	3.9	4.7	5.4	5.5	4.8	5.6	6.4	6.5	5.8	6.6	5.0	5.0	4.3	5.1

Product model code list

ACTUATION	TYPE	ACTUATOR TYPE	ACTION /POWER SOURCE	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE
A	TA	I	*	*	*	*	*	***
A AUTOMATIC VALVE	TA TYPE 14	I TYPE AI	F DOUBLE ACTING (1.0MPa TYPE) G AIR TO OPEN (0.7MPa TYPE) H AIR TO OPEN (1.0MPa TYPE) S AIR TO CLOSE (1.0MPa TYPE)	U U-PVC C C-PVC P PP F PVDF	E EPDM 1 PTFE+EPDM 2 PTFE+FKM	S SOCKET N THREADED P SPIGOT	J JIS10K D DIN A ANSI	015 15mm ~ 050 50mm

Installation, Operation and Maintenance Manual

For details of Installation, Operation and Maintenance, please contact our nearest distribution agent or sales office.