

Diaphragm cylinder valve, single unit



NAD*/NAD*V Series

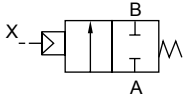
- NC, NO, double acting
- Port size: Rc3/8
- Working fluid

NAD* : Air, inert gas, water, non-corrosive liquid
 NAD*V: Low vacuum

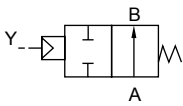


JIS symbol

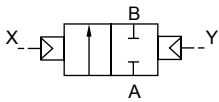
● NC



● NO



● Double acting



Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

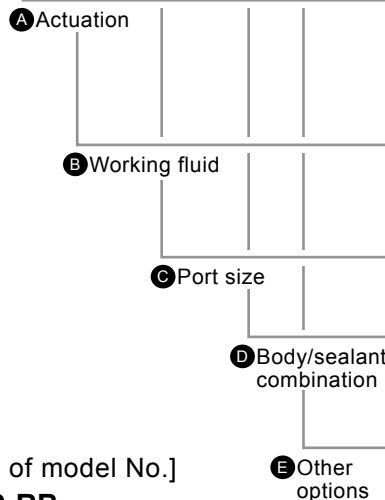
Item	NAD1-10	NAD2-10	NAD3-10	NAD1V-10	NAD2V-10	NAD3V-10
Actuation	NC	NO	Double acting	NC (normally closed)	NO	Double acting
Working fluid	Air, inert gas, water, non-corrosive/non-absorbable liquid			Low vacuum (air/water)		
Fluid viscosity mm ² /s	500 or less					
Working pressure	0 to 0.5 MPa (secondary pressure 0.4 MPa or less)			1.3 x 10 ² to 5 x 10 ⁵ Pa (abs) (secondary pressure 4 x 10 ⁵ Pa (abs) or less)		
Proof pressure (water) MPa	1.0 (≈150 psi, 10 bar)					
Fluid temperature °C	-10 (14°F) to 50 (122°F) (no freezing)					
Ambient temperature °C	-10 (14°F) to 50 (122°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	Rc3/8			Rc3/8		
Orifice size mm	7					
Cv	1.1					
C [dm ³ /(s·bar)]	4.4					
b	0.3			0.1		
Weight kg	0.32					
Mounting orientation	Unrestricted					
Pilot fluid	Air					
Pilot pressure MPa	0.4 (≈58 psi, 4 bar) to 0.5 (≈73 psi, 5 bar)					
Pilot port size	Rc1/8					

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

How to order



Model No.



Code	Description	
A Actuation		
1	NC	
2	NO	
3	Double acting	
B Working fluid		
Blank	Air, inert gas, water	
V	Low vacuum	
C Port size		
10	Rc3/8	
D Body/sealant combination		
	Body	Seal
R	Stainless steel	Ethylene propylene rubber
E Other options		
Blank	No option	
B	Mounting plate	

[Example of model No.]

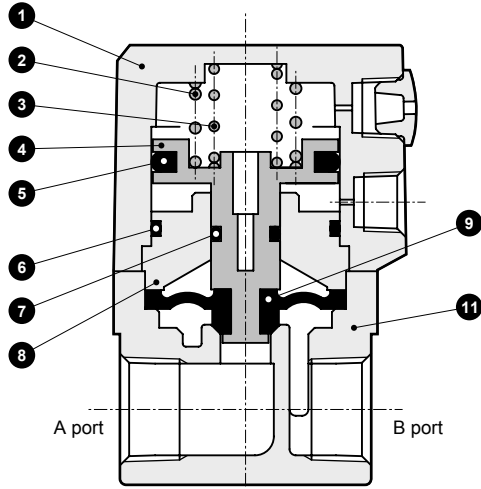
NAD1-10-RB

Model: NAD

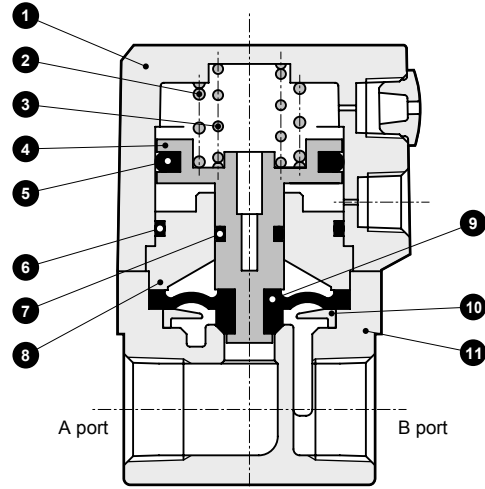
- A Actuation : NC
- B Working fluid : Air, inert gas, water
- C Port size : Rc3/8
- D Body/sealant combination : Body - stainless steel/sealant - ethylene propylene rubber
- E Other options : With mounting plate

