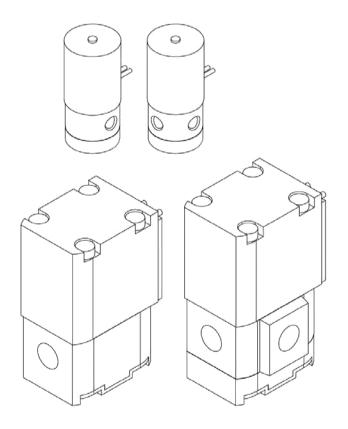


# **INSTRUCTION MANUAL**

2, 3 port solenoid valve for chemical liquid

MY <sup>B</sup><sub>G</sub> Series



- Please read this instruction manual carefully before using this product, particularly the section describing safety.
- Retain this instruction manual with the product for further consultation whenever necessary.

## Safety precautions

When designing and manufacturing a device using CKD products, the manufacturer is obligated to manufacture a safe product by confirming safety of the system comprising the following items:

- Device mechanism
- Pneumatic or water control circuit
- Electric control that controls the above

It is important to select, use, handle, and maintain the product appropriately to ensure that the CKD product is used safely.

Observe warnings and precautions to ensure device safety.

Check that device safety is ensured, and manufacture a safe device.



## WARNING

1. This product is designed and manufactured as a general industrial machine part. It must be handled by someone having sufficient knowledge and experience.

### 2. Use this product within its specifications.

This product cannot be used beyond its specifications. Additionally, the product must not be modified or machined.

This product is intended for use in general industrial devices and parts. Use beyond such conditions is not considered. Consult with CKD for details when using the product beyond the unique specification range, outdoors, or in the following conditions or environments. In any case, measures for safety shall be provided when the vavle malfunctions.

- ① Use for special applications requiring safety including nuclear energy, railroad, aviation, ship, vehicle, medical equipment, equipment or applications coming into contact with beverage or food, amusement equipment, emergency shutoff circuits, press machine, brake circuits, or for safeguard.
- ② Use for applications where life or assets could be adversely affected, and special safety measures are required.

# 3. Observe corporate standards and regulations, etc., related to the safety of device design and control, etc.

ISO4414, JIS B 8370 (pneumatic system rules)

JFPS2008 (principles for pneumatic cylinder selection and use)

Including High Pressure Gas Maintenance Law, Occupational Safety and Sanitation Laws, other safety rules, standards and regulations, etc.

### 4. Do not handle, pipe, or remove devices before confirming safety.

- ① Inspect and service the machine and devices after confirming safety of the entire system related to this product.
- 2 Note that there may be hot or charged sections even after operation is stopped.
- ③ When inspecting or servicing the device, turn off the energy source (air supply or water supply), and turn off power to the facility. Release any compressed air from the system, and pay enough attention to possible water leakage and leakage of electricity.
- ④ When starting or restarting a machine or device that incorporates pneumatic components, make sure that system safety, such as pop-out prevention measures, is secured.
- 5. Observe warnings and cautions on the pages below to prevent accidents.

■The safety cautions are ranked as "DANGER", "WARNING" and "CAUTION" in this section.



DANGER

:When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries, or when there is a high degree of emergency to a warning.



WARNING: When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries.



**CAUTION**: When a dangerous situation may occur if handling is mistaken leading to minor injuries or physical damage.

Note that some items described as "CAUTION" may lead to serious results depending on the situation. In any case, important information that must be observed is explained.

## Precautions with regard to guarantee

### Guarantee period

The warranty period of this product shall be one (1) year after it is delivered to the place specified by the customer.

If the product has been operated by the specified number of durable operations within 1 year, the warranty period ends at the time.

### Guarantee coverage

(1) If any failure for which CKD is recognized to be responsible occurs within the above warranty period, the alternatives or necessary replacement parts are provided at no additional charge, or the product is repaired at no additional charge at the plant of CKD.

