

Introduction of made-to-order products

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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-
Combust
Auto-
Water
Outdoor
SpecFld
Custom
Ending



Noise reduction special purpose valve
(direct acting 2-port solenoid valve for compressed air/dry air)

FGB31/FGB41 Series

- NC (open when energized)
- Working fluids: Compressed air, dry air
- Port size: Rc1/4

Made-to-order product

For quiet environments

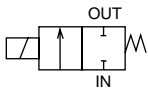
The metallic noise unique to valves has been greatly reduced by incorporating a special structure. The FGB Series of 2-port valves for air is ideal for quiet environments.

Applications

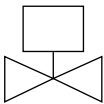
- Medical field - Oxygen generators, artificial dialysis equipment, analysis equipment for research
- Food product field - Food product warming systems, vending machines
- Public facilities - Automatic flushing sensors for toilets

JIS symbol

- NC (open when energized)



Mounting orientation



Specifications

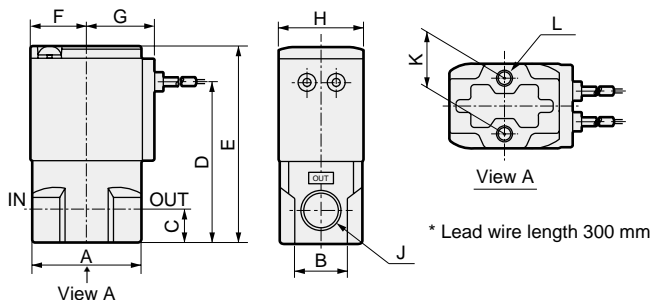
1 MPa = 10 bar

Model No.	NC (open when energized)	
	FGB31-X2077	FGB41-X2078
Working fluid	Compressed air, dry air, inert gas	
Working pressure MPa	0 (≈0 psi) to 0.4 (≈58 psi)	0 (≈0 psi) to 0.45 (≈65 psi)
Proof pressure (water pressure) MPa	2.1 (≈300 psi, 21 bar)	
Fluid temperature °C	0 (32°F) to 40 (104°F) (no freezing)	
Ambient temperature °C	0 (32°F) to 40 (104°F)	
Port size	Rc1/4	
Orifice size mm	3	4
C[dm ³ /(s·bar)]	1.2	2.1
b	0.56	0.54
Valve seat leakage cm ³ /min	0.2 or less	
Atmosphere	Place free of corrosive gas and explosive gas	
Mounting orientation	Vertical position with coil on top	
Thermal class	Class 130 (B) (JIS C 4003)	
Rated voltage	24 VDC, 12 VDC	
Coil	Grommet lead wire	
Power consumption W	6.5	8

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

Dimensions and parts list

- FGB31-X2077
- FGB41-X2078



Part name	Material	
Coil assembly	-	-
Plunger assembly	SUS, NBR	Stainless steel, nitrile rubber
O-ring	NBR	Nitrile rubber
Spring	SUS	Stainless steel
Body	ADC	Aluminum die-casting

Model No.	A	B	C	D	E	F	G	H	J	K	L
FGB31-X2077	36	18	11	53.5	65.5	18.5	22.5	28	Rc1/4	18	M5 depth 6
FGB41-X2078	40	25	12	62	76	22.5	26	34	Rc1/4	18	M5 depth 7



Noise reduction special purpose valve
(direct acting 2-port solenoid valve for water)

FWB31/FWB41 Series

- NC (open when energized)
- Working fluid: Water
- Port size: Rc1/4

Made-to-order product

For quiet environments

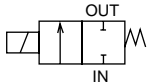
The metallic noise unique to valves has been greatly reduced by incorporating a special structure. The FWB Series of 2-port valves for water is ideal for quiet environments.

Applications

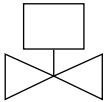
- Medical field - Oxygen generators, artificial dialysis equipment, analysis equipment for research
- Food product field - Food product warming systems, vending machines
- Public facilities - Automatic flushing sensors for toilets

JIS symbol

- NC (open when energized)



Mounting orientation

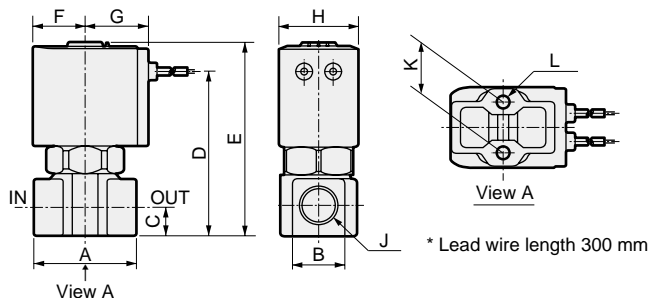


Specifications

Model No.	NC (open when energized)	
Item	FWB31-X2079	FWB41-X2080
Working fluid	Water (excluding sewage, agricultural water and liquid manure)	
Working pressure MPa	0 (≈0 psi, 0 bar) to 0.3 (≈44 psi, 3 bar)	0 (≈0 psi, 0 bar) to 0.35 (≈51 psi, 3.5 bar)
Proof pressure (water pressure) MPa	5.0 (≈730 psi, 50 bar)	
Fluid temperature °C	1 (33.8°F) to 40 (104°F) (no freezing)	
Ambient temperature °C	0 (32°F) to 40 (104°F)	
Port size	Rc1/4	
Orifice size mm	3	4
Cv	0.3	0.54
Valve seat leakage cm ³ /min	0 (water pressure)	
Atmosphere	Place free of corrosive gas and explosive gas	
Mounting orientation	Vertical position with coil on top	
Thermal class	Class 130 (B) (JIS C 4003)	
Rated voltage	24 VDC, 12 VDC	
Coil	Grommet lead wire	
Power consumption W	6	8

Dimensions and parts list

- FWB31-X2079
- FWB41-X2080



Part name	Material	
Coil assembly	-	-
Core assembly	SUS	Stainless steel
Plunger assembly	SUS, NBR	Stainless steel, nitrile rubber
O-ring	NBR	Nitrile rubber
Spring	SUS	Stainless steel
Body	C3771	Copper alloy

Model No.	A	B	C	D	E	F	G	H	J	K	L
FWB31-X2079	36	18	11	57.5	68.5	18.5	22.5	28	Rc1/4	18	M5 depth 6
FWB41-X2080	40	21	12	67	81	22.5	26	34	Rc1/4	18	M5 depth 8



Frequent operation direct acting 2-port solenoid valve

A2-5201

- NC (open when energized)
- Working fluid: Compressed air, dry gas, inert gas
- Port size: Rc1/8, Rc1/4

Made-to-order product



The air pressure open/close state can be controlled at high frequency.

