



Diaphragm cylinder valve, single unit

# NAD\*/NAD\*V Series

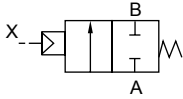
- NC, NO, double acting
- Port size: Rc3/8
- Working fluid

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

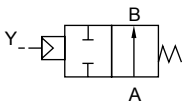


## JIS symbol

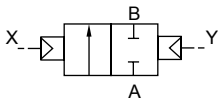
● NC



● NO



● Double acting



## Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Descriptions	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 <sup>2</sup> /s	500 or less					
Working pressure	0 to 0.5 MPa (secondary pressure 0.4 MPa or less)			1.3 x 10 <sup>2</sup> to 5 x 10 <sup>5</sup> Pa (abs) (secondary pressure 4 x 10 <sup>5</sup> 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 <sup>3</sup> /min or less (pneumatic pressure)			1.33 x 10 <sup>-3</sup> Pa·m <sup>3</sup> /sHe or less		
Port size	Rc3/8			Rc3/8		
Orifice size mm	7					
Cv	1.1					
C [dm <sup>3</sup> /(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.

● A Actuation

● B Working fluid

● C Port size

● D Body/sealant combination

● E Other options

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

[Example of model No.]

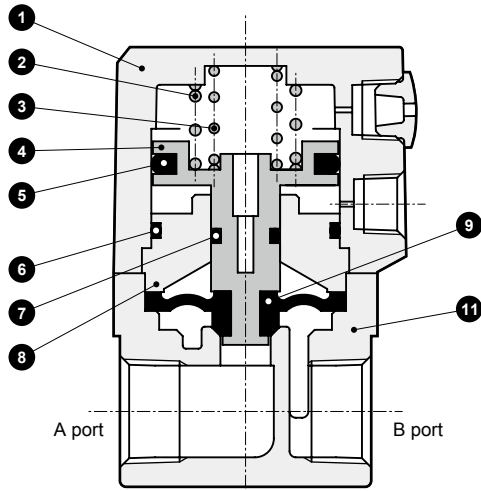
**NAD1-10-RB**

Model: NAD

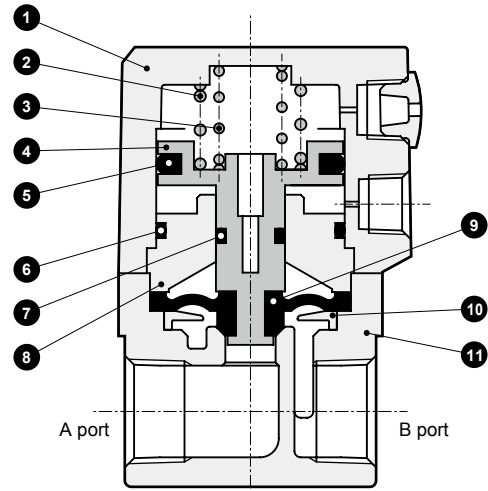
- A Actuation : NC
- B Working fluid : Air, inert gas, water
- C Port size : Rc3/8
- D Body/sealant combination : Body - stainless steel/sealant - ethylene propylene rubber
- E Other options : With mounting plate

### Internal structure and parts list

#### ● NAD1



#### ● NAD1V



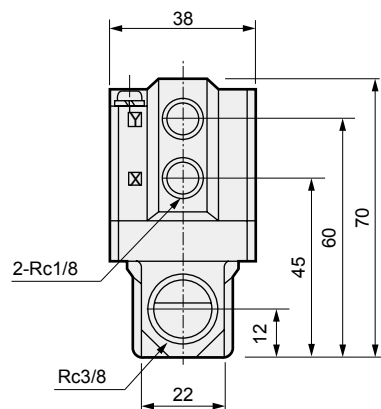
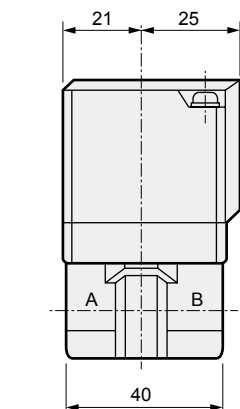
Cannot be disassembled

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	Body	SCS13	Stainless steel casting