Internal structure and parts list

● NAD1



● NAD1V



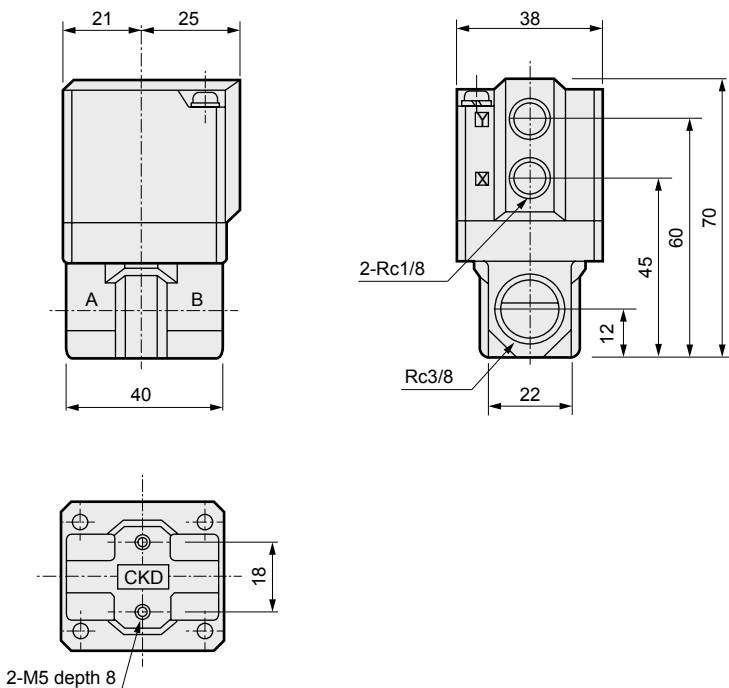
Cannot be disassembled

No.	Part name	Material	
1	Cylinder guard	ADC12	Aluminum die-casting
2	Spring	SWP	Piano wire
3	Piston	PPS	Polyphenylene sulfide
4	PSD packing	NBR	Nitrile rubber
5	O-ring	NBR	Nitrile rubber
6	O-ring	FKM	Fluoro rubber
7	Adaptor	A5056	Aluminum
8	Diaphragm	EPDM	Ethylene propylene rubber
9	Retainer	PP	Polypropylene
10	Retainer	PP	Polypropylene
11	Body	SCS13	Stainless steel casting

Cannot be disassembled

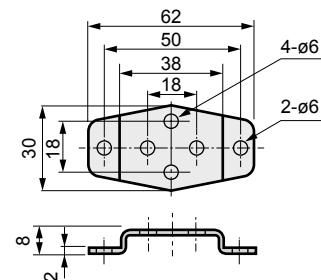
Dimensions

● NAD**-10



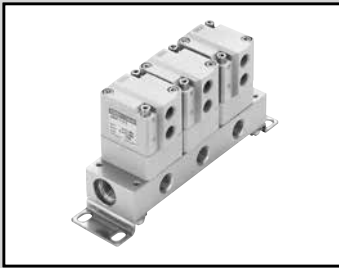
● Mounting plate NAD**-10-RB

Material: Steel
Zinc plated



- 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

Diaphragm cylinder valve, manifold



GNAD*/GNAD*V Series

- NC, NO, double acting
- Port size: Rc1/4, Rc3/8
- Working fluid

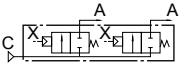
GNAD* : Air, inert gas, water, non-corrosive liquid
 GNAD*V : Low vacuum



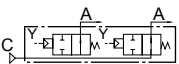
JIS symbol

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

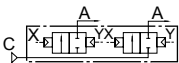
NC



NO

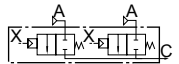


Double acting

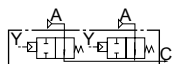


- Individual supply
(port A pressurization, port C vacuum pump side)

