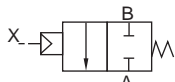


Air operated 2-port valve  
(cylinder valve)**SAB\* A Series**

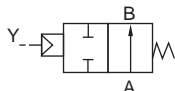
- NC (Normally Closed), NO (Normally Open), double acting
- Port size: Rc1/4 to Rc2 32 to 50 flange
- Working fluids: Air, gas

**JIS symbol**

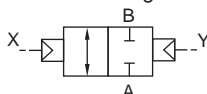
- NC (Normally Closed)



- NO (Normally Open)



- Double acting

**Common specifications**

Item	SAB1A	SAB2A	SAB3A
Actuation	NC (Normally Closed)	NO (Normally Open)	Double acting
Working fluid	Air/gas (*1)		
Working pressure MPa	0 to 0.9	0 to 1	
Proof pressure (water pressure)MPa	2.0		
Fluid temperature °C	-10 to 90 (no freezing)		
Ambient temperature °C	-10 to 60		
Valve seat leakage cm³/min	0.12 or less (Pneumatic pressure)		
Mounting orientation	Unrestricted		
Pilot fluid	Air		
Pilot pressure MPa	0.35 to 0.7	Refer to the following page.	

\*1: Refer to the working fluid check list described in "General Purpose Valves" (catalog No. CB-03-1SA).

**Individual specifications**

Item	Port size	Orifice size(mm)	C [dm³/(s·bar)]	b	S (mm²)	Allowable back pressure (MPa)	Pilot port size	Weight (kg)
Model No.								
NC (Normally Closed)								
SAB1A-8A	Rc 1/4	10	8.3	0.4	-	0.5	Rc 1/8	0.3
SAB1A-10A	Rc 3/8	10	11	0.4	-			0.3
SAB1A-15A	Rc 1/2	15	-	-	120	0.1		0.6
SAB1A-20A	Rc 3/4	16	-	-	150			0.8
SAB1A-25A	Rc 1	20	-	-	240			1.1
SAB1A-32A	Rc 1¼	26	-	-	390			2.2
SAB1A-32F	32 flange	26	-	-	390			5.2
SAB1A-40A	Rc 1½	32	-	-	610			3.2
SAB1A-40F	40 flange	32	-	-	610			6.3
SAB1A-50A	Rc 2	42	-	-	920			5.2
SAB1A-50F	50 flange	42	-	-	920			9.1
NO (Normally Open)								
SAB2A-8A	Rc 1/4	10	8.9	0.4	-	0.1	Rc 1/8	0.3
SAB2A-10A	Rc 3/8	10	12	0.3	-			0.3
SAB2A-15A	Rc 1/2	15	-	-	140	0.05		0.6
SAB2A-20A	Rc 3/4	16	-	-	180			0.8
SAB2A-25A	Rc 1	20	-	-	280			1.1
SAB2A-32A	Rc 1¼	26	-	-	450			2.2
SAB2A-32F	32 flange	26	-	-	450			5.2
SAB2A-40A	Rc 1½	32	-	-	680			3.2
SAB2A-40F	40 flange	32	-	-	680			6.3
SAB2A-50A	Rc 2	42	-	-	1020			5.2
SAB2A-50F	50 flange	42	-	-	1020			9.1
Double acting (*1)								
SAB3A-8A	Rc 1/4	10	8.3 (8.9)	0.4	-	1	Rc 1/8	0.3
SAB3A-10A	Rc 3/8	10	11 (12)	0.4 (0.3)	-			0.3
SAB3A-15A	Rc 1/2	15	-	-	120 (140)			0.6
SAB3A-20A	Rc 3/4	16	-	-	150 (180)			0.8
SAB3A-25A	Rc 1	20	-	-	240 (280)			1.1
SAB3A-32A	Rc 1¼	26	-	-	390 (450)			2.2
SAB3A-32F	32 flange	26	-	-	390 (450)			5.2
SAB3A-40A	Rc 1½	32	-	-	610 (680)			3.2
SAB3A-40F	40 flange	32	-	-	610 (680)			6.3
SAB3A-50A	Rc 2	42	-	-	920 (1020)			5.2
SAB3A-50F	50 flange	42	-	-	920 (1020)			9.1

\*1: The values in C, b and S ( ) for double acting are the flow rate when port A is pressurized.

