

Clean air unit

CAU30 Series

● Port size: ø10, ø12

RoHS CAD

Common specifications

Item		Clean air unit
Working fluid		Compressed clean air
Max. working pressure	MPa	0.7 (≈100 psi, 7 bar) (0.5 (≈73 psi, 5 bar) for low pressure)
Proof pressure	MPa	1 (≈150 psi, 10 bar)
Ambient / fluid temperature	°C	5 (41°F) to 45 (113°F)
Set pressure range	MPa	0.05 (≈7.3 psi, 0.5 bar) to 0.6 (≈87 psi, 6 bar) (0.05 (≈7.3 psi, 0.5 bar) to 0.3 (≈44 psi, 3 bar) for low pressure)
Port size (IN/OUT)		ø10,ø12
Filtration rating	μm	0.01 (removal efficiency 99.99%)
Processing flow rate	ℓ/min	400 *1
Differential pressure-resistant *2	MPa	0.5 (≈73 psi, 5 bar)
Dial value (needle position)	(times)	12 and over
Pilot air pressure for valve	MPa	0.4 (≈58 psi, 4 bar) to 0.5 (≈73 psi, 5 bar)
Pilot port size for valve		Rc1/8
Oil-prohibited specifications		Oil-prohibited fluid passage section

*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 switch specifications (digital pressure gauge: PPX-R10N-6M-P12)

Item		Digital pressure sensor
Power supply voltage		12 to 24 VDC ±10% Ripple P−P 10% or less
Power consumption		Normal: 720 mW or less (current consumption 30 mA or less at 24 V power supply voltage) ECO mode: 480 mW of less at STD (current consumption 20 mA or less at power supply voltage 24 V), 360 mW or less at FULL (current consumption 15 mA or less at power supply voltage 24 V)
Comparison outputs (comparison output 1, comparison output 2)		NPN transistor/open collector · Max. inrush current: 100 mA · Applied voltage: 30 VDC or less (comparison output - 0 V interval) · Residual voltage: 2 V or less (at inrush current 100 mA)
	Output operation	Select NO/NC with key operation
	Output mode	EASY mode/hysteresis mode/window comparator mode
	Hysteresis	Min. 1 digit (variable)
	Repeatability	±0.2% F.S. (within ±2 digits)
	Response time	2.5 ms, 5 ms, 10 ms, 25 ms, 50 ms, 100 ms, 250 ms, 500 ms, 1000 ms, 5000 ms select by key operation
	Short circuit protection	Equipped
Display		4-digit + 4-digit 3-color LCD display (display updating cycle: 250 ms, 500 ms, 1000 ms select by key operation)
Temp characteristics at +20°C		Within ±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 gauge	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 gauge	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

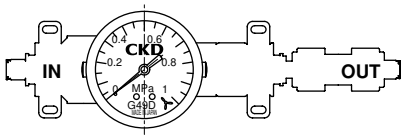
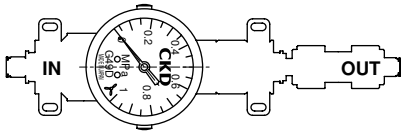
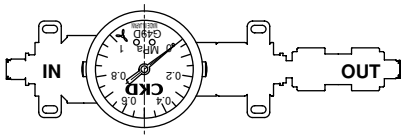
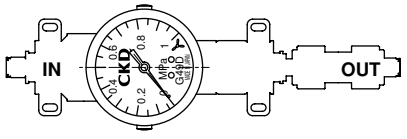
How to order

CAU30 - H10 - 2 - R1 T6N1V1 F - X1

- CAU30: Model No.
- H10: Ⓐ Port size
- 2: Ⓑ System
- R1: Ⓒ Regulator
- T6N1V1: Ⓓ Assembled option
- F: Filter
- X1: Ⓔ Pressure gauge orientation

Code	Description
Ⓐ Port size	
H10	ø10
H12	ø12
Ⓑ System	
Blank	1 system
2	2 system
Ⓒ Regulator *1	
R1	Setting 0.05 to 0.6 MPa Pressure relief
R2	Setting 0.05 to 0.6 MPa Non-relief
RL1	Setting 0.05 to 0.3 MPa (for low pressure) Relief
RL2	Setting 0.05 to 0.3 MPa (for low pressure) Non-relief

Ⓓ Assembled option *2		
Pressure gauge	Blank	Without pressure gauge block
	T6 *3	With pressure outlet port blocked (Pressure outlet port is left open)
	GY49 *4	With analog pressure gauge assembled (G49D-6-□-P94)
	PX1 *5	With 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

Ⓔ Pressure gauge orientation *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 code is selected, only a pressure outlet port block is attached. The pressure outlet port size is Rc 1/8.
*4: If the "GY49" pressure gauge is selected together with the "RL1" or "RL2" regulator, the pressure gauge will be for low pressure (0 to 0.4 MPa pressure range).
(It will be for a standard pressure in the -0.100 to 1.000 MPa pressure range in the case of a "PX1" pressure sensor.)
*5: Output of the digital pressure sensor assembly (PPX) is NPN transistor 2 output points (made to order).
*6: The figure for pressure gauge orientation uses a "GY49" pressure gauge as an example. The same orientation applies to the "PX1" pressure sensor.