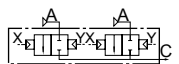
NC



NO



Double acting

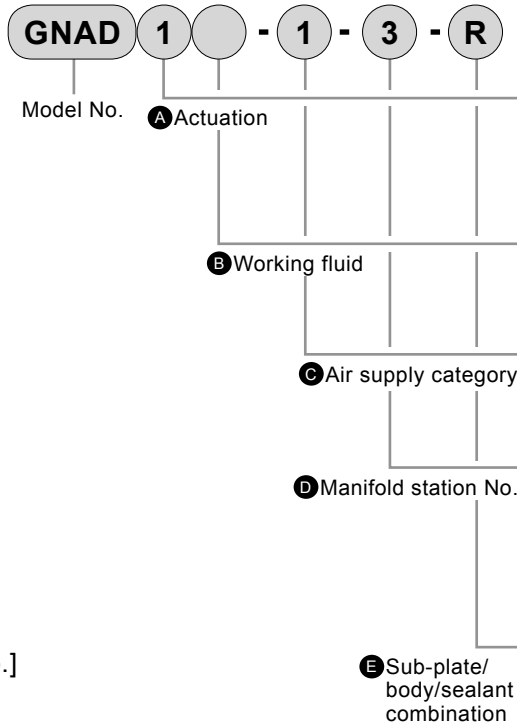


Specifications

Item	GNAD1-1/5	GNAD2-1/5	GNAD3-1/5	GNAD1V-1/5	GNAD2V-1/5	GNAD3V-1/5
Actuation	NC	NO	Double acting	NC	NO	Double acting
Working fluid	Air, inert gas, water, non-corrosive/non-absorbable liquid			Low vacuum (air/water)		
Fluid viscosity mm ² /s	500 or less					
Working pressure	0 to 0.5 MPa (secondary pressure 0.4 MPa or less)			1.3 x 10 ² to 5 x 10 ⁵ Pa (abs) (secondary pressure 4 x 10 ⁵ Pa (abs) or less)		
Proof pressure (water) MPa	1.0 (≈150 psi, 10 bar)					
Fluid temperature °C	-10 (14°F) to 50 (122°F) (no freezing)					
Ambient temperature °C	-10 (14°F) to 50 (122°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	0.7					
C [dm ³ /(s·bar)]	3.4					
b	0.1			-		
Mounting orientation	Unrestricted					
Pilot fluid	Air					
Pilot pressure MPa	0.4 (≈58 psi, 4 bar) to 0.5 (≈73 psi, 5 bar)					
Pilot port size	Rc1/8					

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

How to order



Code	Description
A Actuation	
1	NC
2	NO
3	Double acting

B Working fluid	
Blank	Air, inert gas, water
V	Low vacuum

C Air supply category	
1	Common supply
5	Individual supply

D Manifold station No.	
2	2 stations
to	to
10	10 stations
0	Actuator only

E Sub-plate/body/sealant combination			
	Sub-plate	Body	Seal
R	Stainless steel	Stainless steel	EPM rubber
8	Stainless steel	Polypropylene	EPM rubber
3	Aluminum	Polypropylene	EPM rubber

[Example of model No.]

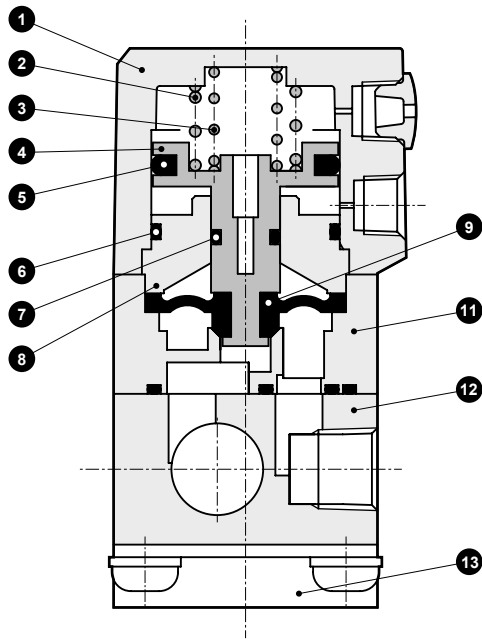
GNAD1-1-3-R

Model: GNAD

- A** Actuation : NC
- B** Working fluid : Air, inert gas, water
- C** Air supply category : Common supply
- D** Manifold station No. : 3 stations
- E** Sub-plate/body/sealant combination : Sub-plate - stainless steel/body - stainless steel/sealant - ethylene propylene rubber