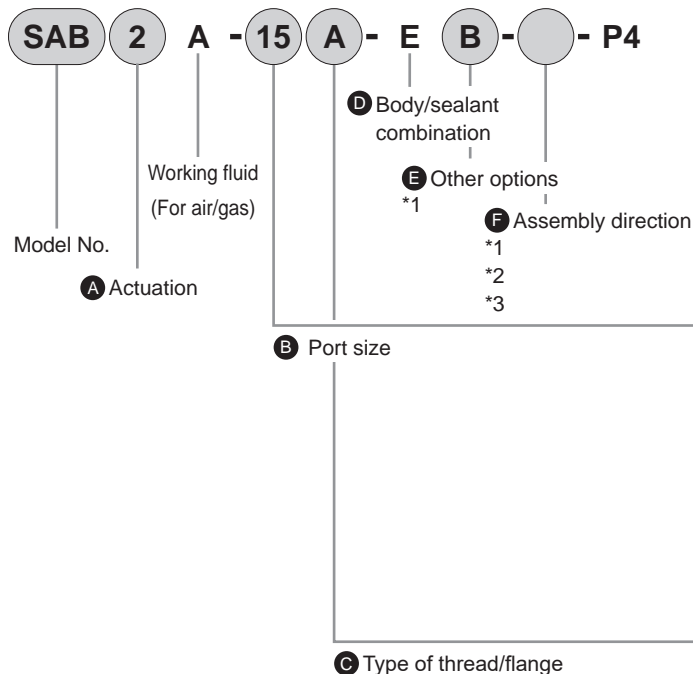
\*2: Effective cross-sectional area S and sonic conductance C are converted as  $S \approx 5.0 \times C$ .

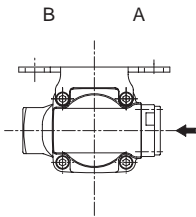
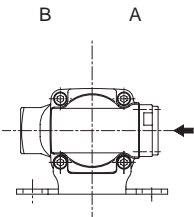
### Compatibility table by variation

	SAB
Port size	Rc1/4 to Rc2, 32 flange, 40 flange, 50 flange
P4	●

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

### How to order



Code	Description		
A Actuation			
1	NC (Normally Closed)		
2	NO (Normally Open)		
3	Double acting		
B Port size			
8	1/4		
10	3/8		
15	1/2		
20	3/4		
25	1		
32	1¼, 32 (Flange)		
40	1½, 40 (Flange)		
50	2, 50 (Flange)		
C Type of thread/flange			
A	Rc (8A to 50A)		
F	Flange (32F to 50F)		
D Body/sealant combination			
		Body	Seal
E	Option	Stainless steel	Fluoro rubber
E Other options			
Blank	No option		
B	Mounting plate *1		
F Assembly direction			
Blank	No option		
R	Mounting plate assembly position reversed		
Code	B (with mounting plate)	B-R *2	
Direction	No rotation	Mounting plate reversed	
Layout			

← shows pilot port IN.

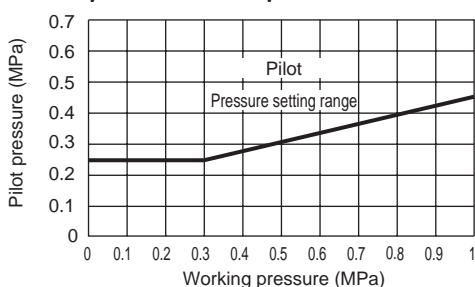
### ⚠ Precautions for model No. selection

- \*1: The mounting plate (Item E B) can be attached to only the female thread of port sizes 8 to 32.
- \*2: Reversed mounting plate (Item F B-R) is available for port sizes 15 to 32.
- \*3: Clockwise when viewed from above with port A on the right.
- \*4: Available as made to order. Contact CKD Sales for details.

### ■ Pilot pressure

Set pilot pressure within the specified range. In particular, set the pilot pressure for the SAB/SVB Series NO and double acting as shown in the graph below. If the product is used with a pressure below the range shown in the graph, sealant failure may occur; if the product is used with a pressure above the range shown in the graph, durability may be compromised. The NC is recommended when the pilot pressure cannot be controlled.