The warranty does not cover the following conditions:

- ① Defects arising from operation under conditions or in the environment exceeding those stated in this specification.
- ② Failures resulting from misuse or incorrect control such as careless treatment.
- 3 Defects arising from malfunction of the equipment/machine other than the product manufactured by CKD.
- 4 Improper usage of the product.
- 5 Failures caused by remodeling of structure, performance, specification, etc. after delivery that CKD is not responsible for or repairs that is not specified by CKD.
- ⑥ If the product is embedded in the customer's machines or devices, and the failure could have been avoided if the customer's machines or devices have any function or structure that should be equipped under normal industrial conventions.
- Tailures that result from the cause that cannot be foreseen by the technology that is realized at the time of delivery.
- 8 Failures for which CKD is not responsible such as an act of nature or disaster.
- 9 Failures caused by used fluid.
  - (Including when the fluid damages the fluid contact section or the failure is caused by dezincification of brass.)
- 1 Defects arising from rust produced if the solenoid valve is left with water contents remained in its inside.
- (1) Failures caused by freezing of fluid.
- ② Defects arising from foreign matter caught in.
- Changes in appearance, such as damage or discoloration occurring during operation.
- 4 Defects arising from vibration.
- (5) Requirement of characteristics other than those stated in the specifications approved by the manufacturer and customer.
- © Caused by factors such as unauthorized modifications or repairs of the product.

The warranty here means the warranty of a single unit of the delivered product. Any other damages induced by the failure of the delivered product are not covered in the warranty.

- (2) The guarantee of this product is valid only in Japan. If the product is operated outside Japan, it is impossible to carry out on-site service free of charge even during the guarantee period. However, if the customer returns the defective product to CKD with expense born by the customer, CKD shall guarantee this product in the same manner as it is operated in Japan.
- (3) Appropriate measures shall be taken so that malfunction of the solenoid valve does not adversely affect the personnel and equipment around its operating place. CKD shall not be held responsible for adverse effects and damages caused by malfunction of the solenoid valve.
- (4) This solenoid valve is not a type of explosion-proof solenoid valve. Therefore, this solenoid valve cannot be operated in a hazardous atmosphere where any explosive gas exists. Therefore, careful consideration shall be taken so that operating environment does not become hazardous. CKD shall not be held responsible for troubles and damages caused by operation of the solenoid valve in such hazardous atmosphere.

### Confirmation of product compatibility

Our customer shall be responsible of confirming compatibility of our product used in our customer's system, machinery or device.

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### 1. Unpacking



Do not take off the packing bag until just before piping. Otherwise, foreign matter enters the valve and cause malfunction or bad operation.

- (1) Check that the model No. shown on the Name Plate of the product is the same with what you ordered
- (2) Check that the product has no external damages.
- (3) When storing the product, keep the product inside the packing box to prevent the intrusion of foreign matter to the valve. Take out the valve when piping.

### 2. Installation



Contact CKD if the product is to be used beyond specifications, or in special applications.

### 2. 1 Conditions for installation



- a) The product cannot be used in an explosive atmosphere.

  In such atmosphere, use our explosion-proof valve or air operated valve.
- b) Do not use the product under corrosive gas atmosphere, or atmosphere that degrades product material
- c) Use the product away from heating elements and radiant heat.
- d) Use the product within the specified ambient temperature range.
- e) The product may break if the fluid freezes. Provide appropriate measures against freezing.

  If heat insulating material is to be covered around the sole-
  - If heat insulating material is to be covered around the solenoid valve, do not cover around the coil. Otherwise, the coil will burn.
- f) Install the product away from rain, water, direct sunlight or ultraviolet rays.
  - The product cannot be used outdoors.
- g) Protective measures shall be taken against splashing of water or medicinal liquid on the product.



a) Install this product in a place free of vibration.

### 2. 2 Installation method

### 2.2.1 Mounting



- a) Read this instruction manual thoroughly and understand the contents before installing the product.
- b) Always take hold of the Main Body portion when handling and mounting the product. Do not apply force on the Coil Assembly portion.
- c) Make sure that there is no tension applied to the coil lead wire portion when installing.
- d) Always take hold of the Main Body portion when carrying the product. Do not hang the product by its lead wire.
- e) After installation, confirm proper mounting by checking for leaks at the piping.
- (1) Mounting orientation should be free.

### 2.2.2 Maintenance space

•Provide enough space for safe maintenance and troubleshooting work.

