

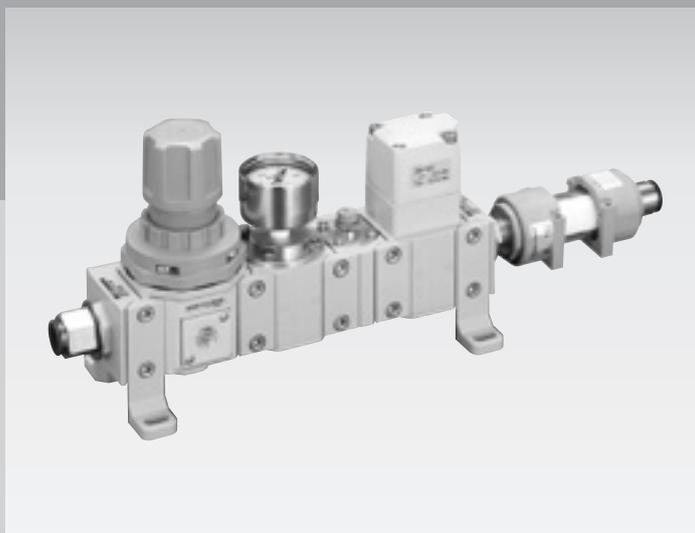
# Clean air unit

## CAU30

### Air unit components

#### Overview

Compact and completely oil-prohibited clean air supply unit without piping work.



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Product introduction	1000
● CAU30	<b>1002</b>
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SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R.(module unit)
Clean F.R
Precision R
Press gauge Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/tube
<b>Clean air unit</b>
Pressure sensor
Flow rate sensor
Valve for air blow
Ending

# Clean blow system all

## with one unit

### High rigidity aluminum body with transparent filter



#### Piping-free unit

Just insert tubes for piping.  
The clean air unit significantly saves the assembling work and its compact body saves space.  
Simplified model number management for ordering.



#### All oil-prohibited specifications

Fluid passage parts are all degreased and cleaned, and manufactured in a dust-free room from assembling to packaging.

Oil-prohibited regulator  
(Relief, no relief)

Pressure gauge  
(Analog, digital)

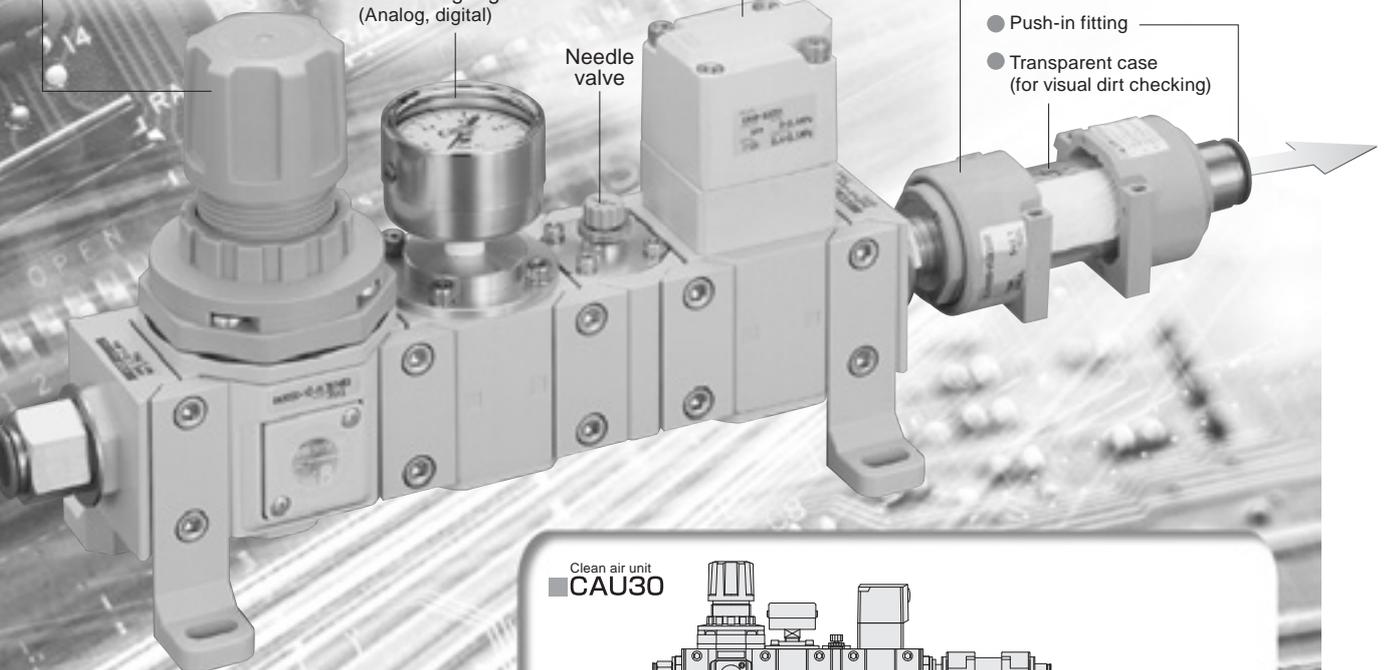
Needle valve

Air operated valve  
(Single acting, double acting)

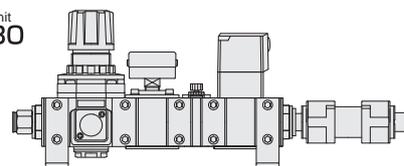
Clean filter  
(Filtration: 0.01  $\mu\text{m}$ , removal ratio: 99.99%)

● Push-in fitting

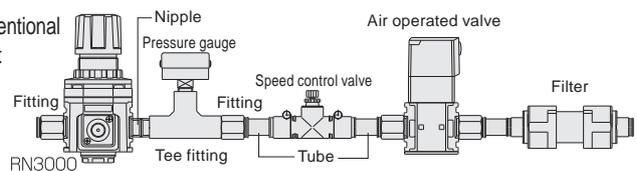
● Transparent case  
(for visual dirt checking)



Clean air unit  
CAU30



Conventional circuit



Clean air unit

# CAU30 Series

- SCPD3
- SCM
- SSD2
- MDC2
- SMG
- LCM
- LCR
- LCG
- LCX
- STM
- STG
- STR2
- MRL2
- GRC
- Cylinder switch
- MN3E  
MN4E
- 4GA/B
- M4GA/B
- MN4GA/B
- F.R (module unit)
- Clean F.R
- Precision R
- Press gauge  
Diff. press gauge
- Electro-pneumatic R
- Speed controller
- Auxiliary valve
- Fitting/  
tube
- Clean air unit**
- Pressure sensor
- Flow rate sensor
- Valve for air blow
- Ending