### ● SAB<sup>2</sup><sub>3</sub> W A Series/SVB<sup>2</sup><sub>3</sub> W A Series

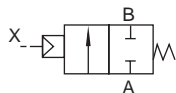


Air operated 2-port valve  
(cylinder valve)**SAB\*V Series**

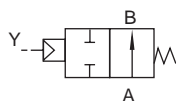
- NC (Normally Closed), NO (Normally Open), double acting
- Port size: Rc1/4 to Rc2, 32 to 50 flange
- Working fluid: Low vacuum

**JIS symbol**

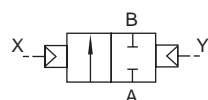
- NC (Normally Closed)



- NO (Normally Open)



- Double acting

**Common specifications**

Item	SAB1V	SAB2V	SAB3V
Actuation	NC (Normally Closed)	NO (Normally Open)	Double acting
Working fluid	Low vacuum (Air, water) (*1)		
Working pressure Pa (abs)	1.3 x 10 <sup>2</sup> to 7 x 10 <sup>5</sup> (refer to working pressure in individual specifications.)		
Proof pressure (water pressure) MPa	2.0		
Fluid temperature °C	-10 to 60 (no freezing) (*2)		
Ambient temperature °C	-10 to 60		
Valve seat leakage Pa·m <sup>3</sup> /s He	1.33 x 10 <sup>-3</sup> or less		
Pilot fluid	Air		
Mounting orientation	Unrestricted		

\*1: Refer to the working fluid check list in General Purpose Valves (CB-03-1SA).

**Individual specifications**

Item Model No.	Port size	Orifice size(mm)	C [dm <sup>3</sup> /(s·bar)]	b	S (mm <sup>2</sup> )	Working pressure Pa (abs)			Pilot pressure (MPa)			Pilot port size	Weight (kg)		
						NC	NO	Double acting	NC	NO	Double acting		NC	NO	Double acting
SAB*V-8A	Rc 1/4	10	8.9	0.4	-	1.3 x 10 <sup>2</sup> to 7 x 10 <sup>5</sup>	1.3 x 10 <sup>2</sup> to 1 x 10 <sup>6</sup>	0.35 to 0.7					0.3		
SAB*V-10A	Rc 3/8	10	12	0.3	-								0.3		
SAB*V-15A	Rc 1/2	15	-	-	140								0.6		
SAB*V-20A	Rc 3/4	16	-	-	180								0.8		
SAB*V-25A	Rc 1	20	-	-	280								1.1		
SAB*V-32A	Rc 1 1/4	26	-	-	450	1.3 x 10 <sup>2</sup> to 5 x 10 <sup>5</sup>	1.3 x 10 <sup>2</sup> to 1 x 10 <sup>6</sup>	0.25 to 0.7	(*1)			Rc 1/8	2.3	2.2	2.2
SAB*V-32F	32 flange	26	-	-	450								5.3	5.2	5.2
SAB*V-40A	Rc 1 1/2	32	-	-	680								3.4	3.2	3.2
SAB*V-40F	40 flange	32	-	-	680								6.5	6.3	6.3
SAB*V-50A	Rc 2	42	-	-	1020								5.5	5.2	5
SAB*V-50F	50 flange	42	-	-	1020								9.4	9.1	8.9

\*1: Refer to page 587 for the pilot pressure for the NO and double acting types.

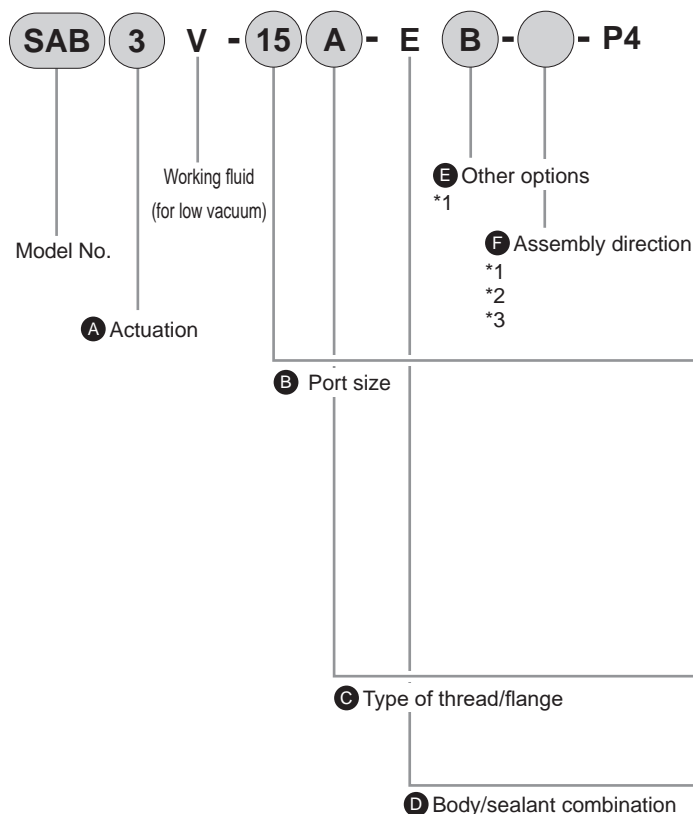
\*2: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.

