



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

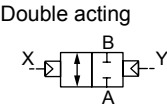
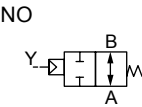
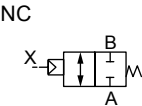
NAB*/NAB*V Series

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



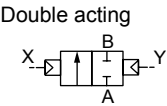
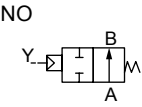
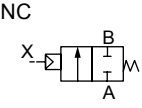
JIS symbol

● NAB*
(*1)



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

● NAB*V



Specifications

1 MPa $\approx$ 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 ⁵ Pa(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·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 $\approx$ 5.0 $\times$ 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.

A Actuation

B Working fluid

C Port size

D Cylinder cover/body/sealant combination

*6

*7

E Other options

F Pilot port size

*6

Code	Description		
A Actuation			
1	NC		
2	NO		
3	Double acting		
B Working fluid			
Blank	General purpose (air/water/gas)		
V	Low vacuum (air/water)		
C Port size			
8	Rc1/4		
10	Rc3/8		
D 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
E Other options			
Blank	No option		
B	Mounting plate		
F 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 **D** 02/B2/D2/E2, select Item **F**. (If Item **D** is blank/B/D/E, pilot port size is Rc1/8.)

*7 : If selecting Item **D** as Blank for material combination and Item **E** Other options, specify Item **D** as 0.

[Example of model No.]

NAB1V-8-D2B-CL4

Model: NAB

A Actuation : NC

B Working fluid : Low vacuum (air, water)

C Port size : Rc1/4

D Cylinder cover/body/sealant combination
: Cylinder cover - polyphenylene sulfide
Body - stainless steel
Sealant - nitrile rubber

E Other options : Mounting plate

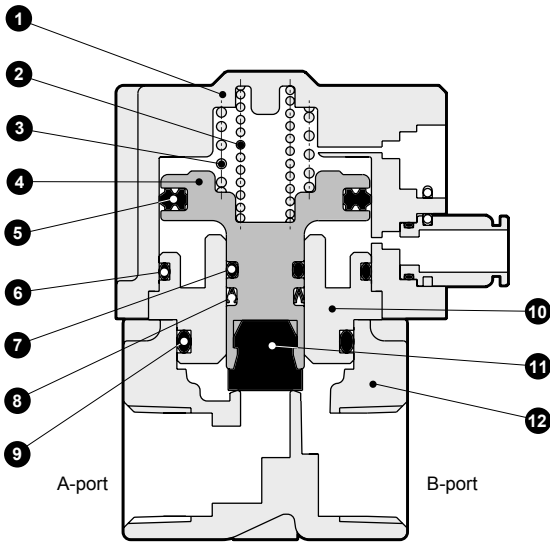
F Pilot port size : ø4 radial push-in fitting

EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/
AD
APK/
ADK
DryAir
EX-
XPLNprf
XPLNprf
HVB/
HVL
S⁺B/
NAB
LAD/
NAD
Water-
Rela
NP/NAP/
NVP
SNP
CHB/G
MXB/G
Other valves
SWD/
MWD
DustColl
CVE/
CVSE
CCH/
CPE/D
LifeSci
Gas-
Combus
Auto-
Water
Outdoor
SpecFld
Custom
Ending

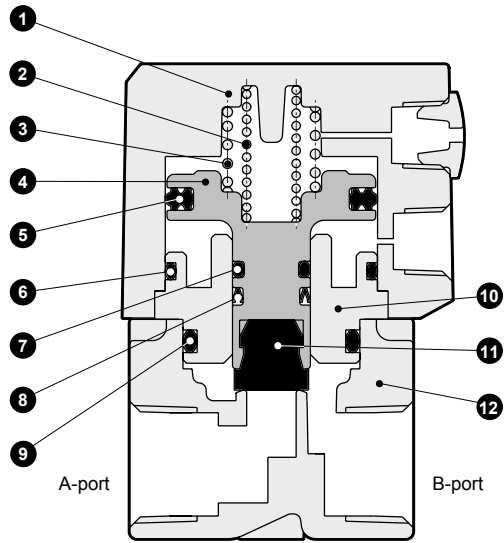
- EXA
- FWD
- HNB/G
- USB/G
- FAB/G
- FGB/G
- FVB
- FWB/G
- FHB
- FLB
- AB
- AG
- AP/
AD
- APK/
ADK
- DryAir
- EX-
XPLNprf
- XPLNprf
- HVB/
HVL
- S⬆B/
NAB
- LAD/
NAD
- Water-
Rela
- NP/NAP/
NVP
- SNP
- CHB/G
- MXB/G
- Other
valves
- SWD/
MWD
- DustColl
- CVE/
CVSE
- CCH/
CPE/D
- LifeSci
- Gas-
Combus
- Auto-
Water
- Outdoor
- SpecFld
- Custom
- Ending