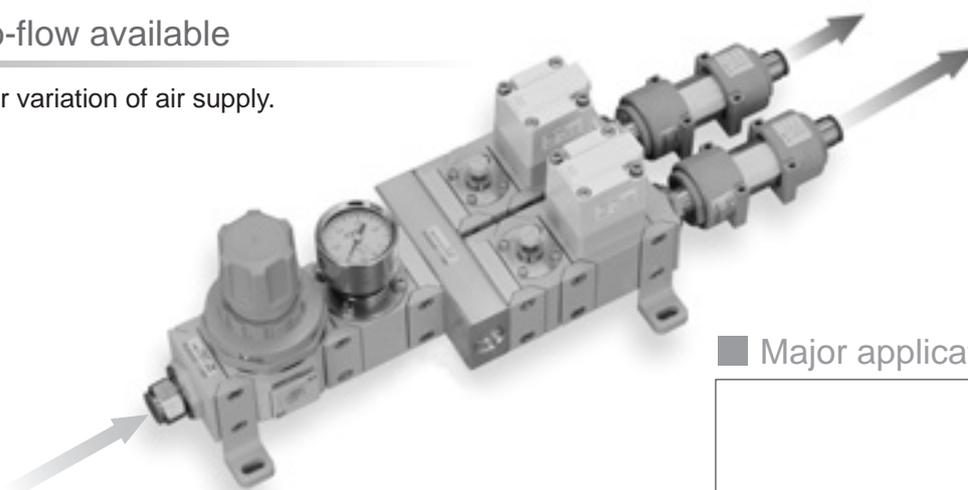
# Compact and clean air supply unit with all-oil-prohibited specification requiring little piping work.

## High rigidity aluminum body

The body made of aluminum has high rigidity (except for the filter).

## Two-flow available

Wider variation of air supply.



## High air flow rate

Provides high stable flow of 400 l/min (ANR).

## Modular allowing flexible combination

Can be combined with various instruments for different uses. This unit can be connected with air operated valves and needle valves, which was not possible before.

## Best suited to the liquid crystal display industry

This unit has been developed mainly for ionizers. It can also be used for automobile parts, foods, and medicine.

## High precision filtration of 0.01 μm

A hollow fiber membrane element is used as a filter. Particle filtration of 0.01 μm and removal ratio of 99.99% are ensured.

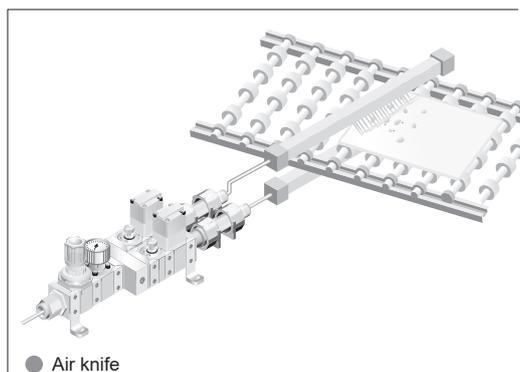
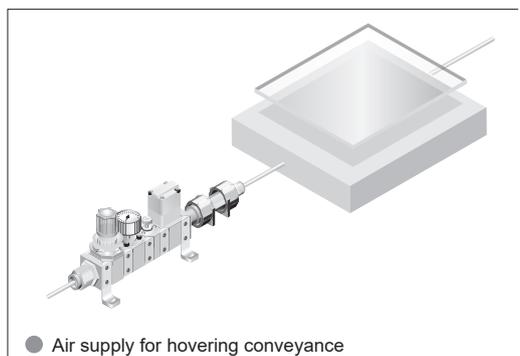
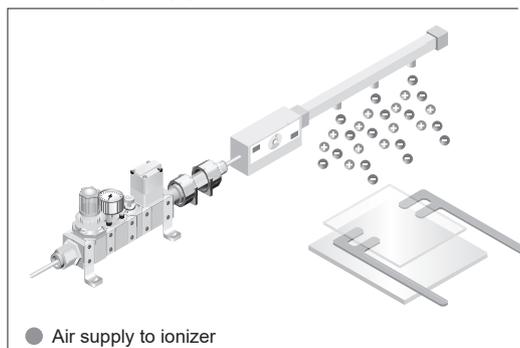
## Visual dirt checking

The filter with its transparent case allows visual checking of dirt, making the maintenance work easy.

## Complied with RoHS directive

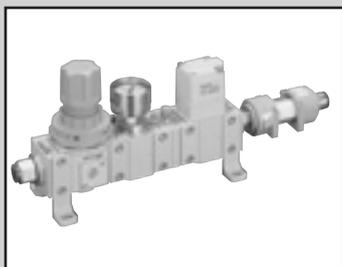
All substances that can adversely affect the environment, including lead and hexavalent chrome, have been eliminated.

## Major applications



SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R.(module unit)
Clean F.R
Precision R
Press gauge Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/tube
<b>Clean air unit</b>
Pressure sensor
Flow rate sensor
Valve for air blow
Ending

**RoHS**



Clean air unit

# CAU30 Series

● Port size:  $\varnothing 10/\varnothing 12$



## Common specifications

Descriptions	Clean air unit
Working fluid	Compressed clean air
Max. working pressure MPa	0.7 (0.5 for low pressure)
Proof pressure MPa	1.0
Ambient temperature/fluid temperature °C	5 to 45
Set pressure MPa	0.05 to 0.6 (0.05 to 0.3 for low pressure)
Port size (IN/OUT)	$\varnothing 10, \varnothing 12$
Filtration rating $\mu\text{m}$	0.01 (removal efficiency 99.99%)
Processing flow rate $\ell/\text{min}$	400 *1
Differential pressure proof *2 MPa	0.5
Dial rotations (needle position)	12 and over
Pilot air pressure for valve MPa	0.4 to 0.5
Pilot port size for valve	Rc1/8
Oil-prohibited specifications	Oil-prohibited flow passage

\*1: Flow rate at 0.7 MPa primary pressure, 0.5 MPa set pressure and 0.15 MPa pressure drop. Refer to the flow characteristics table for details.

\*2: Pressure difference between before and after the filter.

