

Air operated 2-port valve, single unit
(Compact cylinder valve)

NAB*/NAB*V Series

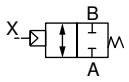
- NC, NO, double acting
- Port size: Rc1/4, Rc3/8
- Working fluids: Air, water, gas, low vacuum

RoHS CAD

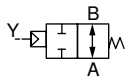
JIS symbol

● NAB*
(*1)

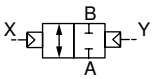
NC



NO



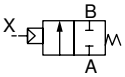
Double acting



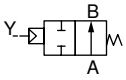
*1: If port B is normally pressurized, refer to the individual precautions on page 567 (*1 and *2).

● NAB*V

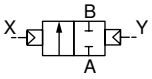
NC



NO



Double acting



Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	NAB*			NAB*V		
	NAB1	NAB2	NAB3	NAB1V	NAB2V	NAB3V
Actuation	NC	NO	Double acting	NC	NO	Double acting
Working fluid	Air/water/gas (*2)			Low vacuum (air, water) (*2)		
Fluid viscosity mm^2/s	500 or less					
Working pressure	0 (≈0 psi) to 0.7 MPa (≈100 psi)			1.3×10^2 to 7×10^5Pa(abs)		
Proof pressure (water pressure) MPa	1.4 (≈200 psi, 14 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	0.12 cm^3/min or less (pneumatic pressure)			1.33 x 10^{-3} Pa·m^3/sHe or less		
Port size	Rc1/4, Rc3/8					
Orifice size mm	7					
Cv	1.2					
C $[dm^3/(s\cdot bar)]$	5.2 (*4)					
b	0.3					
Weight kg	0.28 (depends on type)					
Mounting orientation	Unrestricted					
Pilot fluid	Air					
Pilot pressure MPa	0.25 to 0.7	(*5)		0.25 to 0.7	(*5)	
Pilot port size	Rc1/8 (depends on type)					

*2 : Refer to the working fluid check list on Intro Page 39.
*3 : The same for nitrile rubber seal and fluoro rubber seal.
*4 : Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.
*5 : Refer to page 568 for the pilot air pressure for the NO and double acting.

How to order

NAB 1 V - 8 - D2 B - CL4

Model No.

Ⓐ Actuation

Ⓑ Working fluid

Ⓒ Port size

Ⓓ Cylinder cover/body/sealant combination
*6
*7

Ⓔ Other options

Ⓕ Pilot port size
*6

Code	Description
Ⓐ Actuation	
1	NC
2	NO
3	Double acting
Ⓑ Working fluid	
Blank	General purpose (air/water/gas)
V	Low vacuum (air/water)
Ⓒ Port size	
8	Rc1/4
10	Rc3/8

Ⓓ Cylinder cover/body/sealant combination

	Cylinder guard	Body	Seal
02	Polyphenylene sulfide	Copper alloy	Nitrile rubber
B2	Polyphenylene sulfide	Copper alloy	Fluoro rubber
D2	Polyphenylene sulfide	Stainless steel	Nitrile rubber
E2	Polyphenylene sulfide	Stainless steel	Fluoro rubber
Blank	Aluminum die-casting	Copper alloy	Nitrile rubber
B	Aluminum die-casting	Copper alloy	Fluoro rubber
D	Aluminum die-casting	Stainless steel	Nitrile rubber
E	Aluminum die-casting	Stainless steel	Fluoro rubber

Ⓔ Other options	
Blank	No option
B	Mounting plate
Ⓕ Pilot port size	
C18	ø1.8 push-in fitting for fiber tube
CL18	ø1.8 radial push-in fitting for fiber tube
C4	ø4 push-in fitting
CL4	ø4 radial push-in fitting
C6	ø6 push-in fitting
CL6	ø6 radial push-in fitting
Blank	Rc1/8

⚠ Precautions for model No. selection

*6 : For Item Ⓓ02/B2/D2/E2, select Item Ⓕ.(If Item Ⓓis blank/B/D/E, pilot port size is Rc1/8.)
*7 : If selecting Item Ⓓas Blank for material combination and Item ⒺOther options, specify Item Ⓓas 0.

