CKD

Flexible combination without piping or problems! **New Product**

Air unit
CXU Series

AIR UNIT CXU SERIES

CKD Corporation

CC-901A 2

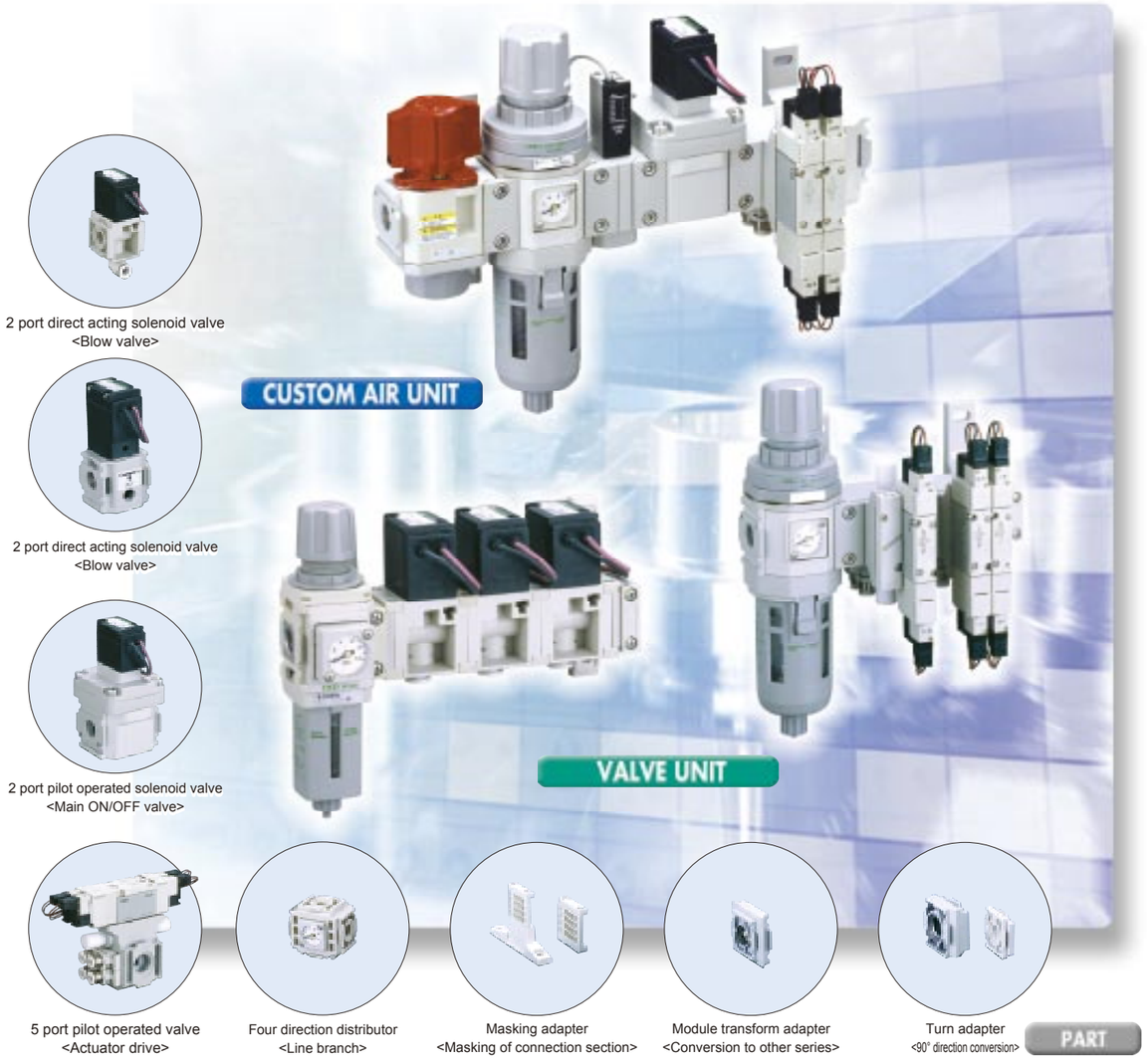
New-Generation Pneumatic Unit

The air unit CXU series modularizes and joins the wide variety of air components indispensable for pneumatic control and actuator drives between filters or regulators and valves.
This series dramatically reduces conventional design and piping labor hours.

CKD Green Technology

Flexible combination without piping or problems!

A wide variety of function parts enhances versatile unit combinations. Customized specifications are also available.

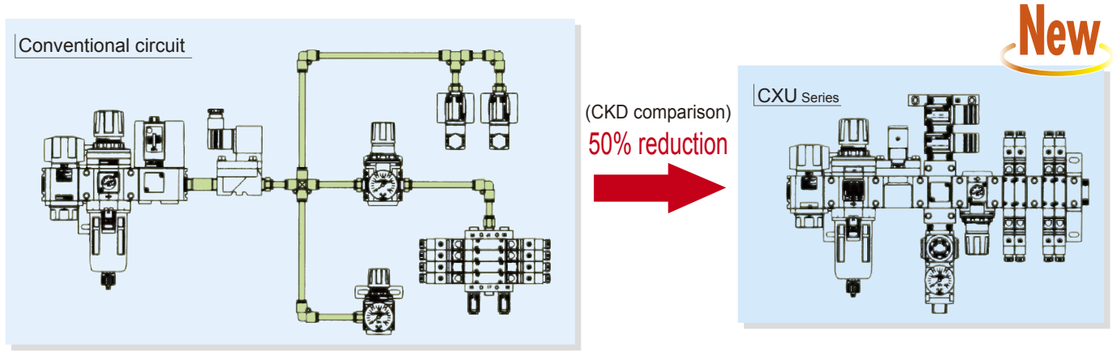


Air unit
CXU Series

No more piping or problems

Piping-versatile, space-saving

Bothersome piping design and work have been eliminated. All work is completed by preparing a single unit.
Installation space is also reduced with the elimination of piping and tubes.
This also makes for a neater appearance.
Mounting positions for separate components are eliminated, and errors in mounting dimensions caused when pipes are tightened are solved.



Improved quality

No threading sections, no external leaks!
This also prevents foreign materials from entering during piping work.

Flexible combination

Vertical or horizontal

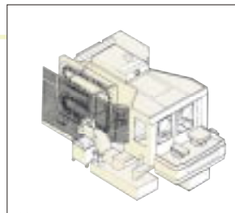
Vertical and horizontal pipes can be arranged versatilely.
Solenoid valves can also be connected directly.
The simple layout greatly reduces piping design labor hours.
(AIR UNIT custom order parts)

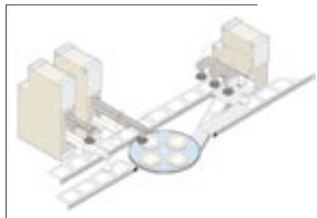

(Patent pending)

Easy change and expansion

Module joining lets air components
be changed and expanded freely.
Components can be attached and removed from the front face.
This also facilitates maintenance.

Example of major applications


Machine tool


Assembled delivery

Series variation

Air unit

Valve air unit (model no. for manifold)

Model	Model no.	Series		Page
		1000	3000	
2 port direct acting solenoid valve	CXU10-GFAB3	●		2
	CXU30-GFAB4U		●	6
5 port pilot operated valve	CXU30-M4G2		●	10

Air unit module (model no. for discrete part)

Model	Model no.	Series		Page
		1000	3000	
2 port direct acting solenoid valve	CXU10-FAB3	●		18
	CXU30-FAB4U		●	20
2 port pilot operated solenoid valve	CXU30-FAD		●	22
5 port pilot operated valve	CXU30-4G2		●	24
Four direction distributor	CXU10-D4	●		30
	CXU30-D4		●	30
Turn adapter	CXU10-TA	●		32
	CXU30-TA		●	32
Masking adapter	CXU10-MA	●		33
Module transform adapter	CXU13-CA	●		34

Custom air unit (model no. for custom combination)

Model	Model no.	Series		Page
		1000	3000	
CXU30 Series	CXU30-UN-		●	37

Air unit custom order parts

Model	Model no.	Series		Page
		1000	3000	
Air unit custom order parts	CXUZ-FL	●	●	70

Safety precautions

Always read this section before starting use.

When designing and manufacturing a device using CKD products, the manufacturer is obligated to check that device safety mechanism, pneumatic control circuit, or water control circuit and the system operated by electrical control that controls the devices is secured.
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 an operator having sufficient knowledge and experience in handling.

2 Use this product in accordance of specifications.

This product must be used within its stated specifications. It must not be modified or machined.
This product is intended for use as a general-purpose industrial device or part. It is not intended for use outdoors or for use under the following conditions or environment.
(Note that this product can be used when CKD is consulted prior to use and the customer consents to CKD product specifications. The customer must provide safety measures to avoid risks in the event of problems.)

❶ 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.
❷ 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 B8370 (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, body standards and regulations, etc.

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

❶ Inspect and service the machine and devices after confirming safety of the entire system related to this product.
❷ Note that there may be hot or charged sections even after operation.
❸ When inspecting or servicing the device, turn off the energy source (air supply or water supply), and turn off power to the facility. Discharge any compressed air from the system, and pay enough attention to possible water leakage and leakage of electricity.
❹ When starting or restarting a machine or device that incorporates pneumatic components, make sure that the system safety, such as pop-out prevention measures, is secured.

5 Observe warnings and cautions on the pages below to prevent accidents.

■ The precautions 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.

Disclaimer

1. CKD cannot be held liable for any business interruption, loss of profit, personal injury, delay cost, or any other ancillary or indirect loss, cost, or damage resulting from the use of or faults in the use of CKD products.
2. CKD cannot be held responsible for the following damage.
   ① Damage resulting from disaster or failure of CKD parts due to fire from reasons not attributable to CKD, or by intentional or negligence of a third party or customer.
   ② When a CKD product is assembled into customer equipment, damage that could have been avoided if customer equipment were provided with functions and structure, etc., generally accepted in the industry.
   ③ Damage resulting from use exceeding the scope of specifications provided in CKD catalogs or instruction manuals, etc., or from actions not following precautions for installation, adjustment, or maintenance, etc.
   ④ Damage resulting from product modifications not approved by CKD, or from faults due to combination with other software or other connected devices.

Safety precautions

Control components: Warning, Caution

Refer to the "General purpose valve (No. CB-03-1SA)" for precautions for general-purpose control components.
Always read this section before starting use.

2 port direct acting solenoid valve CXU10-FAB3/CXU30-FAB4U, 2 port pilot operated solenoid valve CXU30-FAD

Design & Selection

1. Safety designing

⚠ WARNING

■ This product can not be used as an emergency shut off valve.
Valves in this catalog are not designed to ensure safety such as emergency shutoff. When using in such a system, provide other measures to ensure safety.

■ Take measures to prevent harm to operators or objects if this product fails.

⚠ CAUTION

■ Leakage current from other fluid control components
When using a programmable controller, etc., with CR circuits to absorb the surge voltage generated by switching elements, leakage current could pass and adversely affect the operation of the solenoid valve. Keep leakage current to less than the value given in precautions for products in this catalog or values given for products.

■ Minimum working pressure differential
The pilot valve must be used at the minimum working pressure difference or higher listed in specifications in this catalog. (CXU30-FAD)

2. Working fluid

⚠ WARNING

■ Quality of fluid
Iron rust and dirt, etc., in fluid can cause operation faults or leaks, and lowering product performance. Eliminate such substances.

■ Fluid temperature
Fluid temperature must be kept within the specified fluid temperature range.

3. Working environment

⚠ WARNING

■ Only explosion-proof solenoid valves and air-driven valves can be used in an explosion-proof atmosphere.
A solenoid valve for explosion proof is not available for an air unit. Select from General purpose valves.

■ When using AC voltage, a large noise may be generated, depending on working conditions.
If this noise is a problem, use DC voltage.

■ Do not use this product in an environment in which corrosive gases could impregnate configuration materials.

■ Do not use this product near heat-generating elements or where it may be subject to radiated heat.

■ Use within the specified ambient temperature range.

■ Take appropriate antifreeze measures when in cold climates.
When wrapping insulation around the solenoid valve, etc., do not wrap coils.

■ Take appropriate safeguards for protective structures listed in catalog specifications.

■ Take appropriate safeguards when using this product in places where oil or spatter from welding, etc., could come in contact.

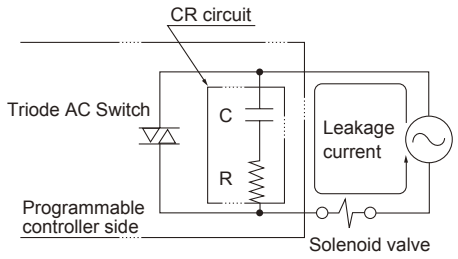
4. Securing of space

⚠ CAUTION

■ Securing of maintenance space
Secure sufficient space for maintenance and inspection.

5. Leakage current

■ Leakage current from other fluid control components
When operating the solenoid valve with a programmable controller etc., confirm that the leak current output from the programmable controller is within the following specifications.



Voltage / Model no.	100 VAC	200 VAC	12 VDC	24 VDC
CXU10-FAB3 CXU30-FAB4U CXU30-FAD	6 mA or less	3 mA or less	1 mA or less	2 mA or less

Installation & Adjustment

1. Installation

⚠ CAUTION

- Always thoroughly read the Instruction Manual before installing this product.
- Do not apply external force at the coil section.
- After installing, check for leaks from pipes and for wire connections, and check that the product is correctly installed.

2. Piping

⚠ CAUTION

- If the pipe vibrates when the solenoid valve is opened and closed, secure piping.
- The solenoid valve may chatter depending on the circuit. Consult with CKD.
- If the piping cross section on the fluid supply side is restricted, operation may become unstable because of a differential pressure fault when the valve functions. Check that the size of piping on the fluid supply side matches the valve connection port size, and has an inner diameter that does not restrict the piping diameter. (CXU30-FAD)

3. Wiring

⚠ CAUTION

- Use within the allowable voltage range. Use outside of the allowable voltage range may lead to operation faults or coil damage.
- Provide a circuit breaker, such as a fuse, on the control circuit to protect electrical equipment.
- If electrical circuitry is susceptible to solenoid surges, provide measures such as inserting a surge absorber parallel to the solenoid.
- Use a wire more than 0.5 mm^2 of nominal section area as the reference. Check that no excessive force is applied to leads.
- Use of a switching circuit that does not cause contact chatter will lengthen the life of the solenoid valve and motorized valve.

During Use & Maintenance

1. Maintenance and inspection

⚠ WARNING

- Do not touch coils or actuators with hands or otherwise while power is on or immediately after turning power on. The solenoid valve's coil and actuator will heat up when electricity is passed through them. Depending on the product, directly touching these sections could cause burns.
- Avoid contact with electrical wiring connection (bare live parts) while power is on. There is a risk of electrical shock. Touching electrical wire connections while power is on could lead to electrical shocks.
- Use within the maximum service pressure and maximum working pressure difference range.
- To ensure that the product is used optimally, regularly inspect the product every six months. This frequency varies with the frequency of use.

⚠ CAUTION

- Do not step the valve, nor put the heavy things on it.
- When using the product with continuous energizing and low frequency, consult with CKD.
- If the product has not been used for more than a month, carry out trial operation.
- Read the instruction manual thoroughly before starting maintenance to ensure correct operation.
- Turn power off and release fluids or pressure before starting maintenance.
- Check that the filter is not clogged.

During Use & Maintenance

2. Assembling & Disassembling

⚠ CAUTION

■ When cleaning the product, use a low-polluting cleaning agent such as a neutral detergent. Replace rubber parts, or they could expand.

■ Consult with CKD on questions about consumables, etc.

■ Tighten coil assembly set screws with the tightening torque below during disassembly and assembly.

Model no.	Coil assembly set screw
CXU10-FAB3	1.1 to 1.8 N・m
CXU30-FAB4U	1.1 to 1.8 N・m
CXU30-FAD	1.1 to 1.8 N・m

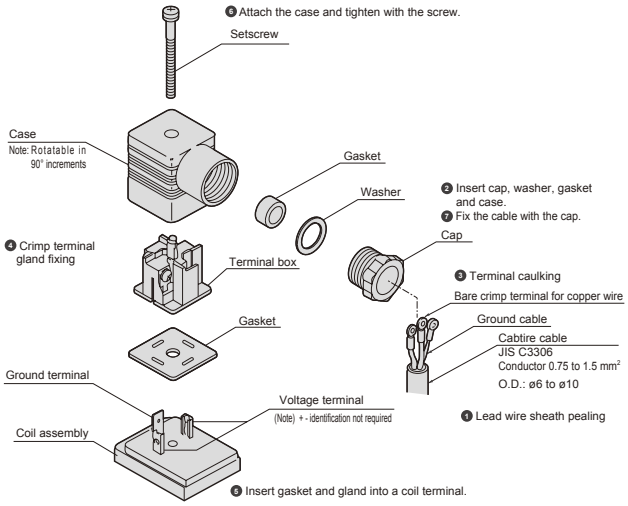
3. How to wire terminal box

■ DIN terminal box with indicator light (Pg11)

(1) Use the following cabtire cable.
- · Cable O.D.: ø6 to ø10
- · Nominal section area: 0.5 to 1.5 mm^2

(2) Insert the crimp terminal for copper wires into the cabtire cable's lead wire, and crimp the terminal with the designated tool. M3 terminal screws are used with the terminal box.

(3) Tighten screws with the following tightening torque.
- · Setscrew tightening torque: 0.5 N · m
- · Terminal screw tightening torque: 0.5 N · m



Wire the terminal box following steps ❶ to ❼.

*The orientation of the cable lead out port can be changed by removing the terminal box from the case, rotating it by 90°, then returning the terminal box to the case.

4. Leakage

■ Instantaneous leakage

When using the 2 port pilot operated solenoid valve, pressure suddenly applied when starting the pump with the valve closed could momentarily open the valve and cause fluid to leak. Exercise caution.
(CXU30-FAD)

Pneumatic components

Safety precautions

Always read this section before starting use.

Refer to the "Pneumatic Valves (Catalog No. CB-023SA)" for details on precautions for general purpose valves.

5 port pilot operated valve CXU30-4G2 Series

Design & Selection

1. Surge suppressor

⚠CAUTION

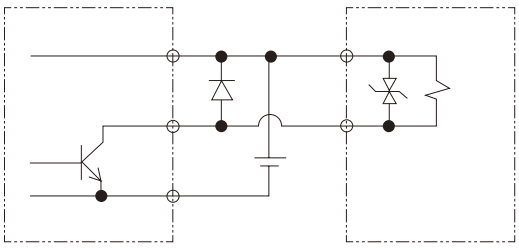
■ The surge suppressor enclosed with the solenoid valve is to protect the output contact for that solenoid valve's drive. There is no significant protection for the other peripheral devices, and devices could be damaged or malfunction by the surge. Surge generated by other devices could be absorbed and cause damage such as burning. Care must be taken for points below.

- The surge suppressor limits solenoid valve surge voltage, which can reach several hundred volts, to a lower voltage level withstandable by the output contact. Depending on the output circuit used, this may be insufficient and could result in damage or malfunction. Check whether the surge suppressor can be used by the surge voltage limit of the solenoid valve in use, the output device's withstand pressure and circuit structure, and by the degree of return delay time. If necessary, provide other surge measures. The CXU30-4G2 Series solenoid valve with surge suppressor can suppress the reverse voltage surge generated at OFF to the following levels.

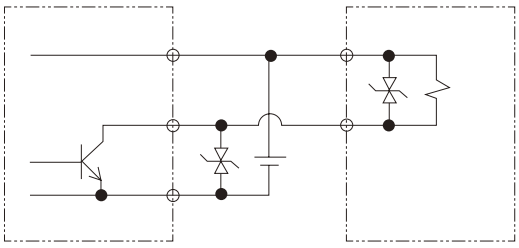
Rated voltage	Reverse voltage value when power turned OFF
24 VDC	47 V

- When using the NPN output unit, a surge voltage equivalent to the voltage above plus the power voltage surge could be applied. Provide contact protection circuit.

(Example of output transistor protective circuit installation 1)



(Example of output transistor protective circuit installation 2)



- If another device or solenoid valve is connected in parallel to the solenoid valve, reverse voltage surge generated when the solenoid valve is off is applied to these devices. Even when using the solenoid valve with a 24 VDC surge suppressor, the surge voltage could reach several tens of volts depending on the model. This revere polarity voltage could damage devices connected in parallel or cause them to malfunction. Avoid parallel connection of devices suspected of reversing polarity voltages, e.g., LED indicators. When driving several solenoid valves in parallel, the surge from other solenoid valves could enter the surge suppressor of one solenoid valve with a surge suppressor. Depending on the current value, that surge suppressor could burn. When driving several solenoid valves with surge suppressors in parallel, surge current could concentrate at the surge suppressor with the lowest limit voltage and cause similar burning. Even if the solenoid valve type is the same, the surge suppressor's limit voltage can be inconsistent, and in the worst case, could result in burning. Avoid driving several solenoid valves in parallel.
- The surge suppressor incorporated in the solenoid valve often short-circuits if damaged by overvoltage or overcurrent from a source other than the solenoid valve. If the surge suppressor fails, if a large current flows when output is on, the output circuit or solenoid valve could be damaged or ignite. Do not keep power on in a faulty state. Provide an overcurrent protection circuit on the power or drive circuit or use a power supply with overcurrent protection so that a large current does not flow continuously.

2. 100 VAC specifications

⚠CAUTION

■ For 100 VAC, all wave rectified circuit is incorporated. When using an SSR to turn the solenoid valve on and off, a solenoid valve reset fault may occur depending on the SSR.
Take care when selecting the SSR. (Please consult with relay or PLC manufacturer.)

Installation & Adjustment

1. Lead wire wiring

⚠CAUTION

■ Lead standards differ with the type of wire connection. Connect wires appropriately.

Electric connection	Descriptions	Conductor size	Cross-section area	Isolator O. D.
E*	E-connector (with lead wire)	AWG#26	0.13 or equivalent	1.35

When connecting wires, check that leads do not apply tension to the solenoid valve coil.

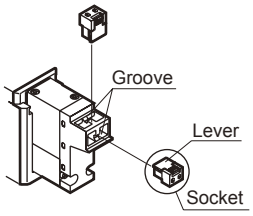
2. How to use E-connector

⚠CAUTION

■ The E-connector is a top/side common connector to which the sockets can be connected to either the top or side directions. The socket assembly is enclosed with the valve. Select the connection direction based on installation.

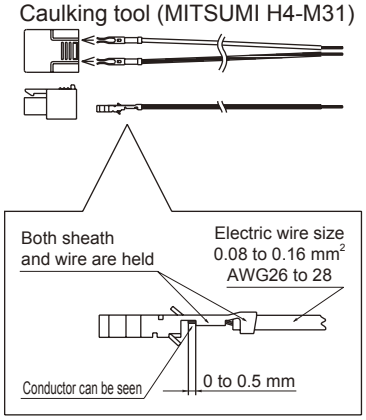
■ How to mount or dismount socket

- When installing the socket, hold the lever and socket with your fingers and insert straight into the square window on the connector. Align the lever with the groove on the connector and lock. When installing from the top, face the socket so that the lever is in front. When installing from the side, face the socket so that the lever is on the top.
- When pulling the socket out, press down on the lever to release jaws from the groove, then pull straight out.



■ How to connect lead wire

- Strip 3 mm of the lead end, arrange the ends of the core wires and insert them into the contact terminal. Crimp with a crimping terminal. Crimp both the sheath and wire, and check that 0 to 0.5 mm of the core wire end is visible.
- After crimping, turn the contact terminal as shown below, and insert into the square window on the socket. The terminal locks when it is inserted into the back. After insertion, tug lightly on the terminal to check that it is locked.



3. DIN terminal box

⚠WARNING

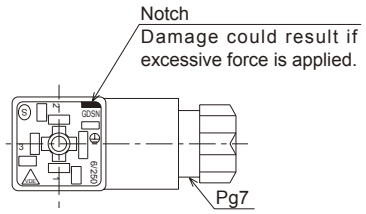
■ Turn power OFF before disassembling or assembling the terminal box. There is a risk of electric shock.

⚠CAUTION

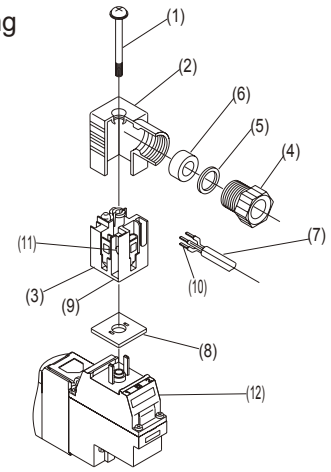
■ Disassembling

- Loosen the screw (1), and pull the cover (2) in the direction of screw (1). The connector will come off the coil assembly (12).
- Pull the screw (1) out of the cover (2).
- There is a notch (9) (next to GDSN mark) on the bottom of the terminal block (3). Insert a small flat-tip screwdriver between the housing (2) and terminal block (3), and twist it. The terminal block (3) will come off the cover (2). (Refer to Fig. 1.) Remove the terminal box while not applying an excessive force. Failure to observe this the product could be damaged.
- Remove the cable gland (4), and remove the washer (5) and rubber packing (6).

Fig.1



Deal drawing



■ Wiring

- Wiring preparation
  - · The cable (7) applicable dimensions are VCTF2 (3) core (ø3.5 to 7) specified in JISC3306.
  - · Strip 10 mm of the cable's lead sheath.
  - · Either twisted wires or single conductors are connected.
  - · When using twisted wires, avoid connecting soldered wires.
  - · When using a crimping sleeve (10) on the end of the twisted wire, use the Japan Weidmuller H0.5/6 (0.3 to 0.5 mm^2), H0.75/6 (0.75 mm^2) or equivalent product. The crimping sleeve must be prepared by the user.
- Wiring
  - · Pass the cable gland (4), washer (5) and rubber packing (6) in order through the cable (7), and insert into cover (2).
  - · Connect to terminal 1 and 2. There is no polarity.
  - · Recommended tightening torque is 0.2 to 0.25 N · m.

Installation & Adjustment

■ Assembly

- Set the connected terminal block (3) into the cover (2). (Press in until a click is heard.)

* The terminal block can be set in four directions. (Fig. 2)

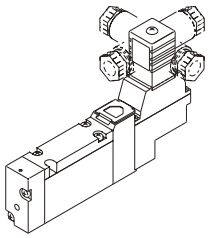
- Set the rubber packaging (6) and washer (5) in order into the cover (2) cable lead-in port, and then securely tighten the cable gland (4).

Remarks: Reference tightening torque of cable gland is 1.0 to 1.5 N · m.
Check that the cable cannot be pulled out.

- Set the gasket (8) between the bottom of the terminal block (3) and the coil assembly (12) plug, and insert the connector. Insert the screw (1) from the top of the cover (2) and tighten.

Remarks: Recommended tightening torque of a screw is 0.2 to 0.25 N · m.

Fig.2



During Use & Maintenance

1. Common

⚠ CAUTION

■ Energizing for a long time could impair solenoid valve performance. Similar caution is required in the following use.

- During intermittent energizing, energizing takes longer than non-energizing.
- During intermittent energizing, one energizing session exceeds 30 min.

Consider heat dissipation when installing.
Consult with CKD if energizing for a long time.

2. Manual override

⚠ WARNING

■ CXU30-4G2 Series is an internal pilot operated solenoid valve. If air is not supplied to the P port, the main valve will not change even if the manual override is operated.

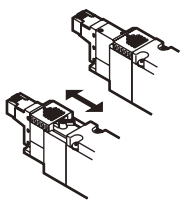
■ A protective cover of manual override is provided as standard. The manual override protective cover is closed when the valve is shipped to protect manual override, which cannot be seen when delivered. Open the protective cover and operate manual override. Note that the protective cover does not close unless the manual override lock is released.

■ Manual override is used for both non-locking and locking. The lock is applied by pressing down and turning manual override. When locking, press down and turn. If manual override is turned without being pressed down, it could be damaged or air could leak.

■ Opening and closing the manual protective cover

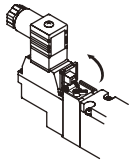
Do not excessively force the manual protective cover when opening and closing it. Excessive force could cause faults. (Less than 5 N)

CXU30-4G2 Series



Slide type

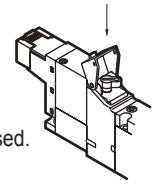
CXU30-4G2 Series DIN terminal box



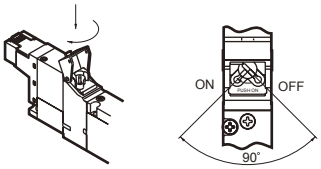
Turn type

■ How to operate manual override

- For non-locking manual override
  Push in the direction of the arrow until it stops.
  Manual override is unlocked when released.



- For locking manual override
  Push manual override and turn 90° in the direction of the arrow.
  Manual override is not unlocked even when released.



■ When conducting manual operations, make sure that there are no people near the moving cylinder.

3. How to change coils

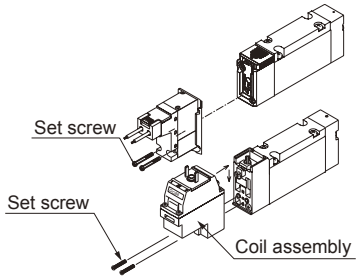
⚠ WARNING

■ E-connector coil assembly

Replace the coil by removing the set screw shown below. Loosening the other screws could cause operation faults. When installing, check that the gasket is installed on the coil side, and note tightening torque. Improper installation could result in air leaks or operation faults.

■ DIN terminal box coil assembly

Replace the coil assembly by removing the set screw shown below. Loosening the other screws could cause operation faults. When installing, check that the gasket is installed on the coil assembly side, and note tightening torque. Improper installation could result in air leaks or operation faults.
The E-connector specification and DIN terminal box specification coil assembly cannot be replaced.



Pneumatic components (F.R.L. unit (modular design))

Safety precautions

Always read this section before starting use.

Refer to the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for precautions for general purpose pneumatic pressure components.

F.R.L. component (modular design)

Design & Selection

1. Common

⚠WARNING

■ This product is intended for industrial use, and must not be used in components or circuits used for medical equipment or components that involve human lives.

■ Air filter, lubricator plastic bowl, lubricator drip window, and pressure gauge lens

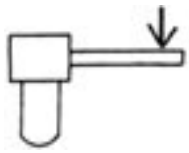
These parts are made of polycarbonate, and cannot be used in environments containing synthetic oil, organic solvents, chemicals, coolant, screw locking adhesive, liquid soap or hot water, etc., or possible exposure to these substances.

Refer to Intro 16 for details on bowl chemical resistance.

■ Piping load torque

Make sure that the piping load or torque is not applied on the body or piping.

Series	1000	2000	3000	4000
Max. torque N・m	10	10	50	50



With the 1000 Series in particular, application of a torque of 20 N・m and over on the piping is "hazardous" as piping could be damaged. Use within the specified torque, even when using the piping adapter.

⚠CAUTION

■ When drainage levels are high

Install the air dryer and drain separator before the air filter.

Use of hot humid air causes excessive drainage from the compressor and may shorten component life or cause corrosion.

■ For dry air

Rubber parts for the regulator could deteriorate quickly, so use of a fluorine rubber valve assembly is recommended. Consult with CKD when necessary.

■ Water lubricated compressor circuit

Take measures to prevent chlorine-based substances from entering the compressed air.

■ Use the automatic drain under the following conditions.

Failure to observe these conditions could result in malfunction.

N.O. type automatic drain (exhaust without pressure): for "F"

- Use the compressor at 0.75 kw (90 ℓ/min. (ANR)) or more.
- Set the working pressure to 0.1 MPa or more.
  Purge air with the initially generated drainage until pressure rises to 0.1 MPa.

N.C. type automatic drain (no exhaust without pressure): for "F1"

- The compressor can be used at 0.75 kw or less.
- Set the working pressure to 0.15 MPa or more.

1000 Series N.C. automatic drain

- The working flow rate must be less than the maximum working flow rate.
- In places with high vibration, such as where the compressor is installed, air could leak from the drain port when the float vibrates. Avoid this use.
- Avoid overflowing the drain because it could cause operation faults.

2. Regulator, filter and regulator

⚠WARNING

■ Install a safety device where an output pressure exceeding the regulator's set pressure value could result in damage or faulty operation of secondary side devices.

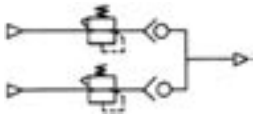
■ The regulator cannot process residual pressure (remove secondary pressure) when primary pressure is released. Use a regulator with check valve when residual pressure must be processed.

■ There are cases when the regulator cannot be used for secondary side sealing circuits or balance circuits.
Consult with CKD for these types of applications.

⚠CAUTION

■ Set secondary side pressure of the regulator to 85% or less of the primary side, or else the pressure drop could increase.

■ When using regulators in parallel as shown below, do not use the OUT side as a closed circuit. If a closed circuit is required, set a check valve at the regulator's OUT side.



3. Lubricator

⚠WARNING

■ Lubricator
Consult with CKD for using lubrication with an air motor or bearings. Also consult with CKD when using this unit at a high frequency such as in a press machine.

⚠CAUTION

■ If the working air rate is low for the lubricator, oil may not drip.
Check the minimum air rate required for dripping oil.

4. Pressure switch

⚠CAUTION

■ When using a compact pressure switch PPD, avoid using it as a set with the lubricator. The switch is not a drip-proof structure, so operation could be disabled if the lubricating oil comes in contact with it.