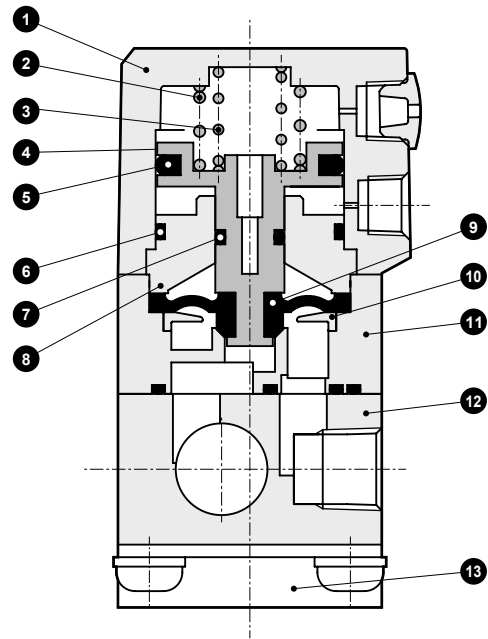
Internal structure and parts list

● GNAD1



Cannot be disassembled

● GNAD1V



Cannot be disassembled

No.	Part name	Material	
1	Cylinder guard	ADC12	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	FKM	Fluoro rubber
8	Adaptor	A5056	Aluminum
9	Diaphragm	EPDM	Ethylene propylene rubber
10	Retainer	PP	Polypropylene
11	Body	PP(SUS303)	Polypropylene (stainless steel)
12	Sub-plate	SUS303(A6063)	Stainless steel (aluminum)
13	Mounting plate	SPC	Steel

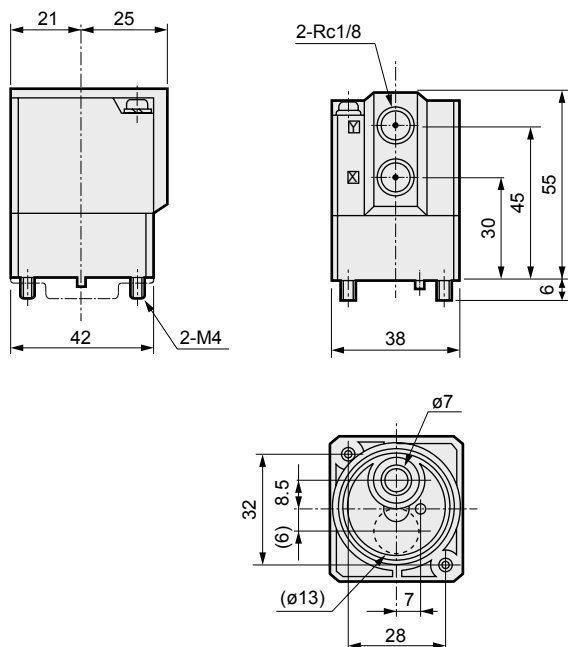
- EXA
- FWD
- HNB/G
- USB/G
- FAB/G
- FGB/G
- FVB
- FWB/G
- FHB
- FLB
- AB
- AG
- AP/
AD
- APK/
ADK
- DryAir
- EX-
XPLNprf
- XPLNprf
- HVB/
HVL
- S** **B**/
NAB
- LAD**/
NAD
- Water-
Rela
- NP/NAP/
NVP
- SNP
- CHB/G
- MXB/G
- Other valves
- SWD/
MWD
- DustColl
- CVE/
CVSE
- CCH/
CPE/D
- LifeSci
- Gas-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

GNAD*/GNAD*V Series

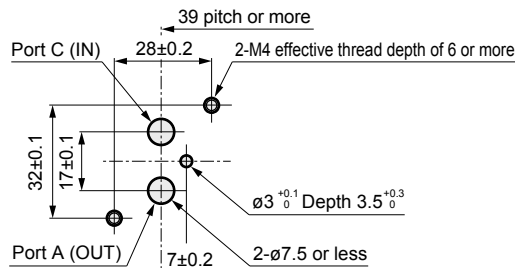
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/AD
APK/ADK
DryAir
EX-XPLNprf
XPLNprf
HVB/HVL
S \diamond B/NAB
LAD/NAD
Water-Rela
NP/NAP/NVP
SNP
CHB/G
MXB/G
Other valves
SWD/MWD
DustColl
CVE/CVSE
CCH/CPE/D
LifeSci
Gas-Combus
Auto-Water
Outdoor
SpecFld
Custom
Ending