- Excellent response and response stability.
- Durability: 10 or more times higher than conventional products.

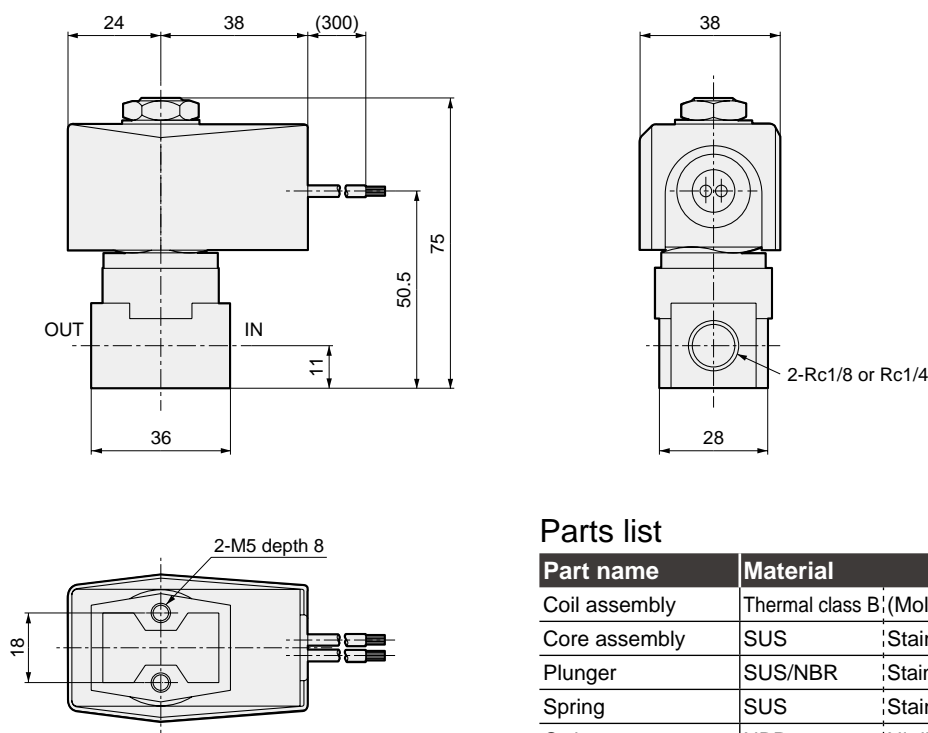
Specifications

1 MPa = 10 bar

Item	A2-5201-01-3	A2-5201-01-4	A2-5201-02-3	A2-5201-02-4
Working fluid	Compressed air, dry gas, inert gas			
Working pressureMPa	0 (≈0 psi) to 0.7 (≈100 psi)	0 (≈0 psi) to 0.5 (≈73 psi)	0 (≈0 psi) to 0.7 (≈100 psi)	0 (≈0 psi) to 0.5 (≈73 psi)
Proof pressure (water pressure)MPa	1.5 (≈220 psi, 15 bar)			
Fluid temperature°C	0 (32°F) to 50 (122°F)			
Ambient temperature°C	0 (32°F) to 50 (122°F)			
Valve seat leakagecm ³ /min	0.2 or less			
Port size	Rc1/8		Rc1/4	
Orifice sizemm	3	4	3	4
C[dm ³ /(s·bar)]	1.2	2.1	1.2	2.1
b	0.53	0.50	0.53	0.50
Weightkg	0.46		0.45	
Mounting orientation	Unrestricted			
Electrical specifications				
Rated voltage	24 VDC intermittent rating (energizing time ratio: ON ≤ OFF, max. continuous energizing time: 10 sec)			
Power consumptionW	20			
Thermal class	Class 130 (B)			

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

Dimensions and parts list



Parts list

Part name	Material
Coil assembly	Thermal class B ₁ (Mold)
Core assembly	SUS : Stainless steel
Plunger	SUS/NBR : Stainless steel/nitrile rubber
Spring	SUS : Stainless steel
O-ring	NBR : Nitrile rubber
Body	C3771 : Copper alloy



Frequent operation pilot operated 2-port solenoid valve

A2-5202

- NC (open when energized)
- Working fluid: Compressed air, dry gas, inert gas
- Port size: Rc1/4, Rc3/8

Made-to-order product



The air pressure open/close state can be controlled at high frequency.

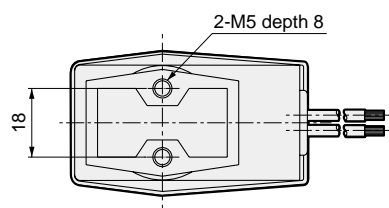
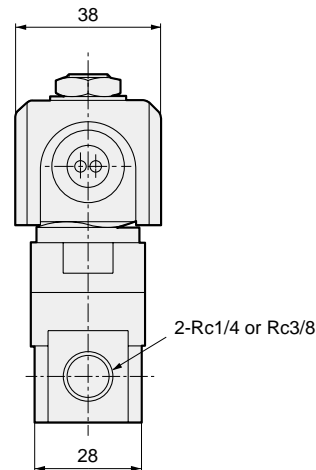
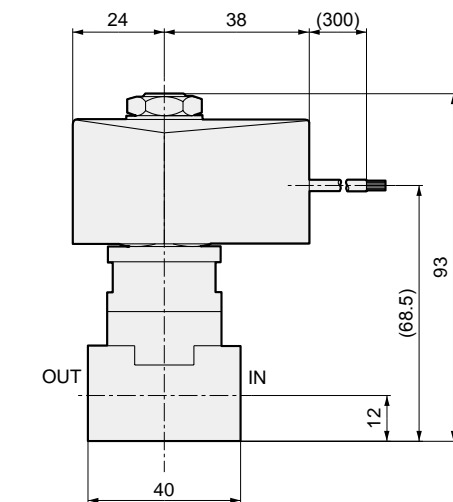
- Excellent response and response stability.
- Durability: 10 or more times higher than conventional products.