## Pressure sensor specifications (Digital pressure sensor: PPX-R10N-6M-P12)

Descriptions	Digital pressure sensor
Power supply voltage	12 to 24 VDC $\pm 10\%$ Ripple P-P 10% or less
Power consumption	Normal operation: 720 mW or less (at a power supply voltage of 24 V, with a current consumption of 30 mA or less) ECO MODE: 480 mW or less at STD (at a power supply voltage of 24 V, with a current consumption of 20 mA or less), 360 mW or less at FULL (at a power supply voltage of 24 V, with a current consumption of 15 mA or less)
Comparative output (Comparative output 1, comparative output 2)	NPN transistor, Open collector ·Max. inflow current: 100 mA ·Applied voltage: 30 VDC or less (between comparative output and 0 V) ·Residual voltage: 2 V or less (at an inflow current of 100 mA)
Output operation	Selecting NO/NC by key stroke
Output mode	EASY mode/Hysteresis mode/Window comparator mode
Differential (hysteresis)	Min. 1 digit (variable)
Repeatability	$\pm 0.2\%$ F.S. (Within $\pm 2$ digits)
Response time	Select from 2.5 ms, 5 ms, 10 ms, 25 ms, 50 ms, 100 ms, 250 ms, 500 ms, 1000 ms, and 5000 ms by key stroke
Short-circuit protection	Installed
Display	4 digits + 4 digits 3-color LCD display (refresh cycle: select from 250 ms, 500 ms, and 1000 ms by key stroke)
Temperature characteristics (Set +20°C as reference.)	In a range of $\pm 1\%$ F.S.
Lead wire	2 m Cable with connector

## Weight

● 1 system

(Unit: g)

Model No.	Weight
CAU30-*-R*F (regulator, filter)	800

● 2 systems

(Unit: g)

Model No.	Weight
CAU30-*-2-R*F (regulator, filter)	1490

## Additional weight

(Unit: g)

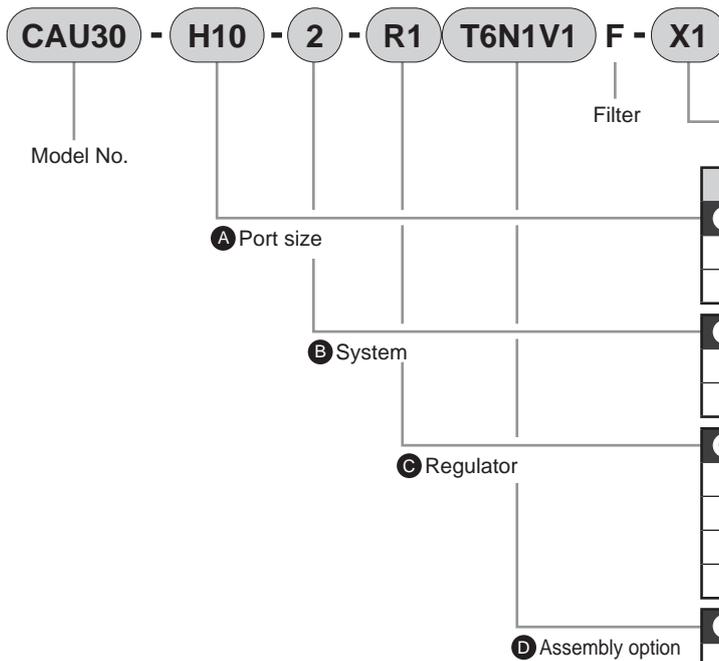
Option (including joiner)	Weight
Pressure gauge	
T6: With pressure outlet port block	265
GY49: Analog pressure gauge	345
PX1: Digital pressure sensor	350
Needle	
N1: Needle block	165
Air operated valve	
V1: Air operated valve block (single acting)	390
V3: Air operated valve block (double acting)	390

## Additional weight

(Unit: g)

Option (including joiner)	Weight
Pressure gauge	
T6: With pressure outlet port block	265
GY49: Analog pressure gauge	345
PX1: Digital pressure sensor	350
Needle	
N1: Needle block	330
Air operated valve	
V1: Air operated valve block (single acting)	780
V3: Air operated valve block (double acting)	780

### How to order



Code	Content
<b>A Port size</b>	
H10	ø10
H12	ø12

<b>B System</b>	
Blank	1 system
2	2 systems

<b>C Regulator</b>		*1
R1	Setting 0.05 to 0.6 MPa	Pressure relief
R2	Setting 0.05 to 0.6 MPa	Nonrelief
RL1	Setting 0.05 to 0.3 MPa (for low pressure)	Pressure relief
RL2	Setting 0.05 to 0.3 MPa (for low pressure)	Nonrelief

<b>D Assembly option</b>			*2
Pressure gauge	Blank	Without pressure gauge block	
	T6	*3	With pressure outlet port block (Pressure outlet port is assembled while air is flowing.)
	GY49	*4	With analog pressure gauge attached (G49D-6-*P94)
	PX1	*5	Digital pressure sensor assembled (PPX-R10N-6M-P12)
Needle	Blank	Without needle block	
	N1	With needle block	
Air operated valve	Blank	Without air operated valve block	
	V1	Single acting (normally closed)	
	V3	Double acting	

<b>E Pressure gauge orientation</b>		*6
Blank	Standard	
X1	90° clockwise	
X2	180° clockwise	
X3	270° clockwise	

### ⚠ Precautions for model No. selection

\*1 Pressure range of pressure gauge (MPa)

	RL1 or RL2	R1 or R2
G49D	0 to 0.4	0 to 0.7
PPX	-0.100 to 1.000	

\*2: Select pressure gauge, needle and air operated valve options.

\*3: If "T6" option is selected, only a pressure outlet port block is attached. The pressure outlet port size is Rc1/8.

\*4: If "GY49" pressure gauge is selected together with "RL1" or "RL2" regulator, the pressure gauge will be for low pressure (0 to 0.4 MPa pressure range).

(It will be for standard pressure of -0.100 to 1.000 MPa pressure range in case of "PX1" pressure gauge.)

\*5: Output of the digital pressure sensor assembled (PPX) is NPN transistor 2 output points (custom order).

\*6: The figure of pressure gauge orientation uses a "GY49" pressure gauge as an example. The same orientation applies to "PX1".

[Example 1 of model No.]

#### CAU30-H10-R1GY49N1V1F

- A** Port size : ø10
- B** System : 1 system
- C** Regulator : 0.05 to 0.6 MPa Pressure relief
- D** Assembly option : Analog pressure gauge (G49D), needle, air operated valve (single acting) assembly
- E** Pressure gauge orientation : Standard

[Example 2 of model No.]