### 2. 3 Piping



- a) When piping or re-piping, fix the product. Always fix the product by holding the Main Body.
- b) Fix and provide appropriate support to the piping, so that the weight and vibration of the piping will not directly be applied to the product.
- c) Tighten the piping with recommended torque shown in table 2-1.
- d) Observe effective thread length for the piping. Additionally, chamfer about half pitch of the thread from the tip.
- e) Before piping, flush the piping with compressed air to remove foreign material such as dust, metal powder, rust and sealing material.
- f) Do not use excessive amount of sealing material (seal tape, gelatinous sealant). Otherwise, the sealing material will enter the product and cause malfunction.
- g) When applying or taping the sealing material to the piping, leave 1.5 to 2 threads at the tip without the sealing material.
- h) Foreign matter such as dust in the fluid hinders normal product operation. Install a filter less than 50µm at the primary side of the product.
- i) Make sure the piping to the product is performed correctly. Check the supply port and piping.
- j) Do not use the metal pipe to destroy a port.

#### (1) Cleaning the piping

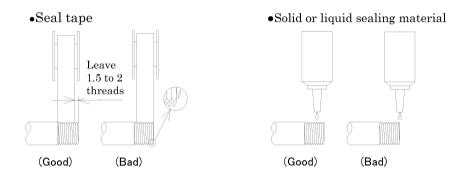
- Before piping, flush the piping with compressed air to remove foreign material such as dust, metal powder, rust and sealing material.
- (2) Removal of foreign matter
  - · Foreign matter such as dust in the fluid causes malfunction and leakage.

Install a filter less than 50µm at the primary side of the product.

### (3) Piping

- · Always take hold of the main body portion when mounting the product.
- (4) Sealing material
  - When using sealing material, make sure the sealing material do not enter the piping. Also, make sure there is no external leakage. When taping seal tape to the pipe thread, leave 1.5 to 2 threads at the tip without taping.

Also, when using liquid sealing material, leave 1.5 to 2 threads at the tip without sealing material. Do not apply too much sealing material on the thread. Do not apply sealing material to the internal thread (refer to Figure 2-1.).



(Figure 2-1.) How to apply sealing material

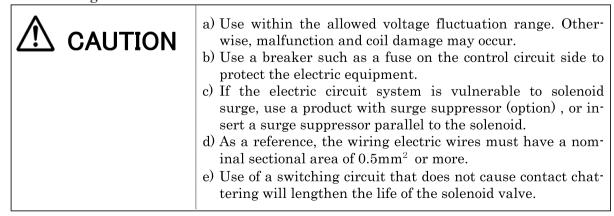
### (5) Port tightening torque

• Refer to Table 2-1. for the recommended port tightening torque.

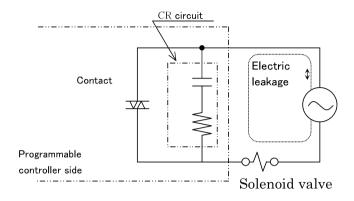
Table 2-1. Recomm	nended port	tightening	torque

Port size	Tightening torque
M5	0.10-0.15[N·m]
R1/8	0.5-0.8[N·m]
R1/4	1.0-1.5[N·m]
R3/8	1.0-1.5[N·m]

### 2. 4 Wiring



f) When operating the solenoid valve using a device such as a programmable controller, confirm that the leakage current output from the device is within values shown in the table below. If leakage current exceeds the value in the table, the valve may malfunction.



Rated voltage	Model no.	Leakage current
DC12V	$\mathrm{MY}_\mathrm{G}^\mathrm{B}$ 1	2mA or less
DC12V	$\mathrm{MY}_\mathrm{G}^\mathrm{B}$ 3	2mA or less
	$\mathrm{MY}_\mathrm{G}^\mathrm{B}$ 1	1mA or less
DC24V	$\mathrm{MY}_\mathrm{G}^\mathrm{B}$ 2	1mA or less
	$\mathrm{MY}_\mathrm{G}^\mathrm{B}$ 3	1mA or less
	$\mathrm{MY}_\mathrm{G}^\mathrm{B}$ 1	1.5mA or less
AC100V	$\mathrm{MY}_\mathrm{G}^\mathrm{B}$ 2	6mA or less
	$\mathrm{MY}_\mathrm{G}^\mathrm{B}$ 3	2mA or less

g) As MYB2·MYG2, incorporating electronic oscillator circuits, generates noise, noise prevention should be taken on the same power supply wire.

