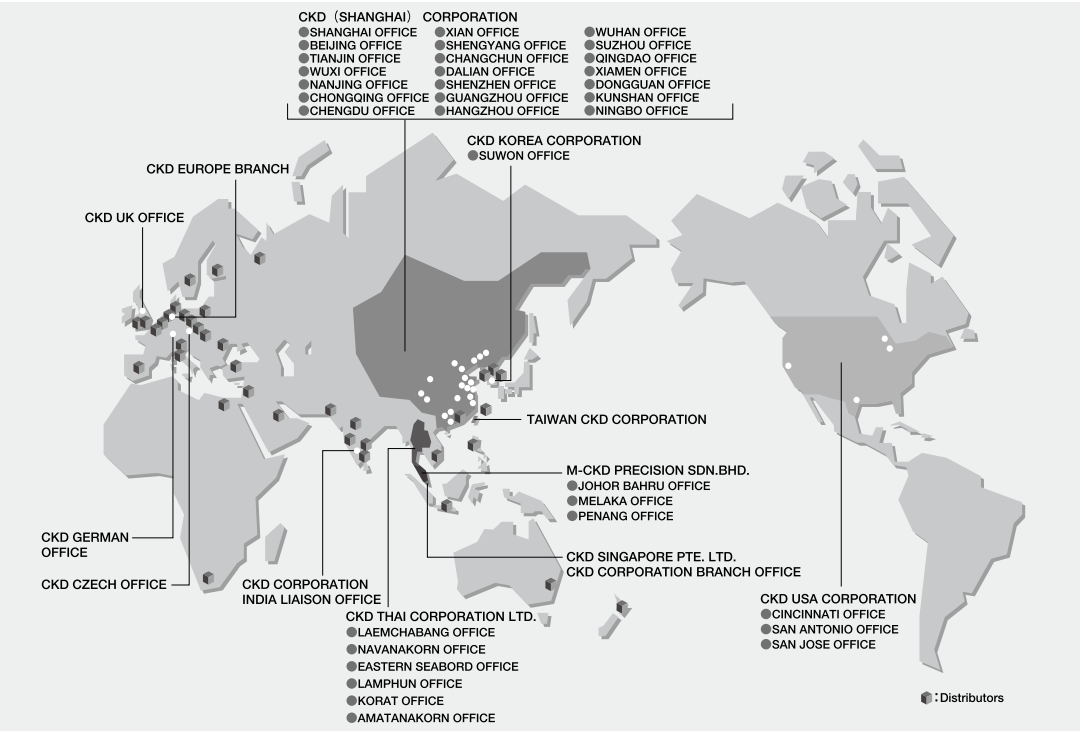
WORLD-NETWORK



CKD Corporation

Website http://www.ckd.co.jp/

☐ OVERSEAS SALES ADMINISTRATION DPT.
OVERSEAS BUSINESS DIV. 2-250 Ouji Komaki, Aichi 485-8551, Japan
☐ PHONE +81-(0)568-74-1338 FAX +81-(0)568-77-3461

U.S.A.
CKD USA CORPORATION
● HEADQUARTERS
4080 Winnetka Avenue, Rolling Meadows, IL 60008 USA
PHONE +1-847-368-0539 FAX +1-847-788-0575

EUROPE
CKD EUROPE BRANCH
De Fruittuinen 28 Hoofddorp 2132NZ The Netherlands
PHONE +31-(0)23-5541490 FAX +31-(0)23-5541491

Malaysia
M-CKD PRECISION SDN.BHD.
● HEADQUARTERS
Lot No.6,Jalan Modal 23/2, Seksyen 23, Kawasan, MIEL,
Fasa 8, 40300 Shah Alam,Selangor Darul Ehsan, Malaysia
PHONE +60-(0)3-5541-1468 FAX +60-(0)3-5541-1533

Thailand
CKD THAI CORPORATION LTD.
● SALES HEADQUARTERS-BANGKOK OFFICE
Suwan Tower, 14/1 Soi Saladaeng 1, North Sathorn Rd., Bangrak,
Bangkok 10500 Thailand
PHONE +66-(0)2-267-6300 FAX +66-(0)2-267-6305

Singapore
CKD SINGAPORE PTE. LTD.
No.33 Tannery Lane #04-01 Hoesteel Industrial Building Singapore 347789
PHONE +65-67442623 FAX +65-67442486
CKD CORPORATION BRANCH OFFICE
No.33 Tannery Lane #04-01 Hoesteel Industrial Building Singapore 347789
PHONE +65-67447260 FAX +65-68421022

Taiwan
TAIWAN CKD CORPORATION
16F-3, No.109, Sec.1 Jhongshan Rd., Shinjhuang City, Taipei County 242,
Taiwan(R.O.C)
PHONE +886-(0)2-8522-8198 FAX +886-(0)2-8522-8128

China
CKD (SHANGHAI) CORPORATION
● SALES HEADQUARTERS / SHANGHAI OFFICE
Room 601,Yuan Zhong Scientific Reseach Building,
1905 Hongmei Road,Shanghai, 200233, China
PHONE +86-(0)21-61911888 FAX +86-(0)21-60905356

Korea
CKD KOREA CORPORATION
● HEADQUARTERS
3rd FL, Sam Young B/D, 371-20
Sinsu-Dong, Mapo-Gu, Seoul, 121-110, Korea
PHONE +82-(0)2-783-5201～5203 FAX +82-(0)2-783-5204

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2011.4.AAC

CKD

Modular Type FRL Standard White Series

CKD

Now available in new white color **New Product**

Modular Type FRL
Standard White Series

MODULAR TYPE FRL STANDARD WHITE SERIES

CKD Corporation

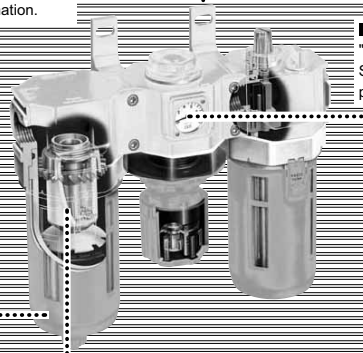
Enhanced Systems Using Full-Scale Modules

Systems are easily upgraded using unified key dimensions and a diverse range of options and variations.

* Indicates series model no. 1, 2, 3, 4, 5, 6, 7, 8.
This page shows only the outline. Refer to contents later in this catalog for details.

Combination

"C*000-W"
FRL combination.



■ Lubricator
"L*000-W"
Supplies oil mist to pneumatic lines.

■ Air filter
"F*000-W"
Effectively removes dust and moisture.

■ Regulator
Reverse type "R*000-W"
Depressurizes supply pressure and supplies stable set pressure.

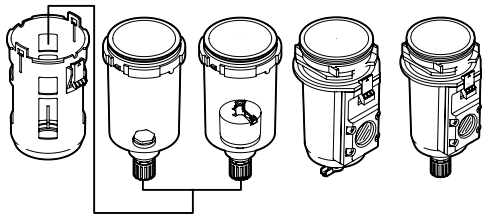
Element — For air filter F*000-W/Filter regulator W*000-W/W*100-W

■ Standard (5μm) element "blank"
This long-life element filters out dirt and foreign particles, etc., from air.

■ Optional submicron 0.3μm element "Y"
This dedicated element effectively separates tar and carbon. (Non-reusable)

Bowl, bowl guard and drain discharge — For air filter F*000-W, oil mist filter M*000-W, filter regulator W*000-W, W*100-W

* A bowl guard is installed on the plastic bowl as a standard.



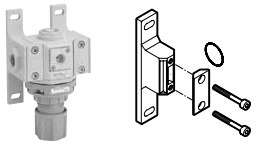
▲ Plastic bowl and bowl guard

		Bowl			
		Polycarbonate bowl	Nylon bowl	Metal bowl	Metal bowl with manual drain cock
Drainage	Manual drain cock	Blank (standard)	Z	M	M1
	Automatic drain with manual override NO type	F	FZ	FM*	FM1
	Automatic drain with manual override NC type	F1	F1Z	F1M*	F1M1

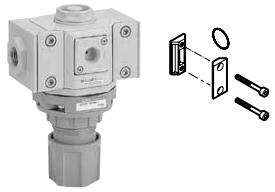
▲ Metal bowl

Refer to page 18 for details on chemical resistance of the bowl.
Metal bowl not available for 1000 Series.
The asterisk (*) indicates the manual cock with an Rc1/4 port.

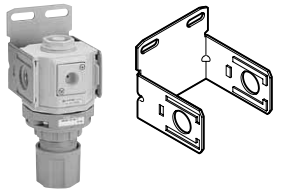
Mounting bracket — Page 152



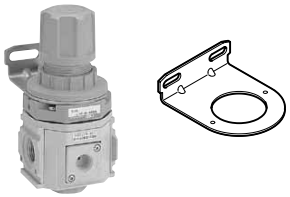
■ T type bracket (B110-W)
This bracket has two holes on the top and bottom to fix the device, together with the system upgrade, to a wall. This brake cylinder has oilless specifications. The 3000-W Series and 4000-W Series are coupled using B410-W. Use B410-W in that case.



■ Joiner "C*000-J*00-W"
Used as a fitting for system configuration.
3000-W Series and 4000-W series can be connected using J400-W.



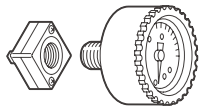
■ C type bracket "B*20"
This bracket fixes isolated parts just by fitting them in.



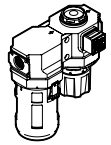
■ L type bracket "B*30"
This bracket fixes parts using the panel mounting nut on the filter regulator or regulator.

Pressure gauge — Page 199 to 209 — For air filter F*000-W/Filter regulator W*000-W/W*100-W

■ Standard built in pressure gauge "G401-W"
Pressure gauge protrusions are eliminated while maintaining performance equivalent to JIS Class 3.



■ Pressure gauge with safety mark "G*0D"
The pressure's actual usage range is displayed with red and green zones making visible control easier.
* Can be assembled using gauge plug.



■ Pressure switch with digital display "PPD"
This unit functions as the pressure detector and display, the ON-OFF switch, and the switch's external output.
* Integration is optional. Option "R1"

Filter·Regulator

Standard type "W*000-W" (Page 69)
Reverse type "W*100-W" (Page 77)
Space efficient F.R. combination.

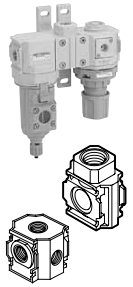
Oil mist filter — Page 103

"M*000-W" "MX000-W"
Effectively removes oil and oil mist from pneumatic lines.

Shut-off valve — Page 143 to 148

"V*000-W"
The pneumatic line is shut off and residual pressure is released.
Maintenance work This is also used to prevent accidents from residual pressure during maintenance.
V3010-W with lock out also available

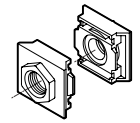
Distributor — Page 153



■ One way branch type "D*01W"
This distributor, which is installed facing either upward or downward, branches pneumatic pressure piping. The effective area of the branch is large.
■ 4 way branch type "D300-W"
The pipe branches in four directions.
* For 3000-W/4000-W Series

Piping adaptor — Page 155

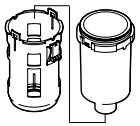
Straight type



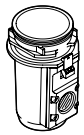
L type

■ Straight type "A*00-W"
Using an adapter, isolated devices are removed for maintenance instead of piping being removed.
The adapter is convenient for changing the connection bore size of the isolated device.
■ L type "A*01-W"
The device's in and out ports are turned by 90° and piped from top or bottom.
* Consult with CKD for vertical direction piping.

Bowl/bowl guard — For lubricator L*000-W



■ Plastic bowl and bowl guard
Material: "Blank" for polycarbonate, option "Z" for standard nylon
* Option "C" for manual drain cock
* A bowl guard is installed on the plastic bowl as a standard.



■ Metal bowl
Use the metal bowl in an atmosphere where plastic bowls cannot be used.
Material: Aluminum Option "M"
* Metal bowl not available for 1000 Series.

Pressure switch — Page 137 to 142

Pneumatic line pressure is repeatedly and accurately checked.

"P4000-W"

"PPD"

"PPX"

Check with CKD for other system upgrades.

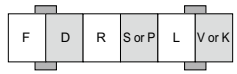
Series variation

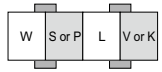
F.R.L. unit
(Combination)

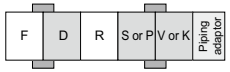
Modular type FRL

Series	Model no.	Available combinations F	R	L	W	M	Available options D	S	P	V	K	Combination of options (U***) D	S	P	V	K	DS	DP	DV	DK	DSV	DSK	DPV	DPK	SV	SK	PV	PK	Combination position
		Filter	Regulator	Lubricator	Filter/ Regulator	Oil mist filter	Distributor	Pressure switch		Shut-off valve																			
● F.R.L. combination	C1000-W	F1000-W	R1000-W	L1000-W			D101-W	P1100-W		V1000-W		○	○		○		○		○		○				○			
	C2000-W	F2000-W	R2000-W	L3000-W			D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	C2500-W	F3000-W	R2000-W	L3000-W			D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	C3000-W	F3000-W	R3000-W	L3000-W			D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	C4000-W	F4000-W	R4000-W	L4000-W			D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Note 5	C4000-20-W	F4000-W	R4000-W	L4000-W			D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	C6500-W	F6000-W	R6000-W	L8000-W			D801-W	P8100-W			V6010-W	○	○			○	○			○		○				○			
P.21	C8000-W	F8000-W	R8000-W	L8000-W			D801-W	P8100-W			V6010-W	○	○			○	○			○		○				○			
● WL combination	C1010-W			L1000-W	W1000-W			P1100-W		V1000-W			○		○										○			
	C2010-W			L3000-W	W2000-W			P4100-W	P4000-W	V3000-W	V3010-W		○	○	○	○										○	○	○	○	
	C3010-W			L3000-W	W3000-W			P4100-W	P4000-W	V3000-W	V3010-W		○	○	○	○										○	○	○	○	
	C4010-W			L4000-W	W4000-W			P4100-W	P4000-W	V3000-W	V3010-W		○	○	○	○										○	○	○	○	
Note 5	C4010-20-W			L4000-W	W4000-W			P4100-W	P4000-W	V3000-W	V3010-W		○	○	○	○										○	○	○	○	
P.29	C8010-W			L8000-W	W8000-W			P8100-W			V6010-W		○			○										○			
● FR combination	C1020-W	F1000-W	R1000-W				D101-W	P1100-W		V1000-W		○	●		○		●		○		○				○			
	C2020-W	F2000-W	R2000-W				D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	
	C2520-W	F3000-W	R2000-W				D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	
	C3020-W	F3000-W	R3000-W				D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	
	C4020-W	F4000-W	R4000-W				D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	
Note 5	C4020-20-W	F4000-W	R4000-W				D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	
	C6020-W	F6000-W	R6000-W				D801-W	P8100-W			V6010-W	○	●			○	●			○		○				○			
P.35	C8020-W	F8000-W	R8000-W				D801-W	P8100-W			V6010-W	○	●			○	●			○		○				○			
● FMR combination	C1030-W	F1000-W	R1000-W			M1000-W	D101-W	P1100-W		V1000-W		○	●		○		●		○		○				○			
	C2030-W	F2000-W	R2000-W			M2000-W	D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	
	C2530-W	F3000-W	R2000-W			M3000-W	D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	
	C3030-W	F3000-W	R3000-W			M3000-W	D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	
	C4030-W	F4000-W	R4000-W			M4000-W	D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	
Note 5	C4030-20-W	F4000-W	R4000-W			M4000-W	D401-W	P4100-W	P4000-W	V3000-W	V3010-W	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	
	C6030-W	F6000-W	R6000-W			M6000-W	D801-W	P8100-W			V6010-W	○	●			○	●			○		○				○			
P.41	C8030-W	F8000-W	R8000-W			M8000-W	D801-W	P8100-W			V6010-W	○	●			○	●			○		○				○			
● WM combination	C1040-W				W1000-W	M1000-W		P1100-W		V1000-W			○		○										○			
	C2040-W				W2000-W	M2000-W		P4100-W	P4000-W	V3000-W	V3010-W		○	○	○	○										○	○	○	○	
	C3040-W				W3000-W	M3000-W		P4100-W	P4000-W	V3000-W	V3010-W		○	○	○	○										○	○	○	○	
	C4040-W				W4000-W	M4000-W		P4100-W	P4000-W	V3000-W	V3010-W		○	○	○	○										○	○	○	○	
Note 5	C4040-20-W				W4000-W	M4000-W		P4100-W	P4000-W	V3000-W	V3010-W		○	○	○	○										○	○	○	○	
P.47	C8040-W				W8000-W	M8000-W		P8100-W			V6010-W		○			○										○			
● RM combination	C1050-W		R1000-W			M1000-W																							
	C2050-W		R2000-W			M2000-W																							
	C2550-W		R2000-W			M3000-W																							
	C3050-W		R3000-W			M3000-W																							
	C4050-W		R4000-W			M4000-W																							
Note 5	C4050-20-W		R4000-W			M4000-W																							
	C6050-W		R6000-W			M6000-W																							
P.53	C8050-W		R8000-W			M8000-W																							
● FM combination	C1060-W	F1000-W				M1000-W																							
	C2060-W	F2000-W				M2000-W																							
	C3060-W	F3000-W				M3000-W																							
	C4060-W	F4000-W				M4000-W																							
Note 5	C4060-20-W	F4000-W				M4000-W																							
	C6060-W	F6000-W				M6000-W																							
P.59	C8060-W	F8000-W				M8000-W																							
● FFM combination	C3070-W	F3000-W (5μm) F3000-W (0.3μm)				M3000-W																							
	C4070-W	F4000-W (5μm) F4000-W (0.3μm)				M4000-W																							
Note 5	C4070-20-W	F4000-W (5μm) F4000-W (0.3μm)				M4000-W																							
	C6070-W	F6000-W (5μm) F6000-W (0.3μm)				M6000-W																							
P.65	C8070-W	F8000-W (5μm) F8000-W (0.3μm)				M8000-W																							

Combination position

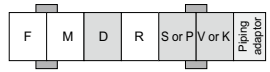






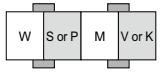
Note 3

The piping adapter can be assembled on models marked with a ●.



Note 3

The piping adapter can be assembled on models marked with a ●.



Note 1: Two T-brackets are included with the combination option.
Note 2: Mounting position of T type bracket will change depending on the combination.
Note 3: T-type bracket standard mounting position is on the inner side of the end product of each combination.
However, there will be an product mounted on the inner side of the piping adaptor when a piping adaptor is mounted on the end.
Note 4: Use the custom combination specification sheet for unavailable combinations and changes in bracket mounting position.
Note 5: Piping adaptor set A400-20-W can be installed on both ends of C40*0-20-W (port size Rc3/4)
The port size is "15" (Rc1/2) for products other than the piping adapter,
Note 6: Only upward branching is available for option "D".

⚠ Read to "Safety Precautions" before use.

Series variation

F.R.L. unit

(Filter･regulator)

Series		Model no.	Port size						Page
			1/8	1/4	3/8	1/2	3/4	1	
Modular type	● Filter･regulator 	W1000-W	●	●					69
		W2000-W		●	●				
		W3000-W		●	●				
		W4000-W		●	●	●			
		W8000-W					●	●	
	● Reverse filter･regulator 	W1100-W	●	●					77
		W2100-W		●	●				
		W3100-W		●	●				
		W4100-W		●	●	●			
		W8100-W					●	●	

(Filter)

Series		Model no.	Port size						Page
			1/8	1/4	3/8	1/2	3/4	1	
Modular type	● Filter 	F1000-W	●	●					85
		F2000-W		●	●				
		F3000-W		●	●				
		F4000-W		●	●	●			
		F6000-W					●	●	
		F8000-W					●	●	
	● Air filter･medium pressure 	FM3000-W		●	●				159
		FM4000-W		●	●	●			
		FM6000-W					●	●	
		FM8000-W					●	●	

(Oil mist filter)

Series		Model no.	Port size						Page
			1/8	1/4	3/8	1/2	3/4	1	
Modular type	● Oil mist filter 	M1000-W	●	●					95
		M2000-W		●	●				
		M3000-W		●	●				
		M4000-W		●	●	●			
		M6000-W					●	●	
		M8000-W					●	●	
	● High performance oil mist filter 	MX1000-W	●	●					103
		MX3000-W		●	●				
		MX4000-W		●	●	●			
		MX6000-W					●	●	
		MX8000-W					●	●	
	● Oil mist filter for medium pressure 	MM3000-W		●	●				165
		MM4000-W		●	●	●			
		MM6000-W					●	●	
		MM8000-W					●	●	

(Regulator)

Series		Model no.	Port size						Page
			1/8	1/4	3/8	1/2	3/4	1	
Modular type	● Regulator 	R1000-W	●	●					113
		R2000-W		●	●				
		R3000-W		●	●				
		R4000-W		●	●	●			
		R6000-W					●	●	
		R8000-W					●	●	
	● Reverse regulator 	R1100-W	●	●					121
		R2100-W		●	●				
		R3100-W		●	●				
		R4100-W		●	●	●			
		R6100-W					●	●	
		R8100-W					●	●	
	● Regulator for medium pressure 	RM3000-W		●	●				171
		RM4000-W		●	●	●			

(Lubricator)

Series		Model no.	Port size						Page
			1/8	1/4	3/8	1/2	3/4	1	
Modular type	● Lubricator 	L1000-W	●	●					129
		L3000-W		●	●				
		L4000-W		●	●	●			
		L8000-W					●	●	

Series variation

F.R.L. unit
(Other related components/attachments)

(Other related components)

Series	Model no.	Port size															Page
		ø4	ø6	ø8	ø10	ø12	1/16	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	
● Automatic drain	DT3000/4000-W									●	●						213
● Air pressure switch	P4000-W								●	●	●						137
	P*100-W							●	●	●	●	●	●				139
	APS-W							●									210
● Shut-off valve	V1000-W							●	●								143
	V3000-W								●	●	●						
● Shut-off valve with key hole (OSHA compliant)	V3010-W								●	●	●						146
	V6010-W											●	●				
● Slow start valve	V3301-W								●	●	●						149
	V3321-W								●	●	●						
● Thin pressure gauge	G401																199
● Pressure gauge with safety sign	G40D/50D							●	●								200
● Pressure gauge with limit gauge	G45D							●	●								201
	G41D							●	●								202
● General purpose pressure gauge	G49D・59D							●	●								203
● Pressure gauge for panel mount	G53D							●	●								205
● Pressure gauge with switch	G52D								●								207

(Attachments)

Series	Model no.	Applicable model	Page
● T type bracket	B110-W	1000 Series	152
	B310-W	2000/3000 Series	
	B410-W	4000 Series	
	B810-W	6000/8000 Series	
● C type bracket	B120	1000 Series	152
	B220	2000 Series	
	B320	3000 Series	
	B420	4000 Series	
	B620	6000 Series	
	B820	8000 Series	
● L type bracket	B130	1000 Series	152
	B230	2000 Series	
	B330	3000 Series	
	B430	4000/6000 Series	
● Joiner	C1000-J100-W	1000 Series	152
	C1000-J100-W	2000/3000/4000 Series	
	C8000-J800-W	6000/8000 Series	
● Distributor	D101-W	1000 Series	153
	D401-W	2000/3000/4000 Series	
	D801-W	6000/8000 Series	
	D300-W	2000/3000/4000 Series	
● Piping adaptor	A100-W	1000 Series	155
	A400-W	2000/3000/4000 Series	
	A800-W	6000/8000 Series	
● L type piping adapter	A101-W	1000 Series	156
	A401-W	2000/3000/4000 Series	
	A801-W	6000/8000 Series	

Series	Port size						Maximum flow rate m^3/min. (ANR) 0.1 1.0 10	Model no.	
	1/8	1/4	3/8	1/2	3/4	1		Manual drain	Automatic drain
FRL Combination 	●	●	●	●	●	●	0.45	C1000-6-W	-
		●					0.63	C1000-8-W	-
			●				1.2	C2000-8-W	C2000-8-W-F1
		●	●				1.7	C2000-10-W	C2000-10-W-F1
							1.28	C3000-8-W	C3000-8-W-F
							1.75	C3000-10-W	C3000-10-W-F
							2.4	C4000-10-W	C4000-10-W-F
							3.0	C4000-15-W	C4000-15-W-F
							7.0	C8000-20-W	C8000-20-W-F
							7.5	C8000-25-W	C8000-25-W-F

*Flow rate when supplied pressure is 0.7MPa, set pressure 0.5MPa, pressure drop 0.1MPa.

Air filter 	●	●	●	●	●	●	0.46	F1000-6-W	-
		●					0.61	F1000-8-W	-
			●				1.3	F2000-8-W	F2000-8-W-F1, Note 1
		●	●				1.7	F2000-10-W	F2000-10-W-F1, Note 1
							1.23	F3000-8-W	F3000-8-W-F
							1.5	F3000-10-W	F3000-10-W-F
							2.14	F4000-10-W	F4000-10-W-F
							3.0	F4000-15-W	F4000-15-W-F
							6.4	F8000-20-W	F8000-20-W-F
							6.8	F8000-25-W	F8000-25-W-F

*Flow rate when supplied pressure is 0.7MPa and pressure drop is 0.02MPa.
Note 1: Refer to the max. flow rate on page 13. for automatic drain “F1”

Oil mist filter 	●	●	●	●	●	●	0.15 (0.01μm)	M1000-6-W	-
		●					0.15 (0.01μm)	M1000-8-W	-
			●				0.25 (0.01μm)	M2000-8-W	M2000-8-W-F1
		●	●				0.25 (0.01μm)	M2000-10-W	M2000-10-W-F1
							0.36 (0.01μm)	M3000-8-W	M3000-8-W-F1
							0.36 (0.01μm)	M3000-10-W	M3000-10-W-F1
							0.825 (0.01μm)	M4000-10-W	M4000-10-W-F1
							0.825 (0.01μm)	M4000-15-W	M4000-15-W-F1
							2.6 (0.01μm)	M8000-20-W	M8000-20-W-F1
							2.6 (0.01μm)	M8000-25-W	M8000-25-W-F1

*This is the flow at supply pressure 0.7MPa pressure drop 0.01MPa.

Note: By combining a piping adapter with the 4000, 8000 Series, the port size can be increased by 1 size. Contact CKD for details. (available up to Rc3/4 for 4000 series , Rc1 1/4 for 8000 series)

Series	Port size						Maximum flow rate m³/min. (ANR) 0.1 1.0 10	Model no.	
	1/8	1/4	3/8	1/2	3/4	1		Manual drain	Automatic drain
Filter Regulator 	●	●	●	●	●	●	0.83	W1000-6-W	-
		●					1.15	W1000-8-W	-
			●				1.5	W2000-8-W	W2000-8-W-F1, Note 1
		●	●				2.0	W2000-10-W	W2000-10-W-F1, Note 1
							2.15	W3000-8-W	W3000-8-W-F
							2.43	W3000-10-W	W3000-10-W-F
							4.35	W4000-10-W	W4000-10-W-F
							4.75	W4000-15-W	W4000-15-W-F
							10.0	W8000-20-W	W8000-20-W-F
							10.0	W8000-25-W	W8000-25-W-F

*Flow rate when supplied pressure is 0.7MPa, set pressure 0.5MPa, and pressure drop is 0.1MPa.
Note 1: Refer to the max. flow rate on Page 13. for automatic drain “F1”

Series	Port size						Maximum flow rate m³/min. (ANR) 0.1 1.0 10	Model no.
	1/8	1/4	3/8	1/2	3/4	1		With standard pressure gauge
Regulator 	●	●	●	●			0.77	R1000-6-W
		●	●		●	●	1.35	R1000-8-W
			●				1.75	R2000-8-W
							2.5	R2000-10-W
							2.6	R3000-10-W
							4.4	R4000-10-W
							5.0	R4000-15-W
							14.0	R8000-20-W
							11.0	R8000-25-W

*Flow rate when supplied pressure is 0.7MPa, set pressure 0.5MPa, and pressure drop is 0.1MPa.

Series	Port size						Maximum flow rate m³/min. (ANR) 0.1 1.0 10	Model no.
	1/8	1/4	3/8	1/2	3/4	1		Standard
Lubricator 	●	●	●	●	●	●	0.55	L1000-6-W
		●	●				0.7	L1000-8-W
							1.1	L3000-8-W
							2.25	L3000-10-W
							1.7	L4000-10-W
							2.7	L4000-15-W
							6.3	L8000-20-W
							10.0	L8000-25-W

*Flow rate when supplied pressure is 0.5MPa and Pressure drop is 0.03MPa.

It's NEW CONCEPT

Pursuing high performance in all aspects, functionality, operability, serviceability, and safety.

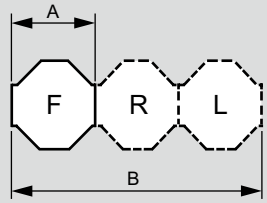
[Filter for compressed air, regulator, filter, other components]

FUNCTIONAL FEATURES

● Compact module

F.R.L. main dimensions (width and depth) are integrated into a compact module. Accurate assembly dimensions are obtained with simple calculation.

COMPACT MODULE



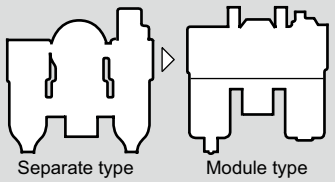
Unit: mm

	C1000-W	C2000-W	C2500-W	C3000-W	C4000-W	C6500-W	C8000-W
A	40	50 50 63	63 50 63	63	80	90 90 100	100
B	40×3	50×2+63	63×2+50	63×3	80×3	90×2+100	100×3

● Lighter by 50% from conventional models.

Hybrid material (aluminum die cast with resin cover) provides strength and cuts weight 50% over the conventional type. (C4000 comparison)

LIGHT WEIGHT



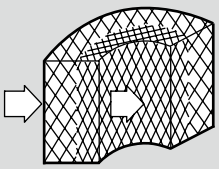
Unit: kg

	C1000-W	C2000-W	C2500-W	C3000-W	C4000-W	C6500-W	C8000-W
Module type	0.4	1.01	1.01	1.15	1.79	3.64	4.5
Conventional products	0.7	-	1.8	1.8	3.4	7.2	7.2

● Long service life element

This element incorporates CKD's original chemical fiber structure (patent pending), which has a rough surface and gradually becomes finer toward the inside. Clogging is greatly reduced and element life greatly extended. There is nor risk of rusting.

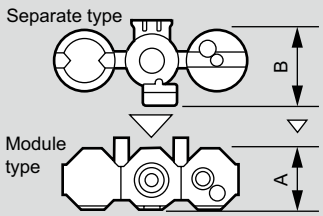
LONG LIFE ELEMENT



● Embedded pressure gauge for space saving

The conventional protruding pressure gauge wasted space on the front, and posed risks to users. Neat design and safety are realized by embedding the pressure gauge into the body.

FLAT FACE



Unit: mm

	C1000-W	C2000-W	C2500-W	C3000-W	C4000-W	C6500-W	C8000-W
Module type A	57	62	70.5	63	79	100	100
Conventional product B	74	-	109	109	124	131	131

● Mechanism to prevent oil dripping during primary side pressure drop

Reduces dripping of oil discharge of shut-off valve.

● Corrosion resistant, safe bowl guard

Appropriate for piping in limited space or complicated piping.

● Gauge plug

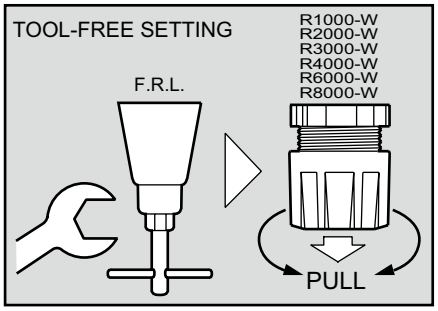
The gauge plug is sealed even without a pipe plug. (Refer to page 209 when using screw-in type pressure gauge)

⚠ Read Precautions on page 11 to 18 before use.

OPERATIVE FEATURES

● Tool free pressure control

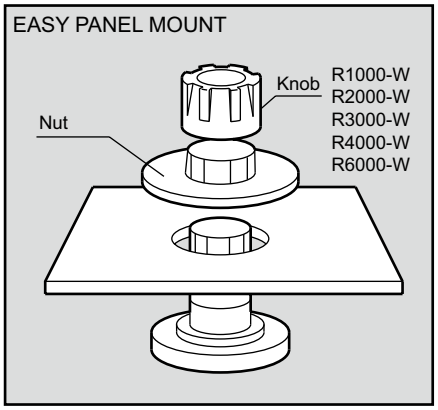
No tools required to adjust pressure. The knob is locked with a single push, The knob is locked with a single push, and is easily operated when setting pressure.



● Easy to accommodate with panel mount

When the panel mounting nut is loosened, the nut acts as a jack and enables the knob to be removed easily. Fix the nut to mount in the panel. The L-type bracket is also installed similarly to the nut.

(The body can be fixed securely without play with the L-type bracket) *Excluding 8000 Series

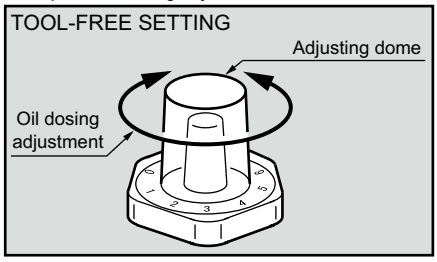


Note: Install the nut before installing the knob. (With the R2000-W, the nut is removed without removing the knob.)

● Oil drip adjustment knob with lock

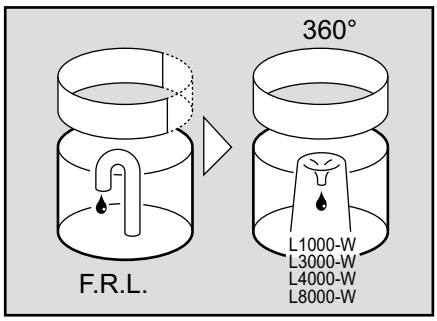
Easy tool free oil dosing adjustment. A stopper is provided in the opening direction to function as a lock, and increase safety. The number on the dial are used as a guide after adjusting dripping.

* Keep the oil dosing adjustment below 0.5N·m



● Double plastic structure

A double plastic structure is used so oil dripping is confirmed from 360°.



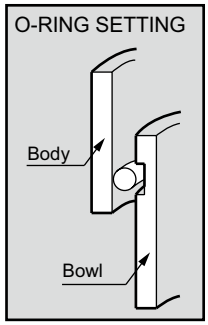
● Easy removal integrated filter element

The integrated bowl and bowl guard are easily attached and removed by operating the latch. (No latch for 1000-W series)

Mount and remove the bowl and bowl guard after checking that pressure is not being applied.

● O ring fall out prevention

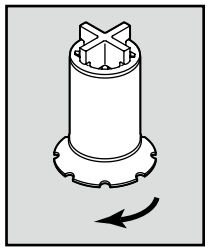
An O ring slot is provided on the bowl to prevent O ring from falling out during bowl attachment and removal for a safe and accurate seal



● Easy to use filter element

The integrated element is removed by turning the baffle 45° to the left.

(1000-W Series only)



F.R.L Combination

Description of options

Combination lists of drainage and bowl material of filter (Ⓓon how to order)

Applicable series	Bowl material		Manual drain cock	Automatic drain with manual cock		Large automatic drain with manual cock	
				NO type	NC type	NO type	NC type
1000-W Series	Plastic bowl	Polycarbonate	○ (Blank)	×	○ (Symbol: F1)	×	×
		Nylon	○ (Symbol: Z)	×	○ (Symbol: F1Z)	×	×
	Metal bowl	Aluminum	×	×	×	×	×
2-W Series 3000-W Series 4000-W Series 6000-W Series	Plastic bowl	Polycarbonate	○ (Blank)	○ (Symbol: F)	○ (Symbol: F1)	×	×
		Nylon	○ (Symbol: Z)	○ (Symbol: FZ)	○ (Symbol: F1Z)	×	×
	Metal bowl	Aluminum	○ (Symbol: M/M1)	○ (Symbol: F1/FM1)	○ (Symbol: F1M/F1M1)	×	×
8000-W Series	Plastic bowl	Polycarbonate	○ (Blank)	○ (Symbol: F)	○ (Symbol: F1)	○ (Symbol: FF)	○ (Symbol: FF1)
		Nylon	○ (Symbol: Z)	○ (Symbol: FZ)	○ (Symbol: F1Z)	○ (Symbol: FFZ)	○ (Symbol: FF1Z)
	Metal bowl	Aluminum	○ (Symbol: M/M1)	○ (Symbol: F1/FM1)	○ (Symbol: F1M/F1M1)	○ (Symbol: F1)	○ (Symbol FF1M/FF1M1)
Features			-	In a nonpressurized state, such as at night, the valve opens and drainage is discharged automatically.	Air is not purged during initial pressurization.	Drainage is automatically discharged when discharge performance is high and the unit is not pressurized.	Air is not purged during initial pressurization when discharge performance is high.

Combination lists of drainage and bowl material of lubricator (Ⓓon how to order)

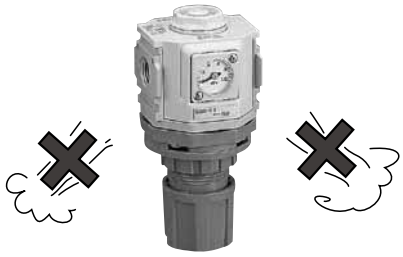
Applicable series	Bowl material		No manual cock	With manual cock
1000-W Series	Plastic bowl	Polycarbonate	○ (Blank)	○ (Symbol: C)
		Nylon	○ (Symbol: Z)	○ (Symbol: CZ)
	Metal bowl	Aluminum	×	×
2000-W Series 2500-W Series 3000-W Series 4000-W Series 6000-W Series 8000-W Series	Plastic bowl	Polycarbonate	○ (Blank)	○ (Symbol: C)
		Nylon	○ (Symbol: Z)	○ (Symbol: CZ)
	Metal bowl	Aluminum	○ (Symbol: M)	○ (Symbol: CM/CM1)

Description of pressure range, pressure gauge and flow direction option symbol (Ⓓon how to order)

Option symbol: L

- Pressure display: 0 to 0.4 MPa
- Pressure range: 0 to 0.35 MPa
- Pressure gauge: G401-W-P04

Option symbol: N



- Air will not relief.

Option symbol: T

- Without pressure gauge
- The Rc1/4 gauge port is sealed when the plug is assembled.
- Refer to page 209 when mounting a pressure gauge.

Option symbol: T8/T6

- Pressure gauge not included because round pressure gauge is attached.
- Pressure gauge mounting port is open.
- Refer to page 209 when mounting a pressure gauge.

Option symbol: R1/R2 (note)

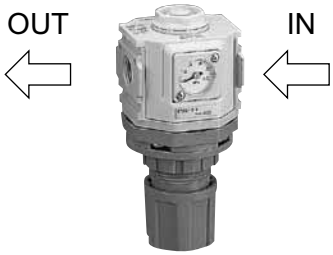
R1

R2

- Pressure switch with display PPD assembled
- Digital pressure sensor PPX included. Refer to "Pneumatic, Vacuum and Auxiliary Components (Catalog No. CB-024SA)" for details)

Option symbol: X1

OUT



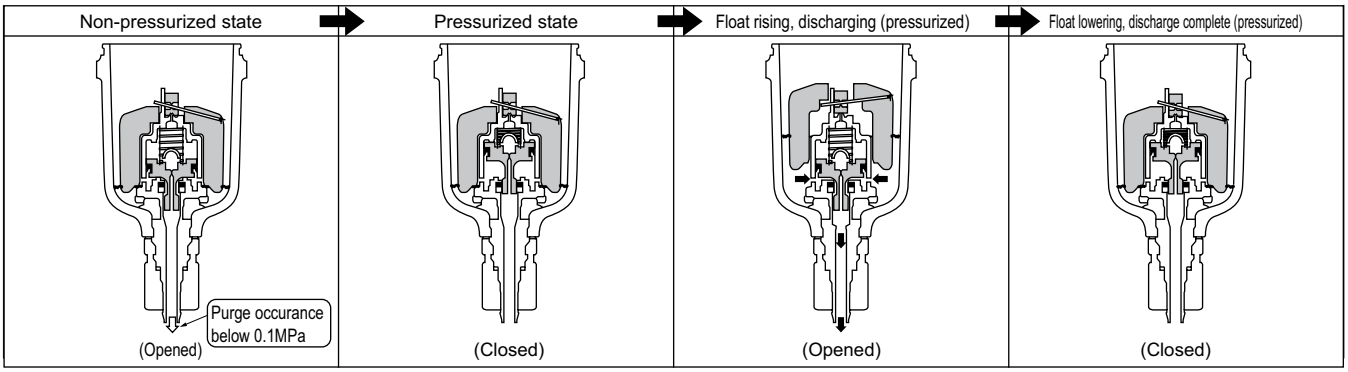
IN

- The right side will be IN with the pressure gauge facing forward.

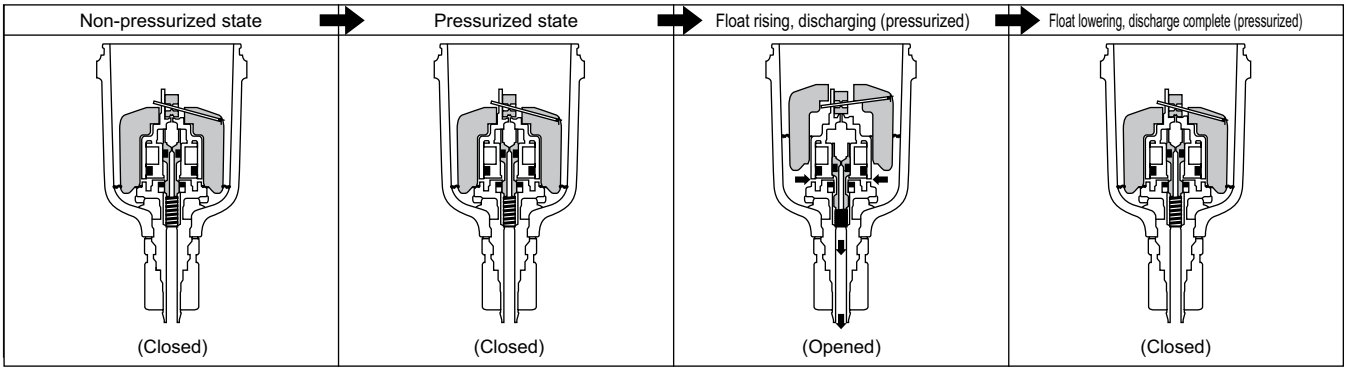
(Note) Option symbol "R1" is not available for C*000-W, C*010-W Series.

Principles of float type automatic drain

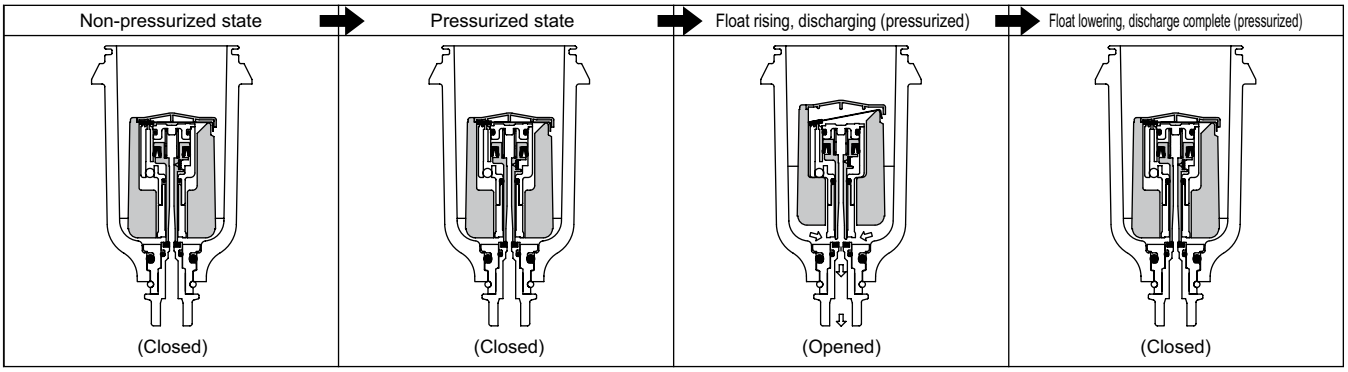
● NO type (F, FF)
3000-W/4000-W/6000-W/8000-W Series



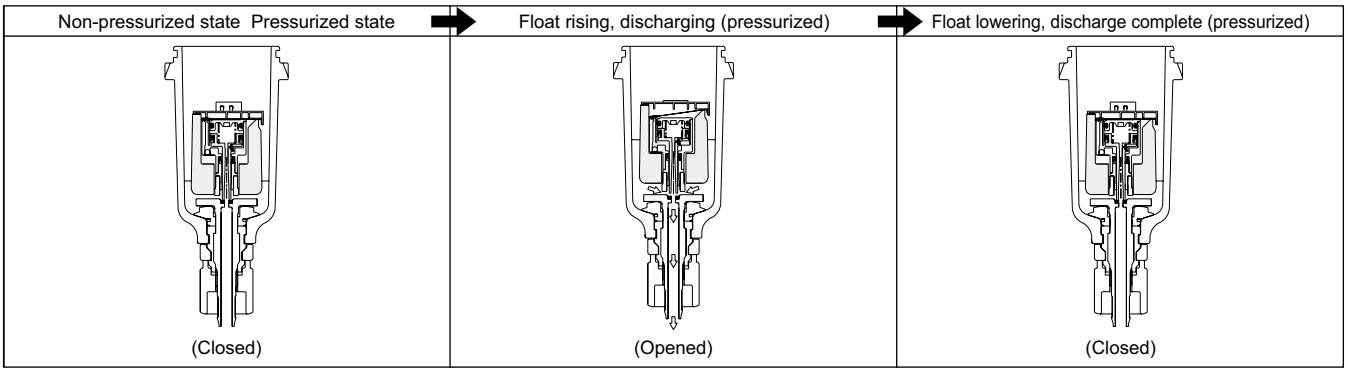
● NC type (F1, FF1)
3000-W/4000-W/6000-W/8000-W Series



● NC type (F1)
1000-W Series



● NC type (F1)
2000-W Series



	Operation principles		Features	Notes
	Non-pressurized (such as night time)	Pressurized		
NO Type	Drainage discharge is opened and drainage is discharged naturally.	Drainage is discharged with air from the drainage discharge section temporarily until pressure becomes the minimum activation pressure or higher. After filling, the drainage discharge section is closed.	Drainage is discharged naturally in the nonpressurized state (nighttime, etc.), so user discharge is not required. In the pressurized state, once pressure is attained, drainage is automatically discharged when it accumulates at a set level.	As indicated in features, air and drainage are temporarily discharged until the pressure attains the minimum activation so pressure may not be sufficient with a compressor (0.75 kW or less) having a small discharge flow. Use a NC type in this case.
NC Type	Drainage discharge section will be closed.		This type is suitable for a compressor (0.75 kW or less) having a small discharge. There is no temporary air purging during pressurization. It will automatically discharge if drain accumulates to a certain level after pressurizing.	Drainage is not discharged in a nonpressurized state (nighttime, etc.), so user discharge is required in applications where large amounts of drainage are generated in a nonpressurized state (nighttime, etc.).

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.
Be sure to observe the description given under DANGER, WARNING and CAUTION to assure safety of the equipment.
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, regulations, etc., related to the safety of device design and control, etc.

ISO 4414, JIS B 8370 (pneumatic system rules)
JFPS2008 (Principles for pneumatic cylinder selection and use)
Including High Pressure Gas Maintenance Law, Occupational Safety and Sanitation Laws, other safety rules, 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 is stopped.
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 are secured.

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

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

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

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

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

Even items described under CAUTION may cause serious results.
In any case, important information that must be observed is explained.

Disclaimer

1 Term of warranty

"Warranty Period" is one (1) year from the first delivery to the customer.

2 Scope of warranty

In case any defect attributable to CKD is found during the Warranty Period, CKD shall, at its own discretion, repair the defect or replace the relevant product in whole or in part, according to its own judgement.
This Limited Warranty will not apply to:
(1) Product abuse/misuse contrary to conditions/environment recommended in its catalogs/specifications
(2) Failure caused by other than the delivered product
(3) Use other than original design purposes.
(4) Third-party repair/modification
(5) Failure caused by reason that is unforeseeable with technology put into practical use at the time of delivery
(6) Failure attributable to force majeure.
In no event shall CKD be liable for business interruptions, loss of profits, personal injury, costs of delay or for any other special, indirect, incidental or consequential losses, costs or damages.

3 Compatibility confirmation

In no event shall CKD be liable for merchantability or fitness for a particular purpose, notwithstanding any disclosure to CKD of the use to which the product is to be put.

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

Safety precautions

Always read this section before starting use.

Refer to “Pneumatic, Vacuum and Auxiliary Components (Catalog No. CB-024SA)” precautions for pneumatic components in general.

Specific precautions: F.R.L. (modular design)

Design & Selection

1. Common

⚠WARNING

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

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

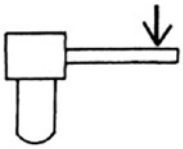
Material is polycarbonate. It cannot be used in environments containing synthetic oil, organic solvents, chemicals, coolant, screw locking agent, leak detection solutions, or hot water, etc., or where these substances may come in contact with them.

Refer to page 18 for details on bowl chemical resistance.

■ Piping load torque

Check that the piping load or torque is not applied to the body or piping sections.

Series	1000-W	2000-W	3000-W	4000-W	6000-W	8000-W
Max. torque N·m	15	15	50	50	100	100

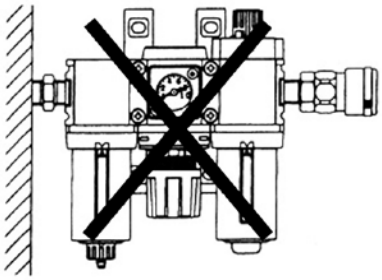


With the 1000-W Series, application of a torque of 30 N·m or more on piping could damage piping. Use within the specified torque, even when using the piping adapter.

Avoid piping similar to the following example.

Avoid piping fixed with a single support, as this can result in excessive force and lead to damage.

With the 1000-W Series, application of a torque of 30 N·m or more on piping could damage piping. Use within the specified torque, even when using the piping adapter.



⚠WARNING

■ Large drainage

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

Hot and humid air or large drainage from the comp could shorten the device life or result in corrosion.

■ Ultra dry air

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

■ Water lubricated compressor circuits

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

■ Use the automatic drain under the working conditions below.

Otherwise, malfunctioning may occur.

N.O. type automatic drain (exhaust without pressurized): F, FF

- Use a compressor with a capacity of 0.75 kW {90l/min [ANR]} or more.
- Set the working pressure to 0.1 MPa or more. (Initially generated drainage and air are purged until pressure reaches 0.1 MPa.)

N.C. type automatic drain (exhaust without pressurized): F1, FF1.

- Can be used with compressor with 0.75kw or less.
- Set the working pressure to 0.15 MPa or more.

1000-W, 2000-W Series NC automatic drain

- Set the working flow to less than the maximum working flow.
- 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.
- Do not let the drain overflow as it may lead to malfunctioning.

F.R.L. unit (modular design)

2. Regulator, filter with 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.

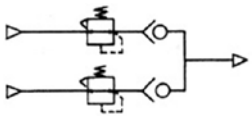
■The regulator cannot process residual pressure (remove secondary pressure) when primary pressure is released.
Use a regulator with a check valve when residual pressure must be processed.

■In some cases, the regulator cannot be used for secondary side sealing circuits or balance circuits.

⚠CAUTION

■Set the regulator's secondary pressure to 85% or less that of the primary side. The pressure could drop further.

■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 the compact pressure switch PPD or digital pressure sensor PPX, avoid using 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

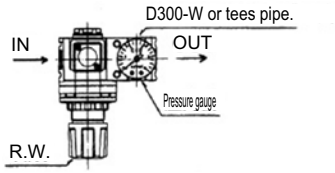
■Precautions for shut-off valve

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

6. Pressure gauge

⚠CAUTION

■When using this unit for a large flow, etc., install a pressure gauge as shown below so that secondary pressure is measured accurately.



■Regarding G45D

- The chemical resistance of the lens 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 this state could lead to bowl damage and accidents.

Chemical resistance of lens

Types of chemicals	Categories of chemicals	Main products containing the chemical	Example of general usage	Lens
Inorganic chemicals	Acid	Hydrochloric acid, sulfuric acid, hydrofluoric acid Phosphoric acid, chrome acid, etc.	Acid washings from metals, acidic degreasing solutions, skin treatment solutions	×
Organic chemicals	Aromatic hydrocarbon	Benzene, toluene Xylene, ethyl benzene, styrene	Contained in paint thinner (benzene, toluene, xylene)	×
	Alcohol	Methanol, ethanol, cyclohexanol, benzyl alcohol	Anti-freeze, eakage detection agent	×
	Phenol	Carbolic acid, cresol Nafthol, etc.	Antiseptic solution.	×
	Ketone	Acetone, methyl ethyl ketone, cyclohexanone, acetophenone, etc.		×
	Carboxylic acid	Formic acid, acetic acid, butyl acid acrylic acid, oxalic acid Phtalic acid, etc.	Dyes; oxalic acid for aluminum processing; phthalic acid for paint base and leak-detection agents e (dowel pin) from rear	×
	Oxo acid	Glycocholic acid, lactic acid, malic acid, citric acid, tartarate		×
	Amine	Methylamine, diethylamine, ethylamine, aniline, acetoacetanilide, etc.	Brake oil additive	×

×: Do not use (Lens will be damaged)

Installation & Adjustment

1. Common

⚠CAUTION

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

■Flush and wash pipes to be used.
Dirt or foreign materials in piping will lower product performance.

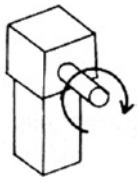
■Check that foreign materials do not enter when tightening pipes or joints.
When screwing in piping or joints, check that swarf from piping threads or sealing agent does not get inside. Dirt or foreign materials in piping will lower product performance.

■How to use 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 connection. Reverse connection causes malfunctions.
3. Install the air filter and lubricator vertically with the case facing downward. Failure to do so could lead to disconnection or malfunction.
4. Use of the automatic drain where vibration is present could cause faults and malfunctions.

■Pipe the automatic drain in the following conditions. Otherwise, malfunctioning may occur.
Use an inner diameter of 5.7 or more and piping of 5 m or less for the drainage section.
Do not pipe in a manner which will apply lateral load to the bowl.
Fix the hexagon side of the cock before screwing the joint, etc., into the Rc1/4 female screw.

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

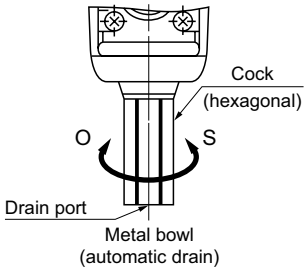
Series	1000-W	2000-W	3000-W	4000-W	6000-W	8000-W
Max. torque N·m	15	30	30	30	70	70



■Drain piping
- Confirm that the drain cock is closed before inserting the tube. 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.

■Drain cock tightening torque
- The max. tightening torque of the drain cock for the plastic bowl is as follows.
  ·1000 Series: 0.1N·m
  ·Others: 0.5N·m

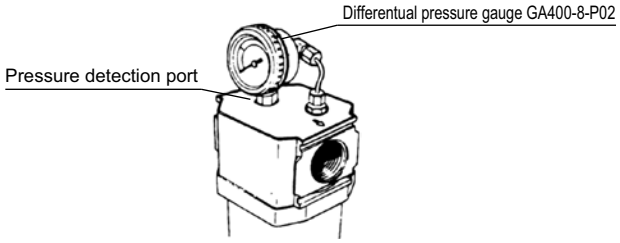
■Drain piping of metal bowl with automatic drain
·Fix the cock's hexagonal face before screwing the joint, etc., into the drain port's female threads. When using the metal bowl with automatic drain, if the drain is piped with a tightening joint, manual operation is not possible.



■Drain with pressure detection port

For F6000-□-W-Q/M6000-□-W-Q/MX6000-□-W-Q/F8000-□-W-Q/M8000-□-W-Q/MX 8000-□-W-Q

Pressure detection port is available as an option for F6000-W·M6000-W·MX6000-W·F8000-W·M8000-W·MX8000-W.
The life of the filter element or oil mist filter mantle assembly is visually checked by assembling the differential pressure gauge GA400-8-P02 into the pressure detection port.
When selecting option Q and X1 simultaneously for F6000-W and M6000-W and mounting differential pressure gauge GA400, raise the gauge with piping material so that it does not interfere.



Check high and low-pressure port positions for the differential pressure installation port, and install correctly.

2. Regulator, filter with regulator

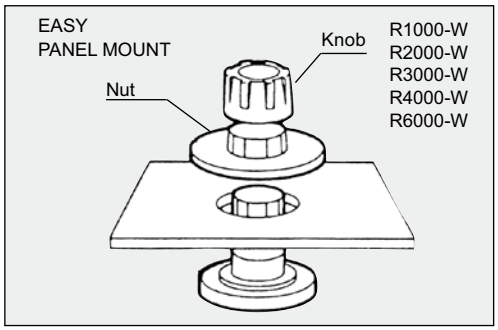
⚠CAUTION

■Regulator, filter regulator

- Lightly tighten (0.6 N·m or less) mounting screws for embedded pressure gauge G401-W-OP, G401-W, 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 15N·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, This will cause the pressure gauge to break. (Pay extra caution when using 0.2 and 0.4 MPa pressure gauges)

■Panel mounting the regulator

When the panel mounting nut is loosened, the nut acts as a jack and enables the knob to be removed easily. Fix the nut to mount in the panel. The L-type bracket is also installed similarly to the nut.
(The body can be fixed securely without play with the L-type bracket)
* Excluding 8000 Series



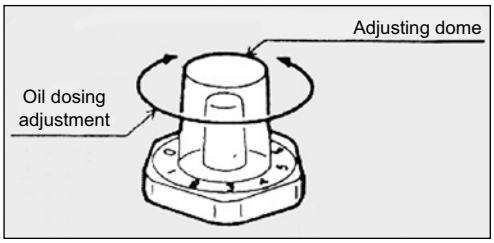
Note: Install the nut before installing the knob.
(With the R2000-W, the nut is removed without removing the knob.)

3. Lubricator

⚠CAUTION

■Adjustment of lubricator oil drippage

- 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.

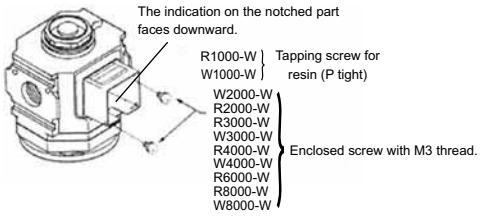


4. Pressure switch

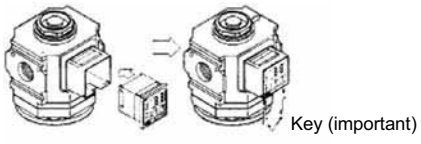
⚠CAUTION

■How to mount pressure switch (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)



- This completes installing the main unit.
  Confirm no dirt or foreign matter is on the base, and then insert the body. Make sure that the body does not catch on the base. Then, insert the two keys. While pressing the body exterior against the base, set the heads of the keys so that they face each other, then insert them so that they are completely stored in the recesses on the base.



Note: Install both keys. Check that two 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.

Installation & Adjustment

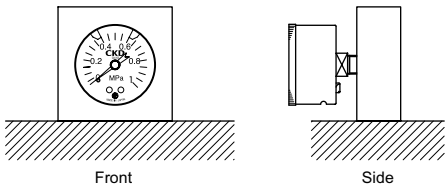
5. Pressure gauge

⚠ CAUTION

■ Pressure gauge

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

■ Install vertically so the scale can be seen right from the front. (Refer to drawing below) Installation on other position will result in an unstable movement of the indicator and lower accuracy.



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.

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

⚠ CAUTION

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

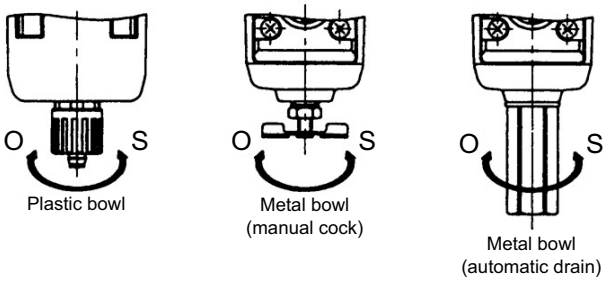
■ Do not branch the air into lubricating air and oilfree air with a distributor. The lubricator oil could reverse flow.

■ Clogged filter element will lower performance. Regularly inspect, clean, and replace the element.

■ Do not disassemble or modify the product.

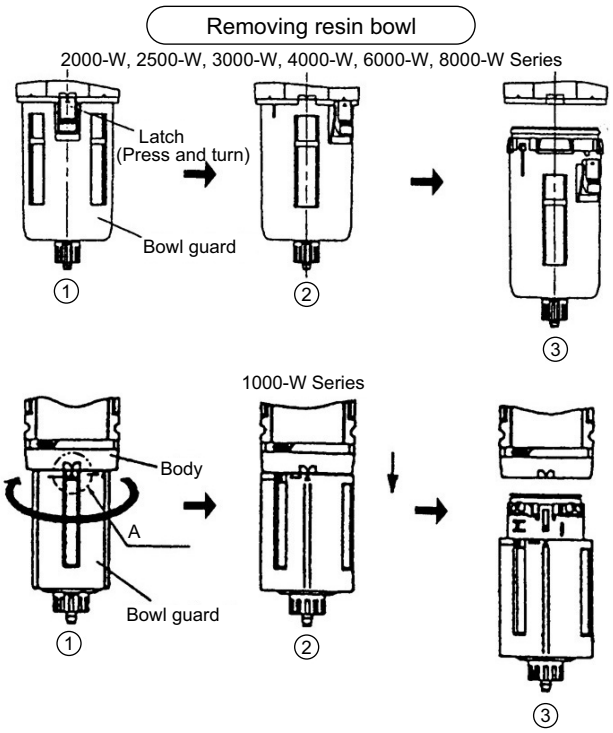
■ Read instructions and precautions enclosed with the product before starting use or maintenance.

How to discharge drain



- 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. Tighten in the S direction with your hands.
- When the automatic drain is provided, drainage is discharged automatically when it accumulates. Drainage is also discharged manually.

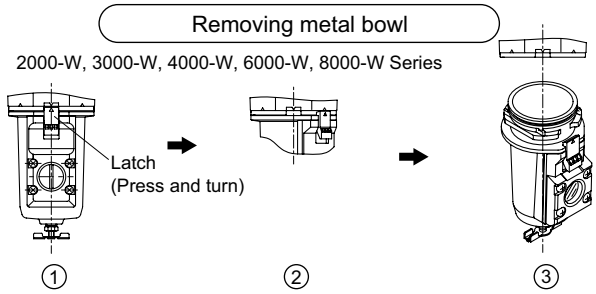
Removing resin bowl



F.R.L. unit (modular design)

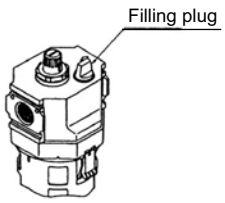
Removing metal bowl

2000-W, 3000-W, 4000-W, 6000-W, 8000-W Series

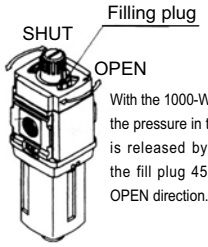


Removal of filling plug

3000-W, 4000-W, 8000-W Series



1000-W Series



With the 1000-W Series, the pressure in the bowl is released by sliding the fill plug 45° in the OPEN direction.

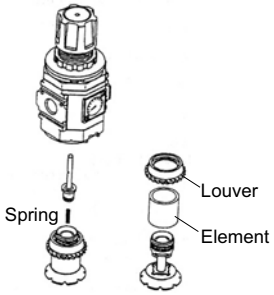
- Close the fill plug after lubricating.
- Do not remove the bowl without removing the filling plug while the bowl is pressurized. (L3000-W to L8000-W)
- Never remove the bowl with the filling plug set to the SHUT side of the 1000-W Series (while the bowl is pressurized). (L1000-W)

2. Filter･regulator

⚠CAUTION

■Element for W1000-W to W8000-W

Inspect the valve assembly when it is removed during maintenance.
Do not lose internal parts when removing the coil.

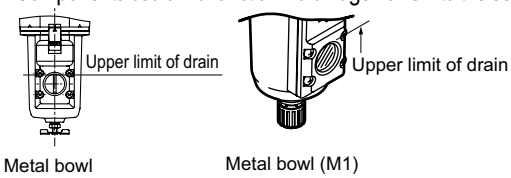


3. Filter

⚠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 0.3μm element

Washing will not restore performance. If the pressure drops to 0.07 MPa, replace the filter with a new one. (Excluding 1000, 2000 Series)

■Oil mist filter

The service lif of the mantle (element) is 1 year (6000 hours) or when pressure drops to 0.1 MPa (Except for the X type,) Replace the mantle when life is reached. (Do not touch the urethane foam layer during replacement.)

■Replace the element before the differential pressure indicator becomes all read if it has an differential pressure indicator.

■Mount with zero of the pressure gauge scale facing vertically downward.

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.

■Working or piping conditions could cause pulsation.
We recommend changing working conditions or piping by means such as lowering primary pressure if pulsation occurs.

5. Lubricator

⚠WARNING

■Use Class 1 turbine oil (nonadditive) ISO VG32 for the lubricator.
Use of other oil will result in damage or malfunction.

■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. Wipe away any dirt around the fill plug that could scatter.

⚠CAUTION

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

■When lubricating the L1000-W, pressure in the bowl is released by turning the fill plug. Refer to the section on usage and maintenance, above, for details on using the fill 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-W to L8000-W, loosen the fill plug slightly to release pressure in the bowl, then remove the fill plug. Refer to the section on usage and maintenance, above, for details on using the fill 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.
With the L8000-W, oil is supplied to the spacer by lubricating from the fill plug hole.

6. Pressure gauge

■Check that no impact or vibration is applied directly to the product.
■Limit marks will not completely contact each other. There may be a clearance of 1 scale.

Specific precautions: F.R.L. components

Chemical resistance of plastic parts

⚠WARNING

- The chemical resistance of plastic parts are 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 this 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	Categories of chemicals	Main products containing the chemical	Example of general usage	Polycarbonate bowl	Nylon bowl	Nylon body
Inorganic chemicals	Acid	Hydrochloride, sulfuric acid, fluorine, phosphoric acid, chromic acid, etc.	Acid washings from metals, acidic degreasing solutions, skin treatment solutions	×	×	×
	Alkaline	Alkalies such as caustic soda, caustic potash, calcium hydroxide, ammonium water, or sodium carbonate	Alkaline degreasing of metals Water-based coolant, leakage detection agent	×	○	○
	Inorganic salts	Alkalies such as caustic soda, caustic potash, calcium hydroxide, ammonium water, or sodium carbonate		×	○	○
Organic chemicals	Aromatic hydrocarbon	Benzene, toluene, xylene, ethyl benzene, styrene, etc.	Contained in paint thinner (benzene, toluene, xylene)	×	×	×
	Chlorinated aliphatic hydrocarbons	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)	×	○	○
	Chlorinated aliphatic hydrocarbons	Chlorobenzene, dichlorobenzene, benzene hexachloride (B,H,C), etc.	Chlorinated aromatic	×	○	○
	Petroleum compounds	Solvent naphtha, gasoline, kerosene		×	○	○
	Alcohol	Methanol, ethanol, cyclohexanol, benzyl alcohol	Anti-freeze Leakage detection agent	×	×	×
	Phenol	Carbolic acid, cresold, naphthol, etc.	Antiseptic solution.	×	×	×
	Ether	Methyl ether, methyl ethyl ether, ethyl ether	Brake oil additive	×	○	○
	Ketone	Acetone, methyl ethyl ketone, cyclohexanone, acetophenone, etc.		×	×	×
	Carboxylic acid	Formic acid, acetic acid, butyl acid, acrylic acid, oxalic acid, phthalic acid, etc.	Dyes; oxalic acid for aluminum processing; phthalic acid for paint base and leak-detection agents e (dowel pin) from rear	×	×	×
	Ester	Dimethyl phthalate (DMP), diethyl phthalate (DEP), dibutyl phthalale (DBP), dioctyl phthalate (DOP)	Used as an additive for lubricant, synthetic and rust proof oil. Used as a plasticizer for resins.	×	○	○
	Oxo acid	Glycocholic acid, lactic acid, malic acid, citric acid, tartarate		×	×	×
	Nitro compounds	Nitromethane, nitroethane, nitroethylene, nitrobenzene, etc.		×	○	○
	Amine	Methylamine, diethylamine, ethylamine, aniline, acetoacetanilide, etc.	Brake oil additive	×	×	×
	Nitrile	Acetonitrile, acrylonitrile, benznitrile, aceloylidyne nitrile, etc.	Raw material for nitryl rubber	×	○	○

○: Permissible ×: Not permissible (plastic will be damaged)

F.R.L. unit (modular design)

Precautions for each model

Automatic drain DT3000･DT4000-W Series

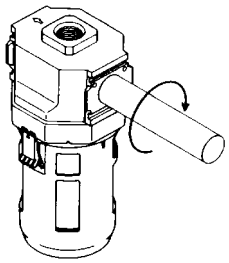
Installation & Adjustment

⚠CAUTION

■ Piping screw-in torque

Do not apply excessive torque to the body and piping when connecting pipes.

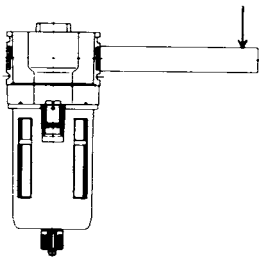
	3000･4000 Series
Max. torque N･m	30



■ Piping, load torque

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

	3000･4000 Series
Max. torque N･m	50



During Use & Maintenance

⚠CAUTION

■Do not use this product where it may be subject to direct sunlight and direct UV rays.

■The bowl is made of polycarbonate, so avoid using this product with the following chemicals or in an atmosphere containing chemicals on page 18. A metal bowl is available if these chemicals must be used.

■Use a household-grade neutral detergent to clean the bowl, then rinse with water.

■Use an inner diameter of ø5.7 to ø6.0 or more and piping of 5 m or less for the drainage section.

■Apply compressor over 0.75kW (flow over 90/min) (NO type automatic drain only)

■Do not let in large amount of drain beyond its capacity. Sudden entry of large amount of drain may result in malfunctioning.

■Service life may shorten drastically in a environment where large amount of foreign materials enter. Please conduct maintenance and replace bowl assembly regularly.

■The bowl assembly is an consumable. Replace it regulary according to conditions and usage.

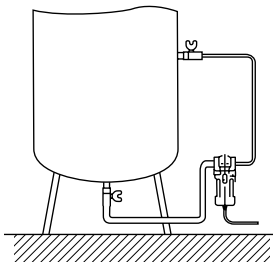
■Mount and remove the bowl and bowl guard after checking that pressure is not being applied.