5. Shut-off valve

⚠WARNING

■ Precautions for shut-off valve

- The EXH port is dedicated for installation of the silencer. Tighten with a torque of 3 N · m or less (as far as can be tightened by hand).
  Avoid piping that applies the piping load or torque, etc., on the EXH port.
- If the exhaust operation is incomplete because of air quality, manually discharge the air by operating the knob (turn and raise).

Installation & Adjustment

1. Common

⚠CAUTION

■ Avoid installing this product where it is subject to direct sunlight.

■ Flush and clean pipes before use.
Dirt or foreign materials in piping will lower product performance.

■ Check that foreign materials do not enter when tightening pipes or joints.
Check that pipe thread swarf or sealing agent does not enter when tightening pipes or joints. Product performance could drop if dirt or foreign materials enter piping.

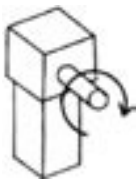
■ Using the F.R.L. correctly

1. Set the regulator pressure setting to increase. After setting pressure, lock the handle. Check primary pressure carefully before setting pressure.
2. Check the arrow indicating the air inlet before connecting. A reverse connection could result in improper operation.
3. Install the air filter and lubricator vertically with the bowl case facing downward. Failure to do so could result in a drainage discharge fault, and prevent dripping from being confirmed.
4. Use of the automatic drain where vibration is present could cause faults and malfunctions.

■ Pipe automatic drain piping as follows: Not doing so could cause malfunctions.
Use a drain discharge pipe with ø5.7 or larger size. Keep the pipe length within 5 m, and avoid an upward slope.
Pipe so that no lateral load acts on the bowl.
Fix the cock's hexagonal side when screwing joints, etc., into Rc1/8 female threads.

■ Pipe screw-in torque
Make sure that excessive torque is not applied on the body and piping when piping.

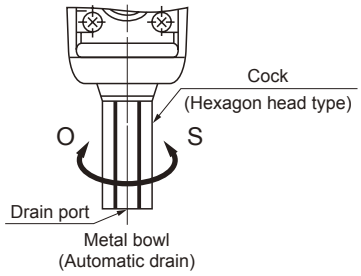
Series	1000	2000	3000	4000
Max. torque N • m	15	30	30	30



■ Drain piping
- The drain piping for the plastic bowl has a barbed nipple, and can be directly installed. However, confirm that the drain cock is closed before inserting the tube.

■ Tightening torque of drain cock
- The maximum tightening torque of the drain cock is shown below.
  · 1000 Series: 0.1 N · m
  · Other: 0.5 N · m

■ Drain piping for metal bowl with automatic drain
- Fix the cock's hexagonal face before screwing the joint, etc., into the drain port's female threads. When using the metal bowl with automatic drain, if the drain is piped with a tightening joint, manual operation is not possible.



2. Regulator, filter with regulator

⚠CAUTION

■ Regulator, filter with regulator

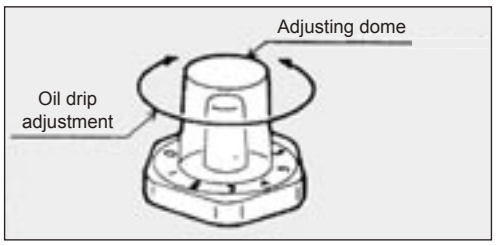
- Lightly tighten (0.6 N·m or less) set screws for the embedded pressure gauge G401-0P, G401 and gauge plug.
- When installing the pressure gauge with a safety mark on the gauge plug, or when installing a general screw-in pressure gauge, tighten with a torque of 10 to 15 N·m or less.
- Do not move or swing the product holding the adjustment knob on the regulator.
- Do not apply pressure exceeding the pressure gauge's full scale, or the pressure gauge could be damaged. (Note when using a full scale 0.2 or 0.4 MPa pressure gauge.)

3. Lubricator

⚠CAUTION

■ Adjusting lubricator drip

- Adjust the oil rate by turning the adjusting dome with bare hands. When closing the dome, tighten with a torque of 0.5 N·m or less. The numbers (scale) on the dial are a guide used after adjustment, and do not indicate the oil drip.

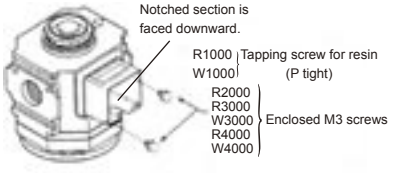


4. Pressure switch

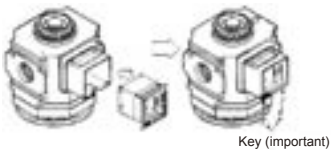
⚠CAUTION

■ Installing the pressure gauge (PPD)

- Separate the body from the base.
- Attach an O ring.
  Refer to the outline drawings for the direct installation type (PPD-****-1F-1) (PPD-****-1F-2) on the left, and attach the O ring to the O ring groove with a clean finger.
- Install the base.
  Install the base with the two enclosed screws (M3).
  * Carefully install at the designated position in the designated direction while taking care not to dislocate the O ring.
  * Do not tighten one screw completely at once, and instead tighten the two screws so that they are balanced. (Tightening torque 0.5±0.1 N · m)



- Install and fix the body.
  Make sure that there is no dirt or foreign matter at the base, and then insert the body. Make sure that the body does not catch on the base. And, inset the two keys. While pressing the body exterior against the base, face the head of the keys so that they face each other, and then insert them so that they are completely stored in the recesses on the base.



Note) Do install both keys. Make sure that both keys are installed before pressurizing.

Note) When changing the position or orientation of the PPD which has been installed once, install using the new keys, O rings and installing screws enclosed with the option kit.

5. Pressure gauge

⚠CAUTION

■ Pressure gauge

Repetitive sudden increase/decreases in pressure and pressure pulses must be avoided, or it could shorten pressure gauge life. Either ease pressure fluctuation in the circuit or consult with CKD so that a pressure gauge with a cushioning screw can be prepared. Applying pressure exceeding the pressure range could damage the pressure gauge.

During Use & Maintenance

1. Common

⚠ WARNING

■ Regularly, once or more in six months, check the air filter and lubricator's plastic bowl for cracks, damage, and other deterioration.
Cracks, damage or other deterioration could result in breakage, so if found, replace with a new bowl or with a metal bowl.

■ Check the air filter, lubricator plastic bowl, and lubricator drip window periodically for contamination.
- If parts are heavily contaminated or if transparency has dropped, replace with a new bowl or drip window.
- Use a diluted neutral household detergent to wash parts, and then rinse well with clean water. Use of other agents could result in breakage.

■ Removing the filter or lubricator bowl
Before removing the bowl, stop the compressed air, discharge pressure in the bowl completely, and confirm that no residual pressure remains.

⚠ CAUTION

■ Check the oil drip once a day.
If the oil drip is faulty, problems could occur in the unit being lubricated.

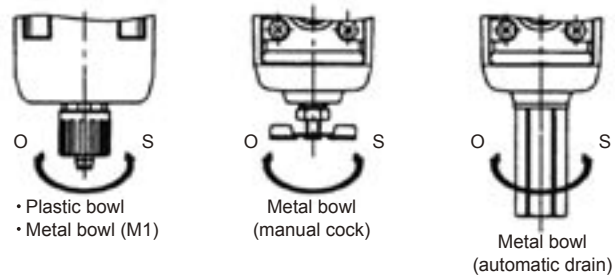
■ Do not branch the air into lubricating air and oilless air with a distributor. The lubricator oil could reverse flow.

■ Performance could drop if the filter element is clogged. Regularly inspect and replace the element.

■ Do not disassemble or modify the product.

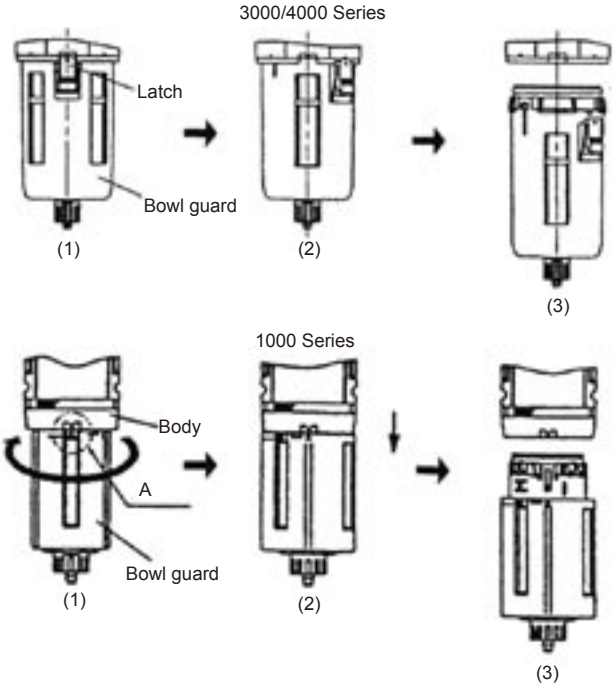
■ Read instructions and precautions enclosed with the product before starting use or maintenance.

How to drainage

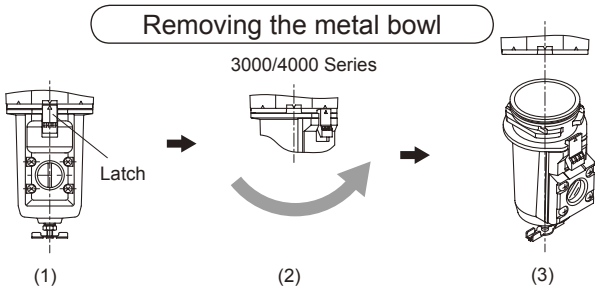


- Drainage is started when the cock is turned to the O side, and the discharge is stopped when the cock is turned in the S direction.
Manually tighten as far as possible in the direction of S.
- When the automatic drain is provided, drainage is discharged automatically when it accumulates. Drainage is also discharged manually.

Removing the resin bowl



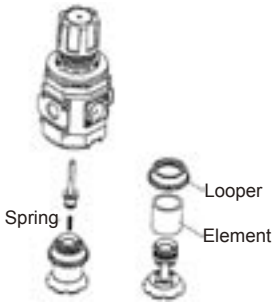
Removing the metal bowl



2. Filter with regulator

⚠CAUTION

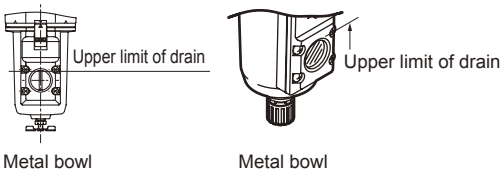
■ W1000 to W4000 element
The valve assembly can be removed, so also inspect it during maintenance.
Take care not to lose springs, etc., during maintenance.



3. Filter

⚠WARNING

■ Drain so that air filter drainage does not accumulate beyond the maximum.
Components could malfunction if drainage flows into the secondary side.



- The resin bowl must not be filled more than the "drain upper limit" or "max. level" stamped on the bowl guard.

⚠CAUTION

■ Submicron 0.3 μm element
This element cannot be washed and reused. When the pressure drops to 0.07 MPa, replace the filter with a new one. (1000 Series is excluded.)

■ Oil mist filter
The life of the mantle (element) is one year (6000 hours) or until pressure drop reaches 0.1 MPa -- excluding the X type. Replace the mantle with a new one when life is reached. (Do not touch the urethane foam layer when replacing the mantle.)

4. Regulator, filter with regulator

⚠CAUTION

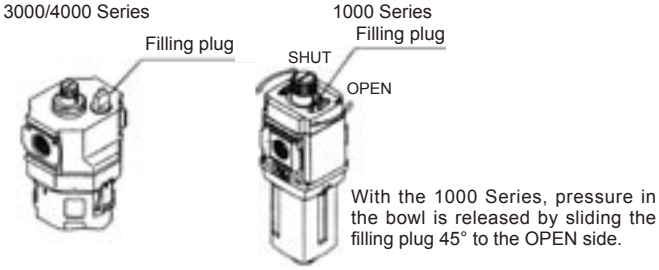
■ Pull the pressure adjustment knob and release the lock before setting the regulator pressure. The regulator could be damaged if the pressure is set without unlock.

5. Lubricator

⚠WARNING

■ Use Class 1 turbine oil (non additive) ISO VG32 for the lubricator.
Other oils could cause breakage or improper operation.

■ Removing the lubricator's filling plug
To prevent the filling plug from popping out, loosen the filling plug by one turn, and then completely depressurize the bowl before removing the filling plug. The dirt around the filling plug could scatter, so completely remove it.



- Close the filling plug after lubricating.
- Never remove the bowl without removing the filling plug (while the bowl is pressurized). (L3000 to L4000)
- With the 1000 Series, never remove the bowl with the filling plug set to the SHUT side (while the bowl is pressurized). (L1000)

⚠CAUTION

■ Periodically replenish oil in the lubricator bowl so that it does not drop below the lower limit.

■ When lubricating the L1000, the pressure in the bowl can be released by turning the filling plug. Refer to the above for the operation of the filling plug. (Lubrication can be carried out while the pipes are pressurized.)
Check that there is no pressure in the bowl, remove the bowl and bowl guard, and then directly lubricate to the bowl.
Refer to the previous page for details on removing the bowl.

■ When lubricating the L3000 to L4000, loosen the filling plug slightly to release the pressure in the bowl, and then remove the filling plug. Refer to the above for the operation of the filling plug.
(By removing the filling plug, lubrication can be carried out while the pipes are pressurized.)
Oil can also be supplied from the filling plug hole, and the bowl can be directly lubricated by removing the bowl and bowl guard.
Refer to the previous page for details on removing the bowl.

F.R.L. component

Chemical resistance of plastic parts

⚠ WARNING

- The chemical resistance of plastic parts is shown below.
- Avoid using products in an atmosphere where chemicals are contained in compressed air, the atmosphere, or where they could adhere to parts.
- Use in the above state could lead to bowl damage and accidents.
- Avoid using these types of chemicals or in an atmosphere containing these chemicals.
- A metal bowl is available if these chemicals must be used.

Chemical resistance of plastic bowl and body

Use a metal bowl in an atmosphere containing the following chemicals.
Check whether the testing solutions, sealing agents and adhesives contain the following chemicals.

Types of chemicals	Chemical class	Main products containing chemical	General usage examples	Polycarbonate bowl	Nylon bowl	Nylon Body
Inorganic chemicals	Acid	Hydrochloride, sulfuric acid, fluorine, phosphoric acid, chromic acid, etc.	Acid washing of metals, acidic degreasing solution, skin treatment solution	X	X	X
	Alkaline	Alkalies such as caustic soda, caustic potash, calcium hydroxide, ammonium water, or sodium carbonate	Alkaline degreasing of metals Water-based coolant, leakage detection solution	X	○	○
	Inorganic salts	Sodium sulfate, nitrate of soda, potassium dichromate, sulfate of soda, etc.		X	○	○
Organic chemicals	Aromatic hydrocarbon	Benzene, toluene, xylene, ethyl benzene, styrene, etc.	Contained in paint thinner (benzene, toluene, xylene)	X	X	X
	Chlorinated aliphatic hydrocarbon	Methyl chloride, ethylene chloride, methylene chloride, acetylene chloride, chloroform, trichylene, perchloro ethylene, carbon tetrachloride	Organic solvent·based washing solution for metals (Trichylene, perchloro ethylene, carbon tetrachloride)	X	○	○
	Chlorinated aromatic hydrocarbon	Chlorobenzene, dichlorobenzene, benzene hexachloride (B,H,C), etc.	Agricultural chemicals	X	○	○
	Petroleum components	Solvent naphtha, gasoline, kerosene		X	○	○
	Alcohol	Methanol, ethanol, cyclohexanol, benzyl alcohol	Used as anti-freezing agent Leakage detection agent	X	X	X
	Phenol	Carbolic acid, creosol, naphthol, etc.	Liquid disinfectant	X	X	X
	Ether	Methyl ether, methyl ethyl ether, ethyl ether	Brake oil additive	X	○	○
	Ketone	Acetone, methyl ethyl ketone, cyclohexanone, acetophenone, etc.		X	X	X
	Carboxylic acid	Formic acid, acetic acid, butyl acid, acrylic acid, oxalic acid, phthalic acid, etc.	Dyes and oxalic acid for aluminum proceeding. Use phthalic acid for paint base. Use as leakage detection agent	X	X	X
	Ester	Dimethyl phthalate (DMP), diethyl phthalate (DEP), dibutyl phthalale (DBP), dioctyl phthalate (DOP)	Lubricant, synthetic oil, additive for rust preventing agent Usable as plasticizer for synthetic resin	X	○	○
	Oxyacid	Glycocholic acid, lactic acid, malic acid, citric acid, tartarate		X	X	X
	Nitro compounds	Nitromethane, nitroethane, nitroethylene, nitrobenzene, etc.		X	○	○
	Amine	Methylamine, diethylamine, ethylamine, aniline, acetoacetanilide, etc.	Brake oil additive	X	X	X
	Nitrile	Acetonitrile, acrylonitrile, benznitrile, aceloylidyne nitrile, etc.	Raw material for nitryl rubber	X	○	○

○: Available X: Unavailable (plastic will be damaged.)

Pneumatic components (air unit (CXU Series))

Safety precautions

Always read this section before starting use.

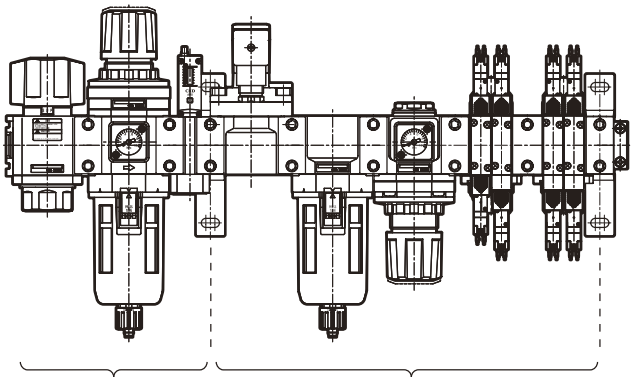
Refer to the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for precautions for general purpose pneumatic pressure components.

Air unit CXU Series

Design & Selection

■ Use T-type brackets at the set spacing.

Single support joiners can be used for three or fewer stations, and double support joiners can be used for five or fewer stations.

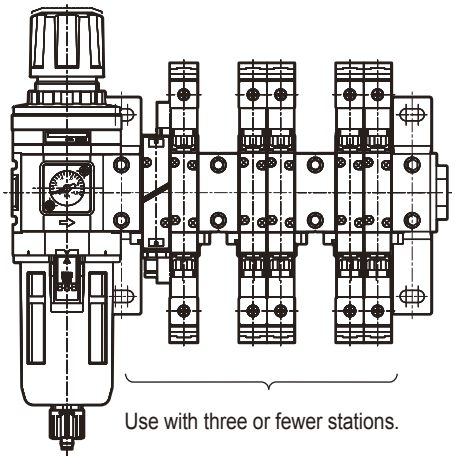


Use single support with three or fewer stations.

Use double support with five or fewer stations.

■ Use 5 port pilot operated valve (CXU30-4G2) with three or fewer stations.

One station consists of two solenoid valves. Up to six solenoid valves can be used.



Use with three or fewer stations.

Installation & Adjustment

■ With the 1000 Series unit, the bracket may twist and rise on one side. Tighten and fix the bracket in this case. The bracket can be mounted stably and poses no problem for use.

■ Tighten the screw for fixing the 1000 Series joiner at 1 to 1.2 N·m and the screw for fixing the 3000 Series joiner at 3 to 4 N·m.

Valve air unit
Model no. for manifold

Overview

The valve air unit is a unit component that lets the solenoid valve be connected to components such as regulators.
This eliminates bothersome piping, and enables immediate use.

Features

① Simple ordering

This unit can be purchased with a single form, making order and delivery control easier.

② Fewer work labor hours

The FR component and solenoid valve are connected as modules, eliminating work such as piping.

③ Space saving

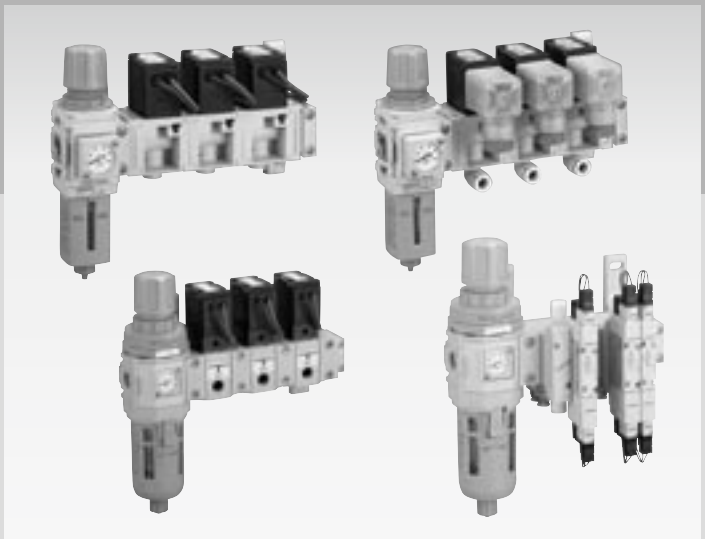
Appearance is neat with piping and joints eliminated.
This compact design fits required space.

Explanation of icon

① Easily selected models

Easy Manifold

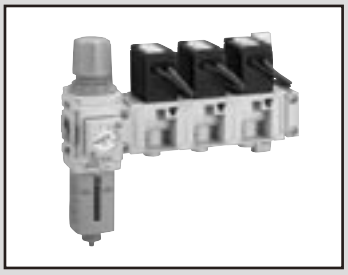
Complicated options have been left out, making it easy for anyone, including beginners, to select models.



CONTENTS

Series variation (solenoid valve)

Series Model no.	Voltage		Port						FR component				Electric connection		
	24 VDC	100 VAC	Port size (IN)		Port size (OUT)				Regulator		Filter Regulator		Grommet lead	E-connector	DIN terminal box
			1/4	3/8	ø4	ø6	ø8	1/4	R1000	R2000	W1000	W3000			
● 2 port direct acting solenoid valve CXU10-GFAB3 Easy Manifold 	●	●	●			●	●		●		●		●		●
● 2 port direct acting solenoid valve CXU30-GFAB4U Easy Manifold 	●	●		●				●		●		●	●		●
● 5 port pilot operated valve CXU30-M4G2 Easy Manifold 	●	●		●	●	●	●			●		●		●	●



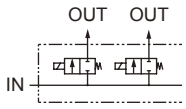
2 port direct acting solenoid valve
Model no. for manifold

CXU10-GFAB3 Series

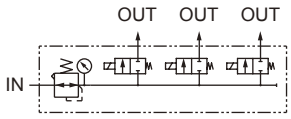
N.C. (normally closed) type
Easily prepare in a manifold state by connecting to a regulator, etc.

Easy Manifold

JIS symbol



(Example) CXU10-GFAB3-C6-R-3-2C-3



Specifications

Descriptions		CXU10-GFAB3
Working fluid		Compressed air
Working pressure differential range MPa		AC: 0 to 1.0, DC: 0 to 0.6
Max. working pressure MPa		1.0
Withstanding pressure MPa		1.5
Fluid temperature °C		AC: 5 to 60, DC: 5 to 40
Ambient temperature °C		AC: 5 to 60, DC: 5 to 40
Atmosphere		Area without corrosive or explosive gases and away from water
Valve structure		Direct acting poppet structure
Valve leakage cm^3/min. (ANR)		10 or less
Mounting attitude		Free
Port size		IN: Rc1/4, OUT: ø6, ø8
Orifice mm		3
C[dm^3/ (s·bar)] Note 1		1.2
b		0.56
Electric specifications		
Rated voltage		100 VAC, 24 VDC
Rated electric power VA	50Hz	At holding: 7.5, at starting: 20
	60Hz	At holding: 5.5, at starting: 17
Power consumption W	50Hz	4.0
	60Hz	3.4
	DC	6.5
Heat proof class		B

Note 1: Effective sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.

Regulator specifications	
Set pressure range MPa	0.05 to 0.85
Relief	With relief mechanism
Port size	Rc1/4
Filter specifications	
Filtration rating µm	5
Drain capacity cm^3	12.0
Port size	Rc1/4

Weight

(Unit: kg)

Descriptions	Descriptions
FR component (T type bracket, joiner, etc., included)	
A: Piping adapter	0.21
R: Regulator	0.34
RT8: Regulator (without pressure gauge)	0.33
W: Filter regulator	0.38
WT8: Filter regulator (without pressure gauge)	0.37
2 port solenoid valve	
CXU10-FAB3 (discrete valve + joiner)	0.26

Weight is calculated with the FR device used + 2 port solenoid valves x number of stations.

How to order

CXU10-GFAB3-C6-R-3-2C-3

Ⓐ Port size (OUT)
Ⓑ FR component option
Ⓒ Solenoid valve station number
Ⓓ Coil option
Ⓔ Rated voltage

Symbol		Descriptions
Ⓐ Port size (OUT)		
C6		ø6 push-in joint
CL6		ø6 push-in joint L type
C8		ø8 push-in joint
CL8		ø8 push-in joint L type
Ⓑ FR component option		
Component option Note 1	**A**	Piping adapter (Rc1/4)
	R	Regulator (R1000-8-W-X2, Note 2)
	RT8	Regulator (R1000-8-W-T8X2, Note 2) Without pressure gauge (port Rc1/4 open)
	W	Filter regulator (W1000-8-W-F1, Note 2)
	WT8	Filter regulator (W1000-8-W-F1T8, Note 2) Without pressure gauge (port Rc1/4 open)
Direction	**Blank**	IN side Left
	X	IN side Right
Ⓒ Solenoid valve station number		
1		1 station
to		to
5		5 stations
Ⓓ Coil option		
2C		Grommet lead wire
2HS		DIN terminal box with light, surge suppressor (Pg11)
Ⓔ Rated voltage		
1		100 VAC 50/60Hz, 110 VAC 60Hz
3		24 VDC

⚠ Note on model no. selection

Note 1: The N.C. auto drain is standard type for the filter regulator.
Select "A" unless selecting component options "R", "RT8", "W" or "WT8".
Multiple FR device options cannot be selected.
Note 2: Model for IN side Left (FR device direction option "No symbol").

Internal structure drawing

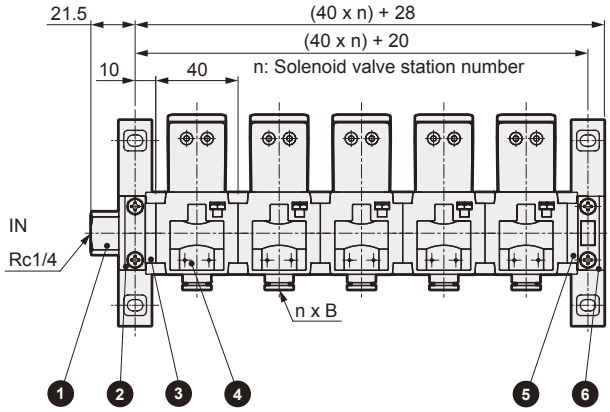
Model	Catalog and Page
CXU10-FAB3	Page 19
CXU10-TA	Page 32
CXU10-MA	Page 33
R1000	Catalog No. CB-024SA
W1000	Catalog No. CB-024SA

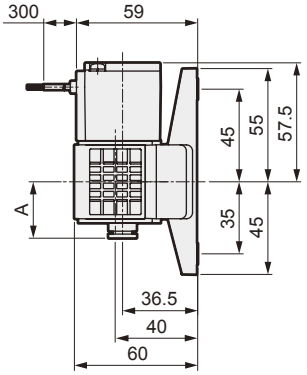
Dimensions

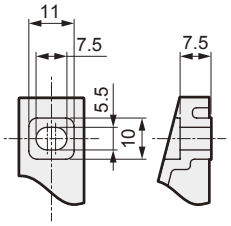
● Grommet lead wire type

CXU10-GFAB3-*-A-*-2C-*

Cartridge joint: Straight







Enlarged view of bracket section

Configuration table

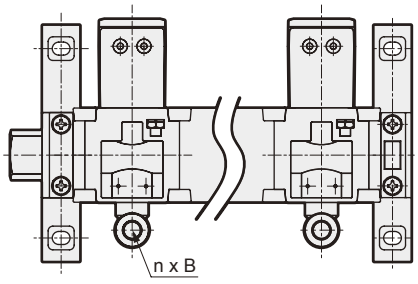
No.	Product name	Model no.
1	Piping adapter Note 1	(FR component option -A)
2	T type bracket	B110-W
3	Turn adapter	CXU10-TA-00
4	2 port direct acting solenoid valve	CXU10-FAB3-*
5	Turn adapter	CXU10-TA-00
6	Masking adapter	CXU10-MA-00-B

Note 1: The final product may differ depending on FR device options.

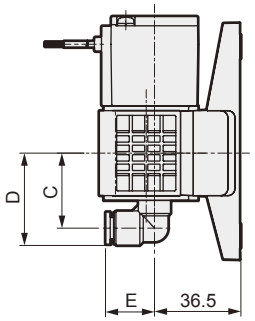
Optional dimensions table

Option	A	B	C	D	E
C6	27	Push-in joint ø6	-	-	-
CL6	-	Push-in joint ø6	31	37	18.5
C8	27	Push-in joint ø8	-	-	-
CL8	-	Push-in joint ø8	32	39	21

Cartridge joint: Elbow type

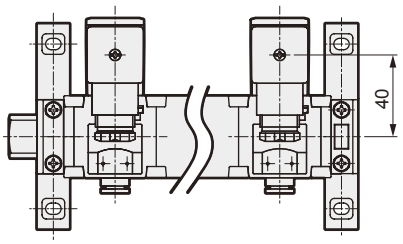


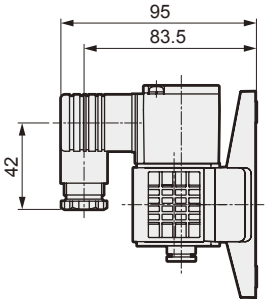
n: Solenoid valve station number



● With DIN terminal box (Pg11)

CXU10-GFAB3-*-A-*-2HS-*

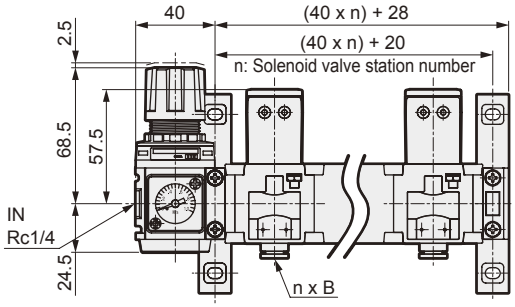


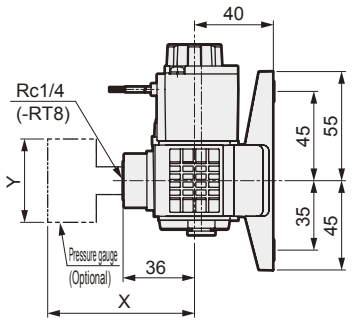


Dimensions

● FR component option: Regulator type
CXU10-GFAB3-*-$^{R}_{RT8}$-*-*-*

Dimension for knob operation



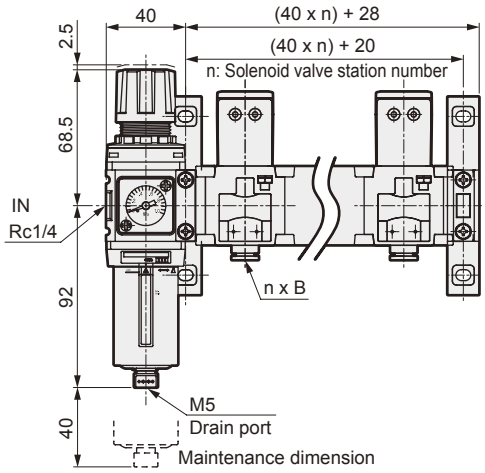


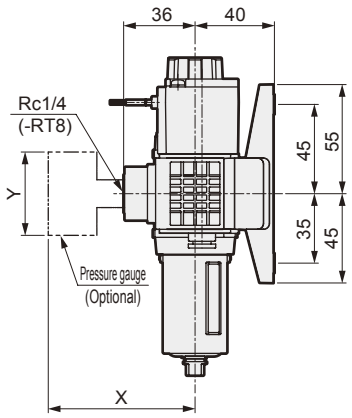
Pressure gauge dimensions table

Pressure gauge (Optional)	X	Y
G49D	(73.5)	ø43.5
G59D	(76)	ø52
G40D	(75.5)	ø42.5
G50D	(75.5)	ø52.5
G41D	(74)	ø42
G52D	(79)	ø52.5

● FR component option: Filter regulator type
CXU10-GFAB3-*-$^{W}_{WT8}$-*-*-*

Dimension for knob operation

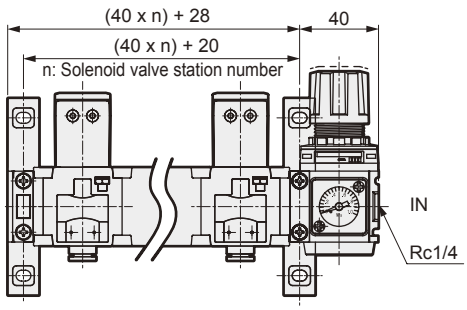




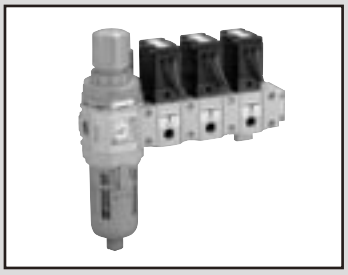
Pressure gauge dimensions table

Pressure gauge (Optional)	X	Y
G49D	(73.5)	ø43.5
G59D	(76)	ø52
G40D	(75.5)	ø42.5
G50D	(75.5)	ø52.5
G41D	(74)	ø42
G52D	(79)	ø52.5

● FR component option: Reverse flow
CXU10-GFAB3-*-$^{R}_{RT8}$X-*-*-*



Note: When reverse flow option X is selected, the IN side and FR device are on the right. The drawing at left is for the regulator.