Cannot be disassembled

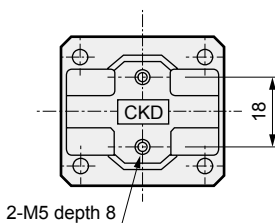
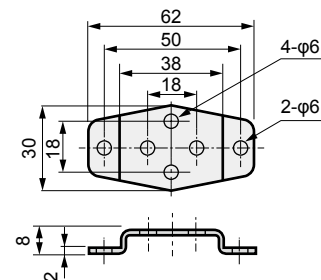
### Dimensions

#### ● NAD\*\*-10



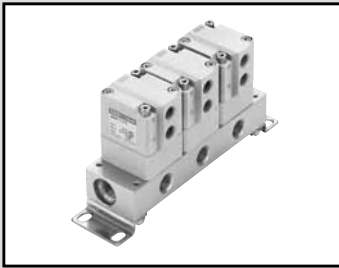
#### ● Mounting plate NAD\*\*-10-RB

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
<b>LAD/ NAD</b>
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
SpecFld
Custom
Ending

Diaphragm cylinder valve, manifold



# GNAD\*/GNAD\*V Series

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

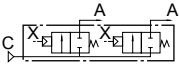
GNAD\* : Air, inert gas, water, non-corrosive liquid  
 GNAD\*V : Low vacuum



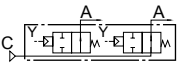
## JIS symbol

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

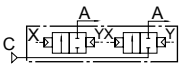
NC



NO

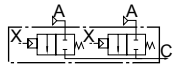


Double acting

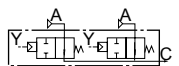


- Individual supply  
(port A pressurization, port C vacuum pump side)

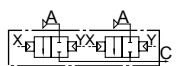
NC



NO



Double acting

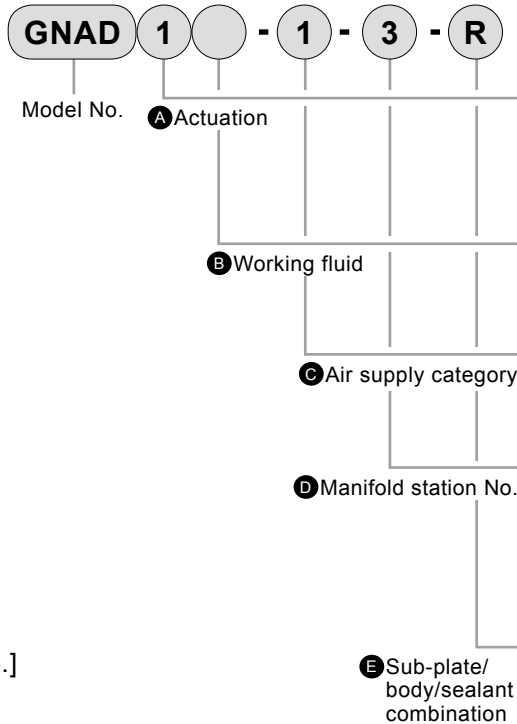


## Specifications

Descriptions	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 <sup>2</sup> /s	500 or less					
Working pressure	0 to 0.5 MPa (secondary pressure 0.4 MPa or less)			1.3 x 10 <sup>2</sup> to 5 x 10 <sup>5</sup> Pa (abs) (secondary pressure 4 x 10 <sup>5</sup> 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 <sup>3</sup> /min or less (pneumatic pressure)			1.33 x 10 <sup>-3</sup> Pa·m <sup>3</sup> /sHe or less		
Orifice size mm	7					
Cv	0.7					
C [dm <sup>3</sup> /(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	Content
<b>A Actuation</b>	
1	NC
2	NO
3	Double acting

<b>B Working fluid</b>	
Blank	Air, inert gas, water
V	Low vacuum

<b>C Air supply category</b>	
1	Common supply
5	Individual supply

<b>D Manifold station No.</b>	
2	2 stations
to	to
10	10 stations
0	Actuator only

<b>E Sub-plate/body/sealant combination</b>			
	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.]

