

Air operated 2-port valve
(cylinder valve)

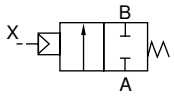
SAB*W Series

- NC, NO, double acting
- Port size: Rc1/4 to Rc2, 32 to 80 flange
- Working fluids: Water, non-corrosive liquid

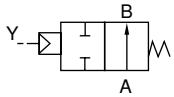
RoHS CAD

JIS symbol

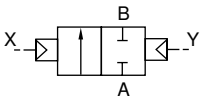
● NC



● NO



● Double acting



Common specifications

1 MPa = 10 bar

Item	SAB1W	SAB2W	SAB3W
Actuation	NC	NO	Double acting
Working fluid	Water/non-corrosive liquid (*1)		
Fluid viscosity mm²/s	500 or less		
Working pressure MPa	0 (≈0 psi) to 0.7 (≈100 psi)(*2)	0 (≈0 psi, 0 bar) to 1 (≈150 psi, 10 bar)	
Proof pressure (water pressure) MPa	2.0 (≈290 psi, 20 bar)		
Fluid temperature °C	-10 (14°F) to 60 (140°F) (no freezing) (*3)		
Ambient temperature °C	-10 (14°F) to 60 (140°F)		
Valve seat leakage cm³/min	0 (water pressure)		
Mounting orientation	Unrestricted		
Pilot fluid	Air		
Water hammer value MPa	1 (≈150 psi, 10 bar) or less (according to the Water Supply Act)		

*1 : Refer to the working fluid check list on Intro Page 39.
*2 : Note that this differs with the type, so refer to the working pressure in the individual specifications.
*3 : -10 to 90°C for fluoro rubber seal (FKM).