### (1) Wiring of the lead wire type

This product uses lead wires described below.

If a terminal is to be crimped onto the lead wire, crimp and insulate the terminal properly.

Model no.	Conductor size	Insulating covering outer diameter
MY <sub>G</sub> <sup>B</sup> 1	$\mathrm{AWG20}(0.5\mathrm{mm}^2)$	φ 1.9mm
MY <sub>G</sub> <sup>B</sup> 2	$\mathrm{AWG20}(0.5\mathrm{mm}^2)$	φ 2.6mm
MY <sub>G</sub> <sup>B</sup> 3	$ m AWG20(0.5mm^2)$	φ 2.6mm

## 3. Pre-operation (post-installation) check

### 3. 1 Appearance check



Stop the flow of the fluid (shut the supply). Discharge the fluid inside the product.

Cut off the electricity.

- (1) Push the product by hand and confirm that the product is firmly fixed on the piping.
- (2) Confirm the piping is done properly.
- (3) Confirm that no screws and bolts are loose.
- (4) Confirm that the wiring is done properly.

### 3. 2 Leakage check

(1) Confirm leakage at the connection part by applying pressure to the fluid.

We recommend leakage check by the following method:

- · Supply compressed air.
- · Apply soap water to the portion to check for leakage.
- · Bubbles will appear if there is any leakage.

### 3. 3 Electrical check



Cut off the electricity.

Check while taking serious care to avoid electric shock.

(1) Check the power supply voltage.

Voltage fluctuation shall be within 10 % of the rated voltage.

Use beyond the allowed voltage fluctuation range will cause malfunction or damage to the coil.

(2) Check insulation resistance

Check the insulation resistance between dead metal parts and un-insulated live parts (such as the tip of the lead wire) that are assembled to the product.

Confirm that insulation resistance is over  $100M\Omega$  at DC1000V megger.

# 4. Instructions for proper use

### 4. 1 Handling precautions



- a) Do not use this product as an emergency shut-off valve.
  - This product is not designed as a safety-securing valve, such as an emergency shut-off valve. For such systems, use this valve after providing another method of securing safety.
- b) Take measures to prevent harm to operators or objects if this product fails.
- c) Liquid-filled state

Before starting use, check the compatibility between the materials of the product and working fluid. When using strong acids, such as hydrochloric acid, hydrofluoric acid or nitric acid, or sodium hypochlorite (soda), use an air operated valve for chemical liquid.

- d) Foreign matter such as rust and dust in the fluid causes malfunction and leakage, which degrades product performance. Provide measures to remove foreign matter.
- e) Use within specified fluid temperature range.
- f) Use within specified ambient temperature range.
- g) Do not touch the coil sections when energized or immediately after energizing. Directly touching these products could cause burns.
- h) Do not touch the wiring connection sections (bare live part) when energized. There is a risk of electric shock.
- i) Use within the maximum working pressure range.
- j) When standing the secondary piping, do not make it higher than 2 m. Use tubing or piping with the same or larger bore size as the orifice to fix the pipe.



- a) Use within the maximum working pressure differential range.
- b) Do not use the product as footings, or place heavy loads on the product.
- c) If the product has not been used for more than a month, carry out trial run before work.
- d) Consult us if the product is to be energized continuously, or if the operation frequency is low.
- e) Beware of clogging of the filter.
- (1) Refer to "6. Troubleshooting" if any trouble occurs.

### 4. 2 Disassembly and assembly



a) Do not disassemble and remodel the product.

When a product is disassembled, product performance may not be satisfied.

Oil is enclosed inside, and oil begins to flow when a product is disassembled.

b) The disassembled product is out of a guarantee.

When a product is disassembled out of necessity, please consult CKD.

### 5. Maintenance

### 5. 1 Maintenance and inspection



Cut off the electricity and release the fluid and pressure before performing maintenance work.