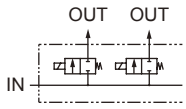
2 port direct acting solenoid valve
Model no. for manifold

CXU30-GFAB4U Series

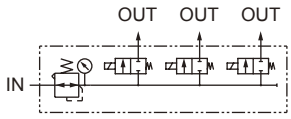
N.C. (normally closed) type
Easily prepare in a manifold state by connecting to a regulator, etc.

Easy Manifold

JIS symbol



(Example) CXU30-GFAB4U-8L-R-3-2C-3



Specifications

Descriptions		CXU30-GFAB4U
Working fluid		Compressed air
Working pressure differential range MPa		AC: 0 to 1.0, DC: 0 to 0.9
Max. working pressure MPa		1.0
Withstanding pressure MPa		1.5
Fluid temperature °C		AC: 5 to 60, DC: 5 to 40
Ambient temperature °C		AC: 5 to 60, DC: 5 to 40
Atmosphere		Area without corrosive or explosive gases and away from water
Valve structure		Direct acting poppet structure
Valve leakage cm^3/min. (ANR)		10 or less
Mounting attitude		Free
Port size		IN: Rc3/8, OUT: Rc1/4
Orifice mm		4
C[dm^3/ (s·bar)] Note 1		2.1
b		0.34
Electric specifications		
Rated voltage		100 VAC, 24 VDC
Rated electric power VA	50Hz	At holding: 15, at starting: 40
	60Hz	At holding: 11, at starting: 35
Power consumption W	50Hz	7.5
	60Hz	6.5
	DC	8.0
Heat proof class		B

Note 1: Effective sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.

Regulator specifications	
Set pressure range MPa	0.05 to 0.85
Relief	With relief mechanism
Port size	Rc3/8
Filter specifications	
Filtration rating µm	5
Drain capacity cm^3	45
Port size	Rc3/8

Weight

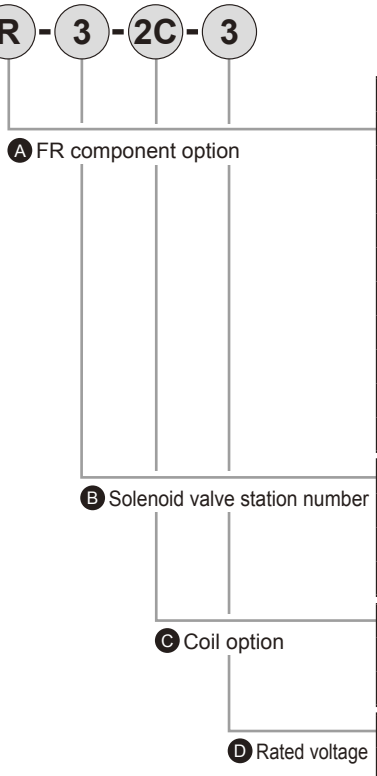
(Unit: kg)

Descriptions	Descriptions
FR component (T type bracket, joiner, etc., included)	
A: Piping adapter	0.54
R: Regulator	0.80
RT8: Regulator (without pressure gauge)	0.79
W: Filter regulator	1.06
WT8: Filter regulator (without pressure gauge)	1.05
2 port solenoid valve	
CXU30-FAB4U (discrete valve + joiner)	0.56

Weight is calculated with the FR device used + 2 port solenoid valves x number of stations.

How to order

CXU30-GFAB4U-8L-R-3-2C-3



Symbol		Descriptions
Ⓐ FR component option		
Component option Note 1	**A**	Piping adapter (Rc3/8)
	R	Regulator (R2000-10-W-X2 Note 2)
	RT8	Regulator (R2000-10-W-T8X2 Note 2) Without pressure gauge (port Rc1/4 open)
	W	Filter regulator (W3000-10-W-F Note 2)
	WT8	Filter regulator (W3000-10-W-FT8 Note 2) Without pressure gauge (port Rc1/4 open)
Direction	**Blank**	IN side Left
	X	IN side Right
Ⓑ Solenoid valve station number		
1		1 station
to		to
5		5 stations
Ⓒ Coil option		
2C		Grommet lead wire
2HS		DIN terminal box with light, surge suppressor (Pg11)
Ⓓ Rated voltage		
1		100 VAC 50/60Hz, 110 VAC 60Hz
3		24 VDC

⚠ Note on model no. selection

Note 1: The N.C. auto drain is standard type for the filter regulator.
Select "A" unless selecting component options "R", "RT8", "W" or "WT8".
Multiple FR device options cannot be selected.
Note 2: Model for IN side Left (FR device direction option "No symbol").

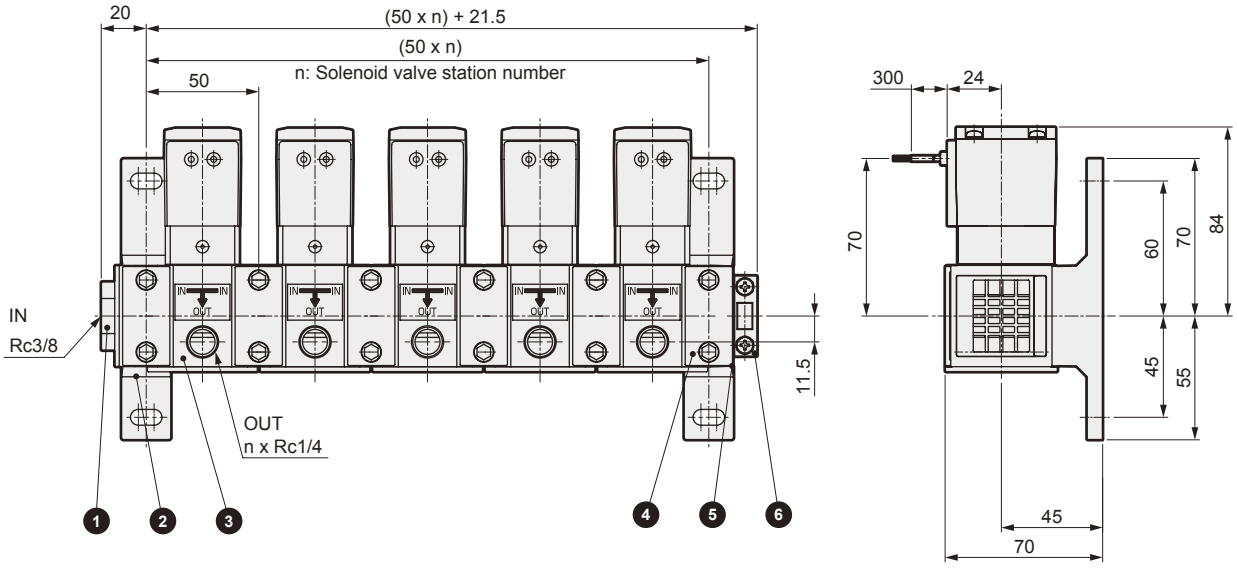
Internal structure drawing

Model	Catalog and Page
CXU30-FAB4U	Page 21
CXU13-CA	Page 34
CXU10-MA	Page 33
R2000	Catalog No. CB-024SA
W3000	Catalog No. CB-024SA

Dimensions

● Grommet lead wire type

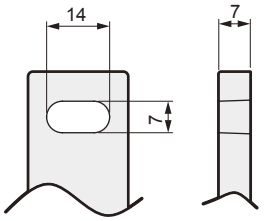
CXU30-GFAB4U-8L-A-*-2C-*



Configuration table

No.	Product name	Model no.
1	Piping adapter Note 1	(FR component option -A)
2	T type bracket	B310-W
3	2 port direct acting solenoid valve	CXU30-FAB4U-*
4	T type bracket	B310-W
5	Module transform adapter	CXU13-CA-00
6	Masking adapter	CXU10-MA-00

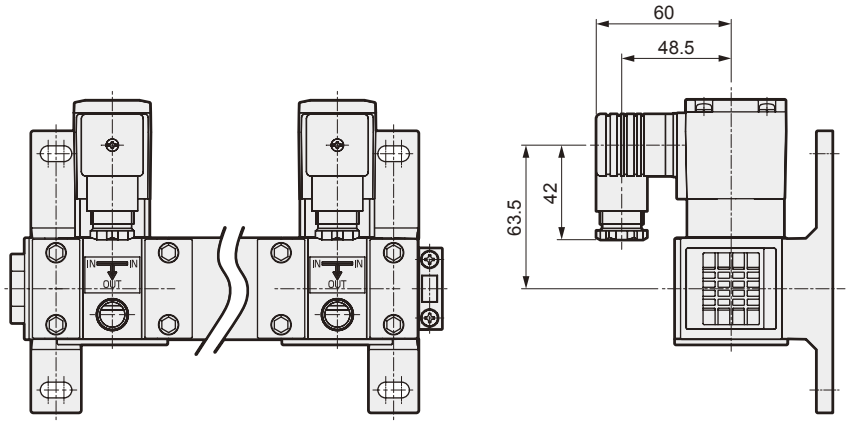
Note 1: The final product may differ depending on FR device options.



Enlarged view of bracket section

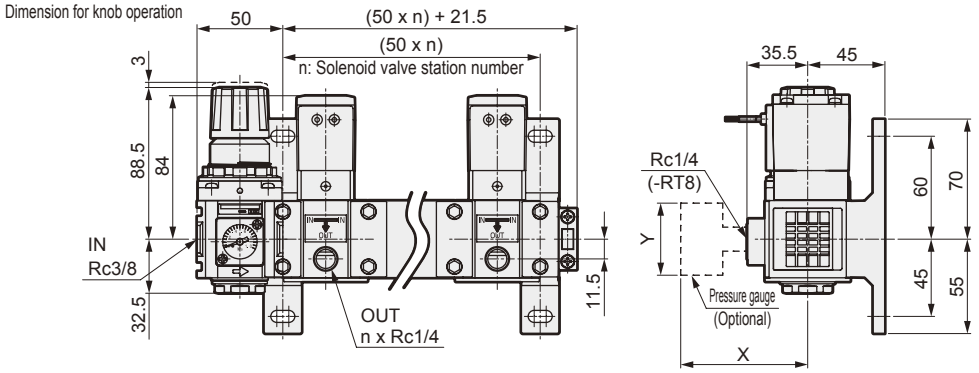
● With DIN terminal box (Pg11)

CXU30-GFAB4U-8L-A-*-2HS-*



Dimensions

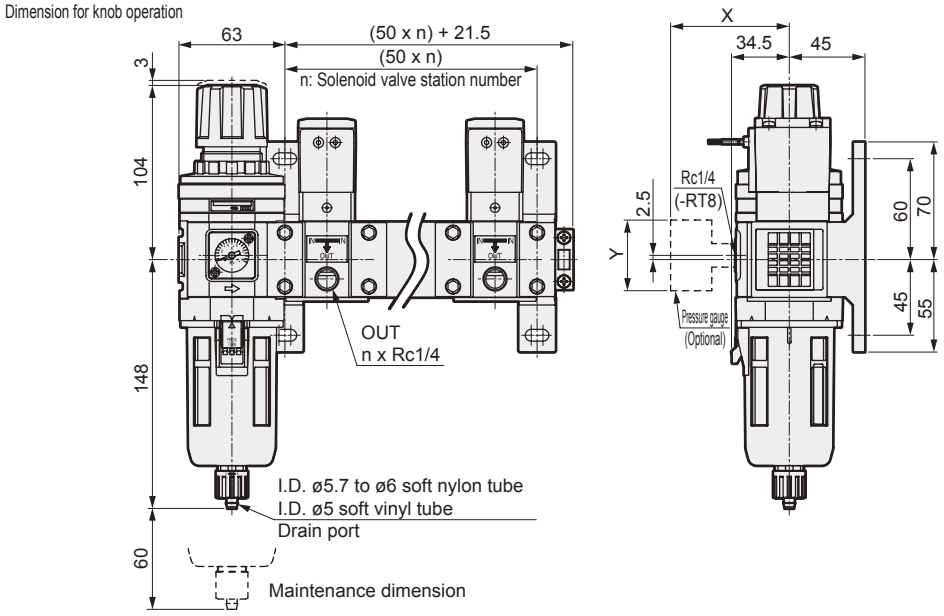
● FR component option: Regulator type
CXU30-GFAB4U-8L-$^{R}_{RT8}$-*-*-*



Pressure gauge dimensions table

Pressure gauge (Optional)	X	Y
G49D	(73)	ø43.5
G59D	(75.5)	ø52
G40D	(75)	ø42.5
G50D	(75)	ø52.5
G41D	(73.5)	ø42
G52D	(78.5)	ø52.5

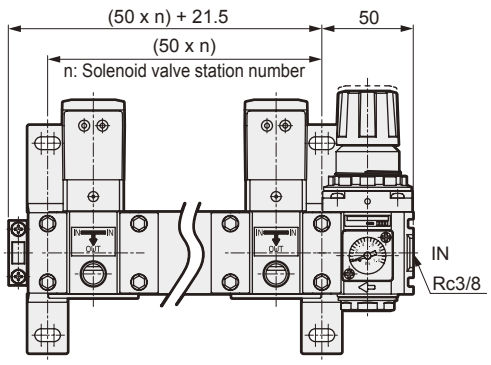
● FR component option: Filter regulator type
CXU30-GFAB4U-8L-$^{W}_{WT8}$-*-*-*



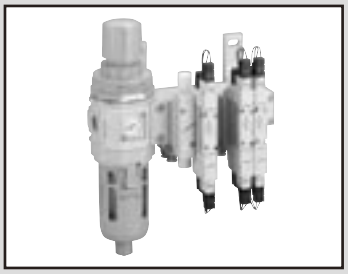
Pressure gauge dimensions table

Pressure gauge (Optional)	X	Y
G49D	(69.5)	ø43.5
G59D	(72)	ø52
G40D	(71.5)	ø42.5
G50D	(71.5)	ø52.5
G41D	(70)	ø42
G52D	(75)	ø52.5

● FR component option: Reverse flow
CXU30-GFAB4U-8L-$^{R}_{RT8}$X-*-*-*



Note: When reverse flow option X is selected, the IN side and FR device are on the right. The drawing at left is for the regulator.



5 port pilot operated valve

CXU30-M4G2 Series

Easily prepare in a manifold state by connecting to a regulator, etc.

Easy Manifold

Common specifications

Descriptions		Descriptions
Type of valve / operation method		Pilot operated soft spool valve
Working fluid		Compressed air
Max. working pressure MPa		0.7
Min. working pressure MPa		0.2 (2-position, 3-position)
Withstanding pressure MPa		1.05
Fluid temperature °C		5 to 55
Ambient temperature °C		-5 to 55 (no freezing)
Working environment		Area without corrosive or explosive gases, away from water
Port size	A/B port	Push-in joint ø4, ø6, ø8
	R1, R2 port	Rc1/4
Manual override		Non-locking/locking common type
Pilot exhaust method		Main valve, pilot valve common exhaust type
Lubrication Note 1		Not required
Protective structure Note 2		Dust proof
Vibration/shock m/s^2		50 or less / 300 or less

Note 1: Use the turbine oil 1 class ISO VG32 if lubricating.
Excessive or intermittent lubrication results in instable operation.
Note 2: Check that water drops or oil, etc., do not come into contact.
DIN terminal box specifications comply with IP65 (jet-proof).
Note that the box must be fixed using the specified adaptive cord outer diameter and tightening torque.

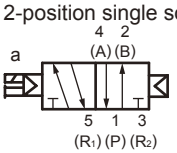
Electric specifications

Descriptions			Descriptions
Rated voltage V		DC	24
		AC	100
Rated voltage fluctuation range			±10%
Holding current Note 3 A		24 VDC	0.023 (0.025)
		100 VAC	0.010 (0.012)
Power consumption Note 3 W		24 VDC	0.55 (0.6)
		100 VAC	0.55 (0.6)
Apparent power VA		100 VAC	1.0 (1.2)
Heat proof class			B
Temperature rise °C			50
Surge suppressor			Standard
Indicator			With indicator light (standard)

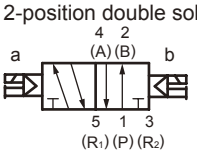
Note 3: Values in ( ) include the lamp.

JIS symbol

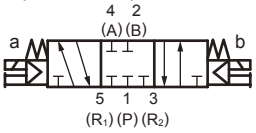
2-position single solenoid



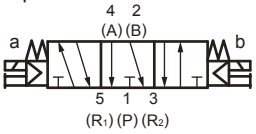
2-position double solenoid



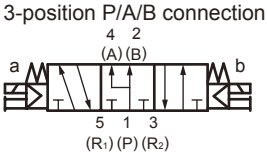
3-position all ports closed



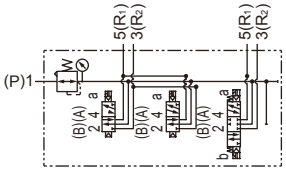
3-position A/R/B connection



3-position P/A/B connection



(Example) CXU30-M4G2-1130-C6-R-B-3



Weight

(Unit: kg)

Descriptions			Descriptions	
FR component (T type bracket, joiner, etc., included)				
A: Piping adapter			0.54	
R: Regulator			0.80	
RT8: Regulator (without pressure gauge)			0.79	
W: Filter regulator			1.06	
WT8: Filter regulator (without pressure gauge)			1.05	
5 port valve: Solenoid position			Discrete valve	Valve sub-base
Without solenoid valve: Masking plate			0.02	0.32
2-position	Single solenoid	E-connector	0.08	
		DIN terminal	0.10	
	Double solenoid	E-connector	0.10	
		DIN terminal	0.14	
3-position	All ports closed	E-connector	0.11	
		DIN terminal	0.15	

Weight can be calculated with the FR device used + solenoid valve (1) to (4) + valve sub-base.

Flow characteristics

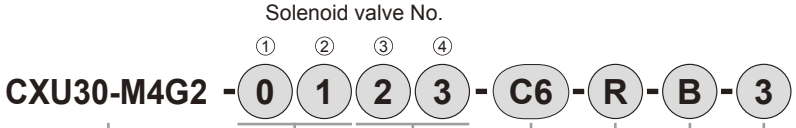
Solenoid position		P → A/B		A/B → R1/R2	
		C (dm^3/ (s • bar))	b	C (dm^3/ (s • bar))	b
2-position		2.3	0.29	1.8	0.24
3-position	All ports closed	2.1	0.27	2.3	0.27
	A/B/R connection	2.1	0.34	1.7	0.2
	P/A/B connection	2.2	0.34	2.4	0.29

Note 1: Effective sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.
Note 2: The 2-position and A/B/R connection values are those when the check valve is built-in.

Regulator specifications	
Set pressure range MPa	0.2 to 0.7 Note 3
Relief	With relief mechanism
Port size	Rc3/8
Filter specifications	
Filtration rating µm	5
Drain capacity cm^3	45
Port size	Rc3/8

Note 3: The set pressure range is limited by CXU30-4G2 working pressure.

How to order



Ⓐ Model no.

Ⓑ Solenoid valve ①② solenoid position Note 7, Note 8

Symbol	Descriptions
Ⓑ Solenoid valve ① and solenoid valve ② solenoid position	
0	Without solenoid valve; masking plate
1	2-position single solenoid
2	2-position double solenoid
3	3-position all ports closed
4	3-position A/B/R connection
5	3-position P/A/B connection

Ⓒ Solenoid valve ③④ solenoid position Note 7, Note 8

Ⓒ Solenoid valve ③ and solenoid valve ④ solenoid position	
Blank	Without sub-base
0	Without solenoid valve; masking plate
1	2-position single solenoid
2	2-position double solenoid
3	3-position all ports closed
4	3-position A/B/R connection
5	3-position P/A/B connection

Ⓓ Port size (OUT)

Ⓓ Port size (OUT)	
C4	ø4 push-in joint
C6	ø6 push-in joint
CL6	ø6 push-in joint L type (rear side direction)
C8	ø8 push-in joint

Ⓔ FR component option

Ⓔ FR component option		
Component option Note 4	**A**	Piping adapter (Rc3/8)
	R	Regulator (R2000-10-W-X2 Note 5)
	RT8	Regulator (R2000-10-W-T8X2 Note 5) Without pressure gauge (port Rc1/4 open)
	W	Filter regulator (W3000-10-W-F Note 5)
	WT8	Filter regulator (W3000-10-W-FT8 Note 5) Without pressure gauge (port Rc1/4 open)
Direction	**Blank**	IN side Left
	X	IN side Right

Ⓕ Electric connection

Ⓕ Electric connection	
B	DIN terminal box (Pg7) With surge suppressor and light
E20	E-connector Lead wire (500 mm) with surge suppressor and light

Ⓖ Rated voltage

Ⓖ Rated voltage	
1	100 VAC (rectified bridge integrated)
3	24 VDC

⚠ Note on model no. selection

Note 1: The GWS*-8-S joint can be mounted on the R1 port.
Note 2: The check valve is provided as a standard.
The 3 position all ports closed and P/A/B connection cannot be used with the check valve.
Note 3: If port size, wire connection or voltage is different between solenoid valve (1) and (2), the product is available as customized order.
Note 4: The N.O. auto drain is standard type for the filter regulator. Multiple FR device options cannot be selected.
Note 5: Model for IN side Left (FR device direction option "No symbol").
Note 6: Two silencers (SLW-8S) are enclosed with one sub-base.
Note 7: Refer to dimensions drawings for positions of solenoid valves (1) to (4)
Note 8: When masking plates are used for all solenoid valves, no symbol is indicated for wire connection and rated voltage options.

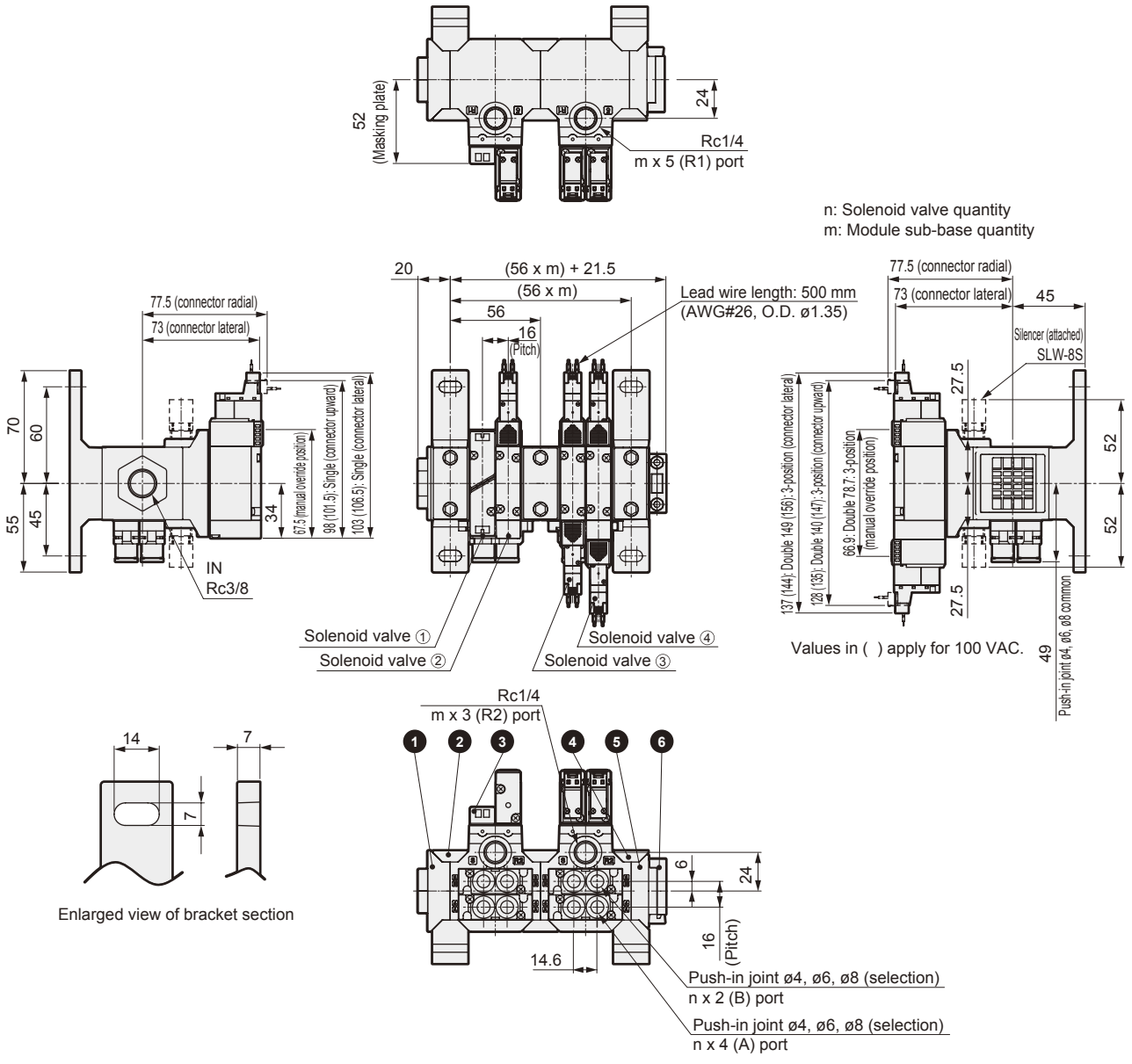
Internal structure drawing

Model	Catalog and Page
CXU30-4G2	Page 26
CXU10-MA	Page 33
CXU13-CA	Page 34
R2000	Catalog No. CB-024SA
W3000	Catalog No. CB-024SA

Dimensions

CXU30-M4G2 -A

● E-connector type (E)
Cartridge joint: Straight



Configuration table

No.	Product name	Model no.
1	Piping adapter Note 1	(FR component option -A)
2	T type bracket	B310-W
3	5 port pilot operated valve	CXU30-4G2-*
4	T type bracket	B310-W
5	Module transform adapter	CXU13-CA-00
6	Masking adapter	CXU10-MA-00

Note 1: The final product may differ depending on FR device options.

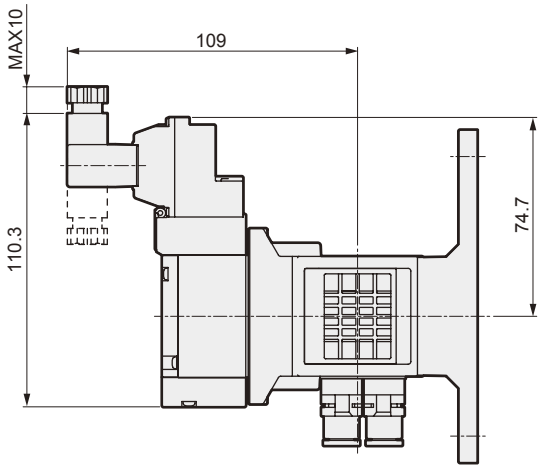
Solenoid valve and module sub-base number

Model no.	Solenoid valve quantity	Module sub-base quantity
CXU30-M4G2-①②	2	1
CXU30-M4G2-①②③④	4	2

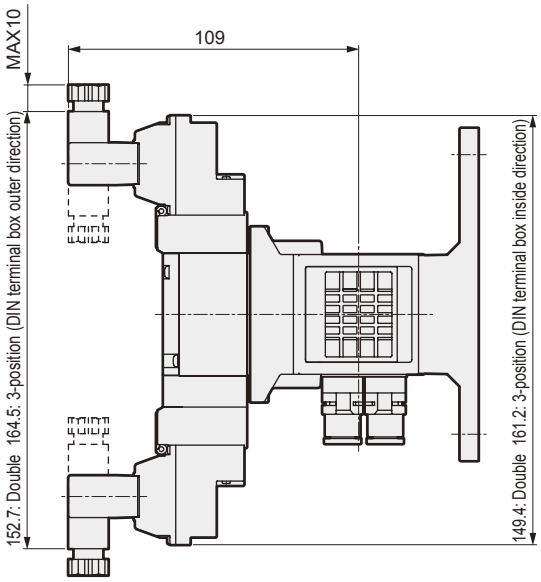
Note: The masking plate is enclosed in the number of solenoid valves.
Two solenoid valves are used for each module sub-base.

Dimensions

● DIN terminal box type (B)
Cartridge joint: Straight
2-position single solenoid

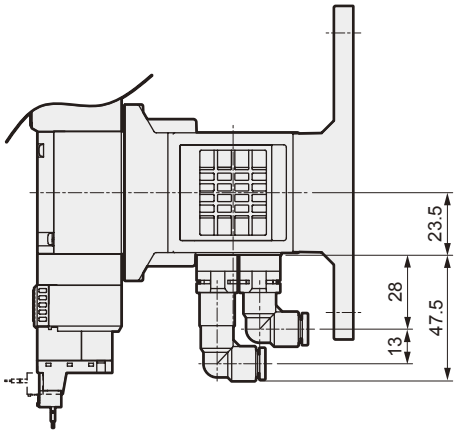


Double, 3-position

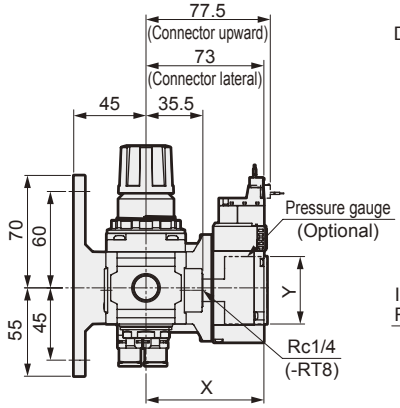


Note: The DIN terminal box assembly is shipped facing inward.

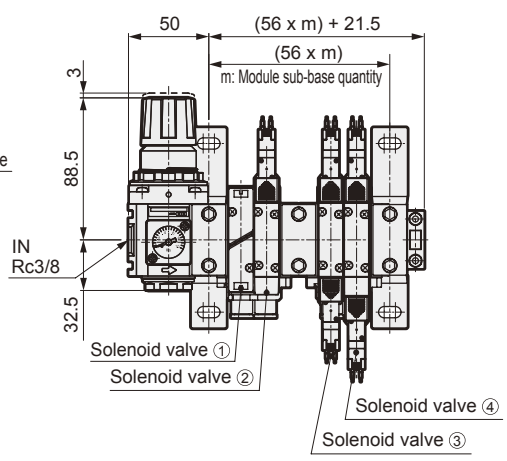
● ø6 push-in joint L type (rear side direction)



● FR component option: Regulator type
CXU30-M4G2-**-*-$^{R}_{RT8}$-*-*



Dimension for knob operation



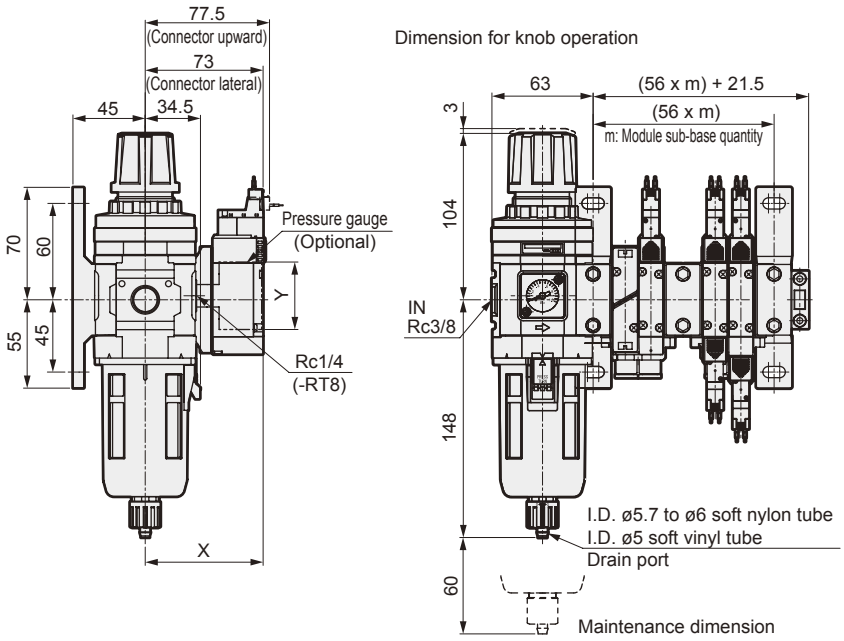
Pressure gauge dimensions table

Pressure gauge (Optional)	X	Y
G49D	(73)	ø43.5
G59D	(75.5)	ø52
G40D	(75)	ø42.5
G50D	(75)	ø52.5
G41D	(73.5)	ø42
G52D	(78.5)	ø52.5

Refer to catalog No. CB-024SA for the discrete model no. of the pressure gauge.

Dimensions

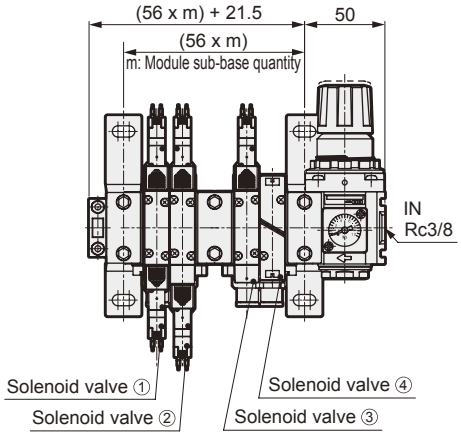
● FR component option: Filter regulator type
CXU30-M4G2-**-*-$^{W}_{WT8}$-*-*



Pressure gauge dimensions table

Pressure gauge (Optional)	X	Y
G49D	(69.5)	ø43.5
G59D	(72)	ø52
G40D	(71.5)	ø42.5
G50D	(71.5)	ø52.5
G41D	(70)	ø42
G52D	(75)	ø52.5

● FR component option: Reverse flow
CXU30-M4G2-**-*-$^{R}_{RT8}$X-*-*



Note: When reverse flow option X is selected, the IN side and FR device are on the right. The solenoid valve is arranged in order from the left.
The drawing at left is for the regulator.