Specifications

Item	A2-5202-02-7	A2-5202-03-7
Working fluid	Compressed air, dry gas, inert gas	
Working pressure MPa	0.02 (≈2.9 psi, 0.2 bar) to 0.7 (≈100 psi, 7 bar)	
Proof pressure (water pressure) MPa	1.5 (≈220 psi, 15 bar)	
Fluid temperature °C	0 (32°F) to 50 (122°F)	
Ambient temperature °C	0 (32°F) to 50 (122°F)	
Valve seat leakage cm³/min	10 or less	
Port size	Rc1/4	Rc3/8
Orifice size mm	7	
C[dm³/(s·bar)]	5.6	5.6
b	0.29	0.29
Weight kg	0.52	
Mounting orientation	Unrestricted	
Electrical specifications		
Rated voltage	24 VDC intermittent rating (energizing time ratio: ON ≤ OFF, max. continuous energizing time: 10 sec)	
Power consumption W	20	
Thermal class	Class 130 (B)	

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

Dimensions and parts list



Parts list

Part name	Material	
Coil assembly	Thermal class B: (Mold)	
Core assembly	SUS	Stainless steel
Plunger	SUS/NBR	Stainless steel/nitrile rubber
O-ring	NBR	Nitrile rubber
Spring	SUS	Stainless steel
Body	C3604	Copper alloy
O-ring	NBR	Nitrile rubber
Body	C3771	Copper alloy

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



Ultra-low temperature 2-port solenoid valve

A2-5800/A2-3400 Series

- NC (open when energized)
- Working fluid: Liquid nitrogen, inert liquids
- Port size: Rc1/4, Rc3/8

Made-to-order product

RoHS

- Usable even with ultra-low temperature fluids such as liquid nitrogen (-196°C).
- The coil is a molded coil which is resistant to condensation.
- 3 types are available based on flow rates.

Applications

- Refrigerant control of the thermo-chiller
- Testers and inspection equipment for semiconductors
- Fluorescent X-ray spectrometers
- Biotechnology (containers for cryo-preservation of cells)
- Industrial freezing and refrigerating equipment

Specifications

1 MPa = 10 bar

Item		A2-5800-02-3	A2-5800-02-5	A2-3400-03-12
Working fluid		LN2, inert liquid		
Valve structure		Direct acting poppet structure		Pilot kick poppet structure
Working pressure	MPa	0 (≈0 psi) to 1.0 (≈150 psi)	0 (≈0 psi) to 0.4 (≈58 psi)	0 (≈0 psi, 0 bar) to 0.8 (≈120 psi, 8 bar)
Orifice size	mm	ø3	ø5	ø12
Cv		0.22	0.6	2.7
Port size		Rc1/4		Rc3/8
Fluid temperature		-196 (-320.8°F) to 50 (122°F) (no freezing)		
Ambient temperature		-20 (-4°F) to 40 (104°F)		
Valve seat leakage	cm ³ /min	100 or less (pneumatic pressure)		400 or less (pneumatic pressure)
Weight	kg	0.65		0.77
Mounting orientation		Vertical position with coil on top		
Rated voltage		100 VAC, 200 VAC (full-wave rectification coil), 12 VDC, 24 VDC		
Power consumption		17 W		AC:17 W, DC:15 W

⚠ Caution

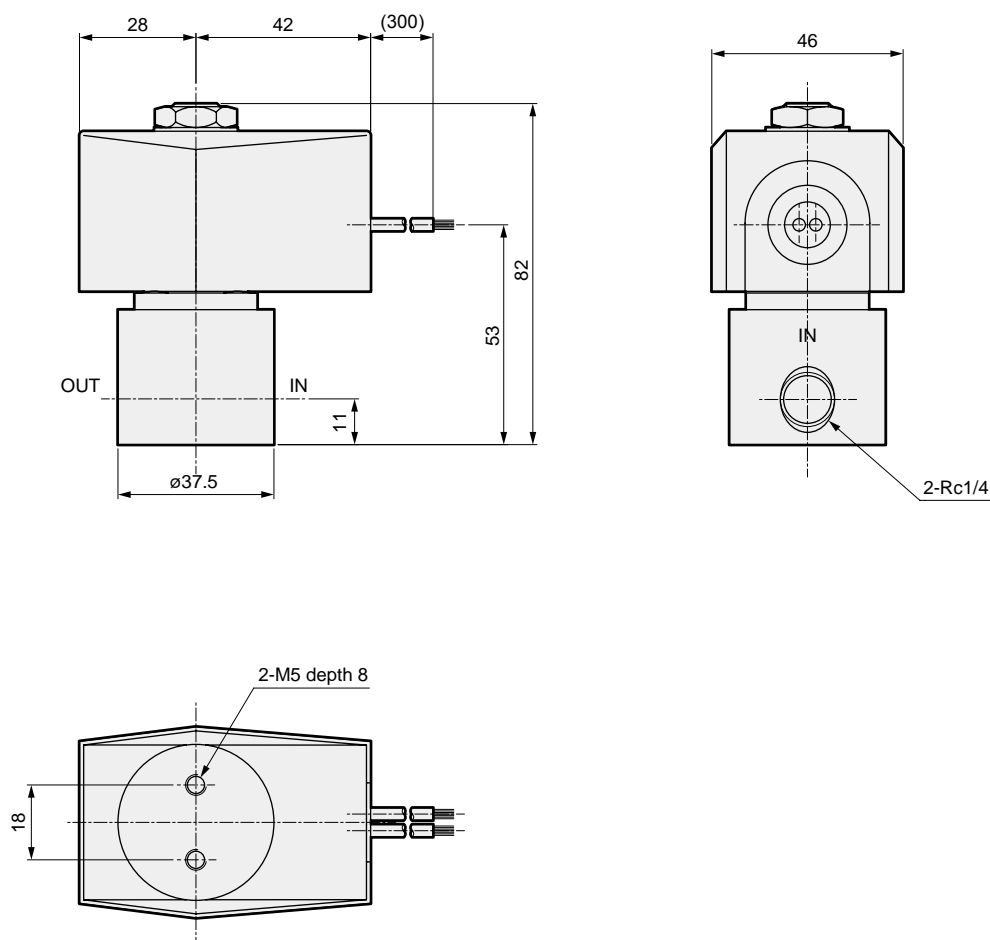
(1) Be careful when piping as malfunctions may occur when the moisture in air condenses and freezes.