- (1) Read this Instruction Manual thoroughly and understand the contents before performing maintenance and inspection.
- (2) Regularly inspect the product to ensure optimum performance. The product should be inspected every half year.
- (3) Always carry out trial run if the valve has not been used for more than a month.
- (4) Refer to "3. Pre-operation check" for contents of inspection.

Refer to "6. Troubleshooting" if there are any abnormalities.

### 5. 2 Service parts

We do not provide service parts.

Please consult CKD or your nearest agent if the product shows abnormalities such as leak or malfunction while use.

# 6. Troubleshooting

(1) Perform inspection when power fails, or at emergencies such as malfunction.

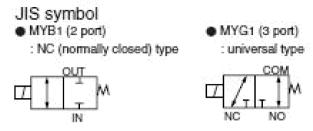
(2) If the product does not operate as intended, inspect the product following the table below.

(=) II the product does i	Tot operate as interface, mispect the	or out of the state of the stat
State of failure	Cause	Countermeasure
	Valve is not energized.	Confirm wiring and fuse, then energize the valve.
	Voltage applied is lower than the allowable voltage range.	Confirm the power supply, and apply rated voltage.
Valve does not open	Fluid pressure applied is beyond the value specified.	Adjust the pressure within the specified value.
	Foreign matter clogs the flow.	Replace the product.
	Foreign matter obstructs operation at the actuator portion.	Replace the product.
	Valve is not de-energized.	Check for electric leakage. Modify the circuit so the power is shut off for sure.
	Fluid pressure applied is beyond the value specified.	Adjust the pressure within the specified value.
Valve does not shut	Foreign matter is caught in the valve seat.	Replace the product.
	Foreign matter obstructs operation at the actuator portion.	Replace the product.
	The Diaphragm is damaged.	Replace the product.
External leakage	The Diaphragm is damaged or deformed.	Replace the product.
	Pressure applied is beyond the value specified.	Adjust the pressure within the specified value.
Tukawal laskawa	The valve seat of the Body is worn or damaged.	Replace the product.
Internal leakage	The sealing side of the Diaphragm is worn or damaged.	Replace the product.
	Foreign matter is caught in the valve seat.	Replace the product.

<sup>(3)</sup> Please consult CKD or your nearest agent for any unclear points.

### 7. Product specification and model number display

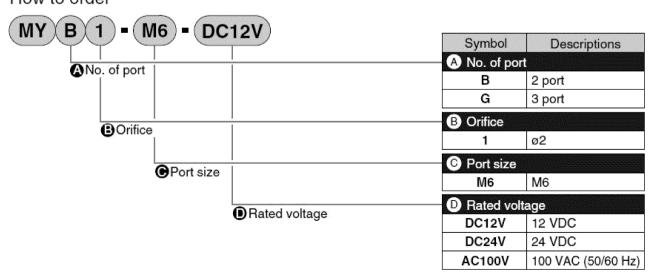
### 7. 1 MYB1·MYG1



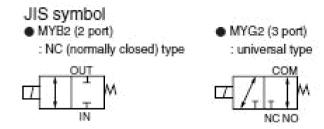
Specifications

Specifications										
Descriptions	MYB1-M6				MYG1-M6					
Working fluid		Wate	er, pure wa	ter, chemical l	iquids (fluids t	hat do not	corrode m	aterials at	wetted p	arts)
		Conditions	Fluid flow direction	Working pres of each port		Conditions	Fluid flow direction	Working pressure range of each port (MPa)		
				IN	OUT			COM	NC	NO
W. 1.	MD.	IN positive	IN→OUT	0 to 0.2	0 to 0.1	COM positive	COM → NC or NO	0 to 0.2	0 to 0.1	0 to 0.1
Working pressure	MPa	OUT positive	OUT→IN	0 to 0.1	0 to 0.1	NC positive	ис→сом	0 to 0.1	0 to 0.1	0 to 0.1
		IN negative	OUT→IN	-0.05 to 0	-0.05 to 0	NO positive	NO→COM	0 to 0.1	0 to 0.1	0 to 0.1
						COM negative	NC or NO → COM	-0.05 to 0	-0.05 to 0	-0.05 to 0
Proof pressure	MPa				0.3 (wate	r pressure)	1			
Fluid temperature	$^{\circ}$ C					o freezing)				
Ambient temperature	$^{\circ}$ C					o freezing)				
Atmosphere				Not being	g a corrosive aı		e atmosph	ere.		
Valve seat leakage	cm³/min				0 (water	pressure)				
Port size						M6				
Orifice size	mm					ent to 2.0				
Cv						).1				
Mounting orientation						ree				
Weight	kg				0.	.14				
Electric specificati	ons									
Rated voltage 12 VDC, 24 VDC,										
Voltage fluctuation ra	mge W AC	-10 to +10% of rated voltage								
Power consumption	3.8									
	DC					3.0				
Leakage current	mA			2 or less (12 VI			5 or less (	100 VAC)		
Thermal class					Class	130 (B)				