Air unit module
Discrete model no.

Overview

The air unit components make it easy to add to existing units and to purchase parts for maintenance, etc. General purpose components can be purchased together and assembled with air unit components.

Features

① Connect solenoid valves as modules

2 port valves and 5 port valves can be connected to conventional F.R.L. devices.

② Easily connect with joiners

Conventional piping materials and tubes are not used, so there is no possibility of foreign materials entry or pressure loss.

③ Diverse module components

Modules can be split into four directions, twisted 90°, and resized.

Explanation of icon

IN side Gasket

① Gasket connection on the IN side

A gasket is required for connecting module indents.

Screw-free open type

② Use at terminals not possible

No connection screw is provided, so a masking adapter or piping adapter is required for use at the terminal.

Stations expandable

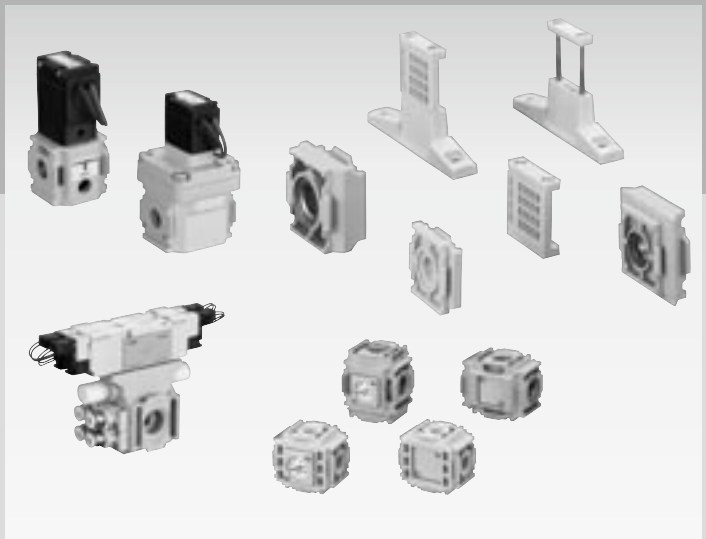
③ Easily expanded stations

IN structures are used on both sides of the module connection section, making it easy to expand stations.

In line

④ Main inline

The component can be used as main inline. This structure is the opposite of the expandable type.

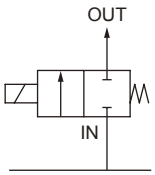
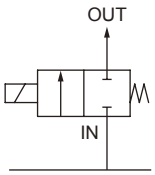
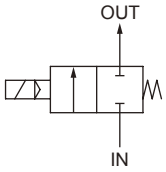
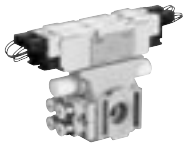
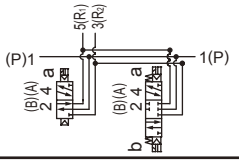


CONTENTS

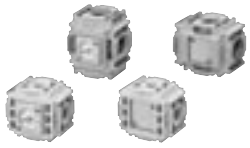
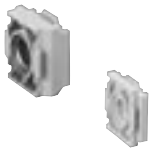
Series variation

Air unit module

<Solenoid valve>

Series	Major applications	JIS symbol	Model no.	
● 2 port direct acting solenoid valve IN side Gasket · Stations expandable · Screw-free open type 	Air blow		CXU10-FAB3	
● 2 port direct acting solenoid valve IN side Gasket · Stations expandable · Screw-free open type 	Air blow		CXU30-FAB4U	
● 2 port pilot operated solenoid valve Screw-free open type · In line 	ON/OFF of main		CXU30-FAD	
● 5 port pilot operated valve IN side Gasket · Stations expandable · Screw-free open type 	For cylinder drive	(Example) CXU30-4G2-13-C6-B-1 	CXU30-4G2	

<Distributor, adapter>

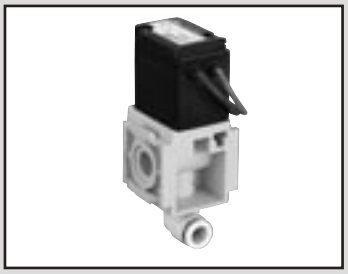
Series	Major applications	Applications	Model no.	
● Four direction distributor IN side Gasket · Screw-free open type Note 2 	Branching in four directions		CXU10-D4	
			CXU30-D4	
● Turn adapter IN side Gasket · Screw-free open type 	Converting module orientation by 90°		CXU10-TA	
			CXU30-TA	
● Masking adapter 	Masking of module		CXU10-MA	
● Module transform adapter IN side Gasket · Screw-free open type 	Connection of 1000 and 3000 Series		CXU13-CA	

Note 1: Effective sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.

	Module		Port size (OUT)				Flow characteristics C[dm^3/ (s·bar)] Note 1	Page
	1000 Series	3000 Series	ø4	ø6	ø8	1/4		
	●			●	●		1.2	18
		●				●	2.1	20
		●					18	22
		●	●	●	●		2.2 to 2.7	24

Note 2: CXU30-D4 has port size.

	Module		Port size	Page
	1000 Series	3000 Series	3/8	
	●			30
		●	●	
	●			32
		●		
	●			33
	●			34

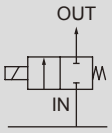


2 port direct acting solenoid valve

CXU10-FAB3 Series

N.C. (normally closed) type
Connectable 1000 Series to modules
Ideal for modular component blow valves

JIS symbol



RoHS

Screw-free open type

IN side Gasket

Stations expandable

Specifications

Descriptions		CXU10-FAB3
Working fluid		Compressed air
Working pressure differential range MPa		AC: 0 to 1.0, DC: 0 to 0.6
Max. working pressure MPa		1.0
Withstanding pressure MPa		1.5
Fluid temperature °C		AC: 5 to 60, DC: 5 to 40
Ambient temperature °C		AC: 5 to 60, DC: 5 to 40
Atmosphere		Area without corrosive or explosive gases and away from water
Valve structure		Direct acting poppet structure
Valve leakage cm^3/min.		10 or less
Mounting attitude		Free
Port size (IN)		Without
Orifice mm		3
C[dm^3/ (s·bar)] Note 1		1.2
b		0.56
Weight kg		0.25
Electric specifications		
Rated voltage		100 VAC, 24 VDC
Rated electric power VA	50Hz	At holding: 7.5, at starting: 20
	60Hz	At holding: 5.5, at starting: 17
Power consumption W	50Hz	4.0
	60Hz	3.4
	DC	6.5
Heat proof class		B

Note 1: Effective sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.

How to order

CXU10-FAB3 - C6 - 2C - 3

- A Port size (OUT)
- B Coil option
- C Rated voltage

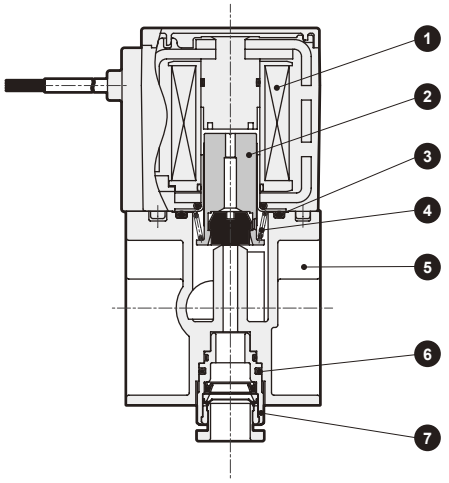
Symbol	Descriptions
A Port size (OUT)	
C6	ø6 push-in joint
CL6	ø6 push-in joint L type
C8	ø8 push-in joint
CL8	ø8 push-in joint L type
B Coil option	
2C	Grommet lead wire
2HS	DIN terminal box with light and surge suppressor (Pg11)
C Rated voltage	
1	100 VAC 50/60Hz, 110 VAC 60Hz
3	24 VDC

⚠ Note on model no. selection

Note: One joiner set and gasket are enclosed.

Internal structure and parts list

● CXU10-FAB3



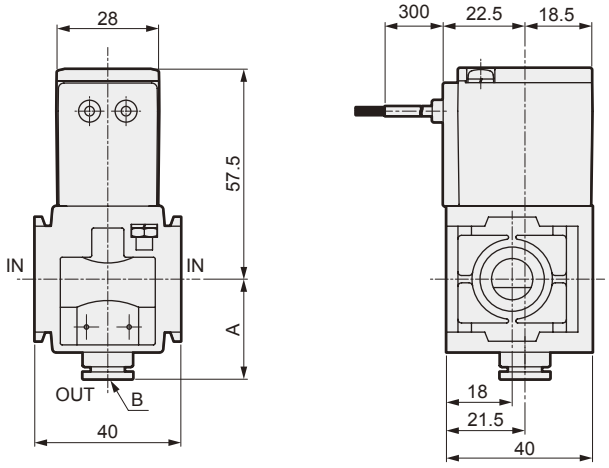
No.	Part name	Material	
1	Coil assembly	Class B molded coil	
2	Plunger assembly	SUS, NBR	Stainless steel, nitrile rubber
3	O ring	NBR	Nitrile rubber
4	Spring	SUS	Stainless steel
5	Body	PA66	Polyamide resin
6	Pin	SUS	Stainless steel
7	Cartridge joint		

Dimensions

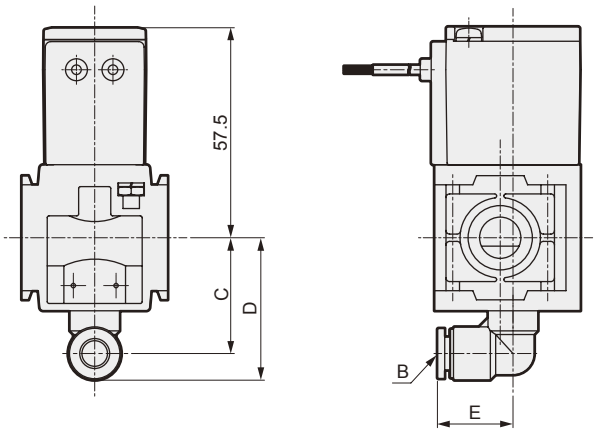
● Grommet lead wire type

CXU10-FAB3-*-2C-*

Cartridge joint: Straight

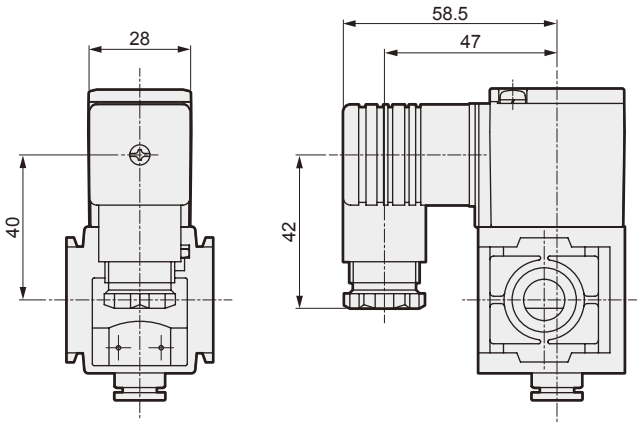


Cartridge joint: Elbow type



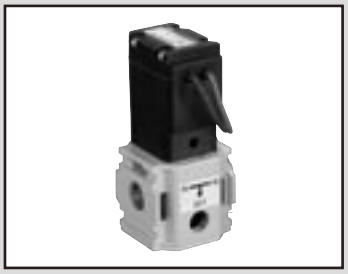
● With DIN terminal box (Pg11)

CXU10-FAB3-*-2HS-*



Optional dimensions table

Option	A	B	C	D	E
C6	27	Push-in joint ø6	-	-	-
CL6	-	Push-in joint ø6	31	37	18.5
C8	27	Push-in joint ø8	-	-	-
CL8	-	Push-in joint ø8	32	39	21

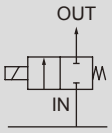


2 port direct acting solenoid valve

CXU30-FAB4U Series

N.C. (normally closed) type
Connectable 3000 Series to modules
Interchangeable with GFAB actuator assembly

JIS symbol



RoHS

Screw-free open type
IN side Gasket
Stations expandable

Specifications

Descriptions		CXU30-FAB4U
Working fluid		Compressed air
Working pressure differential range MPa		AC: 0 to 1.0, DC: 0 to 0.9
Max. working pressure MPa		1.0
Withstanding pressure MPa		1.5
Fluid temperature °C		AC: 5 to 60, DC: 5 to 40
Ambient temperature °C		AC: 5 to 60, DC: 5 to 40
Atmosphere		Area without corrosive or explosive gases and away from water
Valve structure		Direct acting poppet structure
Valve leakage cm^3/min. (ANR)		10 or less
Mounting attitude		Free
Port size	IN	Without
	OUT	Rc1/4
Orifice mm		4
C[dm^3/ (s·bar)] Note 1		2.1
b		0.34
Weight kg		0.55
Electric specifications		
Rated voltage		100 VAC, 24 VDC
Rated electric power VA	50Hz	At holding: 15, at starting: 40
	60Hz	At holding: 11, at starting: 35
Power consumption W	50Hz	7.5
	60Hz	6.5
	DC	8.0
Heat proof class		B

Note 1: Effective sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.

How to order

CXU30-FAB4U-8L-2C-3

Ⓐ Coil option
Ⓑ Rated voltage

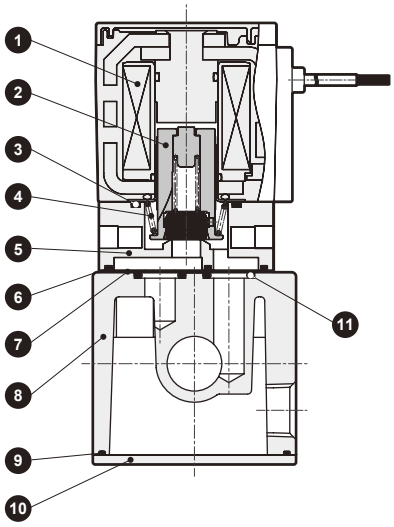
Symbol	Descriptions
Ⓐ Coil option	
2C	Grommet lead wire
2HS	DIN terminal box with light and surge suppressor (Pg11)
Ⓑ Rated voltage	
1	100 VAC 50/60Hz, 110 VAC 60Hz
3	24 VDC

⚠ Note on model no. selection

Note: One joiner set and gasket are enclosed.

Internal structure and parts list

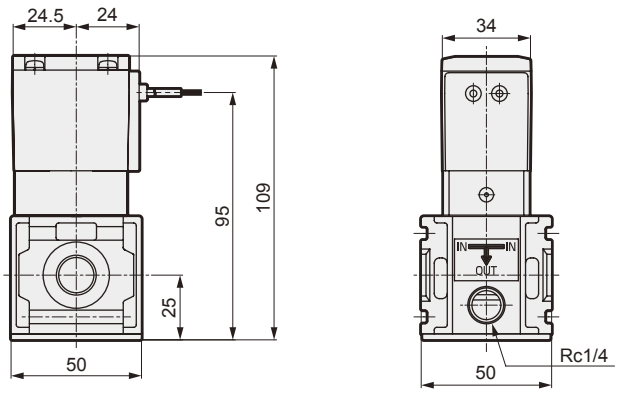
● CXU30-FAB4U



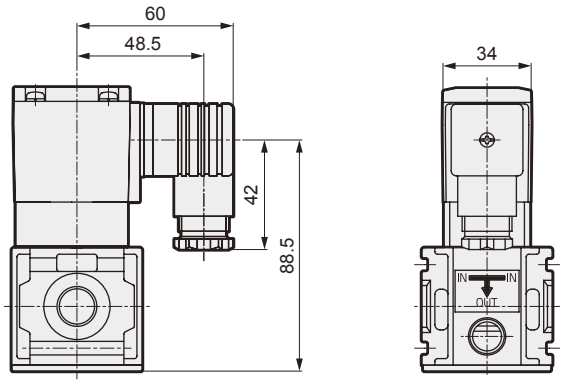
No.	Part name	Material	
1	Coil assembly	Class B molded coil	
2	Plunger assembly	SUS, NBR	Stainless steel, nitrile rubber
3	O ring	NBR	Nitrile rubber
4	Spring	SUS	Stainless steel
5	Body	PPS	Polyphenylen sulfite
6	Gasket	NBR	Nitrile rubber
7	Plate	SUS	Stainless steel
8	Body	ADC12	Aluminum alloy die-casting
9	O ring	NBR	Nitrile rubber
10	Base plate	SPCC	Steel sheet
11	O ring	NBR	Nitrile rubber

Dimensions

● Grommet lead wire type
CXU30-FAB4U-8L-2C-*



● With DIN terminal box (Pg11)
CXU30-FAB4U-8L-2HS-*

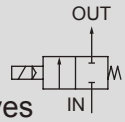


2 port pilot operated solenoid valve

CXU30-FAD Series

N.C. (normally closed) type
Diaphragm drive
Connectable 3000 Series to modules
Suitable as modular component master valves

JIS symbol



RoHS

Screw-free open type

In line

Specifications

Descriptions		CXU30-FAD
Working fluid		Compressed air
Min. working pressure differential	MPa	0.1
Max. working pressure differential	MPa	0.7
Max. working pressure	MPa	0.7
Withstanding pressure	MPa	1.4
Fluid temperature	°C	-10 to 60 (no freezing)
Ambient temperature	°C	-10 to 60
Atmosphere		Area without corrosive or explosive gases and away from water
Valve structure		Pilot operated diaphragm structure
Valve leakage	cm^3/min. (ANR)	10 or less
Mounting attitude		Free
Port size		Without
Orifice	mm	15
C[dm^3/ (s·bar)]	Note 1	18
b		0.4
Weight	kg	0.5
Electric specifications		
Rated voltage		100 VAC, 24 VDC
Apparent power VA	50Hz	7.5
	60Hz	5.5
Power consumption W	50Hz	4.0
	60Hz	3.4
	DC	6.5
Heat proof class		B

Note 1: Effective sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.
Note 2: Depending on use, such as using with an extremely small flow rate or when the solenoid valve's secondary side is restricted, operation may be unstable at pressure differences less than 0.1 MPa.

How to order

CXU30-FAD-00 - X1 - 2C - 3

- Ⓐ Flow direction option
- Ⓑ Coil option
- Ⓒ Rated voltage

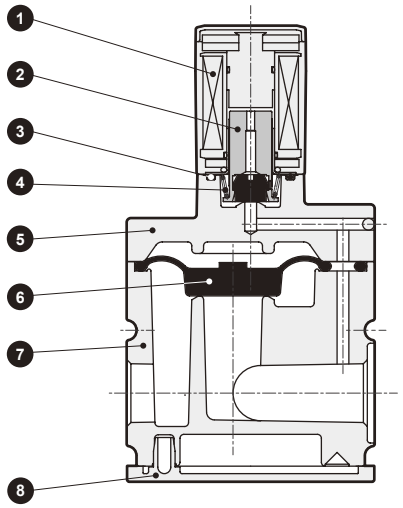
Symbol	Descriptions
Ⓐ Flow direction option	
Blank	Standard flow (left → right)
X1	Reverse flow (right → left)
Ⓑ Coil option	
2C	Grommet lead wire
2HS	DIN terminal box with light and surge suppressor (Pg11)
Ⓒ Rated voltage	
1	100 VAC 50/60Hz, 110 VAC 60Hz
3	24 VDC

⚠ Note on model no. selection

Note: Joiner set is enclosed.

Internal structure and parts list

● CXU30-FAD

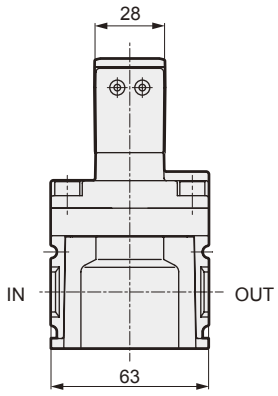


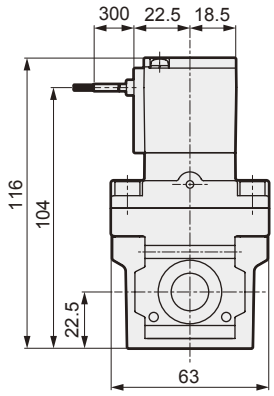
No.	Part name	Material	
1	Coil assembly	Class B molded coil	
2	Plunger assembly	SUS, NBR	Stainless steel, nitrile rubber
3	O ring	NBR	Nitrile rubber
4	Spring	SUS	Stainless steel
5	Stuffing	ADC	Aluminum alloy die-casting
6	Diaphragm	U	Urethane rubber resin
7	Body	ADC	Aluminum alloy die-casting
8	Plate cover	ABS	ABS resin

Dimensions

● Grommet lead wire type

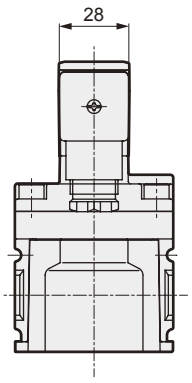
CXU30-FAD-00-*-2C-*

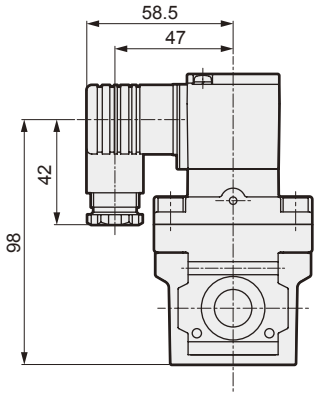




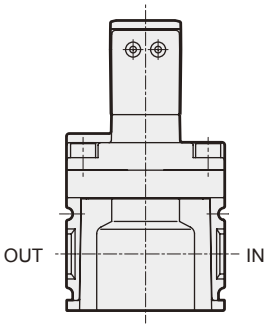
● With DIN terminal box (Pg11)

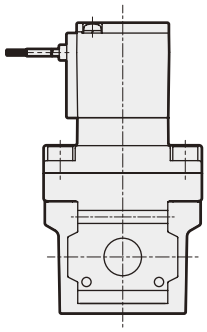
CXU30-FAD-00-*-2HS-*

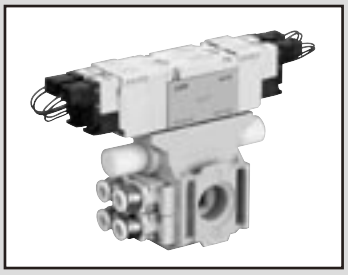




CXU30-FAD-00-X1-2C-*







5 port pilot operated valve

CXU30-4G2 Series

5 port solenoid valve for modular connection with 3000 Series

Screw-free open type

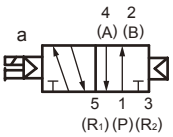
IN side Gasket

RoHS

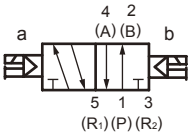
Stations expandable

JIS symbol

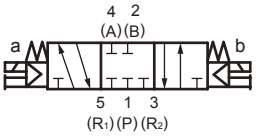
2-position single solenoid



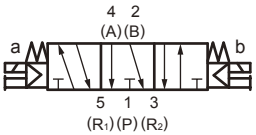
2-position double solenoid



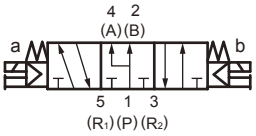
3-position all ports closed



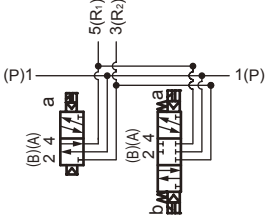
3-position A/B/R connection



3-position P/A/B connection



(Example) CXU30-4G2-13-C6-B-1



Common specifications

Descriptions		Descriptions
Type of valve / operation method		Pilot operated soft spool valve
Working fluid		Compressed air
Max. working pressure MPa		0.7
Min. working pressure MPa		0.2 (2-position, 3-position)
Withstanding pressure MPa		1.05
Fluid temperature °C		5 to 55
Ambient temperature °C		-5 to 55 (no freezing)
Working environment		Area without corrosive or explosive gases and away from water
Port size	A/B port	Push-in joint ø4, ø6, ø8
	P port	None (connectable with 3000 Series)
	R1, R2 port	Rc1/4
Manual override		Non-locking/locking common type
Pilot exhaust method		Main valve, pilot valve common exhaust type
Lubrication Note 1		Not required
Protective structure Note 2		Dust proof
Vibration/shock m/s^2		50 or less / 300 or less

Note 1: Use the turbine oil Class 1 ISO VG32 if lubricated.
Excessive or intermittent lubrication results in instable operation.
Note 2: Check that water drops or oil, etc., do not come into contact.
DIN terminal box specifications comply with IP65 (jet-proof).
Note that the box must be fixed using the specified adaptive cord outer diameter and tightening torque.

Electric specifications

Descriptions		Descriptions
Rated voltage V	DC	24
	AC	100
Rated voltage fluctuation range		±10%
Holding current A Note 3	24 VDC	0.023 (0.025)
	100 VAC	0.010 (0.012)
Power consumption W Note 3	24 VDC	0.55 (0.6)
	100 VAC	0.55 (0.6)
Apparent power VA	100 VAC	1.0 (1.2)
Heat proof class		B
Temperature rise °C		50
Surge suppressor		Standard
Indicator		With indicator light (standard)

Note 3: Values in ( ) include the lamp.

Weight

(Unit: kg)

			Descriptions	
Solenoid position			Discrete valve	Valve sub-base
Without solenoid valve: Masking plate			0.02	0.32
2-position	Single solenoid	E-connector	0.08	
		DIN terminal	0.10	
	Double solenoid	E-connector	0.10	
		DIN terminal	0.14	
3-position	All ports closed	E-connector	0.11	
		DIN terminal	0.15	

Weight can be calculated with the separate valve (1) + separate valve (2) + valve sub base.

Flow characteristics

Solenoid position		P → A/B		A/B → R1/R2	
		C (dm³/ (s • bar))	b	C (dm³/ (s • bar))	b
2-position		2.3	0.29	1.8	0.24
3-position	All ports closed	2.1	0.27	2.3	0.27
	A/B/R connection	2.1	0.34	1.7	0.2
	P/A/B connection	2.2	0.34	2.4	0.29

Note 1: Effective sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.
Note 2: The 2-position and A/B/R connection values are those when the check valve is built-in.

How to order

CXU30-4G2- **3** **3** **-C6** **-E20** **S** **-3**

Ⓐ Model no.

Ⓑ Solenoid valve ① solenoid position Note 5, Note 6

Ⓒ Solenoid valve ② solenoid position Note 5, Note 6

Ⓓ Port size (OUT)

Ⓔ Electric connection

Ⓕ Option

Ⓖ Rated voltage

Symbol	Descriptions
Ⓑ Solenoid valve ① solenoid position	
0	Without solenoid valve; masking plate
1	2-position single solenoid
2	2-position double solenoid
3	3-position all ports closed
4	3-position A/B/R connection
5	3-position P/A/B connection
Ⓒ Solenoid valve ② solenoid position	
0	Without solenoid valve; masking plate
1	2-position single solenoid
2	2-position double solenoid
3	3-position all ports closed
4	3-position A/B/R connection
5	3-position P/A/B connection
Ⓓ Port size (OUT)	
C4	ø4 push-in joint
C6	ø6 push-in joint
CL6	ø6 push-in joint L type (rear side direction)
C8	ø8 push-in joint
Ⓔ Electric connection	
B	DIN terminal box (Pg7)
E20	E-connector lead wire (500 mm) with surge suppressor and light
Ⓕ Option	
Blank	Without
S	2 silencers (SLW-8S) attached
Ⓖ Rated voltage	
1	100 VAC (rectified bridge integrated)
3	24 VDC

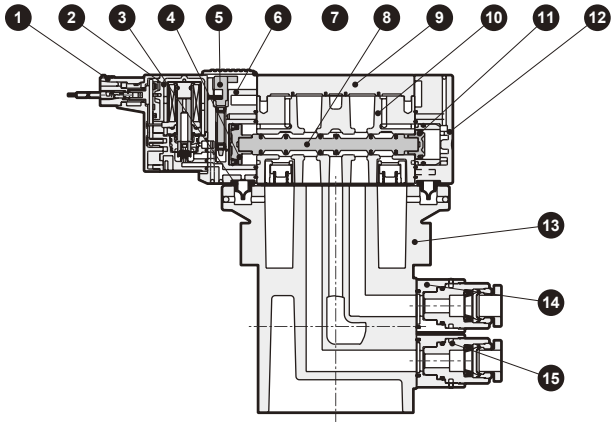
⚠ Note on model no. selection

Note 1: The GWS*-8-S joint can be mounted on the R1 port.
Note 2: The check valve is provided as a standard. The 3 position all ports closed and P/A/B connection cannot be used with the check valve.
Note 3: If port size, wire connection or voltage is different between solenoid valve (1) and (2), the product is available as customized order.
Note 4: One joiner set and gasket are enclosed.
Note 5: Refer to dimensions for positions of solenoid valves (1), (2)
Note 6: When masking plates are used for all solenoid valves, no symbol is indicated for wire connection and rated voltage options.

Refer to page 29 for a solenoid valve model no. list.

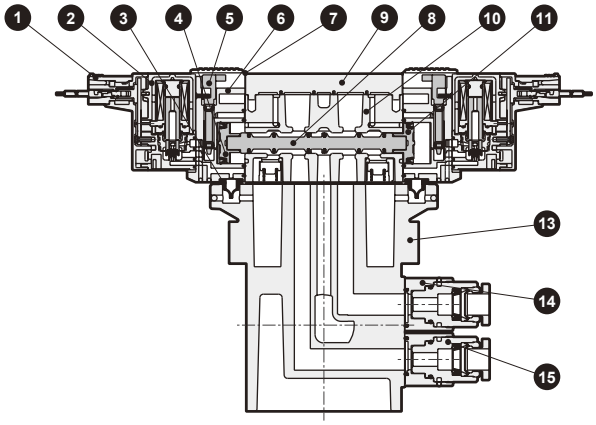
Internal structure and parts list

● 2-position single solenoid
E-connector type E

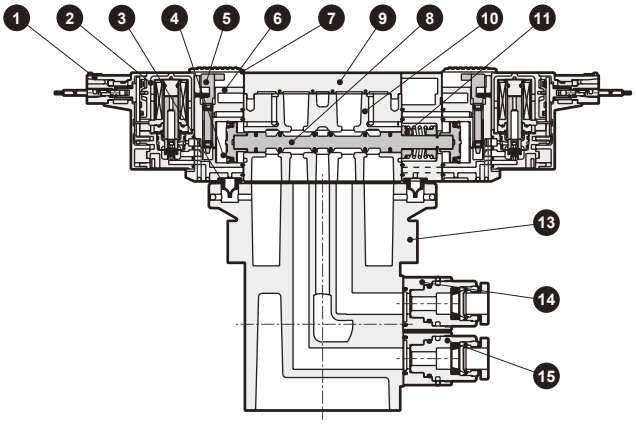


No.	Part name	Material
1	E-connector socket assembly	-
2	Coil assembly	-
3	Pilot exhaust check valve	Nitrile rubber
4	Piston D assembly	-
5	Manual override	Resin
6	Piston room	Resin
7	Protective cover of manual override	Resin
8	Spool assembly	-
9	Plate	Resin
10	Body	Aluminum alloy die-casting
11	Piston S assembly	-
12	Cap	Resin
13	Module sub-base	Aluminum alloy die-casting
14	Joint adapter	Resin
15	Cartridge type push-in joint	-
16	DIN terminal box assembly	-

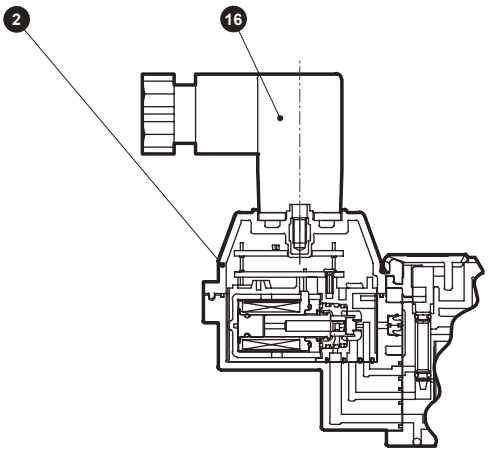
● 2-position double solenoid
E-connector type E



● 3-position
E-connector type E



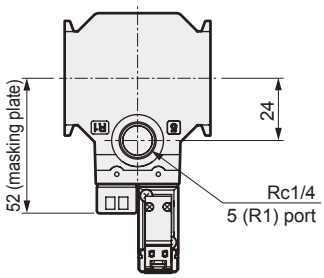
● DIN terminal box type B

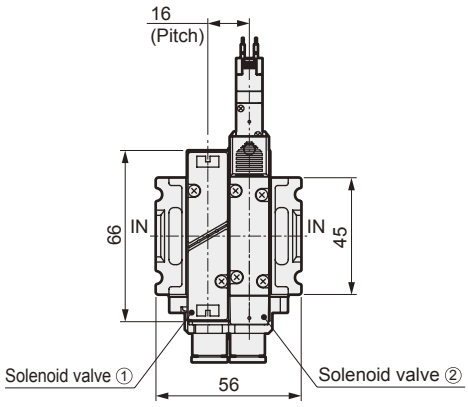


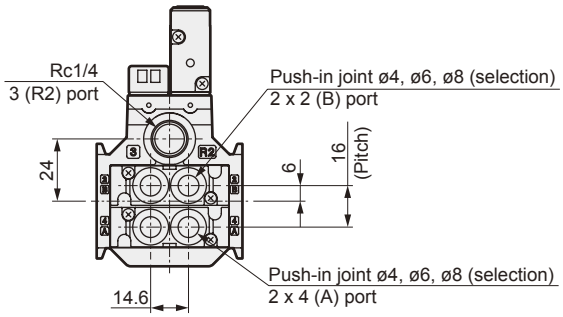
Dimensions

CXU30-4G2-$^{0}_{1}$

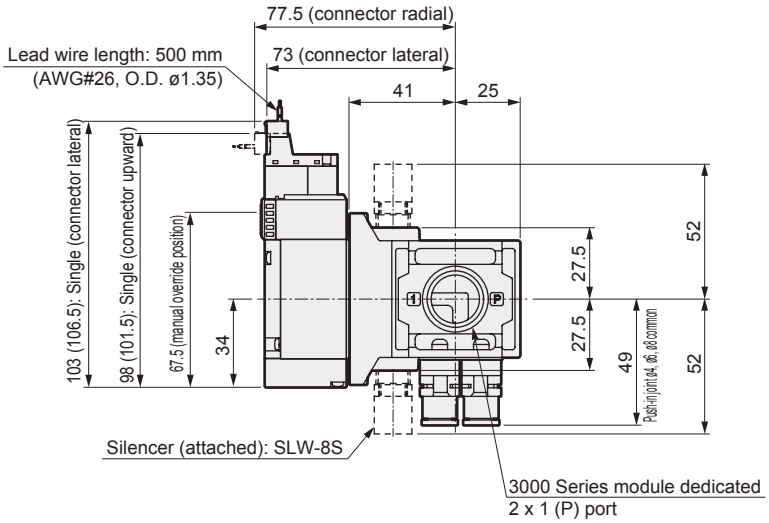
● E-connector type (E)
Cartridge joint: Straight



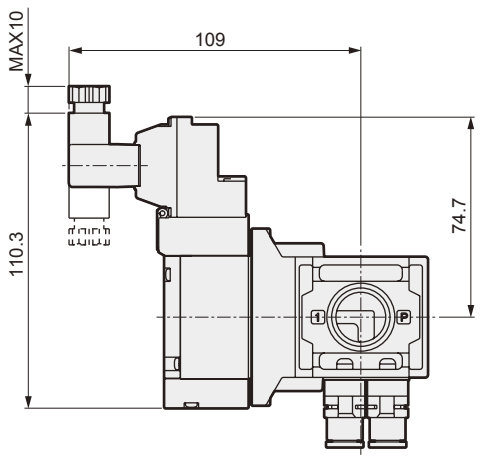




Values in ( ) apply for 100 VAC.