Internal structure and parts list

● NAB1-* -02/B2/D2/E2



● NAB1-*



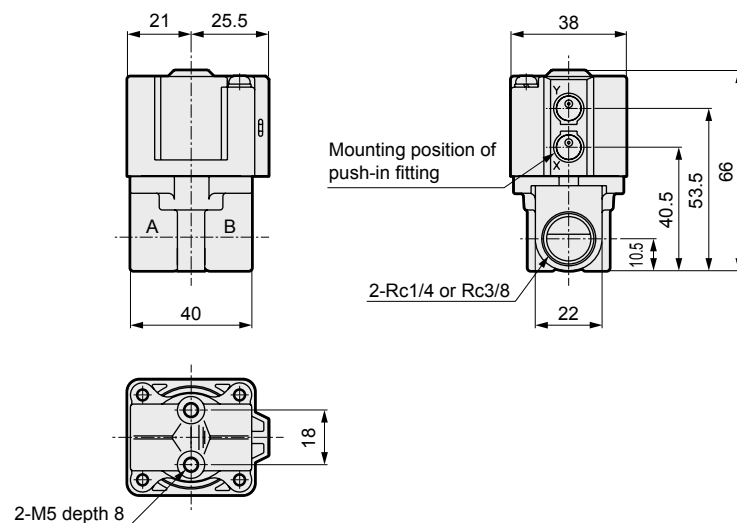
No.	Part name	Material	
1	Cylinder guard	PPS(ADC12)	Polyphenylene sulfide (aluminum die-casting)
2	Spring	SWP	Piano wire
3			
4	Piston	PPS	Polyphenylene sulfide
5	PSD packing	NBR	Nitrile rubber
6	O-ring	NBR	Nitrile rubber
7	O-ring	NBR(FKM)	Nitrile rubber (fluoro rubber)
8	MY packing	NBR(FKM)	Nitrile 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.

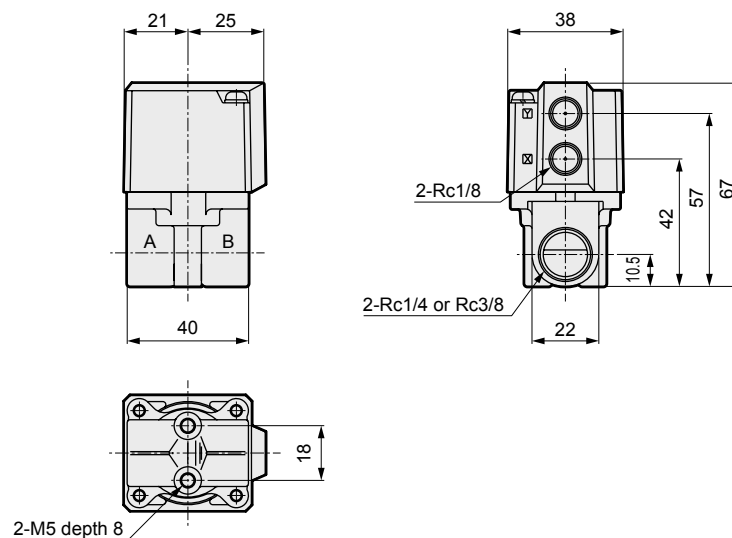
Dimensions



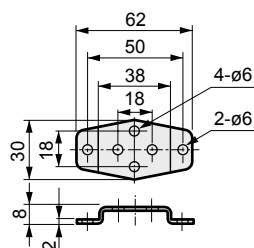
- NAB*-8/10-02/B2/D2/E2
NAB*V-8/10-02/B2/D2/E2