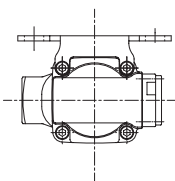
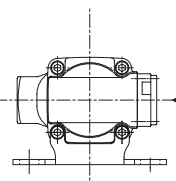
### Compatibility table by variation

	SAB
Port size	Rc1/4 to Rc2, 32 flange, 40 flange, 50 flange
P4	●

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

### How to order



Code	Description
<b>A Actuation</b>	
1	NC (Normally Closed)
2	NO (Normally Open)
3	Double acting
<b>B Port size</b>	
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)
<b>C Type of thread/flange</b>	
A	Rc (8A to 50A)
F	Flange (32F to 50F)
<b>D Body/sealant combination</b>	
	<b>Body</b> <b>Seal</b>
E	Option Stainless steel Fluoro rubber
<b>E Other options</b>	
Blank	No option
B	Mounting plate *2
<b>F Assembly direction</b>	
Blank	No option
R	Mounting plate assembly position reversed
<b>Code</b>	B (with mounting plate) B-R *2
<b>Direction</b>	No rotation Mounting plate reversed
<b>Layout</b>	
	

← shows pilot port IN.

### ⚠ Precautions for model No. selection

- \*1: The mounting plate (Item **E** B) can be attached to only the female thread of port sizes 8 to 32.
- \*2: Reversed mounting plate (Item **F** B-R) is available for port sizes 15 to 32.
- \*3: Clockwise when viewed from above with port A on the right.

**P4**  
Series

Pneumatic actuator  
Hand/Chuck  
Related products  
Cylinder Switch

Vacuum components  
Pneumatic valves

Pneumatic auxiliary components  
Clean air components  
Speed controller  
Fitting  
Auxiliary valve  
Silencer  
Tube

Gas generator

Fluid control components

Electric actuator  
Motor specification  
Motorless specifications

Air operated 2-port solenoid valve  
(cylinder valve)

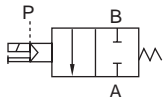
## SVB\*A Series

- NC, NO
- Port size: Rc1/4 to Rc2, 32 to 50 flange
- Working fluids: Air, inert gas

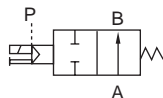


## JIS symbol

- NC (Open when energized)



- NO (Closed when energized)



## Common specifications

Item	SVB1A	SVB2A
Actuation	NC (Open when energized)	NO (Closed when energized)
Working fluid	Air/inert gas (*1)	
Working pressure MPa	0 to 0.9	0 to 1
Proof pressure (water pressure) MPa	2.0	
Fluid temperature °C	-10 to 60 (no freezing)	
Ambient temperature °C	-10 to 60	
Valve seat leakage cm <sup>3</sup> /min	0.12 or less (Pneumatic pressure)	
Pilot fluid	Air	
Pilot pressure MPa	0.35 to 0.7	Refer to next page
Mounting orientation	Unrestricted	

\*1: Refer to the working fluid check list described in "General Purpose Valves" (catalog No. CB-03-1SA).

Electrical specifications		
Rated voltage	24 VDC	
Power consumption(W)	2.0	
Thermal class	Class 130 (B)	
Degree of protection (IEC standards 529)	Grommet lead wire	IPX2
	With DIN terminal box (Pg9)	IPX5
	With T type terminal box (G1/2)	IPX5

\*1: Use the product within ±10% of the rated voltage.