Ultra-low temperature 2-port solenoid valve

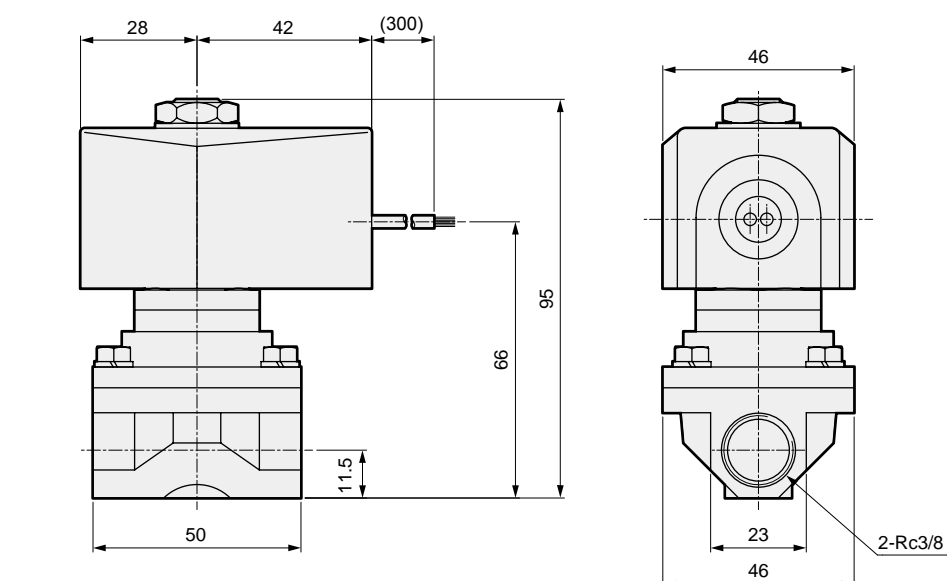
Dimensions

Dimensions

● A2-5800

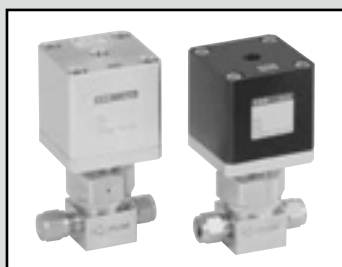


● A2-3400



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
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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



Air operated 2-port valve, cylinder valve for high pressure air

NAB-4SX1450/NAB-4SX1451

- NC, NO
- Working fluid: High pressure air (20 MPa)
- Port size: 1/4 inch double barbed fitting

Made-to-order product

High pressure air (20 MPa) control is possible.

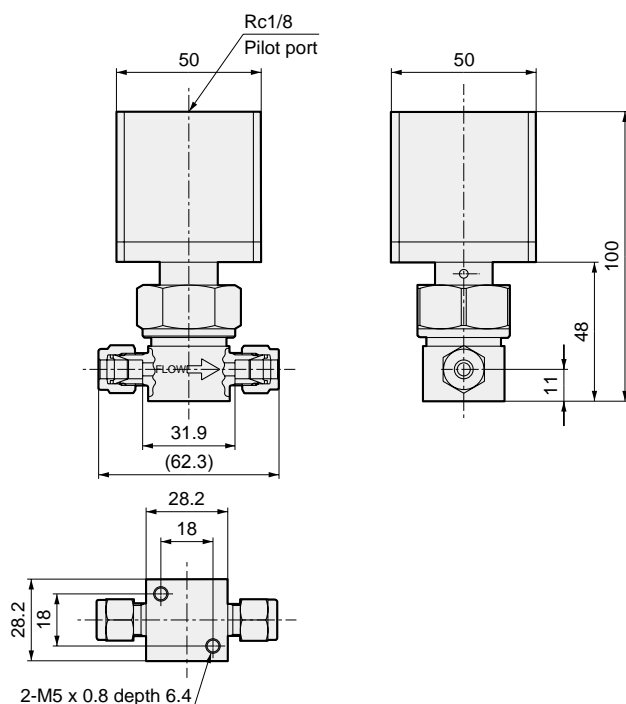
Ideal for sealing hydraulic devices and aerating pressure-resistant inspection media.

- It is possible to apply pressure from both the normal and reverse directions.
- The exterior seal is ensured with a special rod sealant structure.
- NC/NO can be selected depending on the application.
- This valve is suitable for inspection equipment for automobile antilock brake systems (ABS).

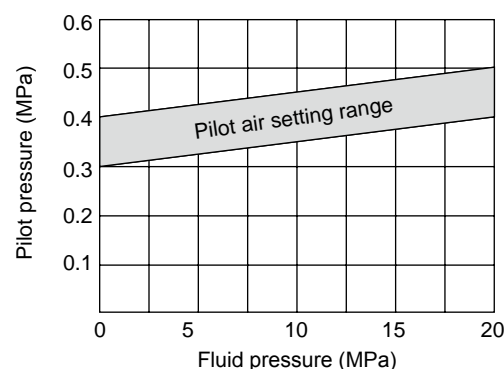
Specifications

Item	NAB-4SX1450	NAB-4SX1451
Actuation	NC	NO
Working fluid	Compressed air	
Working pressure MPa	0 (≈0 psi, 0 bar) to 20 (≈2900 psi, 200 bar)	
Proof pressure (water pressure) MPa	35 (≈5100 psi, 350 bar)	
Fluid temperature °C	-10 (14°F) to 60 (140°F) (no freezing)	
Ambient temperature °C	-10 (14°F) to 60 (140°F)	
Valve seat leakage cm ³ /min(ANR)	0.1 or less	
Connection	1/4" double barbed fitting	
Orifice size mm	3	
Effective cross-sectional area mm ²	4.6	
Weight kg	0.6	0.58
Mounting orientation	Unrestricted	
Pilot fluid	Air	
Pilot pressure MPa	0.4 (≈58 psi, 4 bar) to 0.7 (≈100 psi, 7 bar)	Refer to the figure below.
Pilot port size	Rc1/8	
Frequency	30 times/min. or less	
Fluid pressure supply port	Arbitrary	

Dimensions



- Pilot pressure inlet (NAB-4SX1451)



Parts list

	Part	Material
Gas contact parts	Body	SUS316L
	Seal	PI, FKM
	Holder	SUS304
	Stem	SUS304
Others	Cylinder	A5056
	Piston assembly	A2017, SUS303

*1 : This product is not approved for use with high pressure gas. The entire system, including the valve, must be approved.