- NAB*-8/10
NAB*V-8/10



- Mounting plate
NAB*-8/10-** [B]
NAB*V-8/10-** [B]



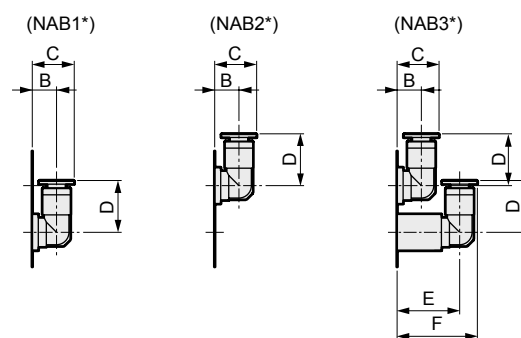
Material: Steel
Zinc plated

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



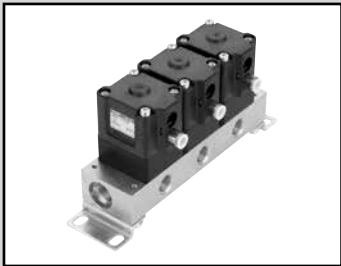
Pilot port size	A
C4	7
C6	8.5
C18	3.5

- 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

EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/ AD
APK/ ADK
DryAir
EX- XPLNprf
XPLNprf
HVB/ HVL
S/B/ NAB
LAD/ NAD
Water- Rela
NP/NAP/ NVP
SNP
CHB/G
MXB/G
Other valves
SWD/ MWD
DustColl
CVE/ CVSE
CCH/ CPE/D
LifeSci
Gas- Combust
Auto- Water
Outdoor
SpecFld
Custom
Ending



Air operated 2-port valve, manifold
(Compact cylinder valve)

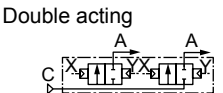
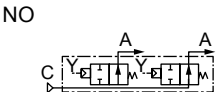
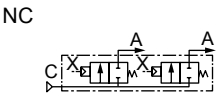
GNAB*/GNAB*V Series

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

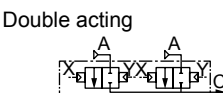
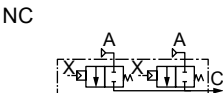


JIS symbol

- Common supply
(port C pressurization, port A vacuum pump side)



- Individual supply
(port A pressurization, port C vacuum pump side)



Specifications

Item	GNAB*			GNAB*V		
	GNAB1	GNAB2	GNAB3	GNAB1V	GNAB2V	GNAB3V
Actuation	NC	NO	Double acting	NC	NO	Double acting
Working fluid	Air/water/gas (*1)			Low vacuum (air, water) (*1)		
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 ⁵ Pa(abs)		
Proof pressure (water pressure) MPa	1.4 (≈200 psi, 14 bar)					
Fluid temperature °C	-10 (14°F) to 60 (140°F) (no freezing) (*2)					
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		
Orifice size mm	7					
Cv	1.0					
C [dm ³ /(s·bar)]	3.8 (*3)					
b	0.3					
Mounting orientation	Unrestricted					
Pilot fluid	Air					
Pilot pressure MPa	0.25 to 0.7	(*4)		0.25 to 0.7	(*4)	
Pilot port size	Rc1/8 (depends on type)					

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

How to order

Model No. **GNAB 2 V - 1 - 2 - B2 - CL4**

A Actuation

B Working fluid

C Air supply category

D Manifold station No.