## Individual specifications

Item	Port size	Orifice size (mm)	C [dm³/(s·bar)]	b	S (mm²)	Allowable back pressure (MPa)	Pilot port size	Weight (kg)
Model No.								
NC (Normally Closed)								
SVB1A-8A	Rc 1/4	10	8.3	0.4	-	0.5	Rc 1/8	0.5
SVB1A-10A	Rc 3/8	10	11	0.4	-			0.5
SVB1A-15A	Rc 1/2	15	-	-	120	0.1		0.8
SVB1A-20A	Rc 3/4	16	-	-	150			1
SVB1A-25A	Rc 1	20	-	-	240			1.3
SVB1A-32A	Rc 1¼	26	-	-	390			2.4
SVB1A-32F	32 flange	26	-	-	390			5.4
SVB1A-40A	Rc 1½	32	-	-	610			3.4
SVB1A-40F	40 flange	32	-	-	610			6.5
SVB1A-50A	Rc 2	42	-	-	920			5.4
SVB1A-50F	50 flange	42	-	-	920	9.3		
NO (Normally Open)								
SVB2A-8A	Rc 1/4	10	8.9	0.4	-	0.1	Rc 1/8	0.5
SVB2A-10A	Rc 3/8	10	12	0.3	-			0.5
SVB2A-15A	Rc 1/2	15	-	-	140			0.8
SVB2A-20A	Rc 3/4	16	-	-	180			1
SVB2A-25A	Rc 1	20	-	-	280			1.3
SVB2A-32A	Rc 1¼	26	-	-	450	0.05		2.4
SVB2A-32F	32 flange	26	-	-	450			5.4
SVB2A-40A	Rc 1½	32	-	-	680			3.4
SVB2A-40F	40 flange	32	-	-	680			6.5
SVB2A-50A	Rc 2	42	-	-	1020			5.4
SVB2A-50F	50 flange	42	-	-	1020			9.3

\*1: Refer to the next page for the NO pilot pressure.

\*2: Effective cross-sectional area S and sonic conductance C are converted as  $S \approx 5.0 \times C$ .

## Compatibility table by variation

	SVB
Port size	Rc1/4 to Rc2, 32 flange, 40 flange, 50 flange
P4	▲

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

## How to order

● With solenoid valve



Code	Description		
A Actuation			
1	NC (Open when energized)		
2	NO (Closed when energized)		
B Port size			
8	1/4		
10	3/8		
15	1/2		
20	3/4		
25	1		
32	1¼, 32 (Flange)		
40	1½, 40 (Flange)		
50	2, 50 (Flange)		
C Type of thread/flange			
A	Rc (8A to 50A)		
F	Flange (32F to 50F)		
D Body/sealant combination			
		Body	Seal
E	Option	Stainless steel	Fluoro rubber
E Coil			
2C	Standard	Grommet lead wire	
2G	Option	With DIN terminal box (Pg9)	
2H		DIN terminal box with lamp (Pg9)	
3T		With T type terminal box (G1/2)	
3R		T type terminal box with lamp (G1/2)	
F Other options			
Blank	No option		
S	With surge suppressor		
B	Mounting plate *1		
G Assembly direction			
Blank	No option		
X	Cylinder cover rotated 90°		
Y	Cylinder cover rotated 180°		
Z	Cylinder cover rotated 270°		
R	Coil reversed 180° [With solenoid valve] Mounting plate/coil reversed 180° [With solenoid valve]		
Refer to page 594 for the layout drawing.			
H Voltage			
DC24V	24 VDC		

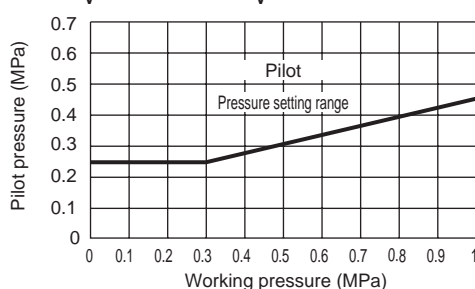
## Precautions for model No. selection

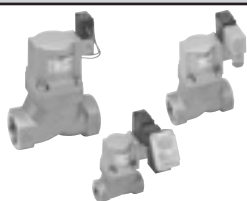
- \*1: The mounting plate (Item **F** B) can be attached to only the female thread of port sizes 8 to 32.
- \*2: To add both the surge suppressor and mounting plate options, indicate Item **F** as SB.
- \*3: The surge suppressor is attached with the lead wire coil. When selecting a coil with terminal box, the surge suppressor is mounted in the terminal box.
- \*4: Manual override (non-locking) is provided as standard.
- \*5: This will be made to order. Contact our Sales for details.