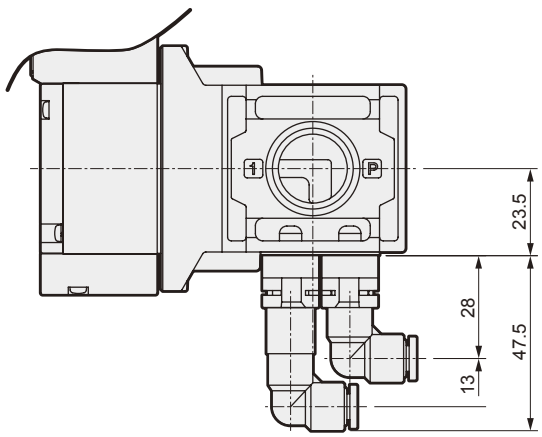


● DIN terminal box type (B)
Cartridge joint: Straight



Note: The DIN terminal box assembly is shipped facing inward.

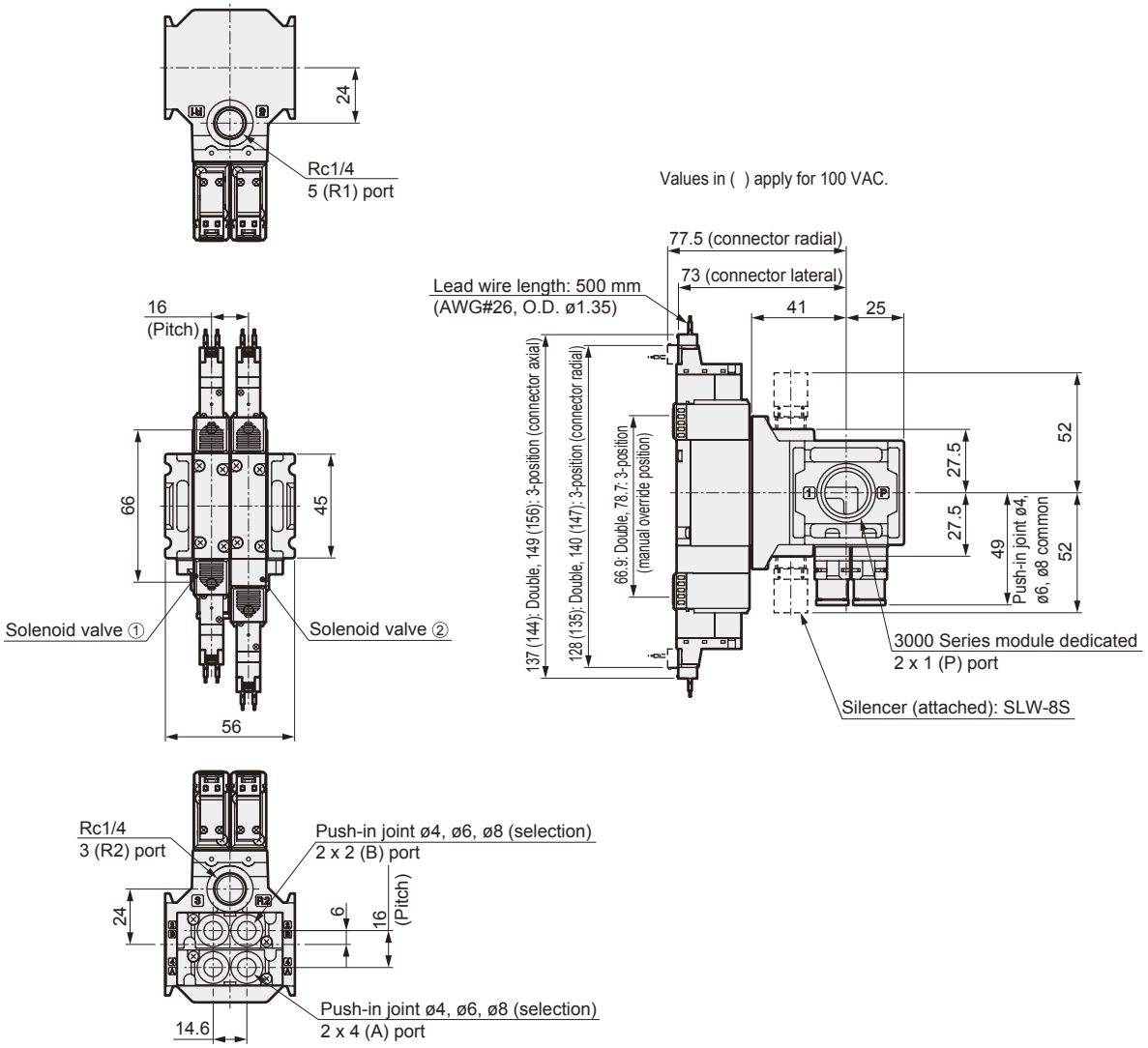
● ø6 push-in joint L type (rear side direction)



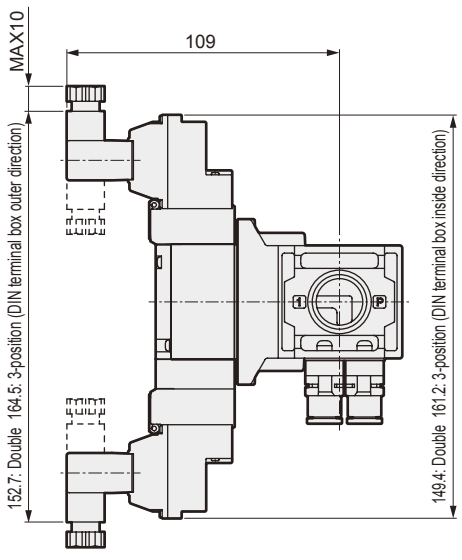
Dimensions

CXU30-4G2-$^{2}_{3}$ ^{4} ^{5}

● E-connector type (E)
Cartridge joint: Straight

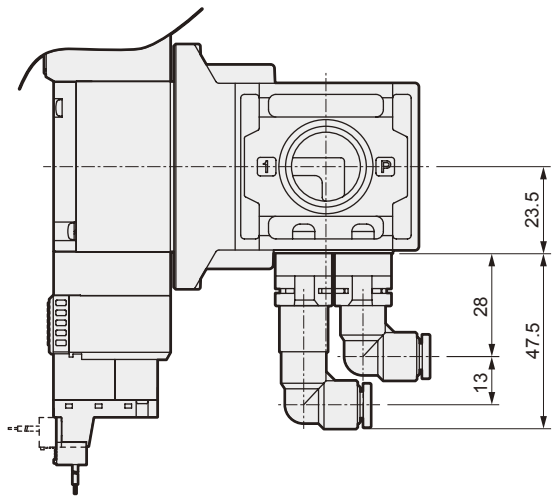


● DIN terminal box type (B)
Cartridge joint: Straight



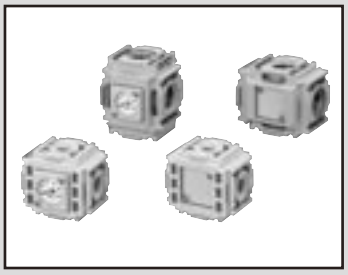
Note: The DIN terminal box assembly is shipped facing inward.

● ø6 push-in joint L type (rear side direction)



Solenoid valve model no. list

Option			Solenoid valve model no.
Solenoid position	Electric connection	Rated voltage	
0			4G2-MP
1	B	1	4GB219-00-BH-1
		3	4GB219-00-BH-3
	E20	1	4GB219-00-E20H-1
		3	4GB219-00-E20H-3
2	B	1	4GB229-00-BH-1
		3	4GB229-00-BH-3
	E20	1	4GB229-00-E20H-1
		3	4GB229-00-E20H-3
3	B	1	4GB239-00-B-1
		3	4GB239-00-B-3
	E20	1	4GB239-00-E20-1
		3	4GB239-00-E20-3
4	B	1	4GB249-00-BH-1
		3	4GB249-00-BH-3
	E20	1	4GB249-00-E20H-1
		3	4GB249-00-E20H-3
5	B	1	4GB259-00-B-1
		3	4GB259-00-B-3
	E20	1	4GB259-00-E20-1
		3	4GB259-00-E20-3



4 direction distributor

CXU10-D4/CXU30-D4 Series

The module's joint section is split in four directions.
Joint sections can be removed from one direction.
Pressure gauge mounting port provided

Screw-free open type

RoHS

IN side Gasket

Specifications

Descriptions	CXU10-D4	CXU30-D4
Working fluid	Compressed air	
Max. working pressure MPa	1.0	
Withstanding pressure MPa	1.5	
Branch joint number	4	
Port size	Without	Rc3/8, Rc1/2
Working temperature °C	5 to 60	
Product weight kg	0.1	0.3

How to use

How to order

CXU10-D4 - 00 - T6

JIS symbol

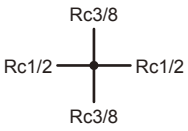
Ⓐ Option

Symbol	Descriptions
Ⓐ **Option**	
Blank	No pressure gauge port (blank plug attached)
T6	Pressure gauge port Rc1/8
T8	Pressure gauge port Rc1/4
G401	With pressure gauge (G401)
R1	Pressure switch PPD assembly with indicator

How to order

CXU30-D4 - 15 - T6

JIS symbol



Ⓐ Option

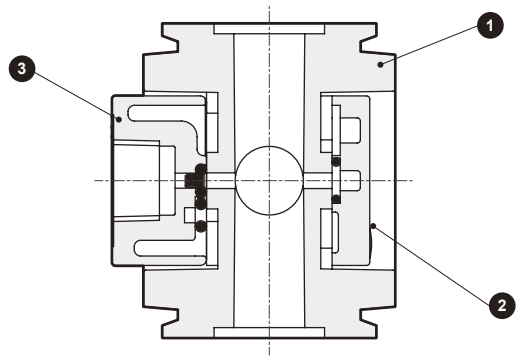
Symbol	Descriptions
Ⓐ **Option**	
Blank	No pressure gauge port (blank plug attached)
T6	Pressure gauge port Rc1/8
T8	Pressure gauge port Rc1/4
G401	With pressure gauge (G401)
R1	Pressure switch PPD assembly with indicator

⚠ Note on model no. selection

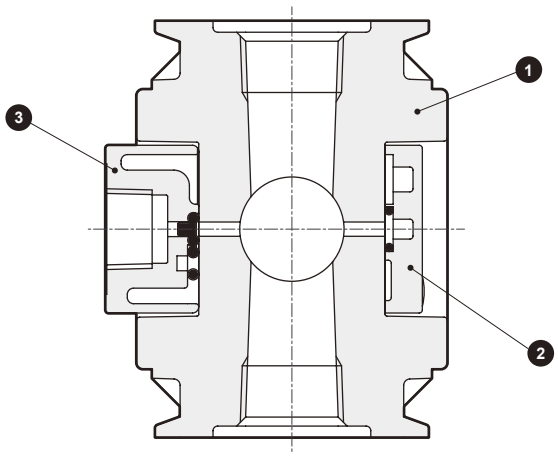
Note 1: The CXU30-D4 can be connected to the 2000/3000/4000 Series.
Note 2: There are four connections so the joiner set and gasket must be purchased and assembled separately.
Note 3: Joiner set (joiner, bolt, O ring) and 1 gasket are enclosed.

Internal structure and parts list

● CXU10-D4



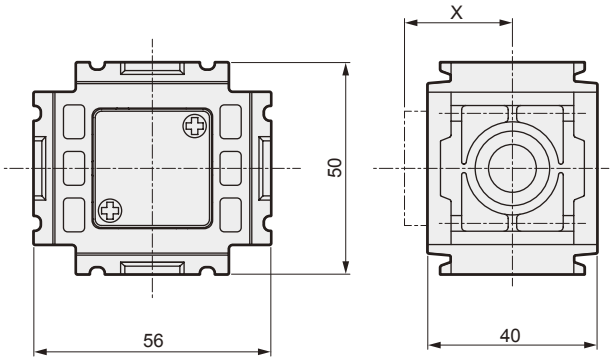
● CXU30-D4



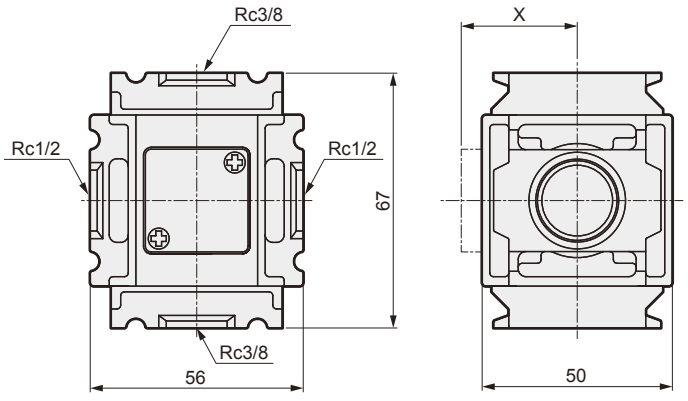
No.	Part name	Material	
		CXU10-D4	CXU30-D4
1	Body	Polyamide resin	Aluminum alloy die-casting
2	Blanking plug assembly	PBT resin, nitrile rubber, steel	
3	Gauge plug assembly	Polyamide resin, nitrile rubber, steel	
	Pressure gauge (G401)	PBT resin, nitryl rubber, polyacetal resin, polycarbonate resin, brass, steel	

Dimensions

● CXU10-D4



● CXU30-D4

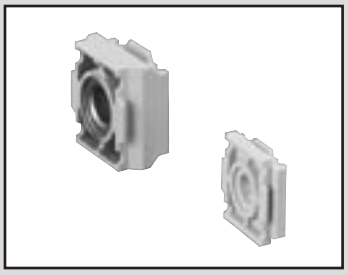


Optional dimensions table

Option	X
T6	25.5
T8	25.5
G401	25.5
R1	40

Optional dimensions table

Option	X
T6	30.5
T8	30.5
G401	30.5
R1	45



Turn adapter

CXU10-TA/CXU30-TA Series

Convert the module's joint section by 90°.
Easily change the module component's orientation.

Screw-free open type

RoHS

IN side Gasket

Specifications

Descriptions	CXU10-TA	CXU30-TA
Working fluid	Compressed air	
Max. working pressure MPa	1.0	
Withstanding pressure MPa	1.5	
Port size	-	
Working temperature °C	5 to 60	
Product weight kg	0.03	0.12

How to use

How to order

CXU10 - TA - 00

Ⓐ Model no.

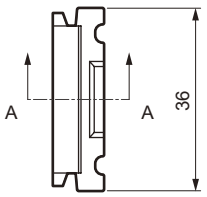
Symbol	Descriptions
Ⓐ **Model no.**	
CXU10	1000 Series
CXU30	3000 Series

⚠ Note on model no. selection

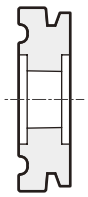
Note 1: The CXU30-TA can be connected to the 2000/3000/4000 Series.
Note 2: Joiner set (joiner, bolt, O ring) and 1 gasket are enclosed.

Internal structure, parts list and dimensions

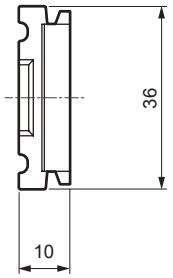
● CXU10-TA



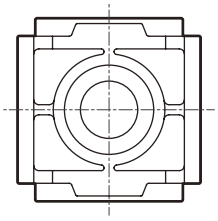
Top



Cross section A-A

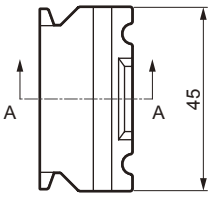


Front

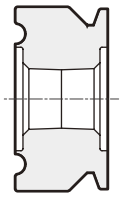


Side surface

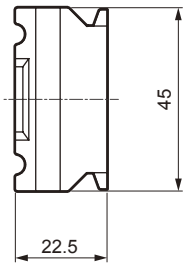
● CXU30-TA



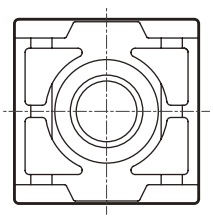
Top



Cross section A-A

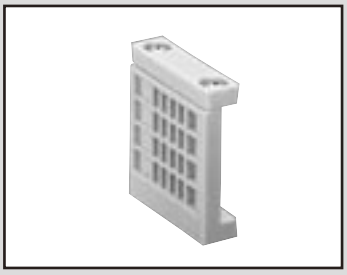


Front



Side surface

No.	Part name	Material	
		CXU10-TA	CXU30-TA
1	Body	Polyamide resin	Aluminum alloy die-casting



Masking adapter

CXU10-MA Series

Masking for the 1000 Series joint section

RoHS

Specifications

Descriptions	CXU10-MA
Working fluid	Compressed air
Max. working pressure MPa	1.0
Withstanding pressure MPa	1.5
Port size	-
Working temperature °C	5 to 60
Product weight kg	0.02

How to use

How to order

CXU10-MA - 00 - B

Ⓐ Option

Symbol	Descriptions
Ⓐ Option	
Blank	Joiner
B	T type bracket (B110-W)
BH	T type bracket (B110-H-W)

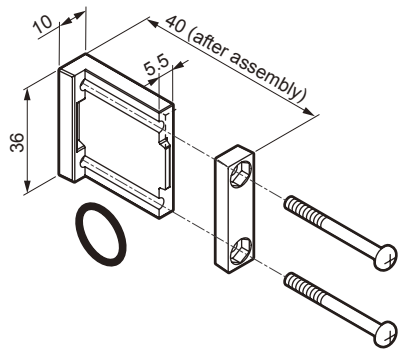
⚠ Note on model no. selection

Note 1: One O ring is enclosed.
Note 2: When the T-type bracket is selected, a hexagon nut for fixing is mounted on it.

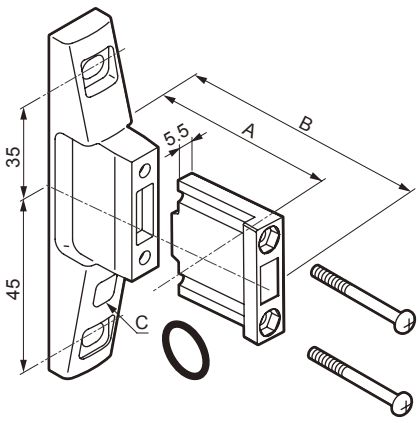
Internal structure, parts list and dimensions

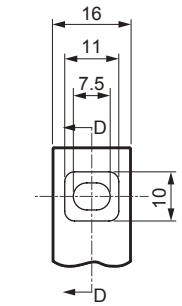
● CXU10-MA

Option: Blank

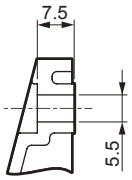


Option: B, BH





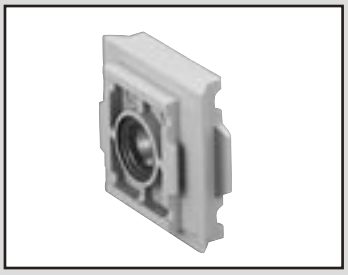
Bracket section details



Cross section DD

Optional dimensions table

Option	A	B	C
B	40	60	-
BH	45	65	I.D. "H"



Module transform adapter

CXU13-CA Series

Connect the 1000 Series with the 2000, 3000, and 4000 Series.

Screw-free open type

RoHS

IN side Gasket

Specifications

Descriptions	CXU13-CA
Working fluid	Compressed air
Max. working pressure MPa	1.0
Withstanding pressure MPa	1.5
Port size	-
Working temperature °C	5 to 60
Product weight kg	0.04

How to use

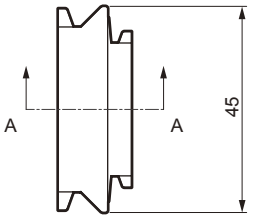
How to order

CXU13-CA - 00

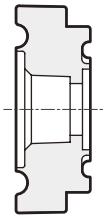
Note: The CXU13-CA can be connected to the 2000/3000/4000 Series.
One C1000-J100 and C4000-J400 joiner set and one gasket are enclosed.

Internal structure, parts list and dimensions

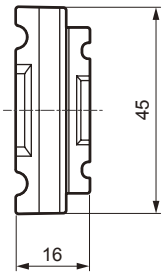
● CXU13-CA



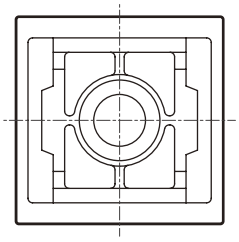
Top



Cross section A-A

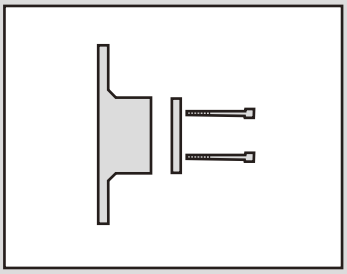


Front



Side surface

No.	Part name	Material
1	Body	Aluminum alloy die-casting



Bracket / joiner

B-W/J-W Series

O ring/gasket/pipe plug

O-RING/GASKET/CXU-PP Series

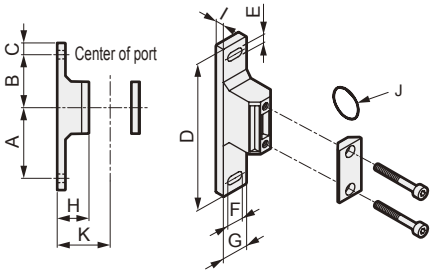
RoHS

Dimensions and examples of use

T type bracket set

● Model no.: B110-W/B110-H-W/B310-W/B410-W

● Example

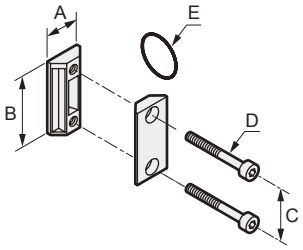


Note: 1000 Series can be the same hight as 3000 Series with using B110-H-W.

Model no.	Applicable model	A	B	C	D	E	F	G	H	I	J	K
B110-W	1000 Series	45	35	10	100	5.5	2	16	25	7	JAS0-2013	40
B110-H-W	1000 Series	45	35	10	100	5.5	2	16	25	7	JAS0-2013	45
B310-W	2000 Series	60	45	10	125	7	7	22	27	7	JISB2401-P21	45
	3000 Series											
B410-W	4000 Series	60	45	10	125	7	7	22	37	7	JISB2401-P21	55

Joiner set

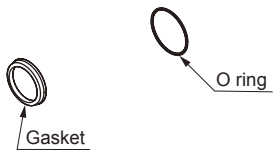
● Model no.: C1000-J100-W
C4000-J400-W



● Example

Model no.	Applicable model	A	B	C	D	E	
C1000-J100-W	1000 Series	10	36	26	M3.5	JAS0-2013	
C4000-J400-W	2000 Series 3000 Series 4000 Series	21	44	32	M5	JIS B2401-P21	

O ring, gasket

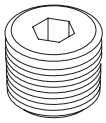


Material: NBR

Model no.	Applicable model	Standards
C1000-ORING	1000 Series	JASO-2013
C1000-GASKET		CKD dedicated
C4000-ORING	2000 Series 3000 Series	JIS B2401-P21
C4000-GASKET	4000 Series	CKD dedicated

These parts are sold in 5 pcs./set.

Pipe plug



Material: Steel

Model no.	Screw standards
CXU-PP-6	R1/8
CXU-PP-8	R1/4
CXU-PP-10	R3/8
CXU-PP-15	R1/2

Note: The pipe plug is sold in 5 pcs./set.

Custom unit

Model no. for custom combination

Overview

Complicated pneumatic components can be constructed by purchasing customized units. This eliminates bothersome piping, and enables immediate use.

Features

① Versatile combinations

Versatile layouts reduce the labor hours required for design.

② Simple ordering

This unit can be purchased with a single form, making order and delivery control easier.

③ Fewer work labor hours

The FR component and solenoid valve are connected as modules, eliminating work such as piping.

④ Space saving

Appearance is neat with piping and joints eliminated.
This compact design fits required space.

⑤ Front access

Components can be attached and expanded from the front. Even maintenance is easier.

Explanation of icon

① Model dedicated

Custom dedicated

Models containing -UN are dedicated for customized combinations.
These cannot be ordered as separate parts.

② Face to face dimensions

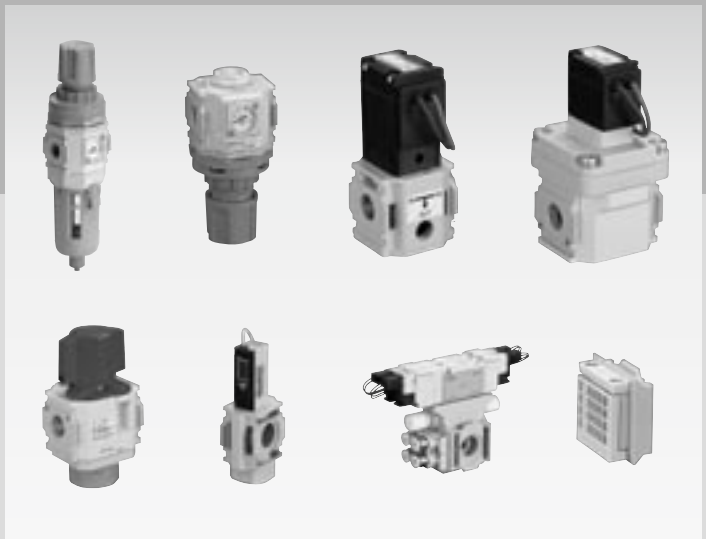
Spacing 56 mm

Face to face dimensions are shown in the icon.

③ Use at terminals not possible

Screw-free open type

No connection screw is provided, so a masking adapter or piping adapter is required for use at the terminal.



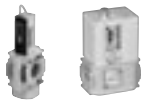
CONTENTS

<F.R.L. component, solenoid valves>
- Filter, regulator
- Reverse filter, regulator
- Air filter
- Oil mist filter
- High performance oil mist filter
- Regulator
- Reverse regulator
- Lubricator
- Mechanical pressure switch
- Shut-off valve
- 2 port direct acting solenoid valve
- 2 port pilot operated solenoid valve
- 5 port pilot operated valve

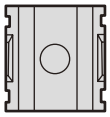
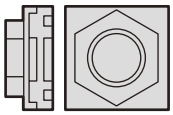
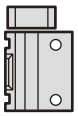
<Distributor, adapter>
- Distributor
- Piping adapter
- L type piping adapter
- Masking adapter

<Joiner and bracket>
- Joiner
- T type bracket

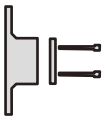
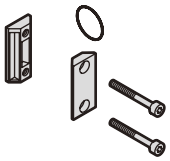
<F.R.L. component, solenoid valves>

Series	Model no.	Port size (OUT)						Page
		ø4	ø6	ø8	1/4	3/8	1/2	
● Filter, regulator 	W3000				●	●		44
	W4000				●	●	●	
● Reverse filter, regulator 	W3100				●	●		46
	W4100				●	●	●	
● Air filter 	F3000				●	●		48
	F4000				●	●	●	
● Oil mist filter 	M3000				●	●		49
	M4000				●	●	●	
● High performance oil mist filter 	MX3000				●	●		50
	MX4000				●	●	●	
● Regulator 	R2000				●	●		52
	R3000				●	●		
	R4000				●	●	●	
● Reverse regulator 	R2100				●	●		54
	R3100				●	●		
	R4100				●	●	●	
● Lubricator 	L3000				●	●		56
	L4000				●	●	●	
● Mechanical pressure switch 	P4000				●	●	●	57
	P4100-UN				●	●	●	58
● Shut-off valve 	V3000				●	●	●	59
	V3010				●	●	●	60
● 2 port direct acting solenoid valve 	CXU30-FAB4U-UN				●			61
● 2 port pilot operated solenoid valve 	CXU30-FAD-UN							62
● 5 port pilot operated valve 	CXU30-4G2-UN	●	●	●				63

<Distributor, adapter>

Series	Model no.	Port size (OUT)					Page
		ø6	ø8	1/4	3/8	1/2	
● Distributor 	D401-UN			●	●	●	66
	D300			●	●		
● Piping adapter 	A400-UN			●	●	●	67
● L type piping adapter 	A401-UN			●	●	●	67
● Masking adapter 	CXU30-MA-UN						68

<Joiner and bracket>

Series	Model no.	Height to pipe center		Page
		45	55	
● T type bracket set  Note: T-bracket sets with different heights cannot be combined.	B310-UN	●		69
	B410-UN		●	
● Joiner 	C4000-J400-UN			69

Example of CXU30 Series custom combination specifications

3000 Series base

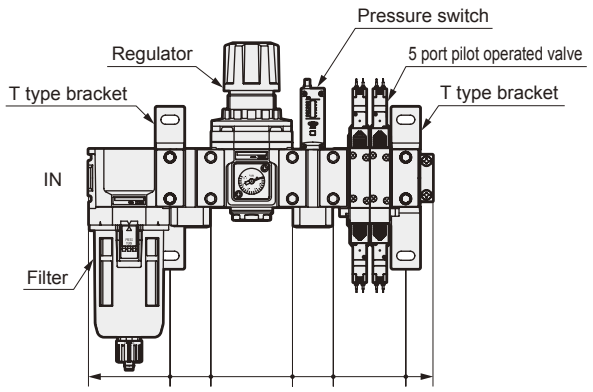
Overview

Customized combinations are customer-oriented combinations that meet user needs for diverse combinations. Place orders by filling out the specifications below.
More solenoid valve types, etc., are available than the conventional customized combinations.

Preparing customized combination specifications

1. Indicate the full model in the model field for the required model.
2. Indicate the installation position of the indicated model with a "◯". Indicate "UP" or "DOWN" for the orientation.
3. Indicate a "◯" in the bracket and joiner fields.

● See individual pages for component ordering and details, etc.
● 2000, 3000, and 4000 Series combinations are available. Use 4000 Series base specifications in this case.



Dimensions for totaling face to face dimensions of each component can be calculated.
The bracket mounting position can also be calculated.

CXU30 Series custom combination specifications

3000 Series base

Contact
Slip No.
Quantity Set
Request date
Issue
Your company name
Contact
Order No.

● Model no.
CXU30 — UN — ● — ▭

Leave blank.
CKD control No.

Flow direction	
Blank	Left → right
X1	Right → left

Designate the direction of compressed air flow as seen from the front.
Leave blank when no symbol is selected.

For products with *, indicate up/down.
Indicate up/down for the regulator's knob direction, and the port up/down direction for other components.

Indicate the installation position in order from the left as seen from the front.