E Cylinder cover/sub-plate/
body/sealant combination
*5

F Pilot port size
*5

Code	Description			
A Actuation				
1	NC			
2	NO			
3	Double acting			
B Working fluid				
Blank	General purpose (air/water/gas)			
V	Low vacuum (air/water)			
C Air supply category				
1	Common supply (port C pressurization), port A vacuum pump side			
5	Individual supply (port A pressurization), port C vacuum pump side			
D Manifold station No.				
2 to 10	2 stations to 10 stations			
0	Actuator only			
E Cylinder cover/sub-plate/body/sealant combination				
	Cylinder guard	Sub-plate	Body	Seal
02	Polyphenylene sulfide	Copper alloy	Polypropylene	Nitrile rubber
B2	Polyphenylene sulfide	Copper alloy	Polypropylene	Fluoro rubber
62	Polyphenylene sulfide	Stainless steel	Polypropylene	Nitrile rubber
72	Polyphenylene sulfide	Stainless steel	Polypropylene	Fluoro rubber
D2	Polyphenylene sulfide	Stainless steel	Stainless steel	Nitrile rubber
E2	Polyphenylene sulfide	Stainless steel	Stainless steel	Fluoro rubber
12	Polyphenylene sulfide	Aluminum	Polypropylene	Nitrile rubber
22	Polyphenylene sulfide	Aluminum	Polypropylene	Fluoro rubber
Blank	Aluminum die-casting	Copper alloy	Polypropylene	Nitrile rubber
B	Aluminum die-casting	Copper alloy	Polypropylene	Fluoro rubber
6	Aluminum die-casting	Stainless steel	Polypropylene	Nitrile rubber
7	Aluminum die-casting	Stainless steel	Polypropylene	Fluoro rubber
D	Aluminum die-casting	Stainless steel	Stainless steel	Nitrile rubber
E	Aluminum die-casting	Stainless steel	Stainless steel	Fluoro rubber
1	Aluminum die-casting	Aluminum	Polypropylene	Nitrile rubber
2	Aluminum die-casting	Aluminum	Polypropylene	Fluoro rubber
F 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

*5 : For Item **E** 02/B2/62/72/D2/E2/12/22, select Item **F**.
(If Item **E** is blank/B/6/7/D/E1/2, pilot port size will be Rc1/8.)

[Example of model No.]

GNAB2V-1-2-B2-CL4

Model: GNAB

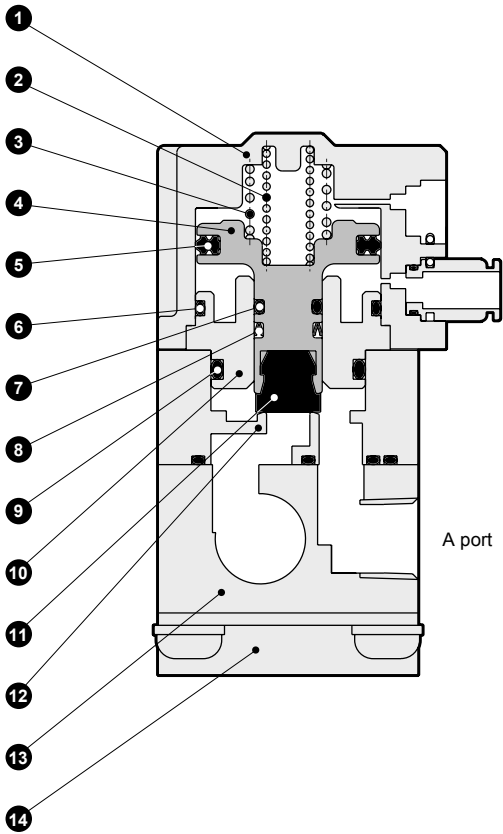
- A** Actuation : NO
B Working fluid : Low vacuum (air, water)
C Air supply category : Port A vacuum pump side
D Manifold station No.: 2 stations
E Cylinder cover/sub-plate/body/sealant combination
: Cylinder cover - polyphenylene sulfide
Sub-plate - copper alloy
Body - polypropylene
Sealant - fluoro rubber
F Pilot port size : ø4 radial push-in fitting

EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/
AD
APK/
ADK
DryAir
EX-
XPLNprf
XPLNprf
HVB/
HVL
S B/
NAB
LAD/
NAD
Water-
Rela
NP/NAP/
NVP
SNP
CHB/G
MXB/G
Other valves
SWD/
MWD
DustColl
CVE/
CVSE
CCH/
CPE/D
LifeSci
Gas-
Combust
Auto-
Water
Outdoor
SpecFld
Custom
Ending