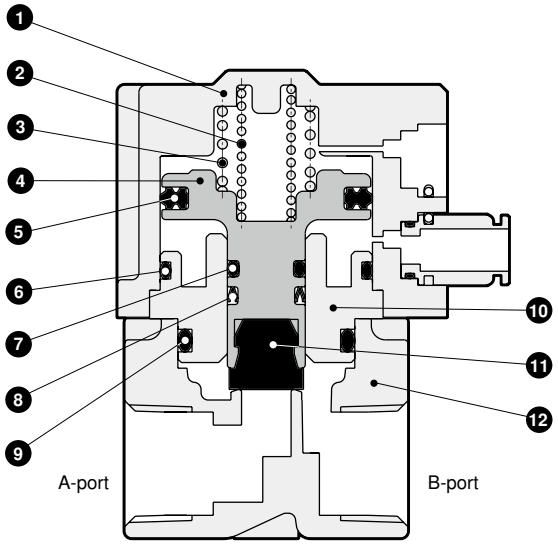
[Example of model No.]

NAB1V-8-D2B-CL4

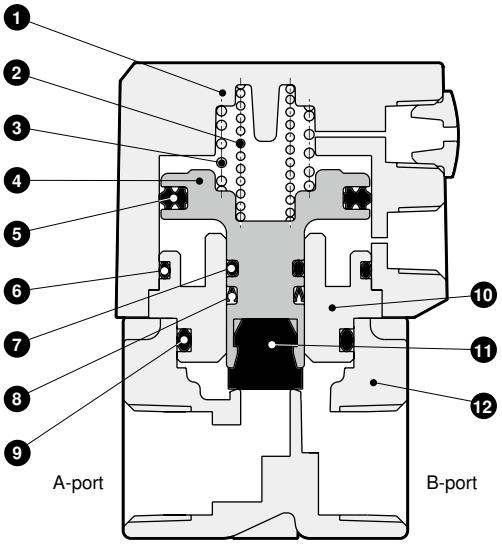
Model: NAB
Ⓐ Actuation : NC
Ⓑ Working fluid : Low vacuum (air, water)
Ⓒ Port size : Rc1/4
Ⓓ Cylinder cover/body/sealant combination
: Cylinder cover - polyphenylene sulfide
Body - stainless steel
Sealant - nitrile rubber
Ⓔ Other options : Mounting plate
Ⓕ Pilot port size : ø4 radial push-in fitting