#### CAU30-2-H12-RL1PX1V3F-X2

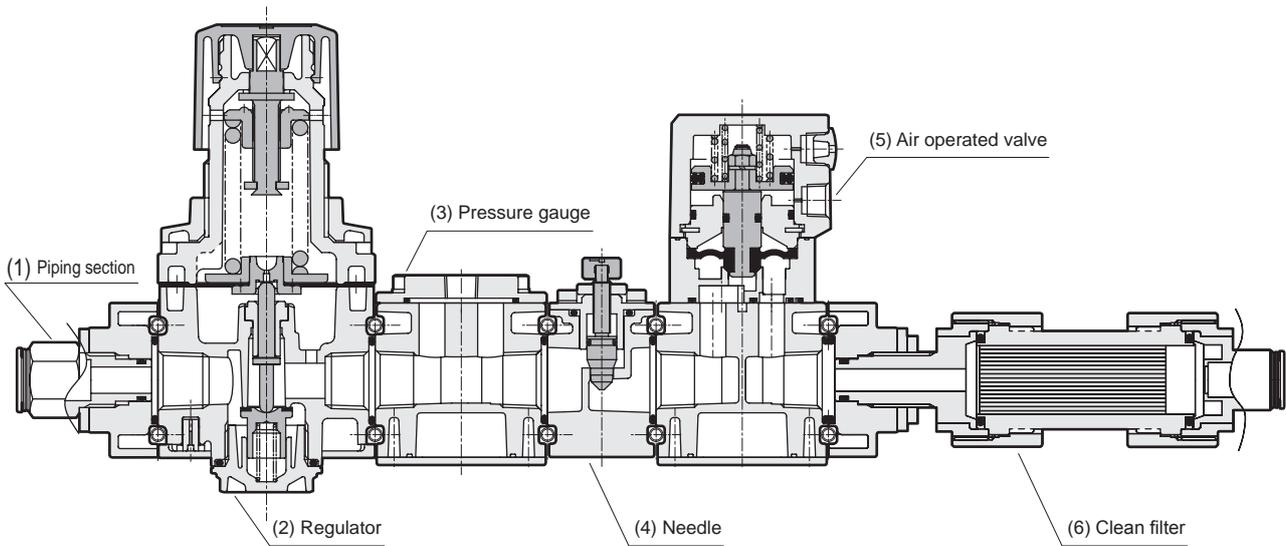
- A** Port size : ø12
- B** System : 2 systems
- C** Regulator : 0.05 to 0.3 MPa Pressure relief
- D** Assembly option : Digital pressure sensor (PPX), air operated valve (double acting) assembly
- E** Pressure gauge orientation : 180° clockwise

SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E
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F.R.(module unit)
Clean F.R
Precision R
Press gauge
Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/ tube
<b>Clean air unit</b>
Pressure sensor
Flow rate sensor
Valve for air blow
Ending

# Clean Air Unit Series

SCPD3  
SCM  
SSD2  
MDC2  
SMG  
LCM  
LCR  
LCG  
LCX  
STM  
STG  
STR2  
MRL2  
GRC  
Cylinder switch  
MN3E  
MN4E  
4GA/B  
M4GA/B  
MN4GA/B  
F.R (module unit)  
Clean F.R  
Precision R  
Press gauge  
Diff. press gauge  
Electro-pneumatic R  
Speed controller  
Auxiliary valve  
Fitting/tube  
Clean air unit  
Pressure sensor  
Flow rate sensor  
Valve for air blow  
Ending

## Internal structure and flow path materials

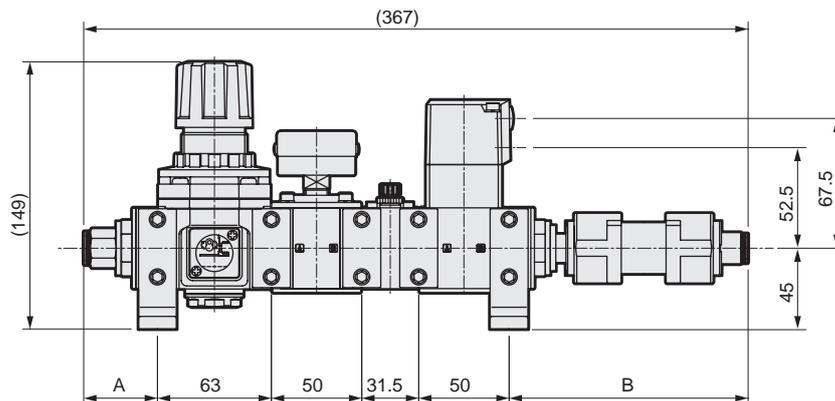
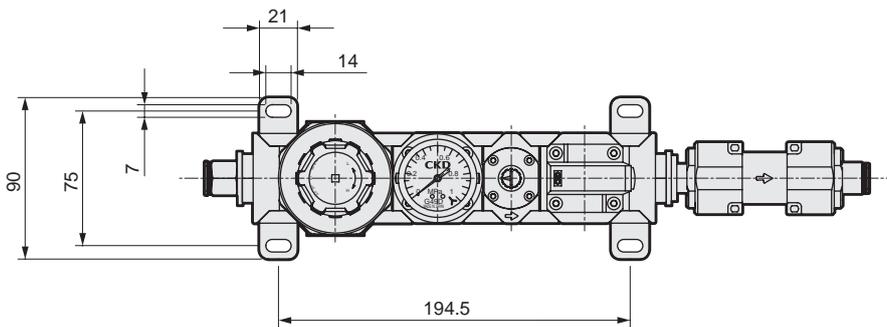


No.	Part name	Flow path material	
(1)	Piping section	Aluminum alloy, brass (nickeling), fluoro rubber, nitrile rubber, hydrogenated nitrile rubber	
(2)	Regulator	Aluminum alloy, zinc alloy, nitrile rubber, hydrogenated nitrile rubber, fluoro rubber, polyacetal resin	
(3)	Pressure gauge	Port only	Aluminum alloy, fluoro rubber
		G49D	Stainless steel, steel (chrome plating)
		PX1	Stainless steel, hydrogenated nitrile rubber
(4)	Needle	Aluminum alloy, brass (nickeling), nitrile rubber, fluoro rubber	
(5)	Air operated valve	Aluminum alloy, stainless steel, fluoro rubber, polypropylene, ethylene propylene rubber	
(6)	Clean filter	Aluminum alloy, fluoro rubber, polypropylene, urethane, polyamide	