- Pilot pressure

Set pilot pressure within the specified range. In particular, set the pilot pressure for the SAB/SVB Series NO and double acting as shown in the graph below. If the product is used with a pressure below the range shown in the graph, sealant failure may occur; if the product is used with a pressure above the range shown in the graph, durability may be compromised. The NC is recommended when the pilot pressure cannot be controlled.

●SAB<sub>3</sub><sup>2W</sup><sub>A</sub> Series/SVB2<sup>W</sup><sub>A</sub> Series





General Purpose Valves  
Catalog No. CB-03-1SA

Air operated 2-port solenoid valve  
(cylinder valve)

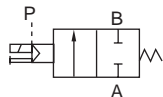
# SVB\*V Series

- NC, NO
- Port size: Rc1/4 to Rc2, 32 to 50 flange
- Working fluid: Low vacuum

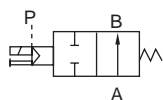


## JIS symbol

- NC (Normally Closed)



- NO (closed when energized)



## Common specifications

Item	SVB1V	SVB2V
Actuation	NC (Normally Closed)	NO (closed when energized)
Working fluid	Low vacuum (Air/water) (*1)	
Working pressure Pa(abs)	1.3 x 10 <sup>2</sup> to 7 x 10 <sup>5</sup> (Refer to the working pressure range in the individual specifications. )	
Proof pressure (water pressure) MPa	2.0	
Fluid temperature °C	-10 to 60 (no freezing)	
Ambient temperature °C	-10 to 60	
Valve seat leakage Pa·m <sup>3</sup> /s He	1.33 x 10 <sup>-3</sup> or less	
Pilot fluid	Air	
Mounting orientation	Unrestricted	

\*1: Refer to the working fluid check list described in "General Purpose Valves" (catalog No. CB-03-1SA).

Electrical specifications		
Rated voltage	24 VDC	
Power consumption (W)	DC	2.0
Thermal class	Class 130 (B)	
Degree of protection (IEC standards 529)	Grommet lead wire	IPX2
	With DIN terminal box (Pg9)	IPX5
	With T type terminal box (G1/2)	IPX5

\*1: Use the product within ±10% of the rated voltage.

## Individual specifications

Item Model No.	Port size	Orifice size (mm)	C [dm <sup>3</sup> /(s·bar)]	b	S (mm <sup>2</sup> )	Working pressure Pa (abs)		Pilot pressure (MPa)		Pilot port size	Weight (kg)	
						NC	NO	NC	NO		NC	NO
SVB*V-8A	Rc 1/4	10	8.3	0.4	-	1.3 x 10 <sup>2</sup> to 7 x 10 <sup>5</sup>	1.3 x 10 <sup>2</sup> to 1 x 10 <sup>6</sup>	0.35 to 0.7	(*1)	Rc 1/8	0.5	
SVB*V-10A	Rc 3/8	10	12	0.3	-						0.5	
SVB*V-15A	Rc 1/2	15	-	-	140						0.8	
SVB*V-20A	Rc 3/4	16	-	-	180						1	
SVB*V-25A	Rc 1	20	-	-	280						1.3	
SVB*V-32A	Rc 1 1/4	26	-	-	450	1.3 x 10 <sup>2</sup> to 5 x 10 <sup>5</sup>	1.3 x 10 <sup>2</sup> to 1 x 10 <sup>6</sup>	0.25 to 0.7	(*1)	Rc 1/8	2.5	2.4
SVB*V-32F	32 flange	26	-	-	450						5.5	5.4
SVB*V-40A	Rc 1 1/2	32	-	-	680						3.6	3.4
SVB*V-40F	40 flange	32	-	-	680						6.7	6.5
SVB*V-50A	Rc 2	42	-	-	1020						5.7	5.4
SVB*V-50F	50 flange	42	-	-	1020						9.6	9.3

\* Refer to the next page for the NO pilot pressure.