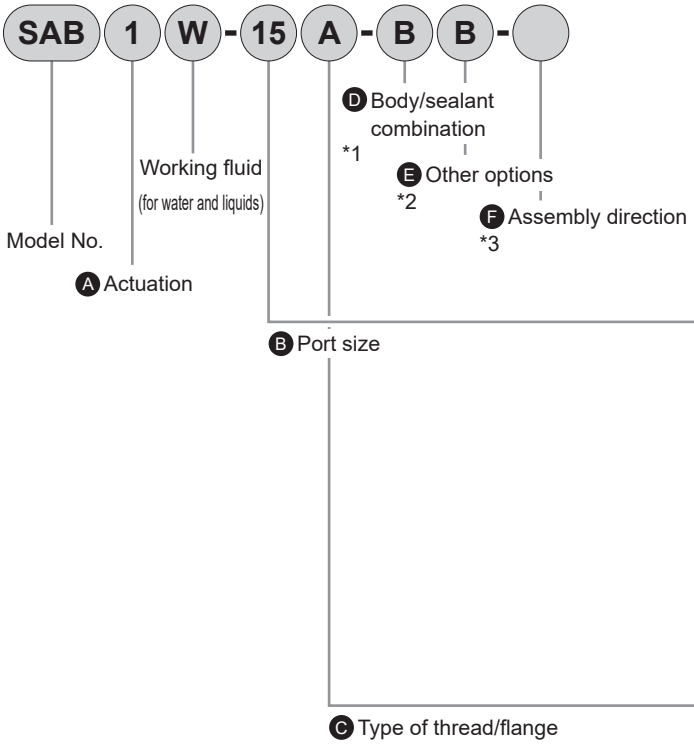
Individual specifications

1 MPa = 10 bar

Item / Model No.	Port size	Orifice size (mm)	Cv	Working pressure (MPa)			Pilot pressure (MPa)			Pilot port size	Weight (kg)		
				NC	NO	Double acting	NC	NO	Double acting		NC	NO	Double acting
SAB*W-8A	Rc 1/4	10	2.3	0 (≈0 psi) to 0.7 (≈100 psi)	0 (≈0 psi) to 1 (≈150 psi)		0.35 (≈51 psi) to 0.7 (≈100 psi)	(*1)		Rc1/8	0.3		
SAB*W-10A	Rc 3/8	10	2.6								0.3		
SAB*W-15A	Rc 1/2	15	5.6								0.6		
SAB*W-20A	Rc 3/4	16	8								0.8		
SAB*W-25A	Rc 1	20	12								1.1		
SAB*W-32A	Rc 1¼	26	20	0 (≈0 psi) to 0.5 (≈73 psi)	0 (≈0 psi) to 1 (≈150 psi)		0.25 (≈36 psi) to 0.7 (≈100 psi)	(*1)			2.3	2.2	2.2
SAB*W-32F	32 flange	26	20								5.3	5.2	5.2
SAB*W-40A	Rc 1½	32	32								3.4	3.2	3.2
SAB*W-40F	40 flange	32	32								6.5	6.3	6.3
SAB*W-50A	Rc 2	42	50								5.5	5.2	5
SAB*W-50F	50 flange	42	50								9.4	9.1	8.9
SAB*W-65F(*2)	65 flange	65	70								20.5	19	18
SAB*W-80F(*2)	80 flange	79	100								25	23	22

*1 : Refer to page 568 for the pilot air pressure for the NO and double acting.
*2 : Port sizes 65 flange/80 flange are made-to-order products.
*3 : Female thread is available in G thread and NPT thread.

How to order



Code	Description
A Actuation	
1	NC
2	NO
3	Double acting
B Port size	
8	1/4
10	3/8
15	1/2
20	3/4
25	1
32	1 1/4, 32 (Flange)
40	1 1/2, 40 (Flange)
50	2, 50 (Flange)
65	65 (Flange) (made-to-order product)
80	80 (Flange) (made-to-order product)
C Type of thread/flange	
A	Rc(8A to 50A)
F	Flange (32F to 80F)
G	G(8G to 50G)
N	NPT(8N to 50N)

D Body/sealant combination

		Body	Seal
O	Standard	Bronze	Nitrile rubber
B	Option	Bronze	Fluoro rubber
P		Bronze	Ethylene propylene rubber
D		Stainless steel	Nitrile rubber
E		Stainless steel	Fluoro rubber
R		Stainless steel	Ethylene propylene rubber

E Other options	
Blank	No option
B	Mounting plate *2
F Assembly direction	
Blank	No option
R	Mounting plate assembly position reversed

Refer to the figure below for the layout drawing.

⚠ Precautions for model No. selection

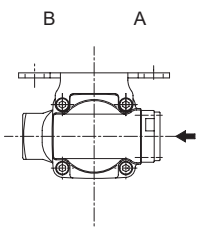
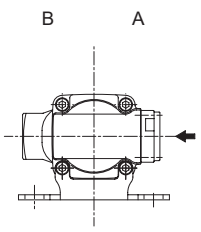
*1 : The body/sealant combination code is O or B for port size 65F and 80F. Note that the body is made of cast iron.
*2 : The mounting plate (Item EB) can be attached to only the female thread of port sizes 8 to 32.
*3 : Reversed mounting plate (Item FB-R) is available for port size 15 to 32.
*4 : Clockwise when viewed from above with the port A on the right.

[Example of model No.]

SAB1W-15A-BB

Model: SAB
A Actuation : NC (Normally closed)
B Port size : 1/2
C Type of thread/flange : Rc
D Body/sealant combination : Body - bronze, sealant - fluoro rubber
E Other options : With mounting plate
F Assembly direction : No option

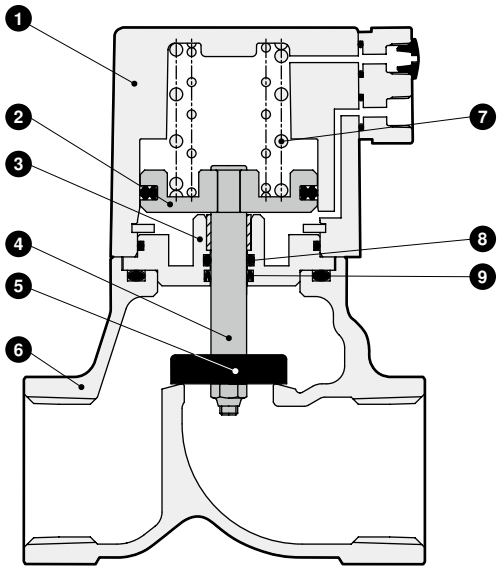
Item F Assembly direction

SAB [Air operated] *2/4		
Code	B (with mounting plate)	B-R *3
Direction	No rotation	Mounting plate reversed
Layout		

← Indicates pilot port IN.