## Dimensions (1 system)



● CAU30-□-R □ GY49N1V □ F (Regulator, pressure gauge, needle, valve, filter)



Port size dimensions table

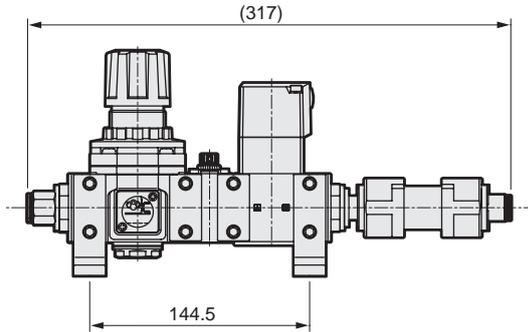
Port size	A	B
H10	41	132
H12	42.5	133.5

\* Dimensions of "T6" and "PX1" pressure gauges are the same as those of "GY49".

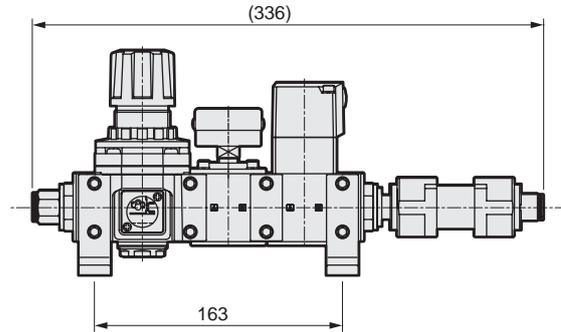
### Dimensions (1 system)



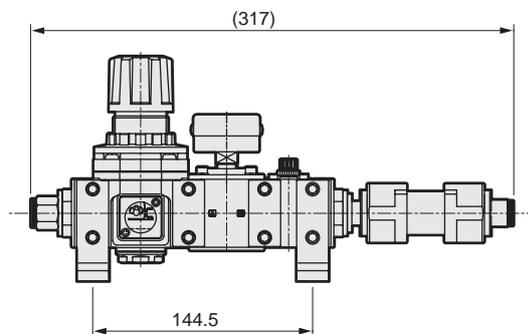
- CAU30-□-R□N1V□F  
(Regulator, needle, valve, filter)



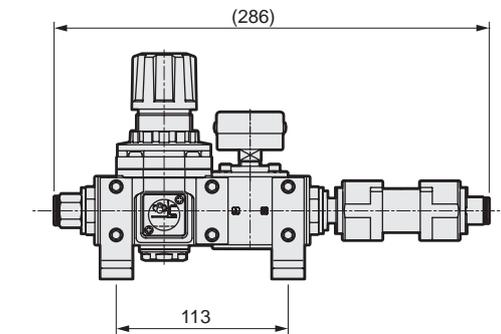
- CAU30-□-R□GY49V□F  
(Regulator, pressure gauge, valve, filter)



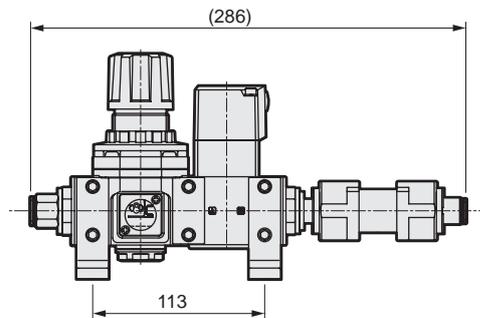
- CAU30-□-R□GY49N1F  
(Regulator, pressure gauge, needle, filter)



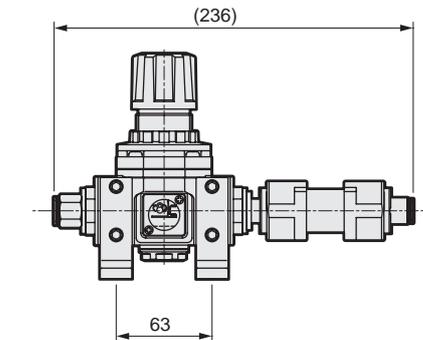
- CAU30-□-R□GY49F  
(Regulator, pressure gauge, filter)



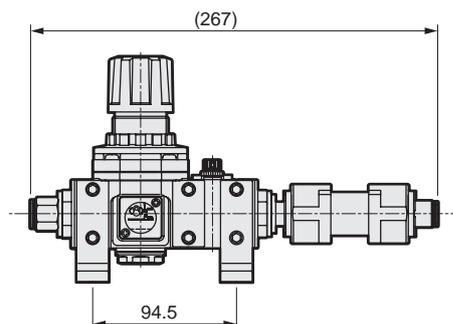
- CAU30-□-R□V□F  
(Regulator, valve, filter)



- CAU30-□-R□F  
(Regulator, filter)



- CAU30-□-R□N1F  
(Regulator, needle, filter)



\* Dimensions of "T6" and "PX1" pressure gauges are the same as those of "GY49".

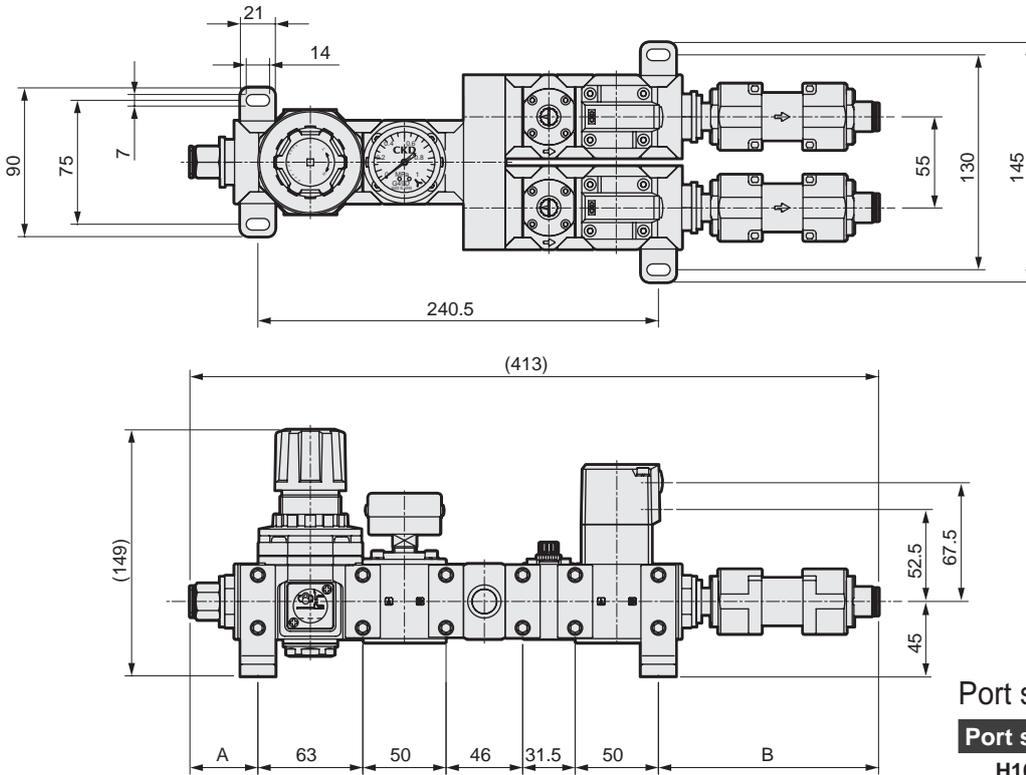
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Pressure sensor
Flow rate sensor
Valve for air blow
Ending