■Avoid hot air as the life of components will be shortened, and corrosion could occur.

■If the drain discharger is installed at a place higher than the tank's drainage discharge port because of installation restrictions, the drainage can be discharged in the following manner.

(1) Let the air bleed by opening the petcock slightly.

(2) Remove the pit cock as shown below, and provide equalizer piping in the tank.



■Repeated sudden increase and decrease of the pressure will cause the drainage discharger's life to drop. Gradually change the pressure in the circuit.

Precautions for mounting and removing bowl and bowl guard

⚠CAUTION

■Residual pressure exhaust

● Release residual pressure from the manual cock at the bottom. When using the metal bowl, release pressure from the petcock on the side.
Release the pressure applied in the bowl, and confirm that there is no pressure.

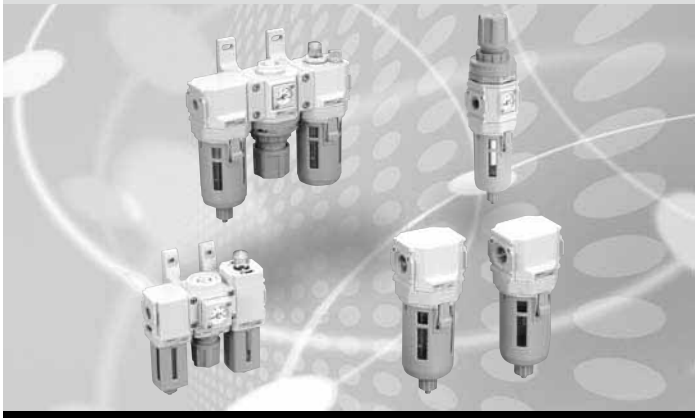
■Attatching and removing

● After confirming that the residual pressure has been released, press down the latch and turn it to lift up the bowl and bowl guard.

Modular type

Standard white series

■ Components for air preparation/F.R.L. unit



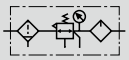
CONTENTS

F.R.L. combination standard white series

C1000 / C2000 / C2500-W C3000 / C4000 / C6500 / C8000-W Series

Space-saving with integrated filter, regulator, and lubricator

Port size: 1/8 to 1

JIS symbol 

RoHS CAD

Specifications

Descriptions		C1000-W	C2000-W	C2500-W	C3000-W	C4000-W	C6500-W	C8000-W
Exterior								
Components	Air filter	F1000-W	F2000-W	F3000-W	F3000-W	F4000-W	F6000-W	F8000-W
	Regulator	R1000-W	R2000-W	R2000-W	R3000-W	R4000-W	R6000-W	R8000-W
	Lubricator	L1000-W	L3000-W	L3000-W	L3000-W	L4000-W	L8000-W	L8000-W
Working fluid		Compressed air						
Max. working pressure MPa		1						
Withstanding pressure MPa		1.5						
Ambient temperature range ℃		5 to 60						
Filtration rating μm		5						
Set pressure range MPa		0.05 to 0.85 Note 5	0.05 to 0.85					
Minimum drip flow (Note 1) m^3/min (ANR)		0.015	0.03	0.03	0.03	0.065	0.065	0.065
Relief		With relief mechanism						
Oil capacity cm^3		20	85	85	85	170	170	170 (MAX360)
Drain capacity cm^3		12	25	45	45	80	80	80 (Note 2)
Applicable oil		Turbine oil Class 1 ISO VG32 (spindle oil can not be used)						
Port size Rc, NPT, G		1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg		0.4	1.01	1.01	1.15	1.79	3.64	4.5
Proded as standard		Pressure gauge, bracket, bowl guard						

Note 1: The minimum drip flow is that five drops of turbine oil drip per minute at the set pressure of 0.5 MPa.

Note 2: Drainage accumulates up to 170 cm^3 only with the manual drain cock.

Note 3: The automatic drain's minimum operating pressure for "F" or "FF" with an automatic drain is 0.1 MPa. Initially generated drainage and air are purged until pressure reaches 0.1 MPa.

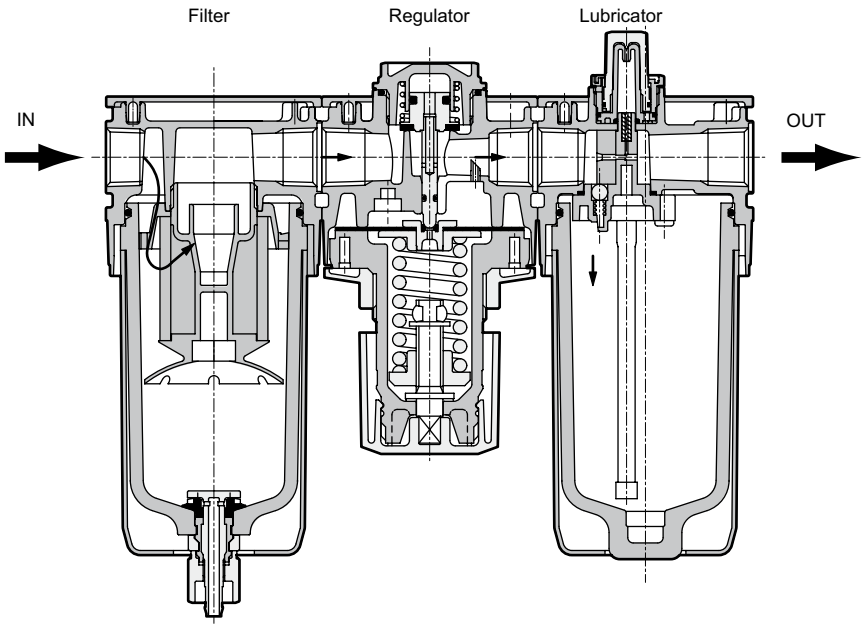
Note 4: The automatic drains minimum operating pressure for "F1" or "FF1" with an automatic drain is 0.15 MPa.

Note 5: When using C1000-W series "F1" with an automatic drain, the minimum operating pressure is 0.2 MPa and maximum operation pressure is 0.7 MPa.
Refer to the maximum working flow table (page 85) for F1000-W-F1 with an automatic drain for details on maximum working flow. Set the working flow to less than the maximum working flow.

Note 6: When element option "Y" is selected, refer to the maximum working flow table (page 87) for maximum flow. Set the working flow to less than the maximum working flow.

Note 7: C2000-W Series with an automatic drain "F1" must be used below maximum flow rate. (Refer to page 85 F2000-W for weight.)

Internal structure



F.R.L. Combination

Refer top page 9 for an explanation of the options.

C1000 – 6 ( ) – W – C – U DSV – ( ) – A6W ( ) ( )

Ⓐ Model no. Note 2
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Assembly attachment
Ⓕ Displayed unit
Ⓖ Piping adaptor set (included)
Ⓗ Attachment
Ⓘ Pressure gauge option (attached)

Symbol	Descriptions	Ⓐ Model no. Note 1 C1000	C2000	C2500	C3000	C4000	C6500	C8000
Ⓑ Port size								
6	1/8	●						
8	1/4	●	●	●	●	●		
10	3/8		●	●	●	●		
15	1/2					●		
20	3/4					●Note 1	●	●
25	1						●	●
Ⓒ Port thread type								Note 2
Blank	Rc thread	●	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●	●
Ⓓ Option								Note 3
Drain discharge Note 4 Blank	Filter with manual drain cock, lubricator without manual drain cock	●	●	●	●	●	●	●
C	Lubricator with manual cock	●	●	●	●	●	●	●
F	Filter with automatic drain (NO type: exhaust without pressurization)			●	●	●	●	●
F1	Filter with automatic drain (NC type: exhaust with pressurization)	●	●	●	●	●	●	●
FF	Filter with automatic large drain (NO type: exhaust without pressurized)							●
FF1	Filter with automatic large drain (NC type: no exhaust without pressurization)							●
Bowl material Blank	Polycarbonate bowl	●	●	●	●	●	●	●
Z	Nylon bowl	●	●	●	●	●	●	●
M	Metal bowl			●	●	●	●	●
M1	Metal bowl with manual drain cock Note 5		●	●	●	●	●	●
Element Blank	5μm	●	●	●	●	●	●	●
Y	0.3μm (submicron) Note 6			●	●	●	●	●
Differential pressure detection Blank	Without differential pressure detection port	●	●	●	●	●	●	●
Q	With differential pressure detection port (Rc1/4)						●	●
Pressure range Blank	0.05 to 0.85MPa	●	●	●	●	●	●	●
L	0.05 to 0.35MPa Note 7	●	●	●	●	●	●	●
Relief Blank	With relief mechanism	●	●	●	●	●	●	●
N	Non-relief type	●	●	●	●	●	●	●
Pressure gauge Blank	With standard pressure gauge (G401-W)	●	●	●	●	●	●	●
T	Without pressure gauge (gauge port (Rc1/4) assembled sealed)	●	●	●	●	●	●	●
T8	Pressure gauge attachable (gauge port (Rc1/4) assembled open)	●	●	●	●	●	●	●
Flow direction Blank	Standard flow (left to right)	●	●	●	●	●	●	●
X1	Reverse flow (right to left)	●	●	●	●	●	●	●
Ⓔ Assembly attachment								Pages 137 to 148, 153, 154
Blank	Without assembly attachment	●	●	●	●	●	●	●
U	With assembly attachment Note 8	●	●	●	●	●	●	●
Assembled D	Distributor (D101-W, D401-W, D801-W)	●	●	●	●	●	●	●
S	Pressure switch (P1100-W, 4100-W, 8100-W)	●	●	●	●	●	●	●
P	Pressure switch (P4000-W)		●	●	●	●		
V	Shut-off valve (V1000-W, V3000-W)	●	●	●	●	●		
K	Shut-off valve with key hole (V3010-W, V6010-W)		●	●	●	●	●	●
Ⓕ Displayed unit								
Blank	MPa display, Rc thread	●	●	●	●	●	●	●
J1	MPa display, NPT, G thread	●	●	●	●	●	●	●
Ⓖ Piping adaptor set (included)								Pages 155 to 157 Note 9
Blank	Not attached	●	●	●	●	●	●	●
A6*W	1/8 piping adaptor set	●						
A8*W	1/4 piping adaptor set	●	●	●	●	●		
A10*W	3/8 piping adaptor set	●	●	●	●	●		
A15*W	1/2 piping adaptor set		●	●	●	●		
A20*W	3/4 piping adaptor set					●	●	●
A25*W	1 piping adaptor set						●	●
A32*W	1 1/4 piping adaptor set						●	●
Adaptor thread type								
Blank	Rc thread	●	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●	●
Ⓗ Attachment								
Blank	Not attached	●	●	●	●	●	●	●
PW	Pressure switch (P4000-W) +joiner set		●	●	●	●		
VW	Shut-off valve (V1000-W, V3000-W) +joiner set	●	●	●	●	●		
Ⓘ Pressure gauge option (attached)								Note 10 page 198
Blank	Not attached	●	●	●	●	●	●	●
G45P	G45D-8-P10 (L: G45D-8-P04)	●	●	●	●	●	●	●
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)	●	●	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Piping adaptor A400-20*-W is assembled on both ends of C4000-20*-W. Piping adaptor set "A20*W" does not need to be specified.

Note 2: G threads and NPT threads are available for IN, OUT, gauge port and drain discharge port (metal bowl with automatic drain). Attachment P, V will be subject to this as well.

Note 3: Select options for each drainage discharge, bowl material, element, differential pressure detection, and regulator items. When selecting options for several items, list options in order from the top.

Note 4: Refer to page 12 for working conditions of the automatic drain.

Note 5: Have a choice drain discharge option "C" or "F" and "F1" for option "M1".

Note 6: Refer to page 87 for max. flow rate of option "Y".

Note 7: Pressure gauge display range will be 0 to 0.4 MPa for option "L".

Note 8: Mounting location for assembly attachments

Symbol	Attachment mounting position	Applicable model
D	F+ (D) +R+L	C1000-W to C8000-W
S or P	F+R+ (S, P) +L	C1000-W to C8000-W ("P" excludes 1000, 6000, 8000 Series)
V or K	F+R+L+ (V, K)	C1000-W to C8000-W ("V" excludes 6000, 8000 Series. "K" excludes 1000 Series)

Note) Indicate "U" + "D", "S", "P", "V", and "K" when selecting an assembly attachment.
Use custom combinations specifications for any other combination.

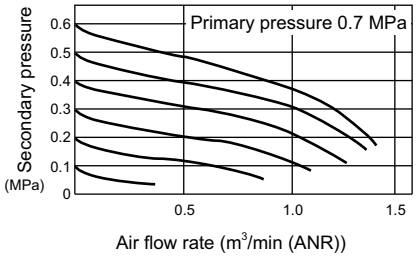
Note 9: A joiner set is attached with the piping adapter set.

Note 10: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

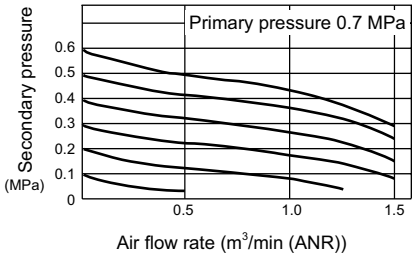
F.R.L. Combination

Flow characteristics

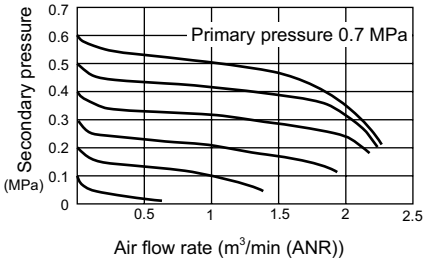
● C1000-6-W



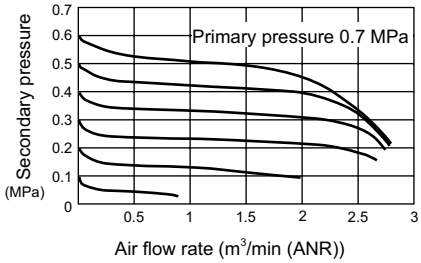
● C1000-8-W



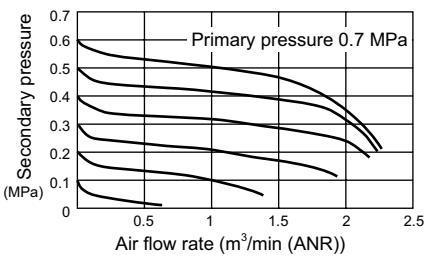
● C2000-8-W



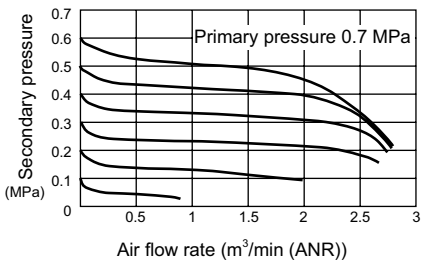
● C2000-10-W



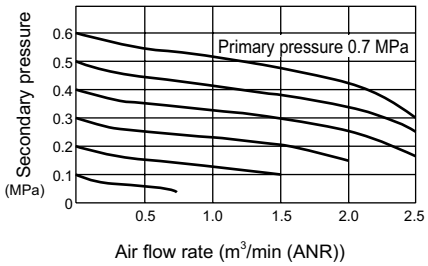
● C2500-8-W



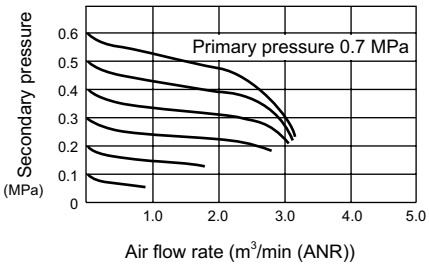
● C2500-10-W



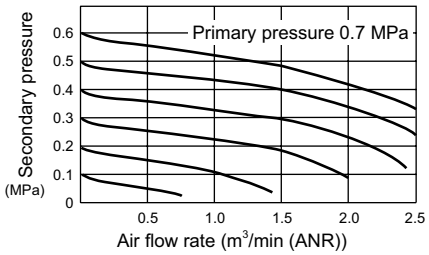
● C3000-8-W



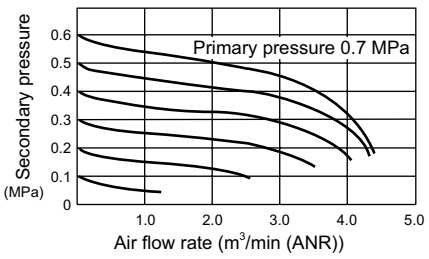
● C3000-10-W



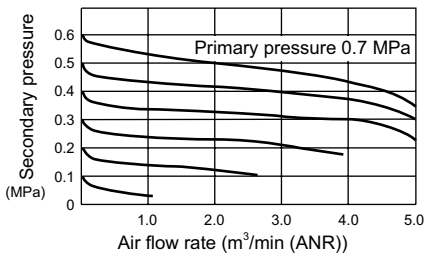
● C4000-8-W



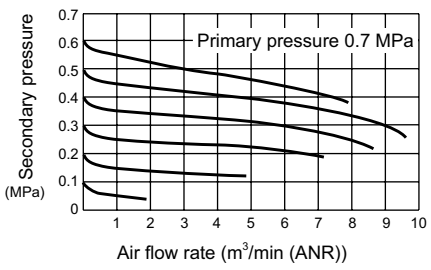
● C4000-10-W



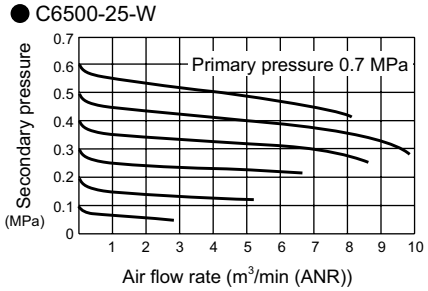
● C4000-15-W



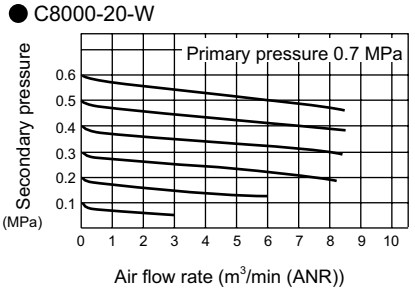
● C6500-20-W



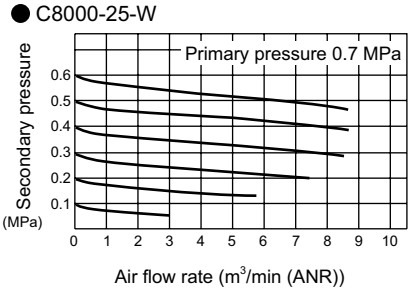
● C6500-25-W



● C8000-20-W



● C8000-25-W

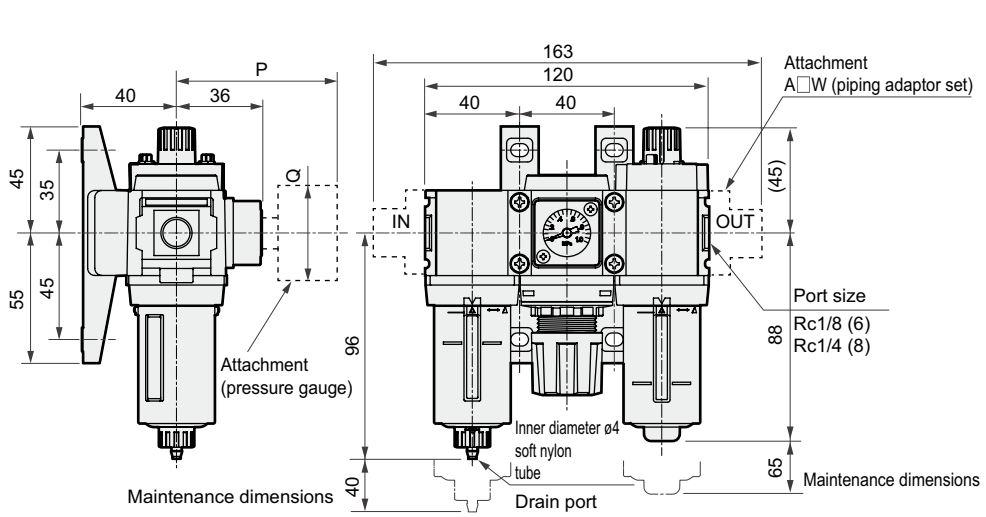


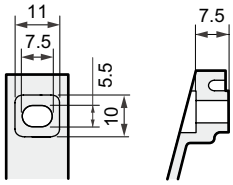
MEMO

F.R.L. Combination

Dimensions CAD

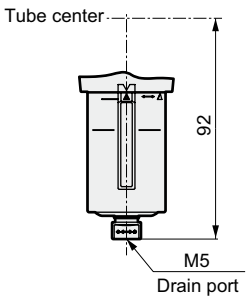
● C1000-W





Drawing of bracket section

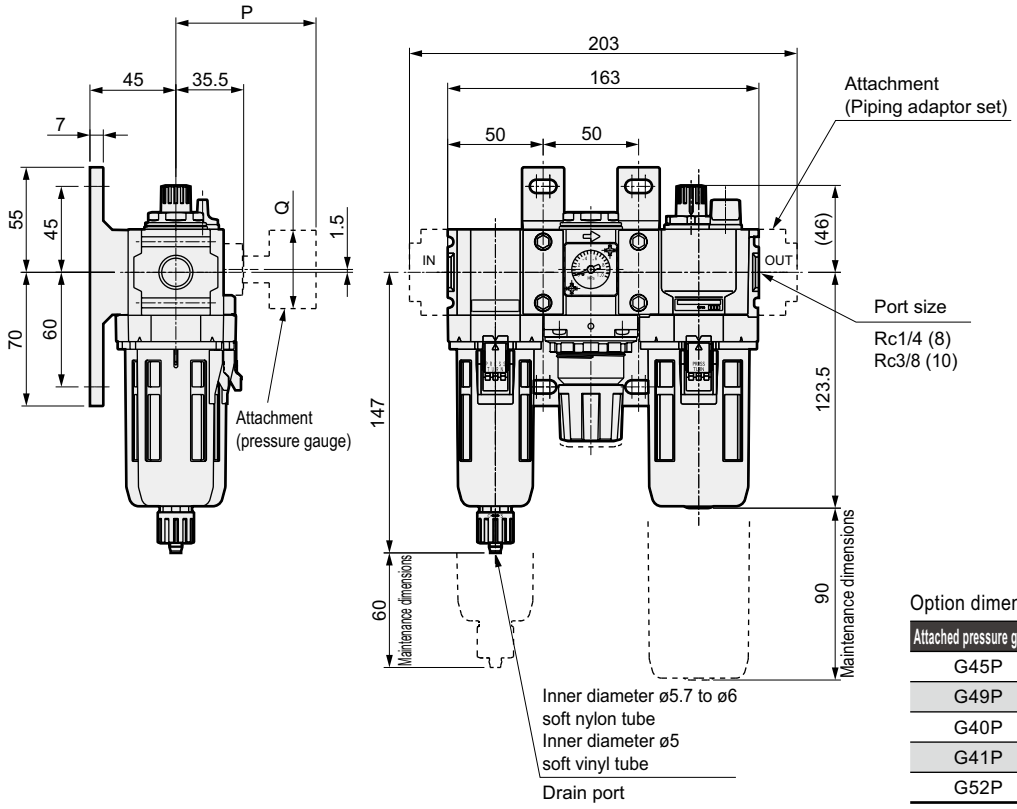
・Option dimensions
With automatic drain (F1)



Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5

● C2000-W

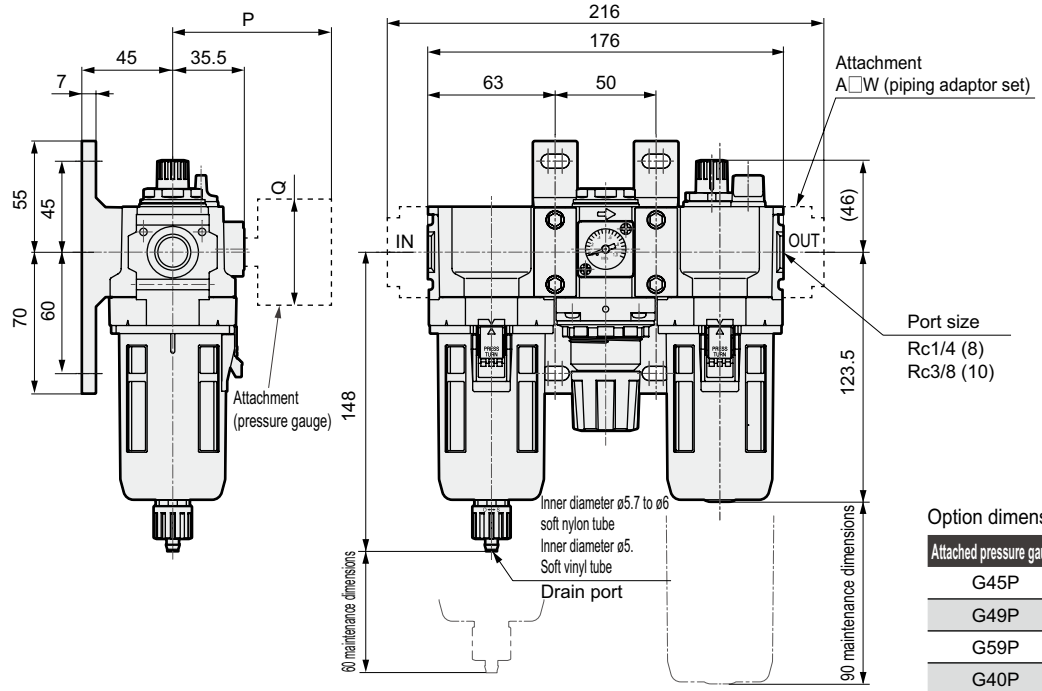


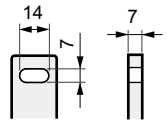
Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G40P	(75)	ø42.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5

Dimensions CAD

● C2500-W



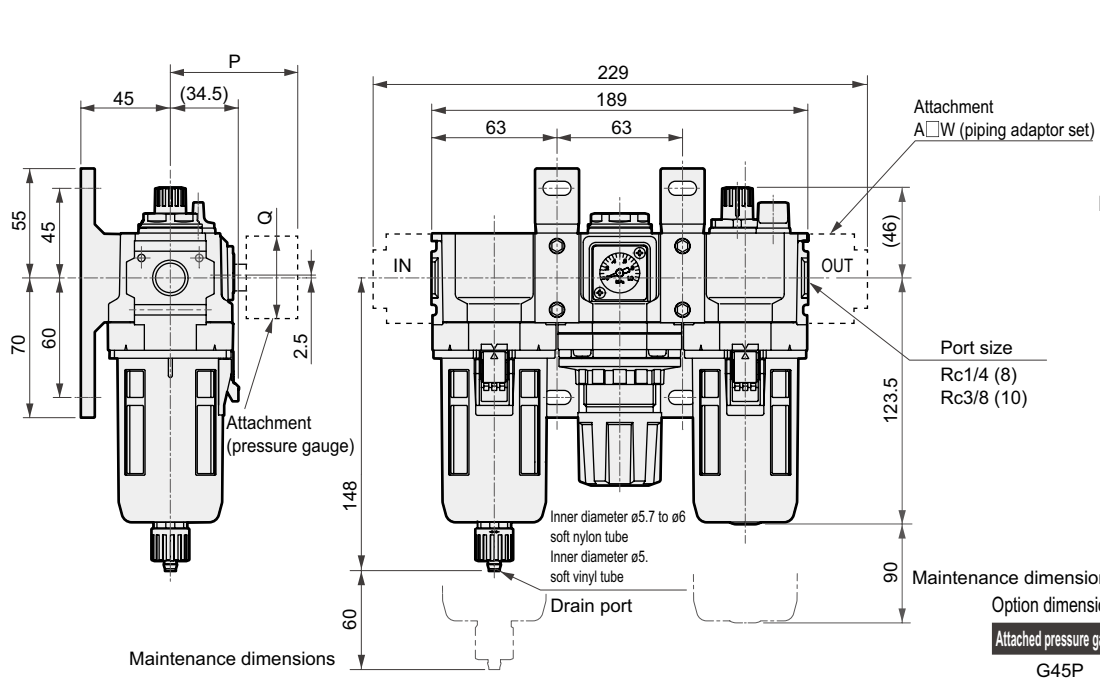


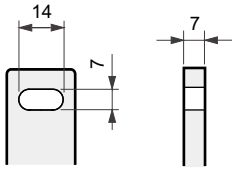
Drawing of bracket section

Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G59P	(75.5)	ø52
G40P	(75)	ø42.5
G50P	(75)	ø52.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5

● C3000-W





Drawing of bracket section

Option dimensions with pressure gauge attached

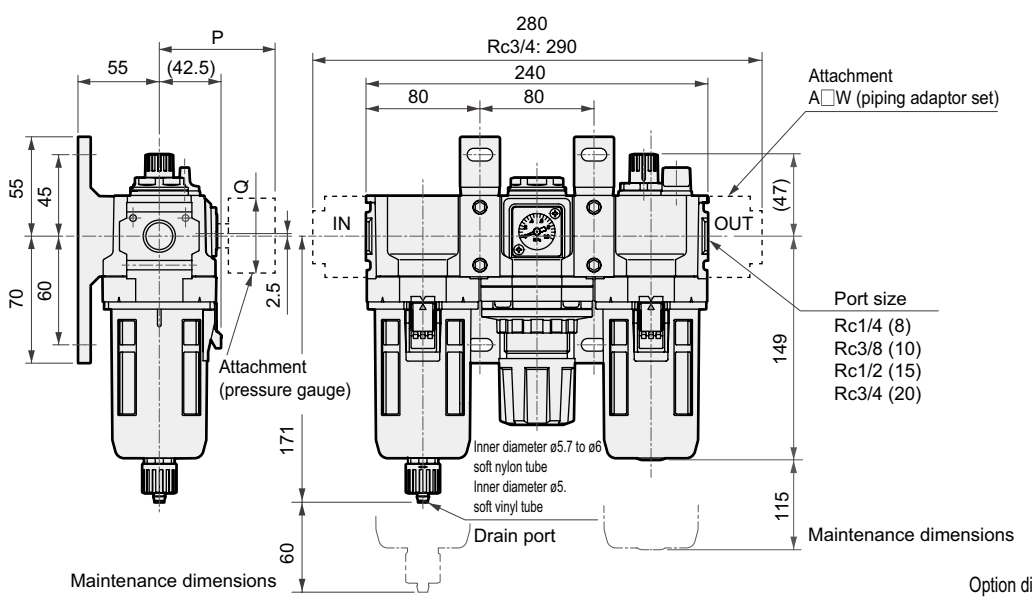
Attached pressure gauge	P	Q
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5

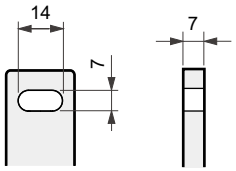
● Refer to page 92 for the dimensions of the metal bowl option filter section and page 135 for the lubricator section.

F.R.L. Combination

Dimensions CAD

● C4000-W





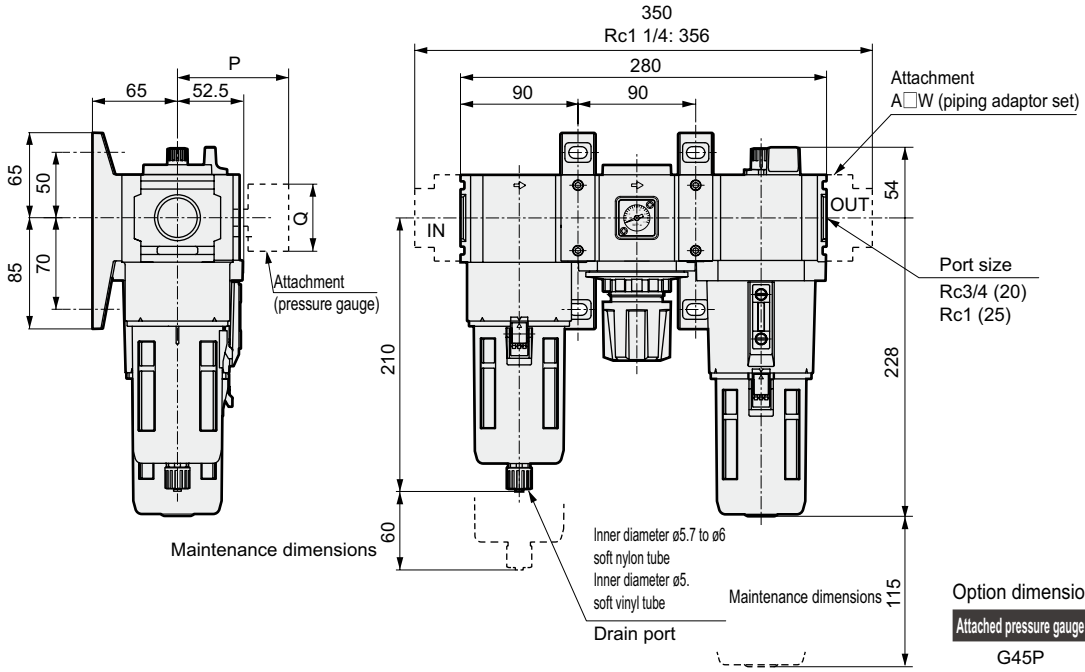
Drawing of bracket section

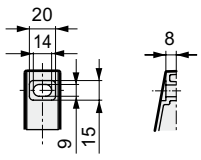
Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5

● Refer to page 92 for the dimensions of the metal bowl option filter and page 135 for the lubricator.

● C6500-W





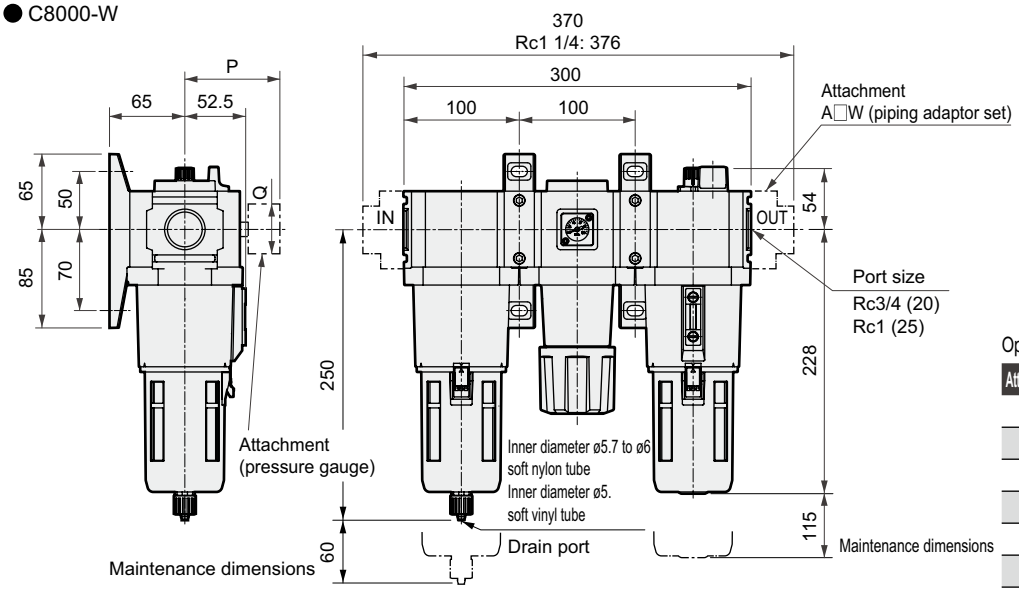
Drawing of bracket section

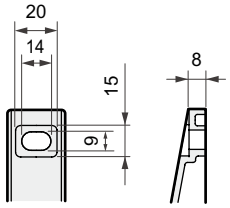
Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(80)	ø39
G49P	(79.5)	ø43.5
G59P	(82)	ø52
G40P	(81.5)	ø42.5
G50P	(81.5)	ø52.5
G41P	(80)	ø42
G52P	(93)	ø52.5

Dimensions CAD

● C8000-W





Drawing of bracket section

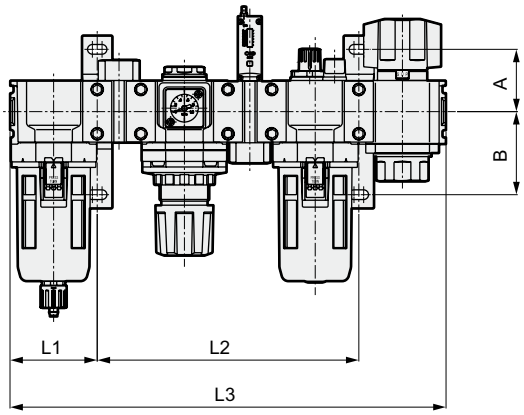
Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5

● Refer to page 92 for the dimensions of the metal bowl option filter and page 135 for the lubricator.

Dimensions with options

● C1000-W to C8000-W



Model no.	A	B
C1000-W	35	45
C2000-W	45	60
C2500-W		
C3000-W		
C4000-W		
C6050-W	50	70
C8000-W		

Assembled options	D			S			P			V			K			DS			DP			DV			DK		
Model no.	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
C1000-W	40	68	148	40	68	148	-	-	-	40	80	160	-	-	-	40	96	176	-	-	-	40	108	188	-	-	-
C2000-W	50	81.5	194.5	50	81.5	194.5	50	130	243	50	113	226	50	113	226	50	113	226	50	161.5	274.5	50	144.5	257.5	50	144.5	257.5
C2500-W	63	81.5	207.5	63	81.5	207.5	63	130	256	63	113	239	63	113	239	63	113	239	63	161.5	287.5	63	144.5	270.5	63	144.5	270.5
C3000-W	63	94.5	220.5	63	94.5	220.5	63	143	269	63	126	252	63	126	252	63	126	252	63	174.5	300.5	63	157.5	283.5	63	157.5	283.5
C4000-W	80	111.5	271.5	80	111.5	271.5	80	160	320	80	160	303	80	160	303	80	143	303	80	191.5	351.5	80	191.5	334.5	80	191.5	334.5
C4000-20-W Note 1	100	111.5	311.5	100	111.5	311.5	100	160	360	100	160	343	100	160	343	100	143	343	100	191.5	391.5	100	191.5	374.5	100	191.5	374.5
C6500-W	90	140	330	90	140	330	-	-	-	-	-	-	90	190	370	90	190	380	-	-	-	-	-	-	90	240	420
C8000-W	100	150	350	100	150	350	-	-	-	-	-	-	100	200	390	100	200	400	-	-	-	-	-	-	100	250	440

Assembled options	DSV			DSK			DPV			DPK			SV			SK			PV			PK		
Model no.	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
C1000-W	40	136	216	-	-	-	-	-	-	-	-	-	40	100	188	-	-	-	-	-	-	-	-	-
C2000-W	50	176	289	50	176	289	50	224.5	337.5	50	224.5	337.5	50	144.5	257.5	50	144.5	257.5	50	193	306	50	193	306
C2500-W	63	176	302	63	176	302	63	224.5	350.5	63	224.5	350.5	63	144.5	270.5	63	144.5	270.5	63	193	319	63	193	319
C3000-W	63	189	315	63	189	315	63	237.5	363.5	63	237.5	363.5	63	157.5	283.5	63	157.5	283.5	63	206	332	63	206	332
C4000-W	80	223	366	80	223	366	80	271.5	414.5	80	271.5	414.5	80	191.5	334.5	80	191.5	334.5	80	240	383	80	240	383
C4000-20-W Note 1	100	223	406	100	223	406	100	271.5	454.5	100	271.5	454.5	100	191.5	374.5	100	191.5	374.5	100	240	423	100	240	423
C6500-W	-	-	-	90	290	470	-	-	-	-	-	-	-	-	-	90	240	420	-	-	-	-	-	-
C8000-W	-	-	-	100	300	490	-	-	-	-	-	-	-	-	-	100	250	440	-	-	-	-	-	-

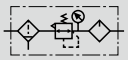
L1: Dimensions from the IN edge to center of the T-type bracket mounting hole
L2: Spacing dimensions of the mounting hole from the first T-type bracket to the second T-type bracket
L3: Dimensions from the IN edge to the OUT edge

*Refer to the general catalog for the detailed dimentions of the mounting hole of the bracket.
Note 1. The piping adapter is assembled on the OUT side.
Piping adaptor A400-20-W is assembled on both ends of C4000-20-W.

F.R.L. combination standard white series

C1010/C2010/C3010/C4010/C8010-W Series

Integrated filter, regulator and lubricator.
Port size: 1/8 to 1

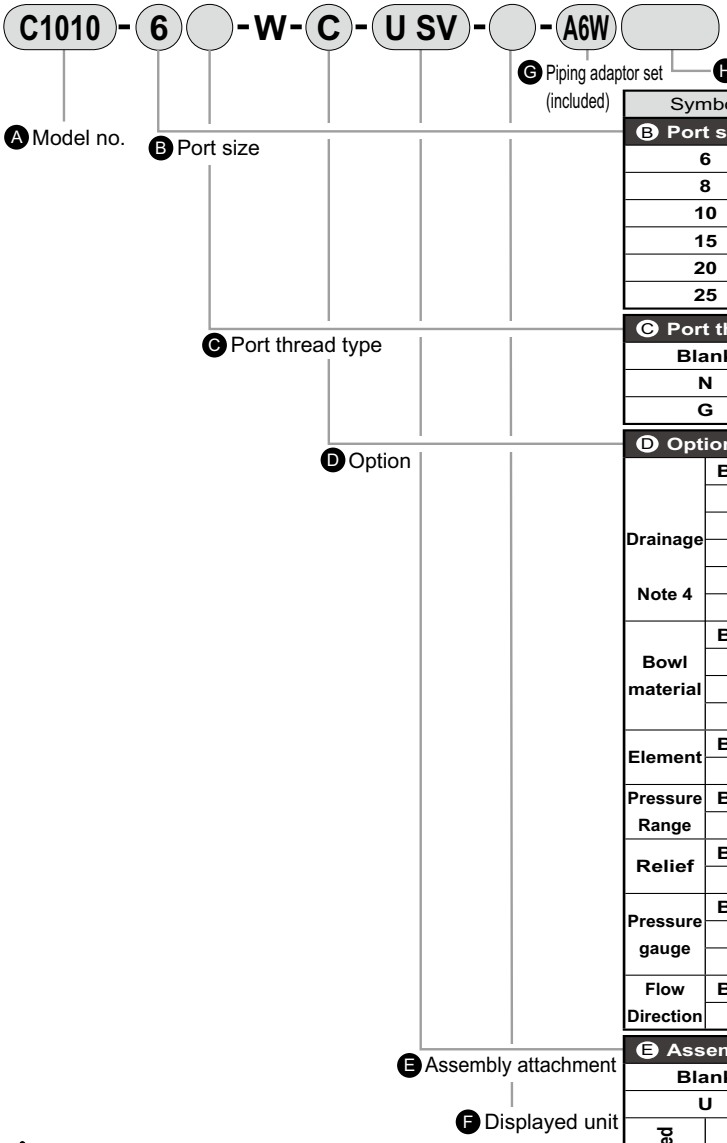
JIS symbol 

Specifications

Descriptions		C1010-W	C2010-W	C3010-W	C4010-W	C8010-W
Exterior						
Components	Filter･regulator	W1000-W	W2000-W	W3000-W	W4000-W	W8000-W
	Lubricator	L1000-W	L3000-W	L3000-W	L4000-W	L8000-W
Working fluid		Compressed air				
Max. working pressure	MPa	1				
Withstanding pressure	MPa	1.5				
Ambient temperature range	℃	5 to 60				
Filtration rating	μm	5				
Set pressure range	MPa	0.05 to 0.85 (Note 5)	0.05 to 0.85			
Minimum drip flow (Note 1)	m^3/min (ANR)	0.015	0.03	0.03	0.065	0.065
Relief		With relief mechanism				
Oil capacity	cm^3	20	85	85	170	170 (MAX360)
Drain capacity	cm^3	12	25	45	80	80 Note 2
Applicable oil		Turbine oil Class 1 ISO VG32 (spindle oil not permitted)				
Port size	Rc, NPT, G	1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight	kg	0.31	0.77	0.97	1.45	3.57
Standard accessories		Pressure gauge, bracket, bowl guard				

Note 1: The minimum drip flow is that five drops of turbine oil drip per minute at the set pressure of 0.5 MPa.
Note 2: Drainage accumulates up to 170 cm^3 only with the manual drain cock.
Note 3: The automatic drain's minimum operating pressure for "F" or "FF" with an automatic drain is 0.1 MPa. Initially generated drainage and air are purged until pressure reaches 0.1 MPa.
Note 4: The automatic drain's minimum operating pressure for "F1" or "FF1" with an automatic drain is 0.15 MPa.
Note 5: When using C1010-W Series "F1" with an automatic drain, the minimum operating pressure is 0.2 MPa and maximum operation pressure is 0.7 MPa. Refer to the maximum working flow table (page 85) for F1000-W-F1 with an automatic drain for details on maximum working flow. Set the working flow below the maximum working flow.
Note 6: When element option "Y" is selected, refer to the maximum working flow table (page 87) for maximum flow. Set the working flow to less than the maximum working flow.
Note 7: C2010-W Series with an automatic drain "F1" must be used below maximum flow rate. (Refer to page 85 F2000-W for weight.)

How to order



* Refer top page 9 for an explanation of the options.

Symbol		Descriptions	Ⓐ Model no. C1010	C2010	C3010	C4010	C8010
Ⓑ Port size							
6		1/8	●				
8		1/4	●	●	●	●	
10		3/8		●	●	●	
15		1/2				●	
20		3/4				●Note 1	●
25		1					●
Ⓒ Port thread type							Note 2
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓓ Option							Note 3
Drainage Note 4	Blank	Filter with manual drain cock, lubricator without manual drain cock	●	●	●	●	●
	C	Lubricator with manual cock	●	●	●	●	●
	F	Filter with automatic drain (NO type: exhaust without pressurization)			●	●	●
	F1	Filter with automatic drain (NC type: exhaust with pressurization)	●	●	●	●	●
	FF	Filter with automatic large automatic drain (NO type: exhaust without pressurized)					●
	FF1	Filter with automatic large drain (NC type: no exhaust without pressurization)					●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●
	M	Metal bowl			●	●	●
	M1	Metal bowl with manual drain cock Note 5		●	●	●	●
Element	Blank	5μm	●	●	●	●	●
	Y	0.3μm (submicron) Note 6			●	●	●
Pressure Range	Blank	0.05 to 0.85MPa	●	●	●	●	●
	L	0.05 to 0.35MPa Note 7	●	●	●	●	●
Relief	Blank	With relief mechanism	●	●	●	●	●
	N	Non-relief type	●	●	●	●	●
Pressure gauge	Blank	Standard pressure gauge (G401-W)	●	●	●	●	●
	T	Without pressure gauge (gauge port (Rc1/4) assembled sealed)	●	●	●	●	●
	T8	Pressure gauge attachable (gauge port (Rc1/4) assembled open)	●	●	●	●	●
Flow Direction	Blank	Standard flow (left to right)	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●
Ⓔ Assembly attachment							Page 137 to148, 153, 154
Blank		Without assembly attachment	●	●	●	●	●
U		Assembly attachment type Note 8	●	●	●	●	●
Assembled	S	Pressure switch (P1100-W, 4100-W, 8100-W)	●	●	●	●	●
	P	Pressure switch (P4000-W)		●	●	●	
	V	Shut-off valve (V1000-W, V3000-W)	●	●	●	●	
	K	Shut-off valve with key hole (V3010-W, V6010-W)		●	●	●	●
Ⓕ Displayed unit							
Blank		MPa display, Rc thread	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●
Ⓖ Piping adaptor set (included)							Page 155 to 157 Note 9
Blank		Not attached	●	●	●	●	●
A6*W		1/8 piping adaptor set	●				
A8*W		1/4 piping adaptor set	●	●	●	●	
A10*W		3/8 piping adaptor set	●	●	●	●	
A15*W		1/2 piping adaptor set		●	●	●	
A20*W		3/4 piping adaptor set				●	●
A25*W		1 piping adaptor set					●
A32*W		1 1/4 piping adaptor set					●
*** Adaptor thread type**							
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓗ Pressure gauge option (attached)							Note 10 Page 198
Blank		Not attached	●	●	●	●	●
G45P		G45D-8-P10 (L: G45D-8-P04)	●	●	●	●	●
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)	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Piping adaptor A400-20*-W is assembled on both ends of C4010-20*-W. Piping adaptor set "A20*W" does not need to be selected.

Note 2: G threads and NPT threads are available for IN, OUT, gauge port and drain discharge port (metal bowl with automatic drain). Attachment P, V will be subject to this as well.

Note 3: Select options per drainage, bowl material, element, and regulator sections. When selecting options for several items, list options in order from the top.

Note 4: Refer to page 12 for working conditions of the automatic drain.

Note 5: Have a choice drain discharge option "C" or "F" and "F1" for option "M1".

Note 6: Refer to page 87 for max. flow rate of option "Y".

Note 7: Pressure gauge display range will be 0 to 0.4 MPa for option "L".

Note 8: Mounting location for assembly attachments

Symbol	Installation position of Attachment	Applicable model
S or P	W+ (S, P) +L	C1010-W to C8010-W ("P" excludes 8000 Series)
V or K	W+L+ (V, K)	C1010-W to C8010-W ("V" excludes 8000 Series. "K" excludes 1000 Series)

Note: Indicate "U" + "D", "S", "P", "V", and "K" when selecting an assembly attachment.
Use custom combinations specifications for any other combination.

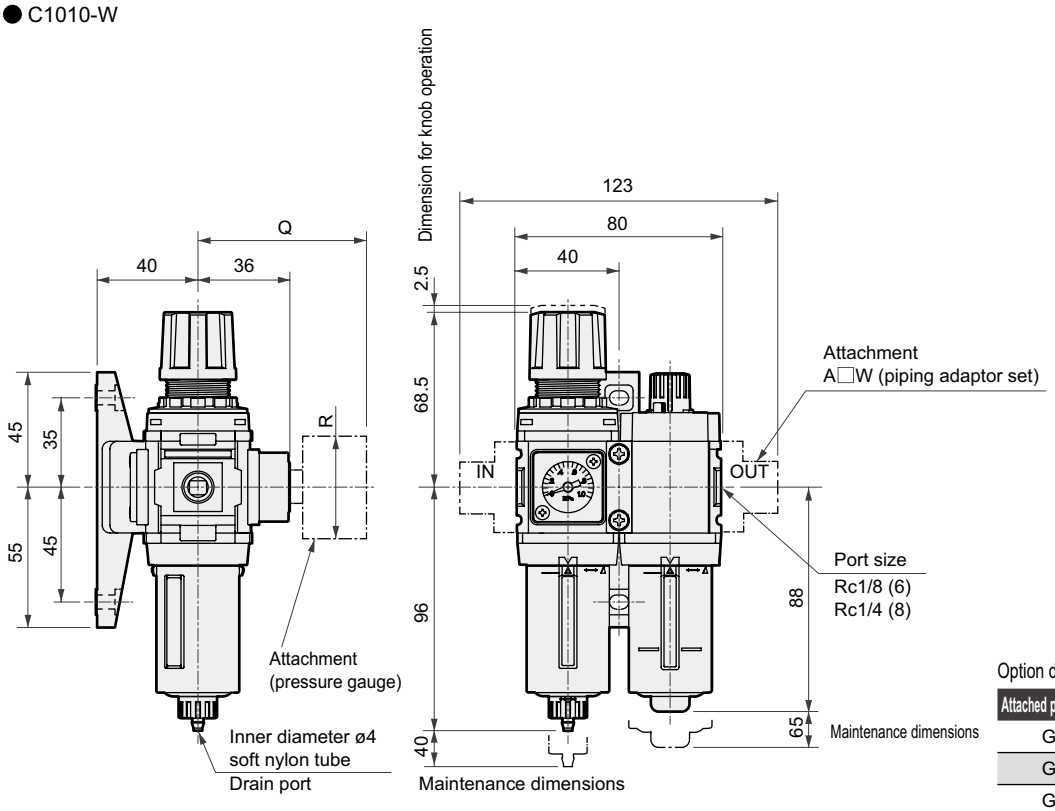
Note 9: A joiner set is attached with the piping adapter set.

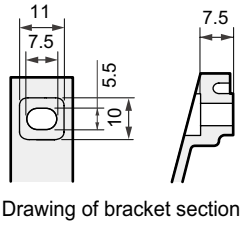
Note 10: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

W.L. Combination

Dimensions CAD

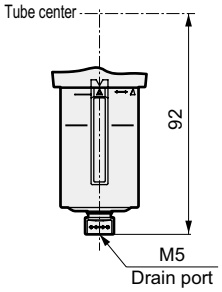
● C1010-W





Drawing of bracket section

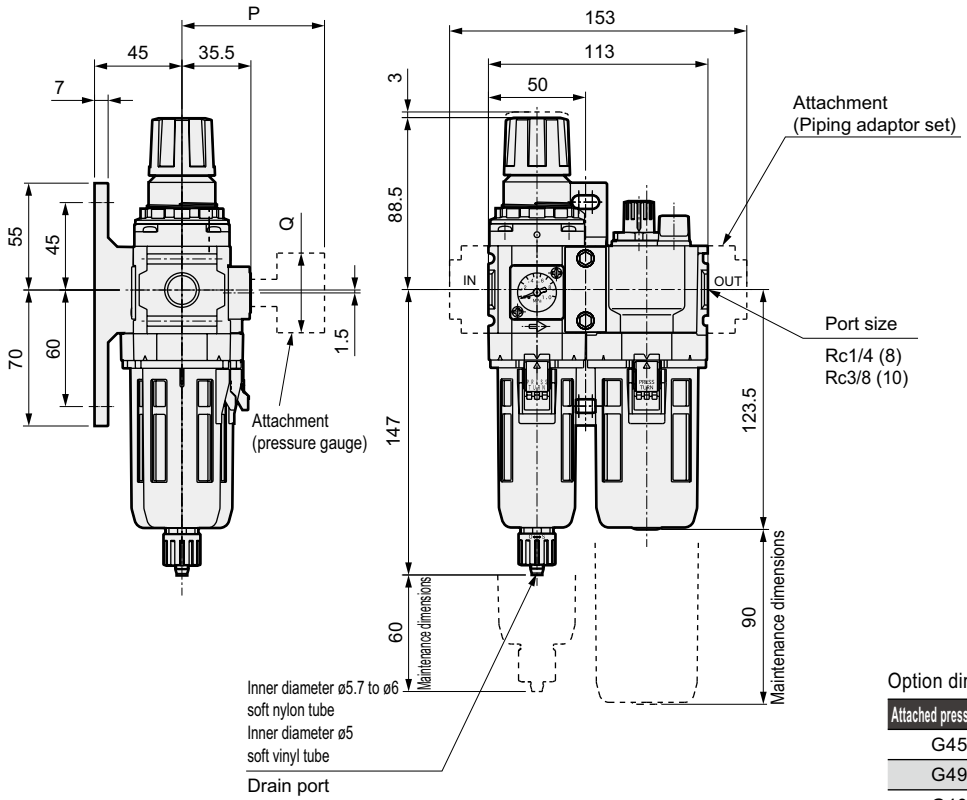
・Option dimensions
With automatic drain (F1)



Option dimensions with pressure gauge attached

Attached pressure gauge	Q	R
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5

● C2010-W

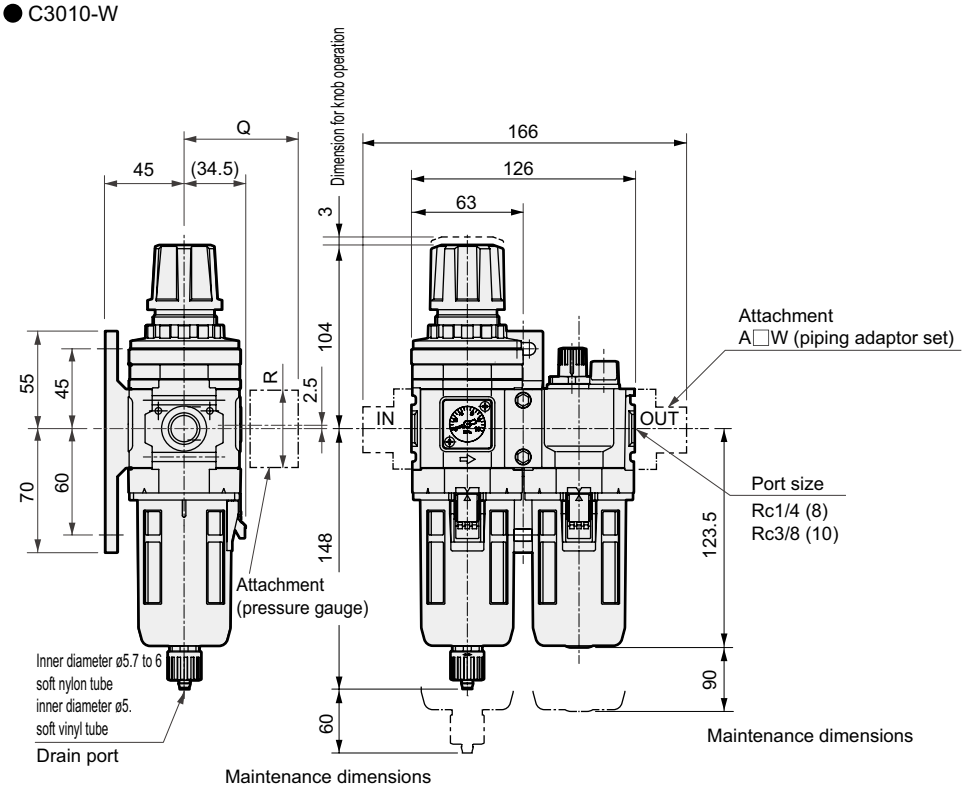


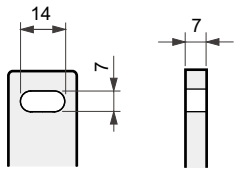
Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G40P	(75)	ø42.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5

Dimensions CAD

● C3010-W





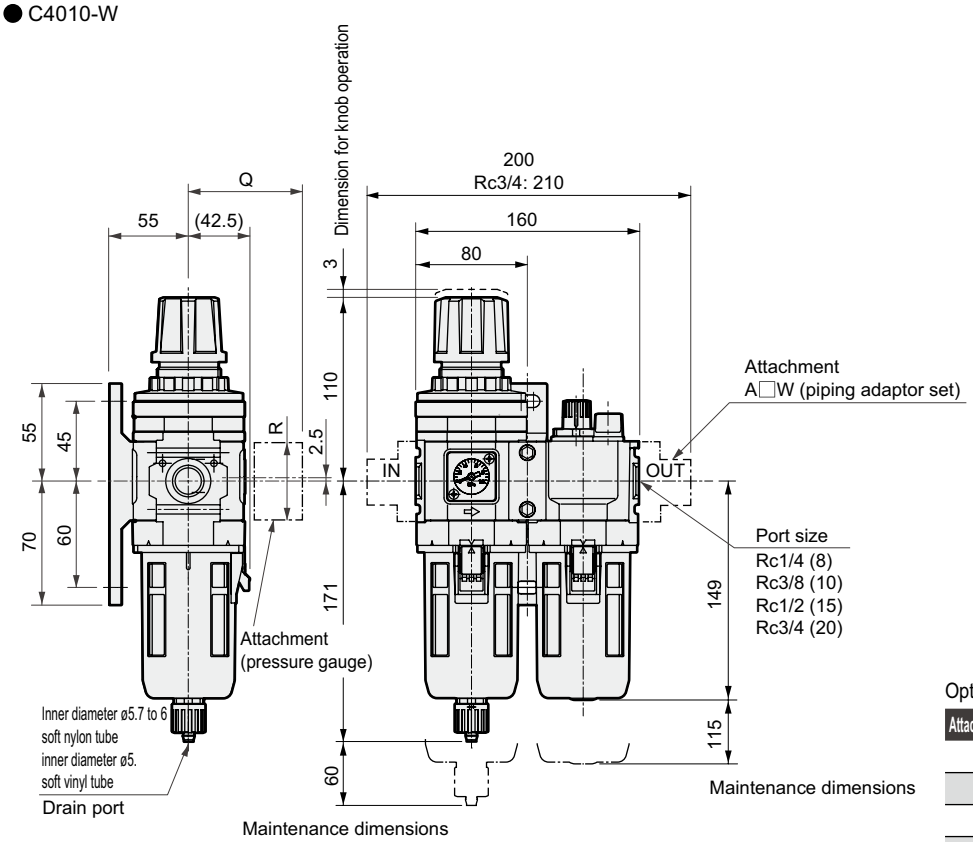
Drawing of bracket section

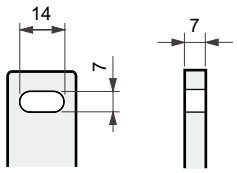
Option dimensions with pressure gauge attached

Attached pressure gauge	Q	R
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5

● Refer to page 75 for the dimensions of the metal bowl option filter/ regulator and page 135 for the lubricator.

● C4010-W





Drawing of bracket section

Option dimensions with pressure gauge attached

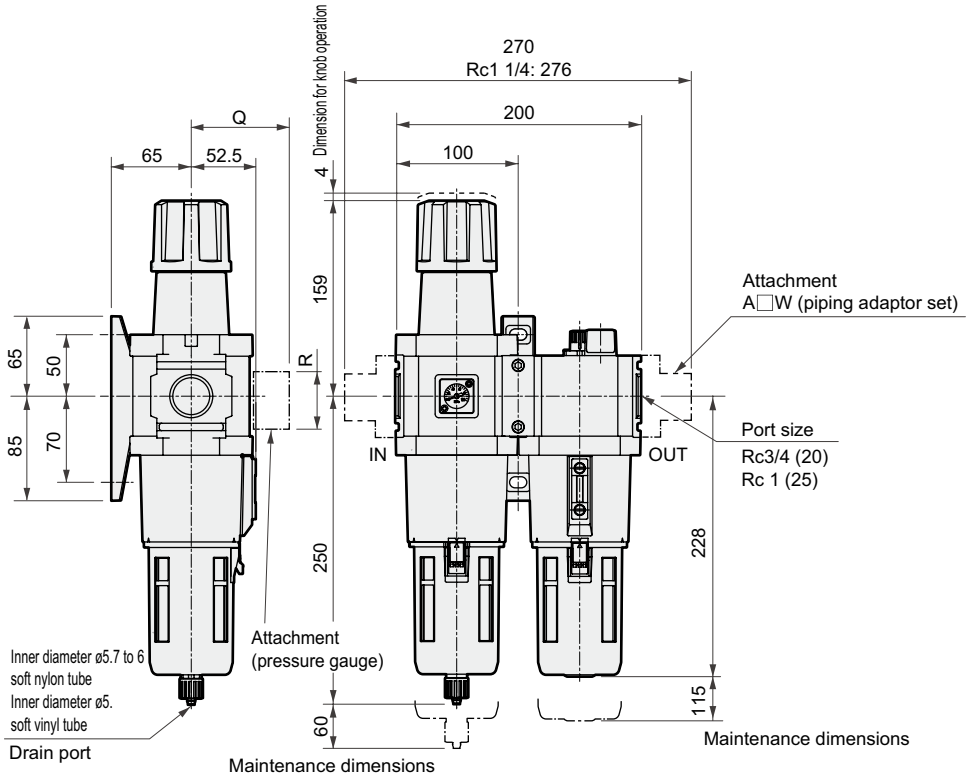
Attached pressure gauge	Q	R
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5

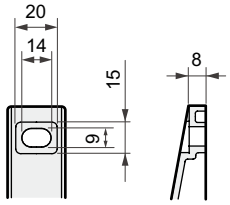
* Refer to page 75 for the dimensions of the metal bowl option filter/ regulator and page 135 for the lubricator.

W.L. Combination

Dimensions CAD

● C8010-W





Drawing of bracket section

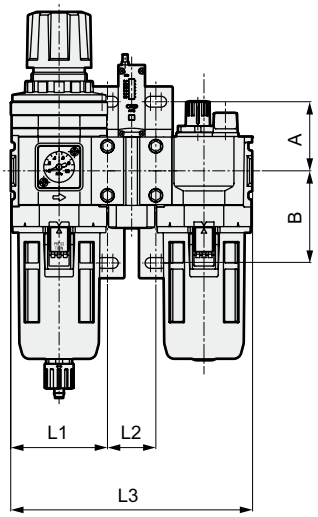
Option dimensions with pressure gauge attached

Attached pressure gauge	Q	R
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5

● Refer to page 75 for the dimensions of the metal bowl option filter/ regulator and page 135 for the lubricator.

Dimensions with options

● C1010-W to C8010-W



Model no.	A	B
C1010-W	35	45
C2010-W	45	60
C3010-W		
C4010-W		
C8010-W	50	70

Assembled options	S			P			V			K			SV			SK			PV			PK		
Model no.	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
C1010-W	40	28	108	-	-	-	40	40	120	-	-	-	40	68	148	-	-	-	-	-	-	-	-	-
C2010-W	50	31.5	144.5	50	80	193	50	63	176	50	63	176	50	94.5	207.5	50	94.5	207.5	50	143	256	50	143	256
C3010-W	63	31.5	157.5	63	80	206	63	63	189	63	63	189	63	94.5	220.5	63	94.5	220.5	63	143	269	63	143	269
C4010-W	80	31.5	191.5	80	80	240	80	80	223	80	80	223	80	111.5	271.5	80	111.5	271.5	80	160	303	80	160	303
C4010-20-W Note 1	100	31.5	231.5	100	80	280	100	80	263	100	80	263	100	111.5	294.5	100	111.5	294.5	100	160	343	100	160	343
C8010-W	100	50	250	-	-	-	-	-	-	100	100	290	-	-	-	100	150	340	-	-	-	-	-	-

L1: Dimensions from the IN edge to center of the T-type bracket mounting hole
L2: Spacing dimensions of the mounting hole from the first T-type bracket to the second T-type bracket
L3: Dimensions from the IN edge to the OUT edge

*Refer to the general catalog for the detailed dimentions of the mounting hole of the bracket.
Note 1. The piping adapter is assembled on the OUT side.
Piping adaptor A400-20-W is assembled on both ends of C4010-20-W.

F.R.L. combination standard white series

C1020 / C2020 / C2520-W C3020 / C4020 / C6020 / C8020-W Series

Integrated filter and regulator.

Port size: 1/8 to 1

JIS symbol 

Specifications

Descriptions		C1020-W	C2020-W	C2520-W	C3020-W	C4020-W	C6020-W	C8020-W
Exterior								
Components	Filter	F1000-W	F2000-W	F3000-W	F3000-W	F4000-W	F6000-W	F8000-W
	Regulator	R1000-W	R2000-W	R2000-W	R3000-W	R4000-W	R6000-W	R8000-W
Working fluid		Compressed air						
Max. working pressure	MPa	1.0						
Withstanding pressure	MPa	1.5						
Ambient temperature range	℃	5 to 60						Note 6
Filtration rating	μm	5						
Set pressure range	MPa	0.05 to 0.85 Note 2	0.05 to 0.85					
Relief		With relief mechanism						
Drain capacity	cm^3	12	25	45	45	80	80	80 (Note 1)
Port size	Rc, NPT, G	1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight	kg	0.28	0.64	0.65	0.79	1.25	2.07	2.93
Standard accessories		Pressure gauge, bracket, bowl guard						

Note 1: Drainage accumulates up to 170 cm^3 only with the manual drain cock.

Note 2: When using C1020-W series "F1" with an automatic drain, the minimum operating pressure is 0.2 MPa and maximum operation pressure is 0.7 MPa. Refer to the maximum working flow table (page 85) for F1000-F1 with an automatic drain for details on maximum working flow. Set the working flow below the maximum working flow.

Note 3: The automatic drain's minimum operating pressure for "F" or "FF" with an automatic drain is 0.1 MPa. (Initially generated drainage and air are purged until pressure reaches 0.1 MPa.

Note 4: The automatic drain's minimum operating pressure for "F1" or "FF1" with an automatic drain is 0.15 MPa.

Note 5: When element option "Y" is selected, refer to the maximum working flow table (page 87) for maximum flow. Set the working flow to less than the maximum working flow.

Note 6: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.

Note 7: C2020-W Series with an automatic drain "F1" must be used below maximum flow rate. (Refer to page 85 F2000-W for weight.)

How to order

C1020 - 6 ○ - W - L - U DSV - ○ - A6W - ○

* Refer page 9 for an explanation of the options.

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Assembly attachment
Ⓕ Displayed unit
Ⓖ Piping adaptor set (included)
Ⓗ Pressure gauge option (included)

Symbol		Descriptions	Ⓐ Model no. C1020	C2020	C2520	C3020	C4020	C6020	C8020
Ⓑ Port size									
6		1/8	●						
8		1/4	●	●	●	●	●		
10		3/8		●	●	●	●		
15		1/2					●		
20		3/4					●[10]	●	●
25		1						●	●
Ⓒ Port thread type									Note 2
Blank		Rc thread	●	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●	●
Ⓓ Option									Note 3
Drainage Note 4	Blank	With filter and manual drain cock	●	●	●	●	●	●	●
	F	Filter with automatic drain (ND type: exhaust without pressurization)			●	●	●	●	●
	F1	Filter with automatic drain (NC type: exhaust with pressurization)	●	●	●	●	●	●	●
	FF	Filter with automatic large automatic drain (NO type: exhaust without pressurized)							●
	FF1	Filter with automatic large drain (NC type: no exhaust without pressurization)							●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●	●	●
	M	Metal bowl			●	●	●	●	●
	M1	Metal bowl with manual drain cock		●	●	●	●	●	●
Element	Blank	5μm	●	●	●	●	●	●	●
	Y	0.3μm (submicron) Note 5	●		●	●	●	●	●
Differential pressure detection	Blank	Without differential pressure detection port	●	●	●	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)						●	●
Pressure Range	Blank	0.05 to 0.85MPa	●	●	●	●	●	●	●
	L	0.05 to 0.35MPa Note 6	●	●	●	●	●	●	●
Relief	Blank	With relief mechanism	●	●	●	●	●	●	●
	N	Non-relief type	●	●	●	●	●	●	●
Pressure gauge	Blank	Standard pressure gauge (G401-W)	●	●	●	●	●	●	●
	T	Without pressure gauge (gauge port (Rc1/4) assembled sealed)	●	●	●	●	●	●	●
	T8	Pressure gauge attachable (gauge port (Rc1/4) assembled open)	●	●	●	●	●	●	●
	T6	Compatibility with digital pressure sensor PPX Note 7	●	●	●	●	●	●	●
	R1	Pressure switch with display PPD assembled Note 8	●		●	●	●	●	●
Flow direction	Blank	Standard flow (left to right)	●	●	●	●	●	●	●
	X1	IN/OUT reverse flow (right to left)	●	●	●	●	●	●	●
Ⓔ Assembly attachment									Page 137 to148, 153, 154
Blank		Without assembly attachment	●	●	●	●	●	●	●
U		Assembly attachment type Note 5	●	●	●	●	●	●	●
Assembled	D	Distributor (D101-W, D401-W, D801-W)	●	●	●	●	●	●	●
	S	Pressure switch (P1100-W, 4100-W, 8100-W)	●	●	●	●	●	●	●
	P	Pressure switch (P4000-W)		●	●	●	●		
	V	Shut-off valve (V1000-W, V3000-W)	●	●	●	●	●		
	K	Shut-off valve with key hole (V3010-W, V6010-W)		●	●	●	●	●	●
Ⓕ Displayed unit									
Blank		MPa display, Rc thread	●	●	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●	●	●
Ⓖ Piping adaptor set (included)									Page 155 to 157
Blank		Not attached	●	●	●	●	●	●	●
A6*W		1/8 piping adaptor set	●						
A8*W		1/4 piping adaptor set	●	●	●	●	●		
A10*W		3/8 piping adaptor set	●	●	●	●	●		
A15*W		1/2 piping adaptor set		●	●	●	●		
A20*W		3/4 piping adaptor set					●	●	●
A25*W		1 piping adaptor set						●	●
A32*W		1 1/4 piping adaptor set						●	●
*** Adaptor thread type**									
Blank		Rc thread	●	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●	●
Ⓗ Pressure gauge option (attached)									Note 11 Page 198
Blank		Not attached	●	●	●	●	●	●	●
G45P		G45D-8-P10 (L: G45D-8-P04)	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Piping adaptor A400-20*-W is assembled on both ends of C4020-20*-W. Piping adaptor set "A20*W" does not need to be specified.