[Example of model No. 1]

CAU30-H10-R1GY49N1V1F

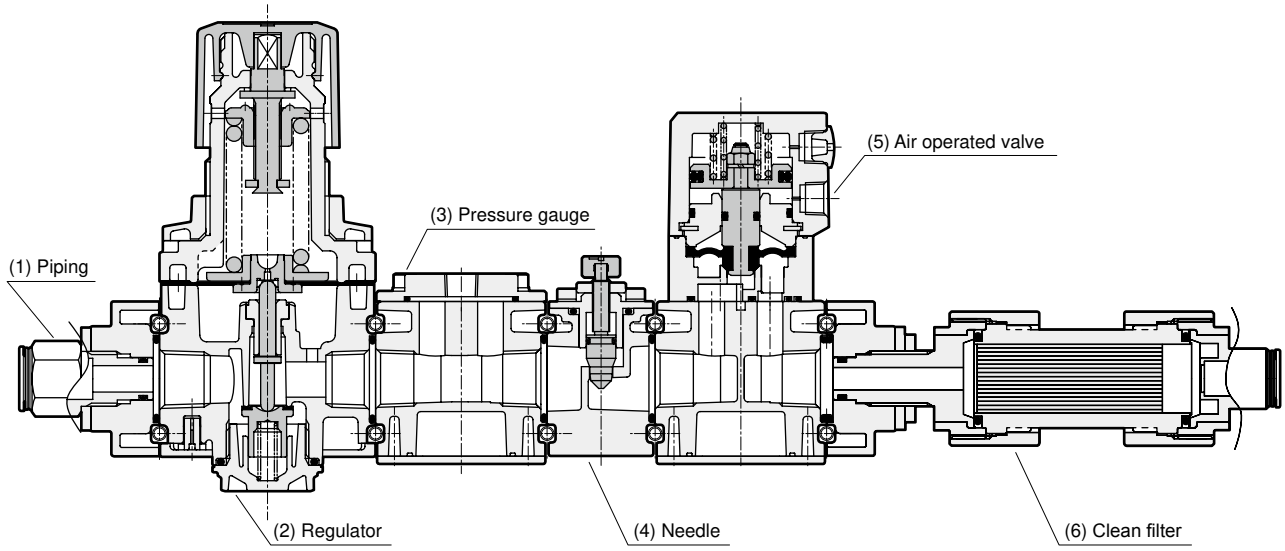
- Ⓐ Port size : ø10
- Ⓑ System : 1 system
- Ⓒ Regulator : 0.05 to 0.6 MPa relief
- Ⓓ Assembled option : Analog pressure gauge (G49D), needle, air operated valve (single acting)
- Ⓔ Pressure gauge orientation : Standard

[Example of model No. 2]

CAU30-2-H12-RL1PX1V3F-X2

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

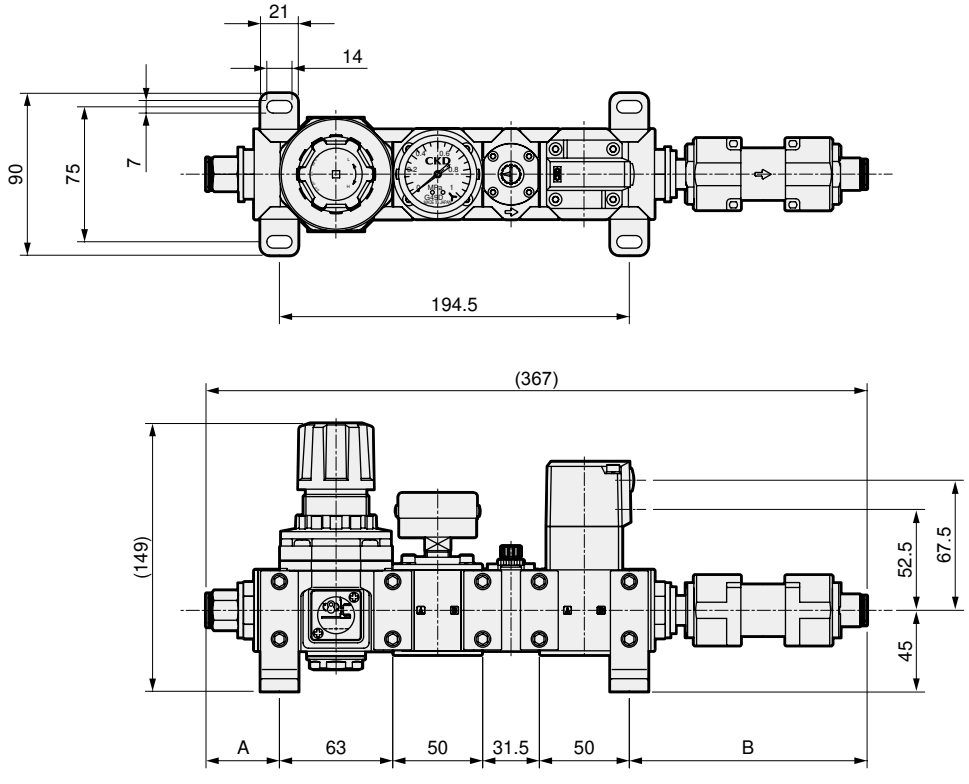
Internal structure and fluid passage materials