Dimensions: Actuator

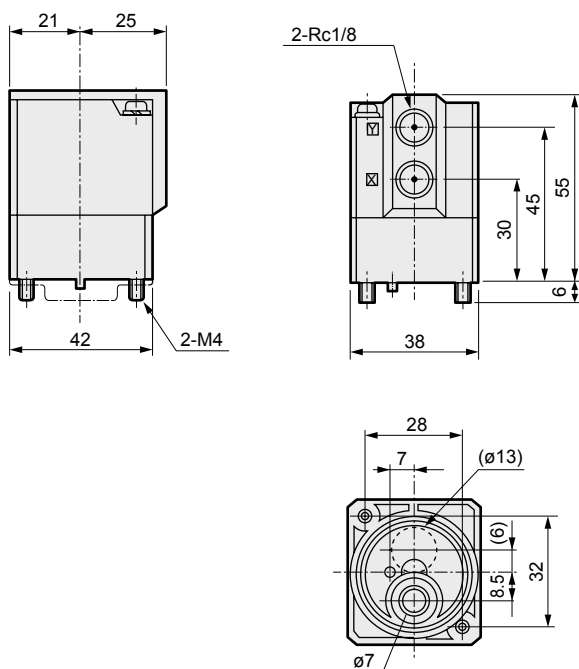
● Common supply GNAD1/2/3-1-0



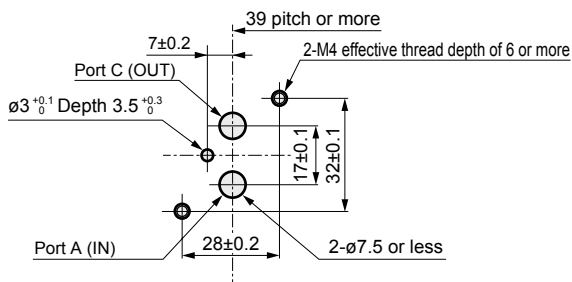
● Actuator installation dimensions



● Individual supply GNAD1/2/3-5-0



● Actuator installation dimensions

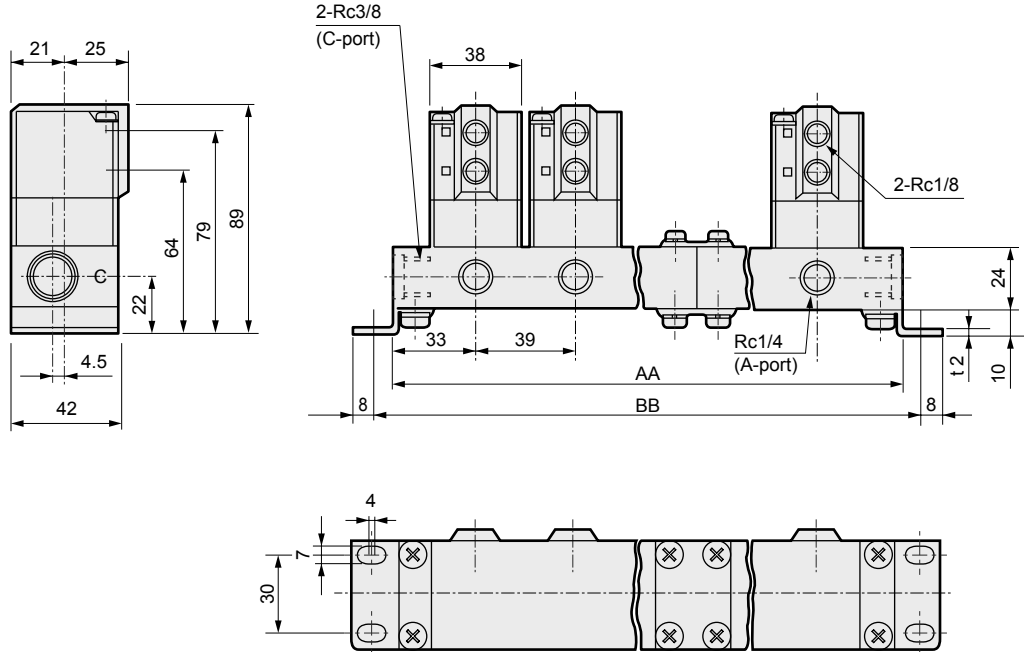


*1 : Dimensions shown in () are for stainless steel option.

*2 : For the product's protection, the product is delivered with a plate attached at the bottom of the body. Remove this plate before starting use.

Dimensions: Manifold

● GNAD1/2/3- $\frac{1}{5}$ - [2 to 10]



Sub-plate material		Stainless steel		Aluminum		Manifold configuration *1	Sub-plate material		Stainless steel		Aluminum		Manifold configuration *1
Station No.		AA	BB	AA	BB		Station No.		AA	BB	AA	BB	
2		106	122	105	121	2 stations x 1	7		329	345	327	343	2 stns. + 5 stns.
3		145	161	144	160	3 stations x 1	8		368	384	366	382	5 stns. + 3 stns.
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.

- 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 $\hat{\sigma}$ B/NAB
- LAD/NAD
- Water-Rela
- NP/NAP/NVP
- SNP
- CHB/G
- MXB/G
- Other valves
- SWD/MWD
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