Note 2: G threads and NPT threads are available for IN, OUT, gauge port and drain discharge port (metal bowl with automatic drain). Attachment P, V will be subject to this as well.

Note 3: Select options from drain exhaust, bowl material, element, differential pressure detection, regulator, and regulator. When selecting options for several items, list options in order from the top.

Note 4: Refer to page 12 for working conditions of the automatic drain.

Note 5: Refer to page 87 for max. flow rate of option "Y".

Note 6: Pressure gauge display range will be 0 to 0.4 MPa for option "L".

Note 7: When option "T6" is selected, only "blank" or "R2" is available for the (H) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.

Note 8: Output type will be NPN transistor output. Consult with CKD if PNP transistor output is required.

Note 9: Mounting location for assembly attachments

Symbol	Installation position of Attachment	Applicable model
D	F+ (D) +R	C1020-W to C8020-W
S or P	F+R+ (S, P)	C1020-W to C8020-W ("P" excludes 1000, 6000, 8000 Series)
V or K	F+R+ (V, K)	C1020-W to C8020-W ("V" excludes 6000, 8000 Series. "K" excludes 1000 Series)

Note: Indicate "U" + "D", "S", "P", "V", and "K" when selecting an assembly attachment.
Use custom combinations specifications for any other combination.

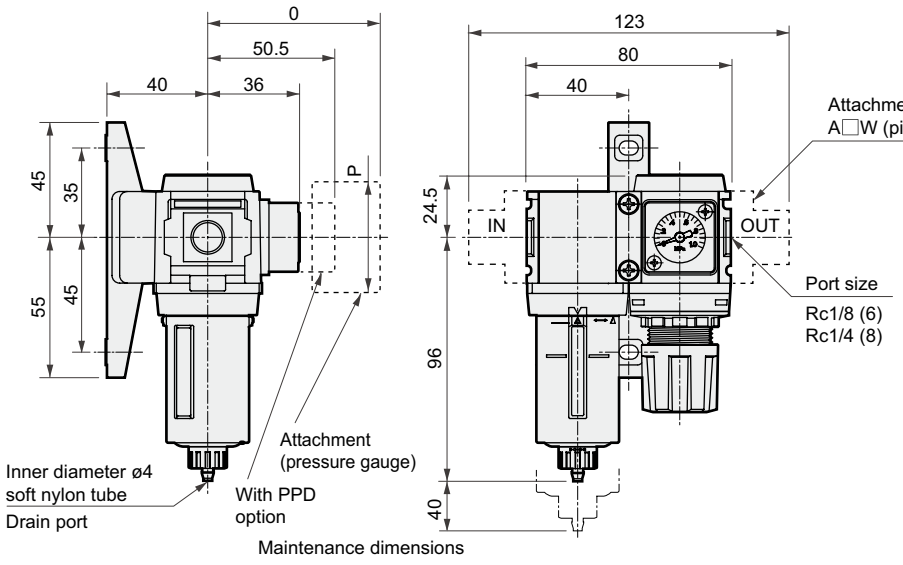
Note 10: A joiner set is attached with the piping adapter set.

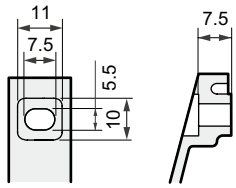
Note 11: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

F.R. Combination

Dimensions CAD

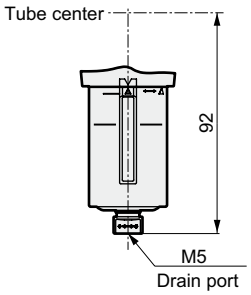
● C1020-W





Drawing of bracket section

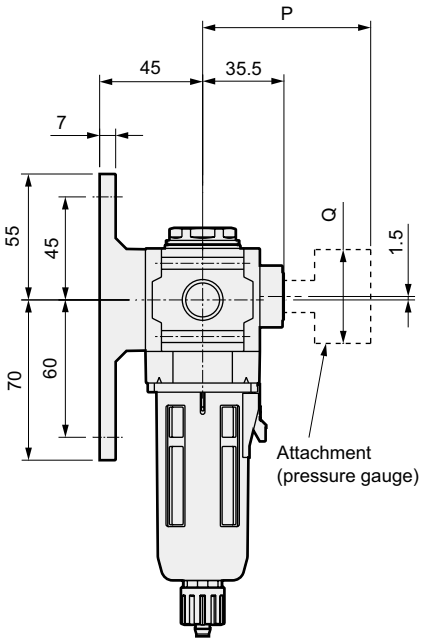
・Option dimensions
With automatic drain (F1)

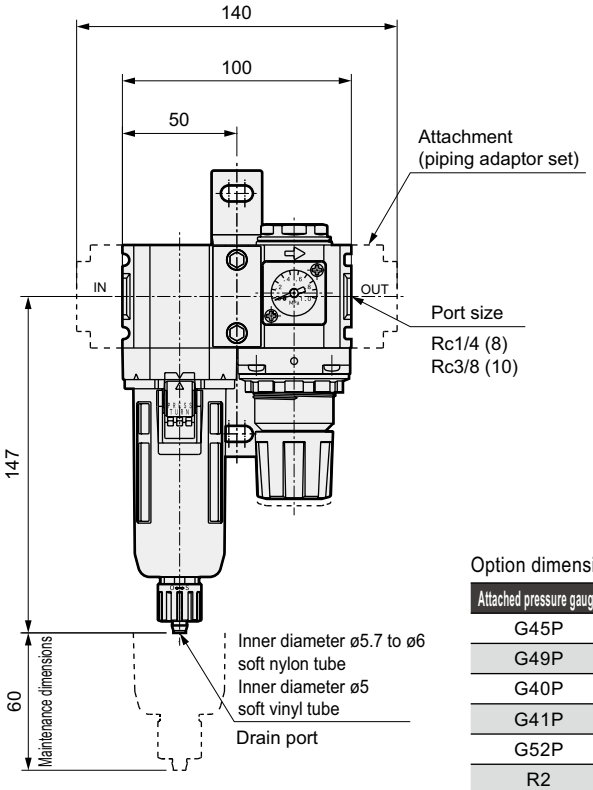


Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5
R2	(74)	□30

● C2020-W



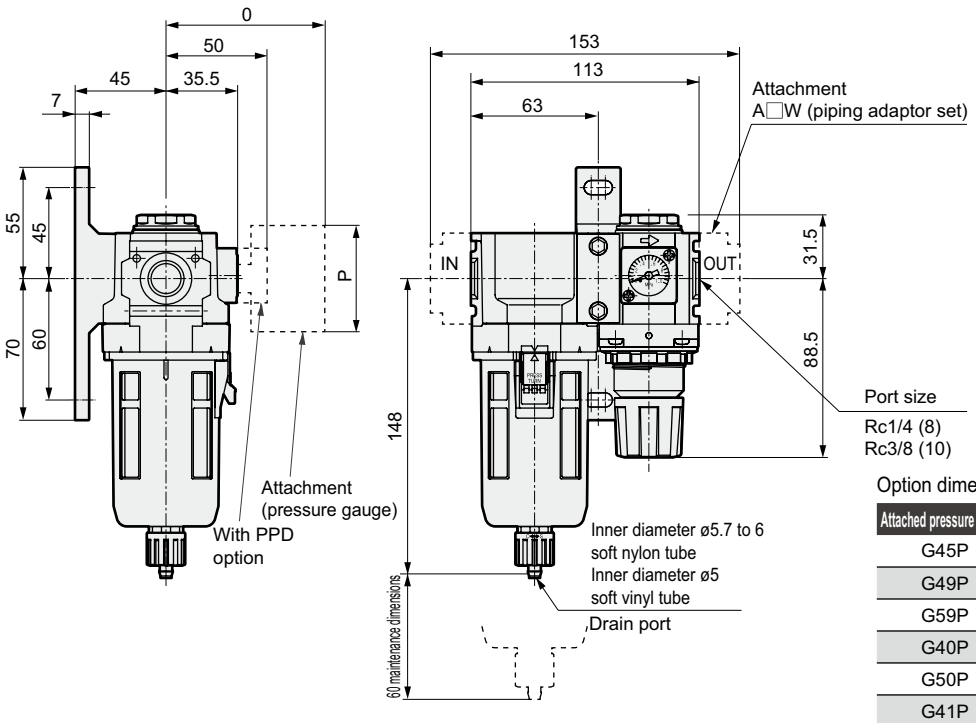


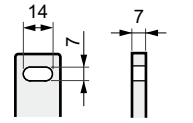
Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G40P	(75)	ø42.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

Dimensions CAD

● C2520-W



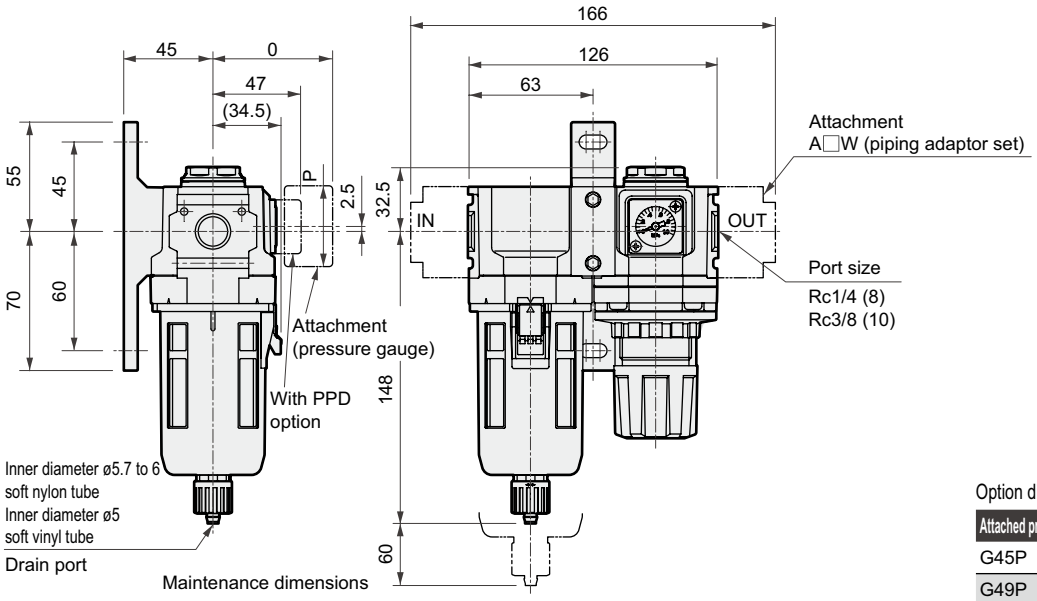


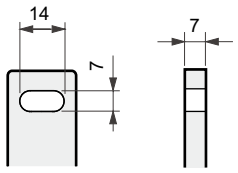
Drawing of bracket section

Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G59P	(75.5)	ø52
G40P	(75)	ø42.5
G50P	(75)	ø52.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

● C3020-W





Drawing of bracket section

Option dimensions with pressure gauge attached

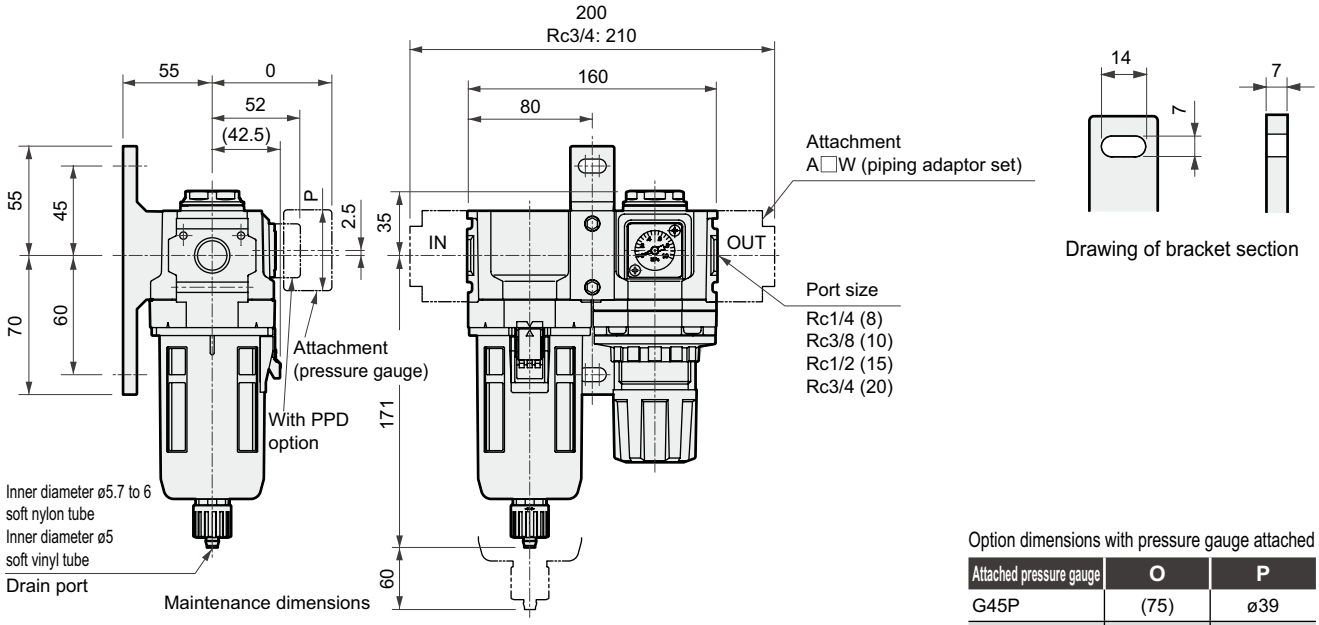
Attached pressure gauge	O	P
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5
R2	(69.5)	□30

● Refer to page 92 for dimensions of the metal bowl option.

F.R. Combination

Dimensions CAD

● C4020-W

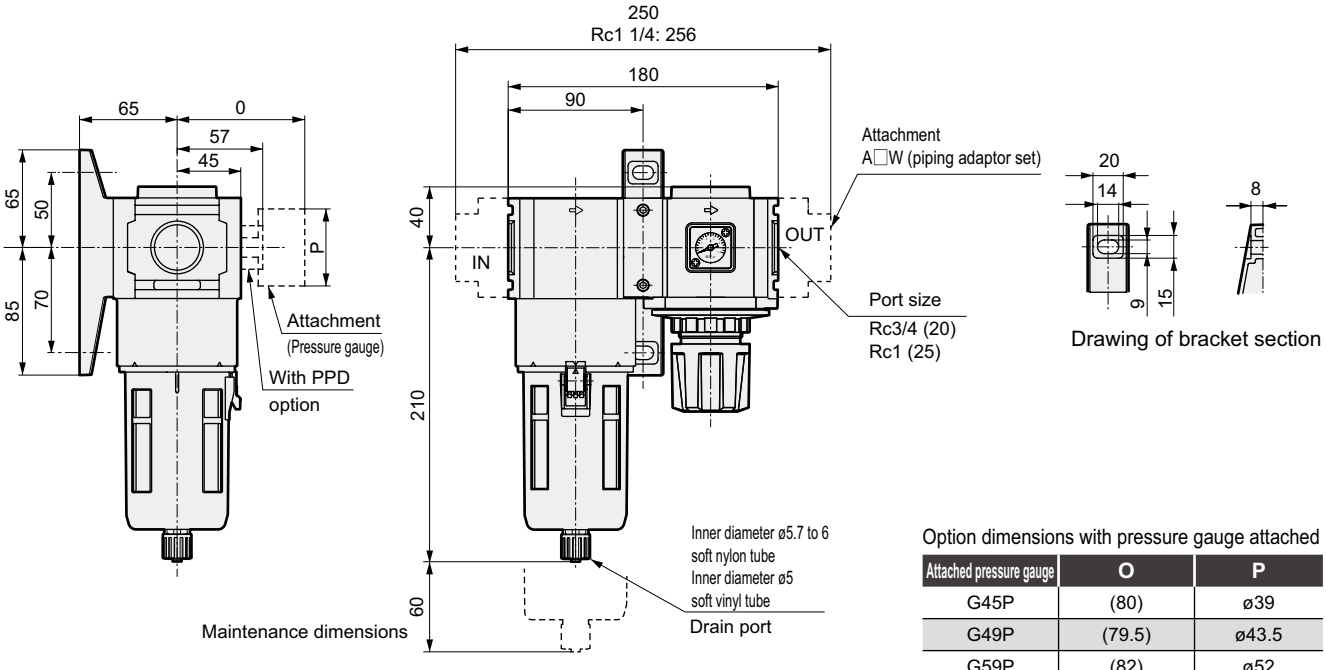


● Refer to page 92 for dimensions of the metal bowl option.

Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5
R2	(75)	□30

● C6020-W

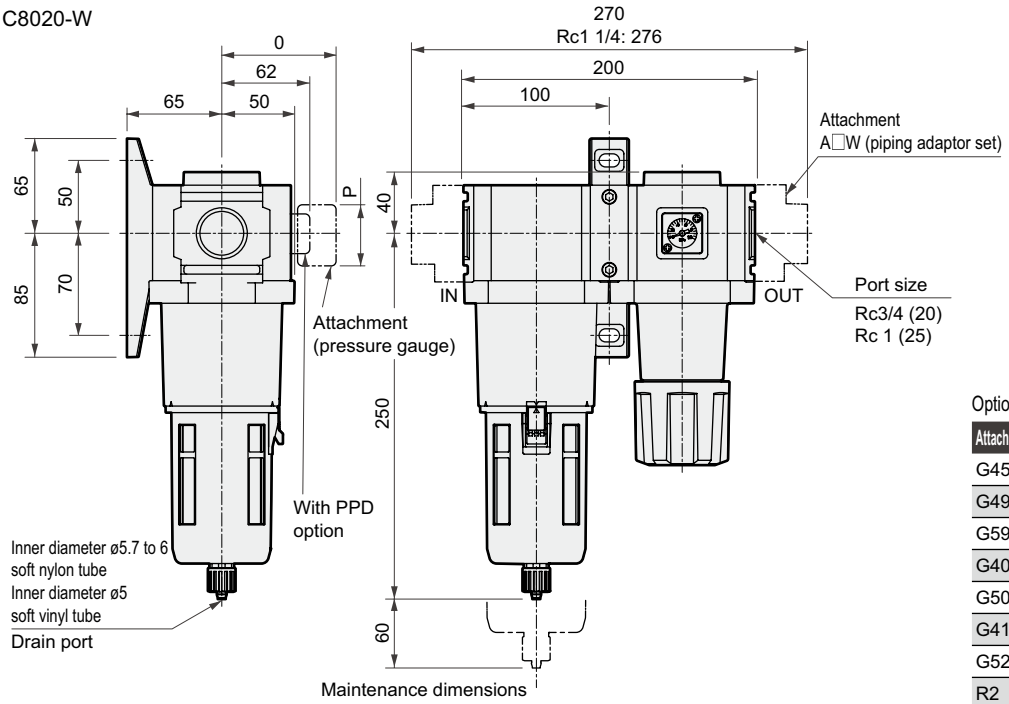


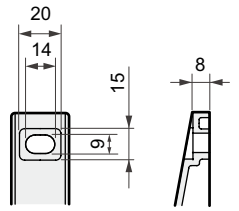
Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(80)	ø39
G49P	(79.5)	ø43.5
G59P	(82)	ø52
G40P	(81.5)	ø42.5
G50P	(81.5)	ø52.5
G41P	(80)	ø42
G52P	(93)	ø52.5
R2	(80)	□30

Dimensions CAD

● C8020-W





Drawing of bracket section

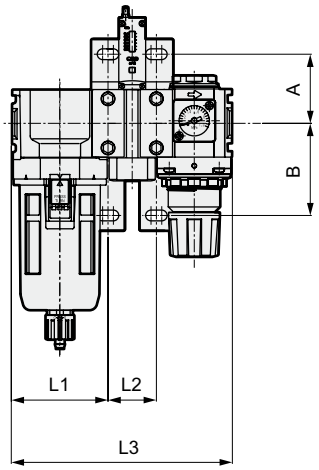
Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5
R2	(85)	□30

● Refer to page 92 for dimensions of the metal bowl option.

Dimensions with options

● C1020-W～C8020-W



Model no.	A	B
C1020-W	35	45
C2020-W	45	60
C2520-W		
C3020-W		
C4020-W		
C6020-W	50	70
C8020-W		

Assembled options	D			S (Note 1)			P			V			K			DS (Note 1)			DP			DV			DK		
Model no.	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
C1020-W	40	28	108	40	40	129.5	–	–	–	40	40	120	–	–	–	40	68	157.5	–	–	–	40	68	148	–	–	–
C2020-W	50	31.5	131.5	50	50	151.5	50	50	180	50	50	163	50	50	163	50	81.5	183	50	81.5	211.5	50	81.5	194.5	50	81.5	194.5
C2520-W	63	31.5	144.5	63	50	164.5	63	50	193	63	50	176	63	50	176	63	81.5	196	63	81.5	224.5	63	81.5	207.5	63	81.5	207.5
C3020-W	63	31.5	157.5	63	63	177.5	63	63	206	63	63	189	63	63	189	63	94.5	209	63	94.5	237.5	63	94.5	220.5	63	94.5	220.5
C4020-W	80	31.5	191.5	80	80	211.5	80	80	240	80	80	223	80	80	223	80	111.5	243	80	111.5	271.5	80	111.5	254.5	80	111.5	254.5
C4020-20-W Note 1	100	31.5	231.5	100	80	231.5	100	80	280	100	80	263	100	80	263	100	111.5	263	100	111.5	311.5	100	111.5	294.5	100	111.5	294.5
C6020-W	90	50	230	90	90	265	–	–	–	–	–	–	90	90	270	90	140	315	–	–	–	–	–	–	90	140	320
C8020-W	100	50	250	100	100	285	–	–	–	–	–	–	100	100	290	100	150	335	–	–	–	–	–	–	100	150	340

Assembled options	DSV			DSK			DPV			DPK			SV			SK			PV			PK		
Model no.	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
C1020-W	40	96	176	–	–	–	–	–	–	–	–	–	40	68	148	–	–	–	–	–	–	–	–	–
C2020-W	50	113	226	50	113	226	50	162	274.5	50	162	274.5	50	81.5	194.5	50	81.5	194.5	50	130	243	50	130	243
C2520-W	63	113	239	63	113	239	63	162	287.5	63	162	287.5	63	81.5	207.5	63	81.5	207.5	63	130	256	63	130	256
C3020-W	63	126	252	63	126	252	63	175	300.5	63	175	300.5	63	94.5	220.5	63	94.5	220.5	63	143	269	63	143	269
C4020-W	80	143	286	80	143	286	80	191.5	334.5	80	191.5	334.5	80	111.5	254.5	80	111.5	254.5	80	160	303	80	160	303
C4020-20-W Note 1	100	143	326	100	143	326	100	191.5	374.5	100	191.5	374.5	100	111.5	294.5	100	111.5	294.5	100	160	343	100	160	343
C6020-W	–	–	–	90	190	370	–	–	–	–	–	–	–	–	–	90	140	320	–	–	–	–	–	–
C8020-W	–	–	–	100	200	390	–	–	–	–	–	–	–	–	–	100	150	340	–	–	–	–	–	–

L1: Dimensions from the IN edge to center of the T-type bracket mounting hole
L2: Spacing dimensions of the mounting hole from the first T-type bracket to the second T-type bracket
L3: Dimensions from the IN edge to the OUT edge

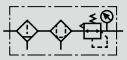
※Refer to the general catalog for the detailed dimentions of the mounting hole of the bracket.
Note 1 The piping adapter is assembled on the OUT side.
Piping adaptor A400-20-W is assembled on both ends of C4020-20-W.

F.M.R. combination standard white series

C1030 / C2030 / C2530-W C3030 / C4030 / C6030 / C8030-W Series

Integrated filter, oil mist filter, and regulator

Port size: 1/8 to 1

JIS symbol 

Specifications

Descriptions		C1030-W	C2030-W	C2530-W	C3030-W	C4030-W	C6030-W	C8030-W
Exterior								
Components	Filter	F1000-W	F2000-W	F3000-W	F3000-W	F4000-W	F6000-W	F8000-W
	Oil mist filter	M1000-W	M2000-W	M3000-W	M3000-W	M4000-W	M6000-W	M8000-W
	Regulator	R1000-W	R2000-W	R2000-W	R3000-W	R4000-W	R6000-W	R8000-W
Working fluid		Compressed air						
Max. working pressure MPa		1						
Withstanding pressure MPa		1.5						
Ambient temperature range ℃		5 to 60						Note 6
Set pressure range MPa		0.05 to 0.85 Note 5	0.05 to 0.85					
Relief		With relief mechanism						
Port size Rc, NPT, G		1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (11/4 uses an adaptor)	3/4, 1 (11/4 uses an adaptor)
Product weight kg		0.40	0.98	1.02	1.10	1.86	3.19	4.45
Secondary oil concentration (Oil mist filter outlet side)		0.01mg/m^3 or less						
Maximum flow rate (Note 1) m^3/min		0.15	0.25	0.36	0.36	0.825	1.27	2.6

Note 1: The maximum flow is for a primary pressure of 0.7 MPa. When element option "Y" is selected, refer to page 87 for maximum flow.

Note 2: Refer to page 95 for details on other oil mist filters.

Note 3: When "F" with an automatic drain is selected, the supply air pressure is 0.15 MPa or more. Air filter and automatic drain are purged with initial drainage until pressure reaches 0.1 MPa.

Note 4: When "F1" with an automatic drain is selected, the filter, oil mist filter, and NC automatic drain are assembled, but the supply air pressure must be 0.15 MPa or more.

Note 5: When "F1" with an automatic drain is selected for the C1030-W series, the NC automatic drain is assembled for both the filter and oil mist filter. Minimum operation pressure is 0.2 MPa and maximum operation pressure is 0.7 MPa. Refer to the maximum processing flow table (page 97) for the M1030-W-F1 automatic drain for the maximum working flow.

Note 6: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.

How to order

C1030 - 6 ○ - W - L - U DSV - ○ - A6W - ○

* Refer page 9 for an explanation of the options.

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Assembly attachment
Ⓕ Displayed unit
Ⓖ Piping adaptor set (included)
Ⓗ Pressure gauge option (attached)

Symbol		Descriptions	Ⓐ Model no. C1030	C2030	C2530	C3030	C4030	C6030	C8030
Ⓑ Port size									
6		1/8	●						
8		1/4	●	●	●	●	●		
10		3/8		●	●	●	●		
15		1/2					●		
20		3/4					●Note	●	●
25		1						●	●
Ⓒ Port thread type									Note 2
Blank		Rc thread	●	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●	●
Ⓓ Option									Note 3
Drainage Note 4, Note 5	Blank	With manual drain cock	●	●	●	●	●	●	●
	F	Automatic drain with manual override (NO type: exhausts without pressurization)			●	●	●	●	●
	F1	Automatic drain with manual override (NC type: no exhaust without pressurization)	●	●	●	●	●	●	●
	FF	Large exhaust automatic drain with manual override (NO type: exhausts without pressurization)							●
	FF1	Large exhaust automatic drain with manual override (NO type: no exhaust without pressurization)							●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●	●	●
	M	Metal bowl			●	●	●	●	●
	M1	Metal bowl with manual drain cock		●	●	●	●	●	●
Element	Blank	5μm	●	●	●	●	●	●	●
	Y	0.3μm (submicron) Note 6			●	●	●	●	●
Differential pressure detection	Blank	Without differential pressure detection port	●	●	●	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)						●	●
Pressure Range	Blank	0.05 to 0.85MPa	●	●	●	●	●	●	●
	L	0.05 to 0.35MPa Note 7	●	●	●	●	●	●	●
Relief	Blank	With relief mechanism	●	●	●	●	●	●	●
	N	Non-relief type	●	●	●	●	●	●	●
Pressure gauge	Blank	Standard pressure gauge (G401-W)	●	●	●	●	●	●	●
	T	Without pressure gauge (gauge port (Rc1/4) assembled sealed)	●	●	●	●	●	●	●
	T8	Pressure gauge attachable (gauge atchment port (Rc1/4) assembled open)	●	●	●	●	●	●	●
	T6	Compatibility with digital pressure sensor PPX Note 8	●	●	●	●	●	●	●
	R1	Pressure switch with display PPD assembled Note 9	●		●	●	●	●	●
Flow Direction	Blank	Standard flow (left to right)	●	●	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●	●	●
Ⓔ Assembly attachment									Pages 137 to 148, 153, 154
Blank		Without assembly attachment	●	●	●	●	●	●	●
U		Assembly attachment type Note 10	●	●	●	●	●	●	●
Assembled	D	Distributor (D101-W, D401-W, D801-W)	●	●	●	●	●	●	●
	S	Pressure switch (P1100-W, 4100-W, 8100-W)	●	●	●	●	●	●	●
	P	Pressure switch (P4000-W)		●	●	●	●		
	V	Shut-off valve (V1000-W, V3000-W)	●	●	●	●	●		
	K	Shut-off valve with key hole (V3010-W, V6010-W)		●	●	●	●	●	●
Ⓕ Displayed unit									
Blank		MPa display, Rc thread	●	●	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●	●	●
Ⓖ Piping adaptor set (included)									Pages 155 to 157 Note 11
Blank		Not attached	●	●	●	●	●	●	●
A6*W		1/8 piping adaptor set	●						
A8*W		1/4 piping adaptor set	●	●	●	●	●		
A10*W		3/8 piping adaptor set	●	●	●	●	●		
A15*W		1/2 piping adaptor set		●	●	●	●		
A20*W		3/4 piping adaptor set					●	●	●
A25*W		1 piping adaptor set						●	●
A32*W		1 1/4 piping adaptor set						●	●
*** Adaptor thread type**									
Blank		Rc thread	●	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●	●
Ⓗ Pressure gauge option (attached)									Note 12 Page 198
Blank		Not attached	●	●	●	●	●	●	●
G45P		G45D-8-P10 (L: G45D-8-P04)	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Piping adaptor A400-20*-W is assembled on both ends of C4030-20*-W. Piping adaptor set "A20*W" does not need to be specified.

Note 2: G threads and NPT threads are available for IN, OUT, gauge port and drain discharge port (metal bowl with automatic drain). Attachment P, V will be subject to this as well.

Note 3: Select options from drain exhaust, bowl material, element, differential pressure detection, regulator, and regulator. When selecting options for several items, list options in order from the top.

Note 4: Refer to page 12 for working conditions of the automatic drain.

Note 5: When option symbol "F" is selected, the NO automatic drain is enclosed for the air filter and the NC automatic drain for the oil mist filter.
"FF" and "FF1" has a large drain type oil mist filter but the automatic drain is same as the NC type.

Note 6: Refer to page 87 for max. flow rate of option "Y".

Note 7: Pressure gauge display range will be 0 to 0.4 MPa for option "L".

Note 8: When option "T6" is selected, only "blank" or "R2" is selected for the (H) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.

Note 9: Output type will be NPN transistor output. Consult with CKD if PNP transistor output is required.

Note 10: Mounting location for assembly attachments

Symbol	Installation position of Attachment	Applicable model
D	F+M+ (D) +R	C1030-W to C8030-W
S or P	F+M+R+ (S, P)	C1030-W to C8030-W ("P" excludes 1000, 6000, 8000 Series)
V or K	F+M+R+ (V, K)	C1030-W to C4030-W ("V" excludes 6000, 8000 Series. "K" excludes 1000 Series)

Note: Indicate "U" + "D", "S", "P", "V", and "K" when selecting an assembly attachment.
Use custom combinations specifications for any other combination.

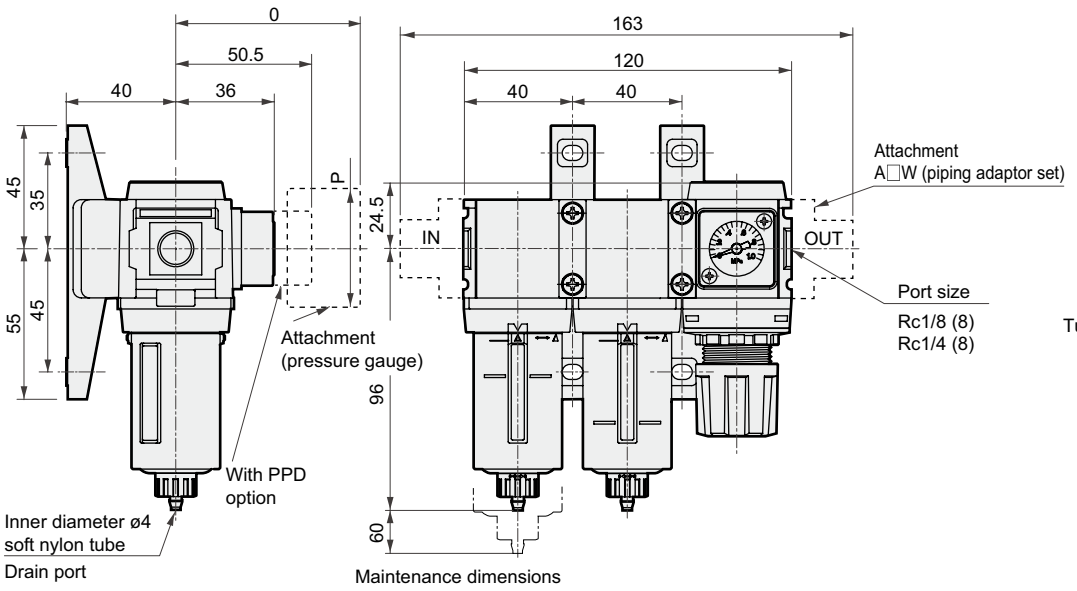
Note 11: A joiner set is attached with the piping adapter set.

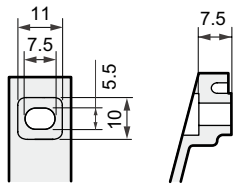
Note 12: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

F.M.R. Combination

Dimensions CAD

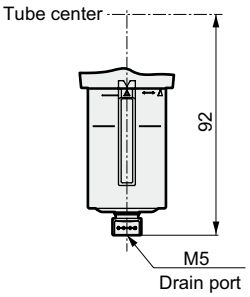
● C1030-W





Drawing of bracket section

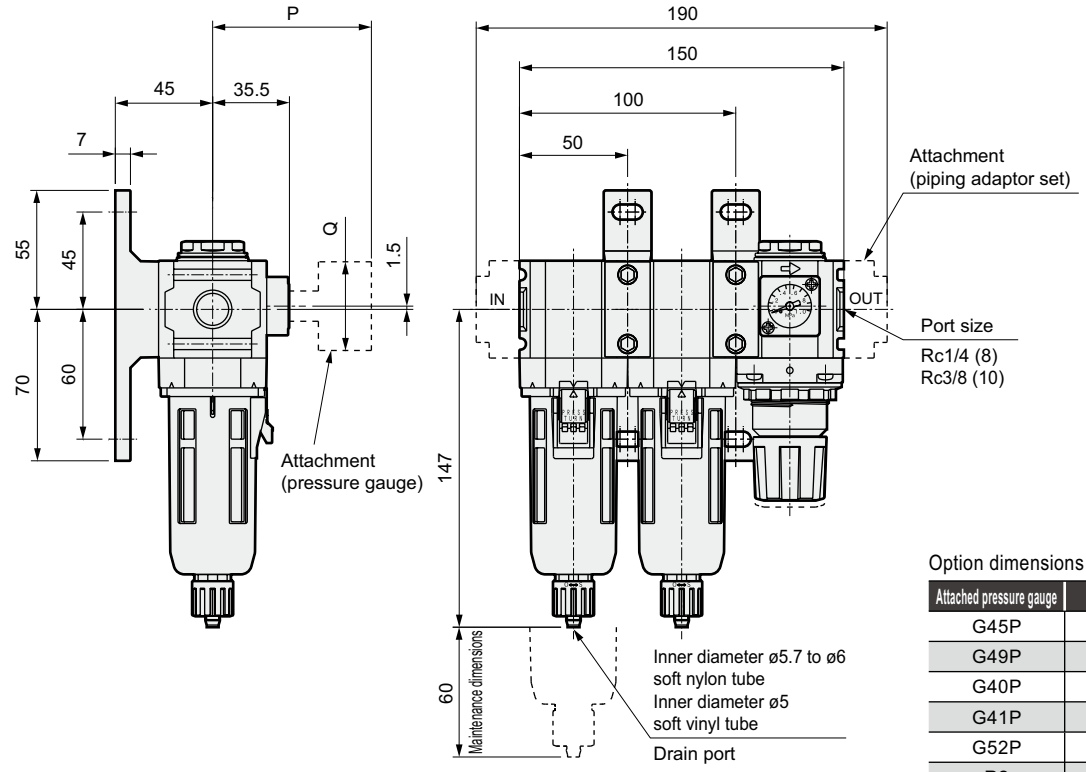
・Option dimensions
With automatic drain (F1)



Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5
R2	(74)	□30

● C2030-W

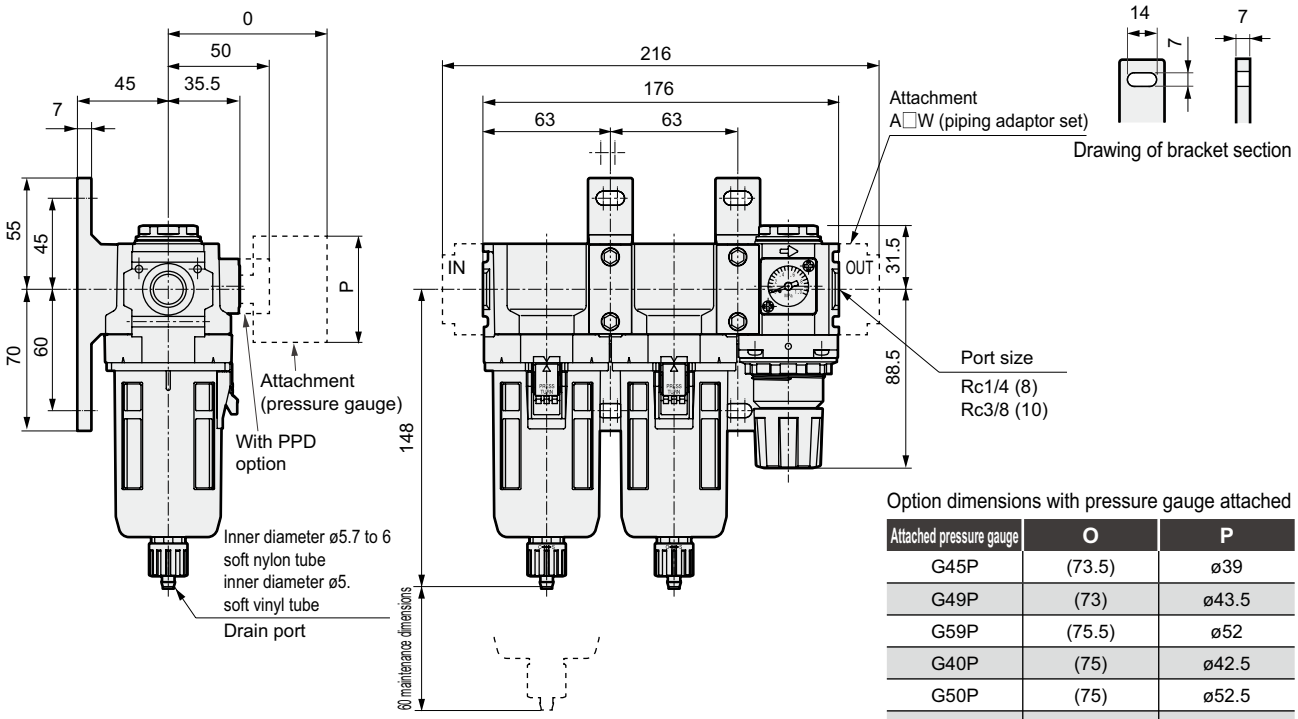


Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G40P	(75)	ø42.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

Dimensions CAD

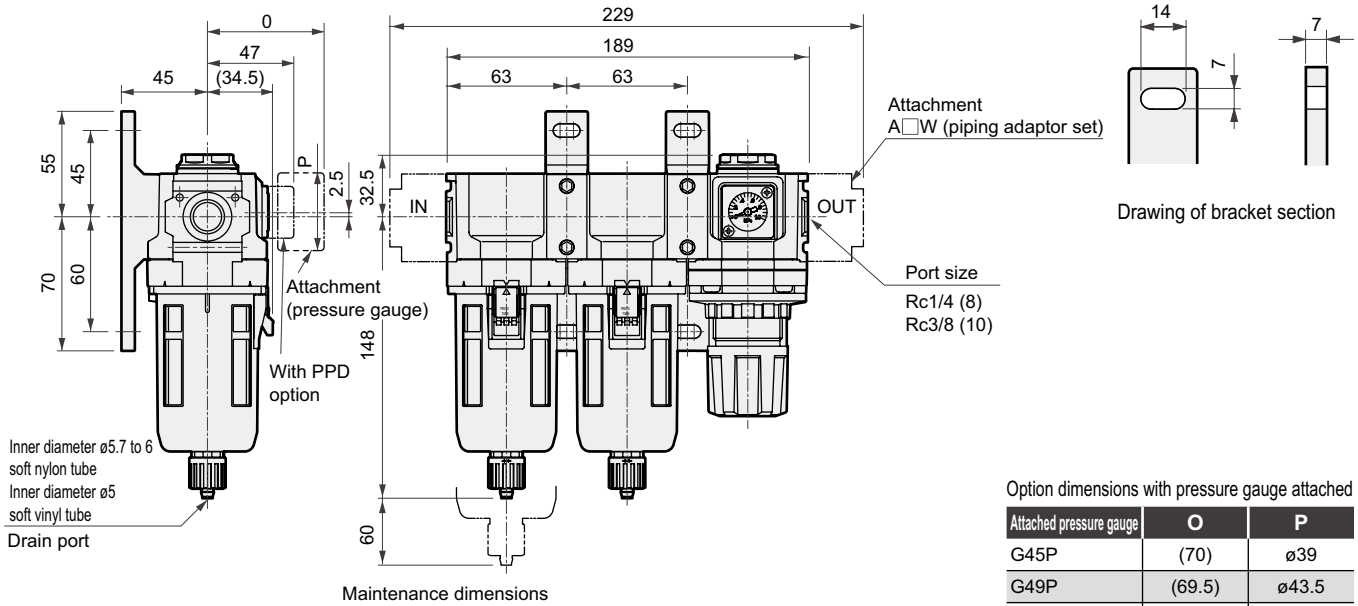
● C2530-W



Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G59P	(75.5)	ø52
G40P	(75)	ø42.5
G50P	(75)	ø52.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

● C3030-W



Option dimensions with pressure gauge attached

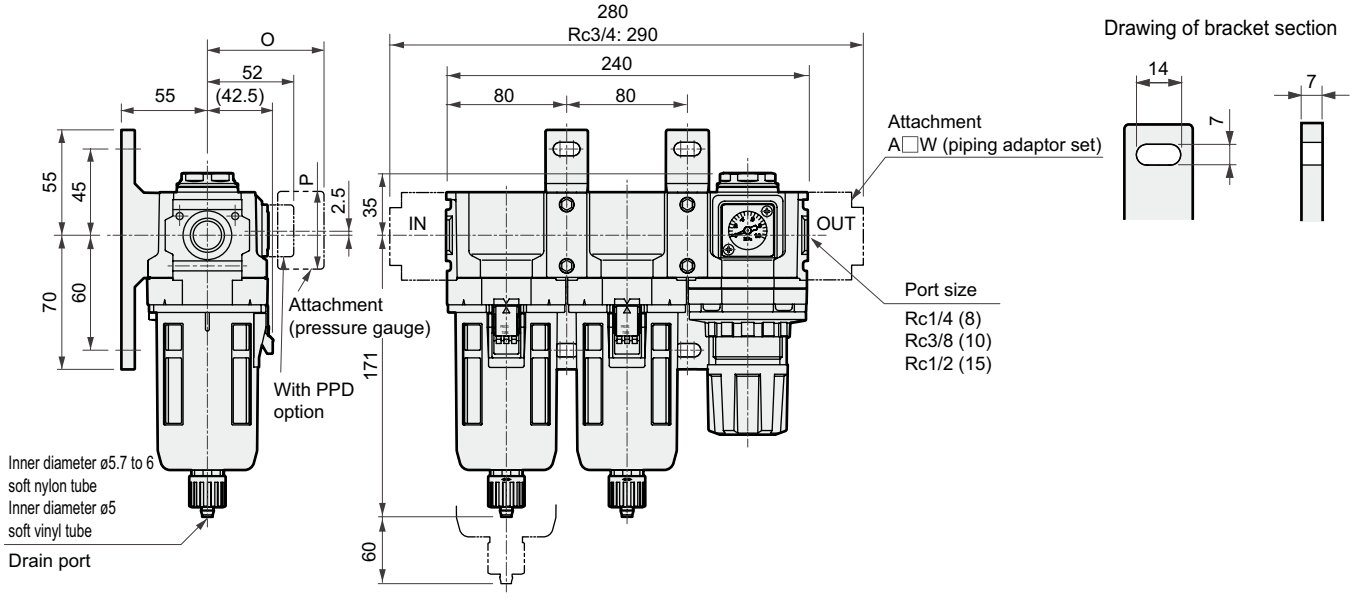
Attached pressure gauge	O	P
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5
R2	(69.5)	□30

● Refer to page 92 for the dimensions of the metal bowl option filter and page 102 for the oil mist filter.

F.M.R. Combination

Dimensions CAD

● C4030-W

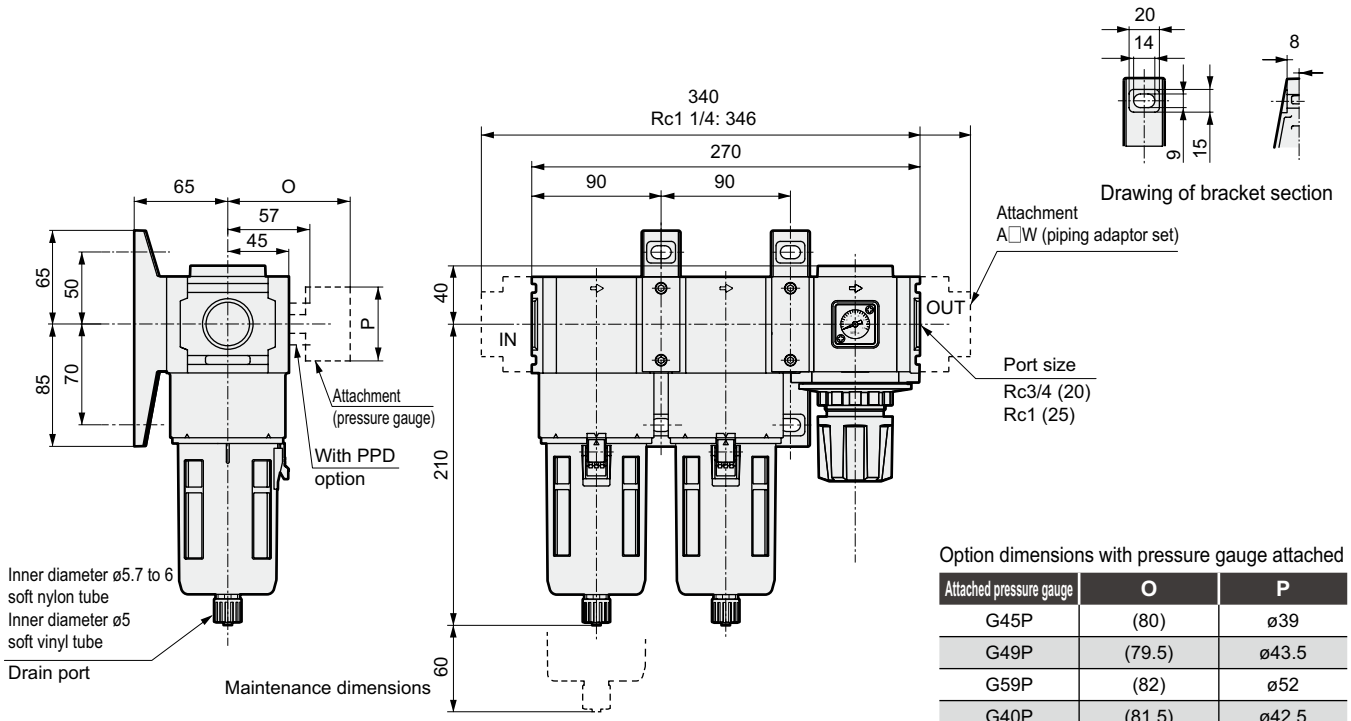


● Refer to page 92 for the dimensions of the metal bowl option filter and page 102 for the oil mist filter.

Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(75)	ø29
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5
R2	(75)	□30

● C6030-W

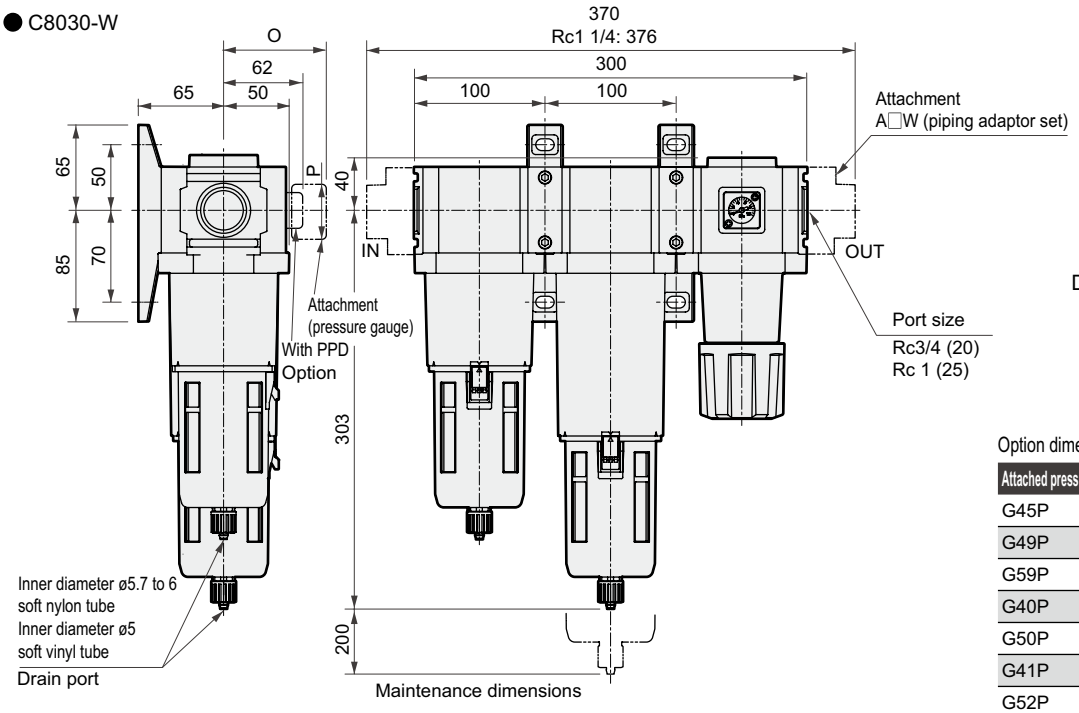


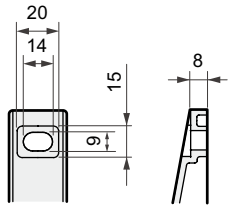
Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(80)	ø39
G49P	(79.5)	ø43.5
G59P	(82)	ø52
G40P	(81.5)	ø42.5
G50P	(81.5)	ø52.5
G41P	(80)	ø42
G52P	(93)	ø52.5
R2	(80)	□30

Dimensions

● C8030-W





Drawing of bracket section

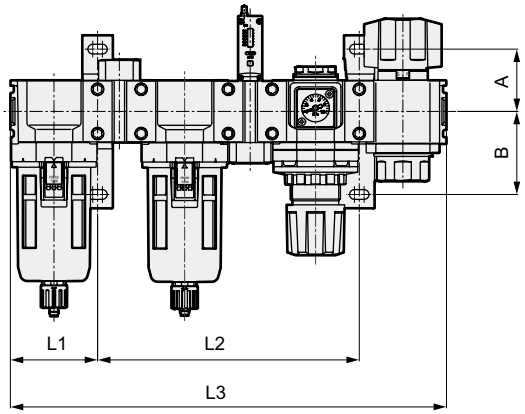
Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(85)	ø29
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5
R2	(85)	□30

● Refer to page 92 for the dimensions of the metal bowl option filter and page 102 for the oil mist filter.

Dimensions with options

● C1030-W to C8030-W



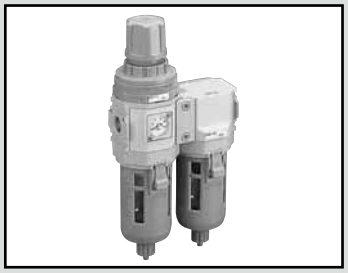
Model no.	A	B
C1030-W	35	45
C2030-W	45	60
C2530-W		
C3030-W		
C4030-W		
C6030-W	50	70
C8030-W		

Assembled options	D			S (Note 1)			P			V			K			DS (Note 1)			DP			DV			DK		
Model no.	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
C1030-W	40	68	148	40	80	169.5	–	–	–	40	80	160	–	–	–	40	108	197.5	–	–	–	40	108	188	–	–	–
C2030-W	50	94.5	181.5	50	113	201.5	50	113	230	50	113	213	50	113	213	50	144.5	233	50	144.5	261.5	50	144.5	244.5	50	144.5	244.5
C2530-W	63	94.5	207.5	63	113	227.5	63	113	256	63	113	239	63	113	239	63	144.5	259	63	144.5	287.5	63	144.5	270.5	63	144.5	270.5
C3030-W	63	94.5	220.5	63	126	240.5	63	126	269	63	126	252	63	126	252	63	157.5	272	63	157.5	300.5	63	157.5	283.5	63	157.5	283.5
C4030-W	80	111.5	271.5	80	160	291.5	80	160	320	80	160	303	80	160	303	80	191.5	323	80	191.5	351.5	80	191.5	334.5	80	191.5	334.5
C4030-20-W Note 1	100	111.5	311.5	100	160	311.5	100	160	360	100	160	343	100	160	343	100	191.5	343	100	191.5	391.5	100	191.5	374.5	100	191.5	374.5
C6030-W	90	140	320	90	180	355	–	–	–	–	–	–	90	180	360	90	230	405	–	–	–	–	–	–	90	230	410
C8030-W	100	150	350	100	200	385	–	–	–	–	–	–	100	200	390	100	250	435	–	–	–	–	–	–	100	250	440

Assembled options	DSV			DSK			DPV			DPK			SV			SK			PV			PK		
Model no.	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
C1030-W	40	136	216	–	–	–	–	–	–	–	–	–	40	108	188	–	–	–	–	–	–	–	–	–
C2030-W	50	176	276	50	176	276	50	225	325	50	225	325	50	144.5	244.5	50	144.5	244.5	50	193	293	50	193	293
C2530-W	63	176	302	63	176	302	63	225	351	63	225	351	63	144.5	270.5	63	144.5	270.5	63	193	319	63	193	319
C3030-W	63	189	315	63	189	315	63	238	364	63	238	364	63	157.5	283.5	63	157.5	283.5	63	206	332	63	206	332
C4030-W	80	223	366	80	223	366	80	271.5	414.5	80	271.5	414.5	80	191.5	334.5	80	191.5	334.5	80	240	383	80	240	383
C4030-20-W Note 1	100	223	406	100	223	406	100	271.5	454.5	100	271.5	454.5	100	191.5	374.5	100	191.5	374.5	100	240	423	100	240	423
C6030-W	–	–	–	90	280	460	–	–	–	–	–	–	–	–	–	90	230	410	–	–	–	–	–	–
C8030-W	–	–	–	100	300	490	–	–	–	–	–	–	–	–	–	100	250	440	–	–	–	–	–	–

L1: Dimensions from the IN edge to center of the T-type bracket mounting hole
L2: Spacing dimensions of the mounting hole from the first T-type bracket to the second T-type bracket
L3: Dimensions from the IN edge to the OUT edge

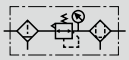
*Refer to the general catalog for the detailed dimentions of the mounting hole of the bracket.
Note 1. The piping adapter is assembled on the OUT side.
Piping adaptor A400-20-W is assembled on both ends of C4030-20-W.



W.M. combination standard white series

C1040/C2040/C3040/C4040/C8040-W Series

Integrated filter, oil mist filter, and regulator
Port size: 1/8 to 1

JIS symbol 

Specifications

Descriptions		C1040-W	C2040-W	C3040-W	C4040-W	C8040-W
Exterior						
Components	Filter·regulator	W1000-W	W2000-W	W3000-W	W4000-W	W8000-W
	Oil mist filter	M1000-W	M2000-W	M3000-W	M4000-W	M8000-W
Working fluid		Compressed air				
Max. working pressure MPa		1				
Withstanding pressure MPa		1.5				
Ambient temperature range ℃		5 to 60				Note 6
Set pressure range MPa		0.1 to 0.85 Note 5	0.1 to 0.85 Note 3, Note 4			
Relief		With relief mechanism				
Port size Rc, NPT, G		1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg		0.31	0.74	0.97	1.52	3.52
Secondary oil concentration		0.01mg/m^3 or less				
Maximum flow rate (Note 1) m^3/min		0.15	0.25	0.36	0.825	2.6

Note 1: Max flow is measured at regulator setting of 0.7MPa. When element option "Y" is selected, refer to page 87 for maximum flow.
Note 2: Refer to page 95 for details on other oil mist filters.
Note 3: When "F" with an automatic drain is selected, the supply air pressure is 0.2 MPa or more. Minimum pressure setting is 0.15MPa. Automatic drain for the filter reglator will operate from supplied air pressure of 0.1MPa. Initially generated drainage and air are purged until pressure reaches 0.1 MPa.
Note 4: When "F" with an automatic drain is selected, the supply air pressure is 0.2 MPa or more. Minimum pressure setting is 0.15MPa.
Note 5: When "F1" with an automatic drain is selected for the C1040-W series, minimum operating pressure is 0.2 MPa and maximum operation pressure is 0.7 MPa. Refer to the maximum processing flow table (page 87) for the F1000-W-F1 automatic drain for the maximum working flow. Set the working flow to less than the maximum working flow.
Note 6: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.

How to order

C1040 - 6 ○ - W - F1 - U SV - ○ - A6W ○

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Assembly attachment
Ⓕ Displayed unit
Ⓖ Piping adaptor set (included)
Ⓗ Pressure gauge option (attached)

* Refer page 9 for an explanation of the options.

Symbol		Descriptions	Ⓐ Model no. C1040	C2040	C3040	C4040	C8040
Ⓑ Port size							
6		1/8	●				
8		1/4	●	●	●	●	
10		3/8		●	●	●	
15		1/2				●	
20		3/4				● Note 1	●
25		1					●
Ⓒ Port thread type							Note 2
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓓ Option							Note 3
Drainage Note 4, Note 5	Blank	With manual drain cock	●	●	●	●	●
	F	Automatic drain with manual override (NO type: exhausts without pressurization)			●	●	●
	F1	Automatic drain with manual override (NC type: no exhaust without pressurization)	●	●	●	●	●
	FF	Large exhaust automatic drain with manual override (NO type: exhausts without pressurization)					●
	FF1	Large exhaust automatic drain with manual override (NO type: no exhaust without pressurization)					●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●
	M	Metal bowl			●	●	●
	M1	Metal bowl with manual drain cock		●	●	●	●
Element	Blank	5μm	●	●	●	●	●
	Y	0.3μm (submicron) Note 6			●	●	●
Differential pressure detection	Blank	Without differential pressure detection port	●	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)					●
Pressure Range	Blank	0.05 to 0.85MPa	●	●	●	●	●
	L	0.05 to 0.35MPa Note 7	●	●	●	●	●
Relief	Blank	With relief mechanism	●	●	●	●	●
	N	Non-relief type	●	●	●	●	●
Pressure gauge	Blank	Standard pressure gauge (G401-W)	●	●	●	●	●
	T	Without pressure gauge (gauge port (Rc1/4) assembled sealed)	●	●	●	●	●
	T8	Pressure gauge attachable (gauge port (Rc1/4) assembled open)	●	●	●	●	●
	T6	Compatibility with digital pressure sensor PPX Note 8	●	●	●	●	●
	R1	Pressure switch with display PPD assembled Note 9	●		●	●	●
Flow Direction	Blank	Standard flow (left to right)	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●
Ⓔ Assembly attachment							Pages 137 to 148, 153, 154
Blank		Without assembly attachment	●	●	●	●	●
U		Assembly attachment type Note 10	●	●	●	●	●
Assembled	S	Pressure switch (P1100-W, 4100-W, 8100-W)	●	●	●	●	●
	P	Pressure switch (P4000-W)		●	●	●	
	V	Shut-off valve (V1000-W, V3000-W)	●	●	●	●	
	K	Shut-off valve with key hole (V3010-W, V6010-W)		●	●	●	●
Ⓕ Displayed unit							
Blank		MPa display, Rc thread	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●
Ⓖ Piping adaptor set (included)							Pages 155 to 157 Note 11
Blank		Not attached	●	●	●	●	●
A6*W		1/8 piping adaptor set	●				
A8*W		1/4 piping adaptor set	●	●	●	●	
A10*W		3/8 piping adaptor set	●	●	●	●	
A15*W		1/2 piping adaptor set		●	●	●	
A20*W		3/4 piping adaptor set				●	●
A25*W		1 piping adaptor set					●
A32*W		1 1/4 piping adaptor set					●
*** Adaptor thread type**							
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓗ Pressure gauge option (attached)							Note 12 Page 198
Blank		Not attached	●	●	●	●	●
G45P		G45D-8-P10 (L: G45D-8-P04)	●	●	●	●	●
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	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Piping adaptor A400-20*-W is assembled on both ends of C4030-20*-W. Piping adaptor set "A20*W" does not need to be specified.

Note 2: G threads and NPT threads are available for IN, OUT, gauge port and drain discharge port (metal bowl with automatic drain). Attachment P, V will be subject to this as well.

Note 3: Select options from drain exhaust, bowl material, element, differential pressure detection, regulator, and regulator. When selecting options for several items, list options in order from the top.

Note 4: Refer to page 12 for working conditions of the automatic drain.

Note 5: When option symbol "F" is selected, the NO automatic drain is enclosed for the filter regulator and the NC automatic drain is enclosed for the oil mist filter. When option symbol "F1" is selected, the NC automatic drain is enclosed for both the filter regulator and oil mist regulator. "FF" and "FF1" has a large drain type oil mist filter but the automatic drain is same as the NC type.

Note 6: Refer to page 87 for max. flow rate of option "Y".

Note 7: Pressure gauge display range will be 0 to 0.4 MPa for option "L".

Note 8: When option "T6" is selected, only "blank" or "R2" is selected for the (H) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.

Note 9: Output type will be NPN transistor output. Consult with CKD if PNP transistor output is required.

Note 10: Mounting location for assembly attachments

Symbol	Installation position of attachment	Applicable model
S or P	W+ (S, P) +M	C1040-W to C8040-W ("P" excludes 1000 and 8000 Series)
V or K	W+M+ (V, K)	C1040-W to C8010-W ("V" excludes 8000 Series. "K" excludes 1000 Series)

Note: Indicate "U" + "D", "S", "P", "V", and "K" when selecting an assembly attachment.
Use custom combinations specifications for any other combination.

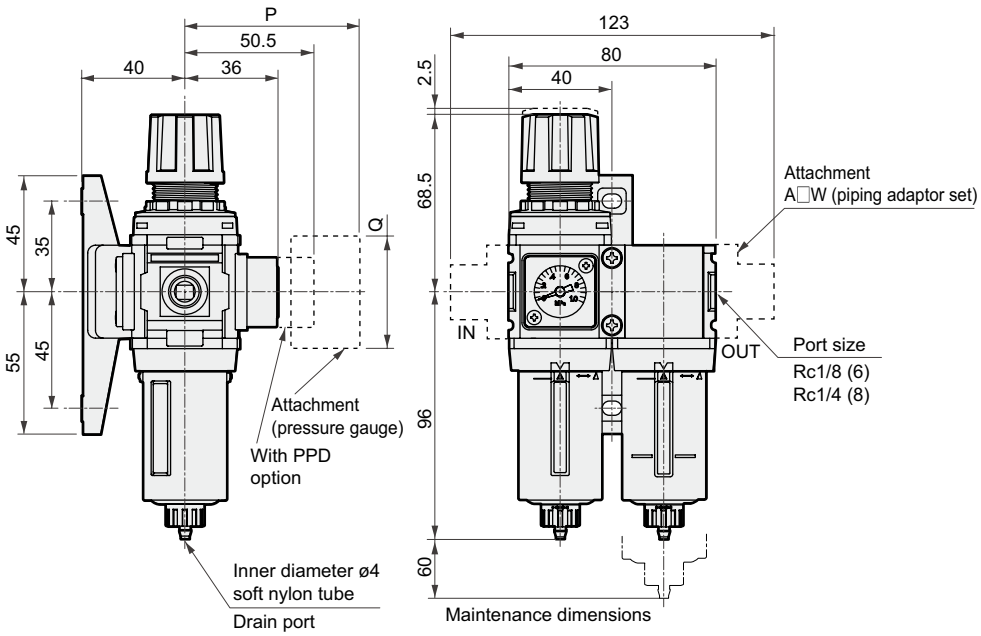
Note 11: A joiner set is attached with the piping adapter set.