### How to order



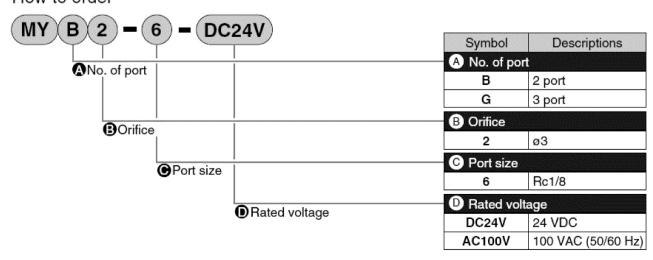
### 7. 2 MYB2·MYG2



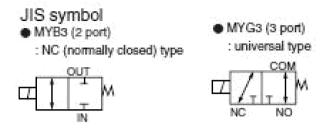
Specifications

Descriptions		MYB2-6 MYG2-6								
Working fluid		Water, pure water, chemical liquids								
working nulu			(fluids that	do not corrode	materials	at wetted	parts)			
		Conditions	Fluid flow	Working pre- of each por		Conditions	Fluid flow direction		ng pressure ch port (MP	
			direction	IN	OUT	]		СОМ	NC	NO
TT 1:	1.00	IN positive	IN→OUT	0 to 0.2	0 to 0.1	GOM positive	COM → NC or NO	0 to 0.2	0 to 0.1	0 to 0.1
Working pressure	MPa	OUT positive	OUT→IN	0 to 0.1	0 to 0.1	NC positive	NC→COM	0 to 0.1	0 to 0.1	0 to 0.1
		IN negative	OUT→IN	-0.05 to 0	-0.05 to 0	NO positive	ио→сом	0 to 0.1	0 to 0.1	0 to 0.1
						COM negative	$NC \text{ or } NO \rightarrow COM$	-0.05 to 0	-0.05 to 0	-0.05 to 0
Proof pressure	MPa				0 .3 (wate	r pressure)				
Fluid temperature	$^{\circ}$ C				5 to 60 (n	o freezing)				
Ambient temperature	$^{\circ}$ C					o freezing)				
Atmosphere				Not bein	g a corrosive a	nd explosiv	e atmosph	ere.		
Valve seat leakage	cm³/min				0 (water	pressure)				
Port size					Re	c1/8				
Orifice size	mm				Equival	ent to 3.0				
Cv					0	.18				
Mounting orientation					F	ree				
Weight	kg			0.22				0.24		
Electric specificatio	ns									
Rated voltage					24 VDC, 100 Y	VAC (50/60	Hz)			
Voltage fluctuation ran		-10 to +10% of rated voltage								
Power consumption	W				5	5.5				
Starting current	А				1 o	r less				
Leakage current	mA			1 or	less (24 VDC)	$/6  \overline{\mathrm{or  less}}$ (	100 VAC)			
Thermal class		-		-	Class	130 (B)			-	