*2 : Other ancillary materials are available. Contact CKD for details.

MEMO

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



Color changing valve

NAB-X2267/NAB-X2268

● Working fluids: Paint/thinner/air

Made-to-order product

Specifications

Item	NAB-X2267 (2-port valve)		NAB-X2268 (3-port valve)	
Actuation	Air operated/single acting			
Working fluid	Paint/thinner/air			
Working pressure MPa	0 (≈0 psi, 0 bar) to 1.0 (≈150 psi, 10 bar)			
Proof pressure (water pressure) MPa	1.5 (≈220 psi, 15 bar)			
Fluid temperature °C	5 (41°F) to 50 (122°F)			
Ambient temperature °C	-10 (14°F) to 60 (140°F)			
Valve seat leakage cm ³ /min	0 (water pressure 0 to 1 MPa) *1			
Mounting orientation	Unrestricted			
Operating frequency Cycle/min.	30 or less			
Main side port size	G1/4			
Orifice size mm	3 or equiv.			
Cv	0.3			
Weight g	180		210	
Material of wetted parts	SUS303, FKM, PTFE			
Pilot fluid	Air			
Pilot pressure MPa	0.35 (≈51 psi, 3.5 bar) to 0.7 (≈100 psi, 7 bar)			
Pilot port size	Rc1/8			

*1: As the NO port of NAB-X2268 (3-port valve) is on the circulating side, valve seat leakage is not guaranteed.

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

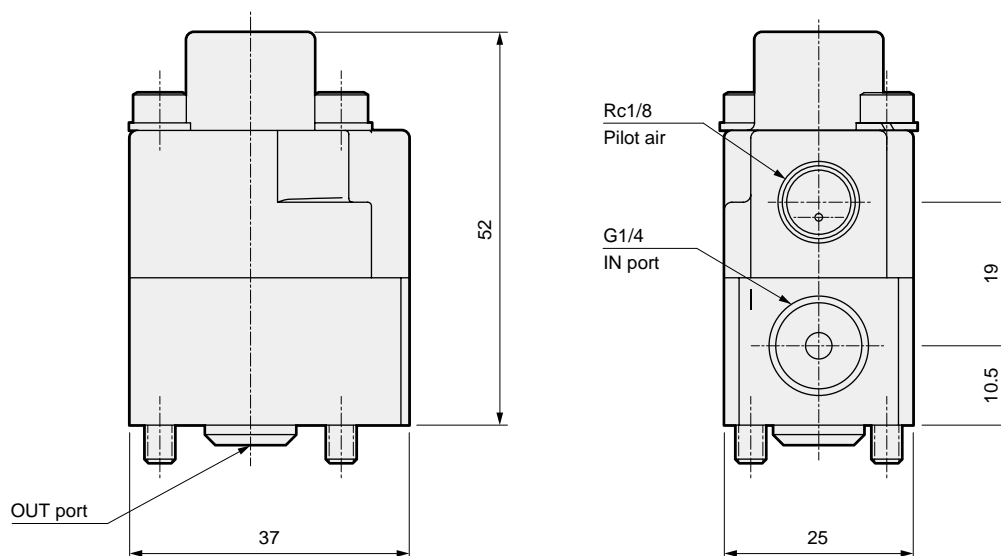
SpecFld

Custom

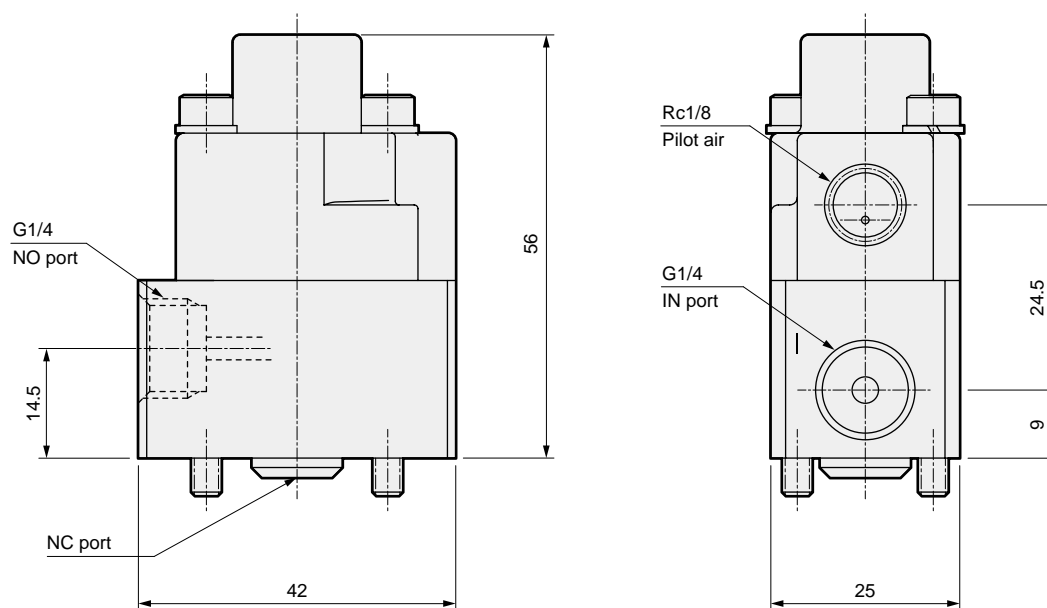
Ending

Dimensions

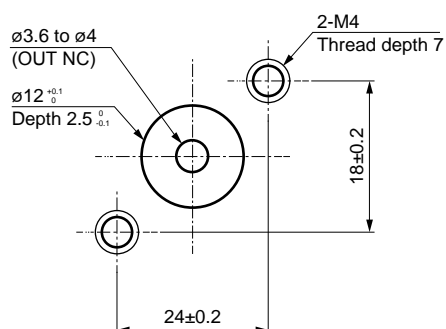
● NAB-X2267



● NAB-X2268



● Mounting dimensions



● Parts list

Part name	Material
Cylinder guard	ADC12 Aluminum die-casting
Spring	SUS304 Aluminum die-casting
Piston	A2011 Aluminum
Adaptor	C3604 Copper alloy
Diaphragm	PTFE Tetrafluoroethylene resin
Body	SUS303 Stainless steel
Valve seat	PTFE Tetrafluoroethylene resin
Rod packing	FKM Fluoro rubber
Valve stem	SUS303 Stainless steel
O-ring	FKM Fluoro rubber
O-ring	FKM Fluoro rubber