Internal structure and parts list

● SAB1W

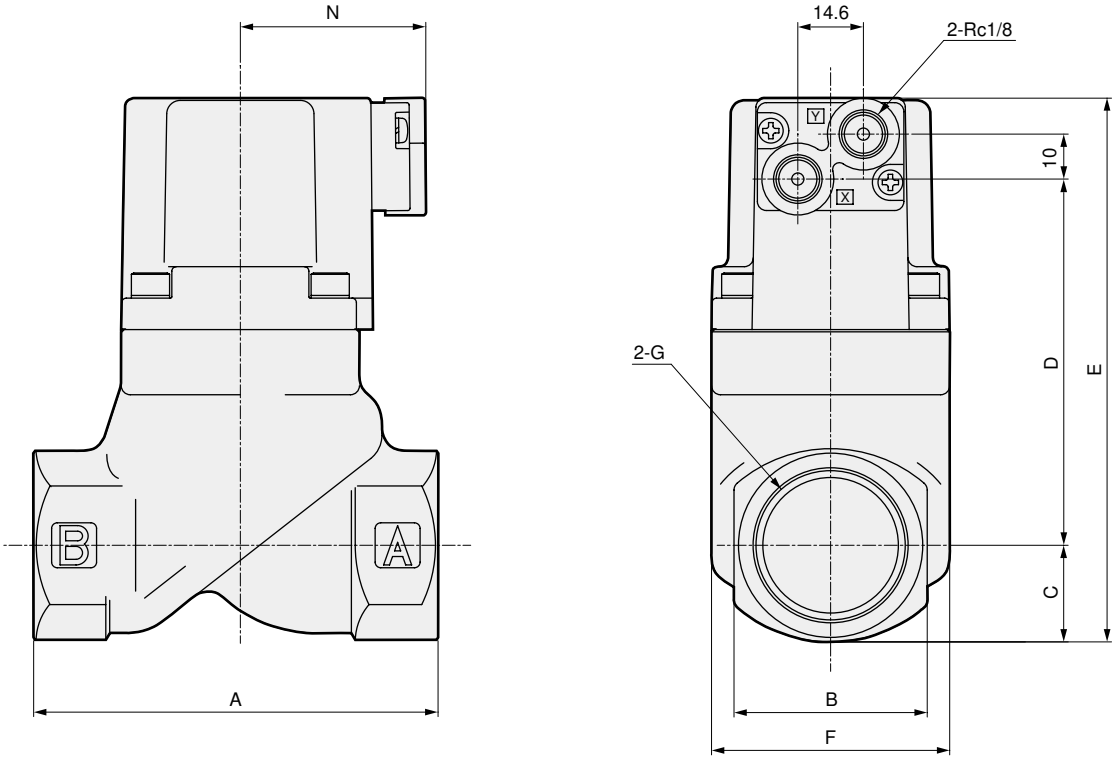


No.	Part name	Material	
1	Cylinder guard	ADC12	Aluminum die-casting
2	Piston	A2017	Aluminum
3	Adaptor	C3604(SUS304)	Copper alloy (stainless steel)
4	Piston rod	SUS304	Stainless steel
5	Main valving element	NBR(FKM, EPDM) SUS304	Nitrile rubber (fluoro rubber, ethylene propylene rubber) stainless steel
6	Body	CAC408(SCS13)	Bronze casting (stainless steel casting)
7	Spring	SWP	Piano wire
8	O-ring	NBR(FKM, EPDM)	NBR (FPM, EPM rubber)
9	MY packing	NBR(FKM, EPDM)	NBR (FPM, EPM rubber)

*1 : ( ) shows options.
*2 : For 65F and 80F, the body is FC250 (cast iron), and the main valving element material is FKM.