No.	Part name		Fluid passage material
(1)	Piping		Aluminum alloy, copper alloy (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, copper alloy (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) CAD

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



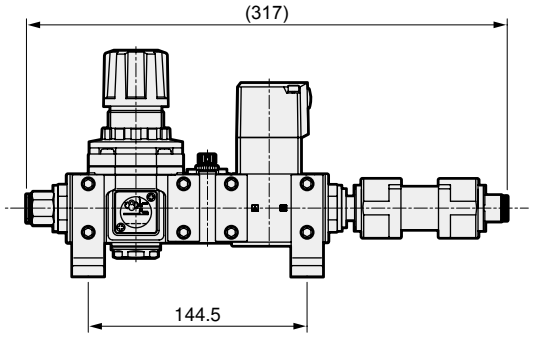
* Dimensions of “T6” and “PX1” pressure sensors are the same as those of “GY49”.

Port size dimensions table

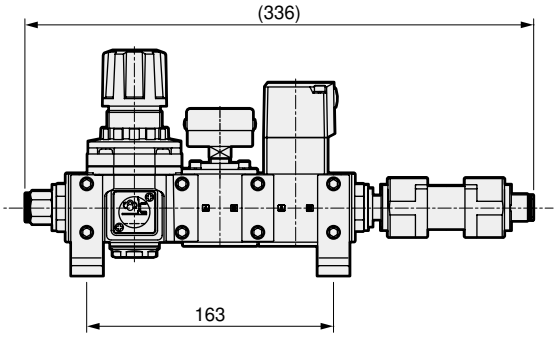
Port size	A	B
H10	41	132
H12	42.5	133.5

Dimensions (1 system)

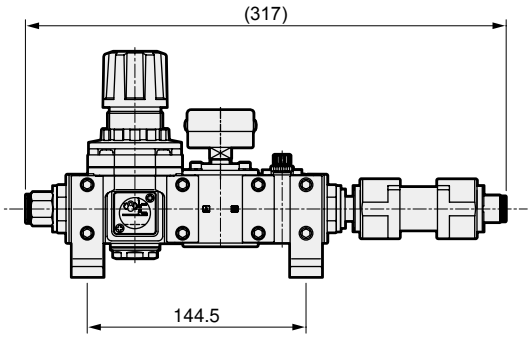
● CAU30-□-R□N1V□F
(regulator, needle, valve, filter)



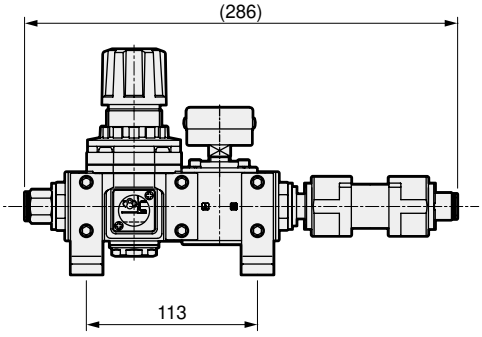
● CAU30-□-R□GY49V□F
(regulator, pressure gauge, valve, filter)



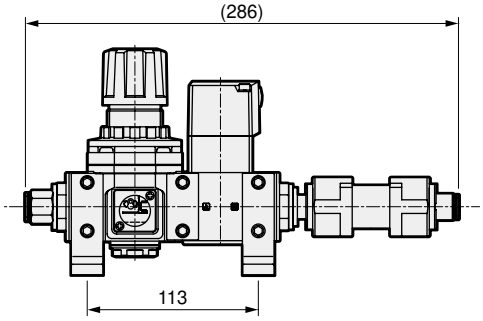
● CAU30-□-R□GY49N1F
(regulator, pressure gauge, needle, filter)



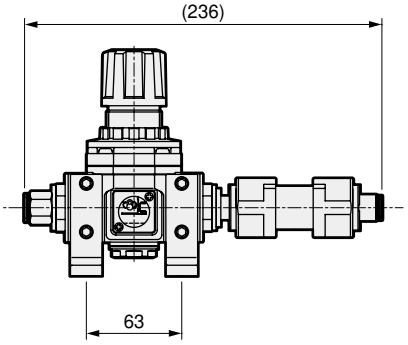
● CAU30-□-R□GY49F
(regulator, pressure gauge, filter)



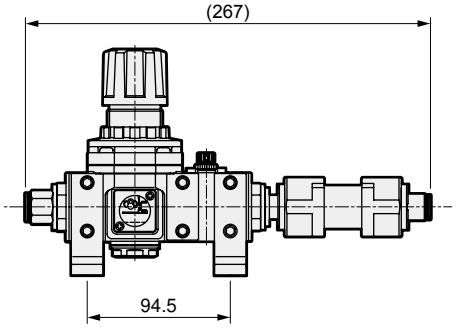
● CAU30-□-R□V□F
(regulator, valve, filter)



● 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”.