### How to order



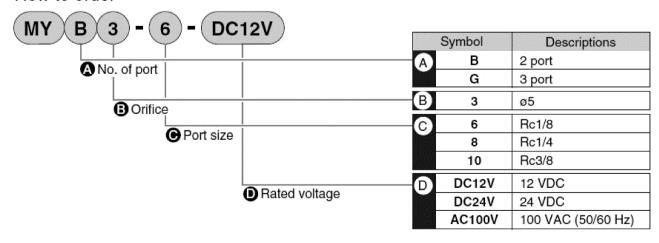
### 7. 3 MYB3·MYG3



### Specifications

Descriptions	MYB3				MYG3					
Working fluid		Wate	er, pure wa	ter, chemical l	iquids (fluids t	hat do not	corrode ma	aterials at	wetted pa	arts)
		Conditions	Fluid flow	Working pres of each por		Conditions	Fluid flow direction		ng pressure ch port (MP	
			direction	IN	OUT			СОМ	NC	NO
XX 1.	MD	IN positive	IN→OUT	0 to 0.2	0 to 0.1	COM positive	COM → NC or NO	0 to 0.2	0 to 0.1	0 to 0.1
Working pressure	MPa	OUT positive	OUT→IN	0 to 0.1	0 to 0.1	NC positive	NC→COM	0 to 0.1	0 to 0.1	0 to 0.1
		IN negative	OUT→IN	-0.05 to 0	-0.05 to 0	NO positive	NO→COM	0 to 0.1	0 to 0.1	0 to 0.1
						COM negative	NC or NO → COM	-0.05 to 0	-0.05 to 0	-0.05 to 0
Proof pressure	MPa				0.3 (water	r pressure)				
Fluid temperature	$^{\circ}$ C				5 to 60 (n	o freezing)				
Ambient temperature	$^{\circ}$					o freezing)				
Atmosphere				Not being	g a corrosive ar	nd explosiv	e atmosph	ere.		
Valve seat leakage	cm <sup>3</sup> /min				0 (water	pressure)				
Port size					Rc1/8, Rc	e1/4, Rc3/8				
Orifice size	mm				Equivale	ent to 5.0				
Cv						).5				
Mounting orientation					Fı	ree				
Weight	kg			0.55				0.6		
Electric specification	ons									
Rated voltage				12 <b>'</b>	VDC, 24 VDC,					
Voltage fluctuation ra	nge	-10 to +10% of rated voltage								
Power consumption	W AC					.1				
	DC					1.5				
Leakage current	mA			2 or less (12 V	DC) / 1 or less	· · · · · · · · · · · · · · · · · · ·	2  or less  (1	.00 VAC)		
Thermal class					Class 1	130 (B)				

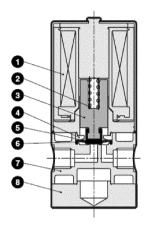
### How to order

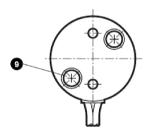


# 8. Internal construction

# 8. 1 MYB1·MYG1

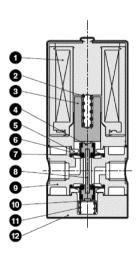
### ● MYB1

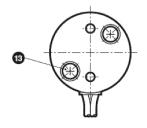




No.	Parts name	Material		
1	Coil assembly	Class B molded coil		
2	Spring	SUS304	Stainless steel	
3	Plunger	SUS405	Stainless steel	
4	Diaphragm receiving	PPS	Polyphenylene sulfide	
5	Protection seat	PTFE	Tetrafluoroethylene resin	
6	Diaphragm	FKM	Fluoro rubber	
7	Body	PPS	Polyphenylene sulfide	
8	Mounting plate	SUS303	Stainless steel	
9	Spring washer assembled cross headed pan head machine screw	SUSXM7	Stainless steel	