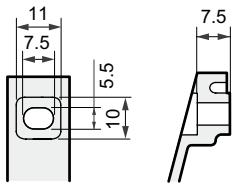
Note 12: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

W.M. Combination

Dimensions CAD

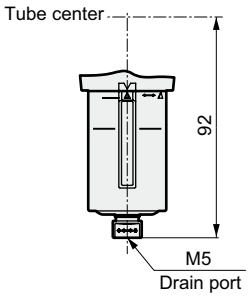
● C1040-W





Drawing of bracket section

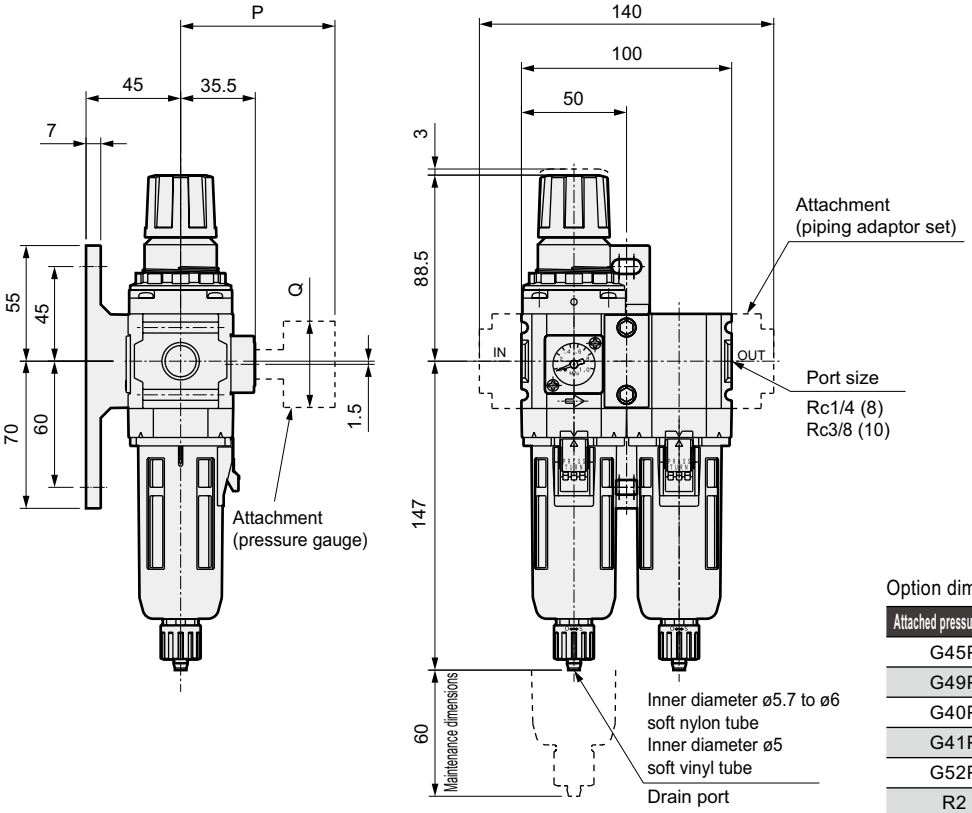
・Option dimensions
With automatic drain (F1)



Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5
R2	(74)	□30

● C2040-W

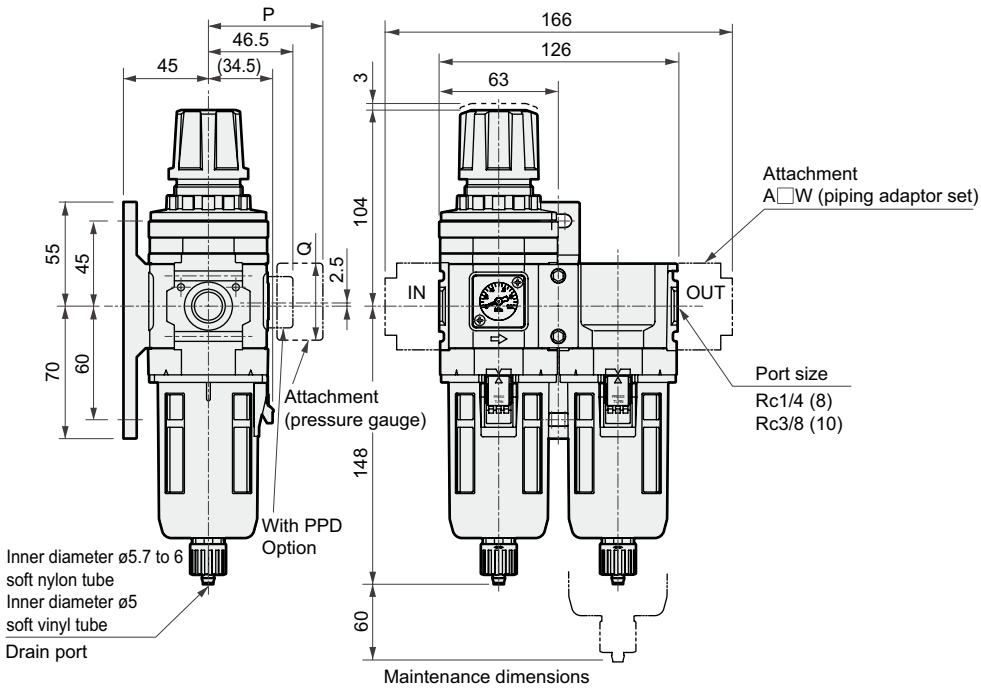


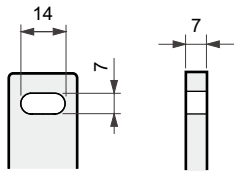
Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G40P	(75)	ø42.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

Dimensions CAD

● C3040-W





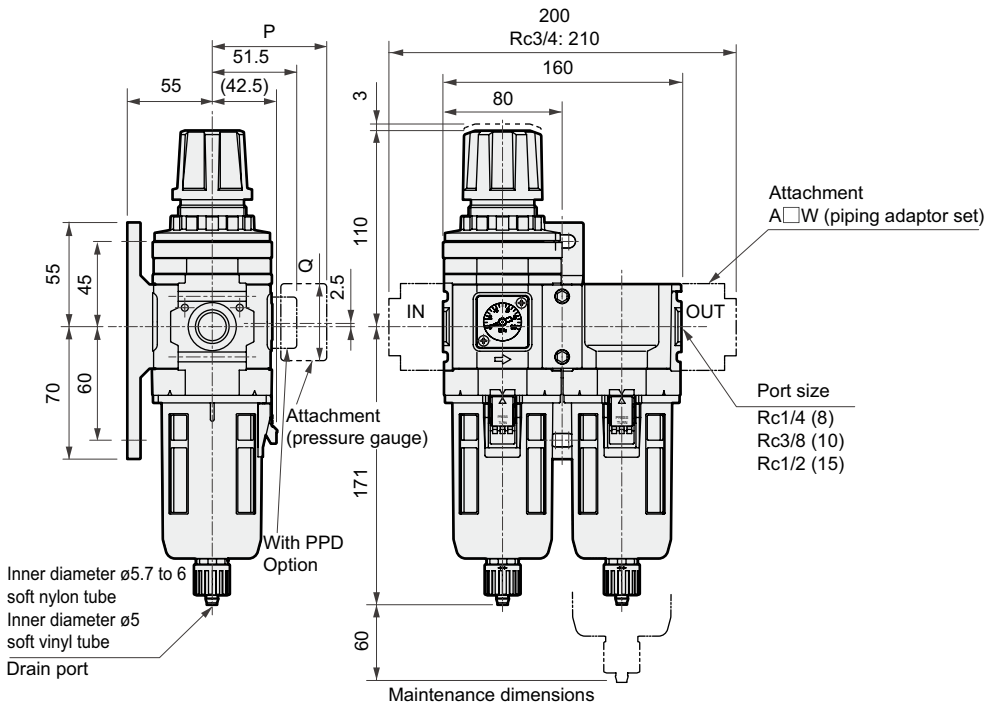
Drawing of bracket section

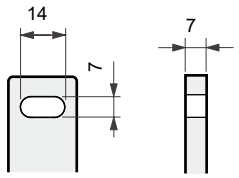
Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5
R2	(69.5)	□30

● Refer to page 75 for the dimensions of the metal bowl option filter/ regulator and page 102 for the oil mist filter.

● C4040-W





Drawing of bracket section

Option dimensions with pressure gauge attached

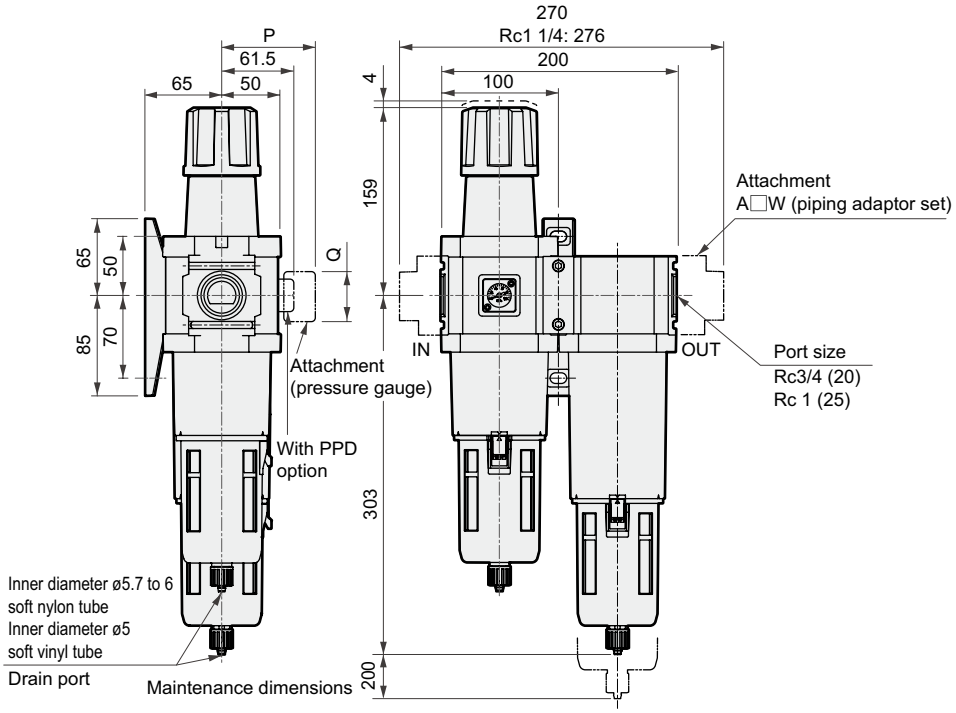
Attached pressure gauge	P	Q
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5
R2	(75)	□30

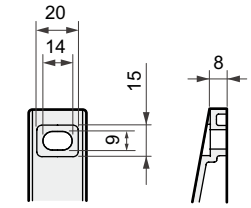
● Refer to page 75 for the dimensions of the metal bowl option filter/ regulator and page 102 for the oil mist filter.

W.M. Combination

Dimensions CAD

● C8040-W





Drawing of bracket section

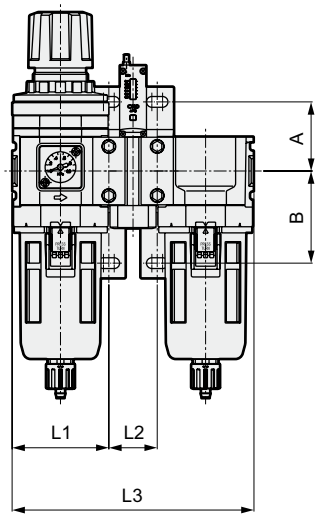
● Refer to page 75 for the dimensions of the metal bowl option filter/ regulator and page 102 for the oil mist filter.

Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5
R2	(85)	□30

Dimensions with options

● C1040-W to C8040-W

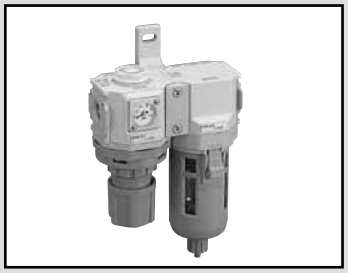


Model no.	A	B
C1040-W	35	45
C2040-W	45	60
C3040-W		
C4040-W		
C8040-W	50	70

Assembled options	S			P			V			K			SV			SK			PV			PK		
Model no.	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
C1040-W	40	28	108	–	–	–	40	40	120	–	–	–	40	68	148	–	–	–	–	–	–	–	–	–
C2040-W	50	31.5	131.5	50	80	180	50	63	163	50	63	163	50	81.5	194.5	50	81.5	194.5	50	130	243	50	130	243
C3040-W	63	31.5	157.5	63	80	206	63	63	189	63	63	189	63	94.5	220.5	63	94.5	220.5	63	143	269	63	143	269
C4040-W	80	31.5	191.5	80	80	240	80	80	223	80	80	223	80	111.5	254.5	80	111.5	254.5	80	160	320	80	160	320
C4040-20-W Note 1	100	31.5	231.5	100	80	280	100	100	263	100	100	263	100	111.5	294.5	100	111.5	294.5	100	160	343	100	160	343
C8040-W	100	50	250	–	–	–	–	–	–	100	100	290	–	–	–	100	150	340	–	–	–	–	–	–

L1: Dimensions from the IN edge to center of the T-type bracket mounting hole
L2: Spacing dimensions of the mounting hole from the first T-type bracket to the second T-type bracket
L3: Dimensions from the IN edge to the OUT edge

*Refer to the general catalog for the detailed dimentions of the mounting hole of the bracket.
Note 1 The piping adapter is assembled on the OUT side.
Piping adaptor A400-20-W is assembled on both ends of C4040-20-W.



R.M. combination standard white series

C1050 / C2050 / C2550 C3050 / C4050 / C6050 / C8050-W Series

Integrated regulator and oil mist filter

Port size: 1/8 to 1

JIS symbol 

Specifications

Descriptions		C1050-W	C2050-W	C2550-W	C3050-W	C4050-W	C6050-W	C8050-W
Exterior								
Components	Regulator	R1000-W	R2000-W	R2000-W	R3000-W	R4000-W	R6000-W	R8000-W
	Oil mist filter	M1000-W	M2000-W	M3000-W	M3000-W	M4000-W	M6000-W	M8000-W
Working fluid		Compressed air						
Max. working pressure MPa		1.0						
Withstanding pressure MPa		1.5						
Ambient temperature range ℃		5 to 60						
Set pressure range MPa		0.1 to 0.85 Note 4	0.1 to 0.85 Note 3					
Relief		With relief mechanism						
Port size Rc, NPT, G		1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg		0.29	0.65	0.66	0.82	1.32	2.12	3.12
Secondary oil concentration		0.01mg/m^3 or less						
Maximum flow rate (Note 1) m^3/min		0.15	0.25	0.38	0.36	0.825	1.27	2.6

Note 1: Max flow is measured at regulator setting of 0.7MPa.

Note 2: Refer to page 95 for details on other oil mist filters.

Note 3: The supply air pressure is 0.2 MPa or more with a minimum setting pressure of 0.15 MPa.

Note 4: When "F1" with an automatic drain is selected for the C1050-W series, minimum operating pressure is 0.2 MPa and maximum operation pressure is 0.7 MPa. Refer to the maximum processing flow table (page 97) for the F1000-W-F1 automatic drain for the maximum working flow. Set the working flow to less than the maximum working flow.

Note 5: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.

How to order

C1050 - 6 ○ - W - L - ○ - A6W ○

Ⓐ Model no. Ⓑ Port size Ⓒ Port thread type Ⓓ Option Ⓔ Displayed unit Ⓕ Piping adaptor set (included) Ⓖ Pressure gauge option (attached)

* Refer page 9 for an explanation of the options.

Symbol		Descriptions	Ⓐ Model no. C1050	C2050	C2550	C3050	C4050	C6050	C8050
Ⓑ Port size									
6		1/8	●						
8		1/4	●	●	●	●	●		
10		3/8		●	●	●	●		
15		1/2					●		
20		3/4					●Note 1	●	●
25		1						●	●
Ⓒ Port thread type									Note 2
Blank		Rc thread	●	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●	●
Ⓓ Option									Note 3
Drainage Note 4	**Blank**	With filter and manual drain cock	●	●	●	●	●	●	●
	F1	Automatic drain with manual override (NC type: no exhaust without pressurization)	●	●	●	●	●	●	●
Bowl material	**Blank**	Polycarbonate bowl	●	●	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●	●	●
	M	Metal bowl			●	●	●	●	●
	M1	Metal bowl with manual drain cock		●	●	●	●	●	●
Differential pressure detection	**Blank**	Without differential pressure detection port	●	●	●	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)						●	●
Pressure Range	**Blank**	0.05 to 0.85MPa	●	●	●	●	●	●	●
	L	0.05 to 0.35MPa Note 5	●	●	●	●	●	●	●
Relief	**Blank**	With relief mechanism	●	●	●	●	●	●	●
	N	Non-relief type	●	●	●	●	●	●	●
Pressure gauge	**Blank**	Standard pressure gauge (G401-W)	●	●	●	●	●	●	●
	T	Without pressure gauge (gauge port (Rc1/4) assembled sealed)	●	●	●	●	●	●	●
	T8	Pressure gauge attachable (gauge port (Rc1/4) assembled open)	●	●	●	●	●	●	●
	T6	Compatibility with digital pressure sensor PPX Note 6	●	●	●	●	●	●	●
	R1	Pressure switch with display PPD assembled Note 7	●		●	●	●	●	●
Flow Direction	**Blank**	Standard flow (left to right)	●	●	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●	●	●
Ⓔ Displayed unit									
Blank		MPa display, Rc thread	●	●	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●	●	●
Ⓕ Piping adaptor set (included)									Pages 155 to 157 Note 8
Blank		Not attached	●	●	●	●	●	●	●
A6*W		1/8 piping adaptor set	●						
A8*W		1/4 piping adaptor set	●	●	●	●	●		
A10*W		3/8 piping adaptor set	●	●	●	●	●		
A15*W		1/2 piping adaptor set		●	●	●	●		
A20*W		3/4 piping adaptor set					●	●	●
A25*W		1 piping adaptor set						●	●
A32*W		1 1/4 piping adaptor set						●	●
*** Adaptor thread type**									
Blank		Rc thread	●	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●	●
Ⓖ Pressure gauge option (attached)									Note 9 Page 198
Blank		Not attached	●	●	●	●	●	●	●
G45P		G45D-8-P10 (L: G45D-8-P04)	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Piping adaptor A400-20*-W is assembled on both ends of C4050-20*-W. Piping adaptor set "A20*W" does not need to be specified.

Note 2: G threads and NPT threads are available for IN, OUT, gauge port and drain discharge port (metal bowl with automatic drain).

Note 3: Select options from drain exhaust, bowl material, element, differential pressure detection, regulator, and regulator. When selecting options for several items, list options in order from the top.

Note 4: Refer to page 12 for working conditions of the automatic drain.

Note 5: Pressure gauge display range will be 0 to 0.4 MPa for option "L".

Note 6: When option "T6" is selected, only "blank" or "R2" is selected for the (H) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.

Note 7: Output type will be NPN transistor output. Consult with CKD if PNP transistor output is required.

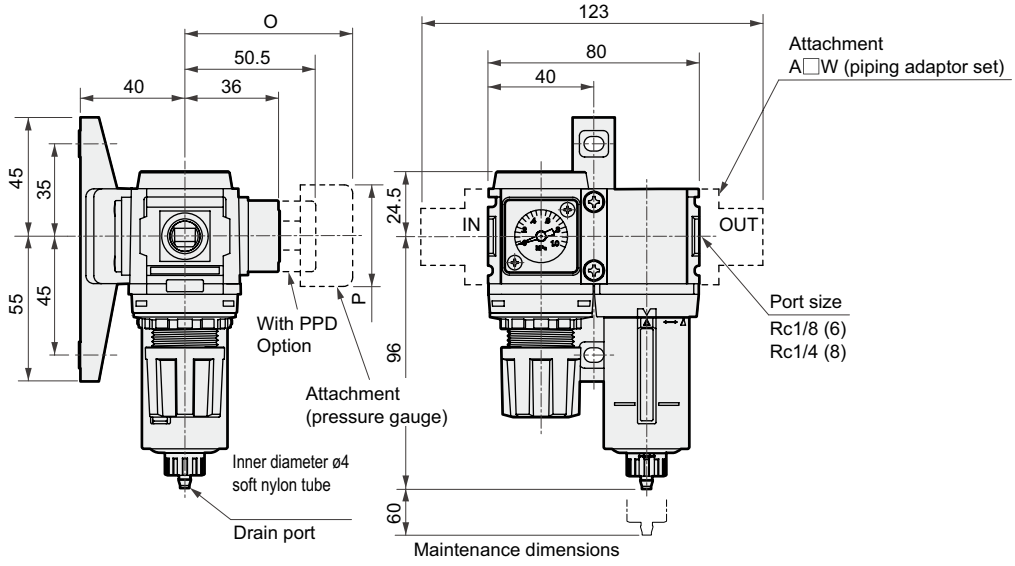
Note 8: A joiner set is attached with the piping adapter set.

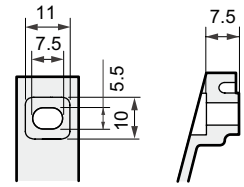
Note 9: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

R.M. Combination

Dimensions CAD

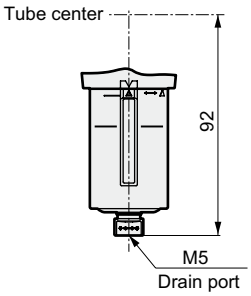
● C1050-W





Drawing of bracket section

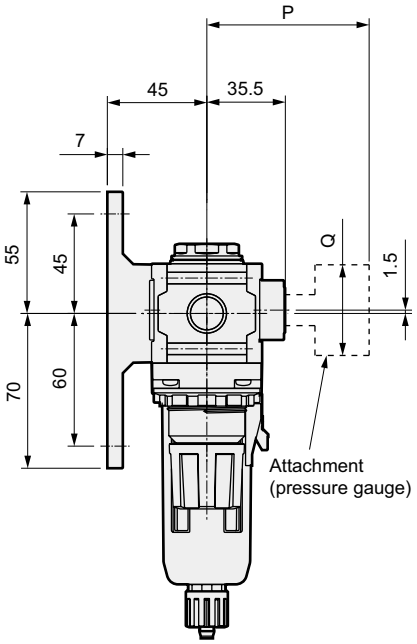
・Option dimensions
With automatic drain (F1)

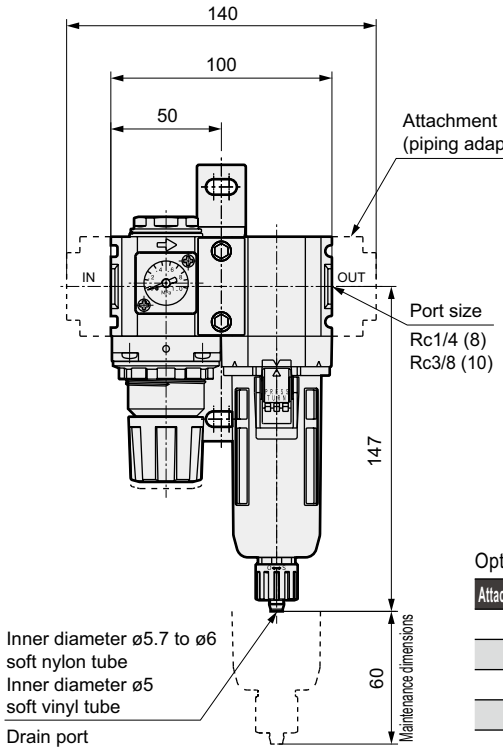


Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5
R2	(74)	□30

● C2050-W



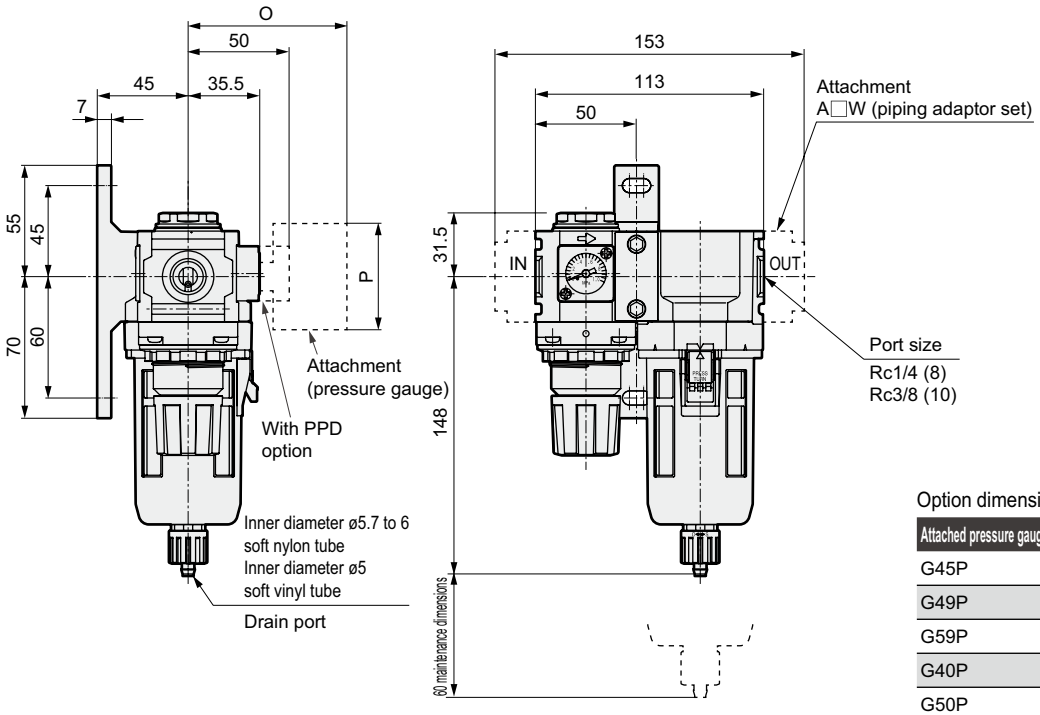


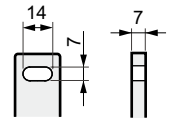
Option dimensions with pressure gauge attached

Attached pressure gauge	P	Q
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G40P	(75)	ø42.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

Dimensions

● C2550-W



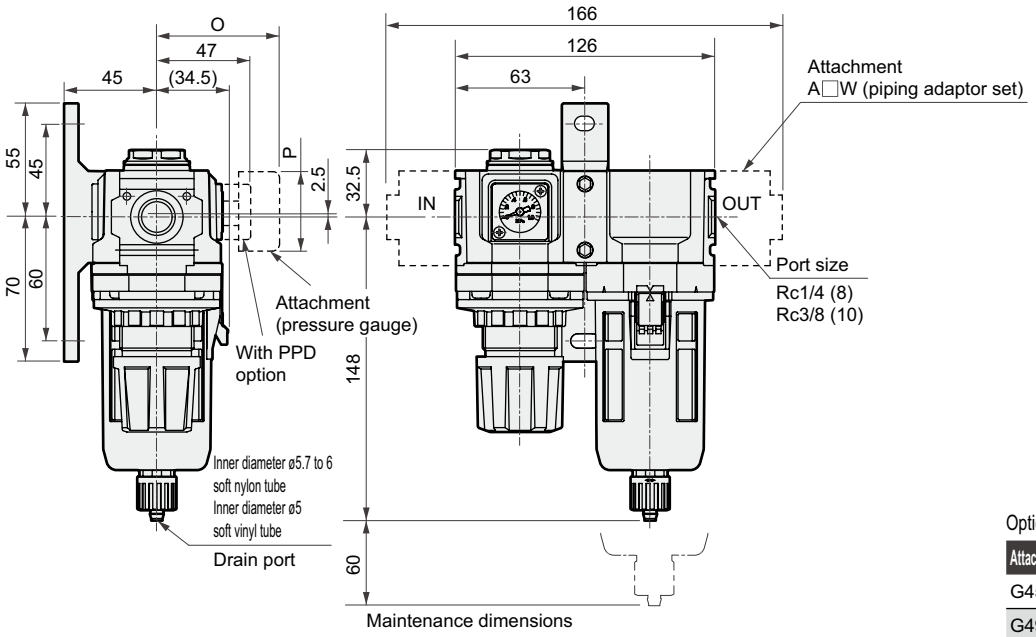


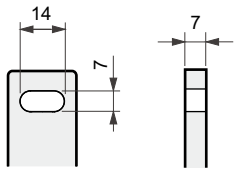
Drawing of bracket section

Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G59P	(75.5)	ø52
G40P	(75)	ø42.5
G50P	(75)	ø52.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

● C3050-W





Drawing of bracket section

Option dimensions with pressure gauge attached

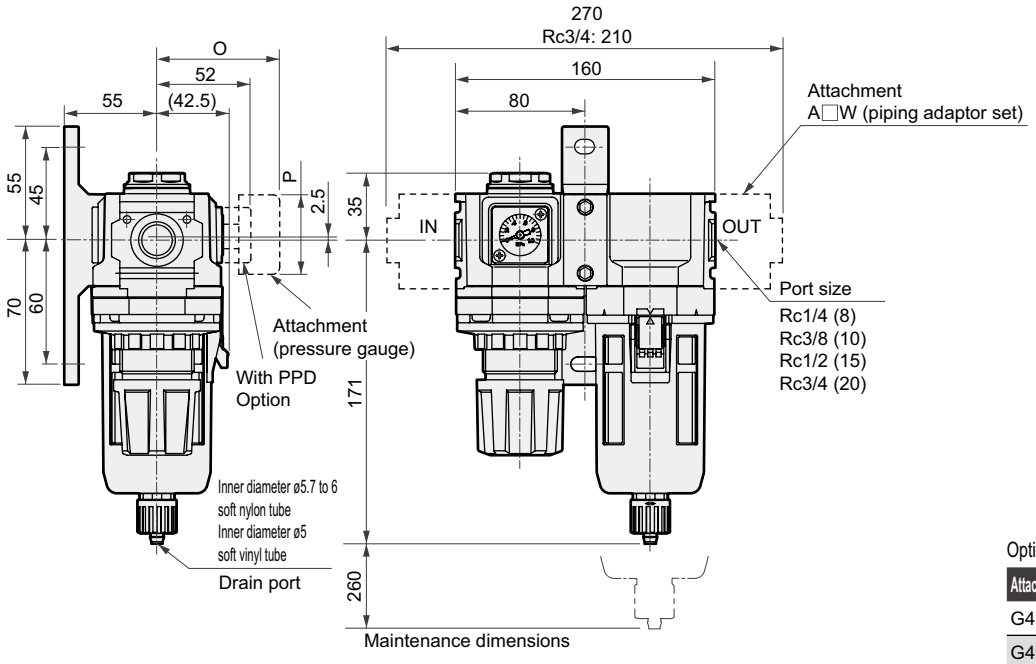
Attached pressure gauge	O	P
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5
R2	(69.5)	□30

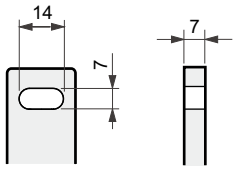
● Refer to page 92 for dimensions of the metal bowl option.

R.M. Combination

Dimensions CAD

● C4050-W





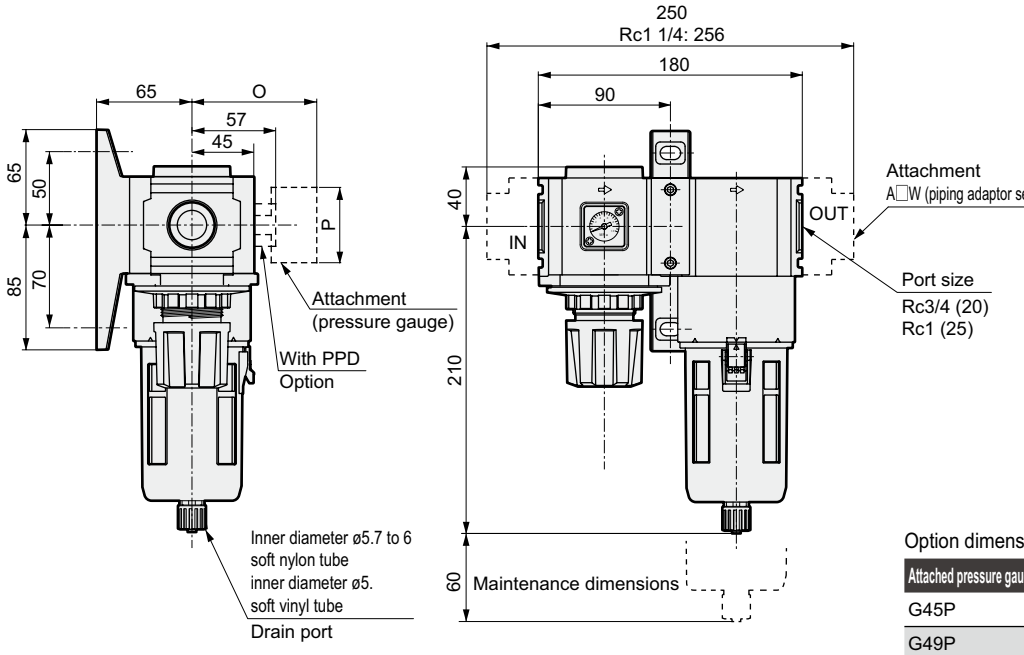
Magnified drawing of bracket section

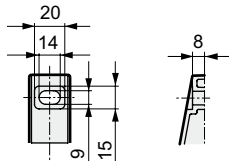
Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5
R2	(75)	□30

● Refer to page 92 for dimensions of the metal bowl option.

● C6050-W





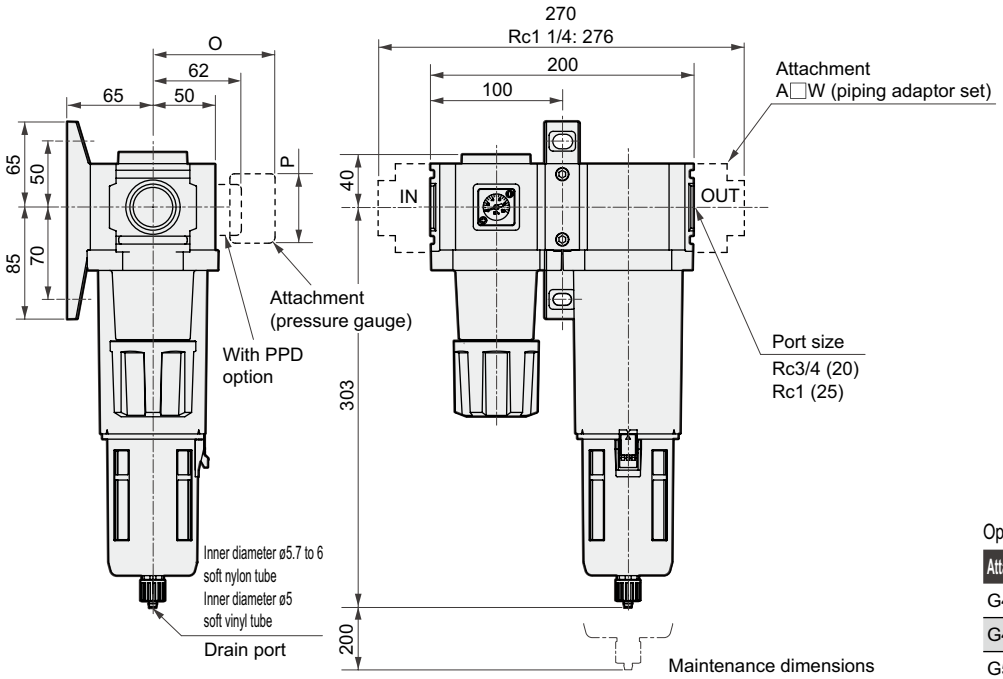
Magnified drawing of bracket section

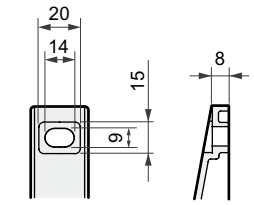
Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(80)	ø39
G49P	(79.5)	ø43.5
G59P	(82)	ø52
G40P	(81.5)	ø42.5
G50P	(81.5)	ø52.5
G42P	(80)	ø42
G52P	(93)	ø52.5
R2	(80)	□30

Dimensions

● C8050-W



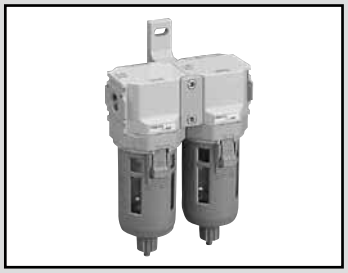


Drawing of bracket section

● Refer to page 102 for dimensions of the metal bowl option.

Option dimensions with pressure gauge attached

Attached pressure gauge	O	P
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5
R2	(85)	□30



F.M. combination standard white series

C1060 / C2060 / C3060 C4060 / C6060 / C8060-W Series

Integrated filter and oil mist filter

Port size: 1/8 to 1

JIS symbol 

Specifications

Descriptions		C1060-W	C2060-W	C3060-W	C4060-W	C6060-W	C8060-W
Exterior							
Components	Filter	F1000-W	F2000-W	F3000-W	F4000-W	F6000-W	F8000-W
	Oil mist filter	M1000-W	M2000-W	M3000-W	M4000-W	M6000-W	M8000-W
Working fluid		Compressed air					
Max. working pressure MPa		1.0 Note 3, 4, 5					
Withstanding pressure MPa		1.5 Note 3					
Ambient temperature range ℃		5 to 60					
Port size Rc, NPT, G		1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg		0.22	0.58	0.62	1.06	2.02	2.68
Secondary oil concentration		0.01mg/m^3 or less					
Maximum flow rate (Note 1) m^3/min		0.15 Note 3	0.25	0.36	0.825	1.27	2.6

Note 1: The maximum flow is for a primary pressure of 0.7 MPa.

Note 2: Refer to page 95 for details on other oil mist filters.

Note 3: When "F1" with an automatic drain is selected for the C1030-W series, the NC automatic drain is assembled for both the filter and oil mist filter. Minimum operation pressure is 0.2 MPa, maximum operation pressure is 0.7 MPa and withstanding pressure is 1.05MPa. Refer to the maximum processing flow graph (page 97) for the M1030-W-F1 automatic drain for the maximum working flow. The working flow must be less than the maximum working flow.

Note 4: When "F" with an automatic drain is selected, the supply air pressure is 0.15 MPa or more. Air is purged with initial drainage until pressure reaches 0.1 MPa.

Note 5: When "F1" with an automatic drain is selected, the supply air pressure must be 0.15 MPa or more.

Note 6: When element option "Y" is selected, refer to page 87 for maximum flow. The working flow must be less than the maximum working flow.

How to order

C1060 - 6 ○ - W - Z - ○ - A6W

- Ⓐ Model no.
- Ⓑ Port size
- Ⓒ Port thread type
- Ⓓ Option
- Ⓔ Displayed unit
- Ⓕ Piping adaptor set (included)

* Refer page 9 for an explanation of the options.

Symbol		Descriptions	Ⓐ Model no. C1060	C2060	C3060	C4060	C6060	C8060
Ⓑ Port size								
6		1/8	●					
8		1/4	●	●	●	●		
10		3/8		●	●	●		
15		1/2				●		
20		3/4				●Note 1	●	●
25		1					●	●
Ⓒ Port thread type								Note 2
Blank		Rc thread	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●
Ⓓ Option								Note 3
Drainage Note 4, Note 5	**Blank**	With manual drain cock	●	●	●	●	●	●
	F	Automatic drain with manual override (NO type: exhausts without pressurization)			●	●	●	●
	F1	Automatic drain with manual override (NC type: no exhaust without pressurization)	●	●	●	●	●	●
	FF	Large exhaust automatic drain with manual override (NO type: exhausts without pressurization)						●
	FF1	Large exhaust automatic drain with manual override (NO type: no exhaust without pressurization)						●
Bowl material	**Blank**	Polycarbonate bowl	●	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●	●
	M	Metal bowl			●	●	●	●
	M1	Metal bowl with manual drain cock		●	●	●	●	●
Element	**Blank**	5μm	●	●	●	●	●	●
	Y	0.3μm (submicron) Note 6			●	●	●	●
Differential pressure detection	**Blank**	Without differential pressure detection port	●	●	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)						●
Flow Direction	**Blank**	Standard flow (left to right)	●	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●	●
Ⓔ Displayed unit								
Blank		MPa display, Rc thread	●	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●	●
Ⓕ Piping adaptor set (included)								Pages 155 to 157 Note 7
Blank		Not attached	●	●	●	●	●	●
A6*W		1/8 piping adaptor set	●					
A8*W		1/4 piping adaptor set	●	●	●	●		
A10*W		3/8 piping adaptor set	●	●	●	●		
A15*W		1/2 piping adaptor set		●	●	●		
A20*W		3/4 piping adaptor set					●	●
A25*W		1 piping adaptor set					●	●
A32*W		1 1/4 piping adaptor set					●	●
*** Adaptor thread type**								
Blank		Rc thread	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●

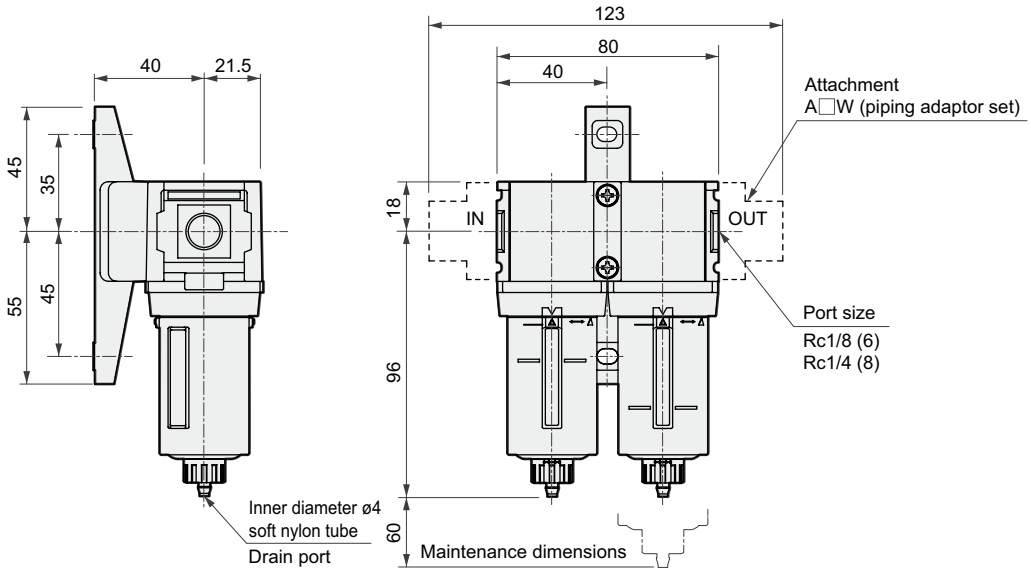
⚠ Cautions for model No. selection

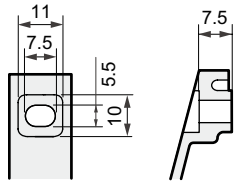
Note 1: Piping adaptor A400-20*-W is assembled on both ends of C4060-20*-W. Piping adaptor set "A20*W" does not need to be specified.
Note 2: When G threads or NPT threads are selected, the IN, OUT, gauge port, and drainage discharge port (metal bowl automatic drain) are the target, as are attachments P and V.
Note 3: Select the option from drain exhaust, bowl material and differential pressure detection. When selecting options for several items, list options in order from the top.
Note 4: Refer to page 12 for working conditions of the automatic drain.
Note 5: When option symbol "F" is selected, the NO automatic drain is enclosed for the air filter and the NC automatic drain is enclosed for the automatic drain. When option symbol "F1" both air filter and oil mist filter will have an NC type automatic drain. "FF" and "FF1" has a large drain type oil mist filter but the automatic drain is same as the NC type.
Note 6: Refer to page 87 for max. flow rate of option "Y".
Note 7: A joiner set is attached with the piping adapter set.

F.M. Combination

Dimensions CAD

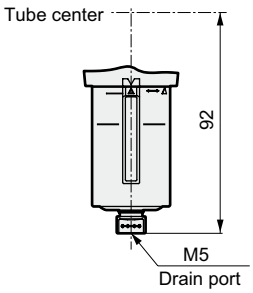
● C1060-W



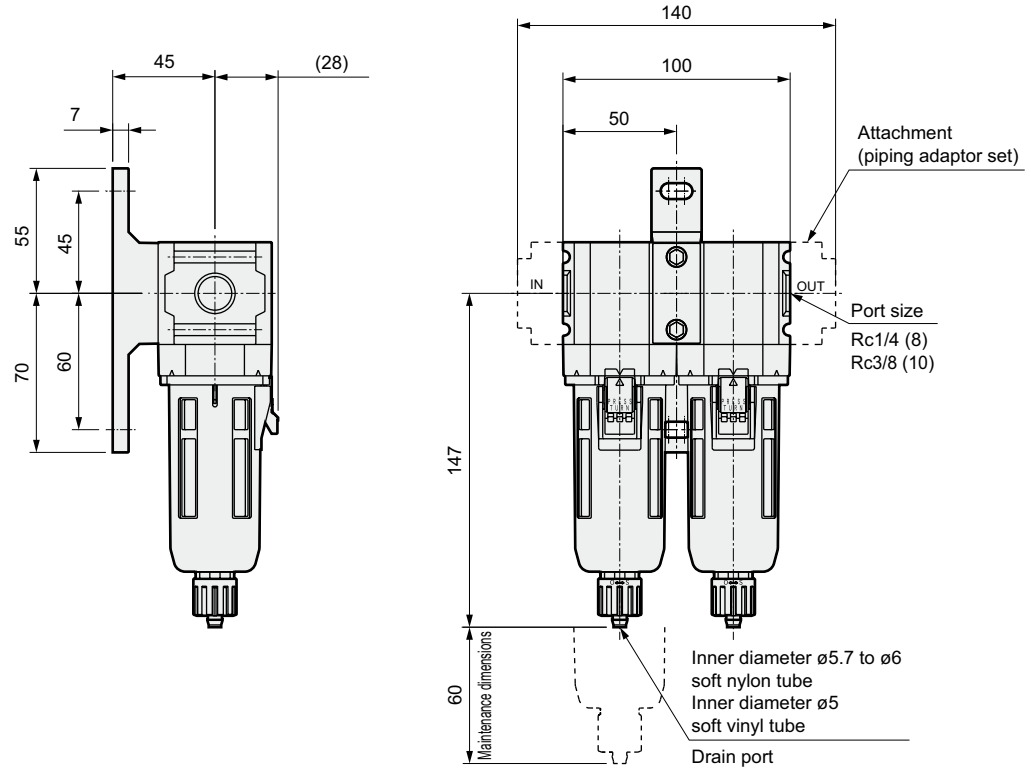


Drawing of bracket section

• Option dimensions
With automatic drain (F1)

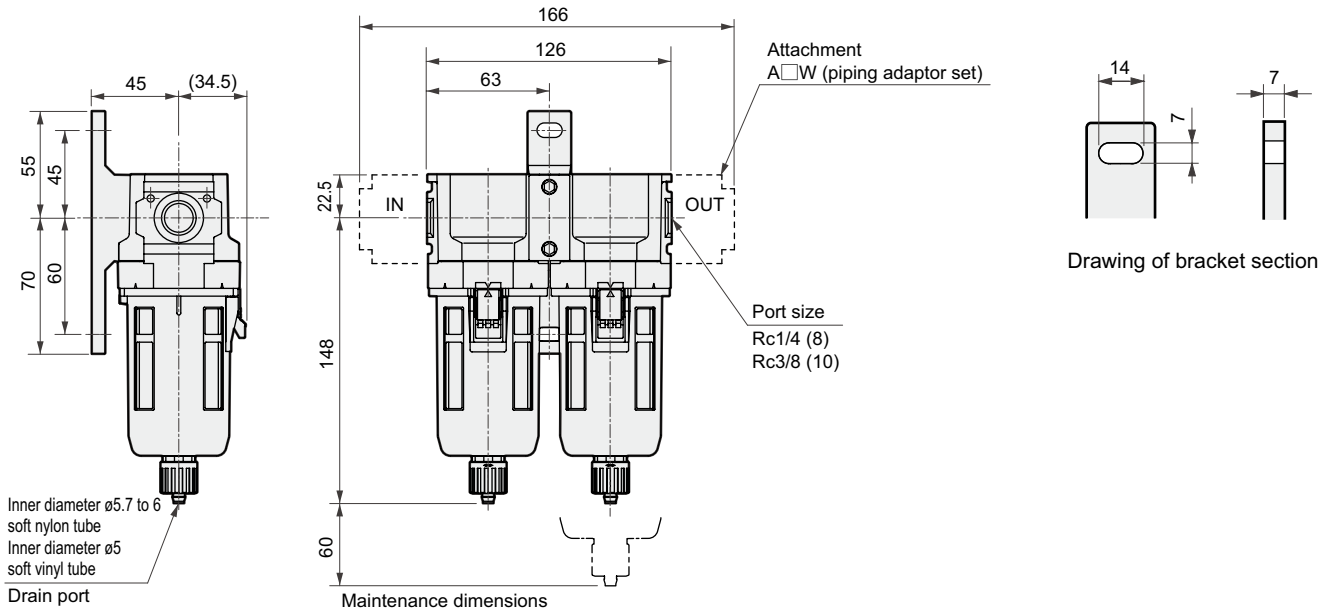


● C2060-W



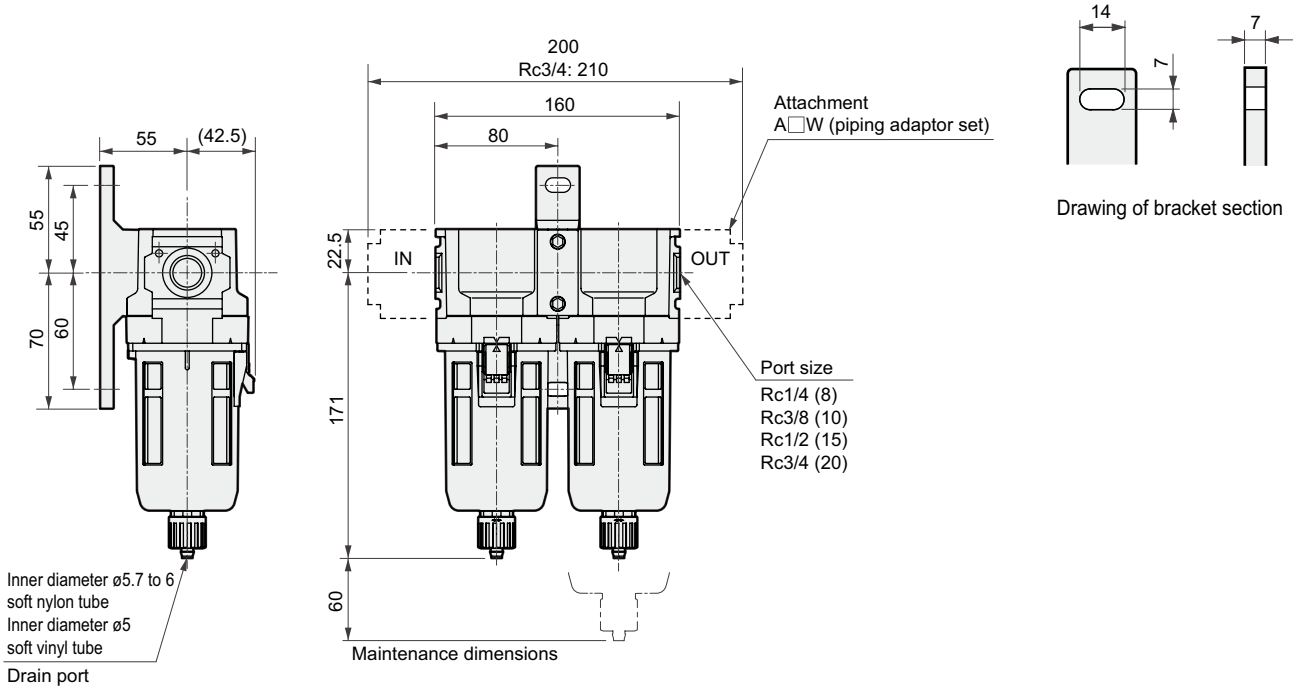
Dimensions

● C3060-W



● Refer to page 92 for the dimensions of the metal bowl option filter and page 102 for the oil mist filter.

● C4060-W

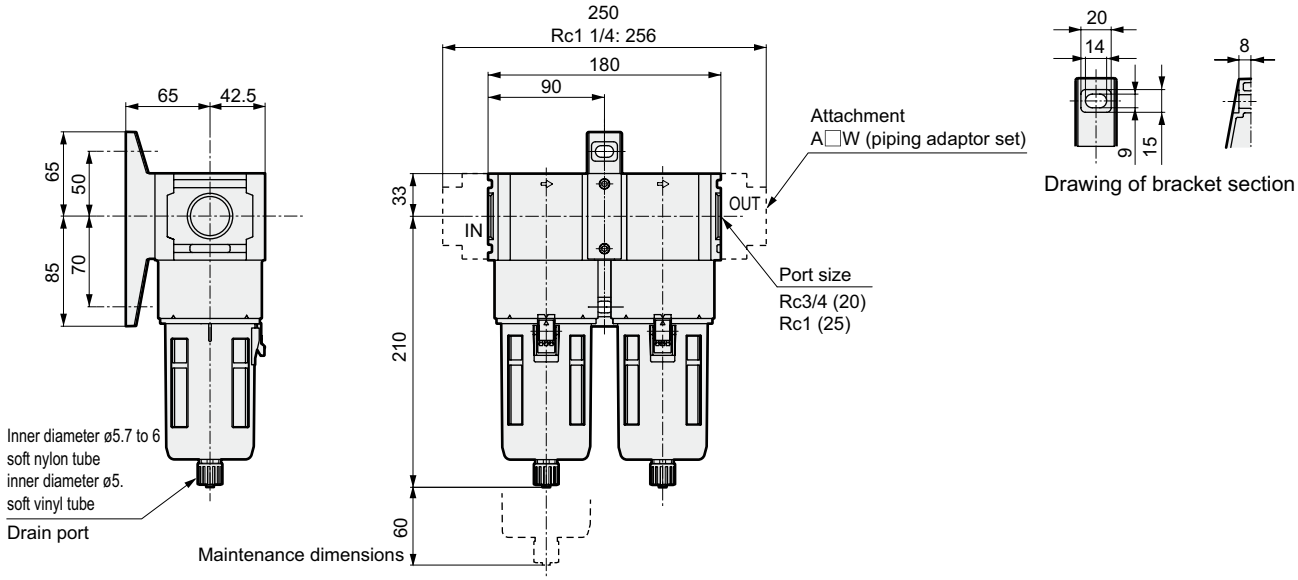


● Refer to page 92 for the dimensions of the metal bowl option filter and page 102 for the oil mist filter.

F.M. Combination

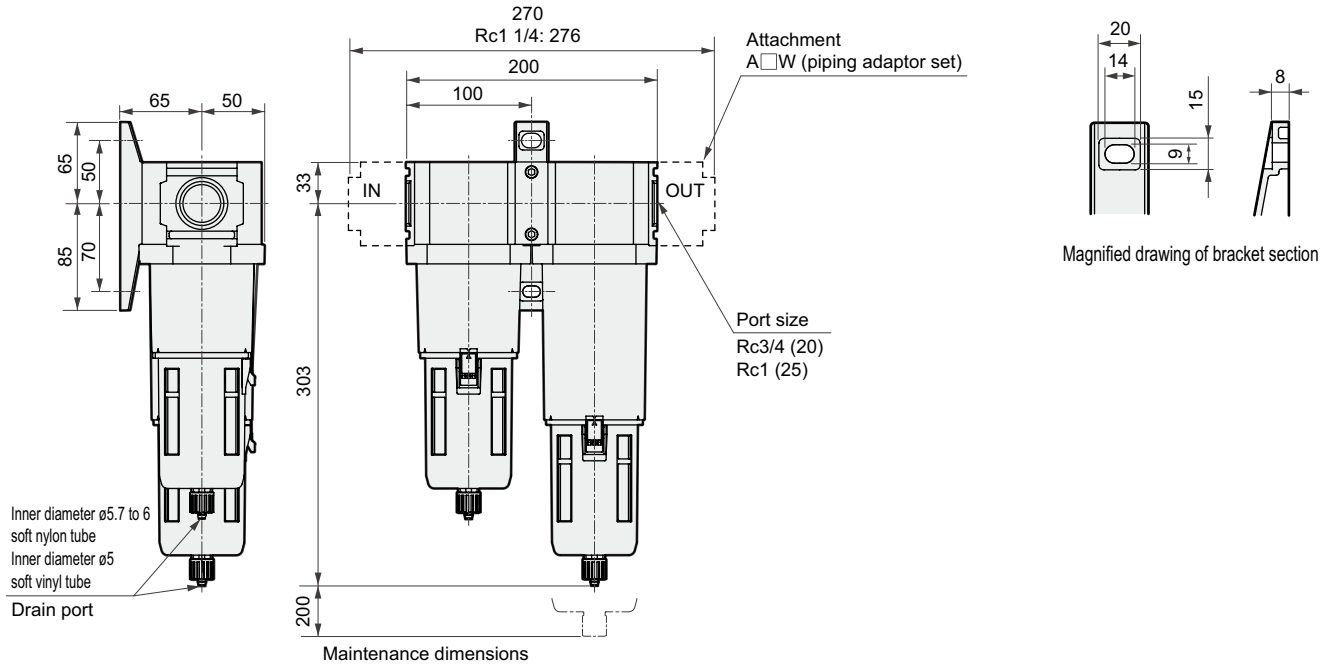
Dimensions CAD

● C6060-W



● Refer to page 92 for the dimensions of the metal bowl option filter and page 102 for the oil mist filter.

● C8060-W



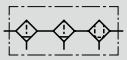
● Refer to page 92 for the dimensions of the metal bowl option filter and page 102 for the oil mist filter.

MEMO

F.F.M. combination standard white series

C3070/C4070/C6070/C8070-W Series

Integrated filter (5 µm), filter (0.3 µm), and oil mist filter
Port size: 1/4 to 1

JIS symbol 

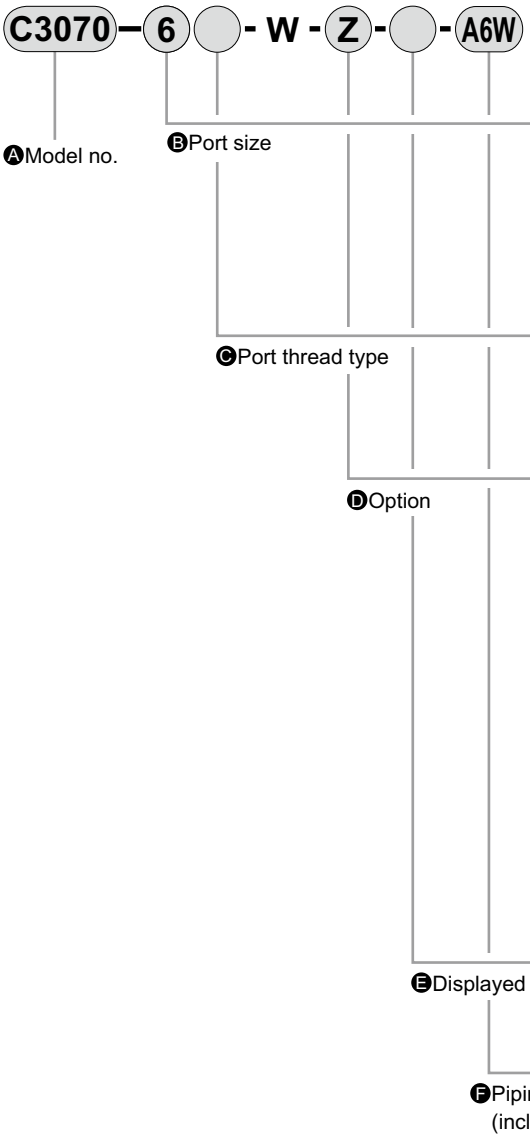
RoHS CAD

Specifications

Descriptions		C3070-W	C4070-W	C6070-W	C8070-W
Exterior					
Components	Filter (5µm)	F3000-W	F4000-W	F6000-W	F8000-W
	Filter (0.3µm)	F3000-W	F4000-W	F6000-W	F8000-W
	Oil mist filter	M3000-W	M4000-W	M6000-W	M8000-W
Working fluid		Compressed air			
Max. working pressure MPa		1.0 Note 3, 4			
Withstanding pressure MPa		1.5			
Ambient temperature range ℃		5 to 60			
Port size Rc, PT,		1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg		0.96	1.61	3.09	4.01
Secondary oil concentration		0.01mg/m^3 or less			
Maximum flow rate (Note 1) m^3/min		0.23	0.5	0.8	1.1

Note 1: The maximum flow is for a primary pressure of 0.7 MPa.
Note 2: Refer to page 95 for details on other oil mist filters.
Note 3: When "F" with an automatic drain is selected, the supply air pressure is 0.15 MPa or more. Air is purged with initial drainage until pressure reaches 0.1 MPa.
Note 4: When "F1" with an automatic drain is selected, the supply air pressure must be 0.15 MPa or more.

How to order



* Refer page 9 for an explanation of the options.

Symbol		Descriptions	Ⓐ Model no. C3070	C4070	C6070	C8070
Ⓑ Port size						
8		1/4	●	●		
10		3/8	●	●		
15		1/2		●		
20		3/4		● Note 5	●	●
25		1			●	●
Ⓒ Port thread type						Note 1
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓓ Option						Note 2
Drainage Note 3, Note 4	**Blank**	With manual drain cock	●	●	●	●
	F	Automatic drain with manual override (NO type)	●	●	●	●
	F1	Automatic drain with manual override (NC type)	●	●	●	●
	FF	Large exhaust automatic drain with manual override (NO type)				●
	FF1	Large exhaust automatic drain with manual override (NO type)				●
Bowl material	**Blank**	Polycarbonate bowl	●	●	●	●
	Z	Nylon bowl	●	●	●	●
	M	Metal bowl	●	●	●	●
	M1	Metal bowl with manual drain cock	●	●	●	●
Differential pressure detection	**Blank**	Without differential pressure detection port	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)			●	●
Flow Direction	**Blank**	Standard flow (left to right)	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●
Ⓔ Displayed unit						
Blank		MPa display, Rc thread	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●
Ⓕ Piping adaptor set (included)						Pages 155 to 157 Note 6
Blank		Not attached	●	●	●	●
A8*W		1/4 piping adaptor set	●	●		
A10*W		3/8 piping adaptor set	●	●		
A15*W		1/2 piping adaptor set	●	●		
A20*W		3/4 piping adaptor set		●	●	●
A25*W		1 piping adaptor set			●	●
A32*W		1 1/4 piping adaptor set			●	●
*** Adaptor thread type**						
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●

⚠ Cautions for model No. selection

Note 1: When G threads or NPT threads are selected, the IN, OUT, gauge port, and drainage discharge port (metal bowl automatic drain) are the target, as are attachments P and V.

Note 2: Select the option from drain exhaust, bowl material and differential pressure detection. When selecting options for several items, list options in order from the top.

Note 3: Refer to page 12 for working conditions of the automatic drain.

Note 4: When option symbol "F" is selected, the NO automatic drain is enclosed for the air filter and the NC automatic drain is enclosed for the automatic drain. When option symbol "F1" both air filter and oil mist filter will have an NC type automatic drain. "FF" and "FF1" has a large drain type oil mist filter but the automatic drain is same as the NC type.

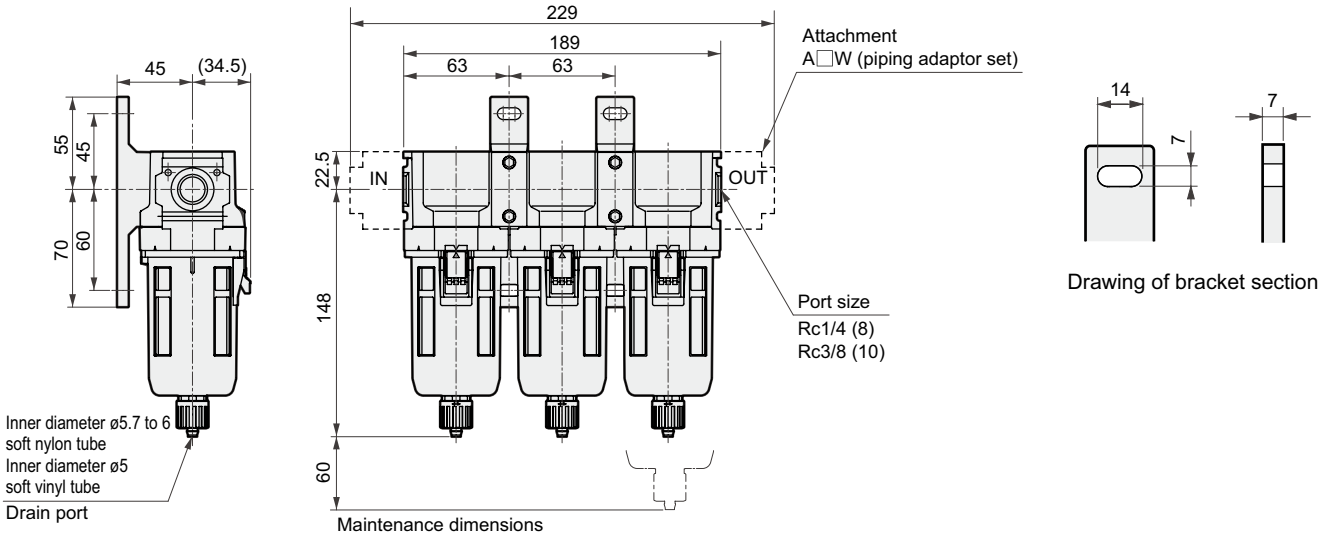
Note 5: Piping adaptor A400-20*-W is assembled on both ends of C4070-20*-W. Piping adaptor set "A20*W" does not need to be specified.

Note 6: A joiner set is attached with the piping adapter set.

F.F.M. Combination

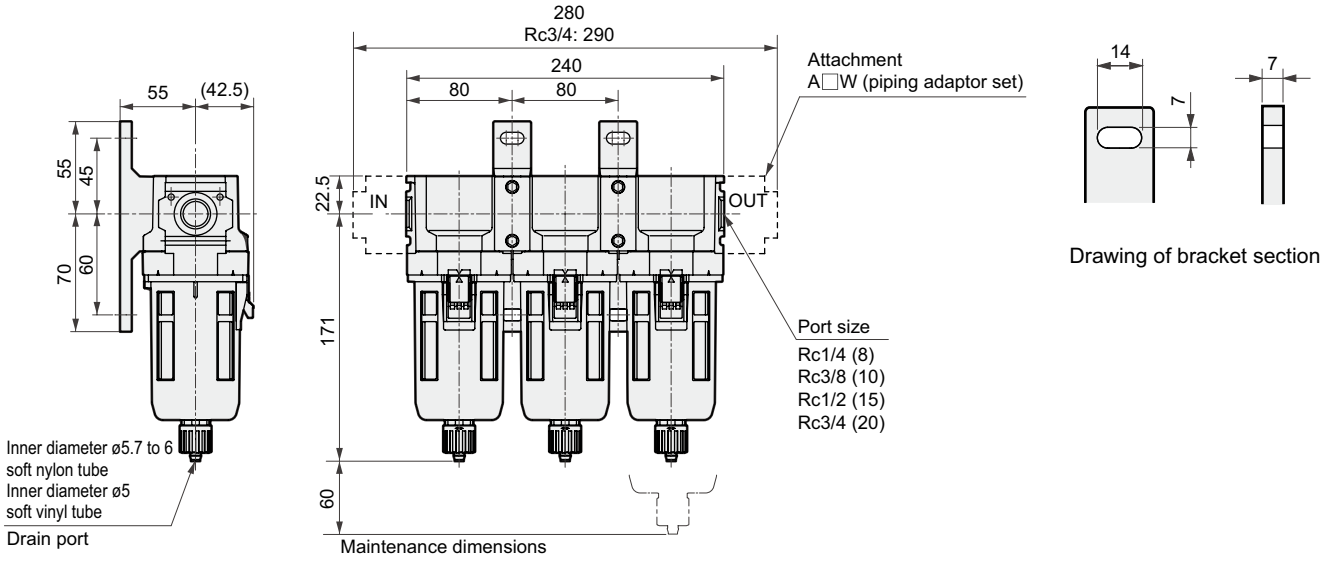
Dimensions CAD

● C3070-W



● Refer to page 92 for the dimensions of the metal bowl option filter and page 102 for the oil mist filter.

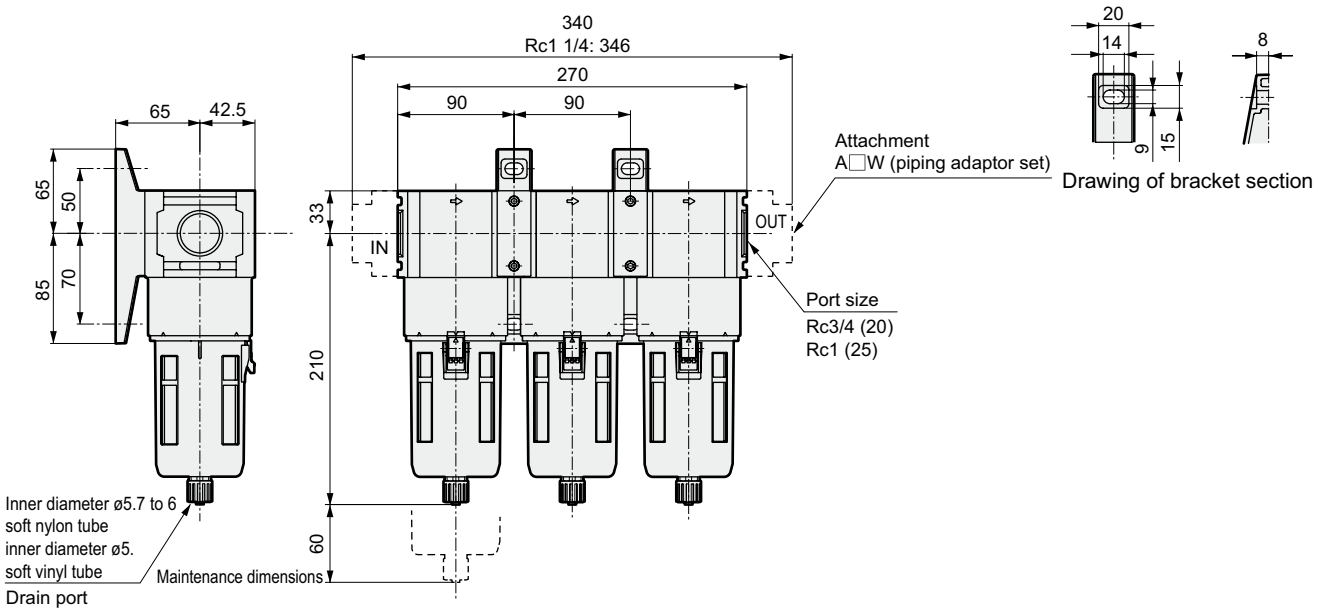
● C4070-W



● Refer to page 92 for the dimensions of the metal bowl option filter and page 102 for the oil mist filter.

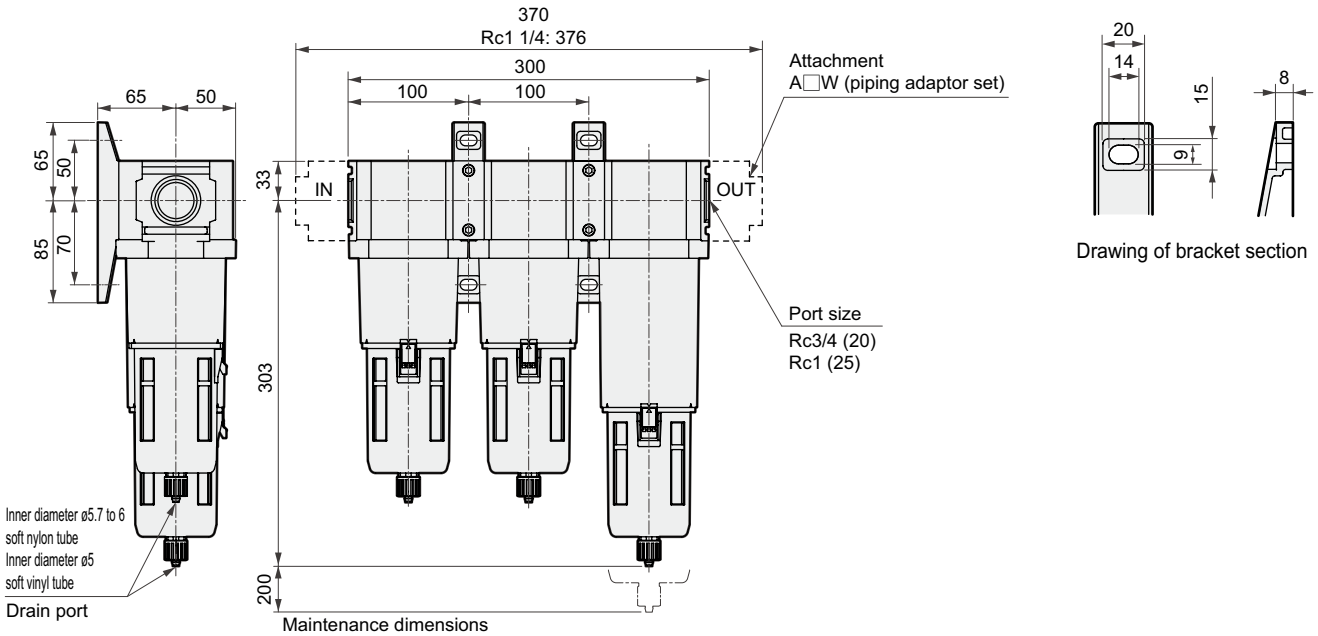
Dimensions

● C6070-W



● Refer to page 92 for the dimensions of the metal bowl option filter and page 102 for the oil mist filter.

● C8070-W



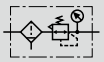
● Refer to page 92 for the dimensions of the metal bowl option filter and page 102 for the oil mist filter.