Part name	The face to face dimensions	Model no.	Direction	Installation position										Technical use column
Filter regulator	63	W3000-												
		W3100-												
Air filter	63	F3000-8-W		○										
Oil mist filter	63	M3000-												
High performance oil mist filter	63	MX3000-												
Regulator *	50	R2000-												
		R2100-												
	63	R3000-8-W	Up			○								
		R3100-												
Lubricator	63	L3000-												
Pressure switch	80	P4000-												
	31.5	P4100-UN-8-W		*2			○						*2	
Shut-off valve	63	V3000-												
		V3010-												
2 port direct acting solenoid valve	50	CXU30-FAB4U-UN-8L-		*2									*2	
2 port pilot operated solenoid valve	63	CXU30-FAD-UN-00-		*2									*2	
5 port pilot operated valve	56	CXU30-4G2-UN-33-C6-E20-3		*2				○					*2	
Distributor *	31.5	D401-UN-00-8-W	Down	*2	○								*2	
Distributor	42	D300-												
Piping adapter	20	A400-UN-												
L piping adapter *	31.5	A401-UN-												
Masking adapter	21.5	CXU30-MA-UN-00							○					
T type bracket set *1		B310-UN-W			○				○					
Joiner set		C4000-J400-UN-W				○	○	○						

Use the 5 port pilot operated valve with three or fewer stations.

One piping adapter is enclosed. 2pcs. set is not available, so indicate required places.

Use this field when using products with different options and port sizes, etc.

Use the T-bracket at a set spacing. Single support joiners can be used for three or fewer stations, and double support joiners can be used for five or fewer stations.

*1: The distance from the pipe center to the mounting surface is 45 mm.
*When using the *2 products at the end of the combination end, a piping adapter (A400-UN, A401-UN) or masking adapter (CXU30-MA) must be used at the end.
(The horizontal direction port does not have threads.)

Technology comment column	

Approval	Inspector	Contact

Leave blank.
CKD approval stamp field

CXU30 Series custom combination specifications

3000 Series base

Contact	Quantity Set	Issue	
Slip No.	Request date	Your company name	
		Contact	
		Order No.	

● Model no.

CXU30 — UN — ( ) — ( )

Flow direction	
Blank	Left → right
X1	Right → left

For products with *, indicate up/down.
Indicate up/down for the regulator's knob direction, and the port up/down direction for other components.

Indicate the installation position in order from the left as seen from the front.

Part name	The face to face dimensions	Model no.	Direction	Installation position										Technical use column
Filter regulator	63	W3000-												
		W3100-												
Air filter	63	F3000-												
Oil mist filter	63	M3000-												
High performance oil mist filter	63	MX3000-												
Regulator *	50	R2000-												
		R2100-												
	63	R3000-												
		R3100-												
Lubricator	63	L3000-												
Pressure switch	80	P4000-												
	31.5	P4100-UN-		*2									*2	
Shut-off valve	63	V3000-												
		V3010-												
2 port direct acting solenoid valve	50	CXU30-FAB4U-UN-8L-		*2									*2	
2 port pilot operated solenoid valve	63	CXU30-FAD-UN-00-		*2									*2	
5 port pilot operated valve	56	CXU30-4G2-UN-		*2									*2	
Distributor *	31.5	D401-UN-00-		*2									*2	
Distributor	42	D300-												
Piping adapter	20	A400-UN-												
L piping adapter *	31.5	A401-UN-												
Masking adapter	21.5	CXU30-MA-UN-00												

T type bracket set	*1	B310-UN-W												
Joiner set		C4000-J400-UN-W												

*1: The distance from the pipe center to the mounting surface is 45 mm.
*When using the *2 products at the end of the combination end, a piping adapter (A400-UN, A401-UN) or masking adapter (CXU30-MA) must be used at the end.
(The horizontal direction port does not have threads.)

Technology comment column	

Approval	Inspector	Contact

Example of CXU30 Series custom combination specifications

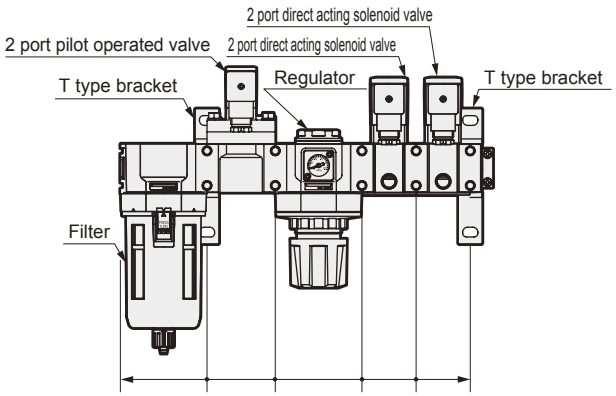
4000 Series base

Overview

Customized combinations are customer-oriented combinations that meet user needs for diverse combinations. Place orders by filling out the specifications below.
More solenoid valve types, etc., are available than the conventional customized combinations.

Preparing customized combination specifications

① Indicate the full model in the model field for the required model.
② Indicate the installation position of the indicated model with a "◯". Indicate "UP" or "DOWN" for the orientation.
③ Indicate a "◯" in the bracket and joiner fields.
● See individual pages for component ordering and details, etc.
● 2000, 3000, and 4000 Series combinations are available. Use 4000 Series base specifications in this case.



Dimensions for totaling face to face dimensions of each component can be calculated.
The bracket mounting position can also be calculated.

CXU30 Series custom combination specifications

4000 Series base

Contact
Slip No.
Quantity Set
Request date
Issue
Your company name
Contact
Order No.

● Model no.
CXU30 ─ UN ─ ◯ ─ ●

Leave blank.
CKD control No.

Flow direction	
Blank	Left → right
X1	Right → left

Designate the direction of compressed air flow as seen from the front.
Leave blank when no symbol is selected.

For products with *, indicate up/down.
Indicate up/down for the regulator's knob direction, and the port up/down direction for other components.

Indicate the installation position in order from the left as seen from the front.

Part name	The face to face dimensions	Model no.	Direction	Installation position										Technical use column
Filter regulator	63	W3000-												
		W3100-												
	80	W4000-												
		W4100-												
Air filter	63	F3000-												
	80	F4000-15-W		◯										
Oil mist filter	63	M3000-												
	80	M4000-												
High performance oil mist filter	63	MX3000-												
	80	MX4000-												
Regulator *	63	R3000-												
		R3100-												
	80	R4000-15-W	Down			◯								
		R4100-												
Lubricator	63	L3000-												
	80	L4000-												
Pressure switch	80	P4000-												
	31.5	P4100-UN-		*2									*2	
Shut-off valve	63	V3000-												
		V3010-												
3 port direct acting solenoid valve	50	CXU30-FAB4U-UN-8L-2HS-3		*2			◯	◯					*2	
2 port pilot operated solenoid valve	63	CXU30-FAD-UN-00-2HS-3		*2	◯								*2	
5 port pilot operated valve	56	CXU30-4G2-UN-		*2									*2	
Distributor	31.5	D401-UN-00-		*2									*2	
Distributor	42	D300-												
Piping adapter	*3	A400-UN-												
L piping adapter *	31.5	A401-UN-												
Masking adapter	21.5	CXU30-MA-UN-00							◯					
T type bracket set	*1	B410-UN-W		◯				◯						
Joiner set		C4000-J400-UN-W			◯	◯	◯							

Use the 5 port pilot operated valve with three or fewer stations.

One piping adapter is enclosed. 2pcs. set is not available, so indicate required places.

Use this field when using products with different options and port sizes, etc.

Use the T-bracket at a set spacing. Single support joiners can be used for three or fewer stations, and double support joiners can be used for five or fewer stations.

*1: The distance from the pipe center to the mounting surface is 55 mm.
*When using the *2 products at the end of the combination end, a piping adapter (A400-UN, A401-UN) or masking adapter (CXU30-MA) must be used at the end. (The horizontal direction port does not have threads.)
*3: For port size 8, 10, 15 is 20 mm and for 20 is 25 mm.

Technology comment column	

Approval	Inspector	Contact

Leave blank.
CKD approval stamp field

CXU30 Series custom combination specifications

4000 Series base

Contact	Quantity Set	Issue	
Slip No.	Request date	Your company name	
		Contact	
		Order No.	

● Model no.

CXU30 — UN — ( ) — ( )

Flow direction	
Blank	Left → right
X1	Right → left

For products with *, indicate up/down.
Indicate up/down for the regulator's knob direction, and the port up/down direction for other components.

Indicate the installation position in order from the left as seen from the front.

Part name	The face to face dimensions	Model no.	Direction	Installation position										Technical use column
Filter regulator	63	W3000-												
		W3100-												
	80	W4000-												
		W4100-												
Air filter	63	F3000-												
	80	F4000-												
Oil mist filter	63	M3000-												
	80	M4000-												
High performance oil mist filter	63	MX3000-												
	80	MX4000-												
Regulator *	63	R3000-												
		R3100-												
	80	R4000-												
		R4100-												
Lubricator	63	L3000-												
	80	L4000-												
Pressure switch	80	P4000-												
	31.5	P4100-UN-		*2									*2	
Shut-off valve	63	V3000-												
		V3010-												
2 port direct acting solenoid valve	50	CXU30-FAB4U-UN-8L-		*2									*2	
2 port pilot operated solenoid valve	63	CXU30-FAD-UN-00-		*2									*2	
5 port pilot operated valve	56	CXU30-4G2-UN-		*2									*2	
Distributor *	31.5	D401-UN-00-		*2									*2	
Distributor	42	D300-												
Piping adapter	*3	A400-UN-												
L piping adapter *	31.5	A401-UN-												
Masking adapter	21.5	CXU30-MA-UN-00												

T type bracket set	*1	B410-UN-W												
Joiner set		C4000-J400-UN-W												

*1: The distance from the pipe center to the mounting surface is 55 mm.
*When using the *2 products at the end of the combination end, a piping adapter (A400-UN, A401-UN) or masking adapter (CXU30-MA) must be used at the end. (The horizontal direction port does not have threads.)
*3: For port size 8, 10, 15 is 20 mm and for 20 is 25 mm.

Technology comment column	

Approval	Inspector	Contact

Filter/regulator Standard white Series

W3000/W4000-W Series

New series of 5 µm elements for dust removal, and 0.3 µm elements for tar removal

Port size: 1/4 to 1/2

JIS symbol 

W3000 Spacing 63 mm

W4000 Spacing 80 mm

RoHS CAD

How to order

W3000 - 8 - W - Z - (blank)

- W3000 — Ⓐ Model no.
- 8 — Ⓑ Port size
- W — (White type)
- Z — Ⓒ Option
- (blank) — Ⓓ Attachment

Symbol		Descriptions	Ⓐ Model no. W3000	Ⓐ Model no. W4000
Ⓑ Port size				
8		Rc1/4	●	●
10		Rc3/8	●	●
15		Rc1/2		●
Ⓒ Option			**Note 2**	
Drainage Note 3	**Blank**	With manual drain cock	●	●
	F	Automatic drain w/ manual override (N.O. type: Exhaust w/o pressurized)	●	●
	F1	Automatic drain w/ manual override (N.C. type: No exhaust w/o pressurized)	●	●
Bowl material	**Blank**	Polycarbonate bowl	●	●
	Z	Nylon bowl	●	●
	M	Metal bowl	●	●
	M1	Metal bowl, manual drain cock with manual override Note 4	●	●
Element	**Blank**	5 µm	●	●
	Y	0.3 µm (submicron) Note 5	●	●
Pressure range	**Blank**	0.05 to 0.85 MPa	●	●
	L	0.05 to 0.35 MPa	●	●
Relief	**Blank**	With relief mechanism	●	●
	N	Nonrelief type	●	●
Pressure gauge	**Blank**	With standard pressure gauge (G401)	●	●
	T	No pressure gauge (gauge port assembled sealed)	●	●
	T8	Port with pressure gauge is assembled ventilated.	●	●
	T6 Note 6	Option for digital pressure sensor PPX attachment	●	●
	R1 Note 1	Pressure switch with indicator PPD assembly	●	●
Flow direction	**Blank**	Standard flow (left → right)	●	●
	X1	Reverse flow (right → left)	●	●
Ⓓ Attachment				
Blank		Not attached	●	●
G49P		G49D-8-P10 (L: G49D-8-P04)	●	●
G59P		G59D-8-P10 (L: G59D-8-P04)	●	●
G40P		G40D-8-P10 (L: G40D-8-P04)	●	●
G50P		G50D-8-P10 (L: G50D-8-P04)	●	●
G41P		G41D-8-P10 (L: G41D-8-P04)	●	●
G52P		G52D-8-P10 (L: G52D-8-P10)	●	●
R2 Note 6		Digital pressure sensor: PPX-R10N-6M	●	●

⚠ Note on model no. selection

Note 1: The pressure switch with R1 indicator is black.

Note 2: Select options per drainage, bowl material, element, differential pressure detection, and regulator sections.
When selecting options for several items, list options in order from the top.

Note 3: See the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for automatic drain working conditions.

Note 4: A manual drain cock is provided on all drain discharges.

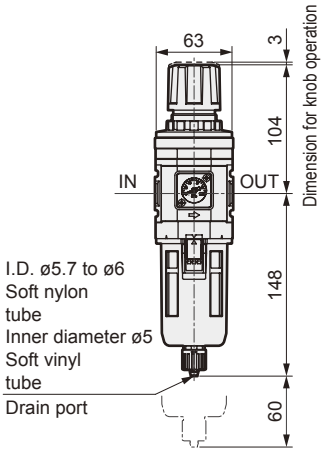
Note 5: See the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for the maximum processing flow rate for option "Y".

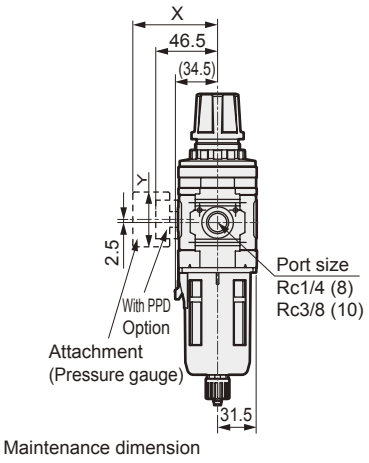
Note 6: When "T6" is selected, only "no symbol" or "R2" can be selected for "D" Attachment (enclosed).
The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.

See the F.R.L. Unit in the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for details on the specifications and internal structure drawings, etc.

Dimensions

● W3000



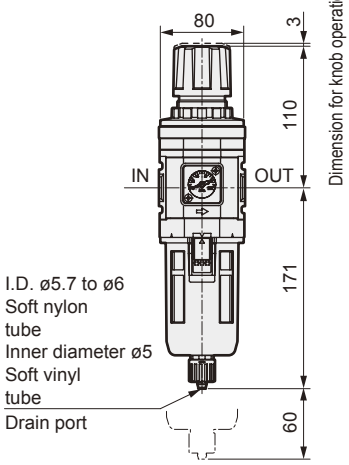


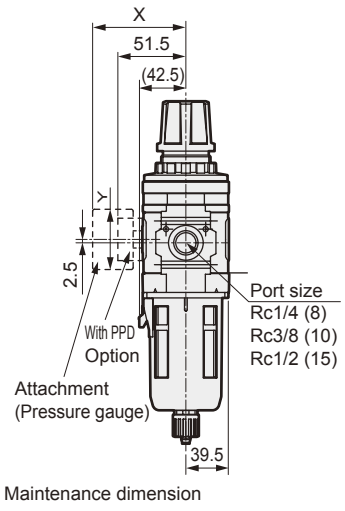
● With the plastic bowl, the same dimensions apply for the type with manual cock or automatic drain.

Table of optional dimensions for type with pressure gauge

Attached pressure gauge	X	Y
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(75)	ø52.5
R2	(69.5)	-

● W4000





● With the plastic bowl, the same dimensions apply for the type with manual cock or automatic drain.

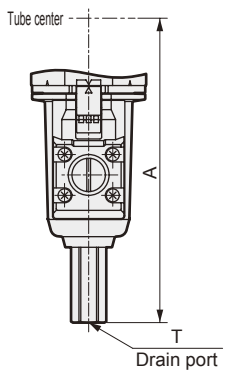
Table of optional dimensions for type with pressure gauge

Attached pressure gauge	X	Y
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(80)	ø52.5
R2	(75)	-

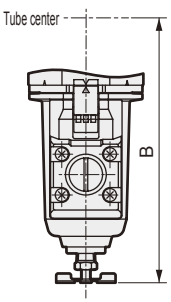
Optional dimensions

● Metal bowl (option)

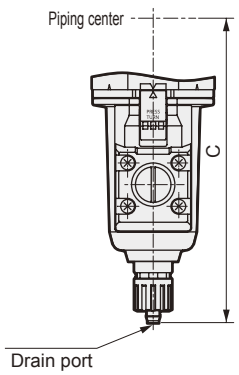
With automatic drain
(FM, F1M)



Automatic drain cock
(M)



Standard manual drain cock
(M1)



Dimensions table

Model no.	F1M	M	M1
	A	B	C
W3000	163.5	143.5	154
W4000	187	166.5	177

Reverse filter/regulator Standard white Series

W3100/W4100-W Series

New series of 5 µm elements for dust removal, and 0.3 µm elements for tar removal with built-in reverse flow Port size: 1/4 to 1/2

JIS symbol 

RoHS CAD

W3100 Spacing 63 mm

W4100 Spacing 80 mm

How to order

W3100 - 8 - W - Z - ( )

(White type)

Ⓐ Model no. Ⓑ Port size Ⓒ Option Ⓓ Attachment

Symbol		Descriptions	Ⓐ Model no. W3100	Ⓐ Model no. W4100
Ⓑ Port size				
8		Rc1/4	●	●
10		Rc3/8	●	●
15		Rc1/2		●
Ⓒ Option		**Note 2, Note 3**		
Drainage Note 4	**Blank**	With manual drain cock	●	●
	F	Automatic drain w/ manual override (N.O. type: Exhaust w/o pressurized)	●	●
	F1	Automatic drain w/ manual override (N.C. type: No exhaust w/o pressurized)	●	●
Bowl material	**Blank**	Polycarbonate bowl	●	●
	Z	Nylon bowl	●	●
	M	Metal bowl	●	●
	M1	Metal bowl, with manual drain cock Note 5	●	●
Element	**Blank**	5 µm	●	●
	Y	0.3 µm (submicron) Note 6	●	●
Pressure range	**Blank**	0.05 to 0.85 MPa	●	●
	L	0.05 to 0.35 MPa	●	●
Relief	**Blank**	With relief mechanism	●	●
	N	Nonrelief type	●	●
Pressure gauge	**Blank**	With standard pressure gauge (G401)	●	●
	T	No pressure gauge (gauge port assembled sealed)	●	●
	T8	Port with pressure gauge is assembled ventilated.	●	●
	T6 Note 7	Option for digital pressure sensor PPX attachment	●	●
	R1 Note 1	Pressure switch with indicator PPD assembly	●	●
Flow direction	**Blank**	Standard flow (left → right)	●	●
	X1	Reverse flow (right → left)	●	●
Ⓓ Attachment				
Blank		Not attached	●	●
G49P		G49D-8-P10 (L: G49D-8-P04)	●	●
G59P		G59D-8-P10 (L: G59D-8-P04)	●	●
G40P		G40D-8-P10 (L: G40D-8-P04)	●	●
G50P		G50D-8-P10 (L: G50D-8-P04)	●	●
G41P		G41D-8-P10 (L: G41D-8-P04)	●	●
G52P		G52D-8-P10 (L: G52D-8-P10)	●	●
R2 Note 7		Digital pressure sensor: PPX-R10N-6M	●	●

⚠ Note on model no. selection

Note 1: The pressure switch with R1 indicator is black.

Note 2: Select options per drainage, bowl material, element, and regulator sections.
When selecting options for several items, list options in order from the top.

Note 3: The check valve and pressure gauge positions cannot be changed.
If IN and OUT must be reversed, indicate "X1" at the end of the option field.

Note 4: See the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for automatic drain working conditions.

Note 5: A manual drain cock is provided on all drain discharges.

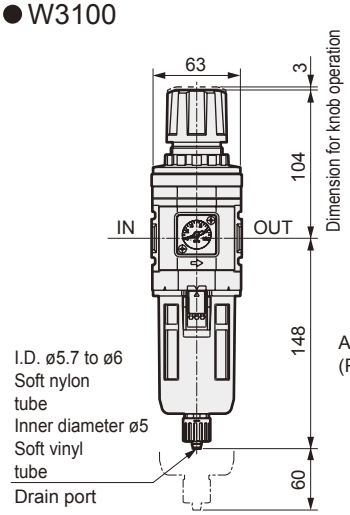
Note 6: See the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for the maximum processing flow rate for option "Y".

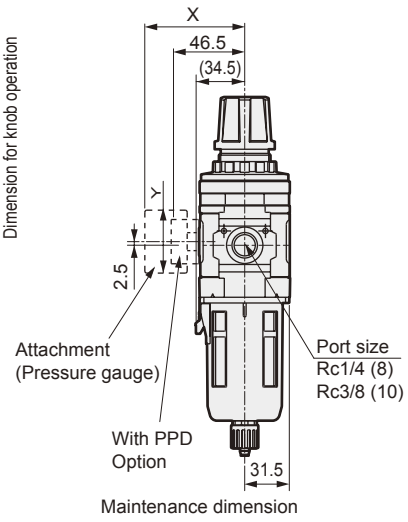
Note 7: When "T6" is selected, only "no symbol" or "R2" can be selected for pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.

See the F.R.L. Unit in the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for details on the specifications and internal structure drawings, etc.

Dimensions

● W3100



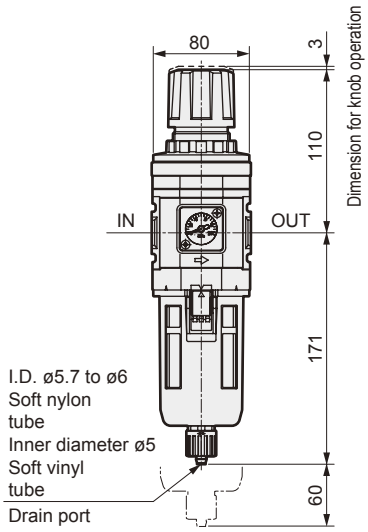


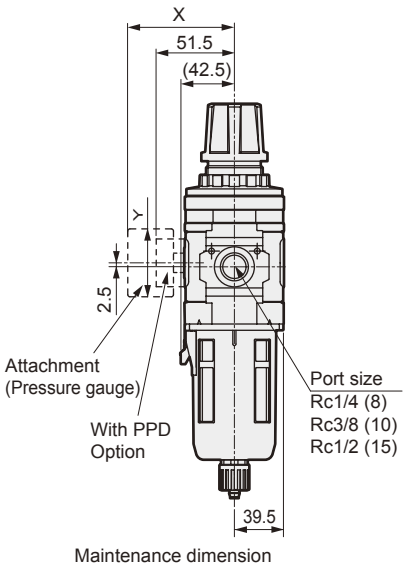
● With the plastic bowl, the same dimensions apply for the type with manual cock or automatic drain.

Table of optional dimensions for type with pressure gauge

Attached pressure gauge	X	Y
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(75)	ø52.5
R2	(69.5)	-

● W4100





● With the plastic bowl, the same dimensions apply for the type with manual cock or automatic drain.

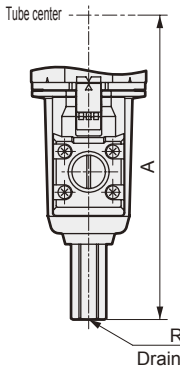
Table of optional dimensions for type with pressure gauge

Attached pressure gauge	X	Y
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(80)	ø52.5
R2	(75)	-

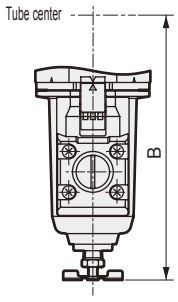
Optional dimensions

● Metal bowl (option)

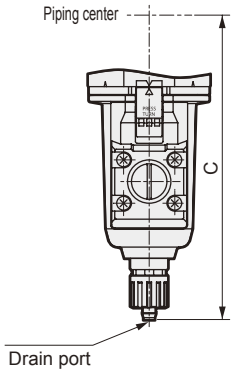
With automatic drain
(FM, F1M)



Automatic drain cock
(M)



Standard manual drain cock
(M1)



Dimensions table

Model no.	F1M	M	M1
	A	B	C
W3100	163.5	143.5	154
W4000	187	166.5	177

Air filter Standard white Series

F3000/F4000-W Series

New series of 5 µm elements for dust and tar removal, and 0.3 µm elements for tar removal.
Port size: 1/4 to 1/2

JIS symbol 

F3000 Spacing 63 mm

F4000 Spacing 80 mm

RoHS CAD

How to order

F3000 - 8 - W - Z

(White type)

Ⓐ Model no. Ⓑ Port size Ⓒ Option

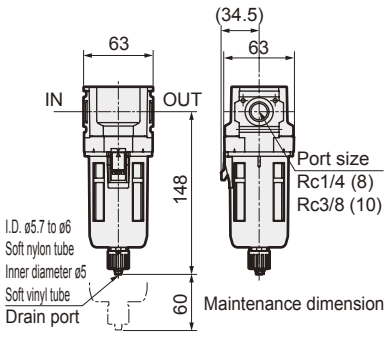
Symbol	Descriptions	Ⓐ Model no. F3000	Ⓐ Model no. F4000
Ⓑ Port size			
8	Rc1/4	●	●
10	Rc3/8	●	●
15	Rc1/2		●
Ⓒ Option			**Note 1**
Drainage Note 2 **Blank**	With manual drain cock	●	●
Drainage Note 2 **F**	Automatic drain w/ manual override (N.O. type: Exhaust w/o pressurized)	●	●
Drainage Note 2 **F1**	Automatic drain w/ manual override (N.C. type: No exhaust w/o pressurized)	●	●
Bowl material **Blank**	Polycarbonate bowl	●	●
Bowl material **Z**	Nylon bowl	●	●
Bowl material **M**	Metal bowl	●	●
Bowl material **M1**	Metal bowl with manual drain cock Note 3	●	●
Element **Blank**	5 µm	●	●
Element **Y**	0.3 µm (submicron)	●	●
Flow direction **Blank**	Standard flow (left → right)	●	●
Flow direction **X1**	Reverse flow (right → left)	●	●

⚠ Note on model no. selection

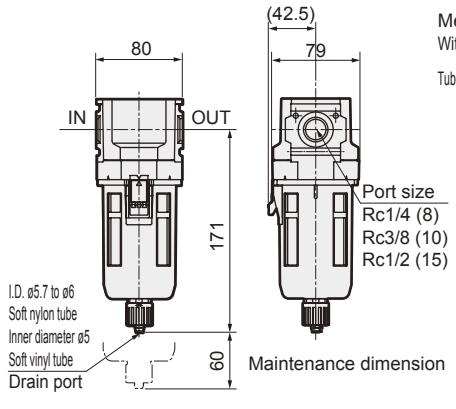
Note 1: Select options for the drain discharge, bowl material, element, and flow direction.
When selecting options for several items, list options in order from the top.
Note 2: See the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for automatic drain working conditions.
Note 3: A manual drain cock is provided on all drain discharges.

Dimensions

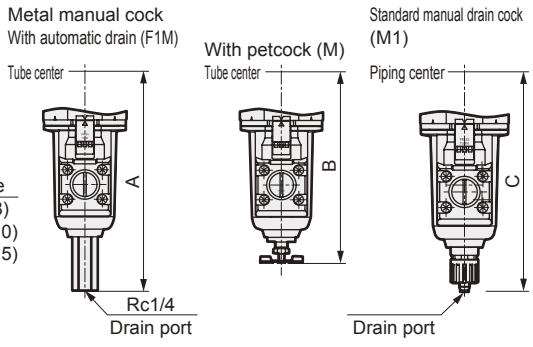
● F3000



● F4000



● Metal bowl (option)



● With the plastic bowl, the same dimensions apply for the type with manual cock or automatic drain.

● With the plastic bowl, the same dimensions apply for the type with manual cock or automatic drain.

Dimensions table

Model no.	F1M	M	M1
	A	B	C
W3000	164	143.5	154
W4000	187	166.5	177

See the F.R.L. Unit in the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for specifications and internal structure.

Oil mist filter Standard white Series

M3000/M4000-W Series

Perfect for circuits suceptible to oil, such as measuring and instrumentation circuits.

Port size: 1/4 to 1/2

JIS symbol 

M3000 Spacing 63 mm

M4000 Spacing 80 mm

RoHS CAD

How to order

M3000 - 8 - W - S

(White type)

Ⓐ Model no. Ⓑ Port size Ⓒ Option

Symbol	Descriptions	Ⓐ Model no. M3000	Ⓐ Model no. M4000
Ⓑ Port size			
8	Rc1/4	●	●
10	Rc3/8	●	●
15	Rc1/2		●

Ⓒ Option			Note 1	
Drain emission Note 2, Note 3	**Blank**	With manual drain cock	●	●
	F1	Automatic drain w/ manual override (N.C. type: No exhaust w/o pressurized)	●	●
Bowl material	**Blank**	Polycarbonate bowl	●	●
	Z	Nylon bowl	●	●
	M	Metal bowl	●	●
	M1	Metal bowl, manual drain cock with manual override Note 4	●	●
Mantle (element)	**Blank**	M type (nominal 0.01 μm; remaining oil 0.01 mg/m^3 or less)	●	●
	S	S type (0.3 μm; remaining oil 0.5 mg/m^3 or less)	●	●
	X Note 5	X type (deodorization; remaining oil 0.03 mg/m^3)	●	●
Indicator	**Q1** Note 6	With differential pressure indicator		●
Flow direction	**Blank**	Standard flow (left → right)	●	●
	X1	Reverse flow (right → left)	●	●

Note on model no. selection

Note 1: Select options for the drain discharge, bowl material, mantle, and flow direction.
When selecting options for several items, list options in order from the top.

Note 2: The N.O. type automatic drain cannot be selected.

Note 3: See the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for automatic drain working conditions.

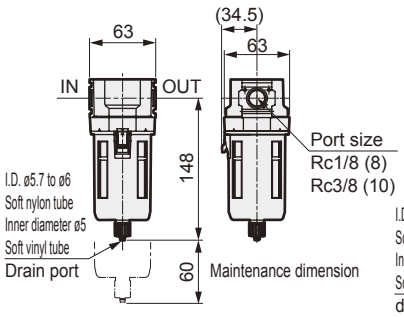
Note 4: A manual drain cock is provided on all drain discharges.

Note 5: Combination with option F1 is not available.

Note 6: Not available for "M" and "X". Replace the element before the differential pressure indicator becomes red.
The differential pressure indicator functions only when compressed air is flowing. Note that the indicator does not function simply when pressure is applied.

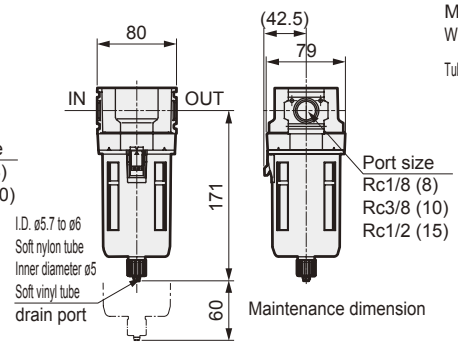
Dimensions

● M3000



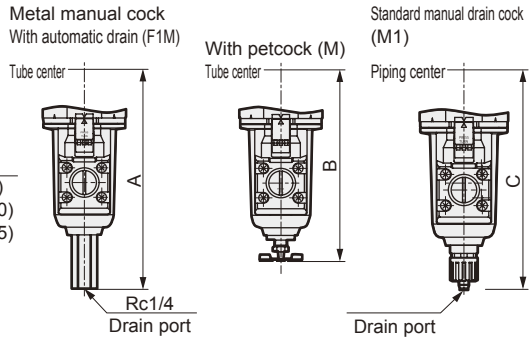
● With the plastic bowl, the same dimensions apply for the type with manual cock or automatic drain.

● M4000

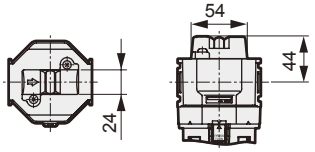


● With the plastic bowl, the same dimensions apply for the type with manual cock or automatic drain.

● Metal bowl (option)



● With differential pressure indicator (option) Q1



Dimensions table

Model no.	F1M	M	M1
	A	B	C
W3000	164	143.5	154
W4000	187	166.5	177

See the F.R.L. Unit in the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" or "Oil Mist Filter M4000 Series Differential Pressure Indicator Option Addition (No. CC-912A)" for details on the specifications and internal structure drawings, etc.

High performance oil mist filter Standard white Series

MX3000/MX4000-W Series

Secondary side oil concentration 0.001 mg/m^3

Suitable for optical equipment such as optical positioning units and laser processing machines

Port size: 1/4 to 1/2

JIS symbol 

RoHS

MX3000 Spacing 63 mm

MX4000 Spacing 80 mm

How to order

MX3000 - 8 - W - Z

(White type)

Ⓐ Model no. Ⓑ Port size Ⓒ Option

Symbol	Descriptions	Ⓐ Model no. MX3000	MX4000
Ⓑ Port size			
8	Rc1/4	●	●
10	Rc3/8	●	●
15	Rc1/2		●
Ⓒ Option			**Note 1**
Drain emission Note 2, Note 3	**Blank** With manual drain cock	●	●
	F1 Automatic drain w/ manual override (N.C. type: No exhaust w/o pressurized)	●	●
Bowl material	**Blank** Polycarbonate bowl	●	●
	Z Nylon bowl	●	●
	M Metal bowl	●	●
	M1 Metal bowl, manual drain cock with manual override Note 4	●	●
Flow direction	**Blank** Standard flow (left → right)	●	●
	X1 Reverse flow (right → left)	●	●

⚠ Note on model no. selection

Note 1: Select options for drain discharge, bowl material, and differential pressure detection.
When selecting options for several items, list options in order from the top.