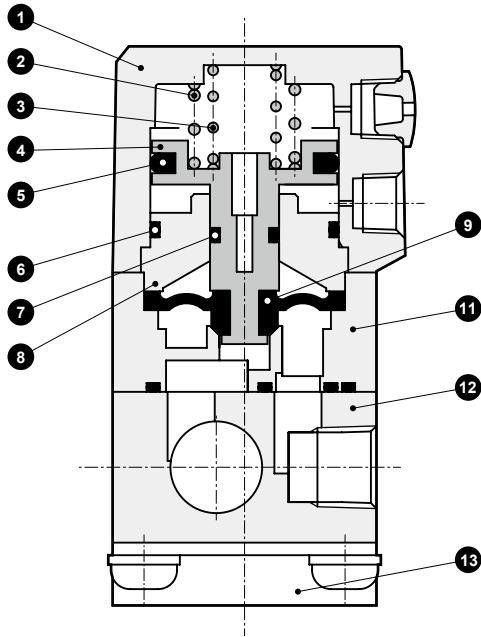
**GNAD1-1-3-R**

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

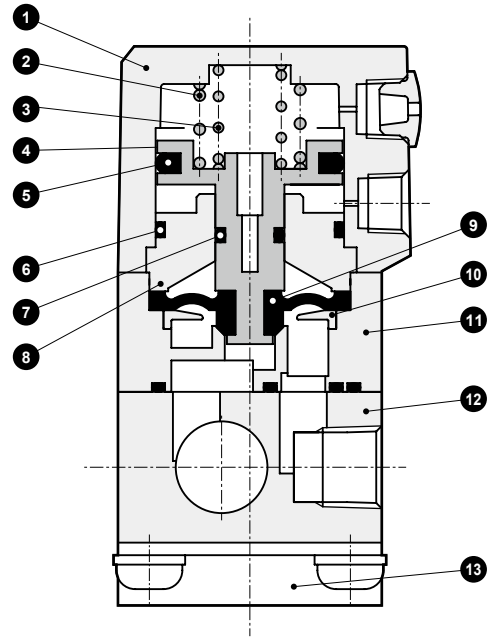
## Internal structure and parts list

### ● 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

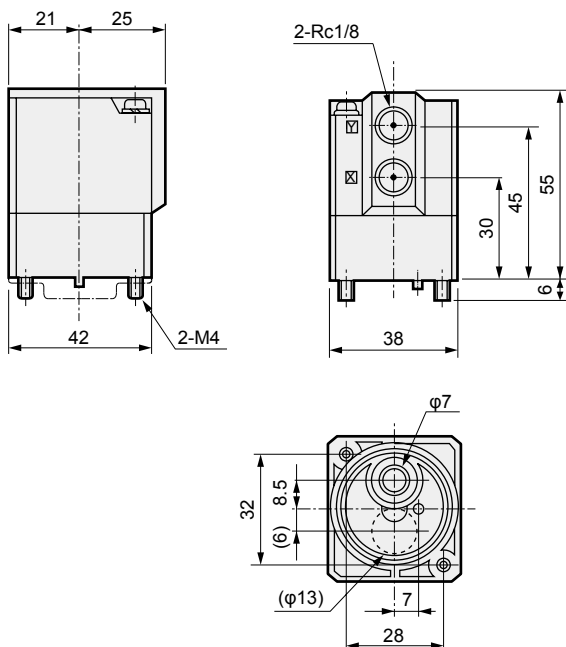
EXA  
FWD  
HNB/G  
USB/G  
FAB/G  
FGB/G  
FVB  
FWB/G  
FHB  
FLB  
AB  
AG  
AP/  
AD  
APK/  
ADK  
DryAir  
EX-  
XPLNprf  
XPLNprf  
HVB/  
HVL  
SAB/  
NAB  
LAD/  
NAD  
Water-  
Rela  
NP/NAP/  
NVP  
SNP  
CHB/G  
MXB/G  
Other  
valves  
SWD/  
MWD  
DustColl  
CVE/  
CVSE  
CCH /  
CPE/D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

# GNAD\*/GNAD\*V Series

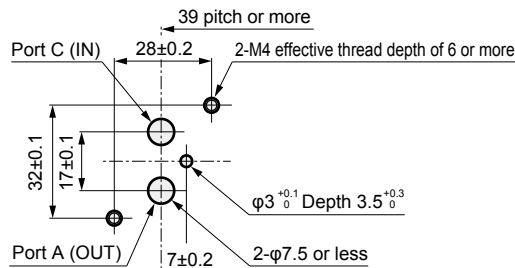
## Dimensions: Actuator

- 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
- SAB/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
- SpecFld
- Custom
- Ending