# Clean Air Unit Series



## Dimensions (2 systems)

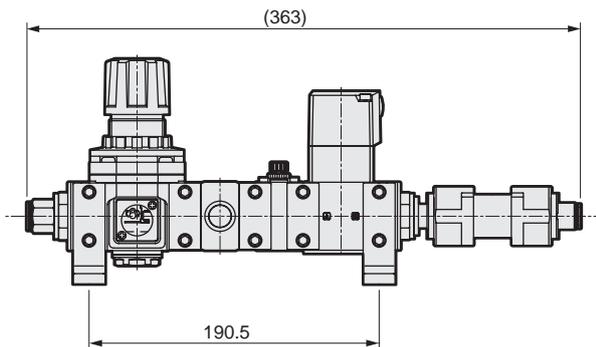
● CAU30-□-2-R□GY49N1V□F (Regulator, pressure gauge, needle, valve, filter)



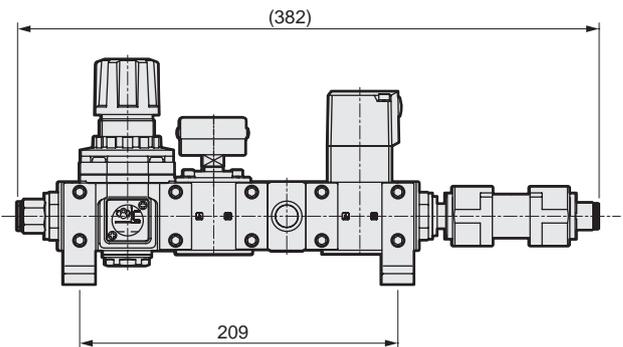
Port size dimensions table

Port size	A	B
H10	41	132
H12	42.5	133.5

● CAU30-□-2-R□N1V□F  
(Regulator, needle, valve, filter)



● CAU30-□-2-R□GY49V□F  
(Regulator, pressure gauge, valve, filter)

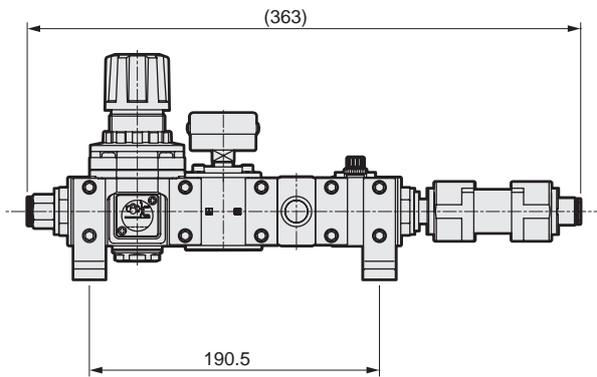


\* Dimensions of "T6" and "PX1" pressure gauges are the same as those of "GY49".

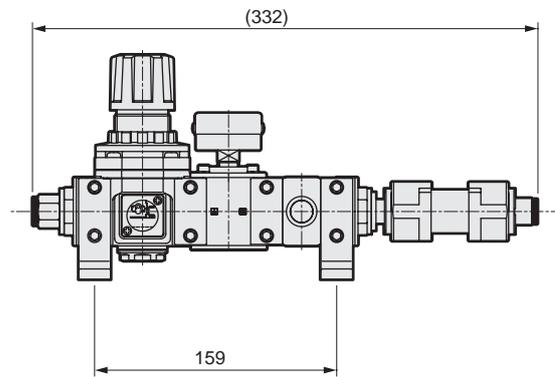
### Dimensions (2 systems)



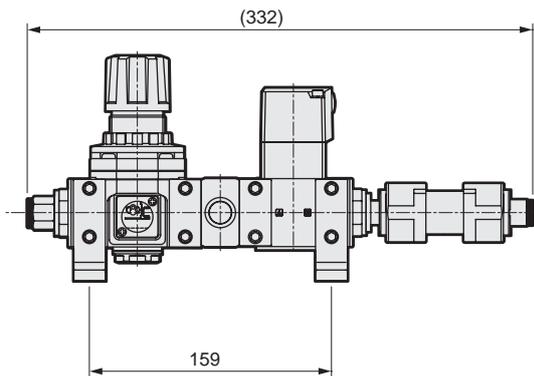
- CAU30-□-2-R□GY49N1F  
(Regulator, pressure gauge, needle, filter)



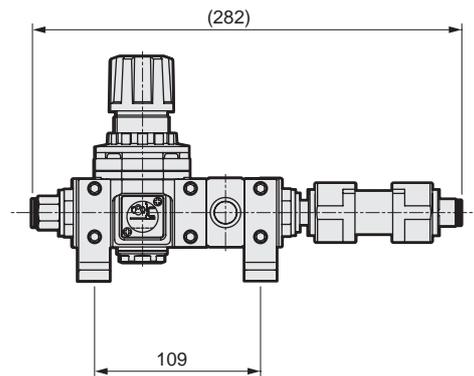
- CAU30-□-2-R□GY49F  
(Regulator, pressure gauge, filter)