Dimensions CAD

● SAB*W-8* to 50* (female thread)

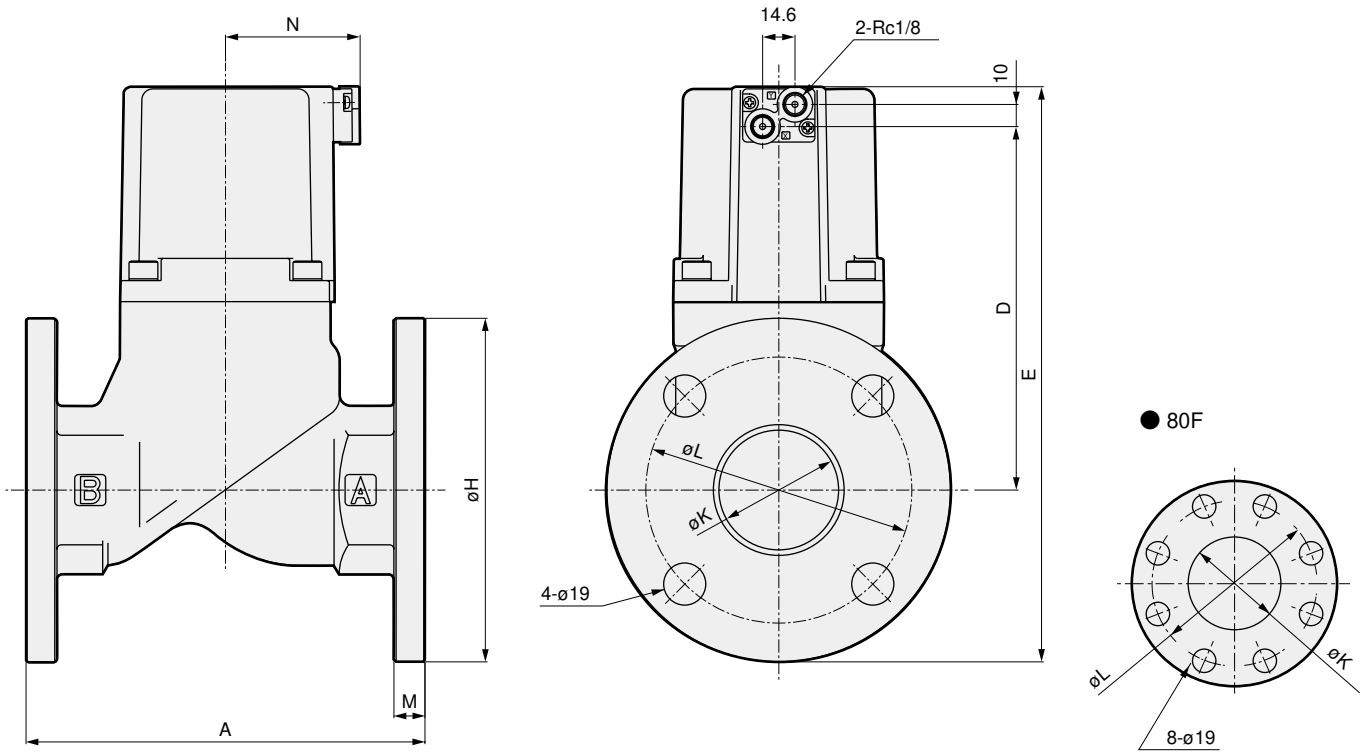


Model No.	A	B	C	D	E	F	G	N
SAB*W-8A/G/N	50	24	12	41.5	71.5	32	Rc1/4 / G1/4 / 1/4-18NPT	37(42)
SAB*W-10A/G/N							Rc3/8 / G3/8 / 3/8-18NPT	
SAB*W-15A/G/N	71	28	14.5	61.5	94	43	Rc1/2 / G1/2 / 1/2-14NPT	38(43)
SAB*W-20A/G/N	80	35	17.5	71	106.5	43	Rc3/4 / G3/4 / 3/4-14NPT	38(43)
SAB*W-25A/G/N	90	43	21	81.5	120.5	53	Rc1/G1/1-11.5NPT	41.5(46.5)
SAB*W-32A/G/N	125	55	27.5	109.5	155	63	Rc1 1/4 / G1 1/4 / 1 1/4-11.5 NPT	46(51)
SAB*W-40A/G/N	140	61	30.5	130.5	179	77	Rc1 1/2 / G1 1/2 / 1 1/2-11.5 NPT	53(58)
SAB*W-50A/G/N	160	76	38	164	220	95	Rc2/G2/2-11.5NPT	61(66)

*1: ( ) shows values for G thread.

Dimensions

● SAB*W-32F to 80F (flange)