Internal structure and parts list

● NAB1-*-02/B2/D2/E2



● NAB1-*

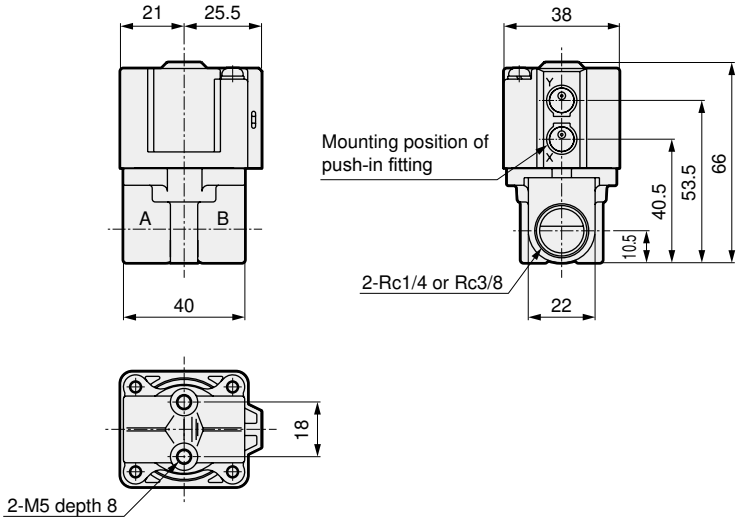


No.	Part name	Material	
1	Cylinder guard	PPS(ADC12)	Polyphenylene sulfide (aluminum die-casting)
2	Spring	SWP	Piano wire
3			
4	Piston	PPS	Polyphenylene sulfide
5	PSD packing	NBR	Nitrile rubber
6	O-ring	NBR	Nitrile rubber
7	O-ring	NBR(FKM)	Nitrile rubber (fluoro rubber)
8	MY packing	NBR(FKM)	Nitrile rubber (fluoro rubber)
9	O-ring	NBR(FKM)	Nitrile rubber (fluoro rubber)
10	Adaptor	C3604(SUS303)	Copper alloy (stainless steel)
11	Valving element	NBR(FKM)	Nitrile rubber (fluoro rubber)
12	Body	C3771(SCS13)	Copper alloy (stainless steel casting)

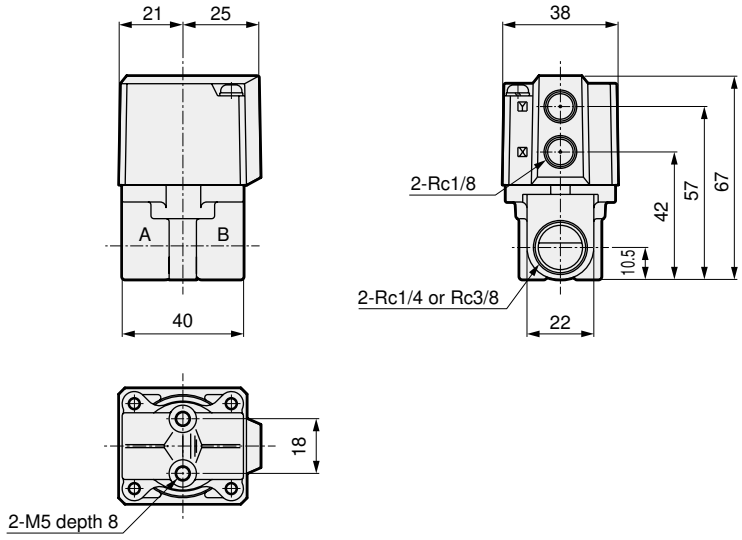
( ) shows options.

Dimensions

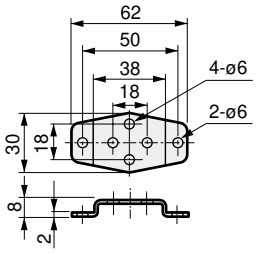
● NAB*-8/10-02/B2/D2/E2
NAB*V-8/10-02/B2/D2/E2



● NAB*-8/10
NAB*V-8/10



● Mounting plate
NAB*-8/10-** B
NAB*V-8/10-** B



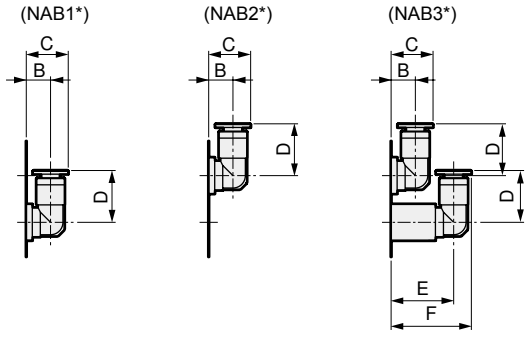
Material: Steel
Zinc plated

● Axial push-in fitting
NAB*-8/10-02/B2/D2/E2
NAB*V-8/10-02/B2/D2/E2



Pilot port size	A
C4	7
C6	8.5
C18	3.5

● Radial push-in fitting
NAB*-8/10-02/B2/D2/E2
NAB*V-8/10-02/B2/D2/E2



Pilot port size	B	C	D	E	F
CL4	6.5	11.5	14	17	22
CL6	7.5	12.5	16	18	23
CL18	4	7	8.5	11	14