Filter・regulator Standard white series

W1000/W2000/W3000/W4000/W8000-W Series

Introducing the 5 µm dust removing element and 0.3 µm tar removing element to the lineup

Port size: 1/8 to 1

JIS symbol 

RoHS CAD

Specifications

Descriptions	W1000-W	W2000-W	W3000-W	W4000-W	W8000-W
Exterior					
Working fluid	Compressed air				
Max. working pressure MPa	1.0 Note 2, 3, 4				
Withstanding pressure MPa	1.5 Note 2				
Ambient temperature range ℃	5 to 60				Note 5
Filtration rating µm	5		5 or 0.3		
Set pressure range MPa	0.05 to 0.85 Note 2	0.05 to 0.85			
Relief	With relief mechanism				
Drain capacity cm^3	12	25	45	80	80 Note 1
Port size Rc, PT,	1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.175	0.4	0.6	0.9	2
Standard accessories	Pressure gauge, bowl guard				

Note 1: Drainage accumulates up to 170 cm^3 only with the manual drain cock.
Note 2: When "F1" with an automatic drain is selected for the W1000-W series, minimum operating pressure is 0.2 MPa, maximum operation pressure is 0.7 MPa and the guaranteed pressure resistance is 1.05 MPa. Refer to the maximum processing flow table (page 85) for the F1000-W-F1 automatic drain for the maximum working flow. Set the working flow to less than the maximum working flow.
Note 3: The automatic drain's minimum operating pressure for "F" with an automatic drain is 0.1 MPa.
Initially generated drainage and air are purged until pressure reaches 0.1 MPa.
Note 4: The automatic drain's minimum operating pressure for "F1" with an automatic drain is 0.15 MPa.
Note 5: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.
Note 6: W2000-W Series with an automatic drain "F1" must be used below maximum flow rate. (Refer to page 85 F2000-W for weight.)

Ozone specifications

(Page 185)

W*000 - ····· - W - ····· - P11

Clean specification

(Catalog No. CB-033SA)

● Dust generation preventing structure for use in cleanrooms

W*000 - ····· - P7*

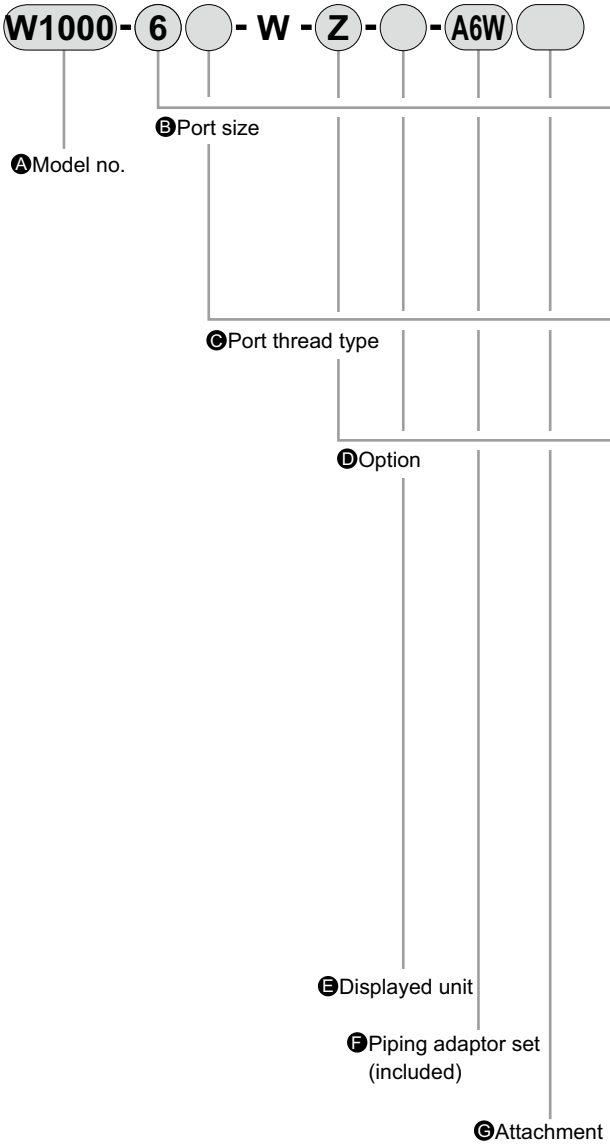
Specification for LiB production

(Catalog No.CC-947A)

● Specification for LiB manufacturing process

W*000 - ····· - P4*

How to order



* Refer page 9 for an explanation of the options.

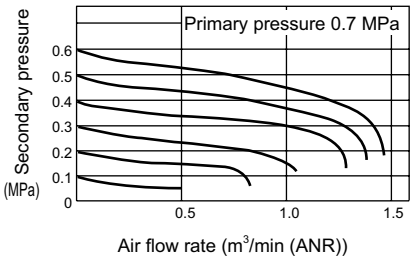
Symbol		Descriptions	Ⓐ Model no. W1000	W2000	W3000	W4000	W8000
Ⓑ Port size							
6		1/8	●				
8		1/4	●	●	●	●	
10		3/8		●	●	●	
15		1/2				●	
20		3/4					●
25		1					●
Ⓒ Port thread type							Note 1
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓓ Option							Note 2
Drainage Note 3	**Blank**	With manual drain cock	●	●	●	●	●
	F	Automatic drain with manual override (NO type)			●	●	●
	F1	Automatic drain with manual override (NC type)	●	●	●	●	●
	FF	Large exhaust automatic drain with manual override (NO type)					●
	FF1	Large exhaust automatic drain with manual override (NO type)					●
Bowl material	**Blank**	Polycarbonate bowl	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●
	M	Metal bowl			●	●	●
	M1	Metal bowl with manual drain cock		●	●	●	●
Element	**Blank**	5μm	●	●	●	●	●
	Y	0.3μm (submicron) Note 4			●	●	●
Pressure Range	**Blank**	0.05 to 0.85MPa	●	●	●	●	●
	L	0.05 to 0.35MPa Note 5	●	●	●	●	●
Relief	**Blank**	With relief mechanism	●	●	●	●	●
	N	Non-relief type	●	●	●	●	●
Pressure gauge	**Blank**	Standard pressure gauge (G401-W)	●	●	●	●	●
	T	Without pressure gauge (gauge port (Rc1/4) assembled sealed)	●	●	●	●	●
	T8	Pressure gauge attachable (gauge port (Rc1/4) assembled open)	●	●	●	●	●
	T6	Compatibility with digital pressure sensor PPX Note 6	●	●	●	●	●
	R1	Pressure switch with display PPD assembled Note 7	●		●	●	●
Flow Direction	**Blank**	Standard flow (left to right)	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●
Ⓔ Displayed unit							
Blank		MPa display, Rc thread	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●
Ⓕ Piping adaptor set (included)							Note 8, 9 Pages 155 to 157
Blank		Not attached	●	●	●	●	●
A6*W		1/8 piping adaptor set	●				
A8*W		1/4 piping adaptor set	●	●	●	●	
A10*W		3/8 piping adaptor set	●	●	●	●	
A15*W		1/2 piping adaptor set		●	●	●	
A20*W		3/4 piping adaptor set				●	●
A25*W		1 piping adaptor set					●
A32*W		1 1/4 piping adaptor set					●
*** Adaptor thread type**							
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓖ Attachment							Note 10 Page 152, 198
Blank		Not attached	●	●	●	●	●
BW		C type bracket	●	●	●	●	●
B3W Note 7		L type bracket Note 11	●	●	●	●	
G45P		G45D-8-P10 (L: G45D-8-P04)	●	●	●	●	●
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 5		Digital pressure sensor: PPX-R10N-6M	●	●	●	●	●

⚠ Cautions for model No. selection

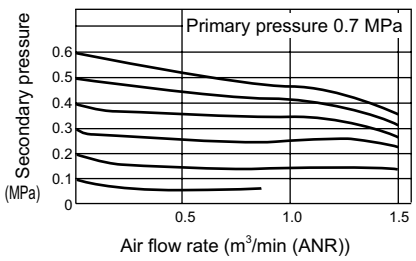
Note 1: G threads and NPT threads are available for IN, OUT, gauge port and drain discharge port (metal bowl with automatic drain).
Note 2: Select options per drainage, bowl material, element, and regulator sections.
When selecting options for several items, list options in order from the top.
Note 3: Refer to page 12 for working conditions of the automatic drain.
Note 4: Refer to page 87 for max. flow rate of option "Y".
Note 5: Pressure gauge display range will be 0 to 0.4 MPa for option "L".
Note 6: When option "T6" is selected, only "blank" or "R2" is selected for the (G) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.
Note 7: Out put type will be NPN transistor output. Consult with CKD if PNP transistor output is required.
Note 8: Piping adapter set and C bracket cannot be used together.
Note 9: A joiner set is attached with the piping adapter set.
Note 10: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.
Note 11: Refer to Section (2. Regulator), in "⚠PRECAUTIONS For Installation and Adjustment" (page 15) for details on mounting the L-type bracket.

Flow characteristics

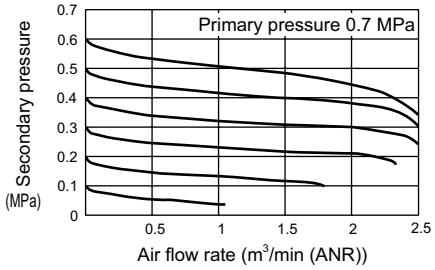
● W1000-6-W



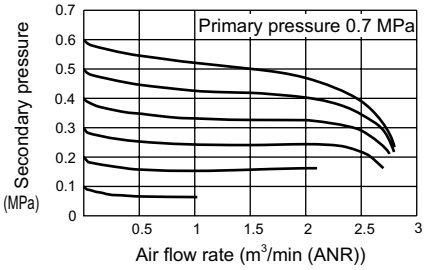
● W1000-8-W



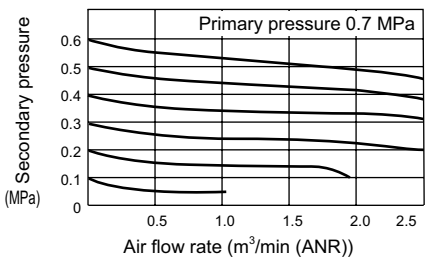
● W2000-8-W



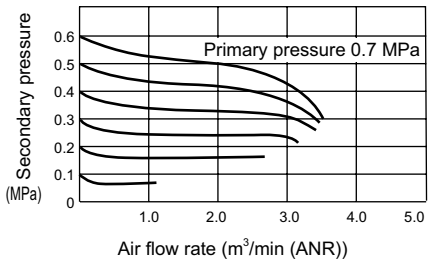
● W2000-10-W



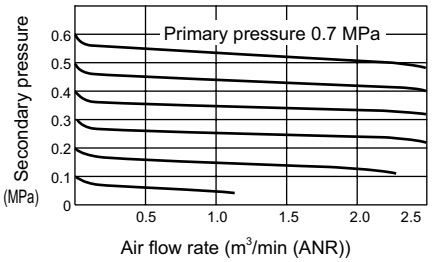
● W3000-8-W



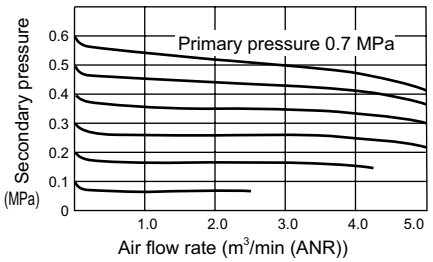
● W3000-10-W



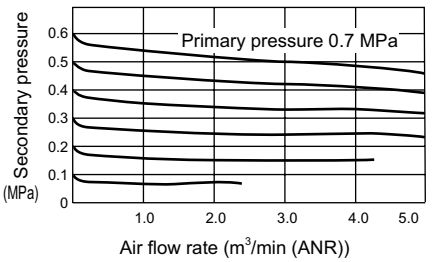
● W4000-8-W



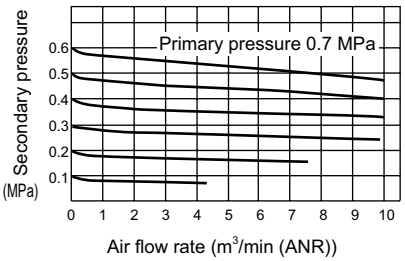
● W4000-10-W



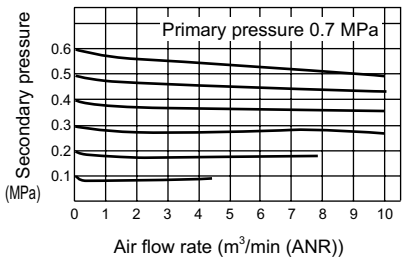
● W4000-15-W



● W8000-20-W

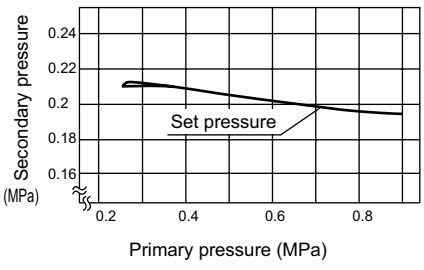


● W8000-25-W

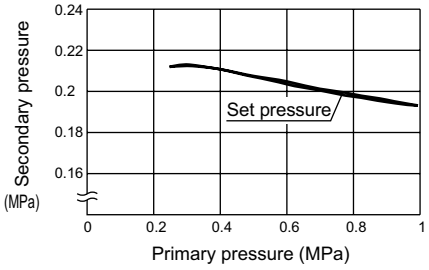


Pressure characteristics

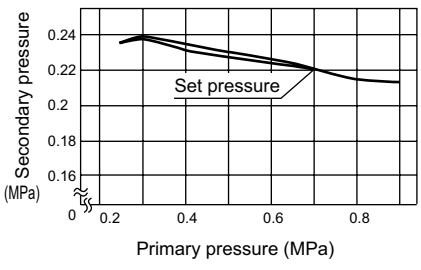
● W1000-W



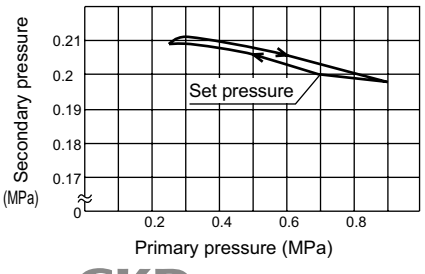
● W2000-W



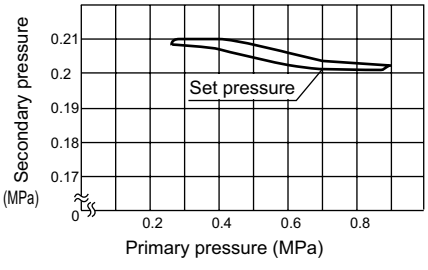
● W3000-W



● W4000-W

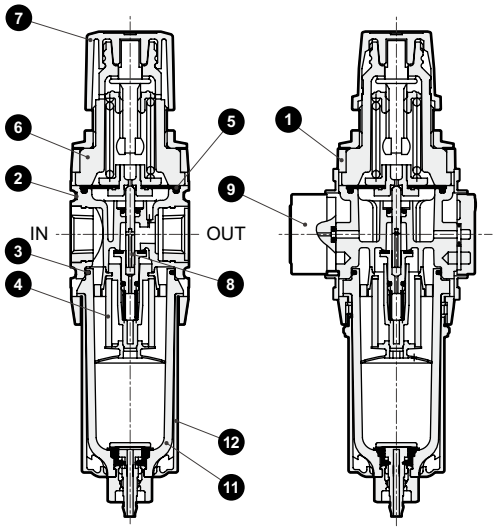


● W8000-W

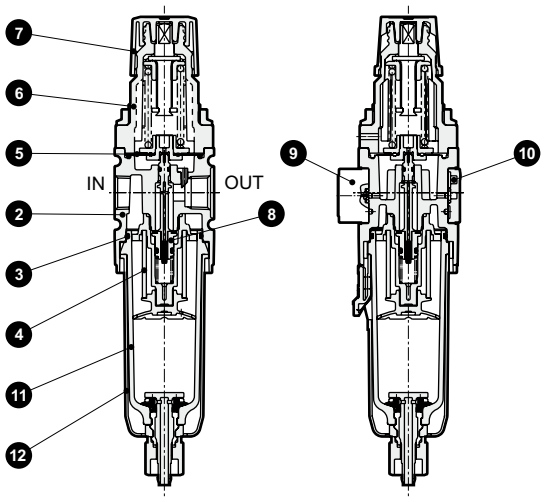


Internal structure and parts list

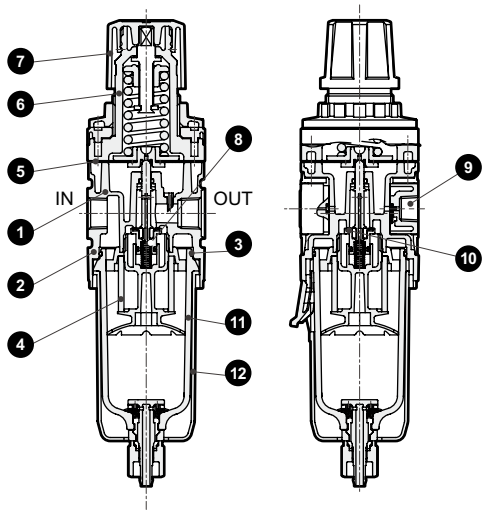
● W1000-W



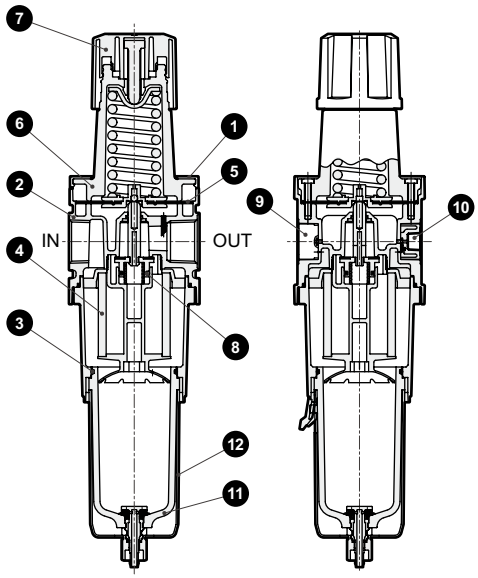
● W2000-W



● W3000-W · W4000-W



● W8000-W

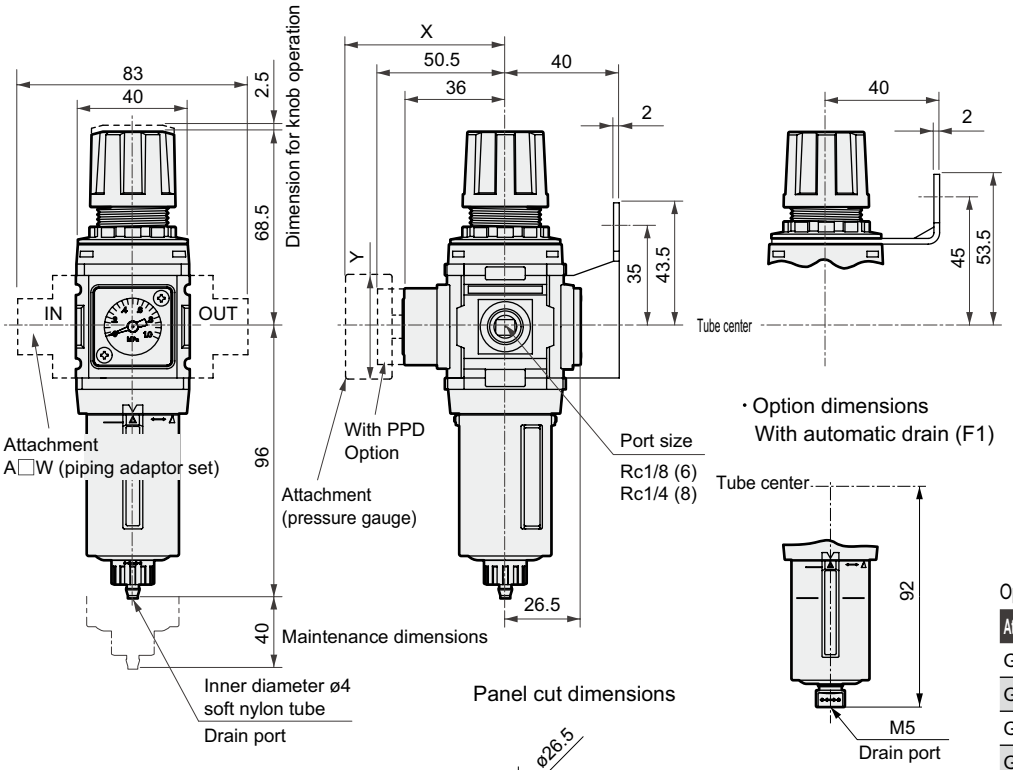


No.	Part name	Material				
		W1000-W	W2000-W	W3000-W	W4000-W	W8000-W
1	Plate cover	ABS resin	-	ABS resin		
2	Body	Polyamide resin, steel	Aluminum alloy die-casting			
3	O-ring Note 2	Special nitrile rubber				
4	Element Note 1	Polyacetal resin polypropylene	Polypropylene			
5	Diaphragm assembly	Polyacetal resin polypropylene	Polyacetal resin nitrile rubber	Zinc alloy die-casting nitrile rubber		
6	Cover	Polyamide resin	PBT Resin			Aluminum alloy die-casting
7	Knob	Polyacetal resin				
8	Valve assembly	Brass, hydrogenated nitrle rubber (polyacetal resin: W2000-W, W3000-W, W4000-W only)				
9	Pressure gauge assembly	PBT resin, polyacetal resin, polycarbonate resin, nitrile rubber, brass, steel				
10	Gauge plug assembly	-		Polyacetal resin nitrile rubber		
	Blanking plug assembly	PBT resin, nitrile rubber, steel		-		
11	Bowl assembly	Polycarbonate resin, polyacetal resin, urethane resin				
12	Bowl guard	Polyamide resin	Polyamide resin			

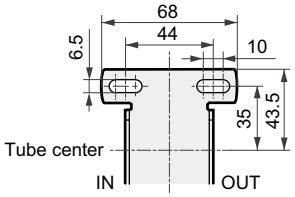
Note 1: W1000-W is an element assembly.
Note 2: The W1000-W O ring has a special shape.

Dimensions CAD

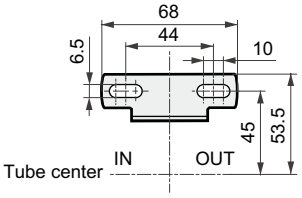
● W1000-W



· Attachment
C type bracket (-BW)
Part no: B120



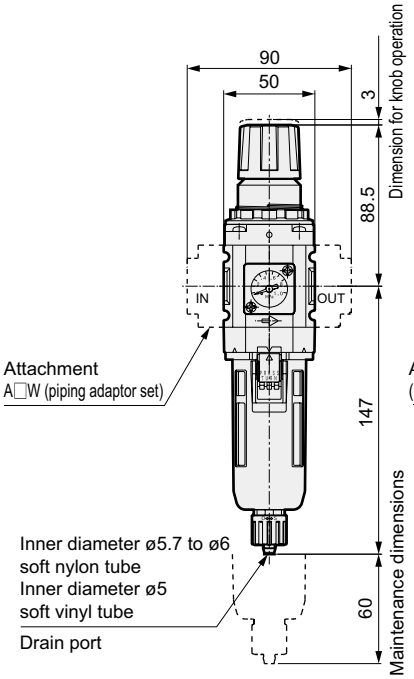
L type bracket (-B3W)
Part no: B130

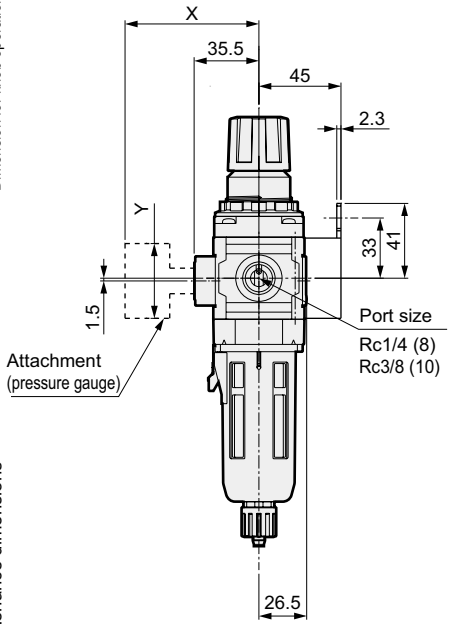


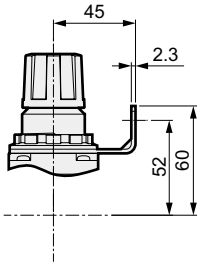
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5
R2	(74)	□30

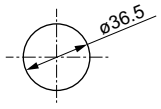
● W2000-W





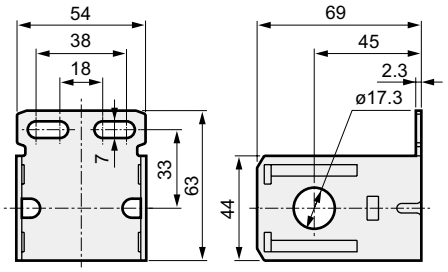


Panel cut dimensions

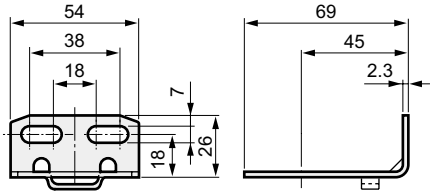


Panel thickness: Max. 4mm

· Attachment
C type bracket (-BW)
Part no: B220



L type bracket (-B3W)
Part no: B230

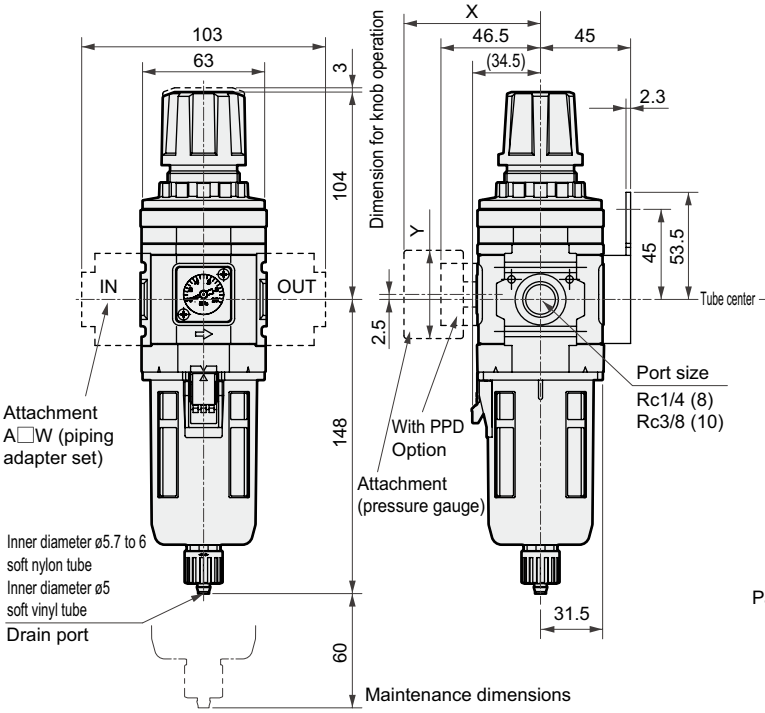


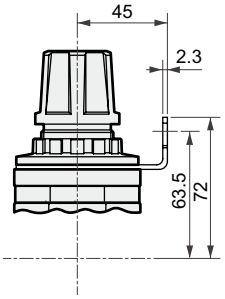
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G40P	(75)	ø42.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

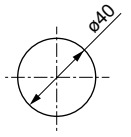
Dimensions

● W3000-W



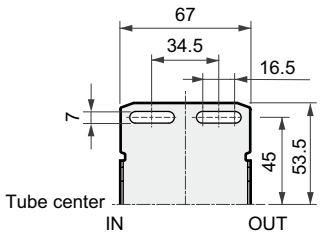


Panel cut dimensions

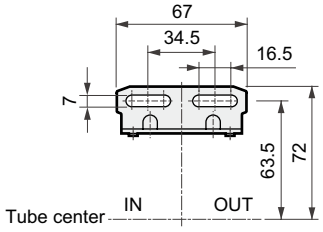


Panel thickness: Max. 4mm

・Attachment
C type bracket (-BW)
part no.: B320



C type bracket (-B3W)
part no.: B330

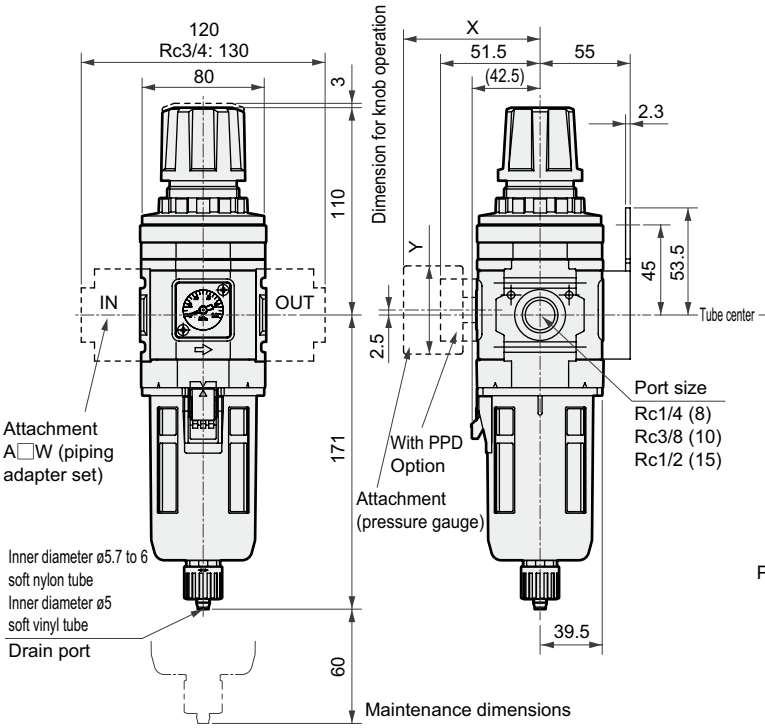


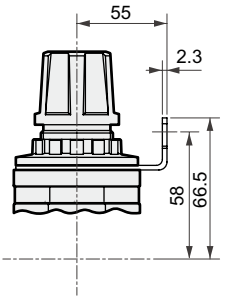
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5
R2	(69.5)	□30

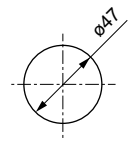
● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.

● W4000-W



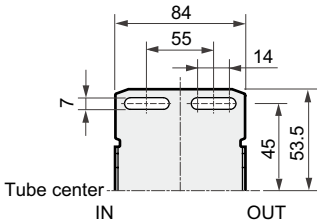


Panel cut dimensions

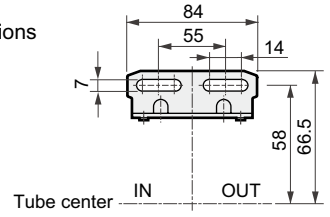


Panel thickness: Max. 7mm

・Attachment
C type bracket (-BW)
Part no: B420



L type bracket (-B3W)
Part no: B430



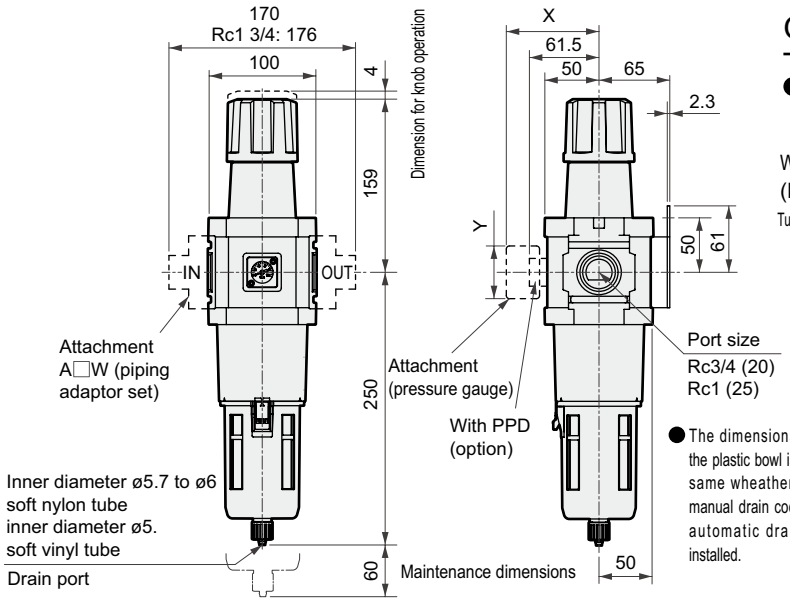
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5
R2	(75)	□30

● For the plastic bowl, the dimensions are the same regardless of whether the manual cock or with automatic drain.

Dimensions

● W8000-W

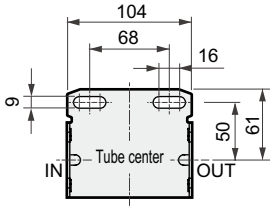


● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.

Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5
R2	(85)	□30

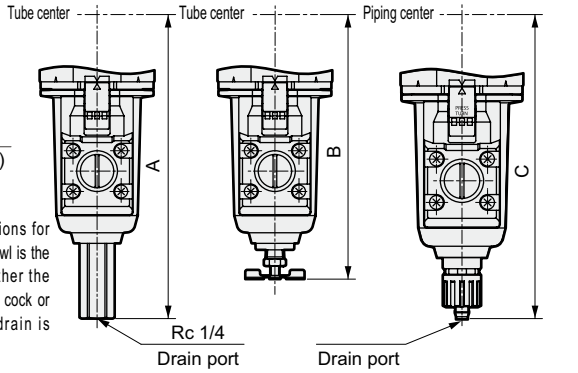
・Attachment
C type bracket (-BW)
Part no: B820



Option dimensions

● Metal bowl (option)
〔W2000-W, 3000-W, 4000-W, 8000-W〕

With automatic drain (FM, F1M) | Automatic drain cock (M) | Standard manual drain cock (M1)



Dimensions table

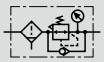
Model no.	F1M	M	M1
	A	B	C
W2000-W	-	-	147
W3000-W	163.5	143.5	154
W4000-W	187	166.5	177
W8000-W	266	245.5	256

MEMO

Reverse filter･regulator Standard white series

W1100/W2100/W3100/W4100/W8100-W Series

Introducing the 5 µm dust removing element and 0.3 µm tar removing element, with back flow function, to the lineup

JIS symbol 

Specifications

Descriptions	W1100-W	W2100-W	W3100-W	W4100-W	W8100-W
Exterior					
Working fluid	Compressed air				
Max. working pressure MPa	1.0 Note 4, 5, 6				
Withstanding pressure MPa	1.5 Note 6				
Ambient temperature range ℃	5 to 60 Note 7				
Filtration rating µm	5		5 or 0.3		
Set pressure range (Note 2) MPa	0.05 to 0.85 Note 4	0.05 to 0.85			
Relief	With relief mechanism				
Drain capacity cm^3	12	25	45	80	80 Note 3
Port size Rc, NPT, G	1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.175	0.4	0.6	0.9	2
Standard accessories	Pressure gauge, bowl guard				

Note 1: Check that the primary pressure is at least 0.05 MPa or more than the secondary pressure.
Note 2: Refer to the set pressure range for the back pressure given on page 79 when selecting the model.
Note 3: Drainage accumulates up to 170 cm^3 only with the manual drain cock.
Note 4: The automatic drain's minimum operating pressure for "F" with an automatic drain is 0.1 MPa. Initially generated drainage and air are purged until pressure reaches 0.1 MPa.
Note 5: The automatic drain's minimum operating pressure for "F1" with an automatic drain is 0.15 MPa.
Note 6: When "F1" with an automatic drain is selected for the W1100-W series, minimum operating pressure is 0.2 MPa, maximum operation pressure is 0.7 MPa and the guaranteed pressure resistance is 1.05 MPa. Refer to the maximum processing flow table (page 85) for the F1000-F1 automatic drain for the maximum working flow. Set the working flow to less than the maximum working flow.
Note 7: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.
Note 8: W2000-W Series with an automatic drain "F1" must be used below maximum flow rate. (Refer to page 85 F2000-W for weight.)

Ozone specifications

(Page 186)

W*100 - ····· - W - ····· - P11

Clean specification

(Catalog No. CB-033SA)

● Dust generation preventing structure for use in cleanrooms

W*100 - ····· - ··· - ····· - P7*

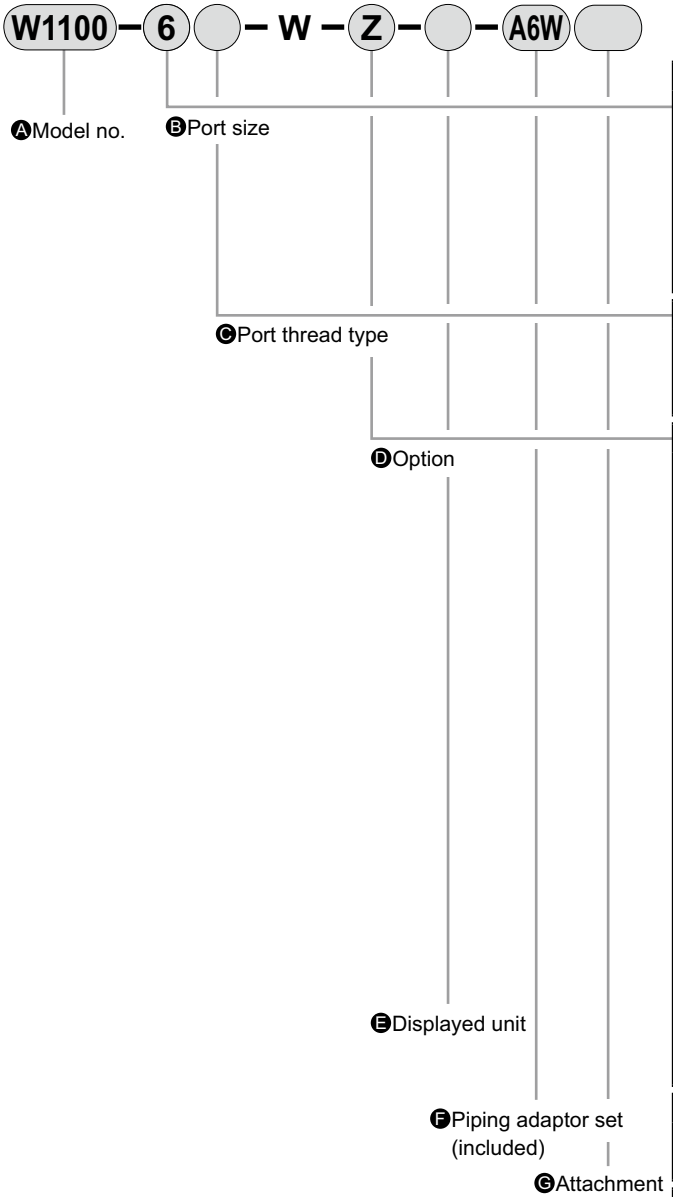
Specification for LiB production

(Catalog No.CC-947A)

● Specification for LiB manufacturing process

W*100 - ····· - P4*

How to order



* Refer page 9 for an explanation of the options.

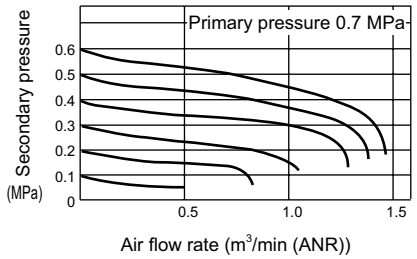
Symbol		Descriptions	Ⓐ Model no. W1100	W2100	W3100	W4100	W8100
Ⓑ Port size							
6		1/8	●				
8		1/4	●	●	●	●	
10		3/8		●	●	●	
15		1/2				●	
20		3/4					●
25		1					●
Ⓒ Port thread type							Note 1
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓓ Option							Note 2, Note 3
Drainage Note 4	**Blank**	With manual drain cock	●	●	●	●	●
	F	Automatic drain with manual override (NO type)		●	●	●	●
	F1	Automatic drain with manual override (NC type)	●		●	●	●
	FF	Large exhaust automatic drain with manual override (NO type)					●
	FF1	Large exhaust automatic drain with manual override (NO type)					●
Bowl material	**Blank**	Polycarbonate bowl	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●
	M	Metal bowl			●	●	●
	M1	Metal bowl with manual drain cock		●	●	●	●
Element	**Blank**	5μm	●	●	●	●	●
	Y	0.3μm (submicron) Note 5			●	●	●
Pressure Range	**Blank**	0.05 to 0.85MPa	●	●	●	●	●
	L	0.05 to 0.35MPa Note 6	●	●	●	●	●
Relief	**Blank**	With relief mechanism	●	●	●	●	●
	N	Non-relief type	●	●	●	●	●
Pressure gauge	**Blank**	Standard pressure gauge (G401-W)	●	●	●	●	●
	T	Without pressure gauge (gauge port (Rc1/4) assembled sealed)	●	●	●	●	●
	T8	Pressure gauge attachable (gauge port (Rc1/4) assembled open)	●	●	●	●	●
	T6	Compatibility with digital pressure sensor PPX Note 7	●	●	●	●	●
	R1	Pressure switch with display PPD assembled Note 8	●		●	●	●
Flow Direction	**Blank**	Standard flow (left to right)	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●
Ⓔ Displayed unit							
Blank		MPa display, Rc thread	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●
Ⓕ Piping adaptor set (included)							Note 9, 10 pages 155 to 157
Blank		Not attached	●	●	●	●	●
A6*W		1/8 piping adaptor set	●				
A8*W		1/4 piping adaptor set	●	●	●	●	
A10*W		3/8 piping adaptor set	●	●	●	●	
A15*W		1/2 piping adaptor set		●	●	●	
A20*W		3/4 piping adaptor set				●	●
A25*W		1 piping adaptor set					●
A32*W		1 1/4 piping adaptor set					●
*** Adaptor thread type**							
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓖ Attachment							Note 11 Page 152, 198
Blank		Not attached	●	●	●	●	●
BW		C type bracket	●	●	●	●	●
B3W Note 8		L type bracket	●	●	●	●	
G45P		G45D-8-P10 (L: G45D-8-P04)	●	●	●	●	●
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	●	●	●	●	●

⚠ Cautions for model No. selection

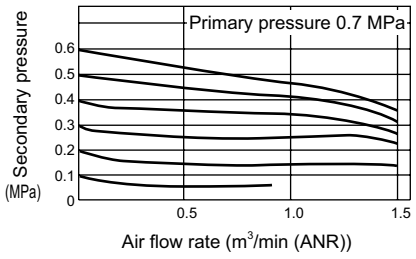
Note 1: G threads and NPT threads are available for IN, OUT, gauge port and drain discharge port (metal bowl with automatic drain).
Note 2: Select options per drainage, bowl material, element, and regulator sections.
When selecting options for several items, list options in order from the top.
Note 3: **Position of the check valve and pressure gauge can not be changed.**
If the reverse direction of IN and OUT are required, indicate "X1" in the end of optional section.
Note 4: Refer to page 12 for working conditions of the automatic drain.
Note 5: Refer to page 87 for max. flow rate of option "Y".
Note 6: Pressure gauge display range will be 0 to 0.4 MPa for option "L".
Note 7: When option "T6" is selected, only "blank" or "R2" is selected for the (G) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.
Note 8: Output type will be NPN transistor output. Consult with CKD if PNP transistor output is required.
Note 9: The piping adapter set and C bracket cannot be used together.
Note 10: A joiner set is attached with the piping adapter set.
Note 11: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.
Note 12: Refer to Section 2. Regulator, in "⚠PRECAUTIONS For Installation and Adjustment" (page 15) for details on mounting the L-type bracket.

Flow characteristics

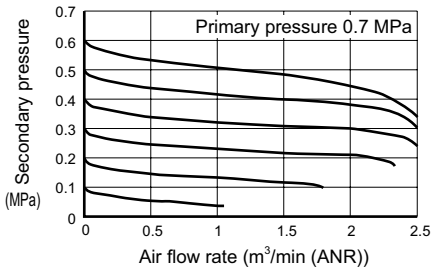
● W1100-6-W



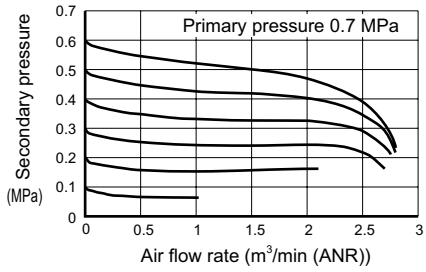
● W1100-8-W



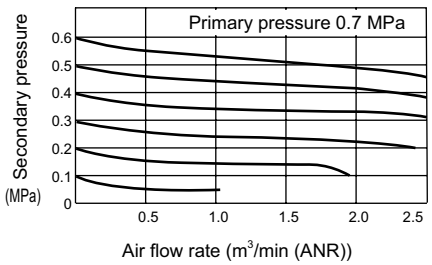
● W2100-8-W



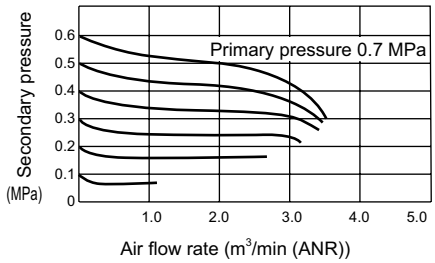
● W2100-10-W



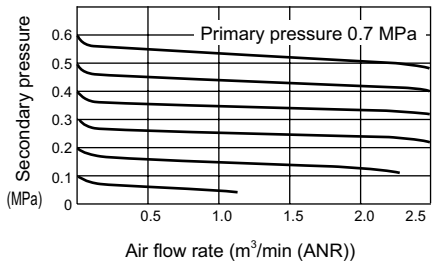
● W3100-8-W



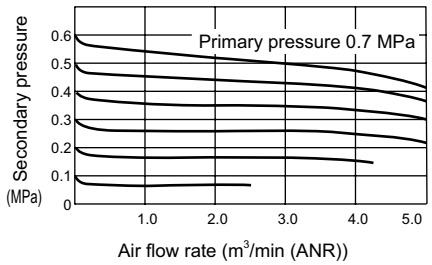
● W3100-10-W



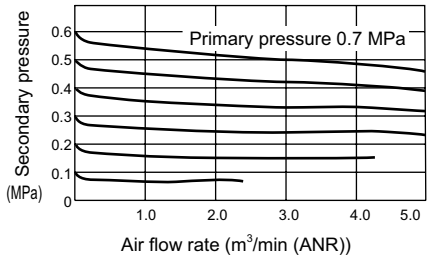
● W4100-8-W



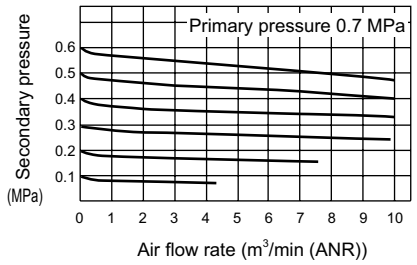
● W4100-10-W



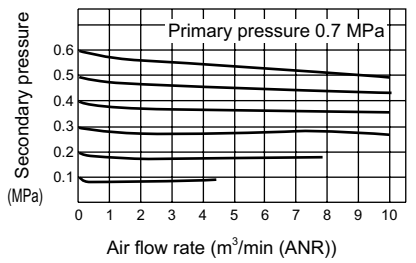
● W4100-15-W



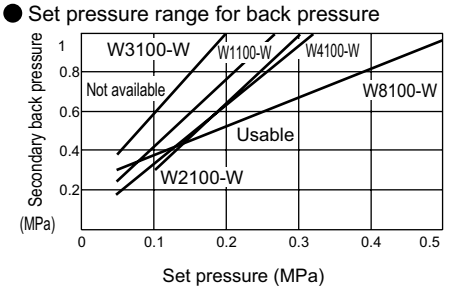
● W8100-20-W



● W8100-25-W



● Set pressure range for back pressure

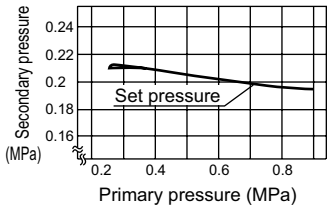


Note: The upper side of the graph is nonusable and the lower side usable.

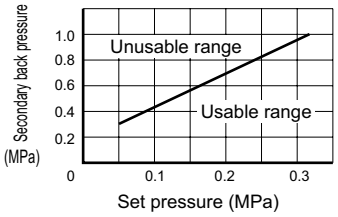
Example: If W4100-W is set to set pressure 0.2 MPa and the secondary back pressure is 0.6 MPa or more, the secondary pressure will not be released to the primary side.

Pressure characteristics

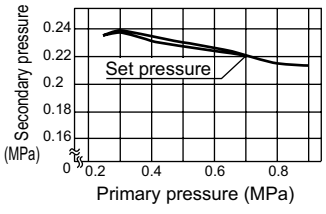
● W1100-W



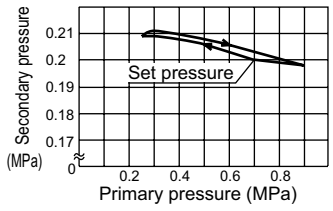
● W2100-W



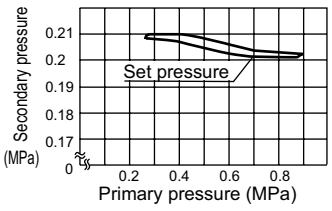
● W3100-W



● W4100-W

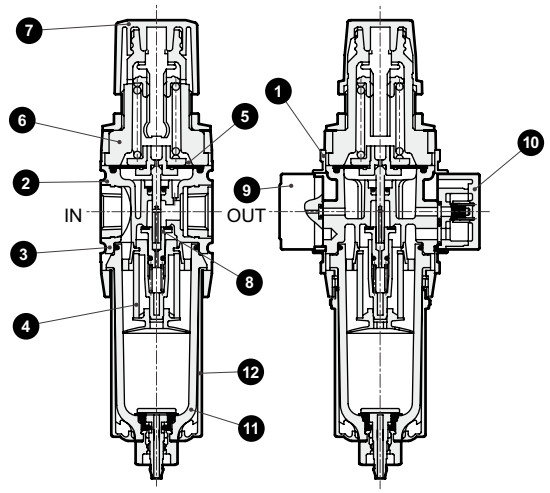


● W8100-W

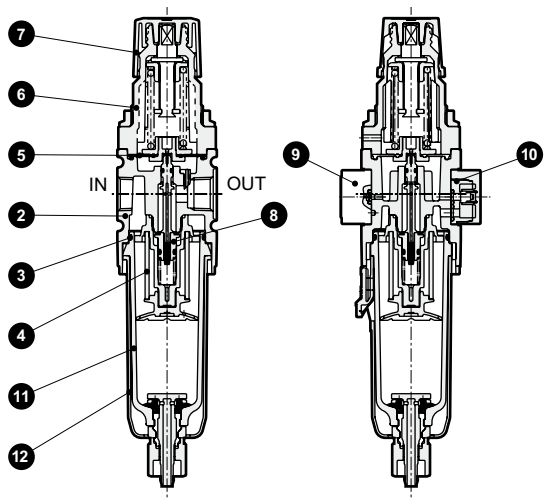


Internal structure and parts list

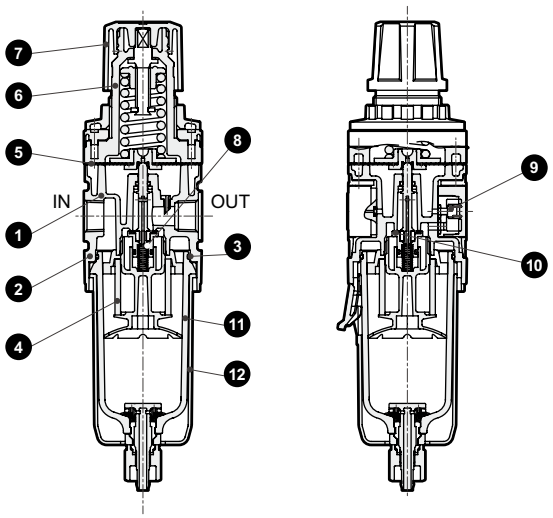
● W1100-W



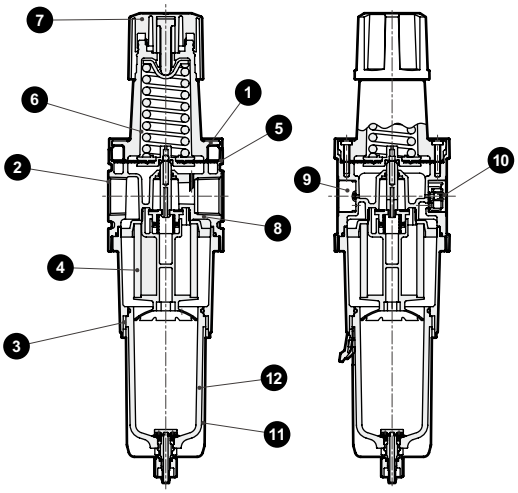
● W2100-W



● W3100-W, W4100-W



● W8100-W



No.	Part name	Material				
		W1100-W	W2100-W	W3100-W	W4100-W	W8100-W
1	Plate cover	ABS resin	-	ABS resin		
2	Body	Polyamide resin, steel	Aluminum alloy die-casting			
3	O-ring Note 2	Special nitrile rubber				
4	Element Note 1	Polyacetal resin Polypropylene	Polypropylene			
5	Diaphragm assembly	Polyacetal resin Nitrile rubber		Zinc alloy die-casting nitrile rubber		
6	Cover	Polyamide resin	PBT Resin			Aluminum alloy die-casting
7	Knob	Polyacetal resin				
8	Valve assembly	Brass, hydrogenated nitrile rubber (polyacetal resin: W2100-W, W3100-W, W4100-W only)				
9	Pressure gauge assembly	PBT resin, polyacetal resin, polycarbonate resin, nitrile rubber, brass, steel				
10	Check valve full assembly	PBT resin, nitrile rubber, stainless steel wire, steel				
11	Bowl assembly	Polycarbonate resin, polyacetal resin, urethane resin				
12	Bowl guard	Polyamide resin	Polyamide resin, steel			

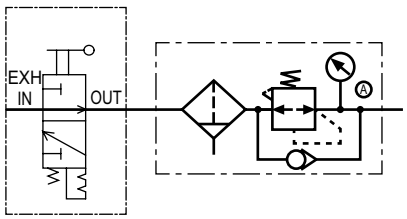
Note 1: W1100-W is an element assembly.
Note 2: The W1100-W O ring has a special shape.
Note 3: Refer to page 84 for repair parts kit model no.

Functional explanation

When the primary pressure is introduced from the IN side, the check valve functions as a regular regulator because it closes with primary pressure and spring load. When primary pressure is released by a changeover valve such as a shut-off valve, the check valve opens with secondary pressure. Pressure in the diaphragm chamber is released and pressure drops. This causes the diaphragm to be pressed down by the pressure adjustment spring. The main valve (valve assembly) opens, and the air on the OUT side is discharged.

Note: Set back pressure A for when the primary pressure is released within the range in the graph for the regulator's set pressure. (Refer to page 79 for graph)

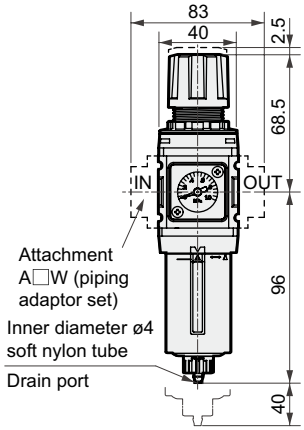
● Circuit diagram Shut-off valve

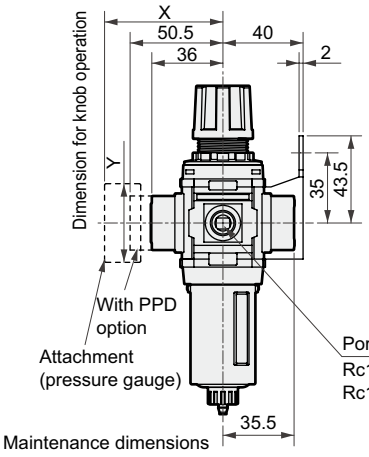


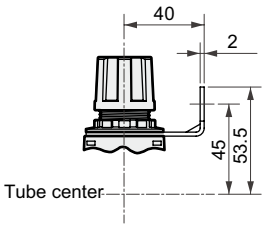
When using a shut-off valve before the reverse filter and regulator.

Dimensions CAD

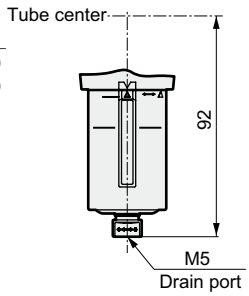
● W1100-W



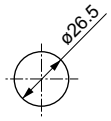




・Option dimensions
With automatic drain (F1)

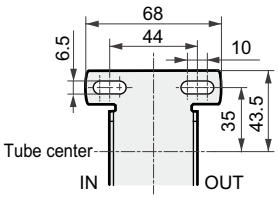


Panel cut dimensions

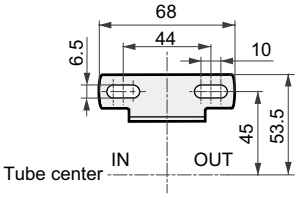


Panel thickness: Max. 6mm

・Attachment
C type bracket (-BW)
Part no: B120



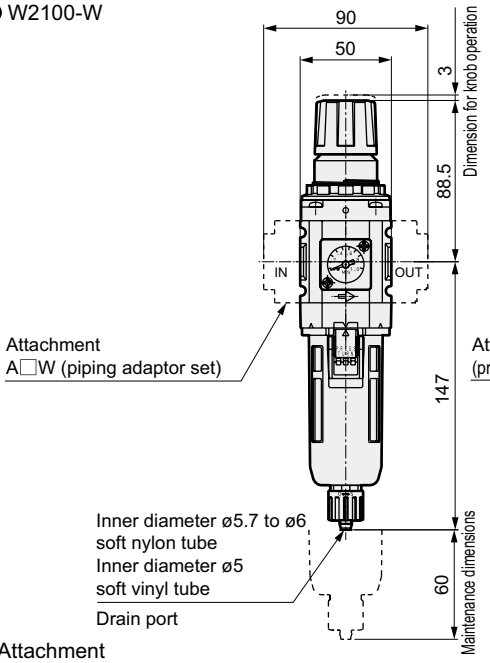
L type bracket (-B3W)
Part no: B130

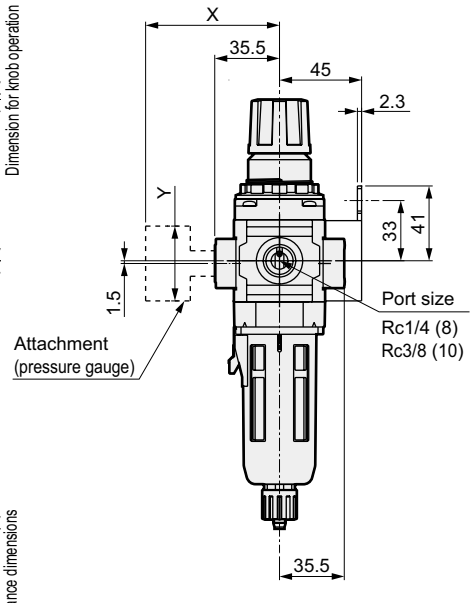


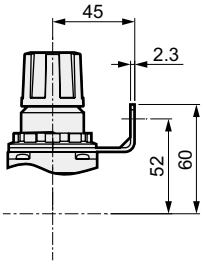
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5
R2	(74)	□30

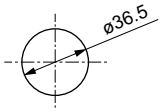
● W2100-W





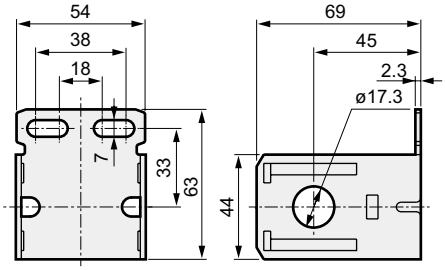


Panel cut dimensions

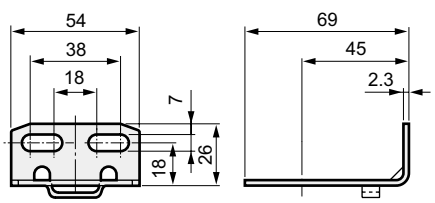


Panel thickness: Max. 4mm

・Attachment
C type bracket (-BW)
Part no: B220



L type bracket (-B3W)
Part no: B230

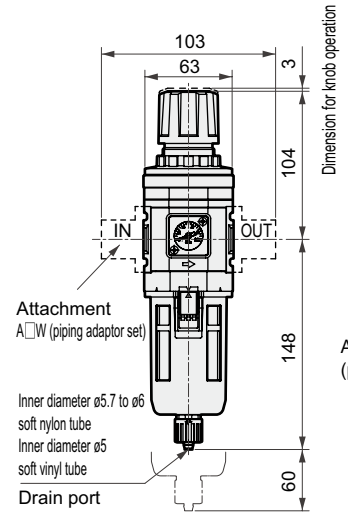


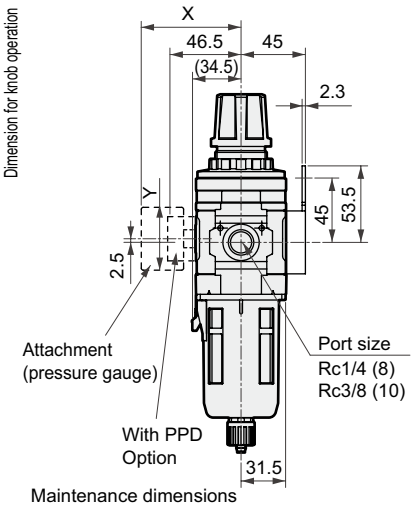
Option dimensions with pressure gauge attached

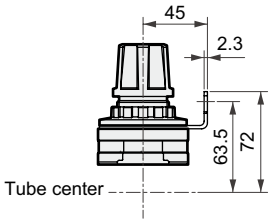
Attached pressure gauge	X	Y
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G40P	(75)	ø42.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

Dimensions

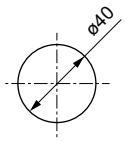
● W3100-W





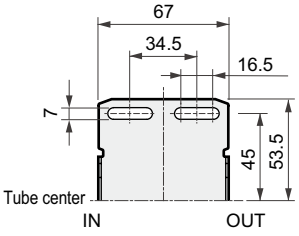


Panel cut dimensions

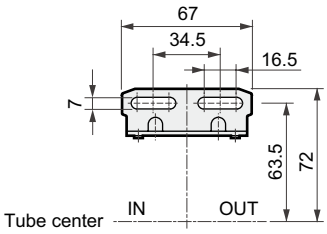


Panel thickness: Max. 4mm

・Attachment
C type bracket (-BW)
Part no: B320



L type bracket (-B3W)
Part no: B330

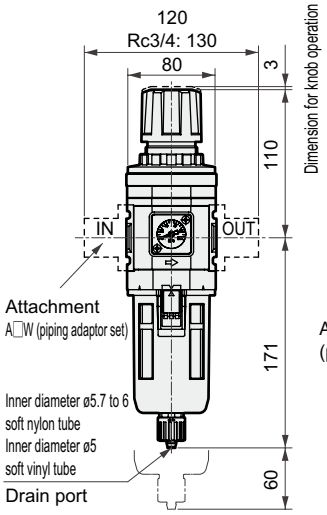


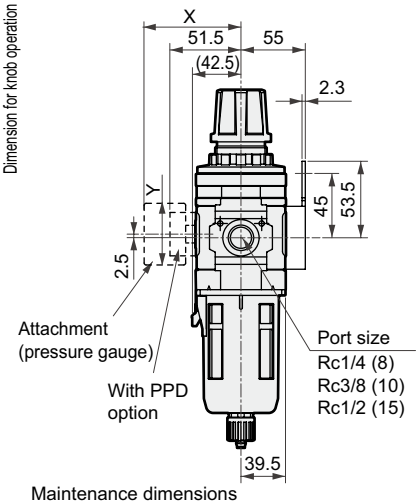
● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.

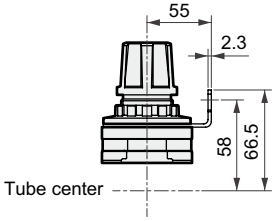
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5
R2	(69.5)	□30

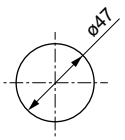
● W4100-W





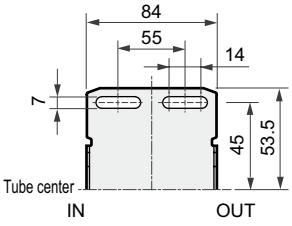


Panel cut dimensions

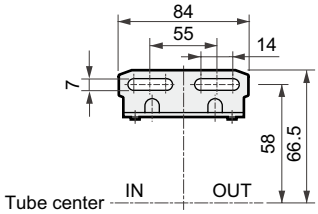


Panel thickness: Max. 7mm

・Attachment
C type bracket (-BW)
Part no: B420



L type bracket (-B3W)
Part no: B430



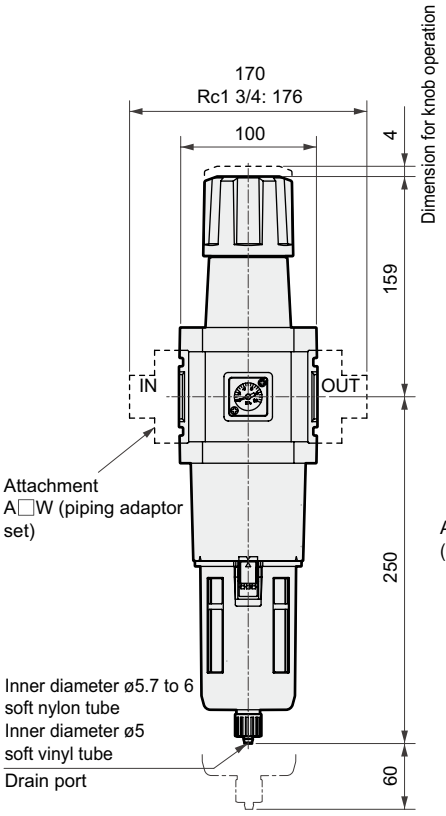
● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.

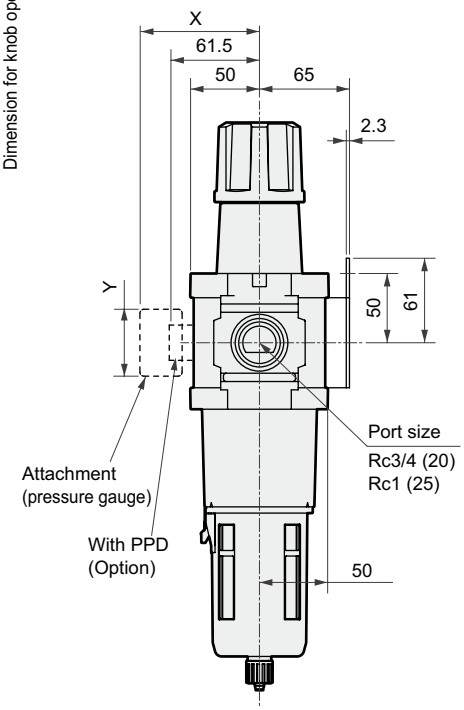
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5
R2	(75)	□30

Dimensions CAD

● W8100-W

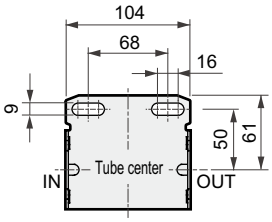




Maintenance dimensions

● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.

・Attachment
C type bracket (-BW)
Part no: B820



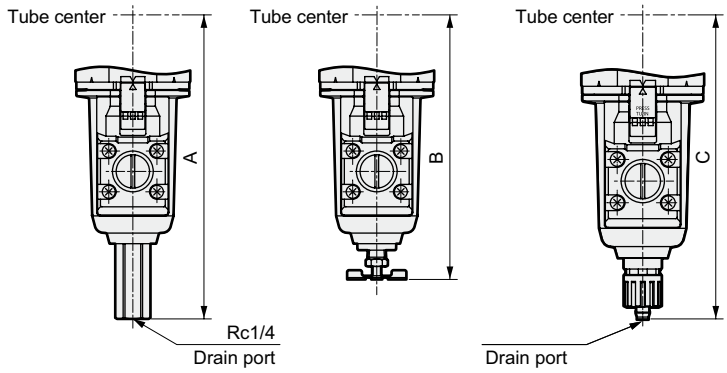
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5
R2	(85)	□30

Option dimensions

● Metal bowl W2100-W·W3100-W·W4100-W·W8100-W (option)

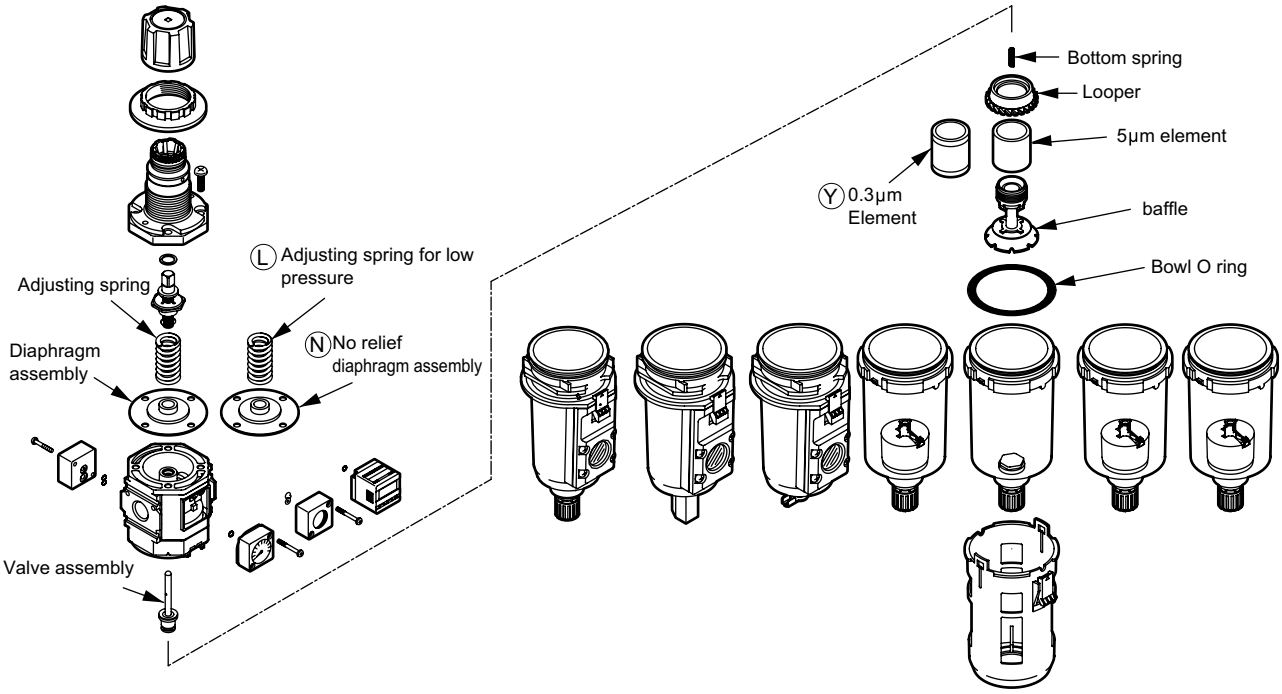
With automatic drain (FM, F1M) | Automatic drain cock (M) | Standard manual drain cock (M1)



Dimensions table

Model no.	F1M	M	M1
	A	B	C
W2100-W	-	-	147
W3100-W	163.5	143.5	154
W4100-W	187	166.5	177
W8100-W	266	245.5	256

Option, parts dimensions



Repair parts kit (Set consisting of diaphragm assembly, valve assembly, bottom spring, louver, element, baffle, bowl O ring)

Repair kit model no. / Model	Relief type diaphragm 5µm element (blank)	No relief type diaphragm 5µm element (N)	Relief type diaphragm 0.3µm element (Y)	No relief type diaphragm 0.3µm element (NY)
W1000-W, W1100-W	W1000-KIT	W1000-KIT-N	—	—
W2000-W, W2100-W	W2000-KIT	W2000-KIT-N	—	—
W3000-W, W3100-W	W3000-KIT	W3000-KIT-N	W3000-KIT-Y	W3000-KIT-NY
W4000-W, W4100-W	W4000-KIT	W4000-KIT-N	W4000-KIT-Y	W4000-KIT-NY
W8000-W, W8100-W	W8000-KIT	W8000-KIT-N	W8000-KIT-Y	W8000-KIT-NY

Note: With the W1000-W and W1100-W, the element and baffle are assembly parts, and the louver is assembled onto the body. These parts are excluded from consumables.