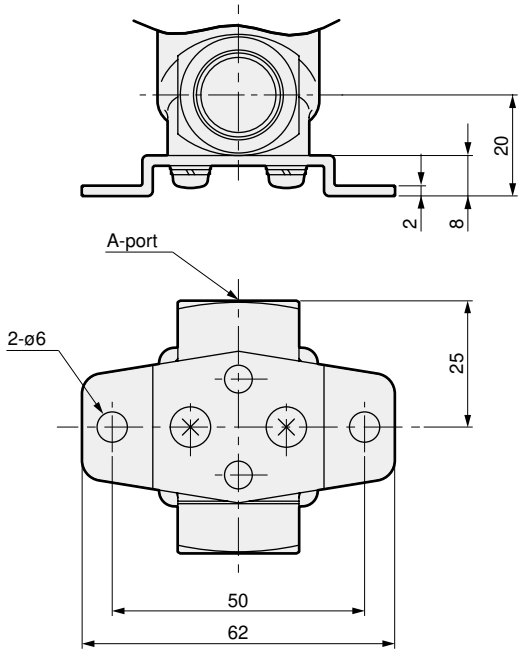


Model No.	A	D	E	H	K	L	M	N
SAB*W-32F	170	109.5	195	135	36	100	12	46
SAB*W-40F	180	130.5	218.5	140	42	105	12	53
SAB*W-50F	180	164	259.5	155	54	120	14	61
SAB*W-65F	210	199	347.5	175	68	140	16	101
SAB*W-80F	240	214	367.5	185	82	150	16	111

Optional dimensions

● Mounting plate
SAB*W-8*/10*-* B

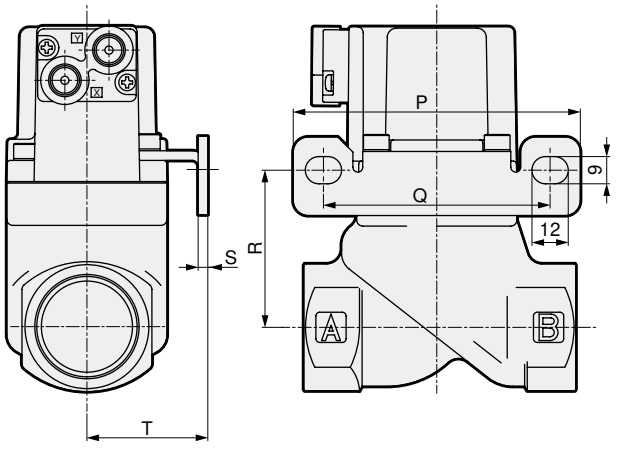
Material: Steel
Zinc plated



* Use the body mounting screws if fixing without a mounting plate.
(Thread size: M4 depth 8 pitch 19)

● Mounting plate
SAB*W-15* to 32*-* B / B-R

Material: Steel
Zinc plated



* The figure shows B.

Model No.	P	Q	R	S	T
SAB*W-15A/G/N	90	70	39	2.3	30
SAB*W-20A/G/N	90	70	48.5	2.3	30
SAB*W-25A/G/N	95	75	52	3.2	40
SAB*W-32A/G/N	105	85	66.5	3.2	45