## How to order

- With solenoid valve

SVB 1 V - 15 A - E 2G S - DC24V - P4

Model No. **A** Actuation

Working fluid (for low vacuum)

**B** Port size

**C** Type of thread/flange

**D** Body/sealant combination

**E** Coil

**F** Other options

**G** Assembly direction

**H** Voltage

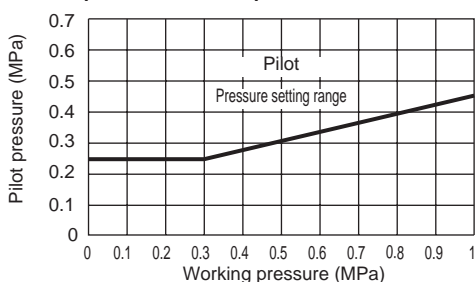
### ⚠ Precautions for model No. selection

- \*1: The mounting plate (Item **F** B) can be attached to only the female thread of port sizes 8 to 32.
- \*2: To add both the surge suppressor and mounting plate options, indicate Item **F** as SB.
- \*3: The surge suppressor is attached with the lead wire coil. When selecting a coil with terminal box, the surge suppressor is mounted in the terminal box.
- \*4: Manual override (non-locking) is provided as standard.
- \*5: This will be made to order. Contact our Sales for details.

### ■ Pilot pressure

Set pilot pressure within the specified range. In particular, set the pilot pressure for the SAB/SVB Series NO and double acting as shown in the graph below. If the product is used with a pressure below the range shown in the graph, sealant failure may occur; if the product is used with a pressure above the range shown in the graph, durability may be compromised. The NC is recommended when the pilot pressure cannot be controlled.

### ● SAB<sub>3</sub><sup>W</sup> Series/SVB<sub>2</sub><sup>W</sup> Series



Code		Description	
A Actuation			
1	NC (Open when energized)		
2	NO (Closed when energized)		
B Port size			
8	1/4		
10	3/8		
15	1/2		
20	3/4		
25	1		
32	1¼, 32 (Flange)		
40	1½, 40 (Flange)		
50	2, 50 (Flange)		
C Type of thread/flange			
A	Rc (8A to 50A)		
F	Flange (32F to 50F)		
D Body/sealant combination			
		Body	Seal
E	Option	Stainless steel	Fluoro rubber
E Coil			
2C	Standard	Grommet lead wire	
2G	Option	With DIN terminal box (Pg9)	
2H		DIN terminal box with lamp (Pg9)	
3T		With T type terminal box (G1/2)	
3R		T type terminal box with lamp (G1/2)	
F Other options			
Blank	No option		
S	With surge suppressor		
B	Mounting plate *1		
G Assembly direction			
Blank	No option		
X	Cylinder cover rotated 90°		
Y	Cylinder cover rotated 180°		
Z	Cylinder cover rotated 270°		
R	Coil reversed 180° [With solenoid valve] Mounting plate/coil reversed 180° [With solenoid valve]		
Refer to page 594 for the layout drawing.			
H Voltage			
DC24V	24 VDC		

### Compatibility table by variation

	SVB
Port size	Rc1/4 to Rc2, 32 flange, 40 flange, 50 flange
P4	▲

- : Applicable models ○: Semi-applicable models  
▲: Contact CKD for details. □: Not applicable

P4  
Series

Pneumatic actuator  
Pneumatic  
Chuck  
Hand/  
Related  
products  
Cylinder  
Switch

Vacuum components

Pneumatic valves

Clean air  
components  
controller

Pneumatic auxiliary components  
Speed  
Fitting  
Auxiliary  
valve

Silencer  
Tube

Gas generator

Fluid control components

Electric actuator  
Motor  
specification  
Motorless  
specifications



SVB [With solenoid valve] *6					
Code	Blank (standard)	X	Y	Z	R
Direction	No rotation	Cylinder cover rotated 90°	Cylinder cover rotated 180°	Cylinder cover rotated 270°	Coil reversed
Layout					

SVB [With solenoid valve] *1, *6					
Code	B (with mounting plate)	B-X	B-Y *7	B-Z *7	B-R *8
Direction	No rotation	Cylinder cover rotated 90°	Cylinder cover rotated 180° Mounting plate reversed	Cylinder cover rotated 270° Mounting plate reversed	Coil reversed Mounting plate reversed
Layout					

\*6: Clockwise rotating angle when viewed from above with port A on the right.

\*7: The mounting plate will be reversed 180° and attached.

\*8: The mounting plate for port size 10A is installed at the bottom, so only the coil position is reversed.

◀ shows pilot port IN.