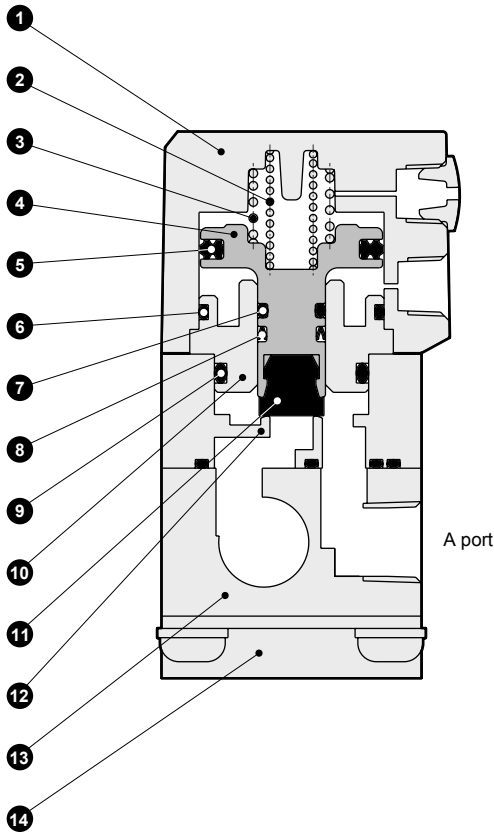
- EXA
- FWD
- HNB/G
- USB/G
- FAB/G
- FGB/G
- FVB
- FWB/G
- FHB
- FLB
- AB
- AG
- AP/
AD
- APK/
ADK
- DryAir
- EX-
XPLNprf
- XPLNprf
- HVB/
HVL
- S⬆B/
NAB
- LAD/
NAD
- Water-
Rela
- NP/NAP/
NVP
- SNP
- CHB/G
- MXB/G
- Other
valves
- SWD/
MWD
- DustColl
- CVE/
CVSE
- CCH/
CPE/D
- LifeSci
- Gas-
Combus
- Auto-
Water
- Outdoor
- SpecFld
- Custom
- Ending

Internal structure and parts list

● GNAB1-1-*-02/B2/D2/E2/12/22



● GNAB1-1-*



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	PP(SUS303)	Polypropylene (stainless steel)
13	Sub-plate	C3604(SUS303, A6063)	Copper alloy (stainless steel/aluminum)
14	Mounting plate	SPC	Steel

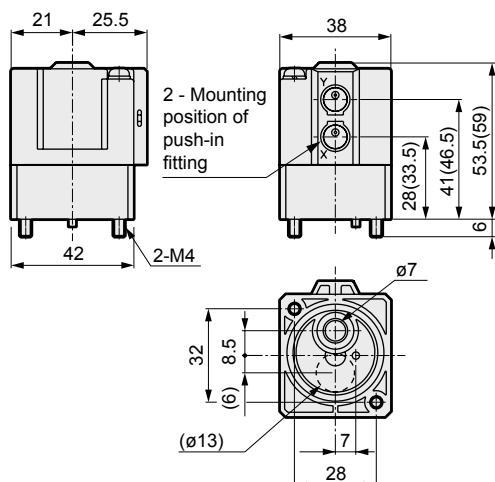
() shows options.

Dimensions: Actuator

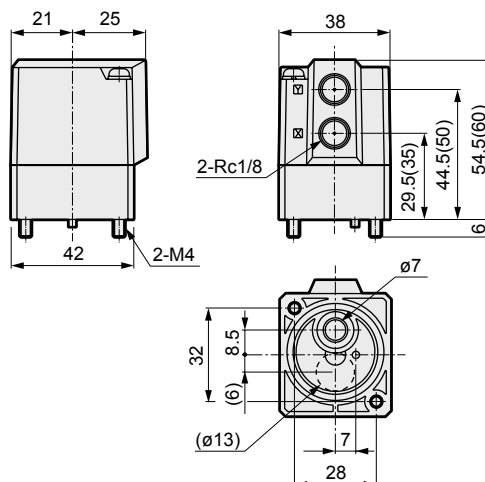


Common supply (port C pressurization, port A vacuum pump side)

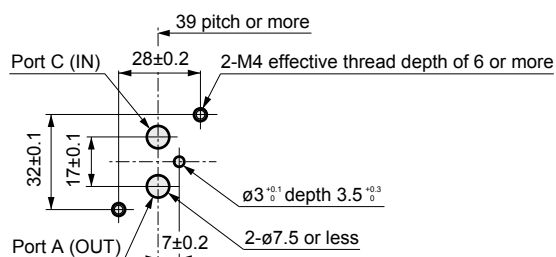
- GNAB*-1-0-02/B2/D2/E2/12/22
- GNAB*V-1-0-02/B2/D2/E2/12/22