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



Medium pressure cylinder valve

NAB-6X2191/NAB-6X2192

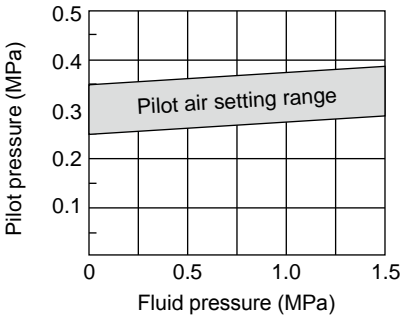
- NC, NO
- Working fluid: Compressed air
- Port size: Rc1/8

Made-to-order product

Specifications

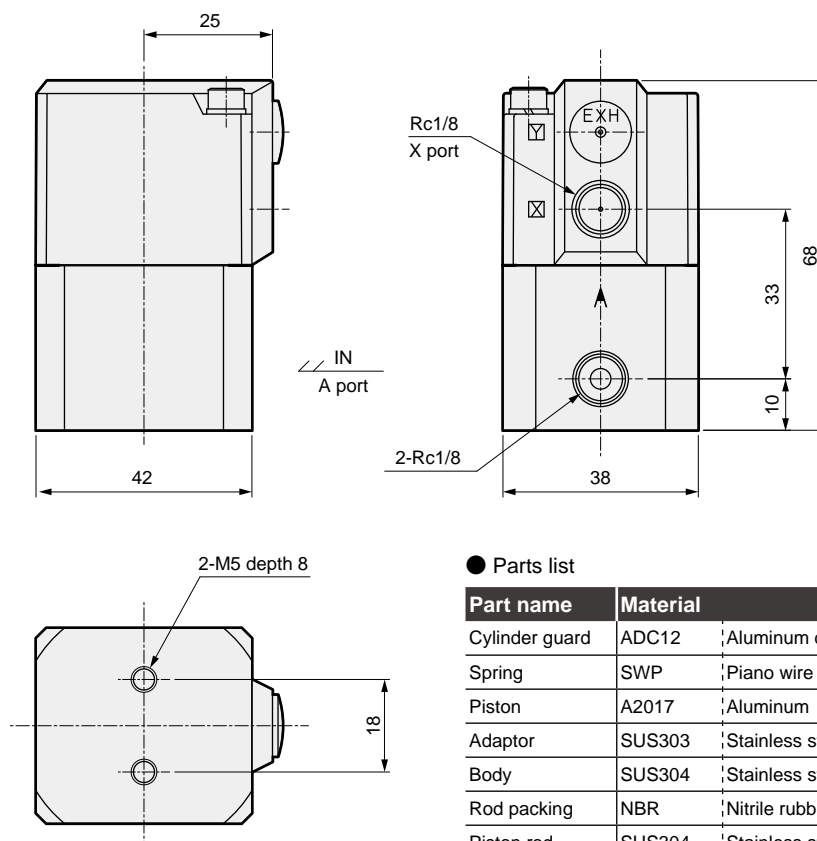
Item	NAB-6X2191		NAB-6X2192	
Actuation	NC		NO	
Working fluid	Compressed air			
Working pressure	MPa	0 (≈0 psi, 0 bar) to 1.5 (≈220 psi, 15 bar)		
Proof pressure (water pressure)	MPa	3.0 (≈440 psi, 30 bar)		
Fluid temperature	°C	-10 (14°F) to 60 (140°F) (no freezing)		
Ambient temperature	°C	-10 (14°F) to 60 (140°F)		
Valve seat leakage	cm ² /min	0.12 or less		
Port size		Rc1/8		
Orifice size	mm	3		
Mounting orientation		Unrestricted		
Pilot fluid		Air		
Pilot pressure	MPa	0.35 (≈51 psi, 3.5 bar) to 0.7 (≈100 psi, 7 bar)	Refer to the figure below.	
Pilot port size		Rc1/8		
Frequency		30 times/min. or less		

● Pilot pressure (NAB-6X2192)



Dimensions

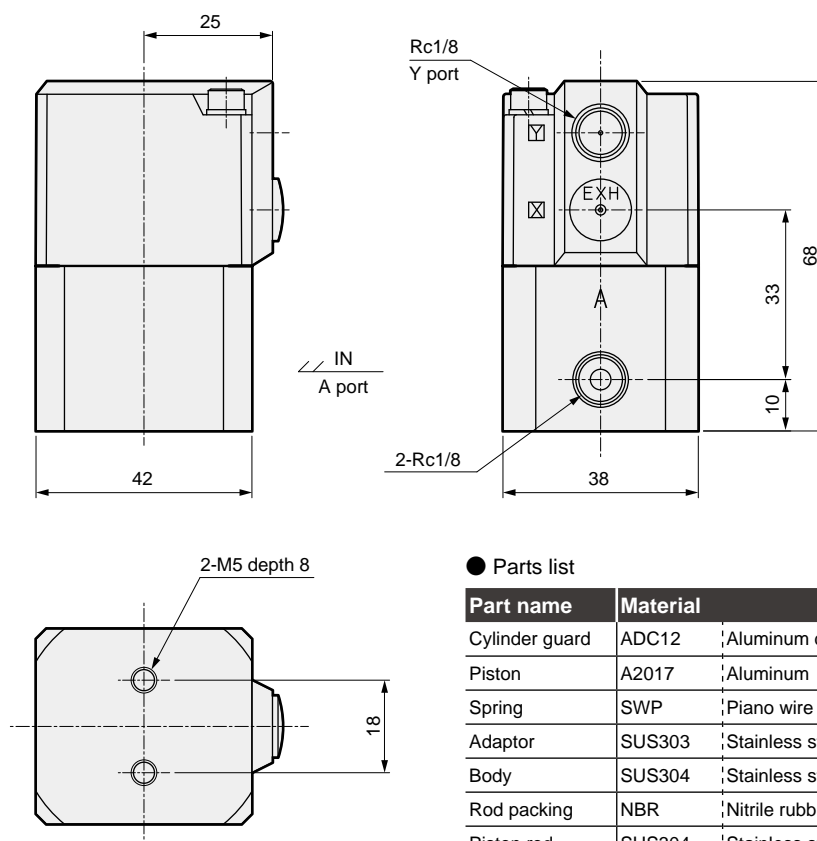
● NAB-6X2191



● Parts list

Part name	Material
Cylinder guard	ADC12 Aluminum die-casting
Spring	SWP Piano wire
Piston	A2017 Aluminum
Adaptor	SUS303 Stainless steel
Body	SUS304 Stainless steel
Rod packing	NBR Nitrile rubber
Piston rod	SUS304 Stainless steel
Valving element	FKM Fluoro rubber