Valve assembly (valve assembly and bottom spring set)

Model	Valve assembly model no.
W1000-W, W1100-W	W1000-VALVE-ASSY
W2000-W, W2100-W	W2000-VALVE-ASSY
W3000-W, W3100-W	W3000-VALVE-ASSY
W4000-W, W4100-W	W4000-VALVE-ASSY
W8000-W, W8100-W	W8000-VALVE-ASSY

* Refer to option, parts list on page 128 for adjusting spring, diaphragm and gauge plug assembly.
Refer to air filter options and parts table (pages 93 to 94) for details on the element, bowl assembly, and bowl guard.

Air filter standard white series

F1000/F2000/F3000 F4000/F6000/F8000-W Series

Introducing the 5 µm element for dust removal and 0.3 µm element for tar removal
0.3 µm element series (excluding F1000 Series) port size: 1/8 to 1

JIS symbol 

RoHS CAD

Specifications

Descriptions	F1000-W	F2000-W	F3000-W	F4000-W	F6000-W	F8000-W
Exterior						
Working fluid	Compressed air					
Max. working pressure MPa	1.0 Note 2, 3, 4					
Withstanding pressure MPa	1.5 Note 2					
Ambient temperature range ℃	5 to 60					
Filtration rating µm	5		5 or 0.3			
Drain capacity cm^3	12	25	45	80	80	80 Note 1
Port size Rc, NPT, G	1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)		1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.087	0.24	0.25	0.45	0.9	1.16
Standard accessories	Bowl guard					

Note 1: Drainage accumulates up to 170 cm^3 only with the manual drain cock.
Note 2: When using F1000-W series "F1" with an automatic drain, the minimum operating pressure is 0.2 MPa and maximum operation pressure is 0.7 MPa.
Refer to the maximum working flow table (page 87) for F1000-W-F1 with an automatic drain for details on maximum working flow. Set the working flow to less than the maximum working flow.
Note 3: The automatic drain's minimum operating pressure for "F" with an automatic drain is 0.1 MPa. Initially generated drainage and air are purged until pressure reaches 0.1 MPa.
Note 4: The automatic drain's minimum operating pressure for "F1" with an automatic drain is 0.15 MPa.

Clean specification

(Catalog No. CB-033SA)

● Dust generation preventing structure for use in cleanrooms

F*000 - ····· **- P7***

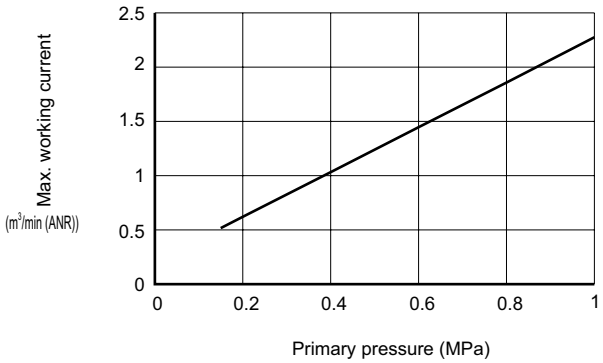
Specification for LiB production

(Catalog No.CC-947A)

● Specification for LiB manufacturing process

F*000 - ····· **- P4***

● F2000-W-F1with automatic drain max. working flow



● F1000-W-F1with automatic drain max. working flow

(m^3/min (ANR))

Primary pressure (MPa) / Port size	0.2	0.3	0.4	0.5	0.6	0.7
6	0.185	0.250	0.310	0.375	0.435	0.500
8	0.225	0.300	0.375	0.450	0.525	0.600

How to order

F1000 - 6 ○ - W - Z - ○ - A6W ○

* Refer page 9 for an explanation of the options.

Symbol	Descriptions	Ⓐ Model no. F1000	F2000	F3000	F4000	F6000	F8000
Ⓑ Port size							
6	1/8	●					
8	1/4	●	●	●	●		
10	3/8		●	●	●		
15	1/2				●		
20	3/4					●	●
25	1					●	●
Ⓒ Port thread type							Note 1
Blank	Rc thread	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●
Ⓓ Option							Note 2
Drainage Note 3	**Blank** With manual drain cock	●	●	●	●	●	●
	F Automatic drain with manual override (NO type)			●	●	●	●
	F1 Automatic drain with manual override (NC type)	●	●	●	●	●	●
	FF Large exhaust automatic drain with manual override (NO type)						●
	FF1 Large exhaust automatic drain with manual override (NO type)						●
Bowl material	**Blank** Polycarbonate bowl	●	●	●	●	●	●
	Z Nylon bowl	●	●	●	●	●	●
	M Metal bowl			●	●	●	●
	M1 Metal bowl with manual drain cock		●	●	●	●	●
Element	**Blank** 5μm	●	●	●	●	●	●
	Y 0.3μm (submicron)			●	●	●	●
Differential pressure detection	**Blank** Without differential pressure detection port	●	●	●	●	●	●
	Q With differential pressure detection port (Rc1/4)					●	●
Flow Direction	**Blank** Standard flow (left to right)	●	●	●	●	●	●
	X1 Reverse flow (right to left)	●	●	●	●	●	●
Ⓔ Displayed unit							
Blank	MPa display, Rc thread	●	●	●	●	●	●
J1	MPa display, NPT, G thread	●	●	●	●	●	●
Ⓕ Piping adaptor set (included)							Note 4 pages 155 to 157 Note 5
Blank	Not attached	●	●	●	●	●	●
A6*W	1/8 piping adaptor set	●					
A8*W	1/4 piping adaptor set	●	●	●	●		
A10*W	3/8 piping adaptor set	●	●	●	●		
A15*W	1/2 piping adaptor set		●	●	●		
A20*W	3/4 piping adaptor set				●	●	●
A25*W	1 piping adaptor set					●	●
A32*W	1 1/4 piping adaptor set					●	●
*** Adaptor thread type**							
Blank	Rc thread	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●
Ⓖ Bracket (attached)							Page 152
Blank	Not attached	●	●	●	●	●	●
BW	C type bracket	●	●	●	●	●	●

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Displayed unit
Ⓕ Piping adaptor set (included)
Ⓖ Bracket (attached)

⚠ Cautions for model No. selection

Note 1: When G threads or NPT threads are selected, the IN, OUT, gauge port, and drainage discharge port (metal bowl automatic drain) are the target, as are attachments P and V.

Note 2: Select the option from drain exhaust, bowl material and differential pressure detection. When selecting options for several items, list options in order from the top.

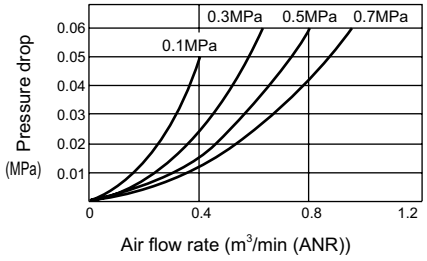
Note 3: Refer to page 12 for working conditions of the automatic drain.

Note 4: The piping adapter set and C bracket cannot be used together.

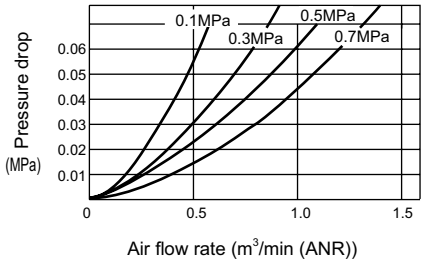
Note 5: A joiner set is attached with the piping adapter set.

Flow characteristics

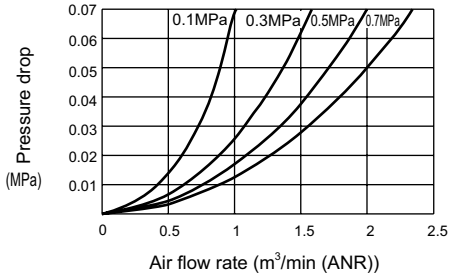
● F1000-6-W



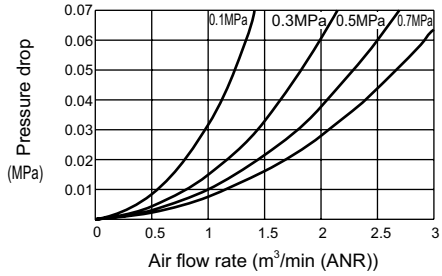
● F1000-8-W



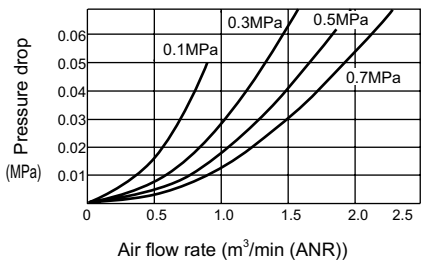
● F2000-8-W



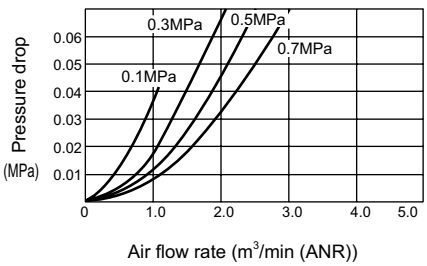
● F2000-10-W



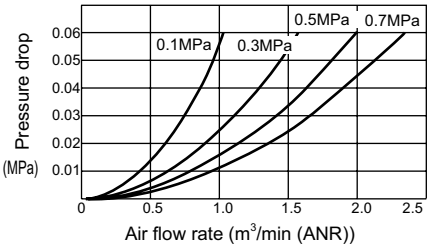
● F3000-8-W



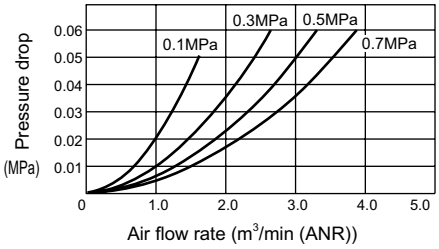
● F3000-10-W



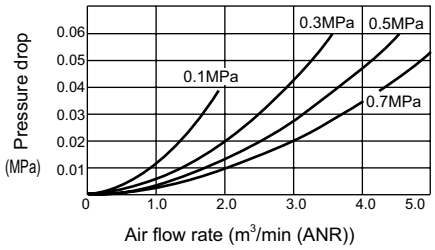
● F4000-8-W



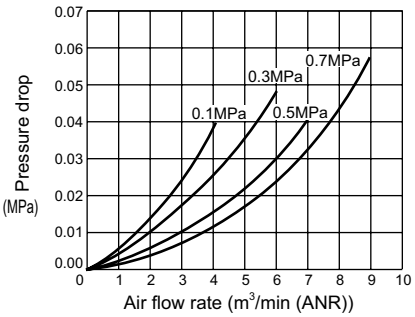
● F4000-10-W



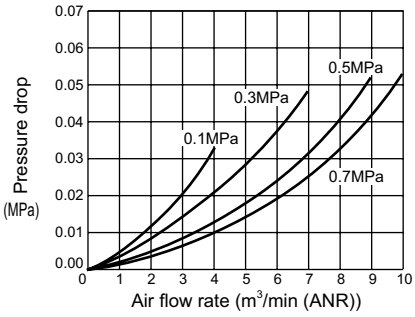
● F4000-15-W



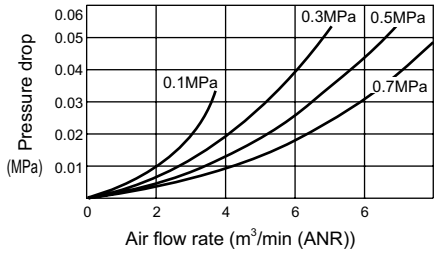
● F6000-20-W



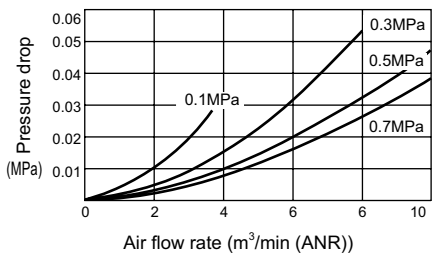
● F6000-25-W



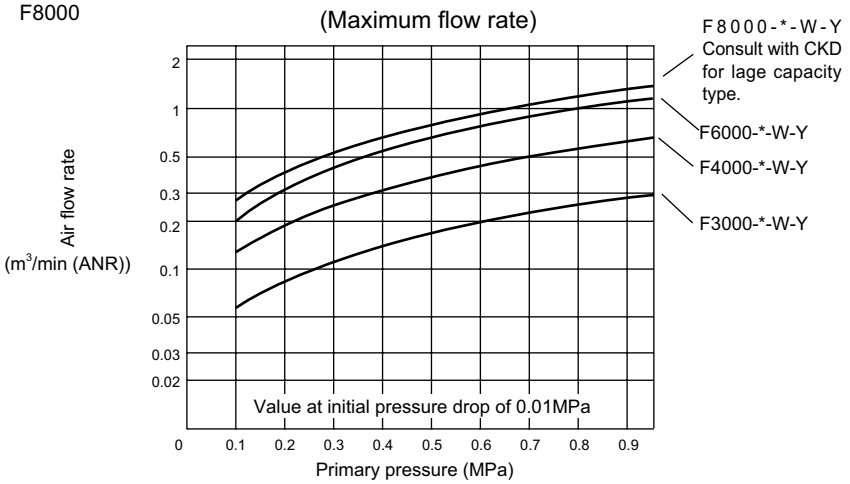
● F8000-20-W



● F8000-25-W

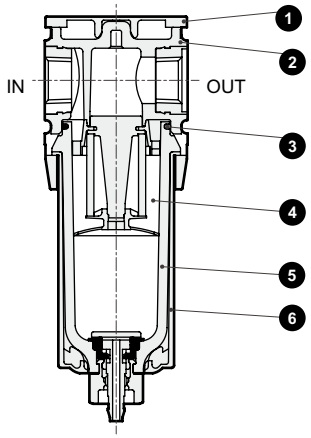


● F3000
F4000
F6000
F8000 -*-W-Y(0.3µm element)

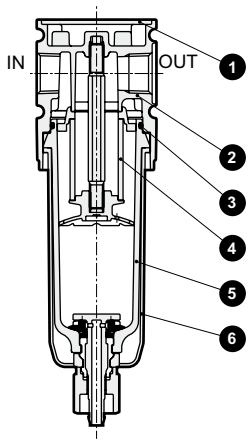


Internal structure and parts list

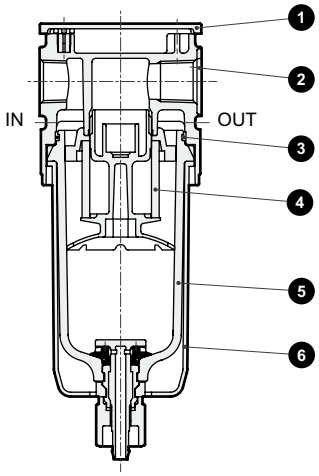
● F1000-W



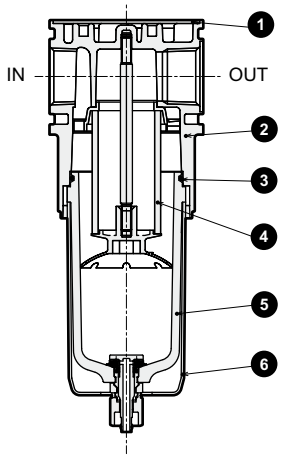
● F2000-W



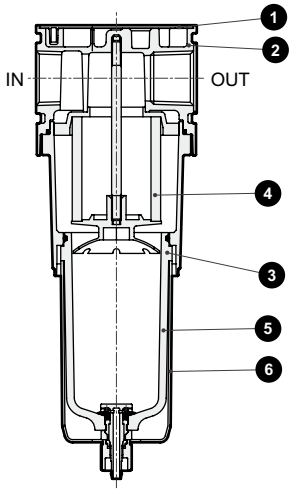
● F3000-W・F4000-W



● F6000-W



● F8000-W

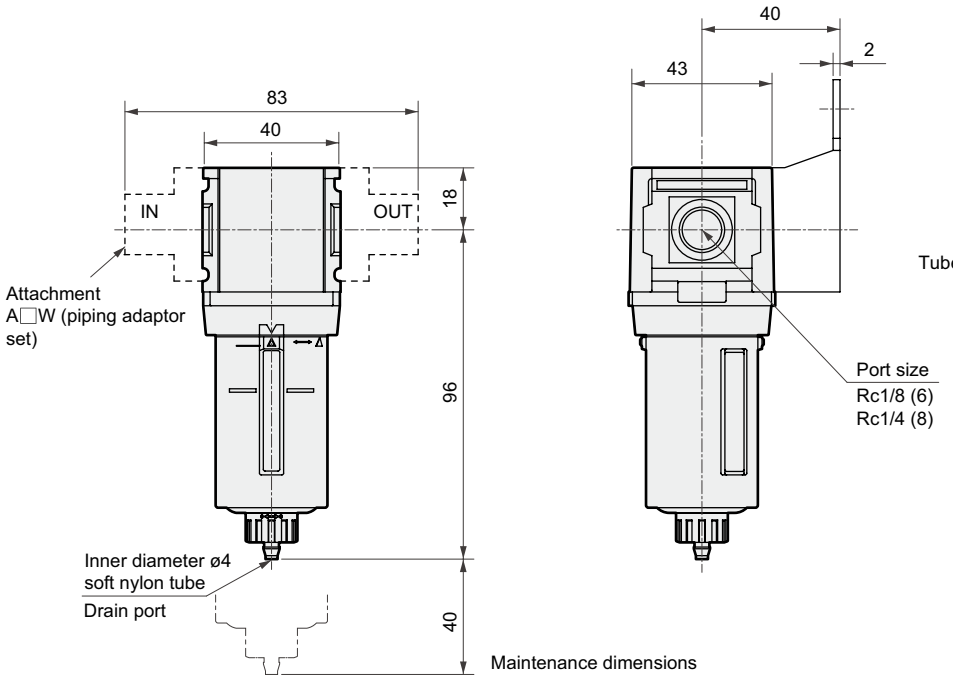


No.	Part name		Material					
			F1000-W	F2000-W	F3000-W	F4000-W	F6000-W	F8000-W
1	Plate cover		ABS resin					
2	Body		Polyamide resin, steel	Aluminum alloy die-casting				
3	O-ring	Note 1	Special nitrile rubber					
4	5µm element	Note 2	Polyacetal resin polypropylene	Polypropylene				
	0.3µm element				-			
5	Bowl assembly		Polycarbonate resin, polyacetal resin, urethane resin					
6	Bowl guard		Polyamide resin	Polyamide resin, steel				

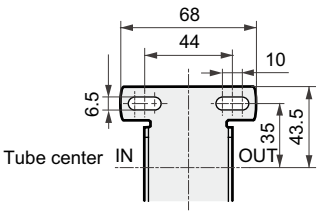
Note 1: The F1000-W O ring has a special shape.
Note 2: F1000-W is an element assembly.
Note 3: Refer to page 93 for comsumable parts kits.

Dimensions CAD

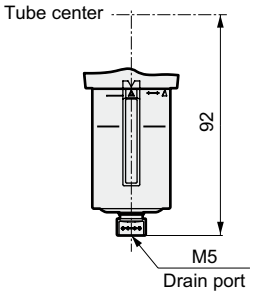
● F1000-W



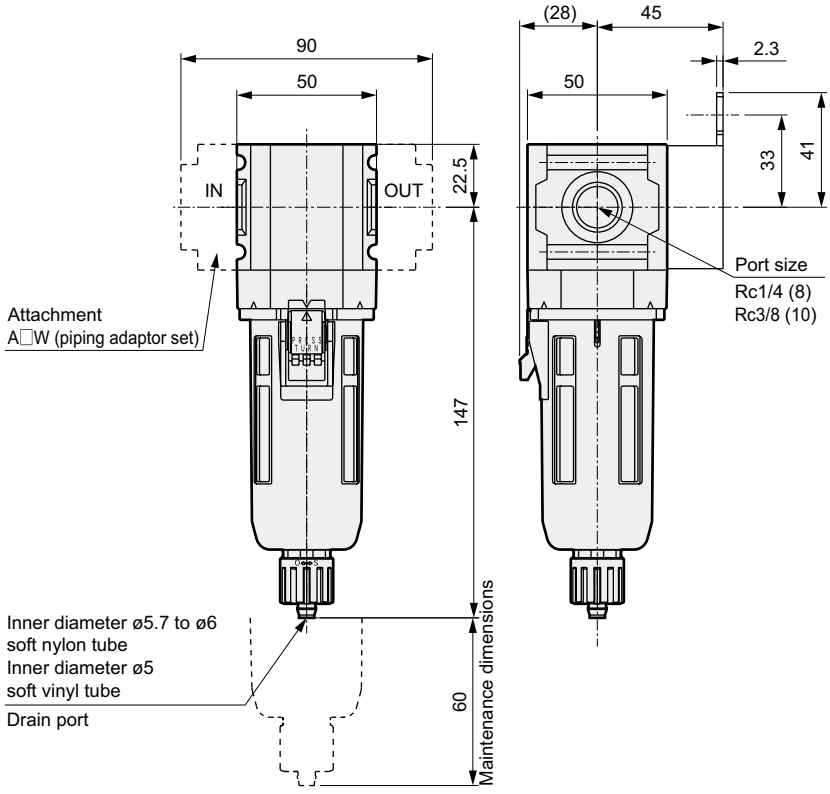
・Attachment
C type bracket (-BW)
Part no: B120



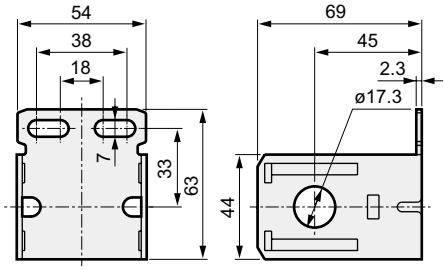
・Option dimensions
With automatic drain (F1)



● F2000-W

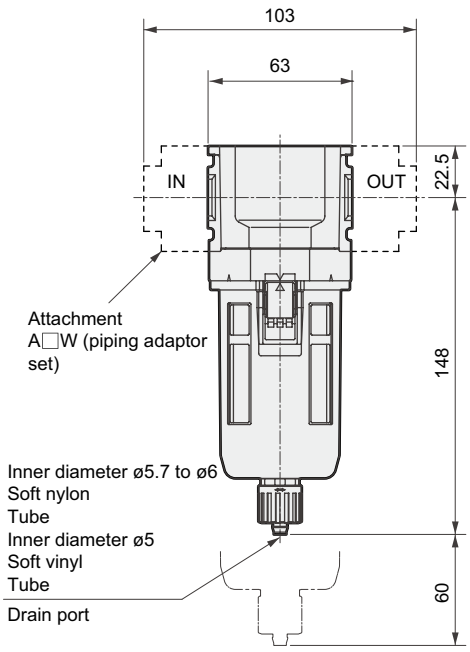


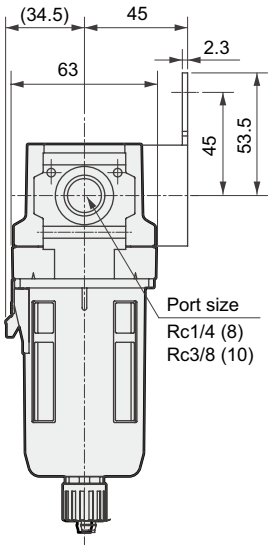
・Attachment
C type bracket (-BW)
Part no: B220



Dimensions

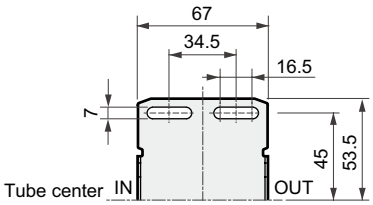
● F3000-W





Maintenance dimensions

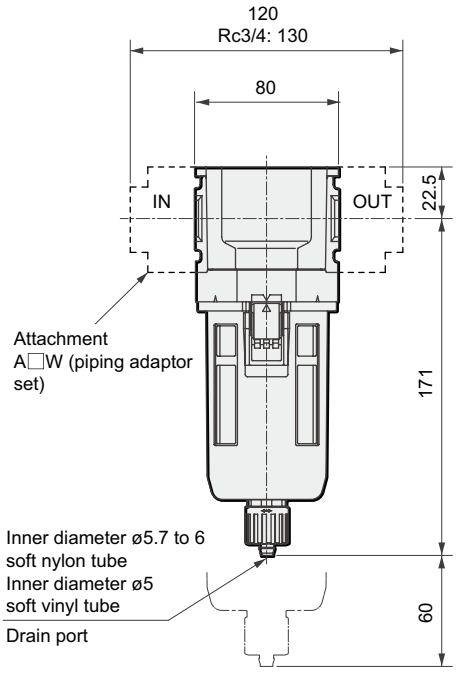
・Attachment
C type bracket (-BW)
Part no: B320

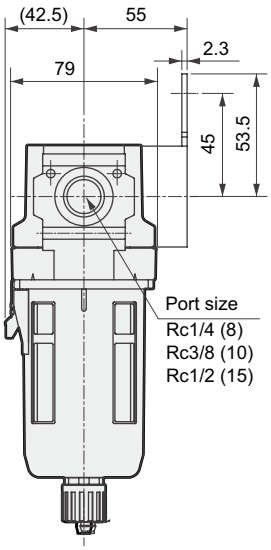


● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.

Note: The C-type bracket and piping adapter set attachments cannot be used at the same time.

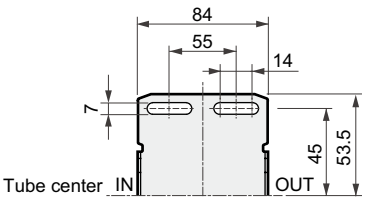
● F4000-W





Maintenance dimensions

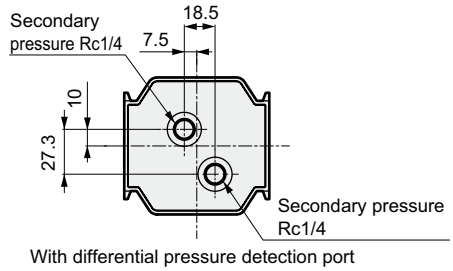
・Attachment
C type bracket (-BW)
Part no: B420



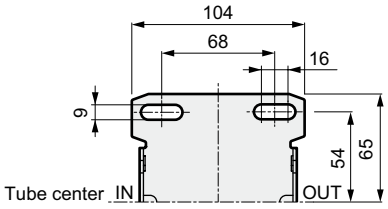
● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.

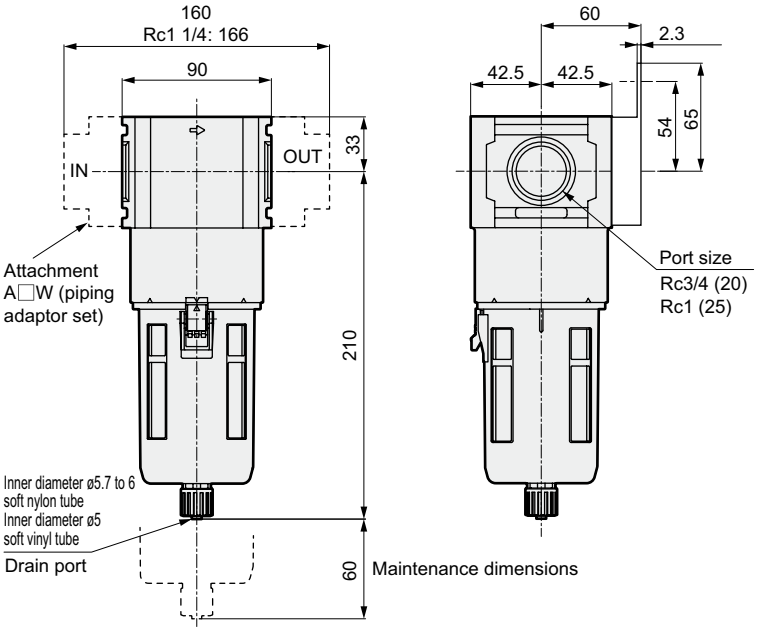
Dimensions CAD

● F6000-W

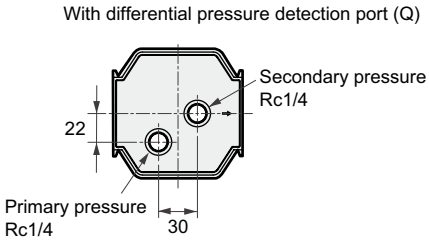


・Attachment
C type bracket (-BW)
Part no: B620

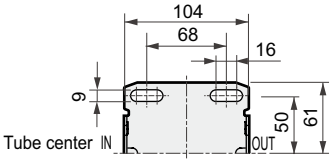


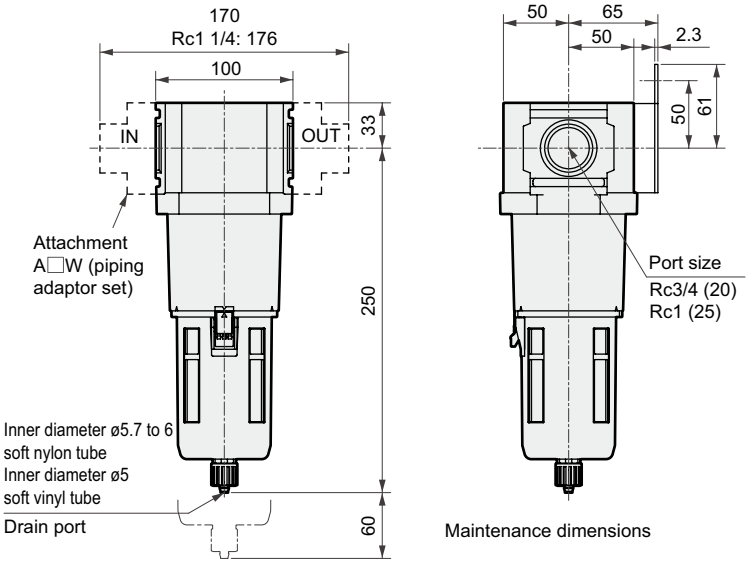


● F8000-W



・Attachment
C type bracket (-BW)
Part no: B820





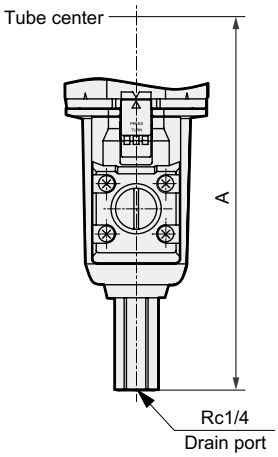
● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.

Note: The C-type bracket and piping adapter set attachments cannot be used at the same time.

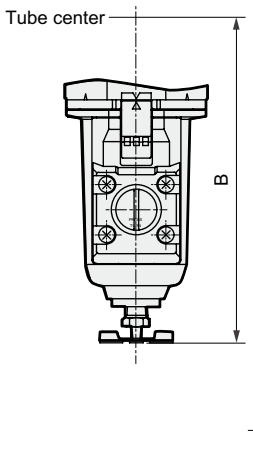
Option dimensions

● Metal bowl F2000-W･F3000-W･F4000-W･F6000-W･F8000-W (option)

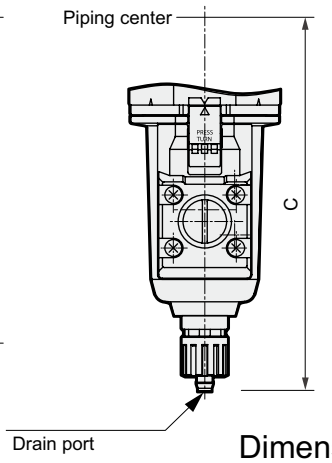
Metal manual cock
With automatic drain (F1M)



With petcock (M)



Standard manual drain cock (M1)



Dimensions table

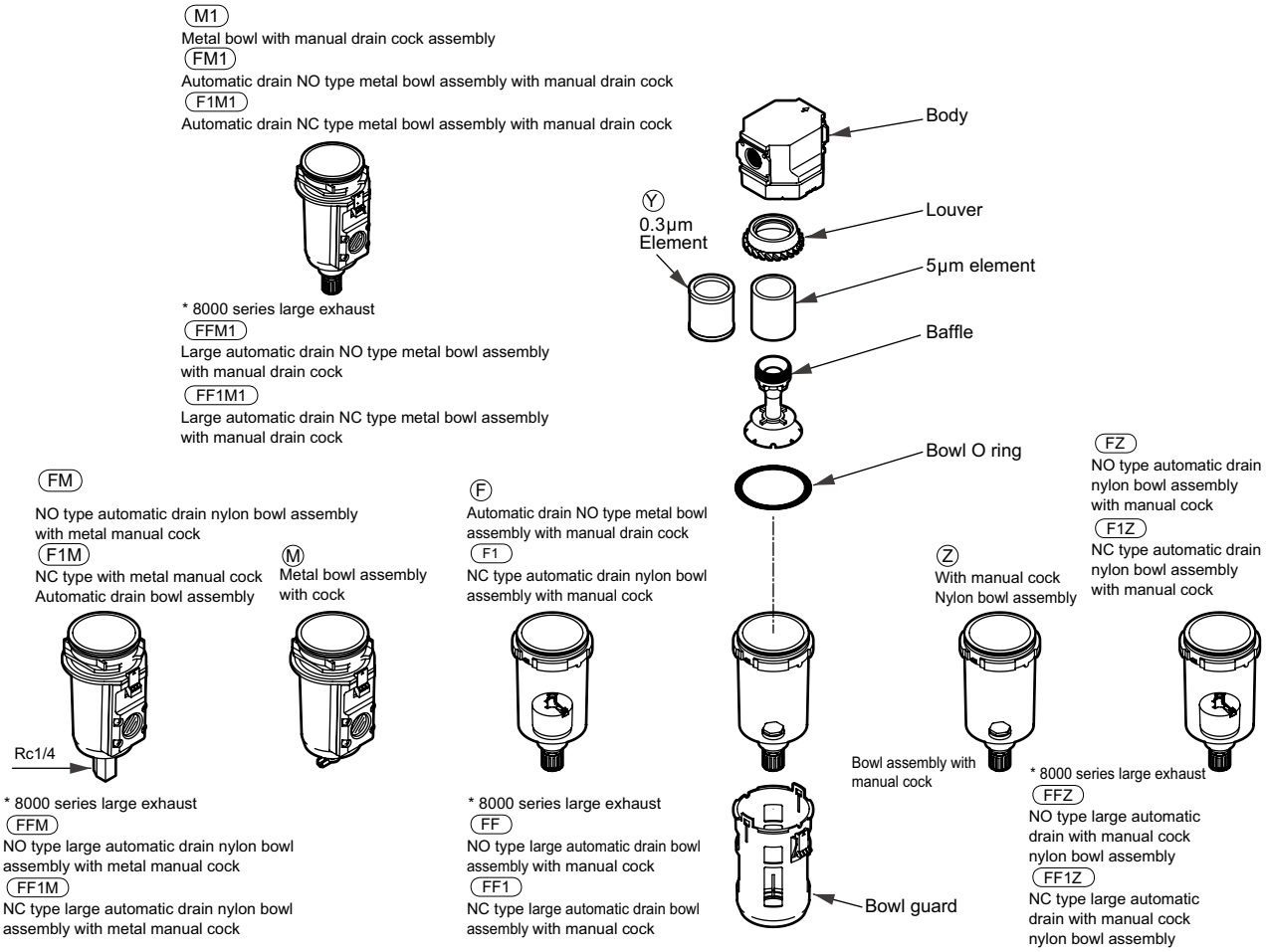
Model no.	F1M	M	M1
	A	B	C
F2000-W	-	-	147
F3000-W	164	143.5	154
F4000-W	187	166.5	177
F6000-W	226	205	216
F8000-W	266	245.5	256

Optional parts drawing

Element

Element model no. / Model	5µm Element	0.3µm Element (Y)
F1000-W	F1000-ELEMENT-ASSY	-
W1000-W, W1100-W	W1000-ELEMENT-ASSY	-
F2000-W	F2000-ELEMENT	-
W2000-W, W2100-W	W2000-ELEMENT	-
F3000-W, FM3000-W	F3000-ELEMENT	F3000-ELEMENT-Y
W3000-W, W3100-W	W3000-ELEMENT	W3000-ELEMENT-Y
F4000-W, FM4000-W	F4000-ELEMENT	F4000-ELEMENT-Y
W4000-W, W4100-W	W4000-ELEMENT	W4000-ELEMENT-Y
F6000-W, FM6000-W	F6000-ELEMENT	F6000-ELEMENT-Y
F8000-W, FM8000-W	F8000-ELEMENT	F8000-ELEMENT-Y
W8000-W, W8100-W	W8000-ELEMENT	W8000-ELEMENT-Y

Note: Baffle and element will be an assembly forF1000-W･W1000-W



Repair kit

(Se of louver, baffle, element and an O ring for bowl)

Repair kit model no. / Model	5µm Element	0.3µm Element (Y)
F1000-W Note1	F1000-KIT	-
F2000-W	F2000-KIT	-
F3000-W, FM3000-W	F3000-KIT	F3000-KIT-Y
F4000-W, FM4000-W	F4000-KIT	F4000-KIT-Y
F6000-W, FM6000-W	F6000-KIT	F6000-KIT-Y
F8000-W, FM8000-W Note 2	F8000-KIT	F8000-KIT-Y

Note 1: For F1000-W, the baffle and element are assembled parts, so the set consists of element assembly and bowl O ring.
Note 2: For F8000, consists of baffle, element and bowl O ring.

Bowl guard

Bowl guard model no. / Model	For polycarbonate bowl	Nylon bowl
F1000-W, W1000-W, W1100-W	F1000-W-BOWL-GUARD	F1000-W-BOWL-GUARD-Z
L1000-W	L1000-W-BOWL-GUARD	L1000-W-BOWL-GUARD-Z
M1000-W	M1000-W-BOWL-GUARD	M1000-W-BOWL-GUARD-Z
F2000-W, W2000-W, W2100-W	F2000-W-BOWL-GUARD	F2000-W-BOWL-GUARD-Z
W3100-W, F3000-W, W3000-W, M3000-W	F3000-W-BOWL-GUARD	F3000-W-BOWL-GUARD-Z
L3000-W	L3000-W-BOWL-GUARD	L3000-W-BOWL-GUARD-Z
F4000-W, W4000-W, M4000-W, W4100-W, F6000-W M6000-W, W8100-W, F8000-W, W8000-W, M8000-W	F4000-W-BOWL-GUARD	F4000-W-BOWL-GUARD-Z
L4000-W, L8000-W	L4000-W-BOWL-GUARD	L4000-W-BOWL-GUARD-Z
W8100-W, F8000-W, W8000-W-FF, FF1	DT4000-W-BOWL-GUARD	DT4000-W-BOWL-GUARD-Z

Note: The bowl guard for the 1000 Series F1 is sold as a set with the bowl assembly. The model no. is "F1000-W-BOWL-BOWL-GUARD-F1"

Bowl assembly (Set of bowl assembly and bowl O ring)

Bowl assembly model no. / Model	PC bowl assembly with manual cock	PA bowl assembly with manual cock	Metal bowl assembly with manual cock	Metal bowl assembly with standard manual cock	NO type automatic drain PC bowl assembly with manual cock Note 1	NC type automatic drain PC bowl assembly with manual cock
F1000-W, W1000-W M1000-W, W1100-W	F1000-W-BOWL	F1000-W-BOWL-Z	-	-	-	F1000-W-BOWL-BOWL GUARD-F1 Note 3
F2000-W, W2000-W M2000-W, W2100-W	F2000-W-BOWL	F2000-W-BOWL-Z	-	F2000-W-BOWL-M1	-	F2000-W-BOWL-F1
F3000-W, M3000-W W3000-W, W3100-W	F3000-W-BOWL	F3000-W-BOWL-Z	F3000-W-BOWL-M	F3000-W-BOWL-M1	F3000-W-BOWL-F	M3000-W-BOWL-F1
FM3000-W, MM3000-W	-	-		-	-	-
F4000-W, F6000-W M4000-W, M6000-W F8000-W, M8000-W W4000-W, W4100-W W8000-W, W8100-W	F4000-W-BOWL	F4000-W-BOWL-Z	F4000-W-BOWL-M	F4000-W-BOWL-M1	F4000-W-BOWL-F	M4000-W-BOWL-F1
FM4000-W, FM6000-W FM8000-W, MM4000-W MM6000-W, MM8000-W	-	-		-	-	-

Bowl assembly model no. / Model	NO type automatic drain PA bowl assembly with manual cock Note 1	NC type automatic drain PA bowl assembly with manual cock	NO type automatic drain metal bowl assembly with metal manual cock Note 1	NO type automatic drain with standard manual cock metal bowl assembly	NC type automatic drain metal bowl assembly with metal manual cock	NC type automatic drain metal bowl assemblywith standard manual cock	NO type automatic drain bowl assembly for medium pressure Note 1	NC type automatic drain bowl assembly for medium pressure
F1000-W, W1000-W M1000-W, W1100-W	-	F1000-W-BOWL-BOWL GUARD-F1Z Note 3	-	-	-	-	-	-
F2000-W, W2000-W M2000-W, W2100-W	-	M2000-W-BOWL-F1Z	-	-	-	M2000-W-BOWL-F1M1	-	-
F3000-W, M3000-W W3000-W, W3100-W	F3000-W-BOWL-FZ	M3000-W-BOWL-F1Z	F3000-W-BOWL-FM	F3000-W-BOWL-FM1	M3000-W-BOWL-F1M	M3000-W-BOWL-F1M1	-	-
FM3000-W, MM3000-W	-	-	-	-	-	-	FM3000-W-BOWL-F	MM3000-W-BOWL-F1
F4000-W, F6000-W M4000-W, M6000-W F8000-W, M8000-W W4000-W, W4100-W W8000-W, W8100-W	F4000-W-BOWL-FZ	M4000-W-BOWL-F1Z	F4000-W-BOWL-FM	F4000-W-BOWL-FM1	M4000-W-BOWL-F1M	M4000-W-BOWL-F1M1	-	-
FM4000-W, FM6000-W FM8000-W, MM4000-W MM6000-W, MM8000-W	-	-	-	-	-	-	FM4000-W-BOWL-F	MM4000-W-BOWL-F1

Bowl assembly model no. / Model	NO type large automatic drain PC bowl assembly with manual cock	NC type large automatic drain PC bowl assembly with manual cock	NO type large automatic drain PA bowl assembly with manual cock	NC type large automatic drain PA bowl assembly with manual cock	NO type large automatic drain metal bowl assembly with metal manual cock	NC type large automatic drain metal bowl assembly with metal manual cock	NO type large automatic drain metal bowl assembly with standard manual cock	NC type large automatic drain metal bowl assembly with standard manual cock
F8000-W, W8000-W W8100-W	F8000-W-BOWL-FF	F8000-W-BOWL-FF1	F8000-W-BOWL-FFZ	F8000-W-BOWL-FF1Z	F8000-W-BOWL-FFM	F8000-W-BOWL-FF1M	F8000-W-BOWL-FFM1	F8000-W-BOWL-FF1M1

Note 1: NO type automatic drain is not available for oil mist filter M1000-W, M3000-W, M4000-W, M6000-W, M8000-W, oil mist filter for medium pressure MM3000-W, MM4000-W, MM6000-W, MM8000-W.

Note 2: The large discharge automatic drain cannot be installed on the M8000-W.

Note 3: The bowl assembly for the 1000 Series F1 is sold as a set with the bowl guard.

Oil mist filter Standard white series

M1000/M2000/M3000 M4000/M6000/M8000-W Series

Ideal for circuits susceptible to oil, including measuring, and instrumentation circuits

Port size: 1/8 to 1

JIS symbol 

RoHS CAD

Specifications

Descriptions	M1000-W	M2000-W	M3000-W	M4000-W	M6000-W	M8000-W
Exterior						
Working fluid	Compressed air					
Working pressure range MPa	0.1 to 1.0 Note 7, Note 8					
Withstanding pressure MPa	1.5 Note 7					
Drain capacity cm^3	3	25	45	80	80	80
Port size Rc, PT,	1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)		1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.096	0.25	0.28	0.52	0.95	1.35
Standard accessories	Bowl guard					

Mantle option name		Blank (M type)	S (S type)	X (X type)
Maximum flow rate Note 1 ℓ/min (ANR) Primary pressure 0.7 MPa at pressure drop 0.01MPa	M1000-□-W	150 Note 7	150 Note 7	150
	M2000-□-W	250 Note 7	310 Note 7	310
	M3000-□-W	360	450	450
	M4000-□-W	825	1000	1000
	M6000-□-W	1270	1400	1400
	M8000-□-W	2600	2900	2900
Ambient temperature range ℃		5 to 60		5 to 30
Filtration rating μm		0.01 (nominal)	0.3	Adsorption by activated carbon Note 4
Secondary oil concentration mg/m^3		0.01 or less Note 2, Note 3	0.5 or less Note 2	0.003 or less Note 5
Mantle (element) replacement		1 year (6000 hours) or pressure drop of 0.1MPa		- Note 6

Note 1: Use within the maximum processing flow rate. If the maximum processing flow is exceeded temporarily, or if the filter is installed at a place with high levels of pulsation, the mantle could be damaged or oil or drainage, etc., could splatter to the secondary side and result in faults at the terminal.

Note 2: The secondary oil density is the value when the primary oil density is 30 mg/m^3 and inlet air temperature is 21°C.

Note 3: Install an oil mist filter (S type) as a prefilter on the primary side to prevent early clogging.

Note 4: Activated carbon particles could flow to the secondary side, so install an air filter (F Series) or oil mist filter (M Series M type or S type) on the secondary side.

Note 5: When an oil mist filter (M Series M type) is installed on the primary side.

Note 6: The mantle (element) replacement period depends on the odor density in compressed air, and thus cannot be clearly indicated.
Consider the total period from initial installation to when the smell of oil is confirmed as the effective deodorizing period, and replace at the same time as the M type or replace according to period of use. (e.g. 1000 hours of use at 21℃ or confirmation of smell, which ever comes first.
The primary air temperature must be 30°C or less. The deodorizing effect will drop if the temperature is high, so provide heat dissipation measures.

Note 7: When "F1" with an automatic drain is selected for the F1000 series, minimum operating pressure is 0.2 MPa, maximum operation pressure is 0.7 MPa and the guaranteed pressure resistance is 1.05 MPa. Refer to the maximum processing flow table (page 97) for the F1000-F1 automatic drain for the maximum working flow.

Note 8: The minimum operating pressure is 0.15 MPa for models with automatic drain "F1".

Clean specification (Catalog No. CB-033SA)

● Dust generation preventing structure for use in cleanrooms

M*000 - ····· - P7*

Specification for LiB production (Catalog No.CC-947A)

● Specification for LiB manufacturing process

M*000 - ····· - P4*

How to order

M1000 - 6 ◯ - W - S - ◯ - A6W - ◯

- Ⓐ Model no.
- Ⓑ Port size
- Ⓒ Port thread type
- Ⓓ Option
- Ⓔ Displayed unit
- Ⓕ Piping adaptor set (included)
- Ⓖ Bracket (attached)

* Refer top page 9 for an explanation of the options.

Symbol		Descriptions	Ⓐ Model no. M1000	M2000	M3000	M4000	M6000	M8000
Ⓑ Port size								
6		1/8	●					
8 Note 1		1/4	●	●	●	●		
10		3/8		●	●	●		
15		1/2				●		
20		3/4					●	●
25		1					●	●
Ⓒ Port thread type								Note 2
Blank		Rc thread	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●
Ⓓ Option								Note 3
Drainage Note 4, Note 5	**Blank**	With manual drain cock	●	●	●	●	●	●
	F1	Automatic drain with manual override (NC type)	●	●	●	●	●	●
Bowl material	**Blank**	Polycarbonate bowl	●	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●	●
	M	Metal bowl Note 6			●	●	●	●
	M1	Metal bowl with manual drain cock		●	●	●	●	●
Mantle (element)	**Blank**	M type (nominal 0.01 µm; remaining oil 0.01 mg/m^3)	●	●	●	●	●	●
	S	S type (0.3 µm; remaining oil 0.5 mg/m^3)	●	●	●	●	●	●
	X Note 7	X type (deodorization; remaining oil 0.003mg/m^3)	●	●	●	●	●	●
Differential pressure detection	**Blank**	Without differential pressure detection port	●	●	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)					●	●
Differential pressure indicator	**Blank**	Without differential pressure indicator	●	●	●	●	●	●
	Q1 Note 6, Note 7	With differential pressure indicator				●		
Flow direction	**Blank**	Standard flow (left to right)	●	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●	●
Ⓔ Displayed unit								
Blank		MPa display, Rc thread	●	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●	●
Ⓕ Piping adaptor set (included)								Note 8, 9 pages 155 to 157
Blank		Not attached	●	●	●	●	●	●
A6*W		1/8 piping adaptor set	●					
A8*W		1/4 piping adaptor set	●	●	●	●		
A10*W		3/8 piping adaptor set	●	●	●	●		
A15*W		1/2 piping adaptor set		●	●	●		
A20*W		3/4 piping adaptor set				●	●	●
A25*W		1 piping adaptor set					●	●
A32*W		1 1/4 piping adaptor set					●	●
*** Adaptor thread type**								
Blank		Rc thread	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●
Ⓖ Bracket (attached)								Page 152
Blank		Not attached	●	●	●	●	●	●
BW		C type bracket	●	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Differential indicator option "Q1" is not available for port size "B"

Note 2: When G threads or NPT threads are selected, the IN, OUT, gauge port, and drainage discharge port (metal bowl automatic drain) are the target, as are attachments P and V.

Note 3: Select options for each drainage discharge, bowl material and differential pressure detection.
When selecting options for several items, list options in order from the top.

Note 4: N.O. automatic drain cannot be selected.

Note 5: Refer to page 12 for working conditions of the automatic drain.

Note 6: Option for differential indicator "Q1" is not available for bowl material "M"

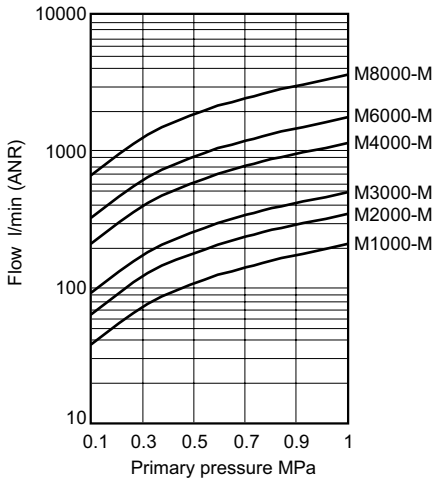
Note 7: Combination with option F1 or "Q1" with differential pressure indicator is not possible.

Note 8: The piping adapter set and C bracket cannot be used together.

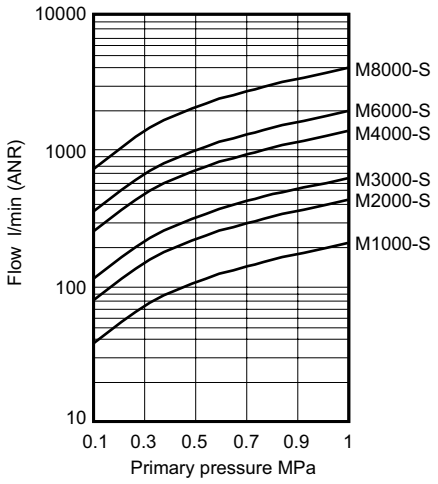
Note 9: A joiner set is attached with the piping adapter set.

Flow characteristics (Maximum flow rate)

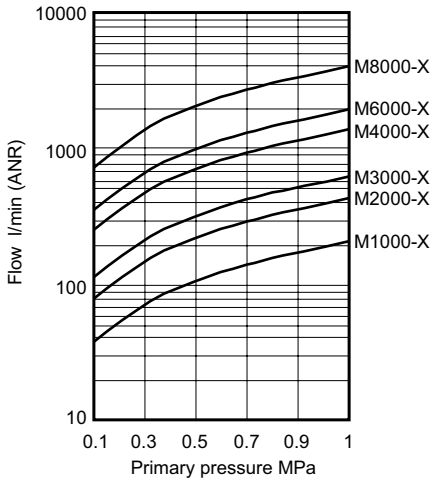
● M*000-W-M



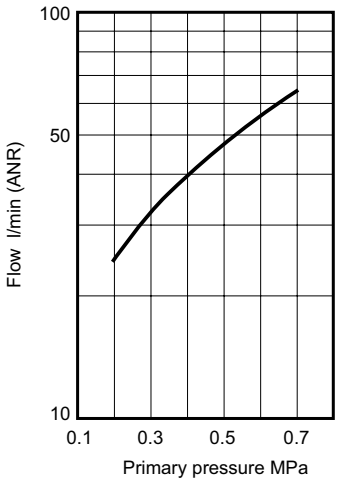
● M*000-W-S



● M*000-W-X



● M1000-W-F1
With automatic drain (M type, S type)



Selecting optional mantle for oil mist filters

Recommended circuit

◆ S type

F S

Applications
General industrial air
- Air tools
  Air drill, air driver
  air grinder
- Labor saving device and components
- Pneumatic jigs and tools
- Air chuck
- Air vice
- Air for cleaning precision parts

◆ M type

F S M

Oil free air
- Instrumentation
- Measurement
- Sequence control
  Movable element, pure fluid element
- Luxury painting
- Precision

◆ X type

F S M X

Deodorization
- Food industry
- Pharmaceutical industry
- Stirring
- Transportation
- Drying
- Packaging
- Air for brewing

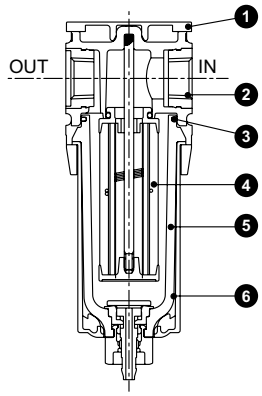
Option symbol and shap of mantles

Option symbol	Appearance
Blank (M type)	End plate black; Plastic form red
S (S type)	End plate green; Plastic form red
X (X type)	End plate black; Punching metal

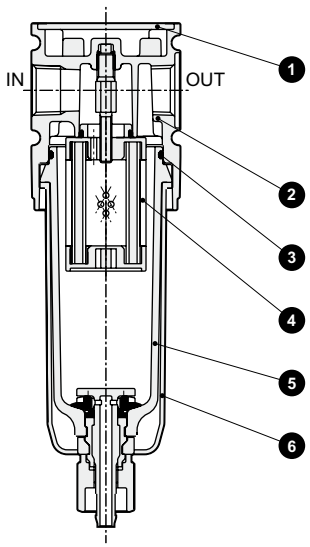
Note: Changes for product upgrades may be made without prior notice.
When placing an order, confirm the option symbol for the part model given here.

Internal structure and parts list

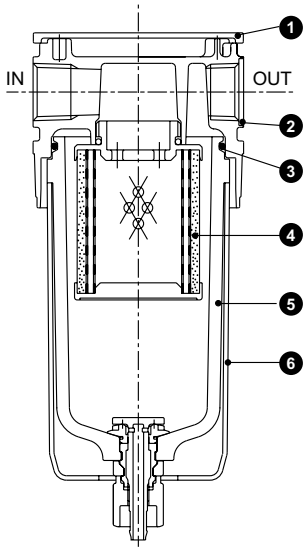
● M1000-W



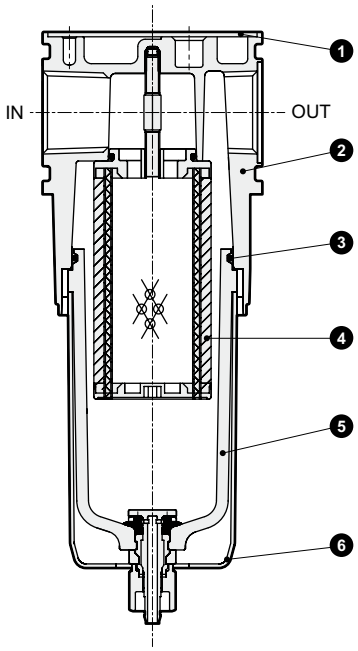
● M2000-W



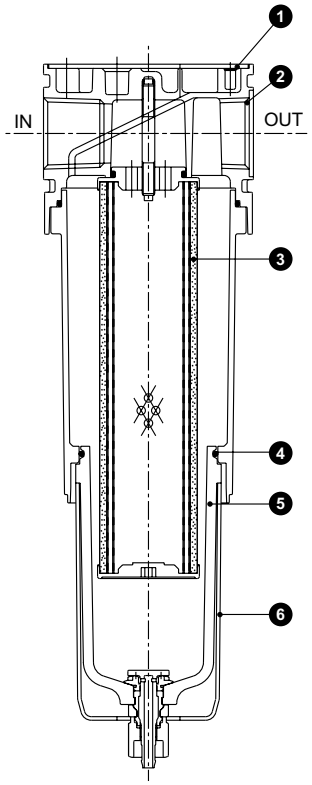
● M3000-W･M4000-W



● M6000-W



● M8000-W

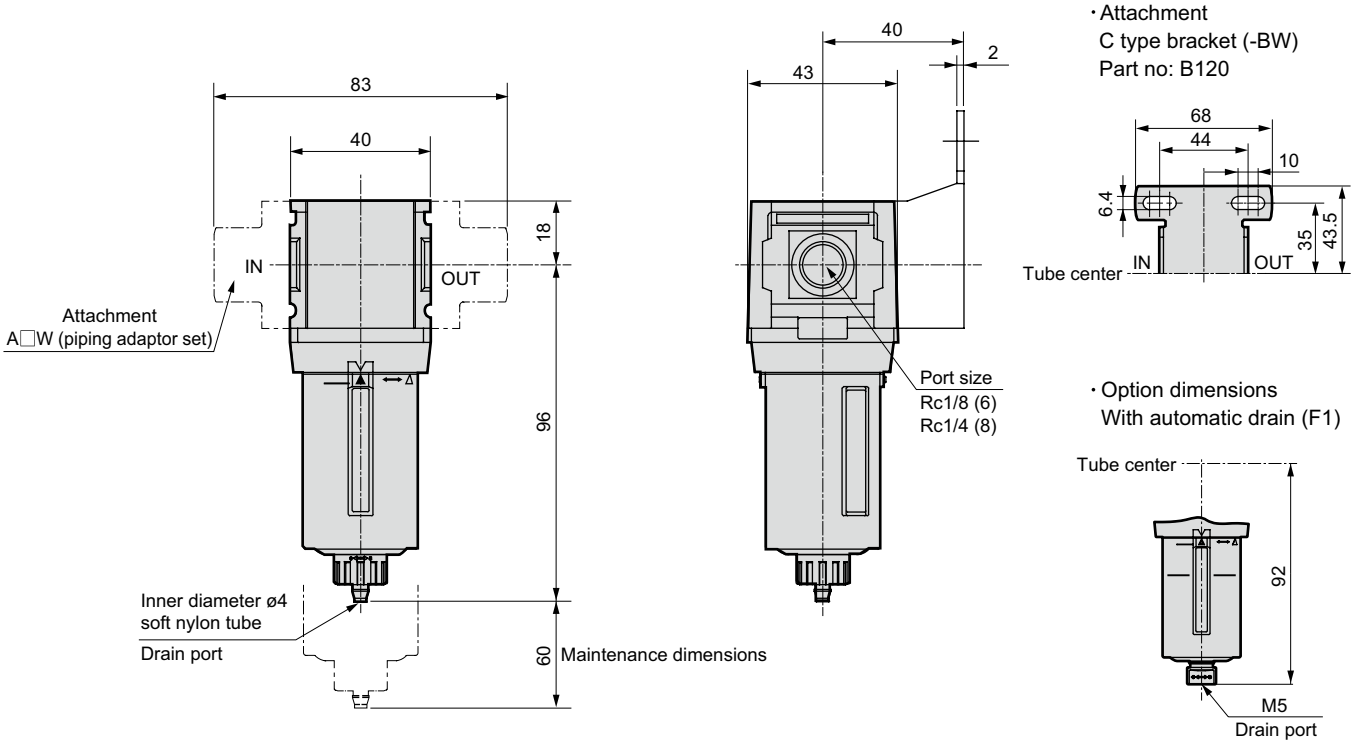


No.	Part name	Material					
		M1000-W	M2000-W	M3000-W	M4000-W	M6000-W	M8000-W
1	Plate cover	ABS resin					
2	Body	Polyamide resin	Aluminum alloy die-casting				
3	O-ring Note 1	Special nitrile rubber					
4	Mantle assembly	-					
5	Bowl assembly	Polycarbonate resin, polyacetal resin, urethane resin					
6	Bowl guard	Polyamide resin	Polyamide resin, steel				

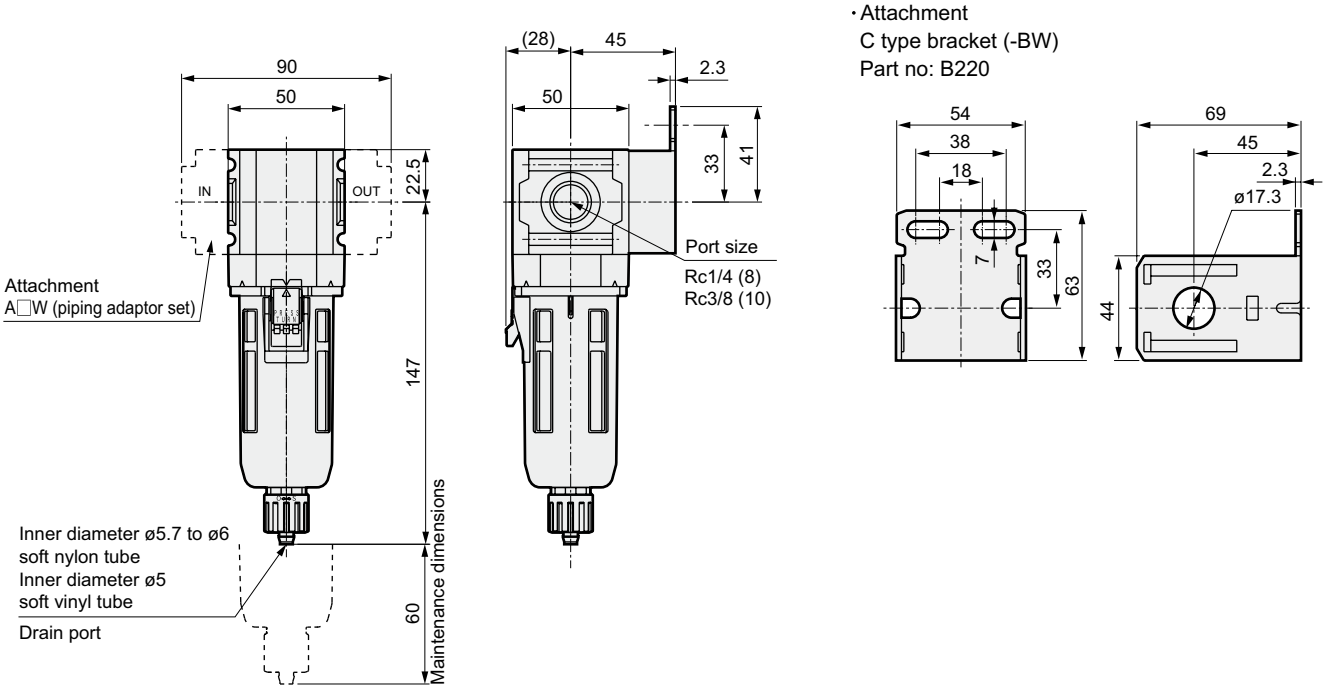
Note 1: The M1000-W O ring has a special shape.

Dimensions CAD

● M1000-W

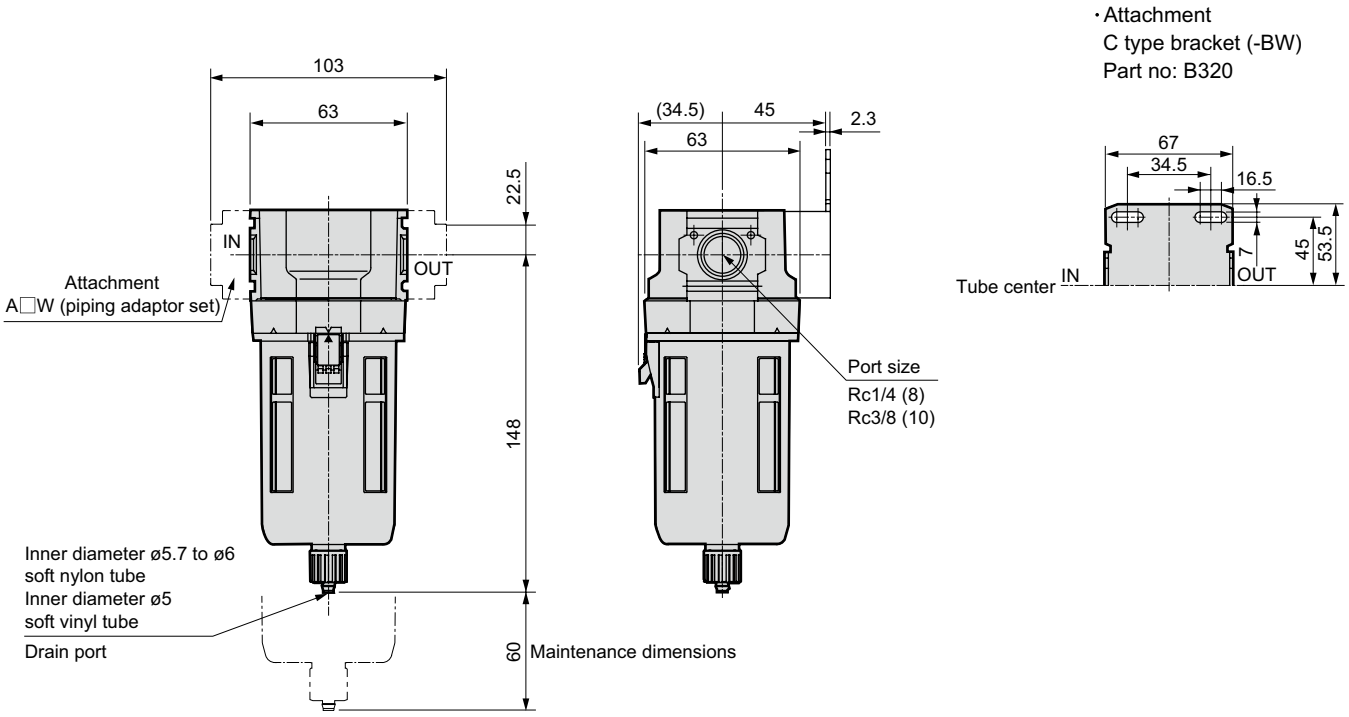


● M2000-W



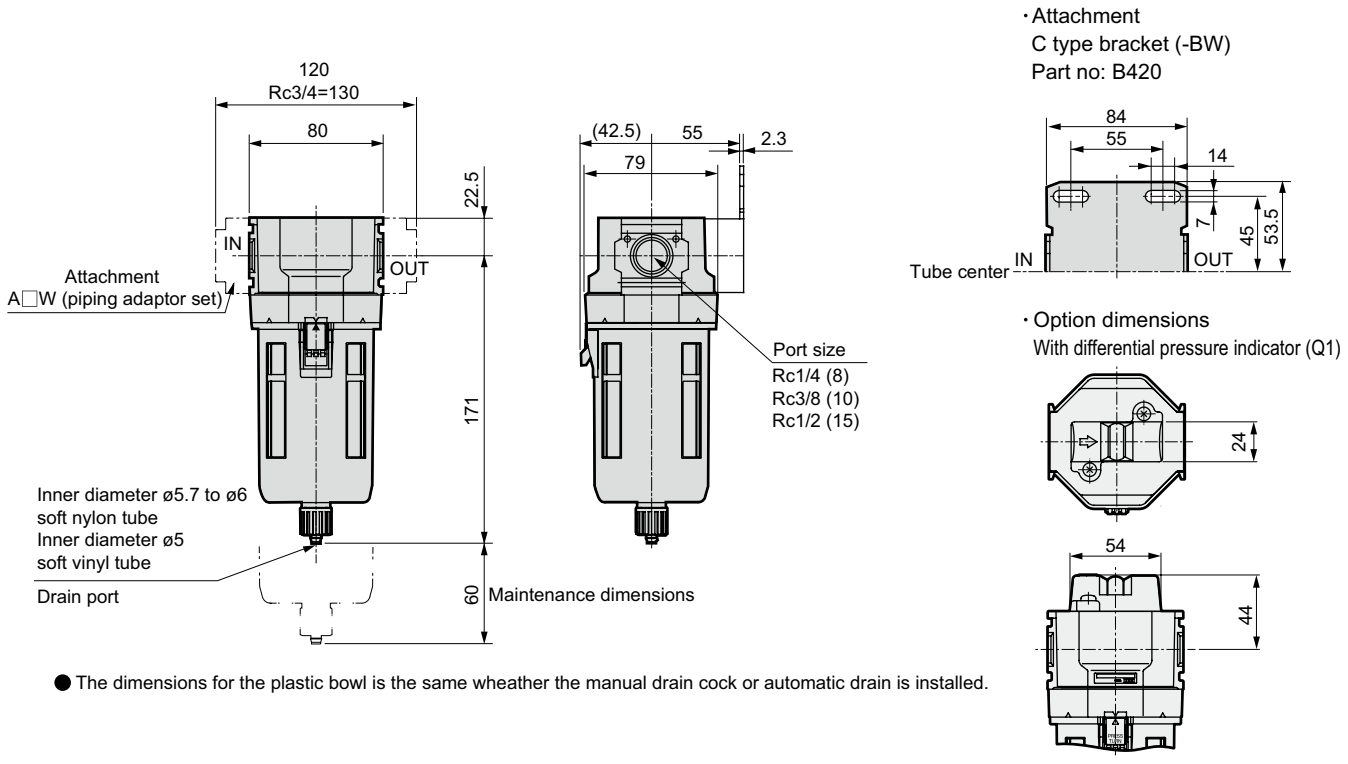
Dimensions CAD

● M3000-W



● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.Note: The C-type bracket and piping adapter set attachments cannot be used at the same time.