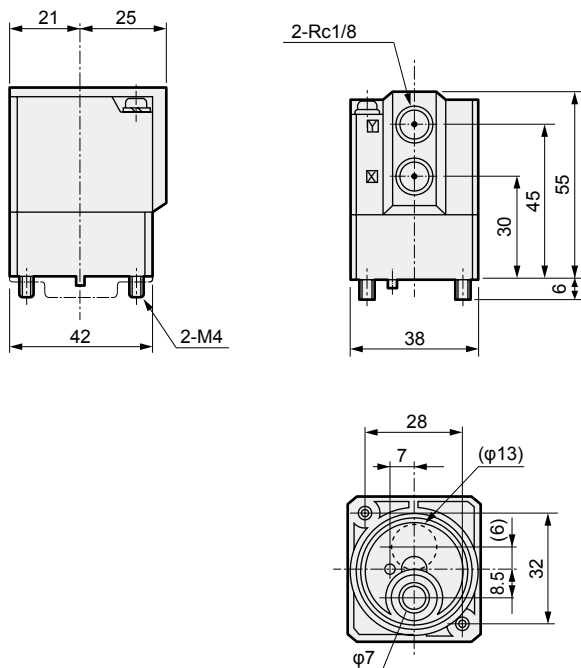
### ● Common supply GNAD1/2/3-1-0



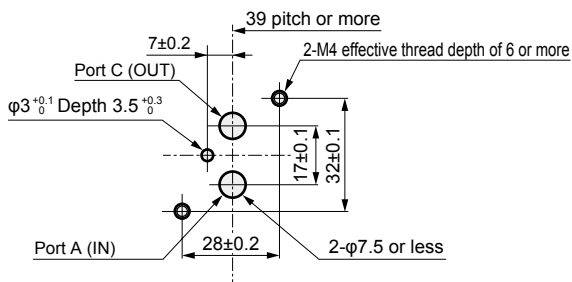
### ● Actuator installation dimensions



### ● Individual supply GNAD1/2/3-5-0



### ● Actuator installation dimensions

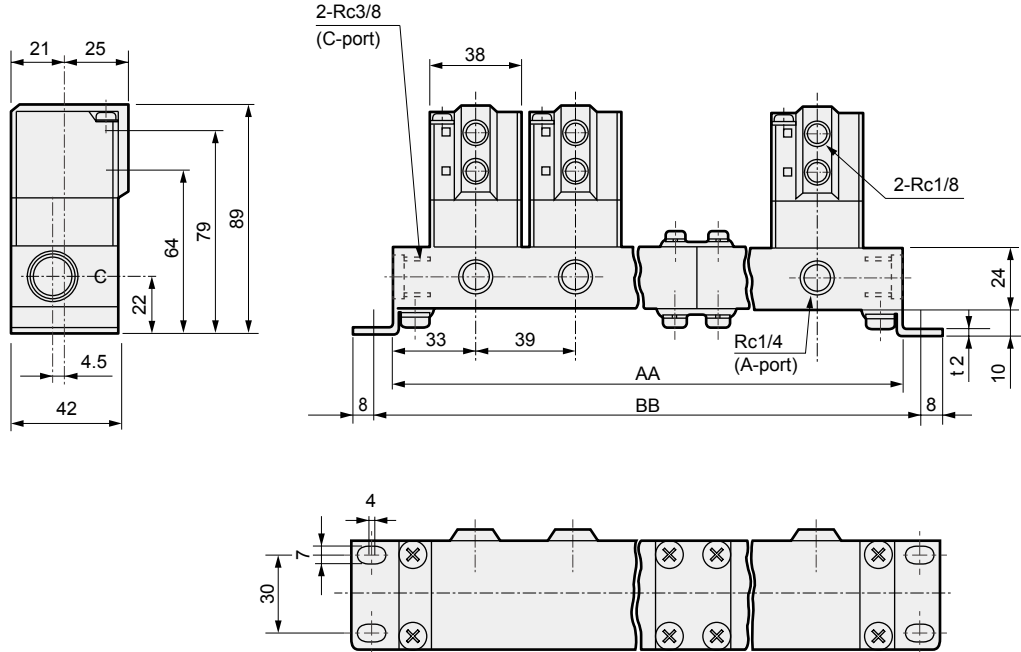


\*1 : Dimensions shown in ( ) are for stainless steel option.

\*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 $\Delta$ 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
- SpecFld
- Custom
- Ending