MYG1

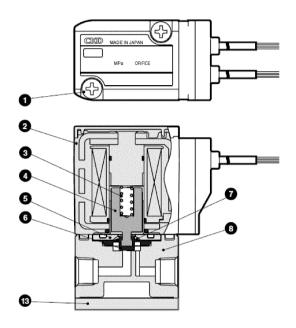




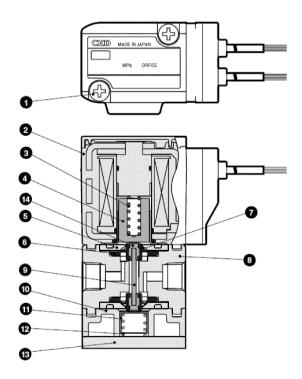
No.	Parts name	Material			
1	Coil assembly	Class B molded coil			
2	Spring	SUS304	Stainless steel		
3	Plunger	SUY	Iron		
4	Spacer	PPS	Polyphenylene sulfide		
5	Diaphragm receiving	PPS	Polyphenylene sulfide		
6	Protection seat	PTFE	Tetrafluoroethylene resin		
7	Diaphragm	FKM	Fluoro rubber		
8	Rod	Ceramic			
9	Body	PPS	Polyphenylene sulfide		
10	Spring holder	SUS304	Stainless steel		
11	Spring	SUS304	Stainless steel		
12	Mounting plate	SUS303	Stainless steel		
13	Spring washer assembled cross headed pan head machine screw	SUSXM7	Stainless steel		

### 8. 2 MYB2·MYG2

### MYB2



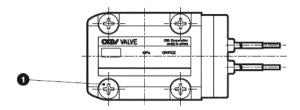
### MYG2

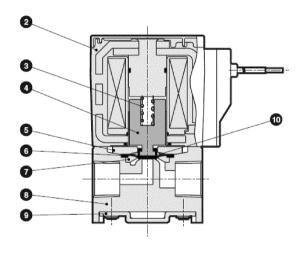


No.	Parts name	Material		Material		Material No. Parts name		Parts name	Material		
1	Cross headed pan head machine screw	SUSXM7	Stainless steel	8	Body	PPS	Polyphenylene sulfide				
2	Coil assembly	Class B mode coil		9	Rod	Ceramic					
3	Spring	SUS304	Stainless steel	10	Base	PPS	Polyphenylene sulfide				
4	Plunger	SUS405	Stainless steel	11	Spring holder	SUS304	Stainless steel				
5	Diaphragm receiving	PPS	Polyphenylene sulfide	12	Spring	SUS304	Stainless steel				
6	Diaphragm	FKM	Fluoro rubber	13	Mounting plate	SUS304	Stainless steel				
7	Protection seat	PTFE	Tetrafluoroethylene resin	14	Сар	PPS	Polyphenylene sulfide				

### 8. 3 MYB3·MYG3

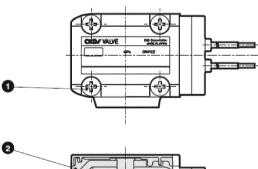
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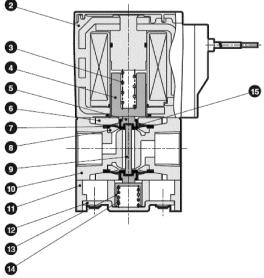




No.	Parts name	Material	
1	Cross headed pan head machine screw	SUSXM7	Stainless steel
2	Coil assembly	Class B molded coil	
3	Spring	SUS304	Stainless steel
4	Plunger	SUS405	Stainless steel
5	Diaphragm receiving	PPS	Polyphenylene sulfide
6	Diaphragm	FKM	Fluoro rubber
7	Diaphragm receiving	PPS	Polyphenylene sulfide
8	Body	PPS	Polyphenylene sulfide
9	Mounting plate	SUS304	Stainless steel
10	Protection seat	PTFE	Tetrafluoroethylene resin

### MYG3





No.	Parts name	Material	
1	Cross headed pan head machine screw	SUSXM7	Stainless steel
2	Coil assembly	Class B molded coil	
3	Spring	SUS304	Stainless steel
4	Plunger	SUS405	Stainless steel
5	Spacer	PPS	Polyphenylene sulfide
6	Diaphragm receiving	PPS	Polyphenylene sulfide
_ 7	Diaphragm	FKM	Fluoro rubber
8	Diaphragm receiving	PPS	Polyphenylene sulfide
9	Rod	Ceramic	
10	Body	PPS	Polyphenylene sulfide
11	Base	PPS	Polyphenylene sulfide
12	Mounting plate	SUS304	Stainless steel
13	Spring holder	SUS304	Stainless steel
14	Spring	SUS304	Stainless steel
15	Protection seat	PTFE	Tetrafluoroethylene resin