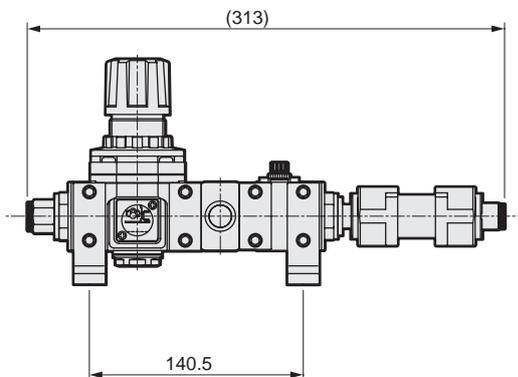
- CAU30-□-2-R□V□F  
(Regulator, valve, filter)



- CAU30-□-2-R□F  
(Regulator, filter)



- CAU30-□-2-R□N1F  
(Regulator, needle, filter)



SCPD3
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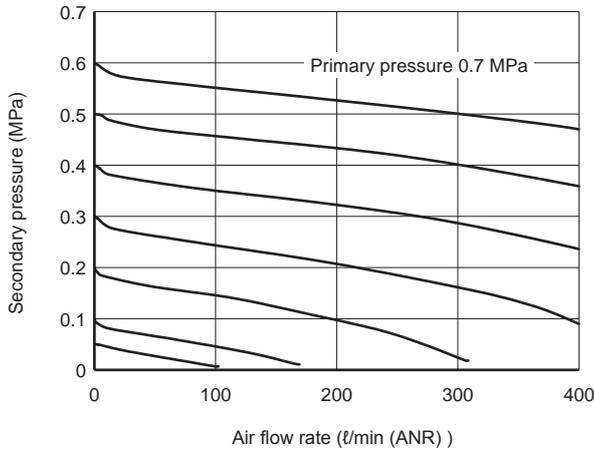
\* Dimensions of "T6" and "PX1" pressure gauges are the same as those of "GY49".

# Clean Air Unit Series

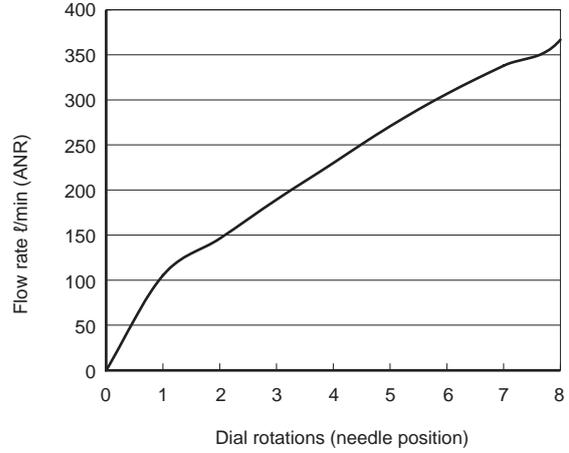
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## Flow characteristics

● Regulator's set pressure and the corresponding flow characteristics



● Dial rotations (needle position) and the corresponding flow characteristics



Note 1: Flow characteristics when the regulator, pressure gauge, needle valve, air operated valve, and filter are assembled and the needle is fully open.



# Pneumatic components

Always read this section before use.

## Design & selection

### 1. Common

#### ⚠ WARNING

- Use this product in accordance with the specifications range.
- This product is designed for industrial use. Do not use it in medical or human life related devices and circuits.
- Take measures to prevent harm to operators or objects if this product fails.
- Understand compressed air features before designing a pneumatic circuit.
- For detailed cautions, refer to the catalog of each equipment.

#### ⚠ CAUTION

- Check the working circuit and working fluid. Install dryer, air filter and oil mist filter on the pneumatic pressure source side, and remove water and oil.

### 2. Regulator

#### ⚠ WARNING

- Always provide a safety system in locations where an output pressure that exceeds the regulator set pressure can cause damage to or malfunction in the secondary-side equipment.
- If the regulator cannot be used with the secondary side sealed circuit or balance circuit, contact CKD. Depending on use, such as when back pressure rises, set pressure may increase by 0.2 MPa.

#### ⚠ CAUTION

- When the primary pressure is released, the secondary pressure flows to the primary side. If flowing of the secondary side fluid to the primary side causes faults in other devices, provide a circuit to maintain the pressure.
- The setting range for the regulator's secondary side pressure should be within 85% of that of the primary side. Otherwise, the pressure drop may increase.
- When used in applications where primary pressure is 0.7 MPa and over, keep the difference between primary pressure and set pressure within 0.4 MPa. Pulsation could occur if the difference in pressures is large and secondary piping is large. If so, lower primary side pressure or restrict the secondary line. Contact CKD if the pulsation still does not cease.

### 3. Needle

#### ⚠ CAUTION

- This valve cannot be used as a stop valve that has no leakage. Slight leakage is allowed in product specifications.

### 4. Air operated valve

#### ⚠ WARNING

- This product cannot be used as an emergency shut-off valve. The valves listed in this catalog are not designed as valves to ensure safety such as emergency shutoff valves. When using in such a system, always take separate measures that will accurately ensure safety.

#### ⚠ CAUTION

- External pilot air
  - (1) Measure against drain - A large amount of drain (water, oxidized oil, tar and foreign matter) is contained in compressed air. This creates a factor that significantly reduces the reliability of the pneumatic components. As measures against drain, improve air quality (clean air) by dehumidifying with an after cooler or dryer, removing foreign matter with a filter, and removing tar with a tar removal filter, etc.
  - (2) Filter - Install a filter with a 5 μm or less filter element.

### 5. Inline clean filter

#### ⚠ WARNING

- Do not use this product in an atmosphere containing organic solvents or chemicals, etc., or where the product could come in contact with them. Not observing this could damage the polyamide housing.

#### ⚠ CAUTION

- Do not flow over the max. flow rate. Not observing this could degrade the filtration accuracy or damage element membrane.
- This device cannot be used as an absolute filter. Filtration accuracy is 99.99% within specified conditions. Do not use the product if foreign matter must strictly be kept out (e.g., direct blowing on wafers).
- Alcohol is used in the manufacturing line of some parts of the product.

\* For safety precautions for the digital pressure sensor (PPX-R10N-6M-P12), refer to "Pneumatic, Vacuum and Auxiliary Components (No.CB-024SA)."

SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R.(module unit)
Clean F.R
Precision R
Press gauge Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/ tube
<b>Clean air unit</b>
Pressure sensor
Flow rate sensor
Valve for air blow
Ending

## Mounting / Installation / adjustment

### 1. COMMON

#### ⚠ CAUTION

- Open the package in a clean room.
  - This product is packed in a cleanroom. It is recommended that the package is opened immediately before making the piping in the clean room.
- Install the product avoiding direct sunlight.
- Do not install this product in a location where it is subjected to vibrations or shocks.
- Securing of maintenance space
  - Secure sufficient space for maintenance and inspection.
- Always thoroughly read the instruction manual before installing this product.
- Check the flow direction with arrow and connect correctly.
- Pipe so no excessive force is applied to the product.
  - Do not apply tension, pressure, bending, or external force by tube etc., during installation and use.
- Select correct piping tube.
  - Use CKD's soft nylon tube and urethane tube.
  - Contact CKD for other fluorine resin tube, etc.
- Securely insert a tube into the push-in fitting before use.
- When supplying compressed air for the first time after connecting pipes, do not apply high pressure suddenly.
  - Connected piping could be dislocated and tubing could bounce.
- Flush and clean the pipes when using the pipe.
  - Dirt or foreign materials in piping will lower product performance.
- Air quality: Compressed air of JIS B 8392-1: 2012 Class 1.3.1 is recommended.
  - Use compressed air that does not contain oxidized oil, tar and carbon from the air compressor.
  - Use CKD's clean air system components according to your application.

Compressed air quality grade by JIS B 8392-1: 2012

Grade	Solid particle			Humidity and moisture		Oil	
	Max. number of particles in 1 m <sup>3</sup> according to the particle size d (μm)			Pressure dew point	Water content concentration Cw	Total oil concentration	
	0.1 < d ≤ 0.5	0.5 < d ≤ 1.0	1.0 < d ≤ 5.0	mg/m <sup>3</sup>	°C	g/m <sup>3</sup>	mg/m <sup>3</sup>
0	Conditions stricter than Grade 1 to be specified by user or supplier.						
1	≤ 20,000	≤ 400	≤ 10	-	≤ -70	-	≤ 0.01
2	≤ 400,000	≤ 6,000	≤ 100	-	≤ -40	-	≤ 0.1
3	-	≤ 90,000	≤ 1,000	-	≤ -20	-	≤ 1
4	-	-	≤ 10,000	-	≤ +3	-	≤ 5
5	-	-	≤ 100,000	-	≤ +7	-	-
6	-	-	-	0 < Cp ≤ 5	≤ +10	-	-
7	-	-	-	5 < Cp ≤ 10	-	Cw ≤ 0.5	-
8	-	-	-	-	-	0.5 < Cw ≤ 5	-
9	-	-	-	-	-	5 < Cw ≤ 10	-
X	-	-	-	Cp > 10	-	Cw > 10	> 5

Details have changed due to revision of JIS B 8392-1: 2003 to JIS B 8392-1: 2012.

For example,

"grade 1:2:1" means:

- Solid particles 0.1 to 0.5 μm are 20,000 particles or less, 0.5 to 1.0 μm are 400 particles or less, and 1.0 to 5.0 μm are 10 particles or less
- Pressure dew point -40°C or less
- Oil concentration 0.01 mg/m<sup>3</sup> or less

- Do not move or swing the product holding the adjustment knob, clean filter or pressure gauge on the regulator.
  - Hold the body when carrying the product.

- For detailed cautions, refer to the catalog of each equipment.

### 2. Needle

#### ⚠ CAUTION

- Do not turn the dial forcibly when fully closing or opening it. Do not use the lock nut to adjust the needle. Otherwise this could cause needle galling or damage.
- Check that lock nuts are not loose.
- Check the needle valve speed of rotation.
  - Turning the needle too much may cause galling or damage although the product has a retainer mechanism. Check the number of rotations for the product used.
- Fully close the needle, and open to adjust speed.
  - The needle closes when turned to the right and opens when turned to the left.

### 3. Air operated valve

#### ⚠ CAUTION

- Check the supply port on the pilot operation side when piping.

Model No.	Pilot operation side supply port
CAU30-*V1*	X
CAU30-*V3*	X and Y

- Refer to the table below for tightening torque of the pilot air piping.

Nominal pipe diameter	Recommended pipe tightening torque (N·m)
Rc1/8	7 to 9

- Grease is applied to the pilot valve. Perform an appropriate exhaust treatment of pilot air when using the single acting in a clean room.

### 4. Pressure gauge

#### ⚠ CAUTION

- Repeated sudden increases and decreases in pressure and pressure pulsation must be avoided because it could adversely affect pressure gauge life.

\* For safety precautions for the digital pressure sensor (PPX-R10N-6M-P12), refer to "Pneumatic, Vacuum and Auxiliary Components (No.CB-024SA)."

## During use & maintenance

### 1. COMMON

#### WARNING

- Use within the max. working pressure and max. operating pressure ranges.

#### CAUTION

- Carefully read the instruction manual before starting use and maintenance.
- Before conducting maintenance, stop the supply of the fluid and make sure that there is no residual pressure.
- Do not disassemble and modify the products.
- Do not use products as footing or place any heavy objects on top of the products.
- Storage
  - Do not store this product in a hot, humid atmosphere or atmospheric conditions outside of the specified range for a prolonged period of time. Storing the product in such an environment can result in deterioration of the resin and rubber.
  - Contact CKD when storing products outside of the specified range.
- For detailed cautions, refer to the catalog of each equipment.

### 2. Air operated valve

#### WARNING

- To ensure optimum use, inspect the product every six months. This frequency varies with the frequency of use.

#### CAUTION

- If the product has not been in use for over one month, perform a test run before starting actual operation.
- Pilot air pressure
  - Use the product with a pilot air pressure in the specified range.

### 3. Inline clean filter

#### WARNING

- Prevent the generated ozone from passing through the filter. Otherwise the filter element may be degraded. Take care especially when using an ozone generator (e.g., ionizer) together.
  - (1) Do not install it in the upstream of the filter.
  - (2) When installing it in the downstream of the filter, stop air while neutralizing static electricity since generated ozone may flow back.

- Check the filter periodically and replace it if necessary.

#### CAUTION

- Performance could drop if the filter element is clogged. Regularly inspect and replace the element.
- Check the resin for cracks, damage, and other deterioration periodically.
  - Cracks, damage or other deterioration could result in breakage, so if found, replace with a new product.

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MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R.(module unit)
Clean F.R
Precision R
Press gauge Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/tube
Clean air unit
Pressure sensor
Flow rate sensor
Valve for air blow
Ending