● NAB-6X2192



● Parts list

Part name	Material
Cylinder guard	ADC12 Aluminum die-casting
Piston	A2017 Aluminum
Spring	SWP Piano wire
Adaptor	SUS303 Stainless steel
Body	SUS304 Stainless steel
Rod packing	NBR Nitrile rubber
Piston rod	SUS304 Stainless steel
Valving element	FKM Fluoro rubber



Proportional solenoid valve

A2-6500 Series

- NC (open when energized)
- Working fluid: Compressed air
- Port size: Rc1/8

Made-to-order product

RoHS

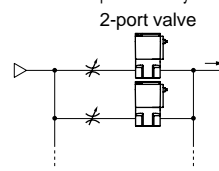
Step-less control of the flow rate in proportion to the current.

Thanks to step-less control of the flow rate with current control, fine flow rate control, such as “multiple-step flow rate control” and “optimal flow rate control”, which was difficult with conventional solenoid valves has been made possible. Proportional control contributes to “energy conservation of devices” and “elimination of waste”.

Applications

Conventional (2-port valve)

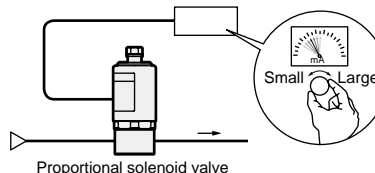
Multiple 2-port valves are required for every flow rate condition.



Proportional solenoid valve

With current control, it is possible to control the flow rate in a step-less manner with a single proportional solenoid valve.

Constant-current power supply, etc.



1 MPa = 10 bar

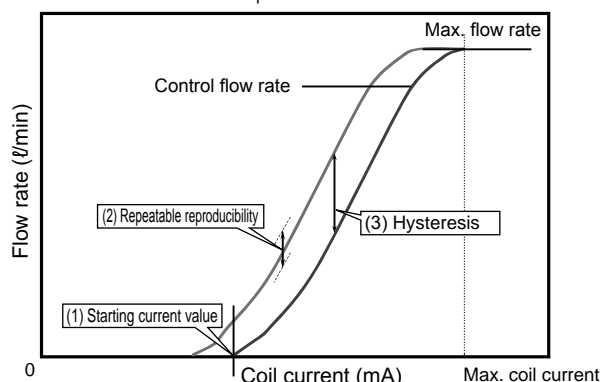
Specifications

Standard specifications	Working fluid	Compressed air		
	Fluid temperature °C	0 (32°F) to 50 (122°F)		
	Ambient temperature °C	0 (32°F) to 50 (122°F)		
	Actuation	NC		
	Mounting orientation	Limited to vertical mounting with the coil on top.		
	When valve is closed (current value: 0)	1 or less		
	Valve seat leakage cm ³ /min	1 or less		
Characteristic specifications	Port size	Rc1/8		
	Model No.	A2-6501	A2-6502	A2-6503
	Orifice size mm	1.6	2.3	3.2
	Max. working pressure differential MPa	0.7 (≈100 psi)	0.35 (≈51 psi)	0.15 (≈22 psi, 1.5 bar)
	Min. working pressure differential MPa	0.2 (≈29 psi)	0.1 (≈15 psi)	0.05 (≈7.3 psi, 0.5 bar)
	Max. working pressure MPa	0.7 (≈100 psi)	0.35 (≈51 psi)	0.15 (≈22 psi, 1.5 bar)
	Control flow rate ℓ/min (under max. working pressure differential)	0 to 100		0 to 80
	Hysteresis (under max. working pressure differential)	10% F.S. or less		13% F.S. or less
	Starting current value (under max. working pressure differential)	50% or less		65% or less
	Repeatability reproducibility	3% F.S. or less		
Coil specs	Used power supply voltage	12 VDC, 24 VDC		
	Coil current mA	0 to 330(12 VDC), 0 to 165(24 VDC)		
	Power consumption W	0 to 4		

- Body material: Copper alloy
- Sealant material: FKM
- Valve closed with power supply OFF (current value: 0)
- Valve seat leakage when valve is closed: 1 cm³/min or less

Details of the various values of the specifications

Flow characteristics



(1) Starting current value

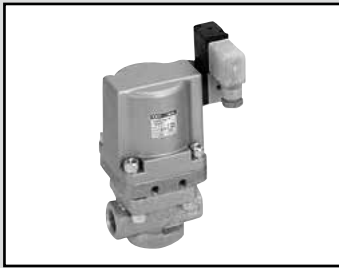
Upon increasing the coil current from a state where the flow rate is 0, the current value of when the fluid starts to flow. (Indicated as a percentage of the max. coil current.)

(2) Repeatability reproducibility

The variance of flow rates which are output when applying identical currents. (Indicated as a percentage of the max. flow rate.)

(3) Hysteresis

The max. flow rate difference with an identical current value when increasing and decreasing the current. (Indicated as a percentage of the max. flow rate.)



Air operated 2-port valve with solenoid valve (coolant control)
High pressure coolant valve

CVSE2-15AX039/20AX040/25AX041

- Working fluid: High pressure coolant (10 MPa)
- Port size: Rc1/2, Rc3/4, Rc1

Made-to-order product

High pressure coolant (10 MPa) control is possible.