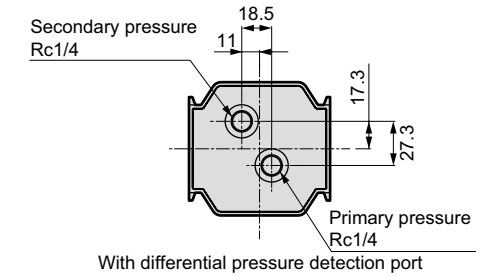
● M4000-W



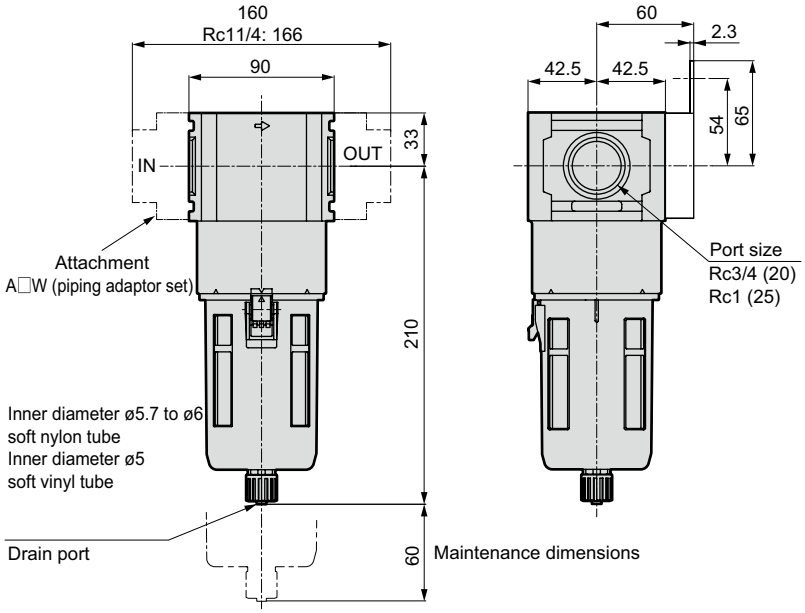
● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.

Dimensions CAD

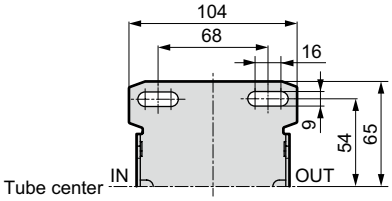
● M6000-W



With differential pressure detection port

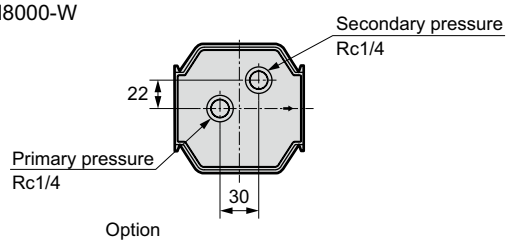


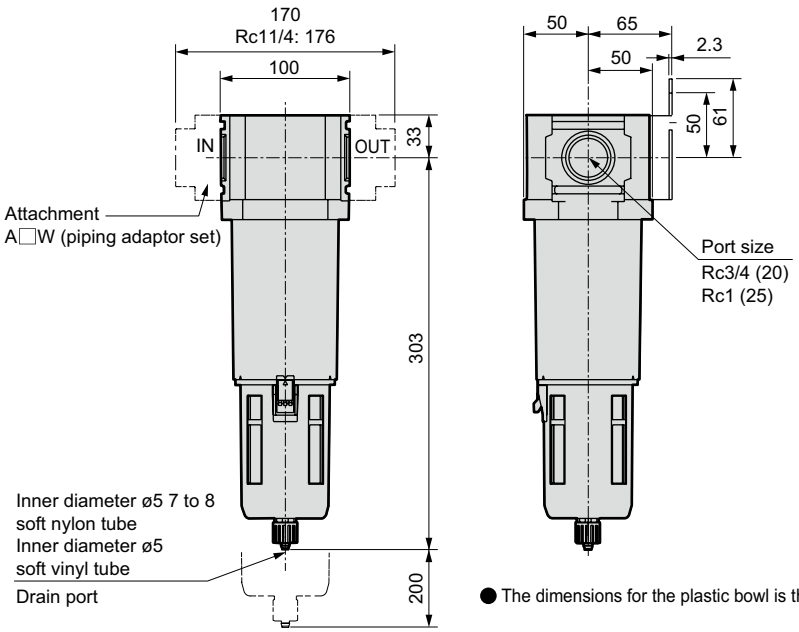
・Attachment
C type bracket (-BW)
Part no: B620



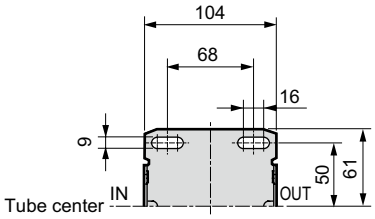
● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.
Note: The C-type bracket and piping adapter set attachments cannot be used at the same time.

● M8000-W





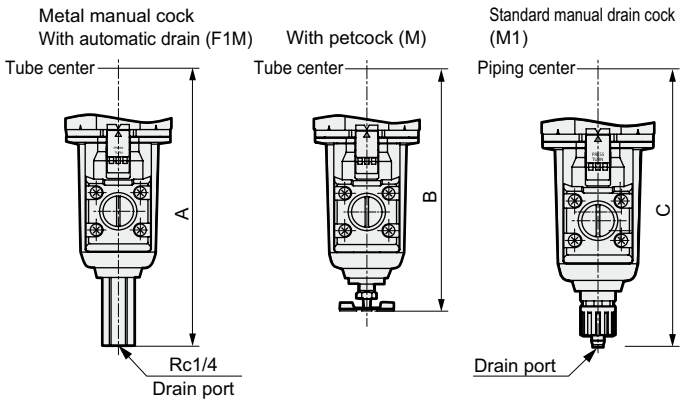
・Attachment
C type bracket (-BW)
Part no: B820



● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.

Option dimensions

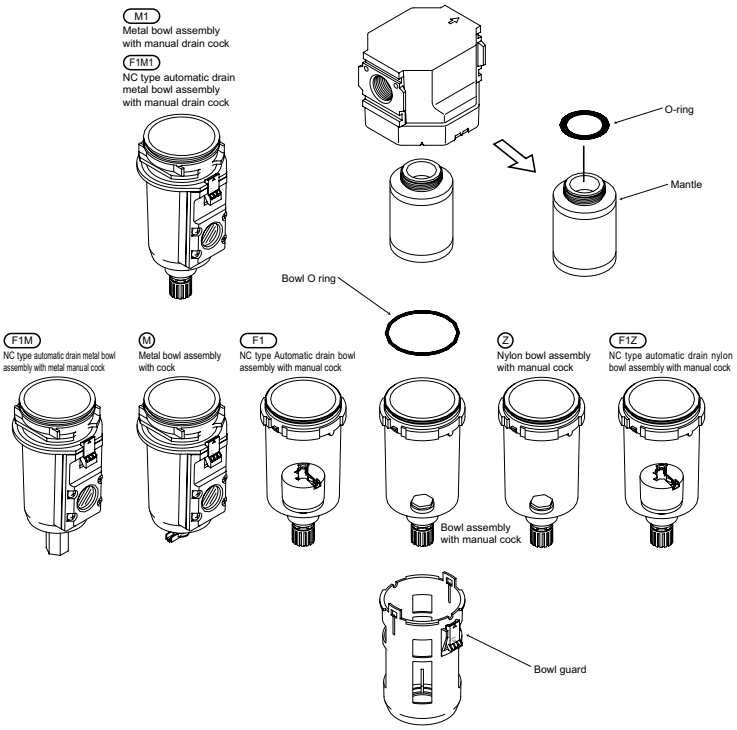
● Metal bowl (option)
〔M2000-W, M3000-W, M4000-W, M6000-W, M8000-W〕



Dimensions table

Model no.	F1M	M	M1
	A	B	C
M2000-W	-	-	147
M3000-W	164	143.5	154
M4000-W	187	166.5	177
M6000-W	226	205	216
M8000-W	319	298	309

Option parts table for oil mist filter



Repair kit model no. (Set of O ring, mantle and bowl O ring)

Model	M type	S type	X type
M1000-W	M1000-KIT	M1000-KIT-S	M1000-KIT-X
M1000-W-F1	M1000-KIT-F1	M1000-KIT-F1S	-
M2000-W	M2000-KIT	M2000-KIT-S	M2000-KIT-X
M3000-W, MM3000-W	M3000-KIT	M3000-KIT-S	M3000-KIT-X
M4000-W, MM4000-W	M4000-KIT	M4000-KIT-S	M4000-KIT-X
M6000-W, MM6000-W	M6000-KIT	M6000-KIT-S	M6000-KIT-X
M8000-W, MM8000-W	M8000-KIT	M8000-KIT-S	M8000-KIT-X

Repair kit model no. (Set of O ring and mantle)

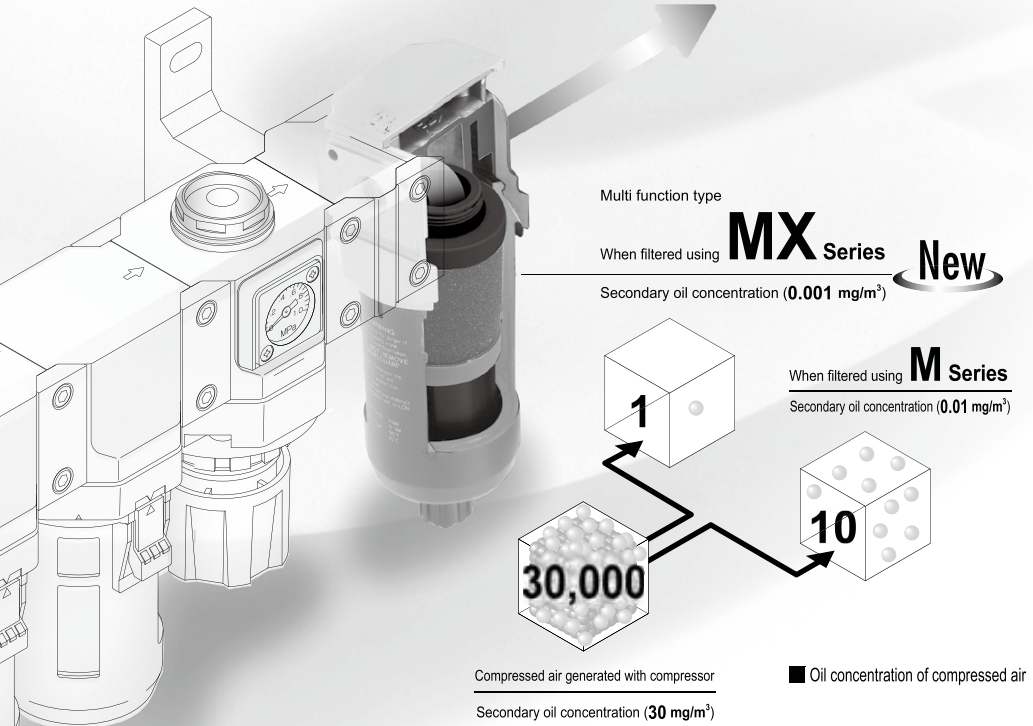
Model	M type	S type	X type
M1000-W	M1000-MANTLE-ASSY	M1000-MANTLE-ASSY-S	M1000-MANTLE-ASSY-X
M1000-W-F1	M1000-MANTLE-ASSY-F1	M1000-MANTLE-ASSY-F1S	-
M2000-W	M2000-MANTLE-ASSY	M2000-MANTLE-ASSY-S	M2000-MANTLE-ASSY-X
M3000-W, MM3000-W	M3000-MANTLE-ASSY	M3000-MANTLE-ASSY-S	M3000-MANTLE-ASSY-X
M4000-W, MM4000-W	M4000-MANTLE-ASSY	M4000-MANTLE-ASSY-S	M4000-MANTLE-ASSY-X
M6000-W, MM6000-W	M6000-MANTLE-ASSY	M6000-MANTLE-ASSY-S	M6000-MANTLE-ASSY-X
M8000-W, MM8000-W	M8000-MANTLE-ASSY	M8000-MANTLE-ASSY-S	M8000-MANTLE-ASSY-X

* Parts of M type are compatible with M1000-W, 3000-W, 4000-W, 8000-W Series manufactured before '98.5.
* Refer to air filter options and parts table for details on bowl assembly, and bowl guard.

High-performance with x10 oil removal.

Highly efficient oil removing mantle removes oil up to a secondary oil concentration 0.001 mg/m^3.

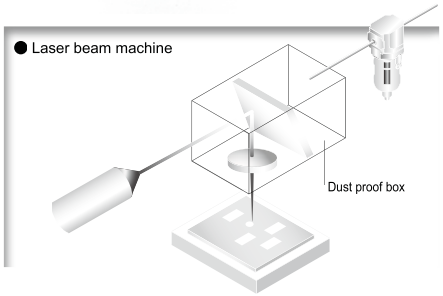
MX Series high-performance oil mist filter with x10 (compared to oil mist filter M Series) oil removal.



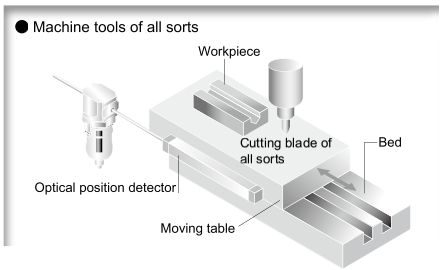
Further expanding high-purity oilfree air applications

This series is ideal for applications requiring high-purity oilfree air, including laser processing systems, optical positioning units, and foodstuff and pharmaceutical manufacturing lines.

● Laser beam machine



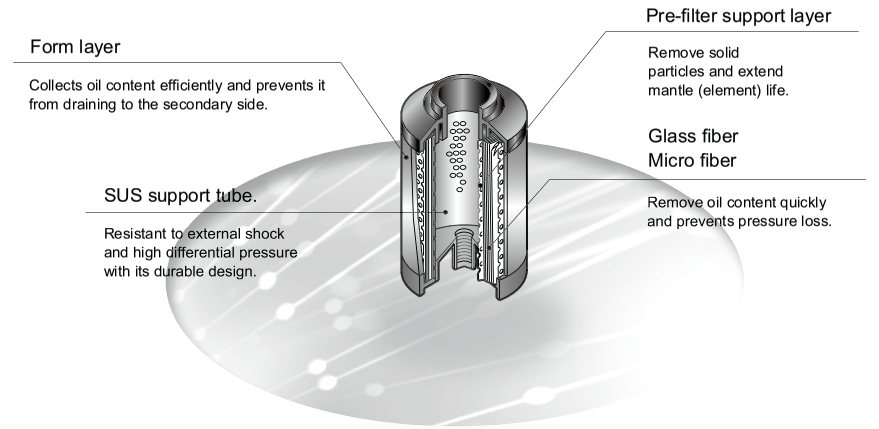
● Machine tools of all sorts



High performance oil mist filter

MX Serise

■ Mantle structural explanation



Secondary oil concentration 0.001mg/m^3 or less

The highly efficient oil removing mantle removes oil up to the secondary oil concentration of 0.001 mg/m^3 at 21°C. This series is compatible with the JIS Standards Oil Class 1.

High precision filtration

Removes impurities down to 0.01µm.

Long service life, low pressure loss

Fibers with a gap rate of 94% used for the mantle reduces pressure loss and prolong service life.

Modular connection possible

A system is configured with module connections in the same manner as the conventional filter F Series and oil mist filter M Series.

Diverse models

Five types -- MX1000, 3000, 4000, 6000, and 8000 --are available for different flow.

Suitable for clean room

P70 Series available.
(3000, 4000, 6000 Series available)

High performance oil mist filter **MX Series** variations

		Filtration rating µm	Secondary oil concentration mg/m^3(21°C時)	Treating flow rate ℓ/min 1000 Series	3000 Series	4000 Series	6000 Series	8000 Series	Ambient temperature range °C
MX Series		0.01	0.001 or less	75	180	370	670	1490	5 to 60
M Series	M Type	0.01	0.01 or less	150	360	825	1270	2600	5 to 60
	S Type	0.3	0.5 or less	150	450	1000	1400	2900	5 to 60
	X Type	Activated carbon	0.003 or less	150	450	1000	1400	2900	5 to 30

Read Safety Precautions to ensure correct, safe product use.

High performance oil mist filter Standard white Series

MX1000 / MX3000 / MX4000 MX6000 / MX8000-W Series

Secondary side oil concentration 0.001 mg/m^{3}Secondary oil concentration (0.001mg/m^3)

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

Port size: 1/8 to 1

JIS symbol 

RoHS

Specifications

Descriptions	MX1000-W	MX3000-W	MX4000-W	MX6000-W	MX8000-W
Exterior					
Working fluid	Compressed air				
Working pressure range MPa	0.1 to 1.0 Note 4, Note 5				
Withstanding pressure MPa	1.5 Note 4				
Ambient temperature range ℃	5 to 60				
Filtration rating μm	0.01 (nominal)				
Secondary oil concentration mg/m^3	0.001 or less Note 2, Note 3				
Maximum flow rate ℓ/min (ANR) Note 1	75 Note 4	180	370	670	1480
Drain capacity cm^3	3	45	80	80	80
Port size Rc, PT, G	1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.096	0.28	0.52	0.95	1.35
Mantle (element) replacement	1 year (6000 hours) or pressure drop of 0.1MPa				
Standard accessories	Bowl guard				

Note 1: Primary pressure 0.7MPa Use within the maximum processing flow rate.
If the maximum processing flow is exceeded temporarily, or if the filter is installed at a place with high levels of pulsation, the mantle could be damaged or oil or drainage, etc., could splatter to the secondary side and result in faults at the terminal.

Note 2: The secondary oil density is the value when the primary oil density is 30 mg/m^3, the inlet air temperature is 21°C and before the oil is saturated.

Note 3: Install an oil mist filter (S type) as a prefilter on the primary side to prevent early clogging.

Note 4: MX1000-W-F1 with an automatic drain has a min. working pressure of 0.2MPa, max. working pressure of 0.7MPa, withstanding pressure of 1.05MPa, and please refer to the flow characteristics on the next page for max. treating flow rate.

Note 5: The minimum operating pressure is 0.15 MPa for models with automatic drain "F1".

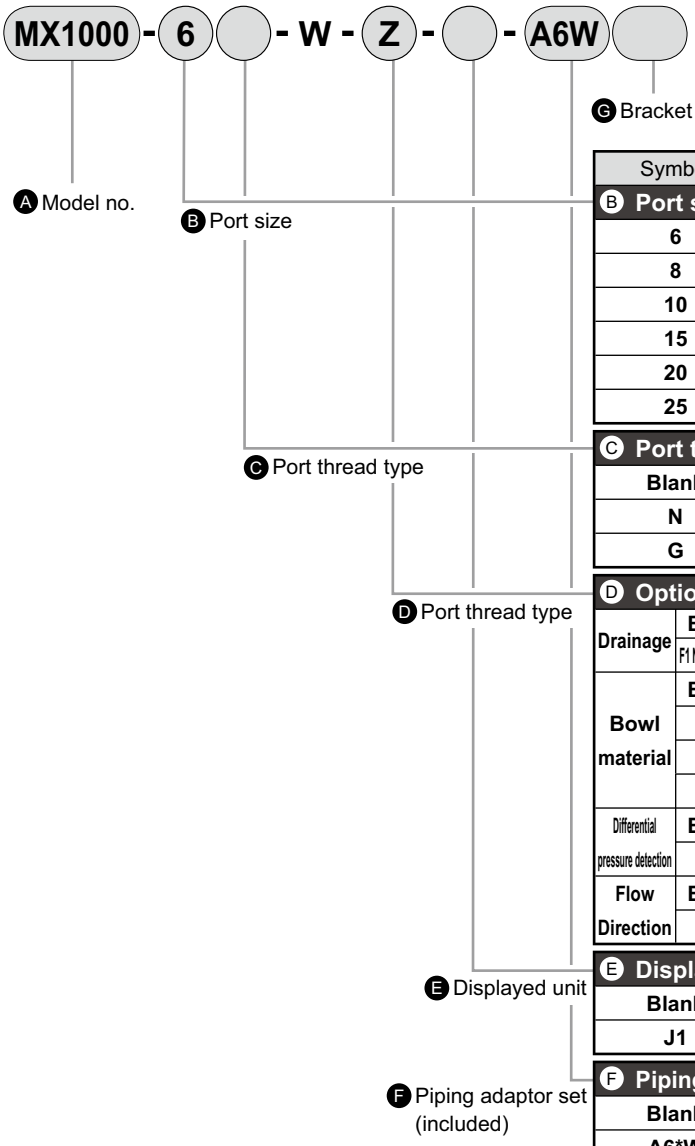
Clean specification

(Catalog No. CB-033SA)

● Dust generation preventing structure for use in cleanrooms

MX*000 - ····· - P7*

How to order



* Refer top page 9 for an explanation of the options.

Symbol		Descriptions	Ⓐ Model no. MX1000	MX3000	MX4000	MX6000	MX8000
Ⓑ Port size							
6		1/8	●				
8		1/4	●	●	●		
10		3/8		●	●		
15		1/2			●		
20		3/4				●	●
25		1				●	●
Ⓒ Port thread type							**Note 1**
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓓ Option							**Note 2**
Drainage	**Blank**	With manual drain cock	●	●	●	●	●
	F1 Note 3, Note 4	Automatic drain with manual override (NC type)	●	●	●	●	●
Bowl material	**Blank**	Polycarbonate bowl	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●
	M	Metal bowl		●	●	●	●
	M1	Metal bowl with manual drain cock		●	●	●	●
Differential pressure detection	**Blank**	Without differential pressure detection port	●	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)				●	●
Flow Direction	**Blank**	Standard flow (left to right)	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●
Ⓔ Displayed unit							
Blank		MPa display, Rc thread	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●
Ⓕ Piping adaptor set (included)		**Note 5**	**pages 155 to 157**				**Note 6**
Blank		Not attached	●	●	●	●	●
A6*W		1/8 piping adaptor set	●				
A8*W		1/4 piping adaptor set	●	●	●		
A10*W		3/8 piping adaptor set	●	●	●		
A15*W		1/2 piping adaptor set		●	●		
A20*W		3/4 piping adaptor set			●	●	●
A25*W		1 piping adaptor set				●	●
A32*W		1 1/4 piping adaptor set				●	●
*** Adaptor thread type**							
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓖ Bracket (attached)							**Page 152**
Blank		Not attached	●	●	●	●	●
BW		C type bracket	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: When G threads or NPT threads are selected, the IN, OUT, gauge port, and drainage discharge port (metal bowl automatic drain) are the target, as are attachments P and V.

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

Note 3: N.O. automatic drain cannot be selected.

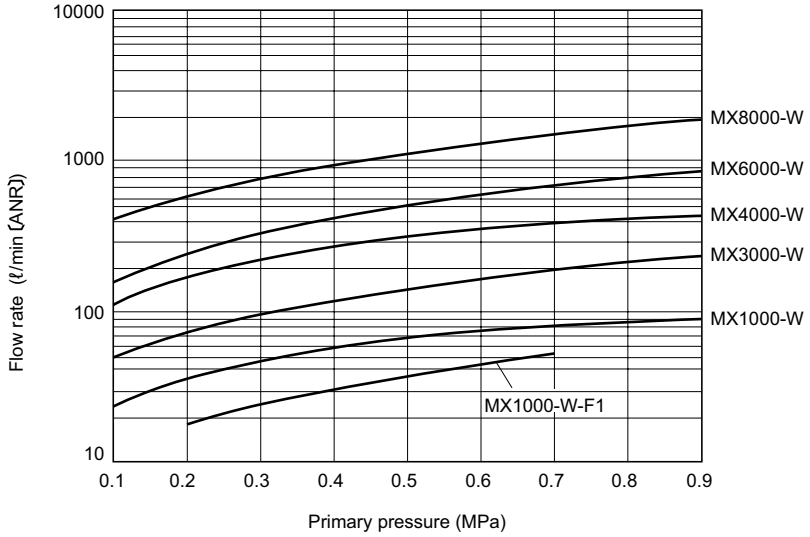
Note 4: Refer to page 12 for working conditions of the automatic drain.

Note 5: Piping adaptor set and C type bracket cannot be used togather.

Note 6: A joiner set is attached with the piping adapter set.

Flow characteristics (Maximum flow rate)

● MX*000-W



Selecting optional mantle for oil mist filters

Recommended circuit | Applications

◆ S type

F S

General industrial air (Secondary side air content 0.5mg/m^3 or less)

- Air tools
  Air drill, air driver
  air grinder
- Labor saving device and components
- Pneumatic jigs and tools
- Air chuck
- Air vice
- Air for cleaning precision parts

◆ M type

F S M

Oil free air (Secondary side air content 0.01mg/m^3 or less)

- Instrumentation
- Measurement
- Sequence control
  Movable element, pure fluid element
- Luxury painting
- Precision industry

◆ X type

F S M X

Odor free air (Secondary side air content 0.003mg/m^3 or less)

- Food industry
- Pharmaceutical industry
- Stirring
- Transportation
- Drying
- Packaging
- Air for brewing

◆ MX type

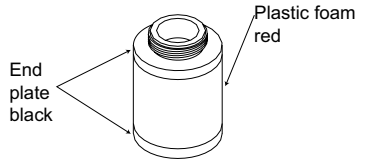
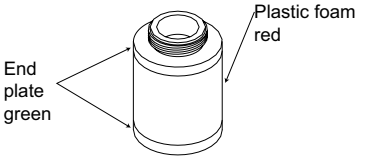
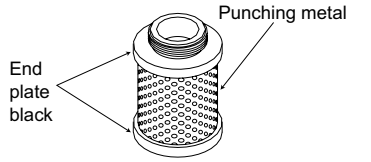
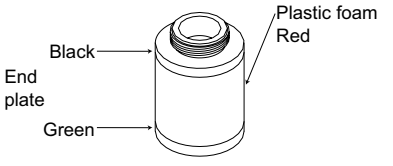
F S MX

Super oil free air (Secondary side air content 0.001mg/m^3 or less)

- Optical positioning equipment
- Laser machining

CAUTION: Secondary oil contentis measured at inlet air temperature of 21 degrees celcius and primary oil content of 30mg/m^3.

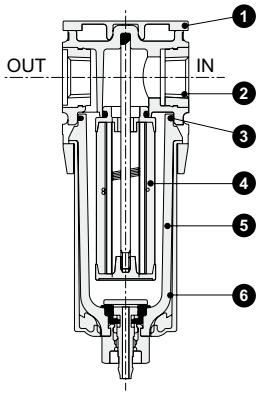
Option symbol and shape of mantles

	Option symbol	Appearance
M※000-W	Blank (M type)	
	S (S type)	
	X (X type)	
MX*000-W		

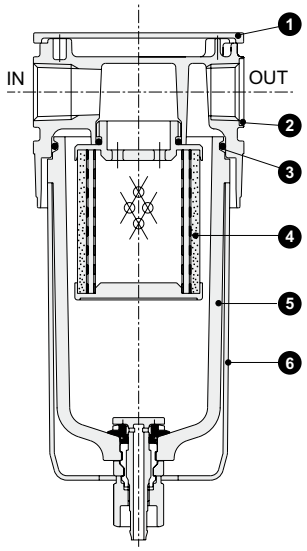
Note: Changes for product upgrades may be made without prior notice.
When placing an order, confirm the option symbol for the part model given here.

Internal structure and parts list

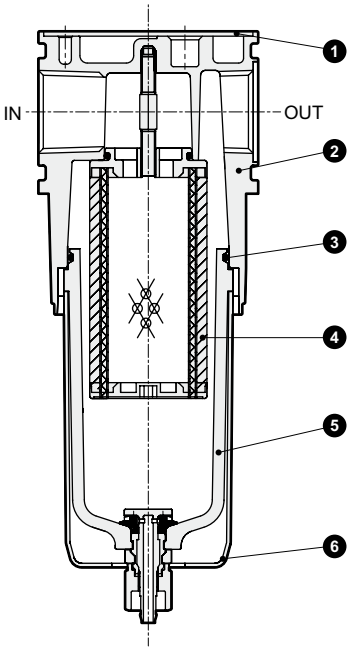
● MX1000-W



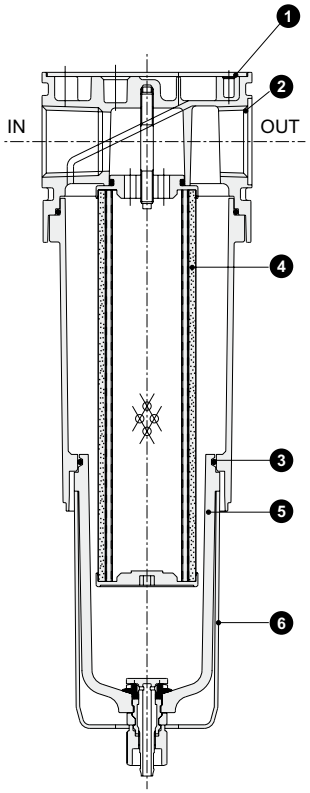
● MX3000-W･MX4000-W



● MX6000-W



● MX8000-W

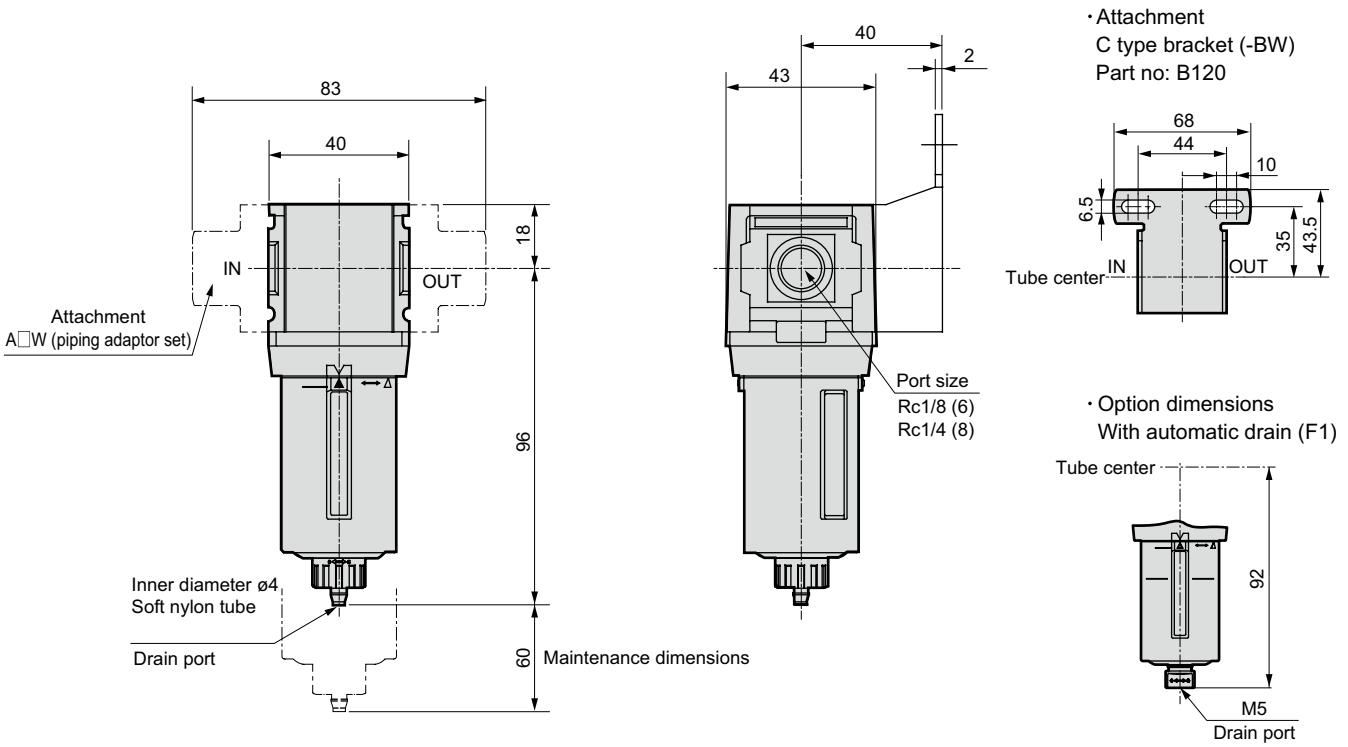


No.	Part name	Material				
		MX1000-W	MX3000-W	MX4000-W	MX6000-W	MX8000-W
1	Plate cover	ABS resin				
2	Body	Polyamide resin	Aluminum alloy die-casting			
3	O-ring Note 1	Special nitrile rubber				
4	Mantle assembly	-				
5	Bowl assembly	Polycarbonate resin, polyacetal resin, urethane resin				
6	Bowl guard	Polyamide resin	Polyamide resin, steel			

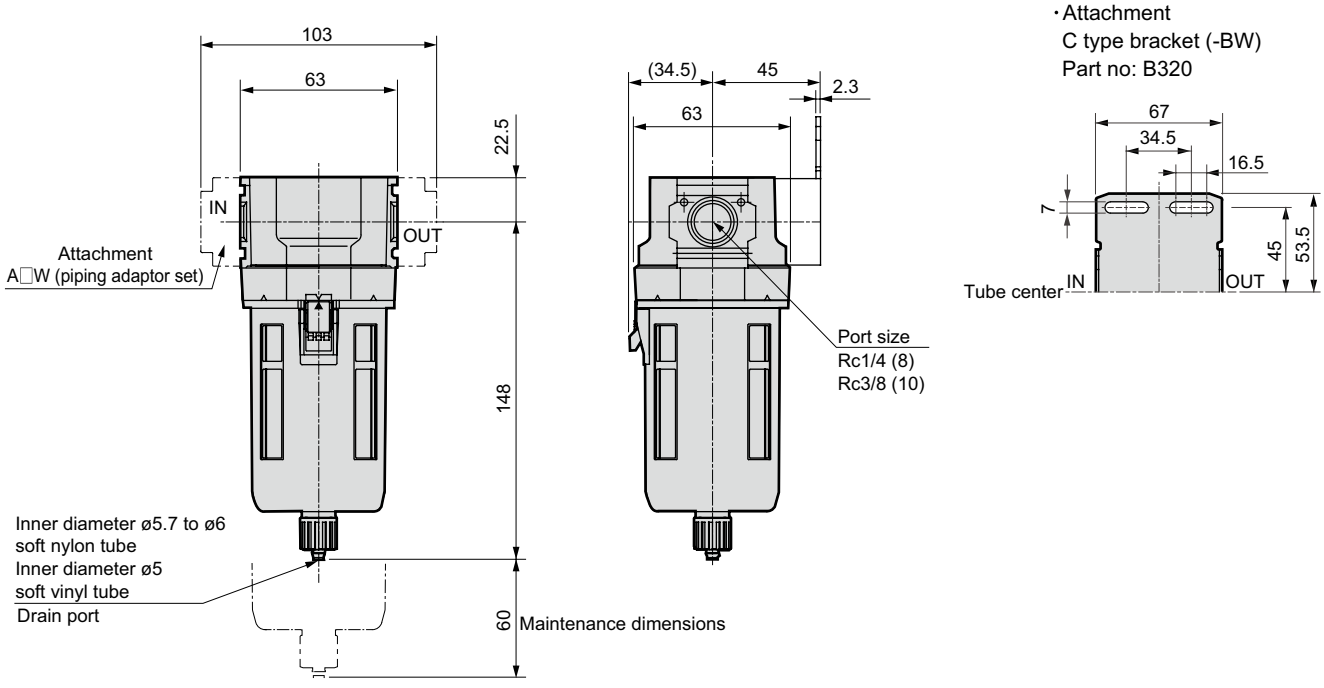
Note 1: O ring for MX1000-W will have a special shape.

Dimensions

● MX1000-W



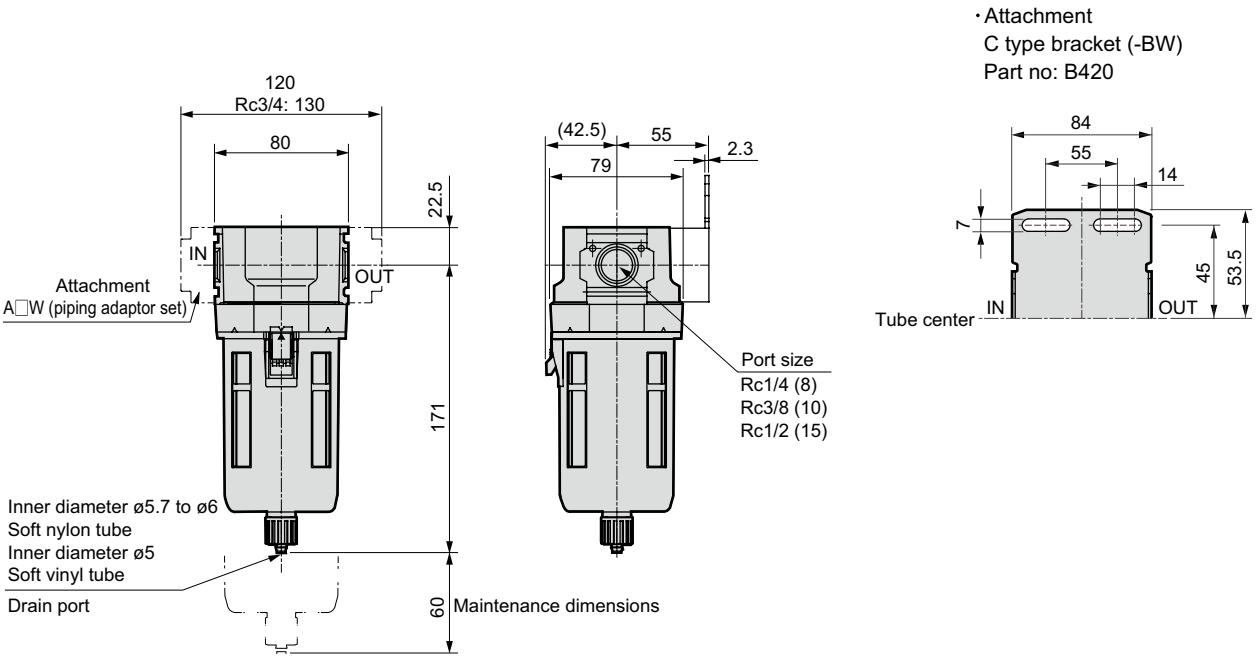
● MX3000-W



● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.
Note: The C-type bracket and piping adapter set attachments cannot be used at the same time.

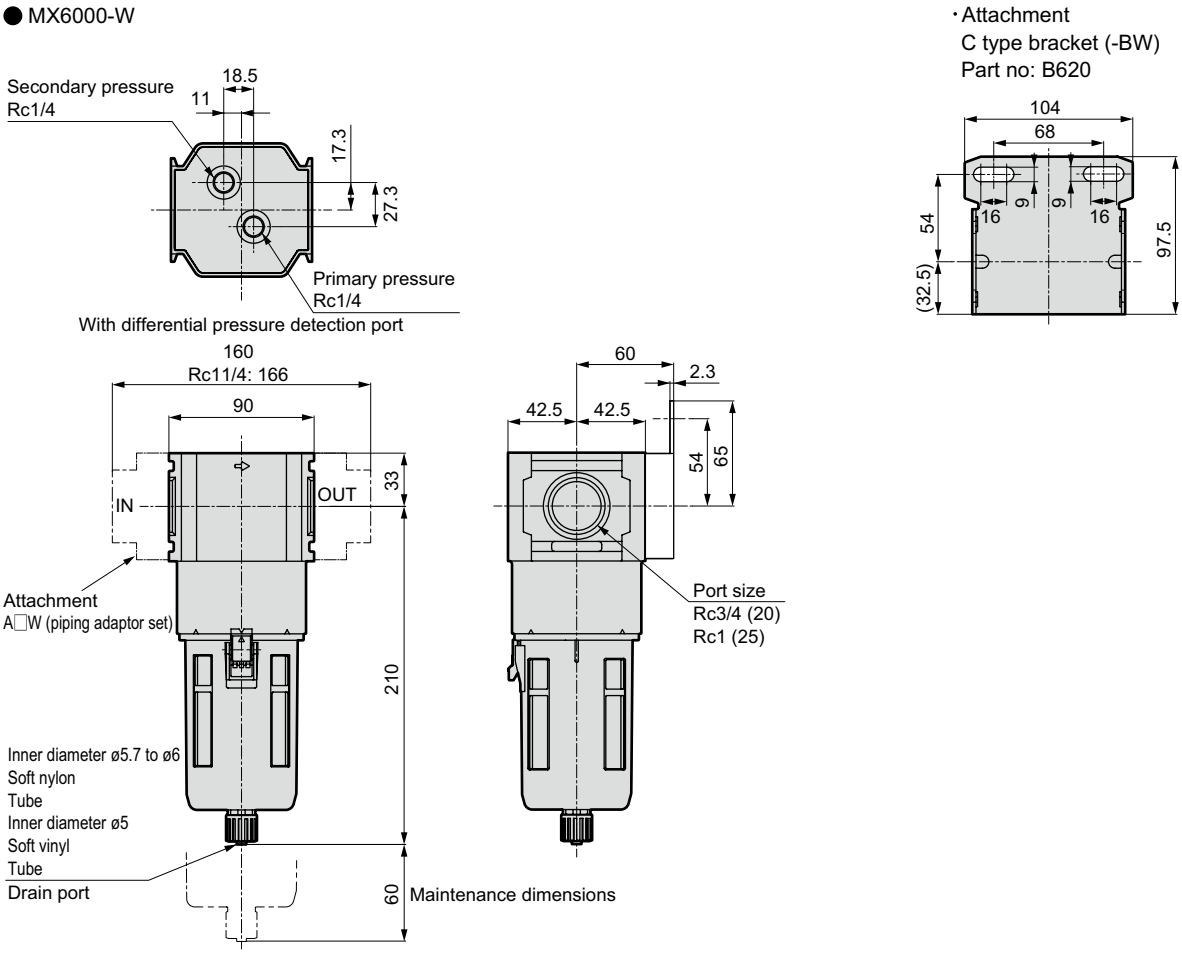
Dimensions

● MX4000-W



● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.

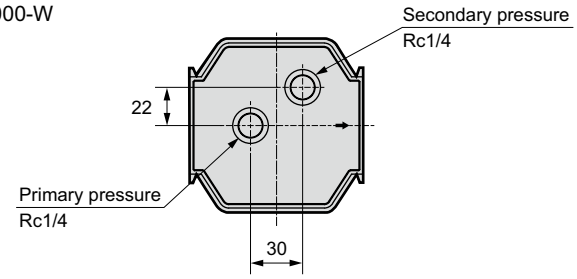
● MX6000-W



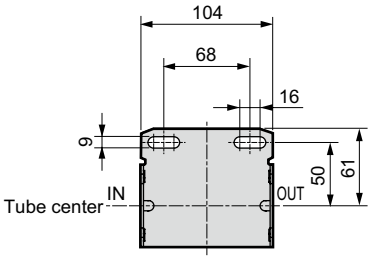
● The dimensions for the plastic bowl is the same wheather the manual drain cock or automatic drain is installed.
Note: The C-type bracket and piping adapter set attachments cannot be used at the same time.

Dimensions

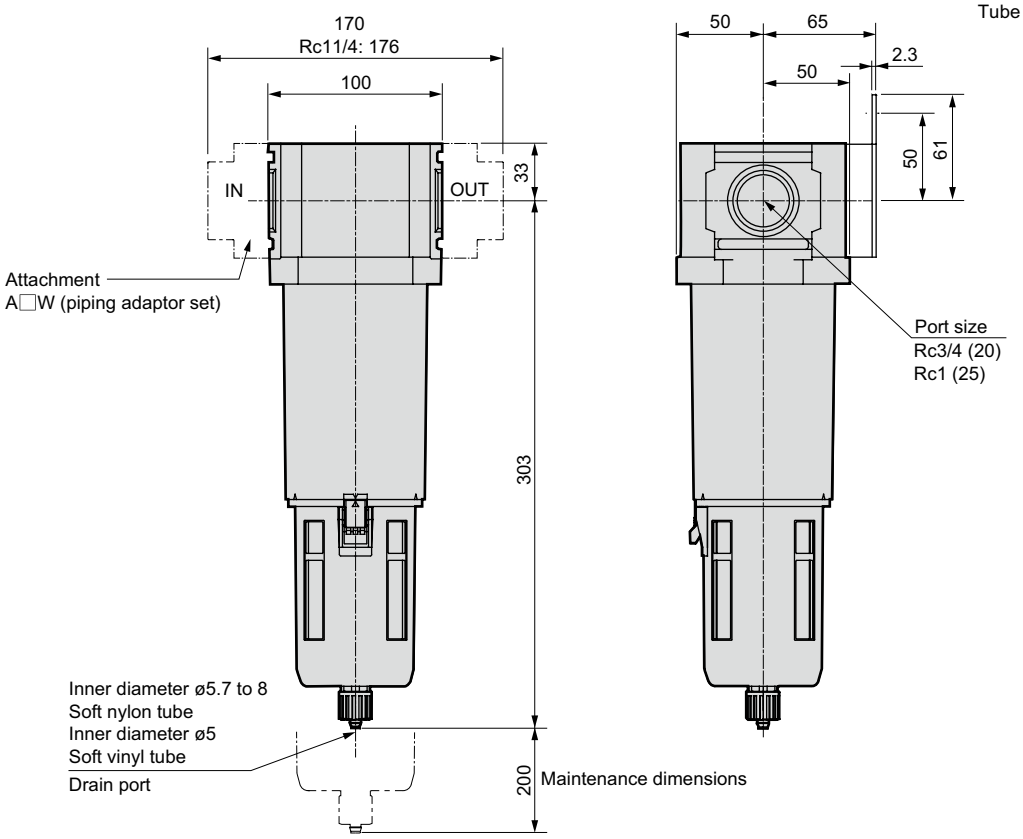
● MX8000-W



・Attachment
C type bracket (-BW)
Part no: B820

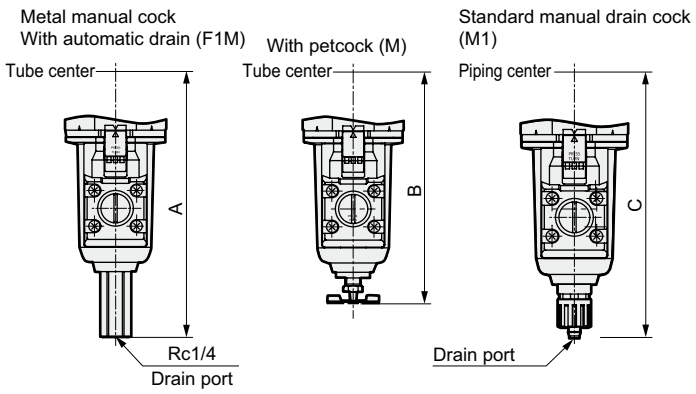


Option
(With differential pressure detection port)



● For the plastic bowl, the dimensions are the same regardless of whether the manual cock or with automatic drain.

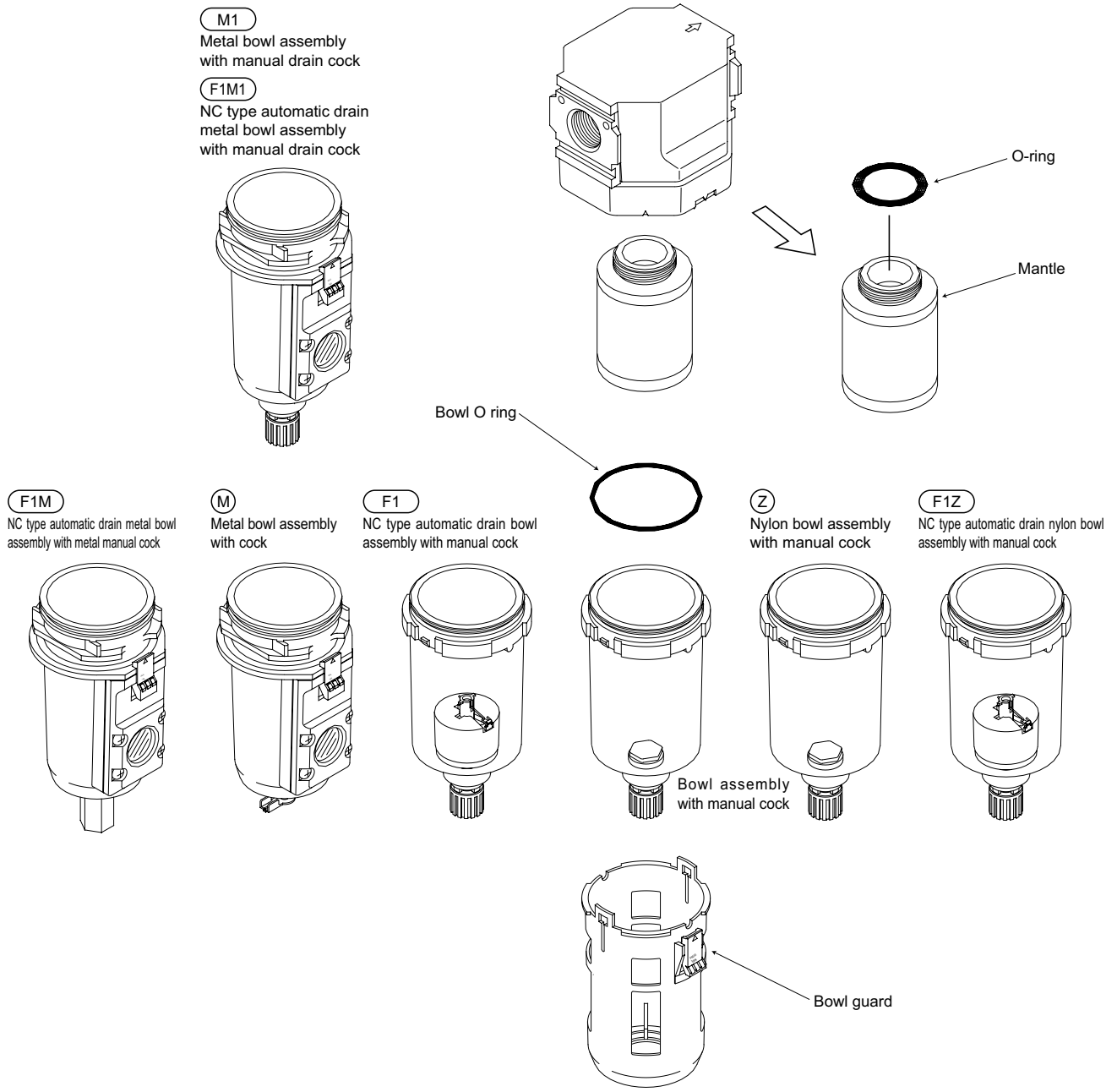
● Metal bowl (option)
〔MX3000-W, MX4000-W, MX6000-W, MX8000-W〕



Dimensions table

Model no.	F1M	M	M1
	A	B	C
MX3000-W	164	143.5	154
MX4000-W	187	166.5	177
MX6000-W	226	205	216
MX8000-W	319	298	309

Option parts table for oil mist filter



Repair kit model no. (Set of O ring, mantle and bowl O ring)

Model	
MX1000-W	MX1000-KIT
MX1000-W-F1	MX1000-KIT-F1
MX3000-W	MX3000-KIT
MX4000-W	MX4000-KIT
MX6000-W	MX6000-KIT
MX8000-W	MX8000-KIT

Repair kit model no. (Set of O ring and mantle)

Model	
MX1000-W	MX1000-MANTLE-ASSY
MX1000-W-F1	MX1000-MANTLE-ASSY-F1
MX3000-W	MX3000-MANTLE-ASSY
MX4000-W	MX4000-MANTLE-ASSY
MX6000-W	MX6000-MANTLE-ASSY
MX8000-W	MX8000-MANTLE-ASSY

※Refer to the air filter Option and parts table on page 93 and 94 for bowl assy and bowl guard.

Regulator Standard white series

R1000 / R2000 / R3000
R4000 / R6000 / R8000-W Series

Low profile with built in pressure gauge.

Port size: 1/8 to 1

JIS symbol 

RoHS CAD

Specifications

Descriptions	R1000-W	R2000-W	R3000-W	R4000-W	R6000-W	R8000-W
Exterior						
Working fluid	Compressed air					
Max. working pressure MPa	1					
Withstanding pressure MPa	1.5					
Ambient temperature range ℃	5 to 60					Note 1
Set pressure range MPa	0.05 to 0.85					
Relief	With relief mechanism					
Port size Rc, NPT, G	1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.16	0.31	0.45	0.7	1.0	1.6
Standard accessories	Pressure gauge, nut for panel mount					Pressure gauge

Note 1: The working temperature for the PPD option "R1" is 5 to 50℃.

Ozone specifications (Page 187)

R*000 - ··· - W··· - **P11**

Clean specification (Catalog No. CB-033SA)

● Dust generation preventing structure for use in cleanrooms

R*000 - ····· - **P7***

Specification for LiB production (Catalog No.CC-947A)

● Specification for LiB manufacturing process

R*000 - ····· - **P4***

How to order

* Refer top page 9 for an explanation of the options.

R1000 - 6 - ○ - W - L - ○ - A6W ○

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Displayed unit
Ⓕ Piping adaptor set (included)
Ⓖ Attachment

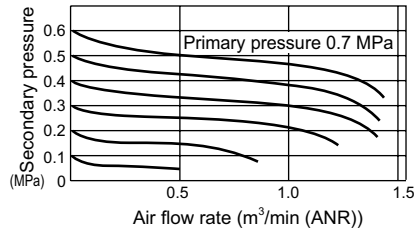
Symbol	Descriptions	Ⓐ Model no. R10000	R20000	R30000	R40000	R60000	R80000
Ⓑ Port size							
6	1/8	●					
8	1/4	●	●	●	●		
10	3/8		●	●	●		
15	1/2				●		
20	3/4					●	●
25	1					●	●
Ⓒ Port thread type							**Note 1**
Blank	Rc thread	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●
Ⓓ Option							**Note 2**
Pressure Range	**Blank** 0.05 to 0.85MPa	●	●	●	●	●	●
	L 0.05 to 0.35MPa Note 3	●	●	●	●	●	●
Relief	**Blank** With relief mechanism	●	●	●	●	●	●
	N Non-relief type	●	●	●	●	●	●
Pressure gauge	**Blank** Standard pressure gauge (G401-W)	●	●	●	●	●	●
	T Without pressure gauge (gauge port (Rc1/4) assembled sealed)	●	●	●	●	●	●
	T8 Pressure gauge attachable (gauge port (Rc1/4) assembled open)	●	●	●	●	●	●
	T6 Compatibility with digital pressure sensor PPX Note 4	●	●	●	●	●	●
	R1 Pressure switch with display PPD assembled Note 5	●	●	●	●	●	●
Flow Direction	**Blank** Standard flow (left to right)	●	●	●	●	●	●
	X1 Reverse flow (right to left)	●	●	●	●	●	●
Ⓔ Displayed unit							
Blank	MPa display, Rc thread	●	●	●	●	●	●
J1	MPa display, NPT, G thread	●	●	●	●	●	●
Ⓕ Piping adaptor set (included)							**Note 6, 7 pages 155 to 157**
Blank	Not attached	●	●	●	●	●	●
A6*W	1/8 piping adaptor set	●					
A8*W	1/4 piping adaptor set	●	●	●	●		
A10*W	3/8 piping adaptor set	●	●	●	●		
A15*W	1/2 piping adaptor set		●	●	●		
A20*W	3/4 piping adaptor set				●	●	●
A25*W	1 piping adaptor set					●	●
A32*W	1 1/4 piping adaptor set					●	●
*** Adaptor thread type**							
Blank	Rc thread	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●
Ⓖ Attachment							**Note 8 Page 152, 198**
Blank	Not attached	●	●	●	●	●	●
BW	C type bracket	●	●	●	●	●	●
B3W Note 5	L type bracket Note 9	●	●	●	●	●	
B4W	B type bracket		●				
G45P	G45D-8-P10 (L: G45D-8-P04)	●	●	●	●	●	●
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 4	Digital pressure sensor: PPX-R10N-6M	●	●	●	●	●	●

⚠ Cautions for model No. selection

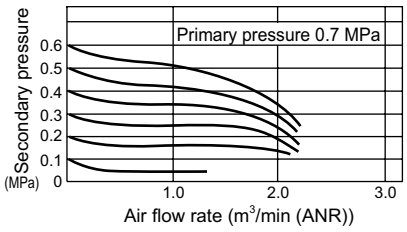
Note 1: G and NPT threads are available for IN, OUT, and gauge ports.
Note 2: When selecting options for several items, list options in order from the top.
Note 3: Pressure gauge display range will be 0 to 0.4 MPa for option "L".
Note 4: When option "T6" is selected, only "blank" or "R2" is selected for the (G) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.
Note 5: Output type will be NPN transistor output. Consult with CKD if PNP transistor output is required.
Note 6: The piping adapter set and C bracket cannot be used together.
Note 7: A joiner set is attached with the piping adapter set.
Note 8: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.
Note 9: Refer to Section 2. Regulator, in "⚠PRECAUTIONS for Installation and Adjustment" (page 15) for details on mounting the L-type bracket.

Flow characteristics

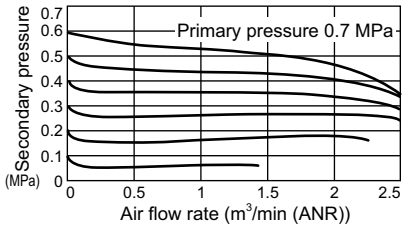
● R1000-6-W



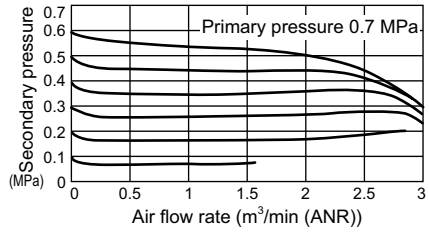
● R1000-8-W



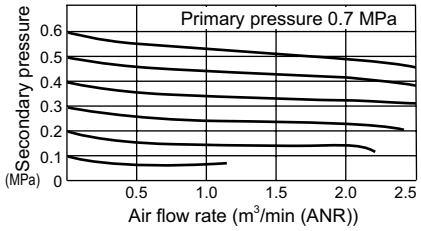
● R2000-8-W



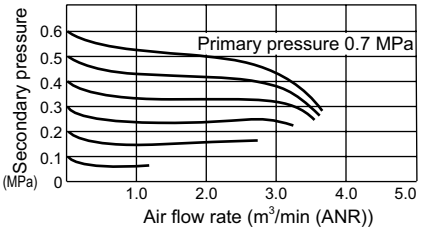
● R2000-10-W



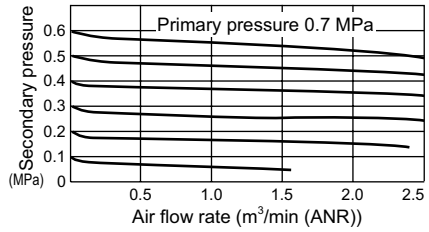
● R3000-8-W



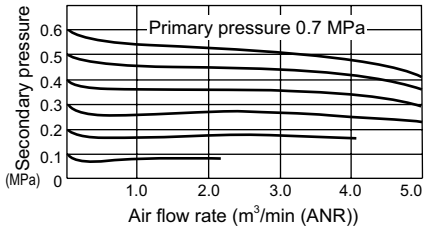
● R3000-10-W



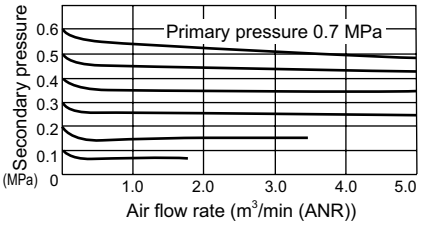
● R4000-8-W



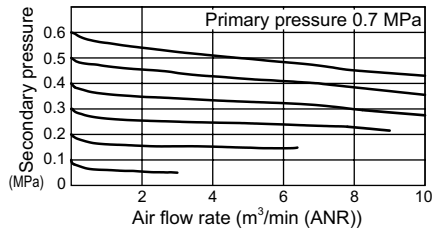
● R4000-10-W



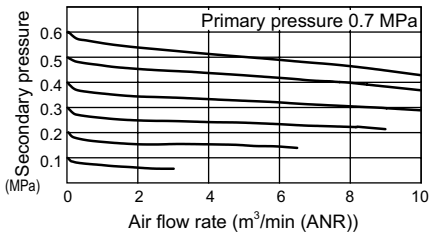
● R4000-15-W



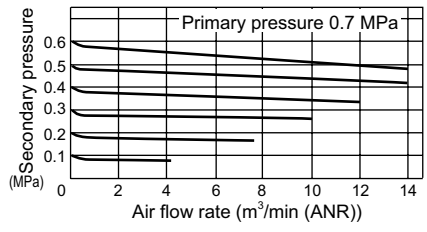
● R6000-20-W



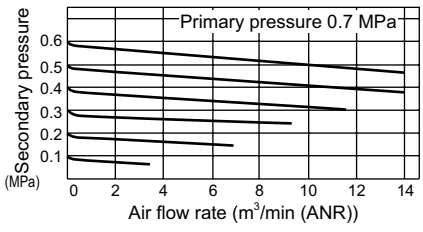
● R6000-25-W



● R8000-20-W

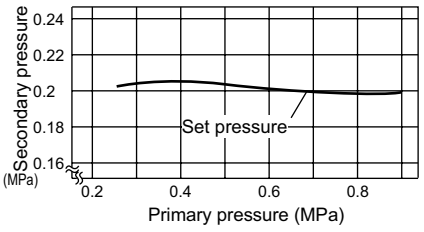


● R8000-25-W

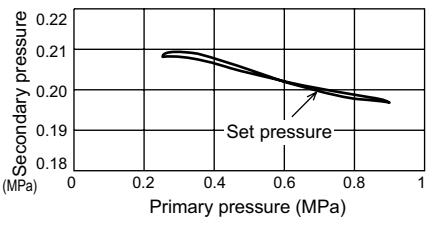


Pressure characteristics

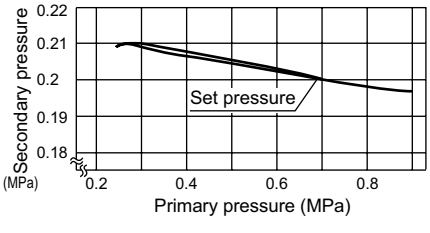
● R1000-W



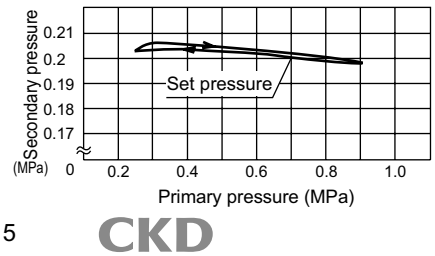
● R2000-W



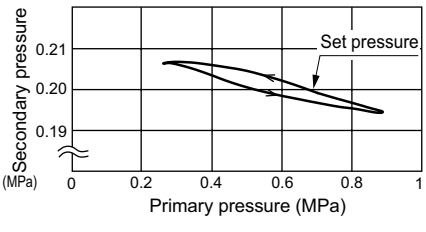
● R3000-W



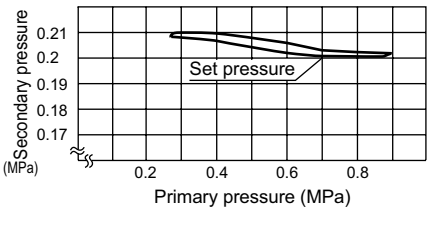
● R4000-W



● R6000-W

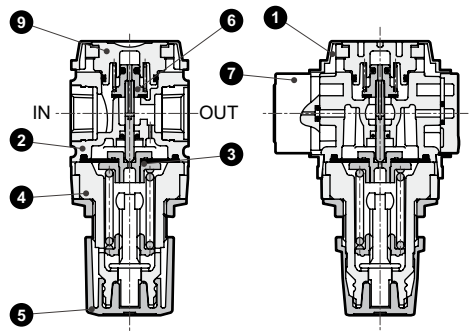


● R8000-W

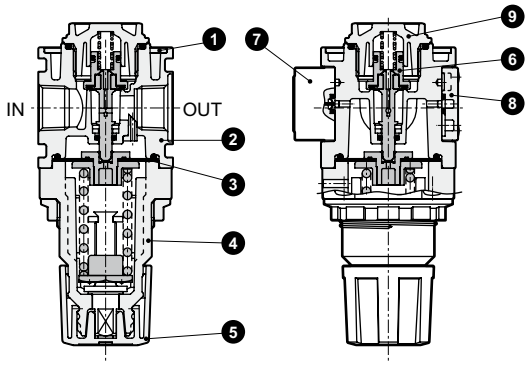


Internal structure and parts list

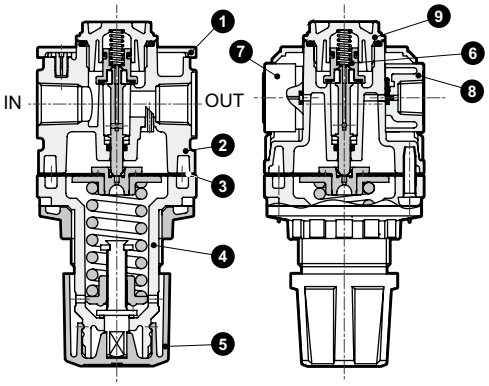
● R1000-W



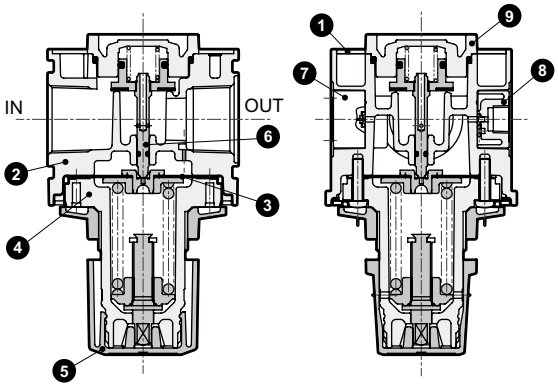
● R2000-W



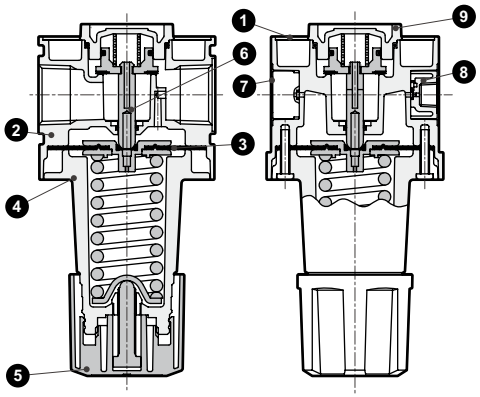
● R3000-W･R4000-W



● R6000-W



● R8000-W

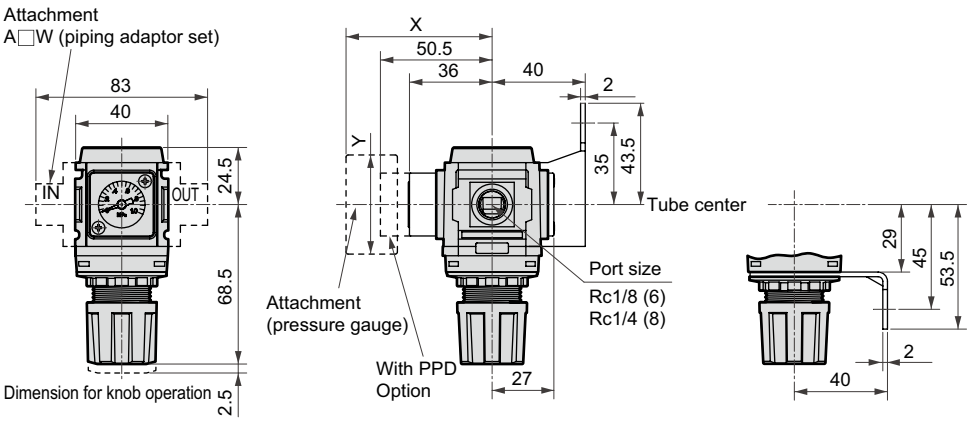


No.	Part name	Material					
		R1000-W	R2000-W	R3000-W	R4000-W	R6000-W	R8000-W
1	Plate cover	ABS resin					
2	Body	Polyamide resin, steel	Aluminum alloy die-casting	Aluminum alloy die-casting			
3	Diaphragm assembly	Polyacetal resin nitrile rubber		Zinc alloy die-casting, nitrile rubber Note 3			
4	Cover	Polyamide resin	PBT Resin				Aluminum alloy die-casting
5	Knob	Polyacetal resin					
6	Valve assembly	Brass, hydrogenated nitrle rubber (polyacetal resin: R2100-W, R3100-W, R4100-W only)					
7	Pressure gauge assembly	PBT resin, polyacetal resin, polycarbonate resin, nitrile rubber, brass, steel					
8	Gauge plug assembly	-	-	Polyacetal resin nitrile rubber			
	Blanking plug assembly Note 1	PBT resin, nitrile rubber, copper		-		-	-
9	Bottom plug Note 4	Polyacetal resin				Aluminum alloy die-casting	

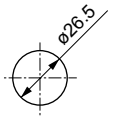
Note 1: A blank plug is enclosed with the R1000-W standard type.
Note 2: Refer to page 128 for repair parts.
Note 3: Aluminum will be added for R6000-W for low pressure.
Note 4: The material for RM3000-W, RM4000-W is aluminum alloy die casting.