- GNAB*-1-0-Blank/B/D/E/1/2
- GNAB*V-1-0-Blank/B/D/E/1/2

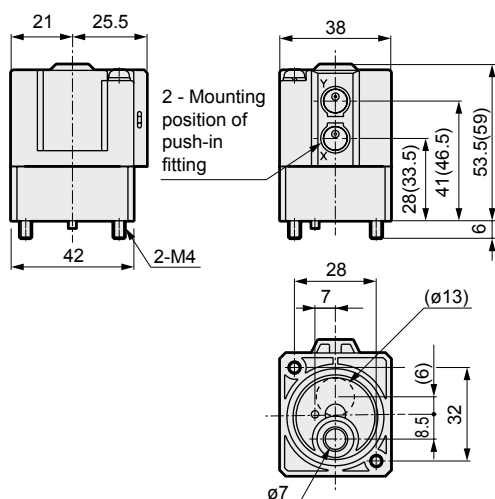


● Actuator installation dimensions

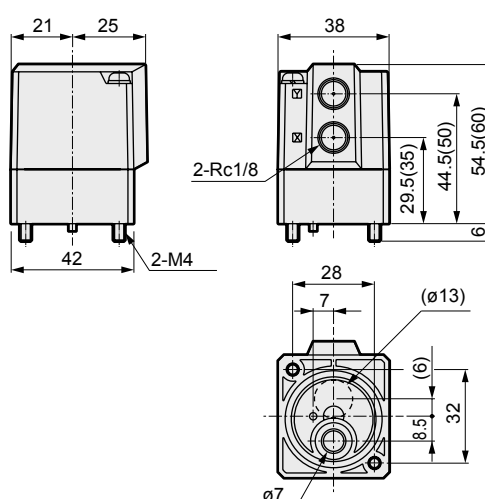


Individual supply (port A pressurization, port C vacuum pump side)

- GNAB*-5-0-02/B2/D2/E2/12/22
- GNAB*V-5-0-02/B2/D2/E2/12/22

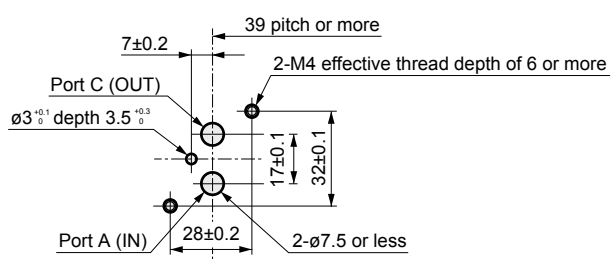


- GNAB*-5-0-Blank/B/D/E/1/2
- GNAB*V-5-0-Blank/B/D/E/1/2



*1: Dimensions shown in () are for stainless steel body.