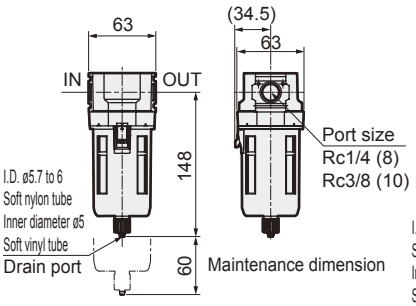
Note 2: The N.O. type automatic drain cannot be selected.

Note 3: See the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for automatic drain working conditions.

Note 4: A manual drain cock is provided on all drain discharges.

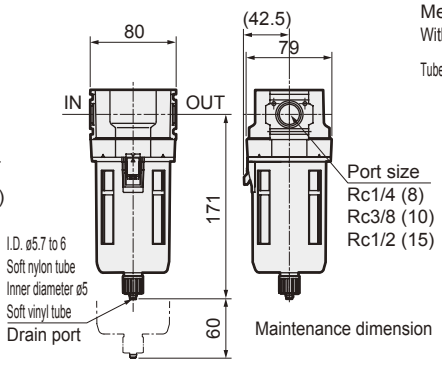
Dimensions

● MX3000



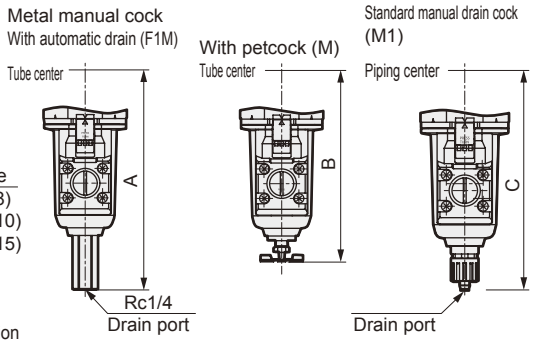
● With the plastic bowl, the same dimensions apply for the type with manual cock or automatic drain.

● MX4000



● With the plastic bowl, the same dimensions apply for the type with manual cock or automatic drain.

● Metal bowl (option)



Dimensions table

Model no.	F1M	M	M1
	A	B	C
W3000	164	143.5	154
W4000	187	166.5	177

See the F.R.L. Unit in the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for specifications and internal structure.

MEMO

Regulator standard white Series

R2000/R3000/R4000-W Series

Compact pressure gauge embedded.
Port size: 1/4 to 1/2

JIS symbol 

R2000 Spacing 50 mm
R3000 Spacing 63 mm
R4000 Spacing 80 mm

RoHS CAD

How to order

R3000 - 8 - W - L - G49P

(White type)

Ⓐ Model no. Ⓑ Port size Ⓒ Option Ⓓ Attachment

Symbol		Descriptions	Ⓐ Model no. R2000	R3000	R4000
Ⓑ Port size					
8		Rc1/4	●	●	●
10		Rc3/8	●	●	●
15		Rc1/2			●
Ⓒ Option					Note 1
Pressure range	**Blank**	0.05 to 0.85 MPa	●	●	●
	L	0.05 to 0.35 MPa	●	●	●
Relief	**Blank**	With relief mechanism	●	●	●
	N	Nonrelief type	●	●	●
Pressure gauge	**Blank**	With standard pressure gauge (G401)	●	●	●
	T	No pressure gauge (gauge port assembled sealed)	●	●	●
	T8	Round pressure gauge (pressure gauge mount. port assembled w/ ventilated)	●	●	●
	T6 Note 2	Option for digital pressure sensor PPX attachment	●	●	●
	R1 Note 3	Pressure switch with indicator PPD assembly	●	●	●
Flow direction	**Blank**	Standard flow (left → right)	●	●	●
	X1	Reverse flow (right → left)	●	●	●
Ⓓ Attachment					
Blank		Not attached	●	●	●
G49P		G49D-8-P10 (L: G49D-8-P04)	●	●	●
G59P		G59D-8-P10 (L: G59D-8-P04)	●	●	●
G40P		G40D-8-P10 (L: G40D-8-P04)	●	●	●
G50P		G50D-8-P10 (L: G50D-8-P04)	●	●	●
G41P		G41D-8-P10 (L: G41D-8-P04)	●	●	●
G52P		G52D-8-P10 (L: G52D-8-P10)	●	●	●
R2 Note 2		Digital pressure sensor: PPX-R10N-6M	●	●	●

⚠ Note on model no. selection

Note 1: When selecting options for several items, list options in order from the top.
Note 2: When "T6" is selected, only "no symbol" or "R2" can be selected for pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.
Note 3: The pressure switch with R1 indicator is black.

See the FRL Unit in the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for details on the specifications and internal structure drawings (excluding R2000), etc.

Dimensions

● R2000

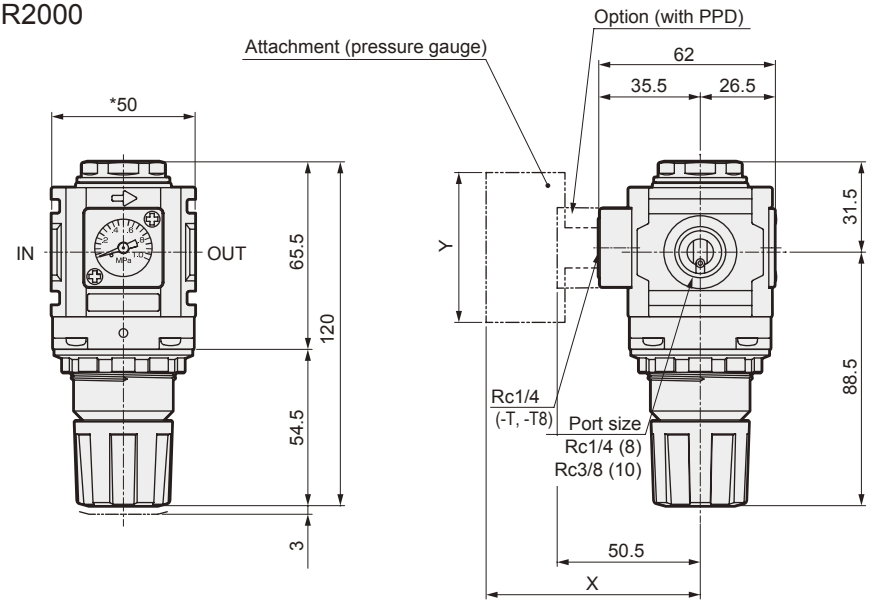


Table of optional dimensions for type with pressure gauge

Attached pressure gauge	X	Y
G49P	(72.5)	ø43.5
G59P	(77.5)	ø52
G40P	(74)	ø42.5
G50P	(75)	ø52.5
G41P	(73.5)	ø42
G52P	(78.5)	ø52.5
R2	(73)	-

● R3000

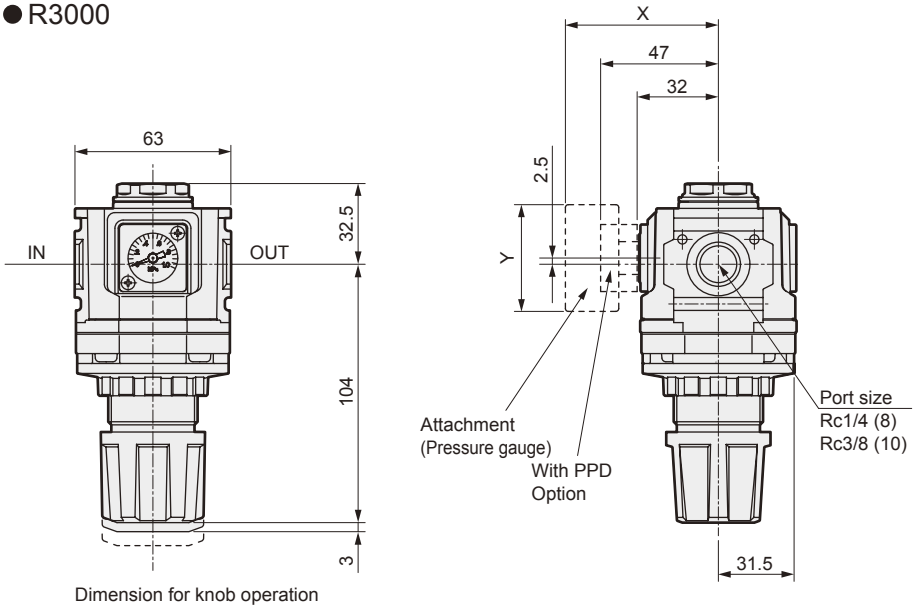


Table of optional dimensions for type with pressure gauge

Attached pressure gauge	X	Y
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(75)	ø52.5
R2	(69.5)	-

● R4000

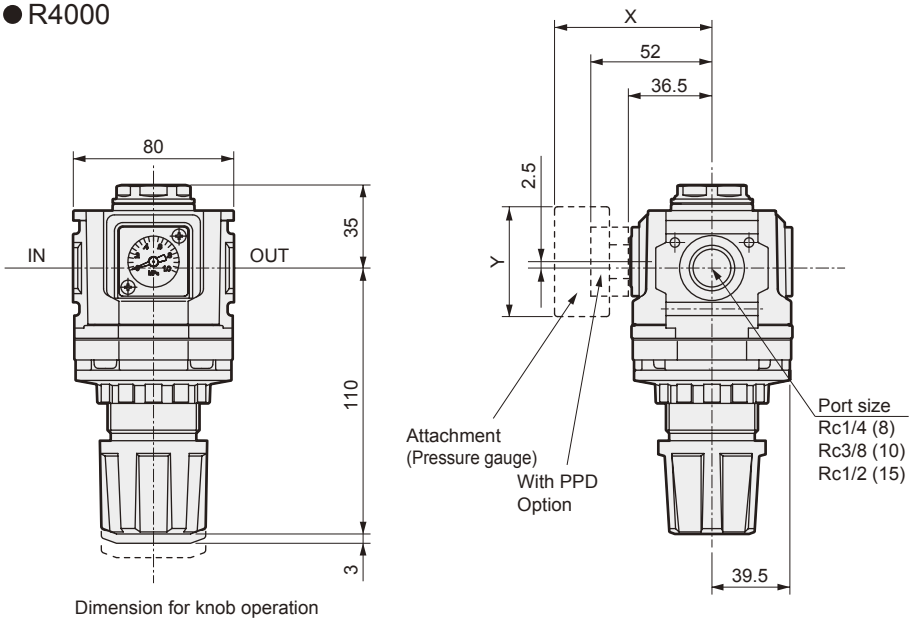


Table of optional dimensions for type with pressure gauge

Attached pressure gauge	X	Y
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(80)	ø52.5
R2	(75)	-

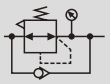
Reverse regulator Standard white Series

R2100/R3100/R4100-W Series

Integrated reverse flow function sends secondary side pressure to primary side.

Port size: 1/4 to 1/2

JIS symbol



R2100 Spacing 50 mm

R3100 Spacing 63 mm

R4100 Spacing 80 mm

RoHS CAD

How to order

R3100 - 8 - W - L - G49P

(White type)

Ⓐ Model no. Ⓑ Port size Ⓒ Option Ⓓ Attachment

Symbol		Descriptions	Ⓐ Model no. R2100	R3100	R4100
Ⓑ Port size					
8		Rc1/4	●	●	●
10		Rc3/8	●	●	●
15		Rc1/2			●
Ⓒ Option		**Note 1, Note 2**			
Pressure range	**Blank**	0.05 to 0.85 MPa	●	●	●
	L	0.05 to 0.35 MPa	●	●	●
Relief	**Blank**	With relief mechanism	●	●	●
	N	Nonrelief type	●	●	●
Pressure gauge	**Blank**	With standard pressure gauge (G401)	●	●	●
	T	No pressure gauge (gauge port assembled sealed)	●	●	●
	T8	Round pressure gauge (pressure gauge mount. port assembled w/ ventilated)	●	●	●
	T6[Note 3]	Option for digital pressure sensor PPX attachment	●	●	●
	R1[Note 4]	Pressure switch with indicator PPD assembly	●	●	●
Flow direction	**Blank**	Standard flow (left → right)	●	●	●
	X1	Reverse flow (right → left)	●	●	●
Ⓓ Attachment					
Blank		Not attached	●	●	●
G49P		G49D-8-P10 (L: G49D-8-P04)	●	●	●
G59P		G59D-8-P10 (L: G59D-8-P04)	●	●	●
G40P		G40D-8-P10 (L: G40D-8-P04)	●	●	●
G50P		G50D-8-P10 (L: G50D-8-P04)	●	●	●
G41P		G41D-8-P10 (L: G41D-8-P04)	●	●	●
G52P		G52D-8-P10 (L: G52D-8-P10)	●	●	●
R2 [Note 3]		Digital pressure sensor: PPX-R10N-6M	●	●	●

⚠ Note on model no. selection

Note 1: When selecting options for several items, list options in order from the top.

Note 2: The check valve and pressure gauge positions cannot be changed. If IN and OUT must be reversed, indicate "X1" at the end of the option field.

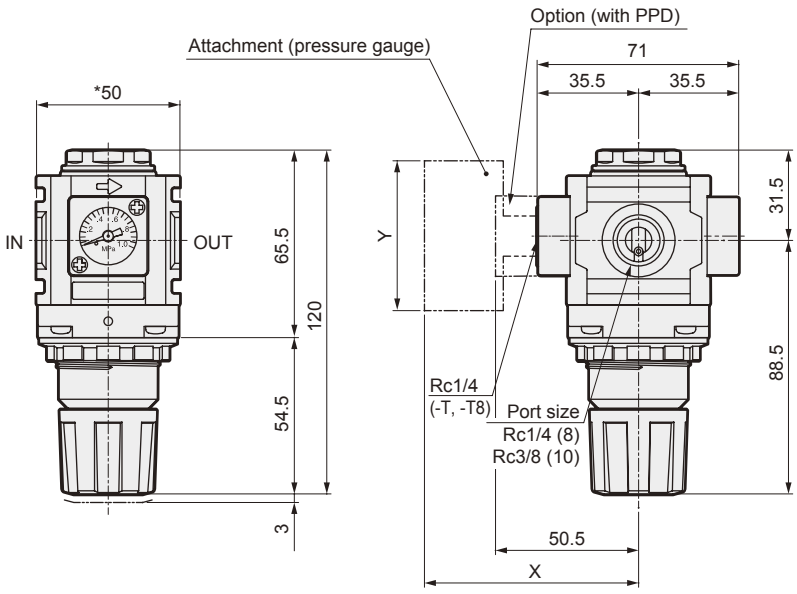
Note 3: When "T6" is selected, only "no symbol" or "R2" can be selected for pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.

Note 4: The pressure switch with R1 indicator is black.

See the F.R.L. Unit in the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for details on the specifications and internal structure drawings (excluding R2100), etc.

Dimensions

● R2100



Pressure gauge optional dimensions table

Attached pressure gauge	X	Y
G49P	(72.5)	ø43.5
G59P	(77.5)	ø52
G40P	(74)	ø42.5
G50P	(75)	ø52.5
G41P	(73.5)	ø42
G52P	(78.5)	ø52.5
R2	(73)	-

● R3100

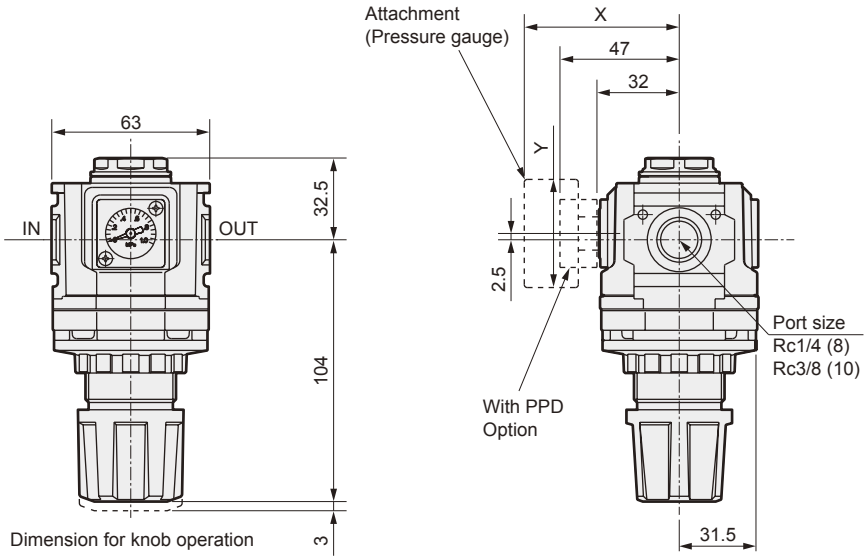


Table of optional dimensions for type with pressure gauge

Attached pressure gauge	X	Y
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(75)	ø52.5
R2	(69.5)	-

● R4100

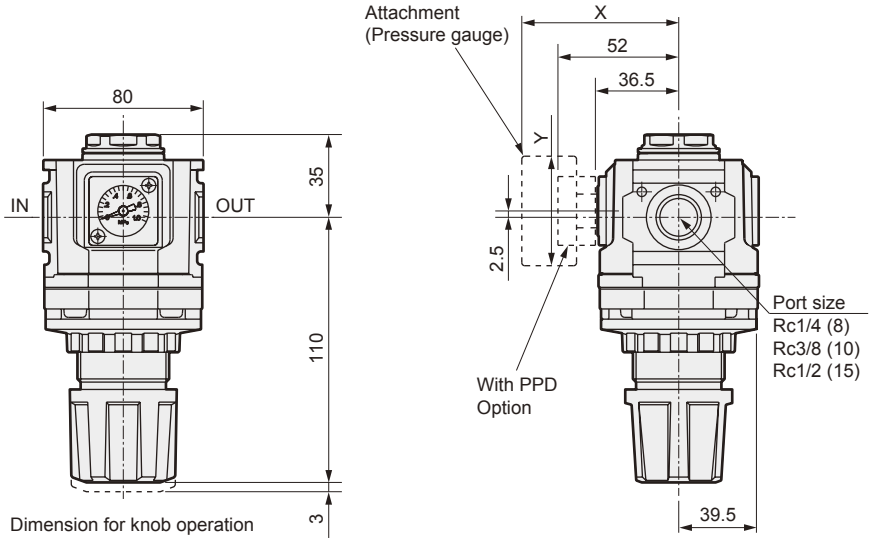
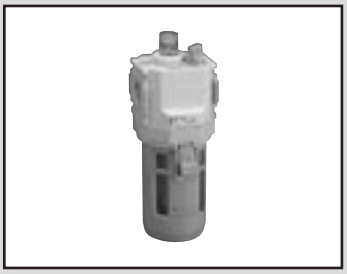


Table of optional dimensions for type with pressure gauge

Attached pressure gauge	X	Y
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(80)	ø52.5
R2	(75)	-



Lubricator Standard white Series

L3000/L4000-W Series

Fine oil mist supply
Port size: 1/4 to 1/2

JIS symbol 

L3000 Spacing 63 mm

L4000 Spacing 80 mm

RoHS CAD

How to order

L3000 - 8 - W - C

(White type)

Ⓐ Model no. Ⓑ Port size Ⓒ Option

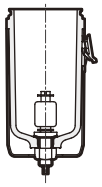
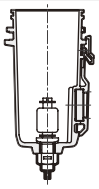
Symbol		Descriptions	Ⓐ Model no. L3000	Ⓐ Model no. L4000
Ⓑ Port size				
8		Rc1/4	●	●
10		Rc3/8	●	●
15		Rc1/2		●
Ⓒ Option				
Drainage	**Blank**	Without manual cock	●	●
	C	With manual cock	●	●
	LL	With float switch	●	●
Bowl material	**Blank**	Polycarbonate bowl	●	●
	Z	Nylon bowl	●	●
	M	Metal bowl	●	●
Flow direction	**Blank**	Standard flow (left → right)	●	●
	X1	Reverse flow (right → left)	●	●

⚠ Note on model no. selection

Note 1: When selecting options for several items, list options in order from the top.
Note 2: The adjusting dome is made of polycarbonate for a nylon bowl or metal bowl. Consult with CKD if different material is required.

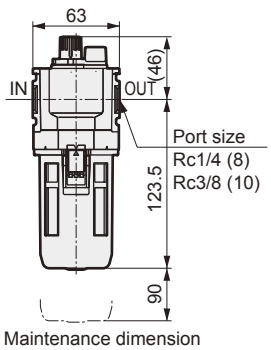
Drain discharge and bowl material combination ("C" in How to order)

Option ● With float switch

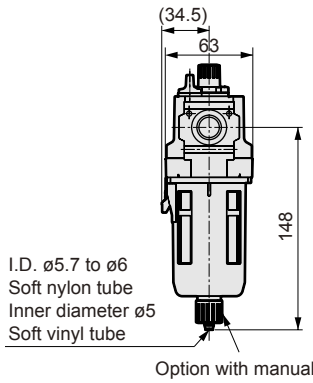
	3000/4000 Series	
Shape		
Material	**Plastic bowl**	**Metal bowl**
	Polycarbonate / **Nylon**	**Aluminum**
Lubricator L*000	LL / LLZ	LLM

Dimensions

● L3000

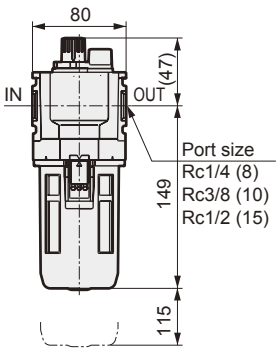


Maintenance dimension

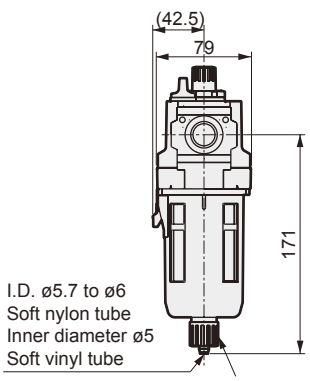


Option with manual cock

● L4000

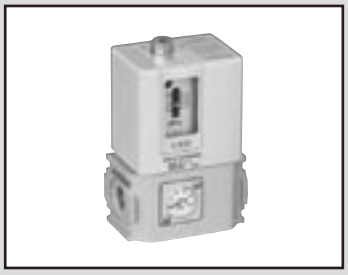


Maintenance dimension



Option with manual cock

See the F.R.L. Unit in the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for specifications and internal structure.



Mechanical pressure switch Standard white Series

P4000-W Series

Wide pressure setting range covers 0.1 to 0.8 MPa.
Port size: Rc1/4 to Rc1/2

JIS symbol

Spacing 80 mm

RoHS CAD Custom dedicated

How to order

P4000 - 8 - W - 1N

(White type)

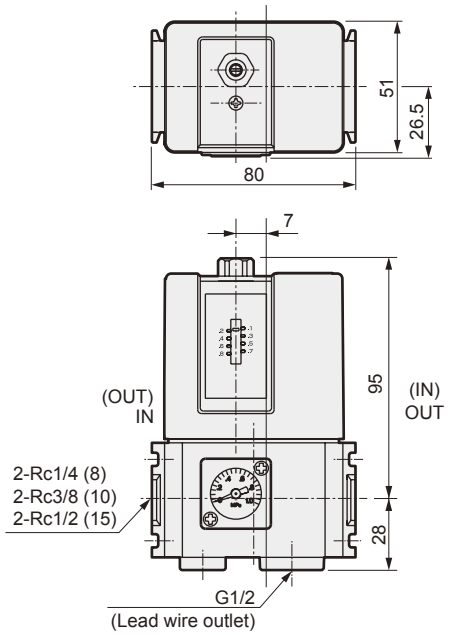
Ⓐ Port size

Ⓑ Option

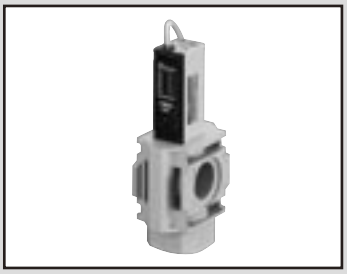
Symbol	Descriptions
Ⓐ Port size	
8	Rc1/4
10	Rc3/8
15	Rc1/2
Ⓑ Option	
Blank	Without indicator light
1N	100/200 VAC with indicator light
3N	24 VDC with indicator light
T	Without pressure gauge

*Dedicated model.
Not available as a separate part.

Dimensions



See the F.R.L. Unit in the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for specifications, internal structure and precautions, etc.



Compact reed switch type Mechanical pressure switch

P4100-UN- Series

Compatible with module connection to FRL

JIS symbol 

Spacing 31.5 mm

RoHS CAD Custom dedicated

How to order (modular design)

P4100 - UN - 6 - W - L - 3

- 6: Ⓐ Port size (White type)
- L: Ⓑ Branch direction
- 3: Ⓒ Lead wire length

*Dedicated model.
Not available as a separate part.

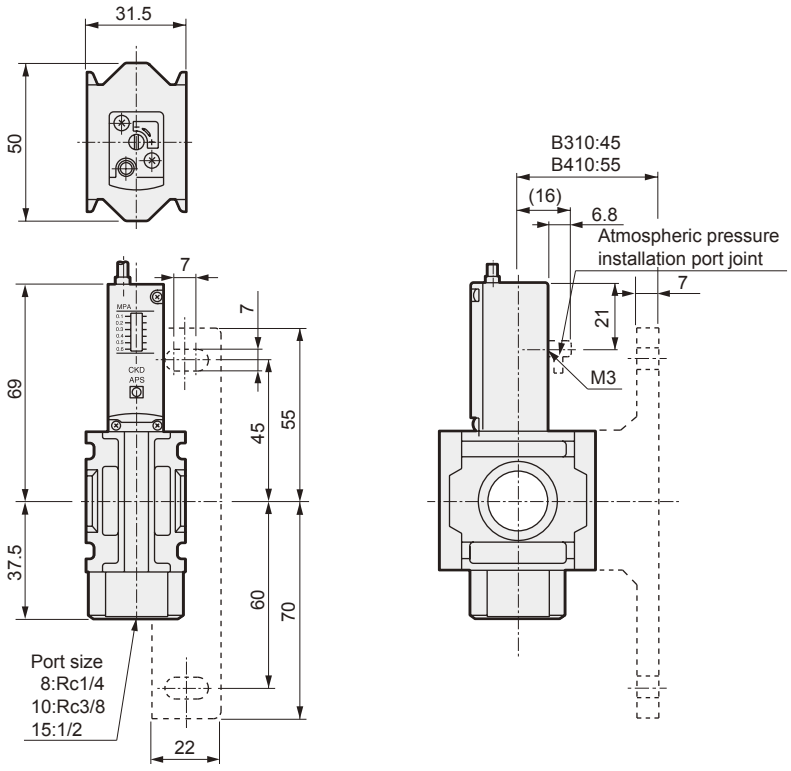
Symbol	Descriptions
Ⓐ Port size	
8	Rc1/4
10	Rc3/8
15	Rc1/2

Ⓑ Branch direction Note 1		
Blank Note 2	**L**	**R**
		

Ⓒ Lead wire length	
Blank	1m
3	3m
5	5m

Note on model no. selection

Note 1: This is used for intermediate connection of the module series so the module connection section is not threaded.
Note 2: A masking plug matching the port size is enclosed.



Weight 190 g

Shut-off valve Standard white Series

V3000-W Series

Only 1 action for exhaust operation. Ideal for preventing residual pressure accidents in air pressure lines.

Port size: Rc1/4 to Rc1/2

JIS symbol

RoHS CAD Spacing 63 mm

How to order

V3000 - 8 - W - X1 - S

(White type)

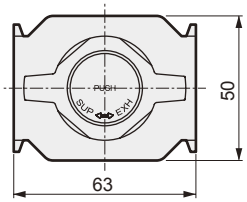
Ⓐ Port size

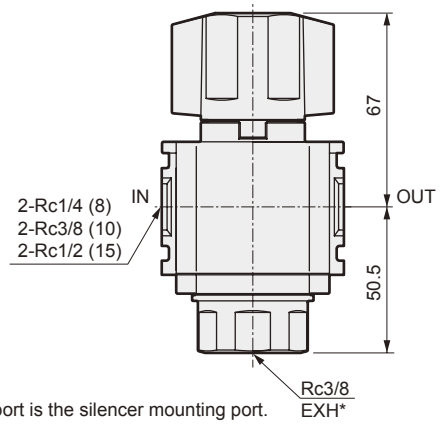
Ⓑ Option

Ⓒ Attachment

Symbol	Descriptions
Ⓐ Port size	
8	Rc1/4
10	Rc3/8
15	Rc1/2
Ⓑ Option	
Blank	None
X1	IN/OUT reverse flow (right → left)
Ⓒ Attachment	
Blank	Not attached
S	Silencer

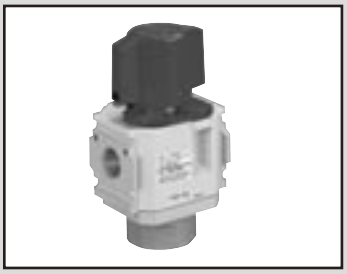
Dimensions





* The EXH port is the silencer mounting port.

See the F.R.L. Unit in the "Pneumatic, Vacuum and Auxiliary Components (No. CB-024SA)" for specifications and internal structure.

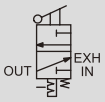


Lockout valve (OSHA compliant)

V3010-W Series

Ideal for preventing residual pressure accidents in air pressure lines.
Port size: 1/4 to 1/2

JIS symbol



RoHS CAD Spacing 63 mm

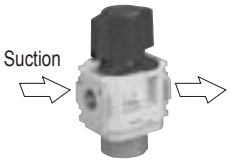
OSHA (Occupational Safety and Health Administration)

OSHA established US Safety Standards related to worker safety.

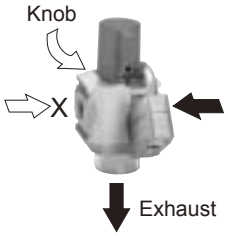
<Regulations for lockout / tagout >
When servicing or maintaining machinery, the air source is closed with a SHUT-OFF VALVE (lockout valve), and residual pressure is discharged. If a third party inadvertently operates the valve during such operation and compressed air is applied, the cylinder, etc., could move suddenly and injure personnel. This standard states that, "All valves used for such purposes shall have a key or a structure which can be locked with a key."

How to use

● Regular use



● Maintenance work
Locks can be applied where residual pressure is discharged.



How to order

V3010 - 8 - W - X1 - S

(White type)

Ⓐ Port size

Ⓑ Option

Ⓒ Attachment
Note 2

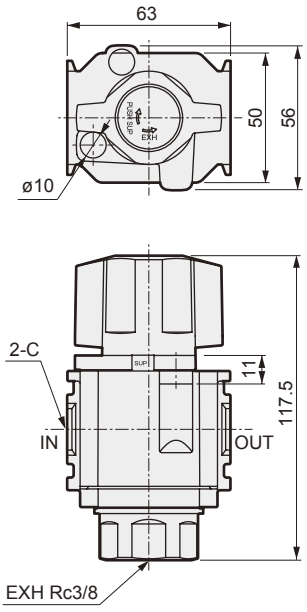
Symbol	Descriptions
Ⓐ Port size	
8	Rc1/4
10	Rc3/8
15	Rc1/2
Ⓑ Option	
Blank	Standard flow (left → right)
X1	IN/OUT reverse flow (right → left)
Ⓒ Attachment	
Blank	Without attachment
S	Silencer

⚠ Note on model no. selection

Note 1: Consult with CKD for applying the lock at the air supply position.
Note 2: The silencer's element is not flame-retardant resin.

Dimensions

● V3010



* EXH port is the silencer mounting port.

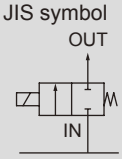
Descriptions	C
V3010-8-W	Rc1/4
V3010-10-W	Rc3/8
V3010-15-W	Rc1/2

2 port direct acting solenoid valve

CXU30-FAB4U-UN Series

N.C. (normally closed) type
Connectable 3000 Series to modules

JIS symbol



Spacing 50 mm

Without screw Release type

Custom Dedicated

How to order

CXU30-FAB4U-UN-8L-2C-3

Ⓐ Coil option

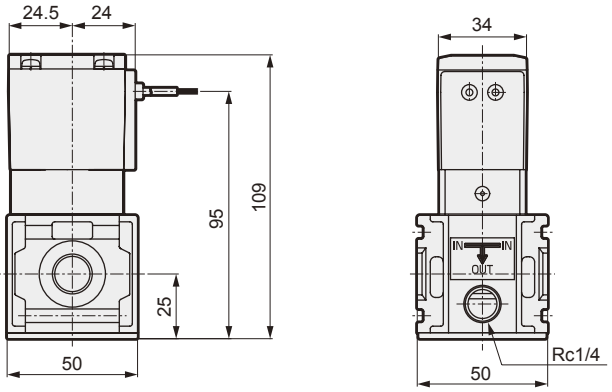
Ⓑ Rated voltage

*Dedicated model.
These cannot be ordered as separate parts.
See page 20 for details on ordering.