Specifications

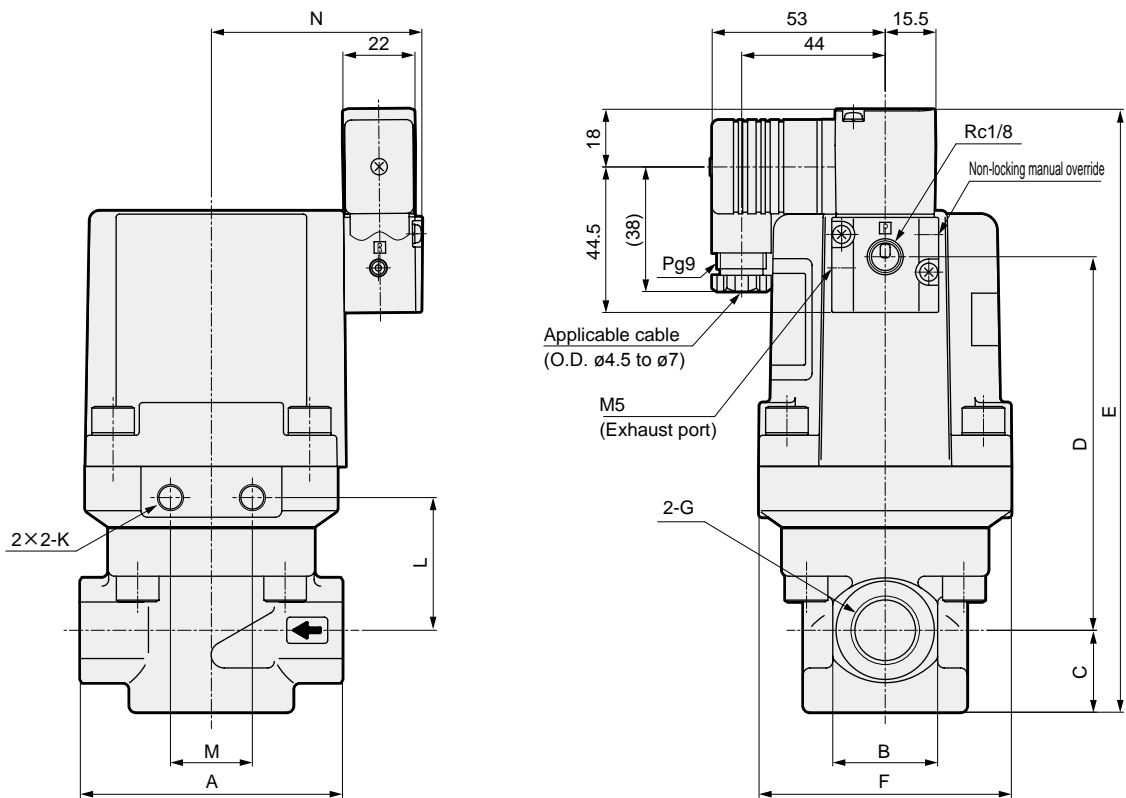
Item	CVSE2-15AX039	CVSE2-20AX040	CVSE2-25AX041
Actuation	NC		
Working fluid	Coolant		
Fluid viscosity mm²/s	500 or less		
Working pressure MPa	0 (≈0 psi, 0 bar) to 10 (≈1500 psi, 100 bar)		
Proof pressure (water pressure) MPa	14 (≈2000 psi, 140 bar)		
Fluid temperature °C	-10 (14°F) to 60 (140°F) (no freezing)		
Ambient temperature °C	-10 (14°F) to 60 (140°F)		
Valve seat leakage cm²/min	20 or less (water pressure)		
Port size	Rc1/2	Rc3/4	Rc1
Orifice size mm	6.5	8	10
Mounting orientation	Unrestricted		
Pilot fluid	Air		
Pilot pressure MPa	0.25 (≈36 psi, 2.5 bar) to 0.7 (≈100 psi, 7 bar)		
Pilot port size	Rc1/8		
Electrical specifications			
Rated voltage	100 VAC (50/60 Hz) / 110 V (60 Hz), 200 VAC (50/60 Hz) / 220 V (60 Hz), 24 VDC		
Apparent power (VA)	When holding	3.6(50 Hz), 2.8(60 Hz)	
	When starting	11(50 Hz), 9(60 Hz)	
Power consumption (W)	AC	1.9(50 Hz), 1.5(60 Hz)	
	DC	2.0	
Thermal class	Class 130 (B)		
Coil	With surge suppressor integrated DIN terminal box with lamp (Pg9)		

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

CVSE2 Series

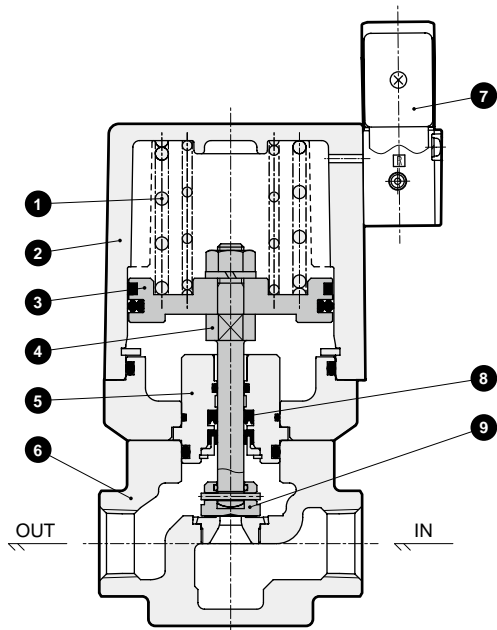
Dimensions

Dimensions



Model No.	A	B	C	D	E	F	G	K	L	M	N
CVSE2-15AX039	80	32	25	114	184	77	Rc1/2	M8 thread depth 10	40.5	25	64.5
CVSE2-20AX040	90	40	29	136.5	210.5	95	Rc3/4	M8 thread depth 10	45.5	25	72.5
CVSE2-25AX041	110	48	33.5	149.5	228	113	Rc1	M12 thread depth 14	49	45	82.5

Internal structure and parts list



No.	Part name	Material
1	Spring	SWP : Piano wire
2	Cylinder guard	ADC12 : Aluminum die-casting
3	Piston	A2017 : Aluminum
4	Piston rod	SUS304 : Stainless steel
5	Adaptor	SUS303 : Stainless steel
6	Body	FCD450 : Cast iron
7	Pilot solenoid valve	- : -
8	Rod packing	NBR : Nitrile rubber
9	Main valving element	SUS420 : Stainless steel