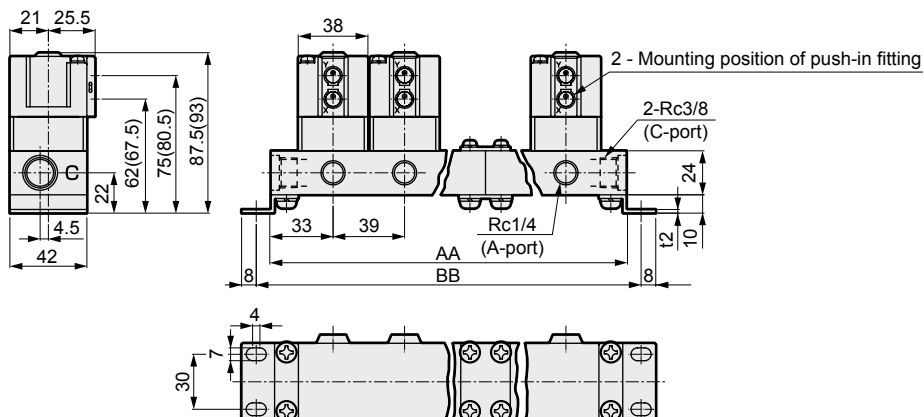
● Actuator installation dimensions



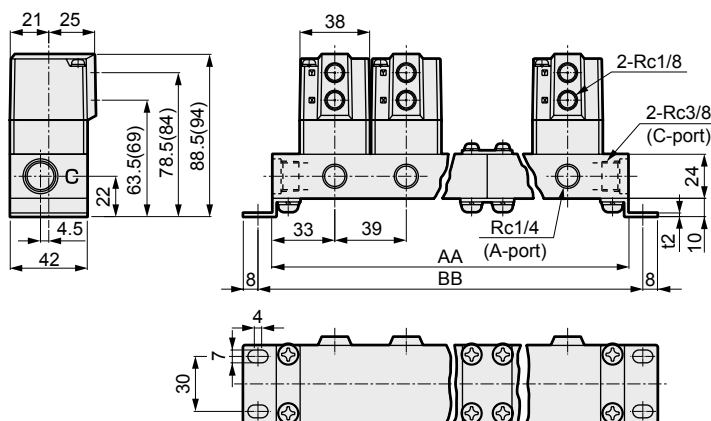
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/AD
APK/ADK
DryAir
EX-XPLNprf
XPLNprf
HVB/HVL
S&B/NAB
LAD/NAD
Water-Rela
NP/NAP/NVP
SNP
CHB/G
MXB/G
Other valves
SWD/MWD
DustColl
CVE/CVSE
CCH/CPE/D
LifeSci
Gas-Combus
Auto-Water
Outdoor
SpecFld
Custom
Ending

Dimensions: Manifold

- GNAB*- $\frac{1}{5}$ - $\frac{2}{10}$ -02/B2/62/72/D2/E2/12/22
- GNAB*V- $\frac{1}{5}$ - $\frac{2}{10}$ -02/B2/62/72/D2/E2/12/22



- GNAB*- $\frac{1}{5}$ - $\frac{2}{10}$ -Blank/B/6/7/D/E/1/2
- GNAB*V- $\frac{1}{5}$ - $\frac{2}{10}$ -Blank/B/6/7/D/E/1/2



Station No.	Copper alloy/stainless steel sub-plate		Aluminum sub-plate		Manifold configuration *1	Station No.	Copper alloy/stainless steel sub-plate		Aluminum sub-plate		Manifold configuration *1
	AA	BB	AA	BB			AA	BB	AA	BB	
2	106	122	105	121	2 stations x 1	7	329	345	327	343	5 stations + 2 stations
3	145	161	144	160	3 stations x 1	8	368	384	366	382	5 stations + 3 stations
4	211	227	210	226	2 stations x 2	9	435	451	432	448	3 stations x 3
5	223	239	222	238	5 stations x 1	10	446	462	444	460	5 stations x 2
6	290	306	288	304	3 stations x 2						

*1 : Manifold configuration combines 2-station, 3-station and 5-station units.

*2 : Contact CKD for 11 stations or more.

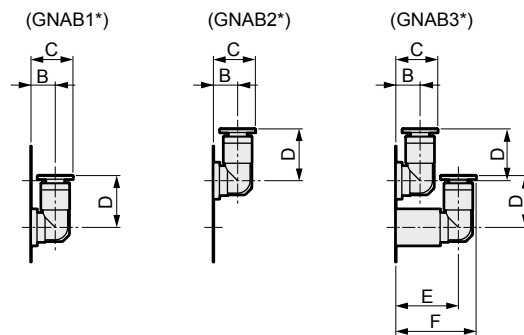
*3 : Dimensions shown in () are for stainless steel body.

- Axial push-in fitting
- GNAB*- $\frac{1}{5}$ - $\frac{2}{10}$ -02/B2/62/72/D2/E2/12/22
- GNAB*V- $\frac{1}{5}$ - $\frac{2}{10}$ -02/B2/62/72/D2/E2/12/22



Pilot port size	A
C4	7
C6	8.5
C18	3.5

- Radial push-in fitting
- GNAB*- $\frac{1}{5}$ - $\frac{2}{10}$ -02/B2/62/72/D2/E2/12/22
- GNAB*V- $\frac{1}{5}$ - $\frac{2}{10}$ -02/B2/62/72/D2/E2/12/22



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