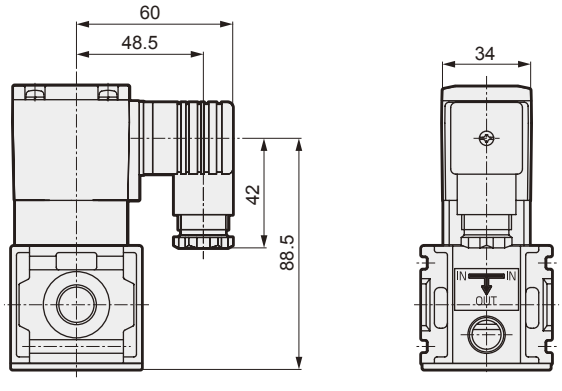
Symbol	Descriptions
Ⓐ Coil option	
2C	Grommet lead wire
2HS	DIN terminal box with light and surge suppressor (Pg11)
Ⓑ Rated voltage	
1	100 VAC 50/60Hz, 110 VAC 60Hz
3	24 VDC

Dimensions

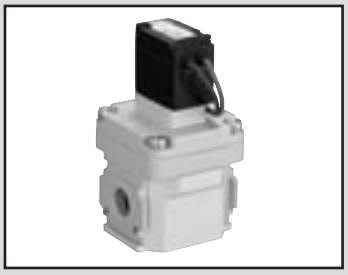
● Grommet lead wire type
CXU30-FAB4U-UN-8L-2C-*



● With DIN terminal box (Pg11)
CXU30-FAB4U-UN-8L-2HS-*



Refer to page 20 of air unit component for specifications and internal structures.

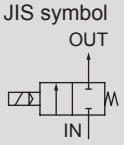


2 port pilot operated solenoid valve

CXU30-FAD-UN Series

N.C. (normally closed) type
Diaphragm drive
Connectable 3000 Series to modules
Suitable as modular component master valves

JIS symbol



Spacing 63 mm

Custom dedicated

Without screw Release type

How to order

CXU30-FAD-UN-00-○-2C-3

A Flow direction option

B Coil option

C Rated voltage

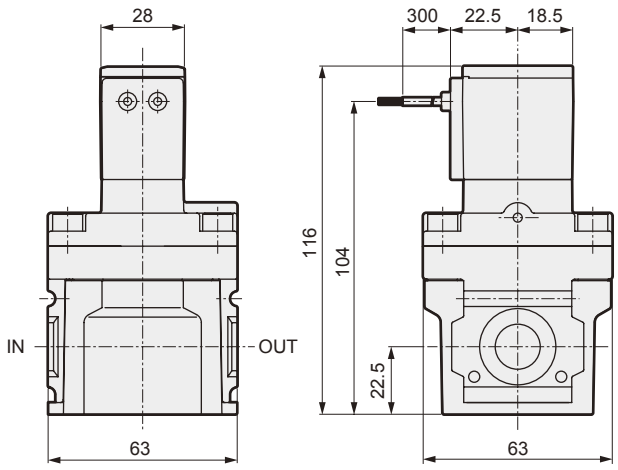
*Dedicated model.
These cannot be ordered as separate parts.
See page 22 for details on ordering.

Symbol	Descriptions
A Flow direction option	
Blank	Standard flow (left → right)
X1	Reverse flow (right → left)
B Coil option	
2C	Grommet lead wire
2HS	DIN terminal box with light and surge suppressor (Pg11)
C Rated voltage	
1	100 VAC 50/60Hz, 110 VAC 60Hz
3	24 VDC

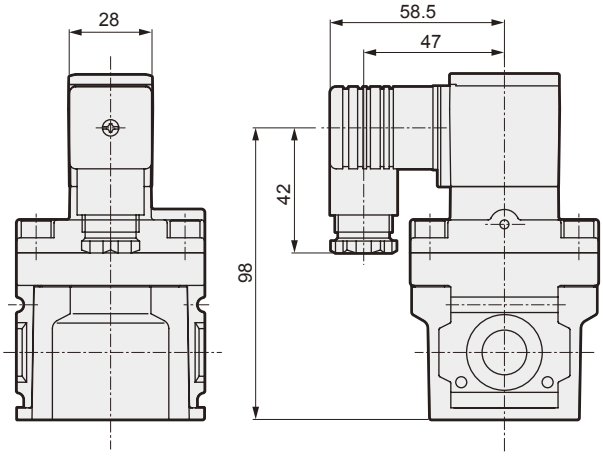
Note 1: Depending on use, such as using with an extremely small flow rate or when the solenoid valve's secondary side is restricted, operation may be unstable at pressure differences less than 0.1 MPa.

Dimensions

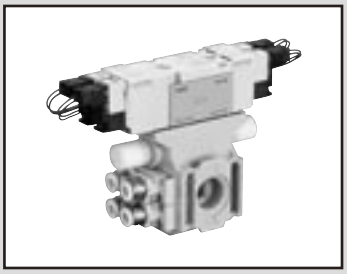
● Grommet lead wire type
CXU30-FAD-UN-00-2C-*



● With DIN terminal box (Pg11)
CXU30-FAD-UN-00-2HS-*



Refer to the FAD series in the "General purpose valve (No. CB-03-1SA)" for specifications and internal structure.



5 port pilot operated valve

CXU30-4G2-UN Series

5 port solenoid valve for modular connection with 3000 Series

Spacing 56 mm

Custom dedicated

Without screw Release type

How to order

CXU30-4G2-UN- **3** **3** **-C6** **-E20** **S** **-** **3**

Ⓐ Model no.

Ⓑ Solenoid valve ① solenoid position Note 4, Note 5

*Dedicated model.
These cannot be ordered as separate parts.
See page 25 for details on ordering.

Ⓒ Solenoid valve ② solenoid position Note 4, Note 5

Ⓓ Port size (OUT)

Ⓔ Electric connection

Ⓕ Option

Ⓖ Rated voltage

Symbol	Descriptions
Ⓑ Solenoid valve ① solenoid position	
0	Without solenoid valve; masking plate
1	2-position single solenoid
2	2-position double solenoid
3	3-position all ports closed
4	3-position ABR connection
5	3-position P/A/B connection
Ⓒ Solenoid valve ② solenoid position	
0	Without solenoid valve; masking plate
1	2-position single solenoid
2	2-position double solenoid
3	3-position all ports closed
4	3-position A/B/R connection
5	3-position P/A/B connection
Ⓓ Port size (OUT)	
C4	ø4 push-in joint
C6	ø6 push-in joint
CL6	ø6 push-in joint L type (rear side direction)
C8	ø8 push-in joint
Ⓔ Electric connection	
B	DIN terminal box (Pg7)
E20	E-connector lead wire (500 mm) with surge suppressor and light
Ⓕ Option	
Blank	Without
S	2 silencers (SLW-8S) attached
Ⓖ Rated voltage	
1	100 VAC (rectified bridge integrated)
3	24 VDC

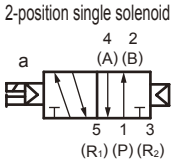
Refer to page 29 for solenoid valve model no. list.

⚠ Note on model no. selection

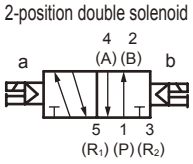
Note 1: The GWS*-8-S joint can be mounted on the R1 port.
Note 2: The check valve is provided as a standard. The 3 position all ports closed and P/A/B connection cannot be used with the check valve.
Note 3: If port size, wire connection, option or voltage is different between solenoid valve (1) and (2), the product is available as customized order.
Note 4: Refer to dimensions for positions of solenoid valves (1), (2).
Note 5: When masking plates are used for all solenoid valves, no symbol is indicated for wire connection and rated voltage options.

JIS symbol

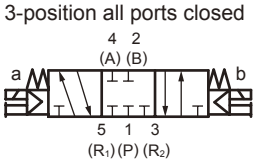
2-position single solenoid



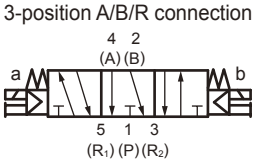
2-position double solenoid



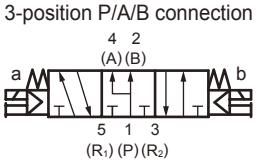
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection

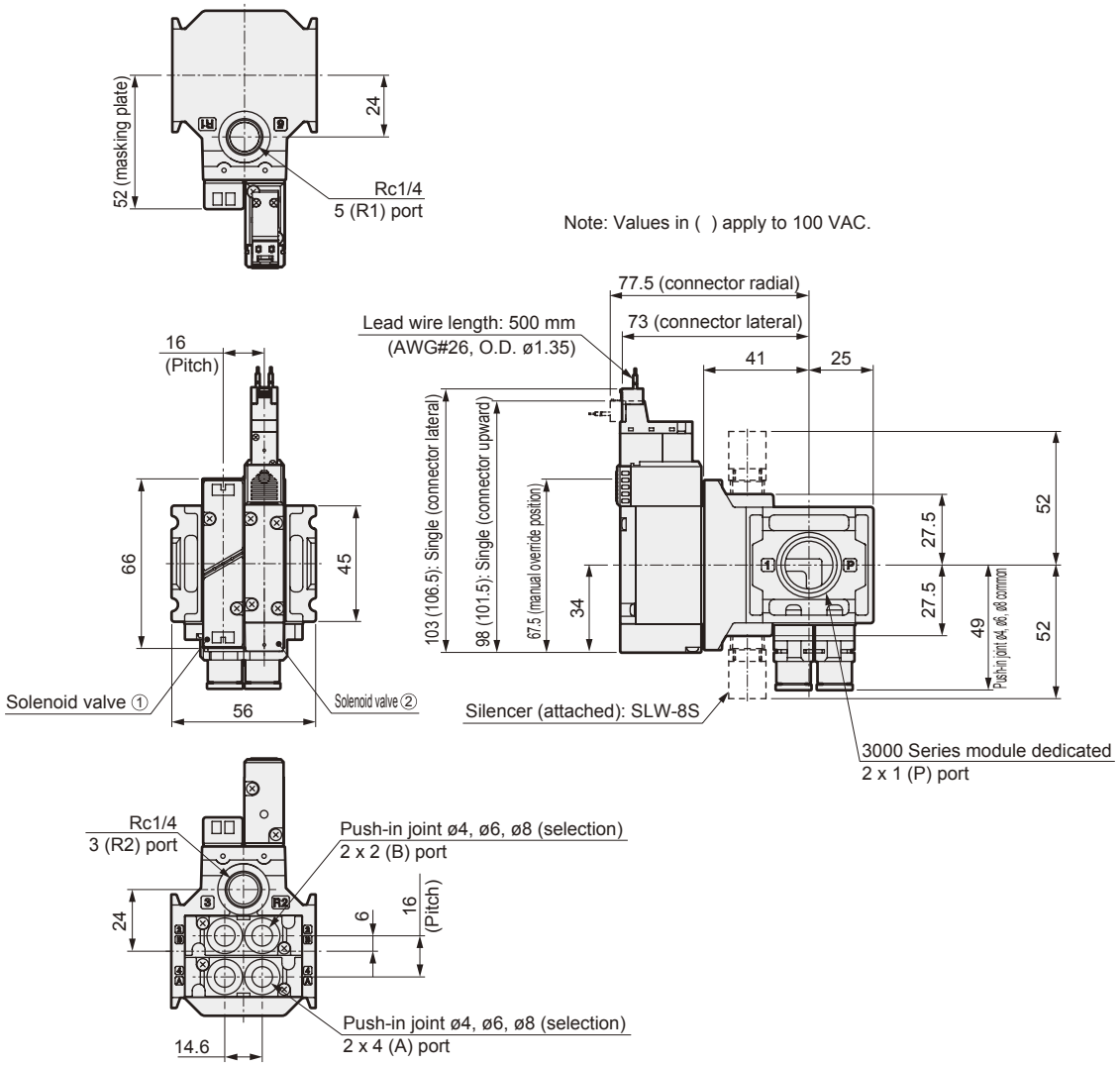


Refer to the 4G Series in the "Pneumatic Valves (Catalog No. CB-023SA)" for specifications and internal structure.

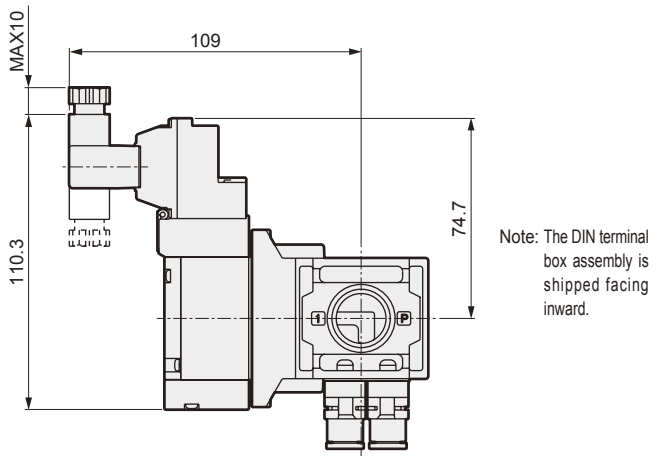
Dimensions

CXU30-4G2-$^{0}_{1}$

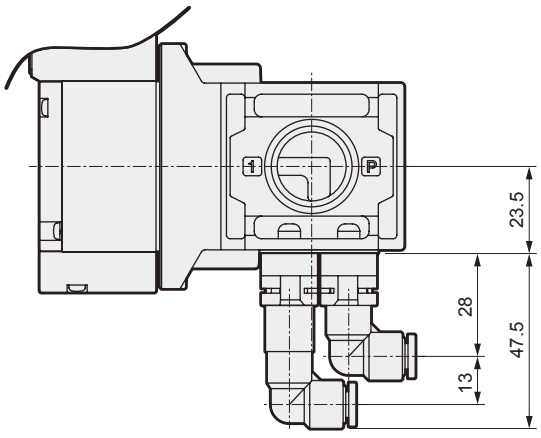
● E-connector type (E)
Cartridge joint: Straight



● DIN terminal box type (B)
Cartridge joint: Straight



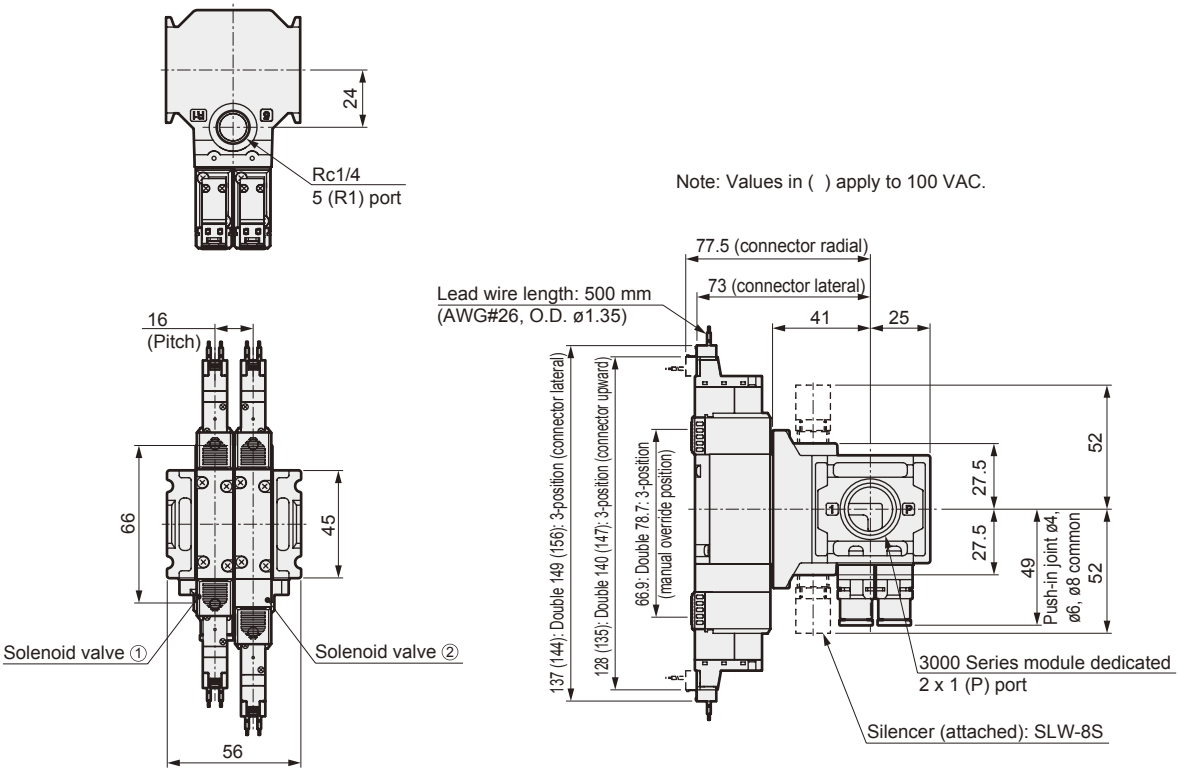
● ø6 push-in joint L type (rear side direction)



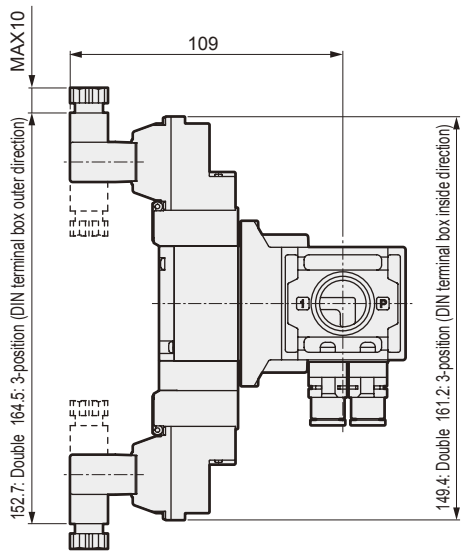
Dimensions

CXU30-4G2-$^{2}_{3}$ ^{4} ^{5}

● E-connector type (E)
Cartridge joint: Straight

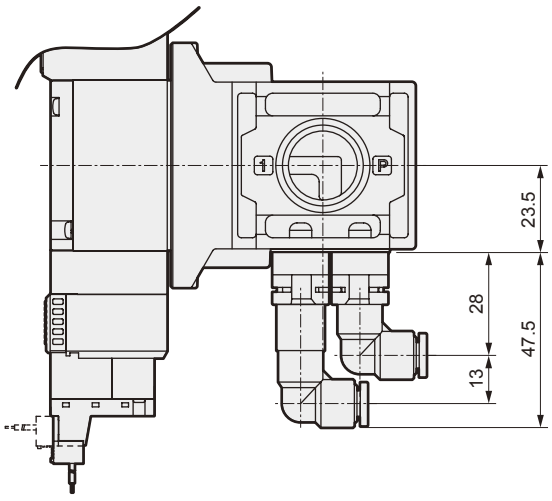


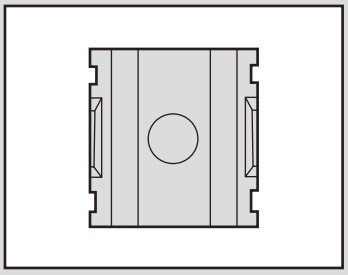
● DIN terminal box type (B)
Cartridge joint: Straight



Note: The DIN terminal box assembly is shipped facing inward.

● ø6 push-in joint L type (rear side direction)





Distributor Standard white Series

D401-UN-W/D300-W Series

Suitable for branching pipes.
Port size: Rc1/4 to Rc1/2

D401
Spacing 31.5 mm

D300
Spacing 42 mm

RoHS

How to order

D401 - UN - 00 - 8 - W

(White type)

Ⓐ Port size

Symbol	Descriptions
Ⓐ Port size	
8	Rc1/4
10	Rc3/8
15	Rc1/2

D300 - 8 - W - Q

Distributor

(White type)

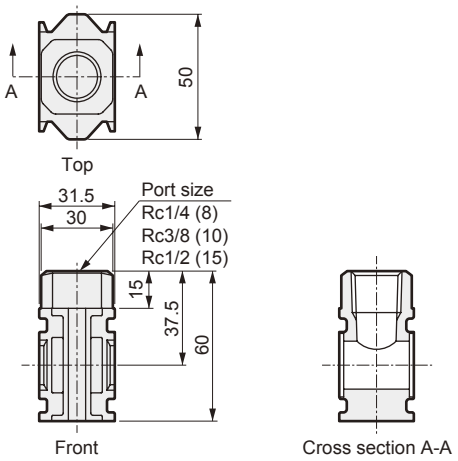
Ⓐ Port size

Ⓑ Option

Symbol	Descriptions
Ⓐ Port size	
8	Rc1/4
10	Rc3/8
Ⓑ Option	
Blank	None
Q	2 Rc1/4 blank plugs and 2 Rc3/8 blank plugs are enclosed.

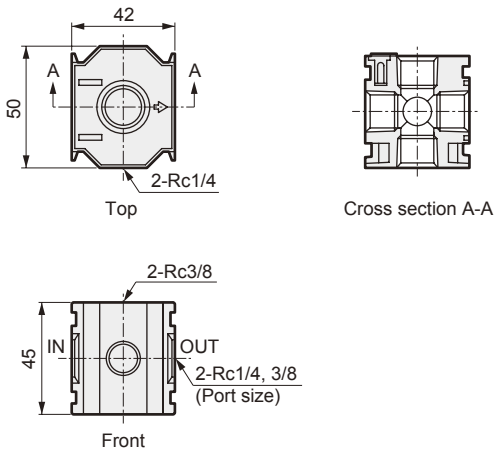
Dimensions

● D401-00

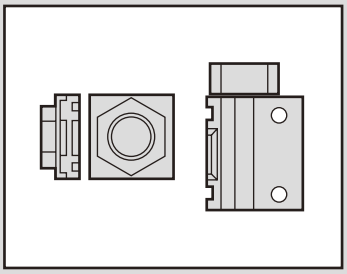


Dimensions

● D300



Applications (D401-00-W)



Piping adapter / L type piping adapter Standard white Series

A400-UN-W Series
A401-UN-W Series

Port size: Rc1/4 to Rc3/4, Rc1/4 to Rc1/2

RoHS Custom Dedicated

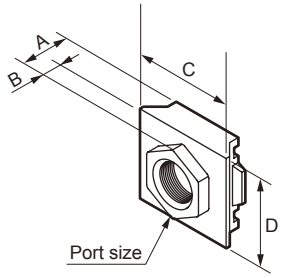
Dimensions and examples of use

*Dedicated model. These cannot be ordered as separate parts.

Piping adapter

● Example

● Model no.: A400-UN-8, 10, 15, 20-W



Model no.	Port size	Applicable model	A	B	C	D	Other
A400-UN-8-W	Rc1/4	2000/3000 Series, 4000 Series	20 (25)	6 (11)	50	45	Values in ( ) are for Rc3/4
A400-UN-10-W	Rc3/8						
A400-UN-15-W	Rc1/2						
A400-UN-20-W	Rc3/4						

L type piping adapter

How to order

A401 - UN - 8 - W

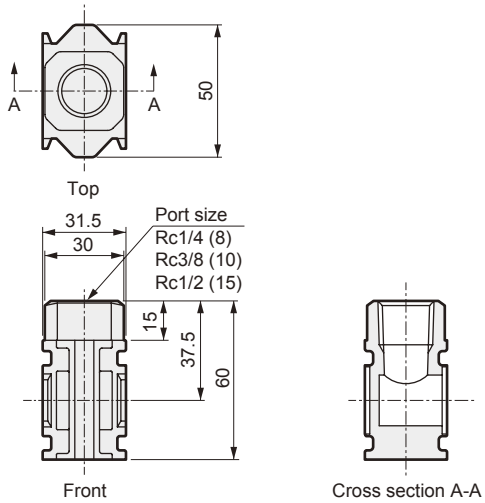
(White type)

Ⓐ Port size

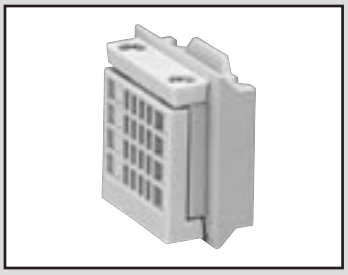
Symbol	Descriptions
Ⓐ **Port size**	
8	Rc1/4
10	Rc3/8
15	Rc1/2

・Applicable model: 2000, 3000, 4000-W Series

Dimensions



Applications



Masking adapter

CXU30-MA-UN Series

Adapter for masking joint sections

CXU30-MA

Spacing 21.5mm

Custom dedicated

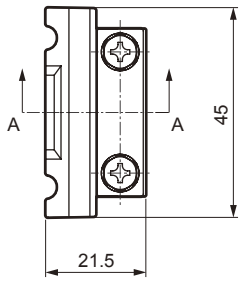
How to order

CXU30-MA-UN-00

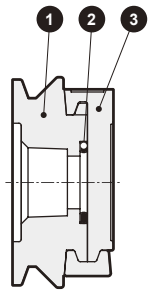
*Dedicated model.
Not available as a separate part.

Internal structure, parts list and dimensions

● CXU30-MA-UN-00

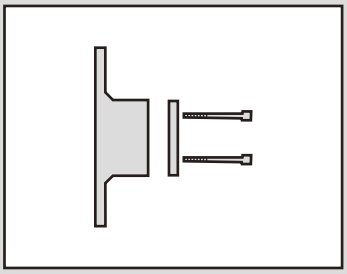


Front



Cross section A-A

No.	Part name	Model no.
1	Module transform adapter	CXU13-CA-00
2	O ring	JASO-2013
3	Masking adapter	CXU10-MA-00



Bracket / joiner

B-UN-W/J-UN-W Series

Custom dedicated

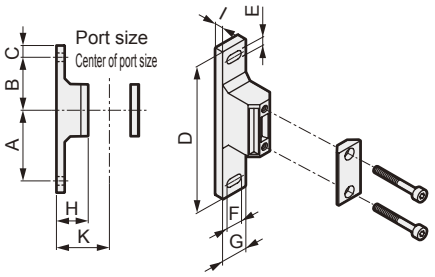
Dimensions and examples of use

*Dedicated model. These cannot be ordered as separate parts. See page 35 for details on ordering.

T type bracket set

● Model no.: B310-UN-W/B410-UN-W

● Example

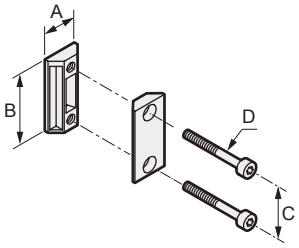


Note: B310-UN-W and B410-UN-W cannot be combined.

Model no.	Applicable model	A	B	C	D	E	F	G	H	I	K
B310-UN-W	2000 Series	60	45	10	125	7	7	22	27	7	45
	3000 Series										
B410-UN-W	4000 Series	60	45	10	125	7	7	22	37	7	55

Joiner set

● Model no.: C4000-J400-UN-W



● Example

Model no.	Applicable model	A	B	C	D
C4000-J400-UN-W	2000 Series 3000 Series 4000 Series	21	44	32	M5

Air unit custom order parts

Overview

All air unit combinations are available as customized combinations from CKD.
Module connections in the up/down direction, not possible with customized units, are now possible.

Features

① Vertical or horizontal

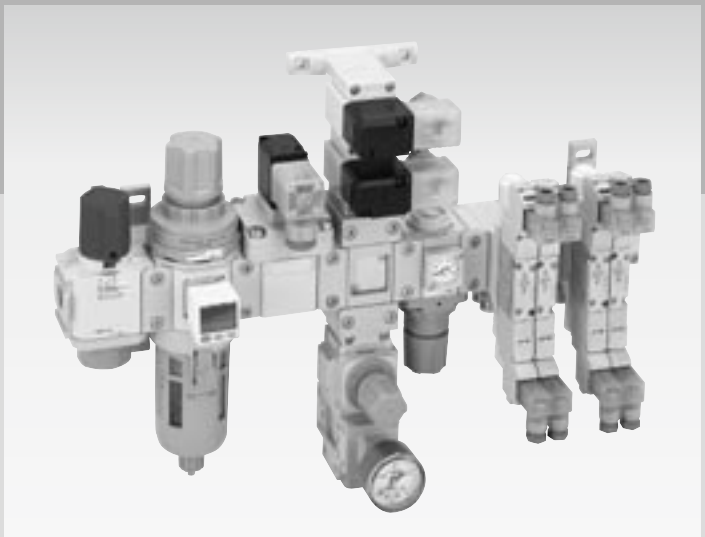
Vertical and horizontal pipes can be arranged versatility. Solenoid valves can also be connected freely.

② Unlimited use

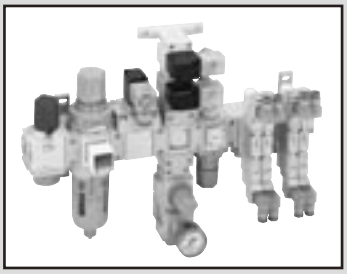
Module components not listed in this catalog are also available.

③ Fewer work labor hours

All components are connected as modules, eliminating work such as piping.



CONTENTS



Air unit custom order parts

CXUZ Series

How to order

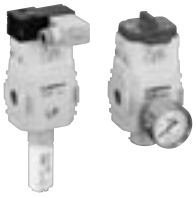
CXUZ-FL

Dedicated model
Each product is assigned a 6-digit number.

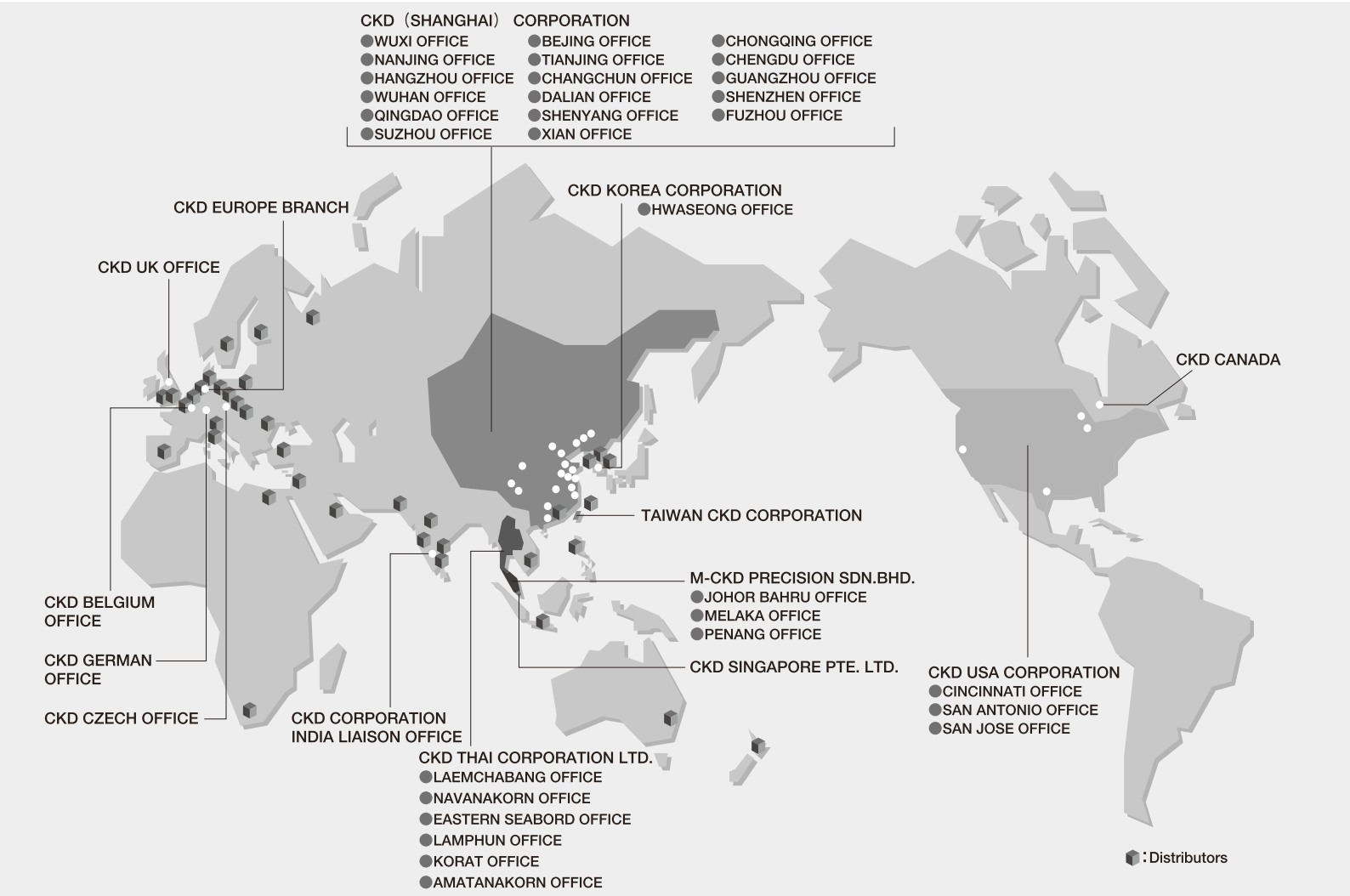
Air unit components can be combined depending on applications and space.
Contact your CKD Sales Representative for available combinations.

Related products (module combination product possible)

CXU10 (applicable model: 1000 Series)					
Model	**Shut-off valve**	**Precision regulator**	**Electro-pneumatic regulator**	**Reed switch type** Compact mechanical pressure switch	**High performance oil mist filter**
Model no.	V1000-W 	RP1000 	EVD-1000 	P1100-W 	MX1000-W 
Catalog No.	CC-942	CB-024S	CB-024S	CC-942	CB-024S

CXU30 (applicable model: 3000, 4000 Series)					
Model	**Slow start valve**	**Precision regulator**	**Electro-pneumatic regulator**	**Reed switch type** Compact mechanical pressure switch	**High performance oil mist filter**
Model no.	V3301-W V3321-W 	RP2000 	EVD-3000 	P4100-W 	MX3000-W MX4000-W 
Catalog No.	CC-942	CB-024S	CB-024S	CC-942	CB-024S

WORLD-NETWORK



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