Dimensions CAD

● R1000-W



Panel cut dimensions

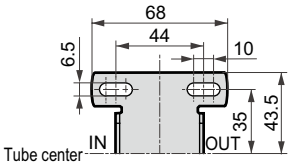


Panel thickness: Max. 6mm

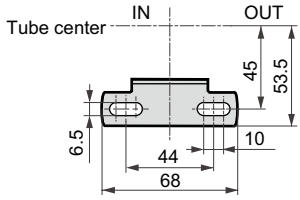
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5
R2	(74)	□30

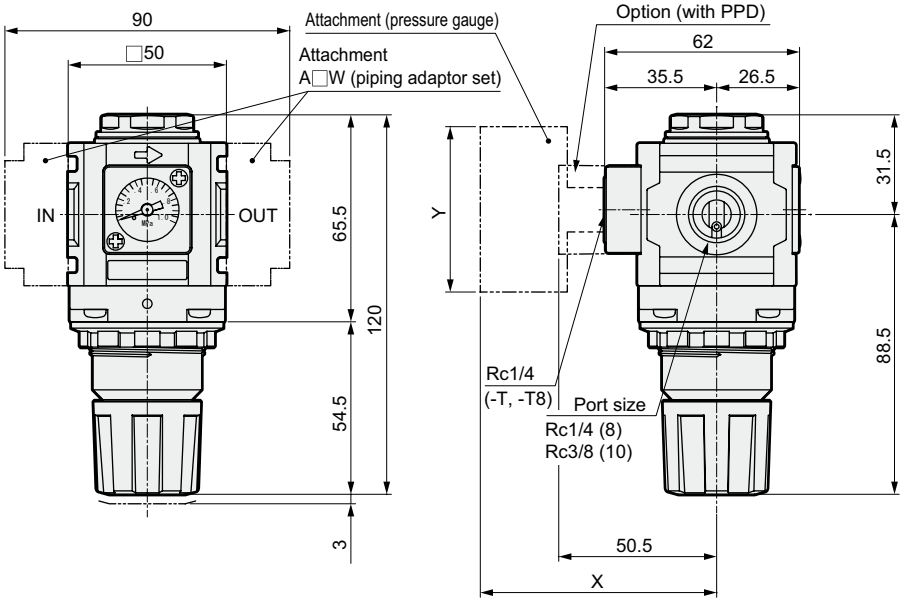
・Attachment
C type bracket (-BW)
Part no: B120



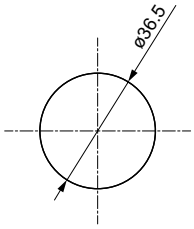
L type bracket (-B3W)
Part no: B130



● R2000-W



Panel cut dimensions

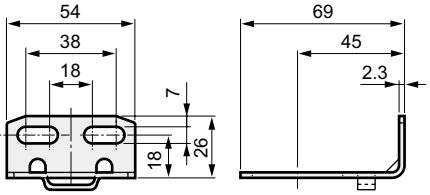


Panel thickness: Max. 4mm

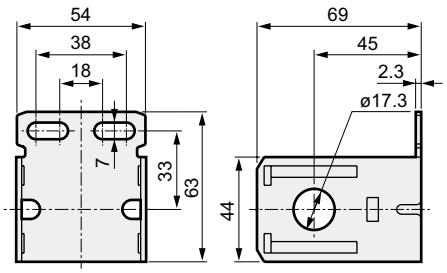
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G59P	(75.5)	ø52
G40P	(75)	ø42.5
G50P	(75)	ø52.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

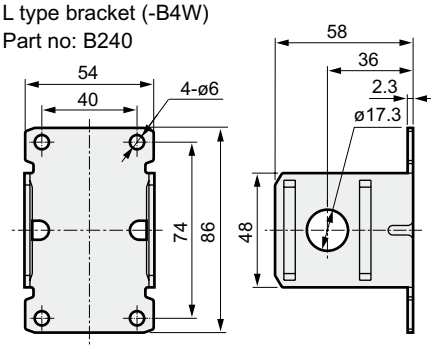
● L type bracket (-B3W)
Part no: B230



● C type bracket (-BW)
Part no: B220

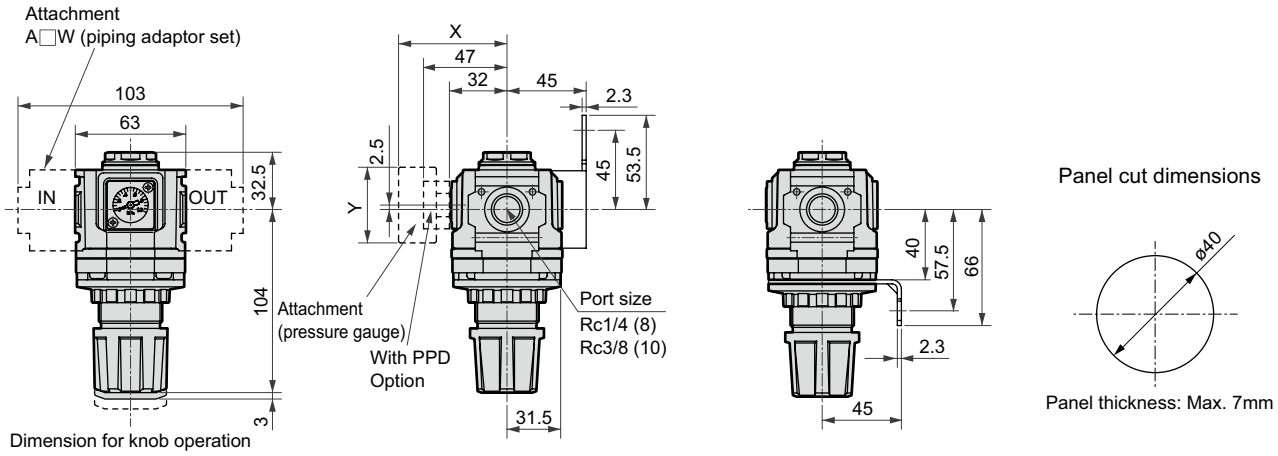


● L type bracket (-B4W)
Part no: B240

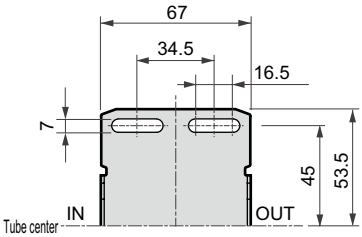


Dimensions

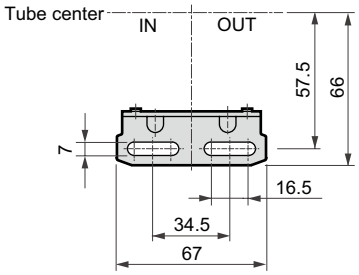
● R3000-W



・Attachment (C type bracket)
C type bracket (-BW)
Part no: B320



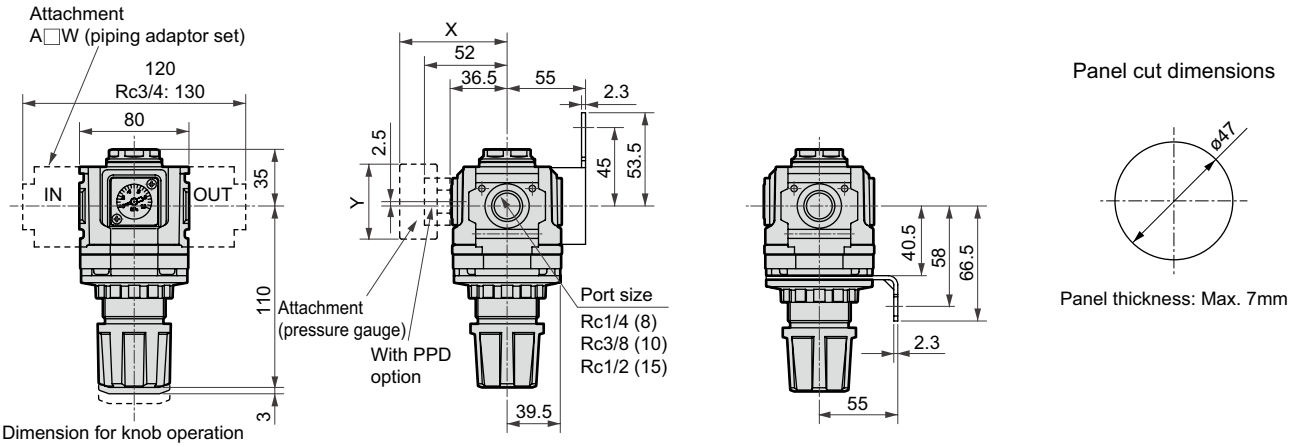
L type bracket (-B3W)
Part no: B330



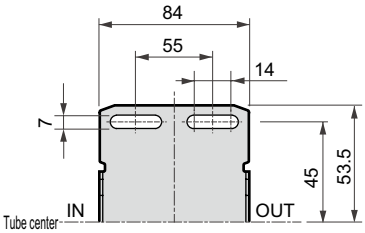
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5
R2	(69.5)	□30

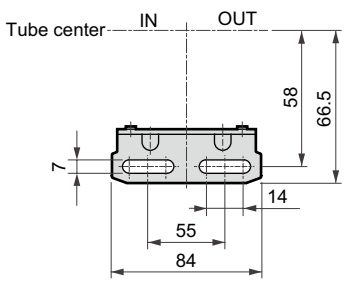
● R4000-W



・Attachment
C type bracket (-BW)
Part no: B420



L type bracket (-B3W)
Part no: B430

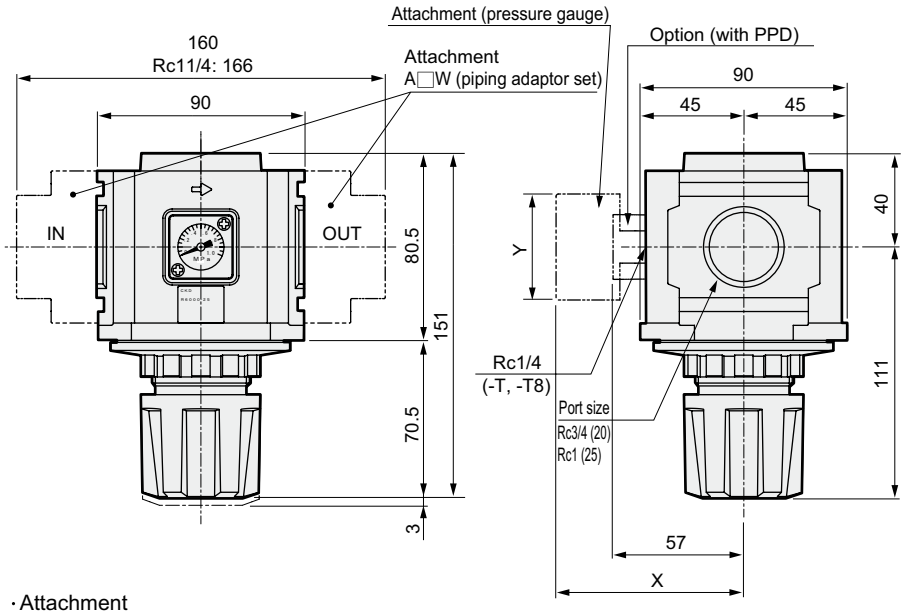


Option dimensions with pressure gauge attached

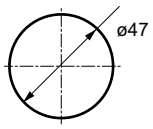
Attached pressure gauge	X	Y
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5
R2	(75)	□30

Dimensions CAD

● R6000-W



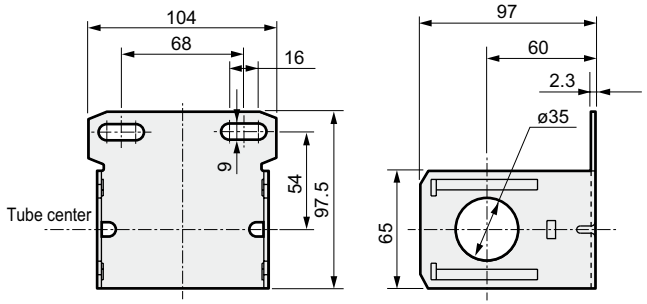
Panel cut dimensions



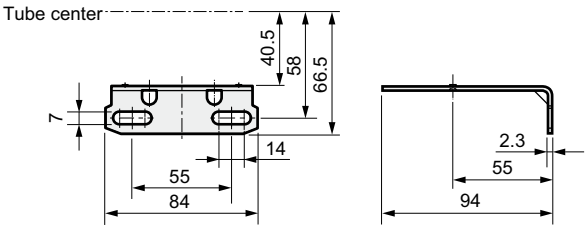
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(80)	ø39
G49P	(79.5)	ø43.5
G59P	(82)	ø52
G40P	(81.5)	ø42.5
G50P	(87.5)	ø52.5
G41P	(80)	ø42
G52P	(93)	ø52.5
R2	(80)	□30

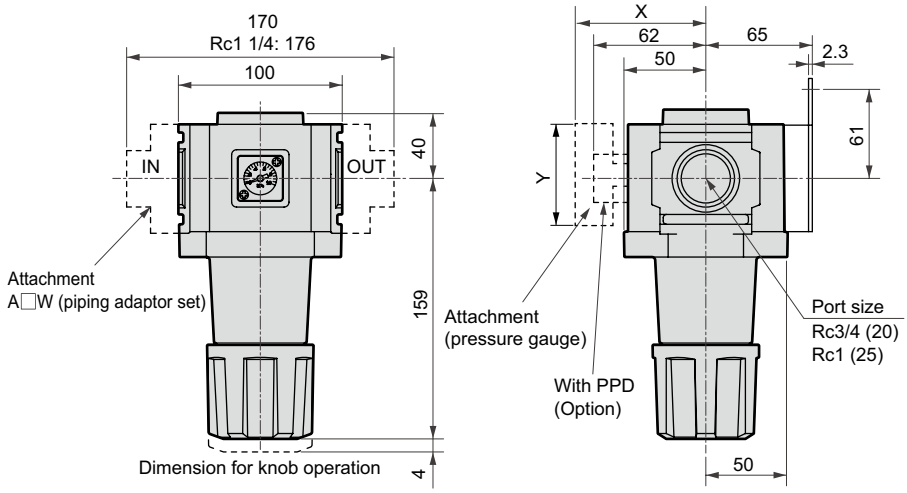
・Attachment
C type bracket (-BW)
Part no: B620



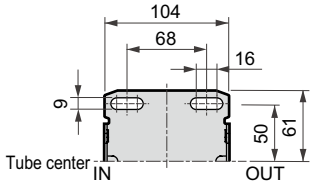
L type bracket (-B3W)
Part no: B430



● R8000-W



・Attachment
C type bracket (-BW)
Part no: B820



Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5
R2	(85)	□30

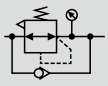
MEMO

Reverse regulator Standard white series

R1100/R2100/R3100 R4100/R6100/R8100-W Series

From secondary pressure to primary pressure with back flow function.

Port size: 1/8 to 1

JIS symbol 

RoHS CAD

Specifications

Descriptions	R1100-W	R2100-W	R3100-W	R4100-W	R6100-W	R8100-W
Exterior						
Working fluid	Compressed air					
Max. working pressure MPa	1.0					
Withstanding pressure MPa	1.5					
Ambient temperature range ℃	5 to 60					Note 3
Set pressure range (Note 2) MPa	0.05 to 0.85					
Relief	With relief mechanism					
Port size Rc, PT,	1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.16	0.31	0.45	0.7	1.0	1.6
Standard accessories	Pressure gauge, nut for panel mount					Pressure gauge

Note 1: Check that the primary pressure is at least 0.05 MPa or more than the secondary pressure.
Note 2: Refer to the set pressure range for the back pressure given on page 123 when selecting the model.
Note 3: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.

Ozone specifications

(Page 188)

R*100 - ···W··· - P11

Clean specification

(Catalog No. CB-033SA)

● Dust generation preventing structure for use in cleanrooms

R*100 - ····· - P7*

Specification for LiB production

(Catalog No.CC-947A)

● Specification for LiB manufacturing process

R*100 - ····· - P4*

How to order

* Refer top page 9 for an explanation of the options.

R1100 - 6 ◯ - W - L - ◯ - A6W ◯

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Displayed unit
Ⓕ Piping adaptor set (included)
Ⓖ Attachment

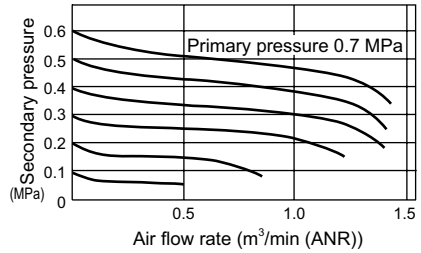
Symbol	Descriptions	Ⓐ Model no. R1100	R2100	R3100	R4100	R6100	R8100
Ⓑ Port size							
6	1/8	●					
8	1/4	●	●	●	●		
10	3/8		●	●	●		
15	1/2				●		
20	3/4					●	●
25	1					●	●
Ⓒ Port thread type							**Note 1**
Blank	Rc thread	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●
Ⓓ Option							**Note 2, Note 3**
Pressure Range	**Blank** 0.05 to 0.85MPa	●	●	●	●	●	●
	L 0.05 to 0.35MPa Note 4	●	●	●	●	●	●
Relief	**Blank** With relief mechanism	●	●	●	●	●	●
	N Non-relief type	●	●	●	●	●	●
Pressure gauge	**Blank** Standard pressure gauge (G401-W)	●	●	●	●	●	●
	T Without pressure gauge (gauge port (Rc1/4) assembled sealed)	●	●	●	●	●	●
	T8 Pressure gauge attachable (gauge port (Rc1/4) assembled open)	●	●	●	●	●	●
	T6 Compatibility with digital pressure sensor PPX Note 5	●	●	●	●	●	●
	R1 Pressure switch with display PPD assembled Note 6	●	●	●	●	●	●
Flow Direction	**Blank** Standard flow (left to right)	●	●	●	●	●	●
	X1 Reverse flow (right to left)	●	●	●	●	●	●
Ⓔ Displayed unit							
Blank	MPa display, Rc thread	●	●	●	●	●	●
J1	MPa display, NPT, G thread	●	●	●	●	●	●
Ⓕ Piping adaptor set (included)							**Note 7, 8 pages 155 to 157**
Blank	Not attached	●	●	●	●	●	●
A6*W	1/8 piping adaptor set	●					
A8*W	1/4 piping adaptor set	●	●	●	●		
A10*W	3/8 piping adaptor set	●	●	●	●		
A15*W	1/2 piping adaptor set		●	●	●		
A20*W	3/4 piping adaptor set				●	●	●
A25*W	1 piping adaptor set					●	●
A32*W	1 1/4 piping adaptor set					●	●
*** Adaptor thread type**							
Blank	Rc thread	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●
Ⓖ Attachment							**Note 9 Page 152, 198**
Blank	Not attached	●	●	●	●	●	●
BW	C type bracket	●	●	●	●	●	●
B3W	L type bracket Note 10	●	●	●	●	●	
B4W	B type bracket		●				
G45P	G45D-8-P10 (L: G45D-8-P04)	●	●	●	●	●	●
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 5	Digital pressure sensor: PPX-R10N-6M	●	●	●	●	●	●

⚠ Cautions for model No. selection

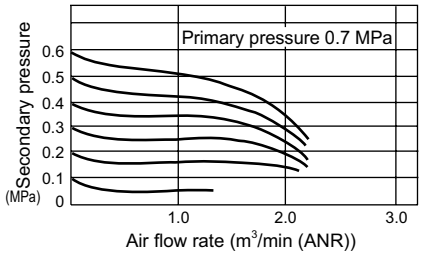
Note 1: G and NPT threads are available for IN, OUT, and gauge ports.
Note 2: When selecting options for several items, list options in order from the top.
Note 3: Position of the check valve and pressure gauge can not be changed. If the reverse direction of IN and OUT are required, indicate "X1" in the end of optional section.
Note 4: Pressure gauge display range will be 0 to 0.4 MPa for option "L".
Note 5: When option "T6" is selected, only "blank" or "R2" is selected for the (G) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.
Note 6: Out put type will be NPN transistor output. Consult with CKD if PNP transistor output is required.
Note 7: The piping adapter set and C bracket cannot be used together.
Note 8: A joiner set is attached with the piping adapter set.
Note 9: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.
Note 10: Refer to Section (2. Regulator), in "⚠PRECAUTIONS for Installation and Adjustment" (page 15) for details on mounting the L-type bracket.

Flow characteristics

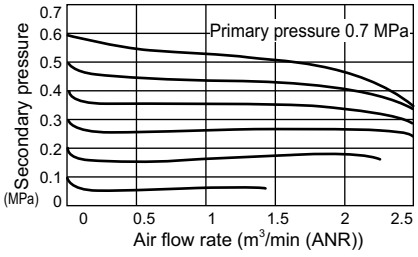
● R1100-6-W



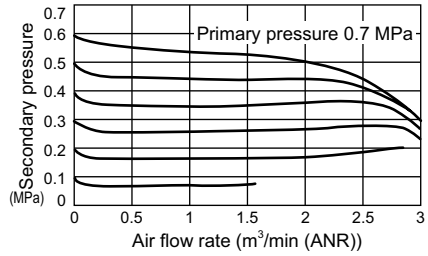
● R1100-8-W



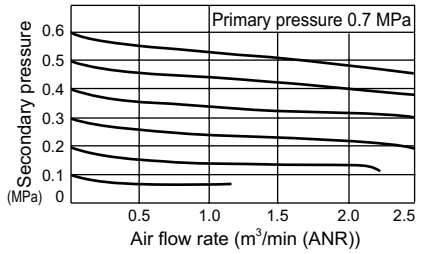
● R2100-8-W



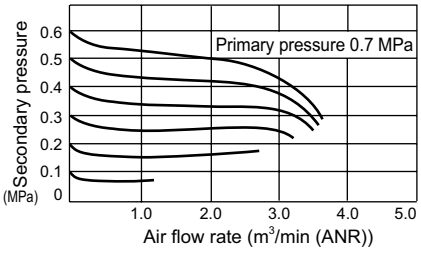
● R2100-10-W



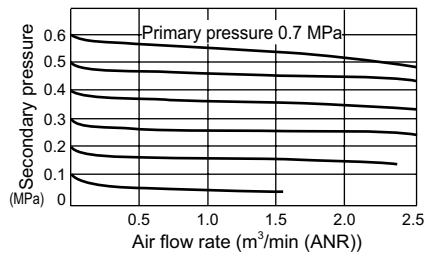
● R3100-8-W



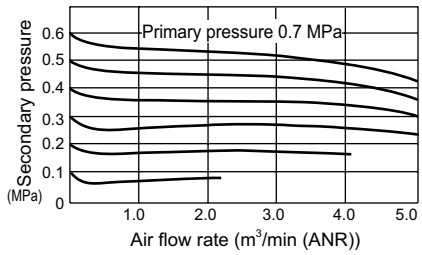
● R3100-10-W



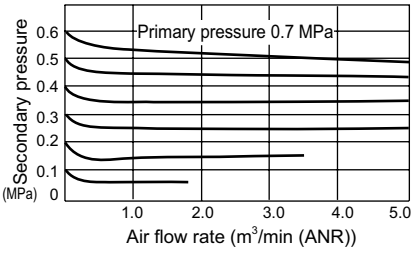
● R4100-8-W



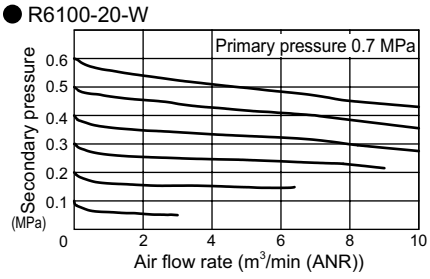
● R4100-10-W



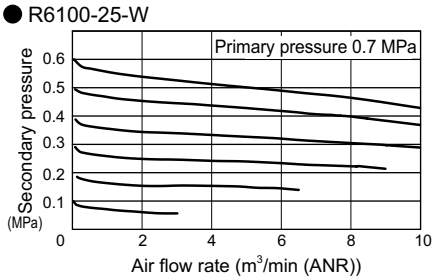
● R4100-15-W



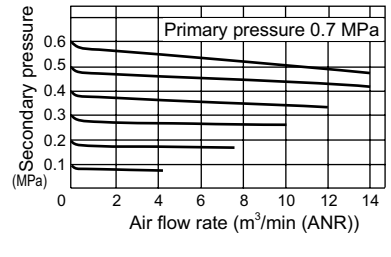
● R6100-20-W



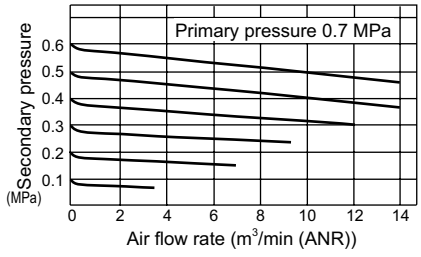
● R6100-25-W



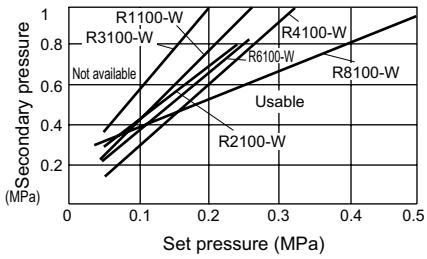
● R8100-20-W



● R8100-25-W



● Set pressure range for back pressure

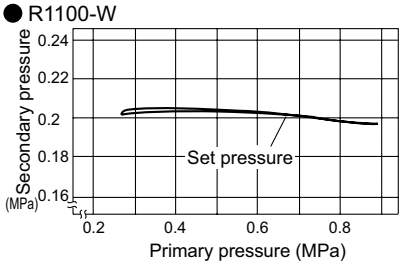


Note: The upper side of the graph is nonusable and the lower side usable.

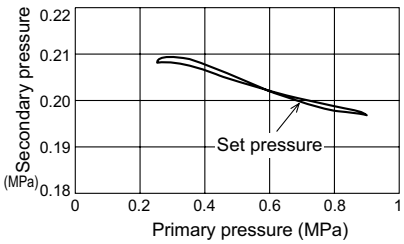
Example: If W4100-W is set to set pressure 0.2 MPa and the secondary back pressure is 0.6 MPa or more, the secondary pressure will not be released to the primary side.

Pressure characteristics

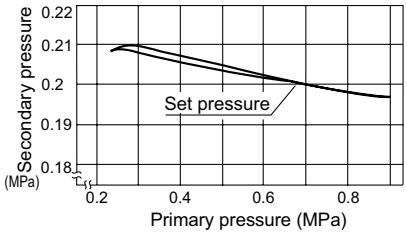
● R1100-W



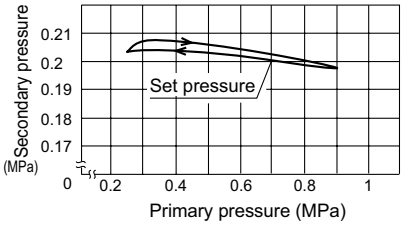
● R2100-W



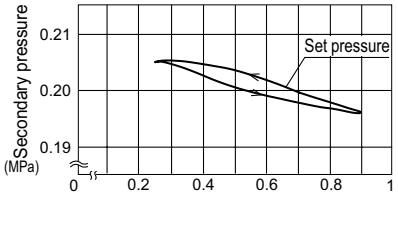
● R3100-W



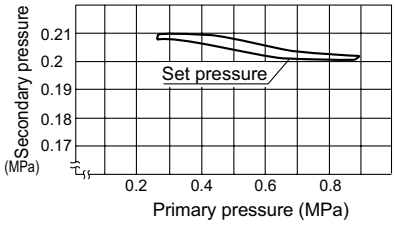
● R4100-W



● R6100-W

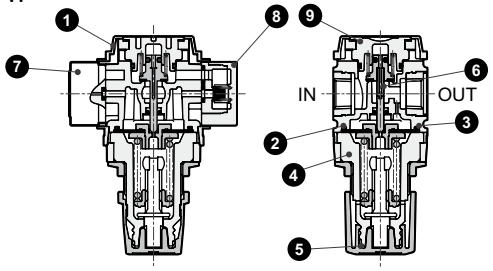


● R8100-W

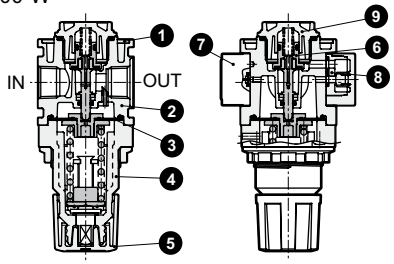


Internal structure and parts list

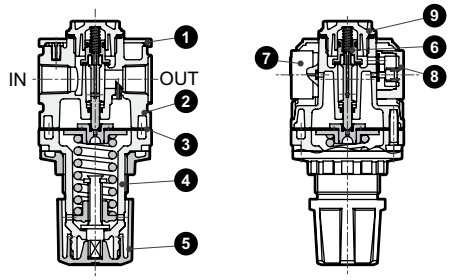
● R1100-W



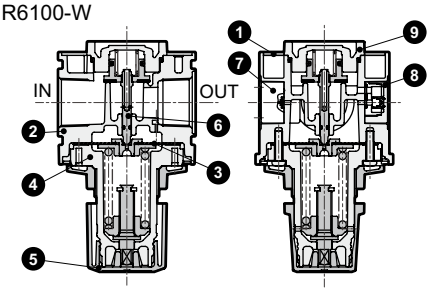
● R2100-W



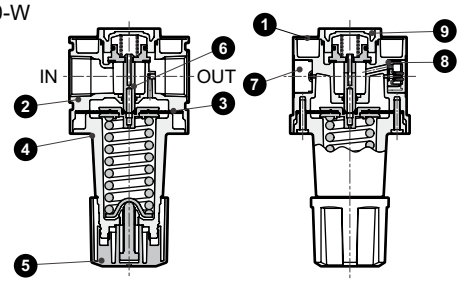
● R3100-W・R4100-W



● R6100-W



● R8100-W



No.	Part name	Material					
		R1100-W	R2100-W	R3100-W	R4100-W	R6100-W	R8100-W
1	Plate cover	ABS resin					
2	Body	Polyamide resin, steel	Aluminum alloy die-casting				
3	Diaphragm assembly	Polyacetal resin nitrile rubber	Zinc alloy die-casting, nitrile rubber Note 2				
4	Cover	Polyamide resin	PBT Resin				Aluminum alloy die-casting
5	Knob	Polyacetal resin					
6	Valve assembly	Brass, hydrogenated nitrle rubber (polyacetal resin: R2100-W, R3100-W, R4100-W only)					
7	Pressure gauge assembly	PBT resin, polyacetal resin, polycarbonate resin, nitrile rubber, brass, copper					
8	Check valve full assembly	PBT resin, nitrile rubber, stainless steel wire, steel					
9	Bottom plug	Polyacetal resin				Aluminum alloy die-casting	

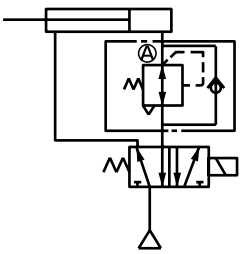
Note 1: Refer to page 128 for repair parts kits.
Note 2: Aluminum will be added for R6000-W for low pressure.

Functional explanation

When the primary pressure is introduced from the IN side, the check valve functions as a regular regulator because it closes with primary pressure and spring load. When primary pressure is released by a changeover valve such as a shut-off valve, the check valve opens with secondary pressure. Pressure in the diaphragm chamber is released and pressure drops. This causes the diaphragm to be pressed down by the pressure adjustment spring. The main valve (valve assembly) opens, and the air on the OUT side is discharged.

● Circuit diagram

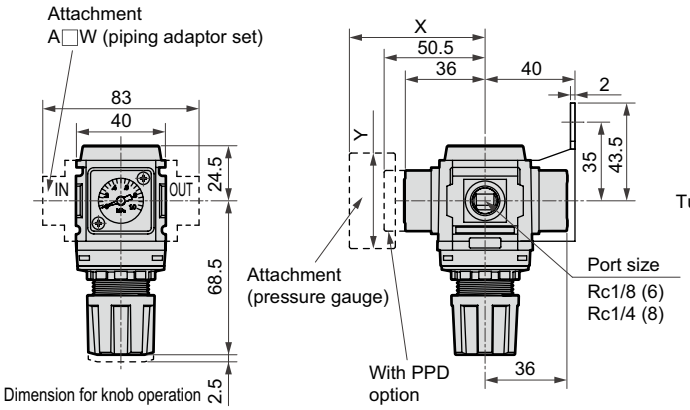
When cylinder head side and rod side pressure is different.



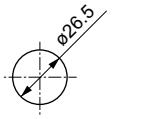
Note: Set back pressure A for when the primary pressure is released within the range in the graph for the regulator's set pressure.

Dimensions CAD

● R1100-W



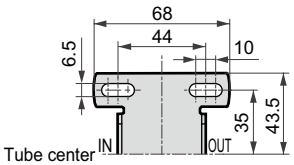
Panel cut dimensions



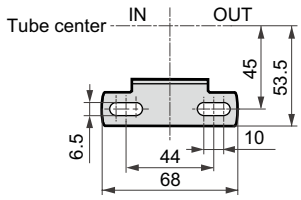
Panel thickness: Max. 6mm

・Attachment

C type bracket (-BW)
Part no: B120



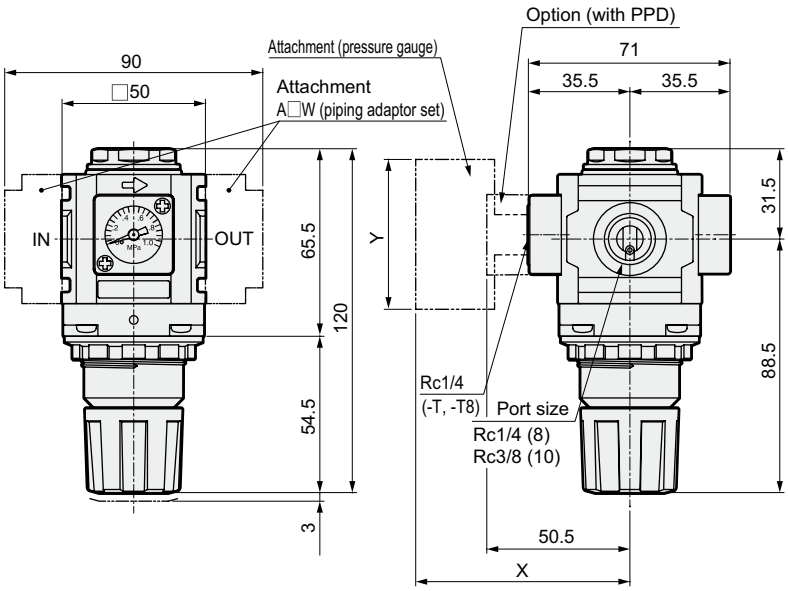
L type bracket (-B3W)
Part no: B130



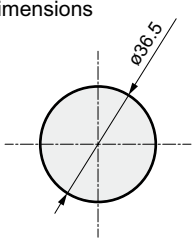
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5
R2	(74)	□30

● R2100-W



Panel cut dimensions

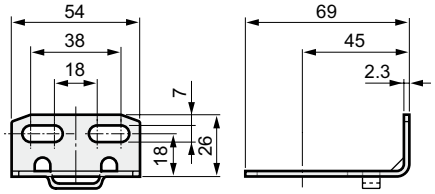


Panel thickness: Max. 4mm

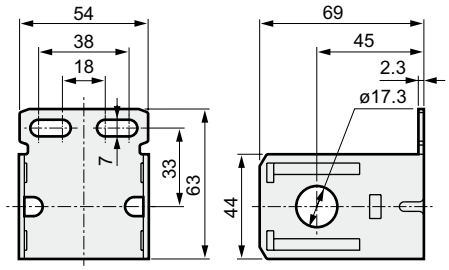
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G59P	(75.5)	ø52
G40P	(75)	ø42.5
G50P	(75)	ø52.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

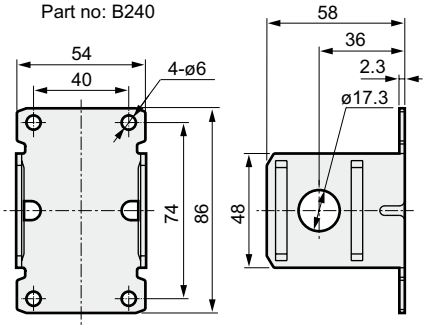
● L type bracket (-B3W)
Part no: B230



● C type bracket (-BW)
Part no: B220

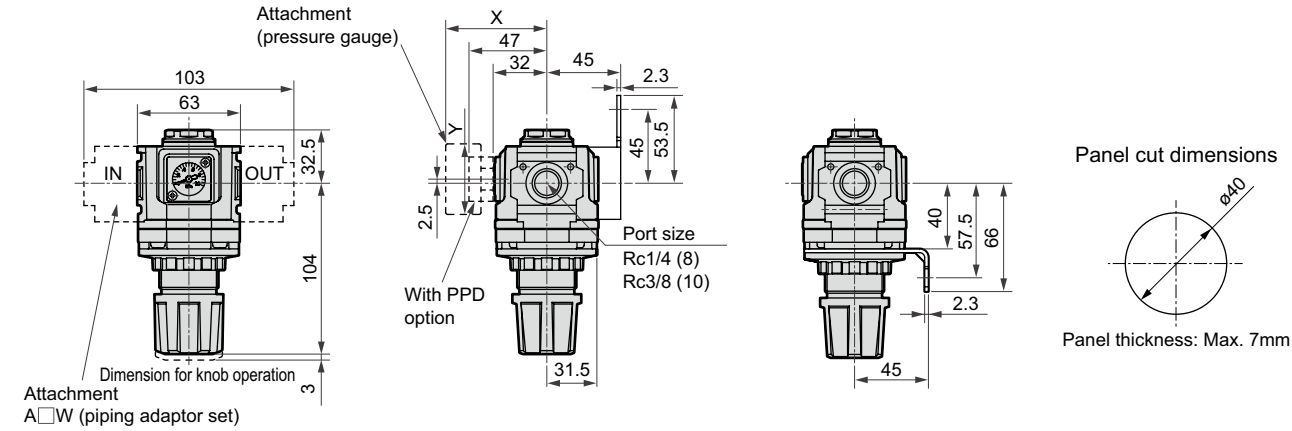


● L type bracket (-B4W)
Part no: B240

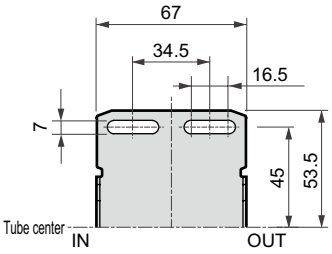


Dimensions

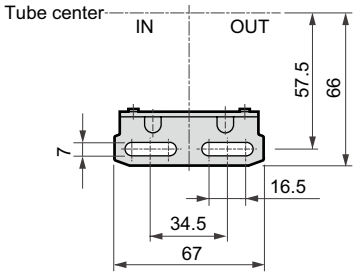
● R3100-W



・Attachment
C type bracket (-BW)
Part no: B320



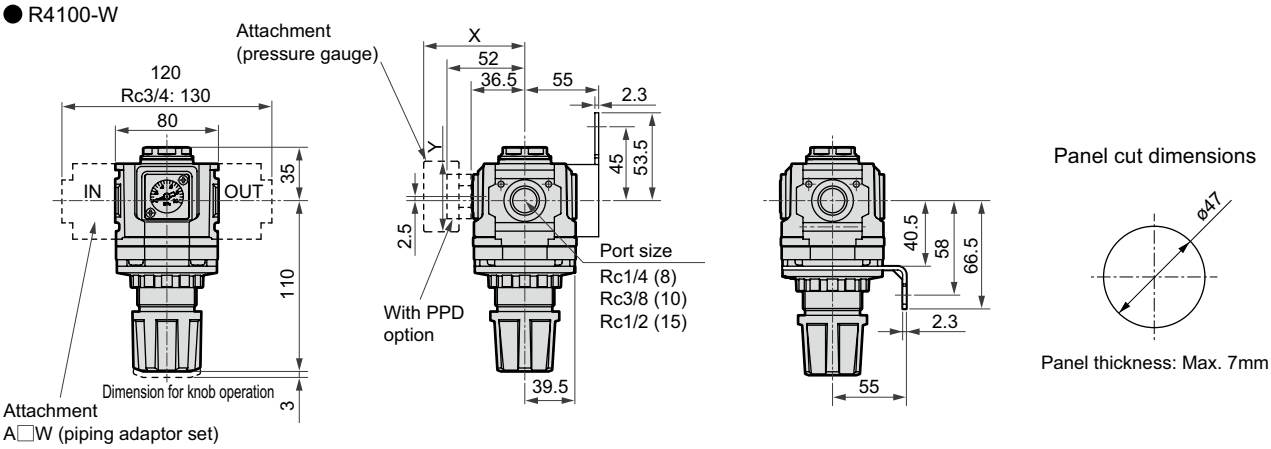
L type bracket (-B3W)
Part no: B330



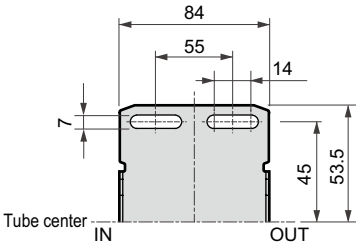
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5
R2	(69.5)	□30

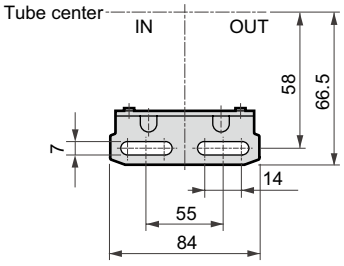
● R4100-W



・Attachment
C type bracket (-BW)
Part no: B420



L type bracket (-B3W)
Part no: B430

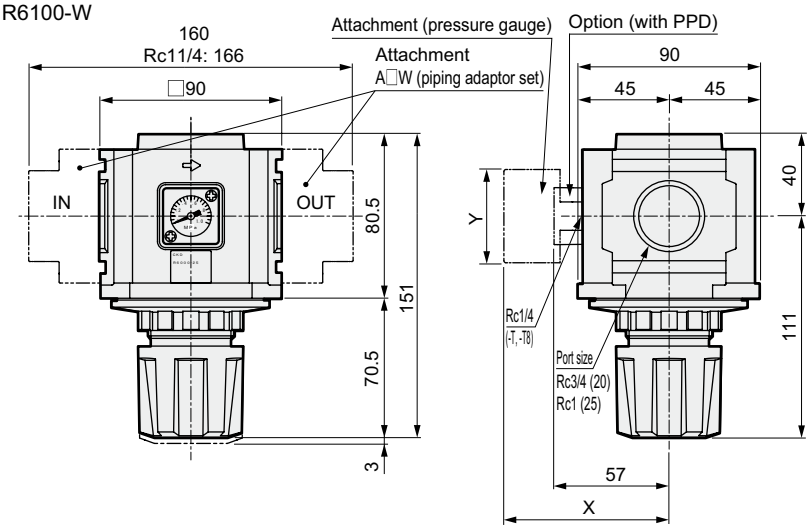


Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5
R2	(75)	□30

Dimensions CAD

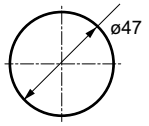
● R6100-W



・Attachment
C type bracket (-BW)
Part no: B620

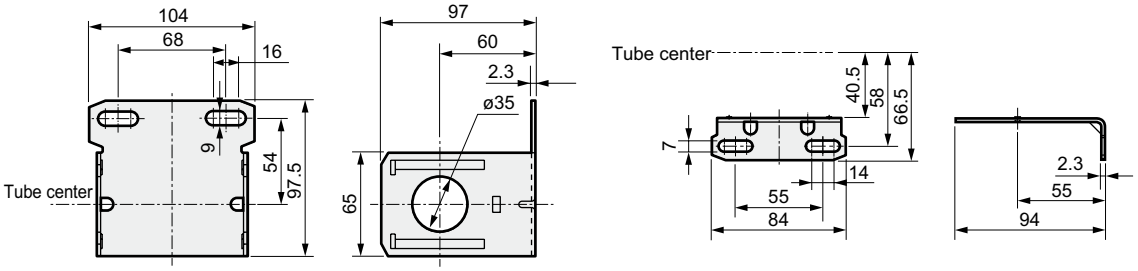
L type bracket (-B3W)
Part no: B430

Panel cut dimensions

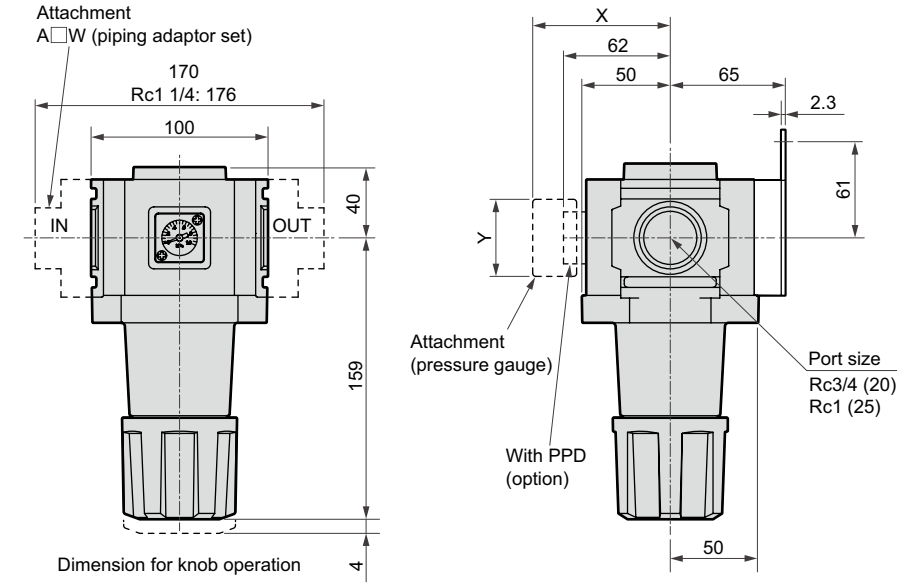


Pressure gauge option dimensions

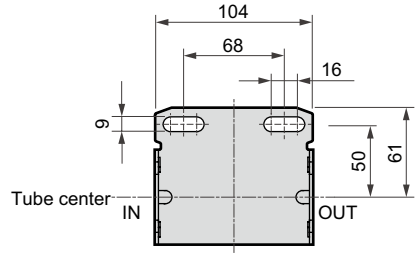
Attached pressure gauge	X	Y
G45P	(80)	ø39
G49P	(79.5)	ø43.5
G59P	(82)	ø52
G40P	(81.5)	ø42.5
G50P	(81.5)	ø52.5
G41P	(80)	ø42
G52P	(93)	ø52.5
R2	(80)	□30



● R8100-W



・Attachment
C type bracket (-BW)
Part no: B820



Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5
R2	(85)	□30

Optional parts drawing

Repair parts kit (Set consisting of diaphragm assembly, valve assembly, bottom spring, louver, element, baffle, bowl O ring)

Repair kit model no. / Model	Relief type diaphragm	No relief type diaphragm
R1000-W, R1100-W	R1000-KIT	R1000-KIT-N
R2000-W, R2100-W	R2000-W-KIT	R2000-W-KIT-N
R3000-W, R3100-W, RM3000-W	R3000-KIT	R3000-KIT-N
R4000-W, R4100-W, RM4000-W	R4000-KIT	R4000-KIT-N
R6000-W, R6100-W	R6000-KIT R6000-KIT-L (for low pressure range)	R6000-KIT-N R6000-KIT-LN (for low pressure range)
R8000-W, R8100-W	R8000-KIT	R8000-KIT-LN

Valve assembly (valve assembly, bottom spring, bottom O ring set)

Model	Valve assembly model no.
R1000-W, R1100-W	R1000-VALVE-ASSY
R2000-W, R2100-W	R2000-W-VALVE-ASSY
R3000-W, R3100-W, RM3000-W	R3000-VALVE-ASSY
R4000-W, R4100-W, RM4000-W	R4000-VALVE-ASSY
R6000-W, R6100-W	R6000-VALVE-ASSY
R8000-W, R8100-W	R8000-VALVE-ASSY

* Refer to page 209 for gauge plug assembly

Check valve for reverse regulator assembly

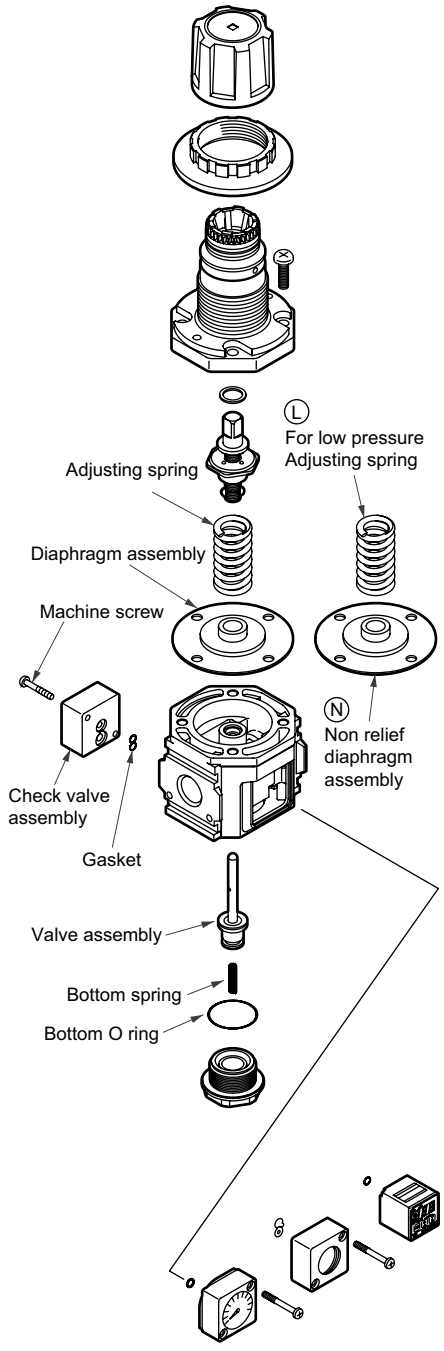
Model	Check valve assembly model no.
R1000-W, R1100-W	R1100-W-CHECK-VALVE-ASSY
R2100-W	R3100-W-CHECK-VALVE-ASSY
R3100-W, RM3000-W, W3100-W R4100-W, RM4000-W, W4100-W R6100-W, R8100-W W8100-W	R3100-W-CHECK-VALVE-ASSY

Adjusting spring

Adjusting spring model no. / Model	Standard spring (0.05 to 0.85MPa)	Spring for low pressure (0.05 to 0.35MPa)
R1000-W, R1100-W W1000-W, W1100-W	R1000-SPRING	R1000-SPRING-L
R2000-W, R2100-W	R2000-W-SPRING	R2000-W-SPRING-L
R3000-W, R3100-W, RM3000-W W3000-W, W3100-W	R3000-SPRING	R3000-SPRING-L
R4000-W, R4100-W, RM4000-W W4000-W, W4100-W	R4000-SPRING	R4000-SPRING-L
R8000-W, R8100-W	R8000-SPRING	R8000-SPRING-L
W8000-W, W8100-W	W8000-SPRING	W8000-SPRING-L

Diaphragm assembly (diaphragm assembly only)

Diaphragm assembly model no. / Model	Relief type Diaphragm	Non-relief type Diaphragm
R1000-W, R1100-W W1000-W, W1100-W	R1000-DIAPHRAGM-ASSY	R1000-DIAPHRAGM-ASSY-N
R2000-W, R2100-W	R2000-DIAPHRAGM-ASSY	R2000-DIAPHRAGM-ASSY-N
R3000-W, R3100-W, RM3000-W W3000-W, W3100-W	R3000-DIAPHRAGM-ASSY	R3000-DIAPHRAGM-ASSY-N
R4000-W, R4100-W, RM4000-W W4000-W, W4100-W	R4000-DIAPHRAGM-ASSY	R4000-DIAPHRAGM-ASSY-N
R6000-W, R6100-W	R6000-DIAPHRAGM-ASSY R6000--DIAPHRAGM-ASSY-L (for low pressure range)	R6000-DIAPHRAGM-ASSY-N R6000-DIAPHRAGM-ASSY-LN (for low pressure range)
R8000-W, R8100-W	R8000-DIAPHRAGM-ASSY	R8000-DIAPHRAGM-ASSY-N
W8000-W, W8100-W	W8000-DIAPHRAGM-ASSY	W8000-DIAPHRAGM-ASSY-N



Lubricator Standard white series

L1000 / L3000 / L4000 / L8000-W Series

Supply fine mist oil.
Port size: 1/8 to 1

JIS symbol 

Specifications

Descriptions	L1000-W	L3000-W	L4000-W	L8000-W
Exterior				
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Withstanding pressure MPa	1.5			
Working temperature ℃	5 to 60			
Minimum drip flow Note 1 m^3/min (ANR)	0.015	0.03	0.065	0.065
Oil capacity cm^3	20	85	170	170 (MAX360)
Applicable oil	Turbine oil Class 1 ISO VG32 (spindle oil can not be used)			
Port size Rc, NPT, G	1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.1	0.28	0.45	1.4
Standard accessories	Bowl guard			

Note 1: The minimum drip flow is is the amount of flow that allows five drops of turbine oil drip per minute at primary pressure of 0.5 MPa and intake air temperature of 20℃. (Can not be used for dry fog)

Float switch electircal specifications

Descriptions	
Control points	1 points
Operation	Rising float will (oil full) will turn the switch OFF, and lowering float (no oil) will turn the switch ON.
Maximum working voltage	AC240V, DC200V
Maximum opening/closing capacity	50 VA or 50 W, whichever is smaller
Maximum opening/closing current	0.5A
Withstanding pressure between contacts	DC400V for 1 min, leakage current 1mA or less
Contact resistance	220mΩ or less (between terminal sections)
Insulation resistance	100MΩ and over (between terminal and cases, 500 VDC megger)
Withstanding voltage	AC1500V 1min. (between case and terminal)
Electrical service life	10^6 cycles (AC200V, 200mA, with resistance)

How to order

L1000 - 6 ○ - W - C - ○ - A6W ○

* Refer top page 9 for an explanation of the options.

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Displayed unit
Ⓕ Piping adaptor set (included)
Ⓖ Bracket (attached)

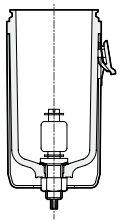
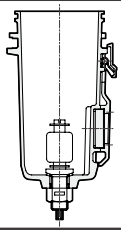
Symbol		Descriptions	Ⓐ Model no. L1000	L3000	L4000	L8000
Ⓑ Port size						
6		1/8	●			
8		1/4	●	●	●	
10		3/8		●	●	
15		1/2			●	
20		3/4				●
25		1				●
Ⓒ Port thread type						Note 1
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓓ Option						Note 2
Drain Discharge	**Blank**	No manual cock	●	●	●	●
	C	With manual cock	●	●	●	●
	LL	With float switch		●	●	●
Bowl Material Note 3	**Blank**	Polycarbonate bowl	●	●	●	●
	Z	Nylon bowl	●	●	●	●
	M	Metal bowl		●	●	●
	M1	Metal bowl with manual drain cock Note 4		●	●	●
Flow Direction	**Blank**	Standard flow (left to right)	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●
Ⓔ Displayed unit						
Blank		MPa display, Rc thread	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●
Ⓕ Piping adaptor set (included)		Note 5, 6 pages 155 to 157				
Blank		Not attached	●	●	●	●
A6*W		1/8 piping adaptor set	●			
A8*W		1/4 piping adaptor set	●	●	●	
A10*W		3/8 piping adaptor set	●	●	●	
A15*W		1/2 piping adaptor set		●	●	
A20*W		3/4 piping adaptor set			●	●
A25*W		1 piping adaptor set				●
A32*W		1 1/4 piping adaptor set				●
*** Adaptor thread type**						
Blank		RC thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓖ Bracket (attached)						
Blank		Not attached	●	●	●	●
BW		C type bracket	●	●	●	●

⚠ Cautions for model No. selection

Note 1: G and NPT threads are available for IN, OUT.
Note 2: When selecting options for several items, list options in order from the top.
Note 3: The adjusting dome is made of polycarbonate for a nylon bowl or metal bowl. Consult with CKD if a different material is required.
Note 4: Have a choice drain dischange option "C" or "F" and "F1" for option "M1".
Note 5: The piping adapter set and C bracket cannot be used together.
Note 6: A joiner set is attached with the piping adapter set.

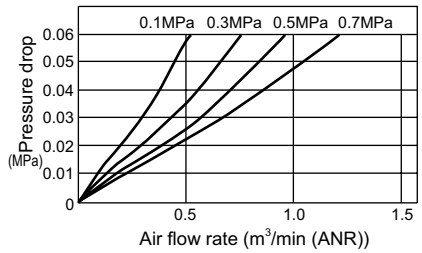
Drainage and bowl material combination (how to order "D")

Option ● with float switch

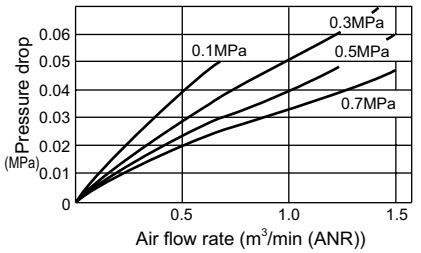
	3000/4000/8000 Series	
Shape		
Material	**Plastic bowl**	**Metal bowl**
	Polycarbonate / **Nylon**	**Aluminum**
Lubricator L※000-W	LL / LLZ	LLM

Flow characteristics

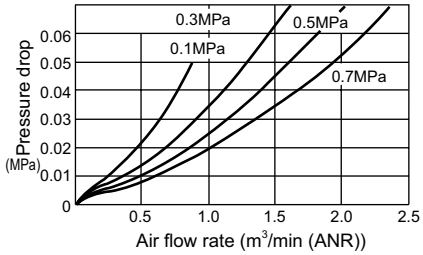
● L1000-6-W



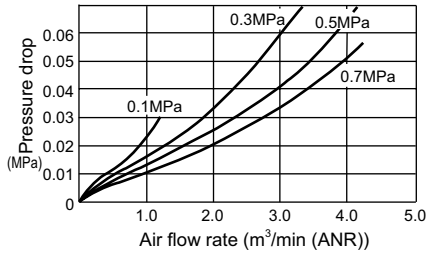
● L1000-8-W



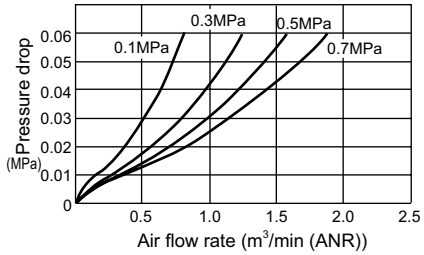
● L3000-8-W



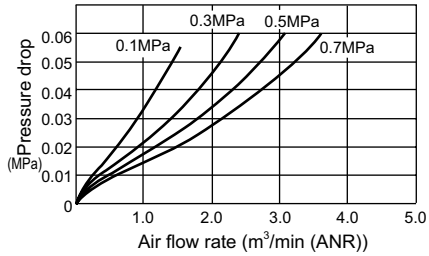
● L3000-10-W



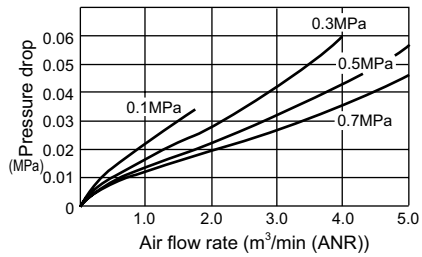
● L4000-8-W



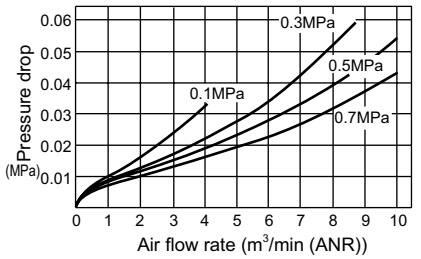
● L4000-10-W



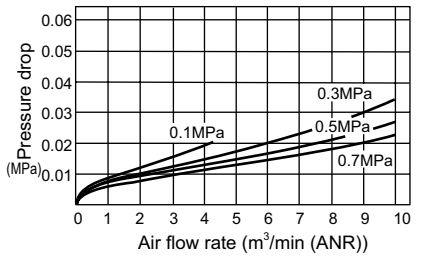
● L4000-15-W



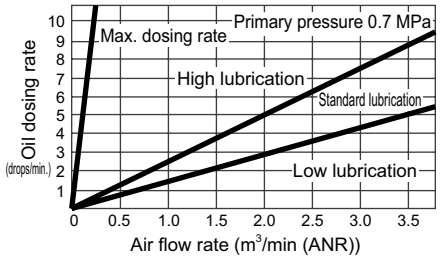
● L8000-20-W



● L8000-25-W

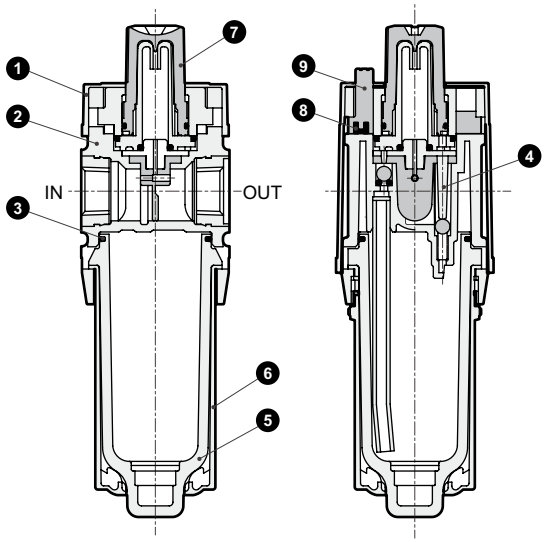


Oil dosing rate

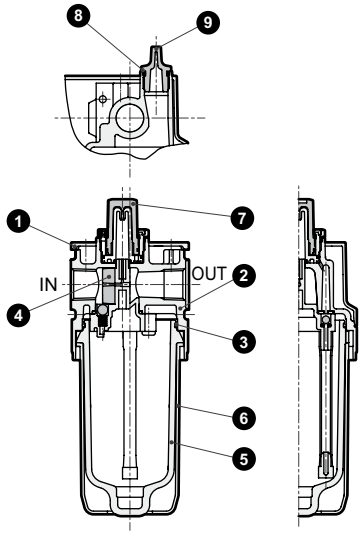


Internal structure and parts list

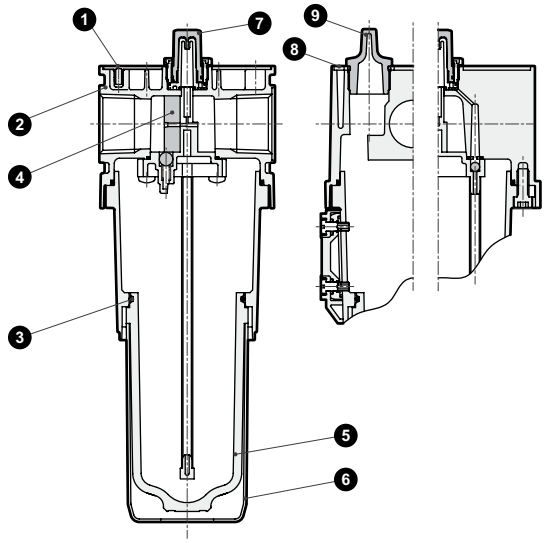
● L1000-W



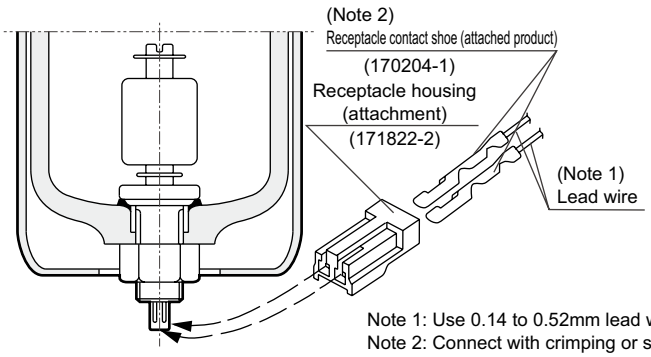
● L3000-W･L4000-W



● L8000-W



● Optional float switch



Note 1: Use 0.14 to 0.52mm lead wire.
Note 2: Connect with crimping or soldering.

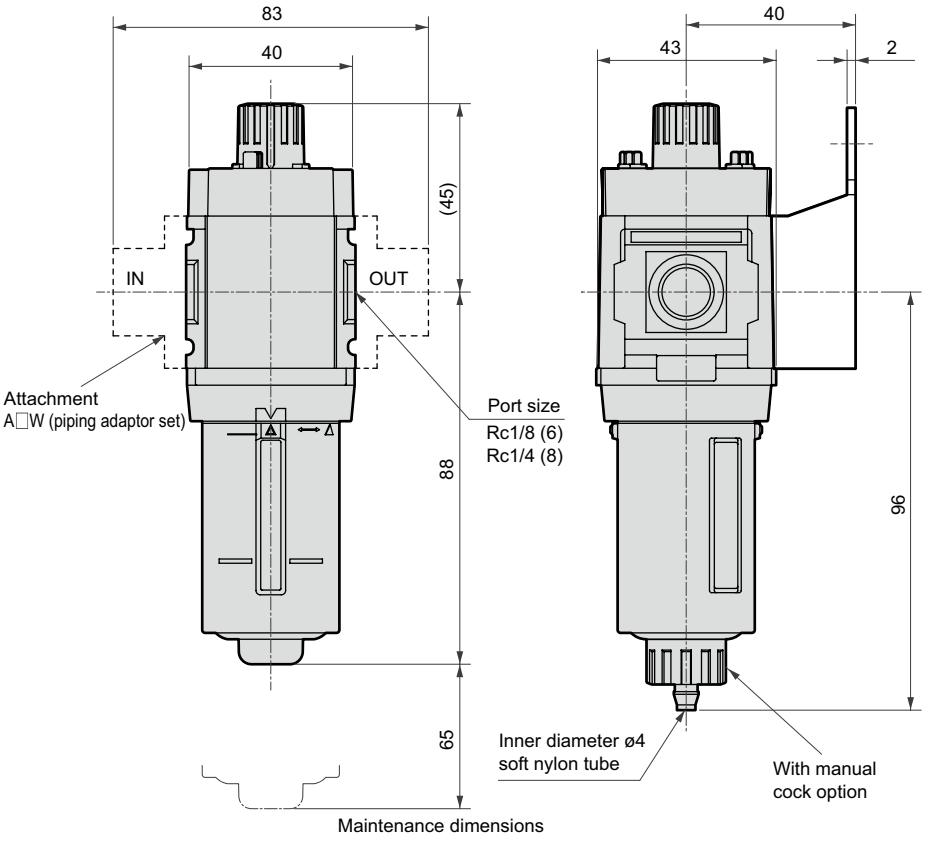
Japan AMP post header (part No. AMP171825-2) is used for the terminal.
AMP171822-2 (standard) or AMP172142-2 (low profile) connectors are compatible.

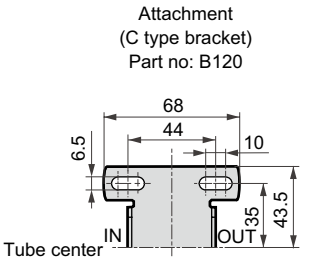
No.	Part name	Material			
		L1000-W	L3000-W	L4000-W	L8000-W
1	Plate cover	ABS resin			
2	Body	Polyamide resin, steel	Aluminum alloy die-casting		
3	O-ring Note 1	Special nitrile rubber			
4	Flow guide	Urethane rubber resin		Nitrile rubber	
5	Bowl	Polycarbonate resin			
6	Bowl guard	Polyamide resin	Polyamide resin, steel		
7	Adjusting dome	Transparant nylon			
8	O-ring	Nitrile rubber			
9	Filling plug	Polyacetal resin			

Note 1: L1000-W O ring has a special shape.

Dimensions CAD

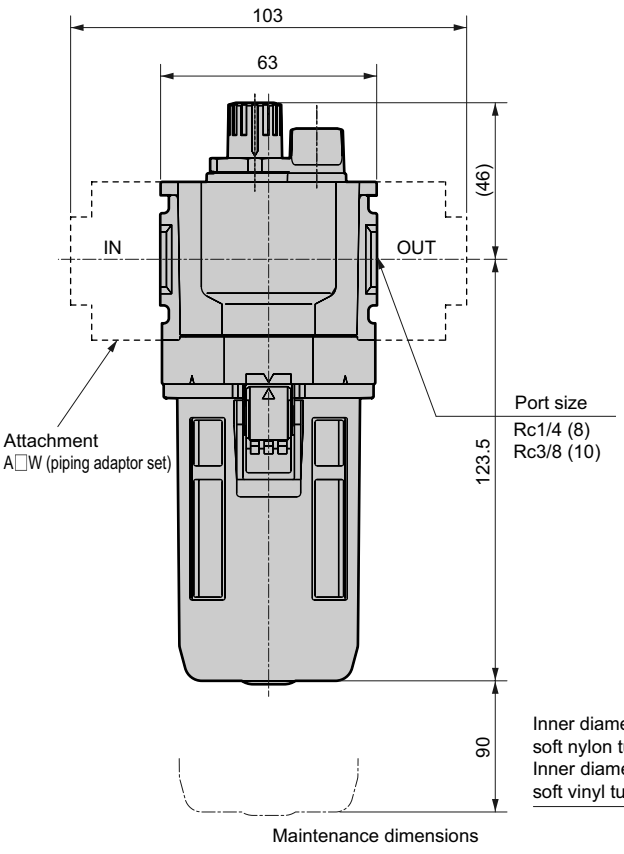
● L1000-W

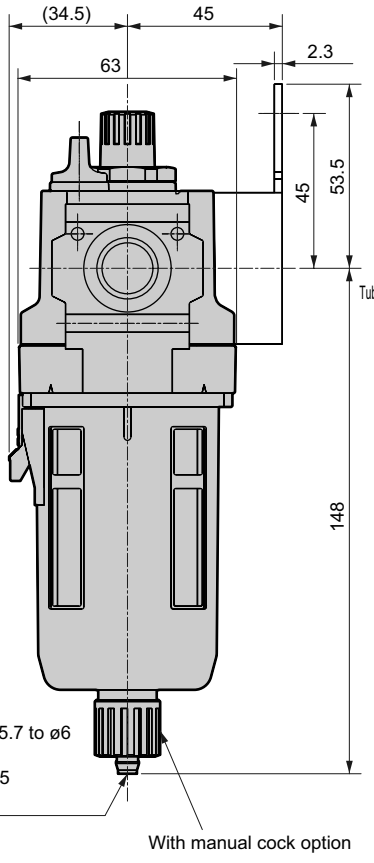


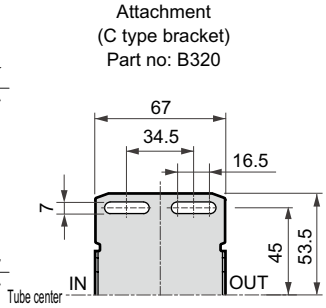


Note: The C-type bracket and piping adapter set attachments cannot be used at the same time.

● L3000-W



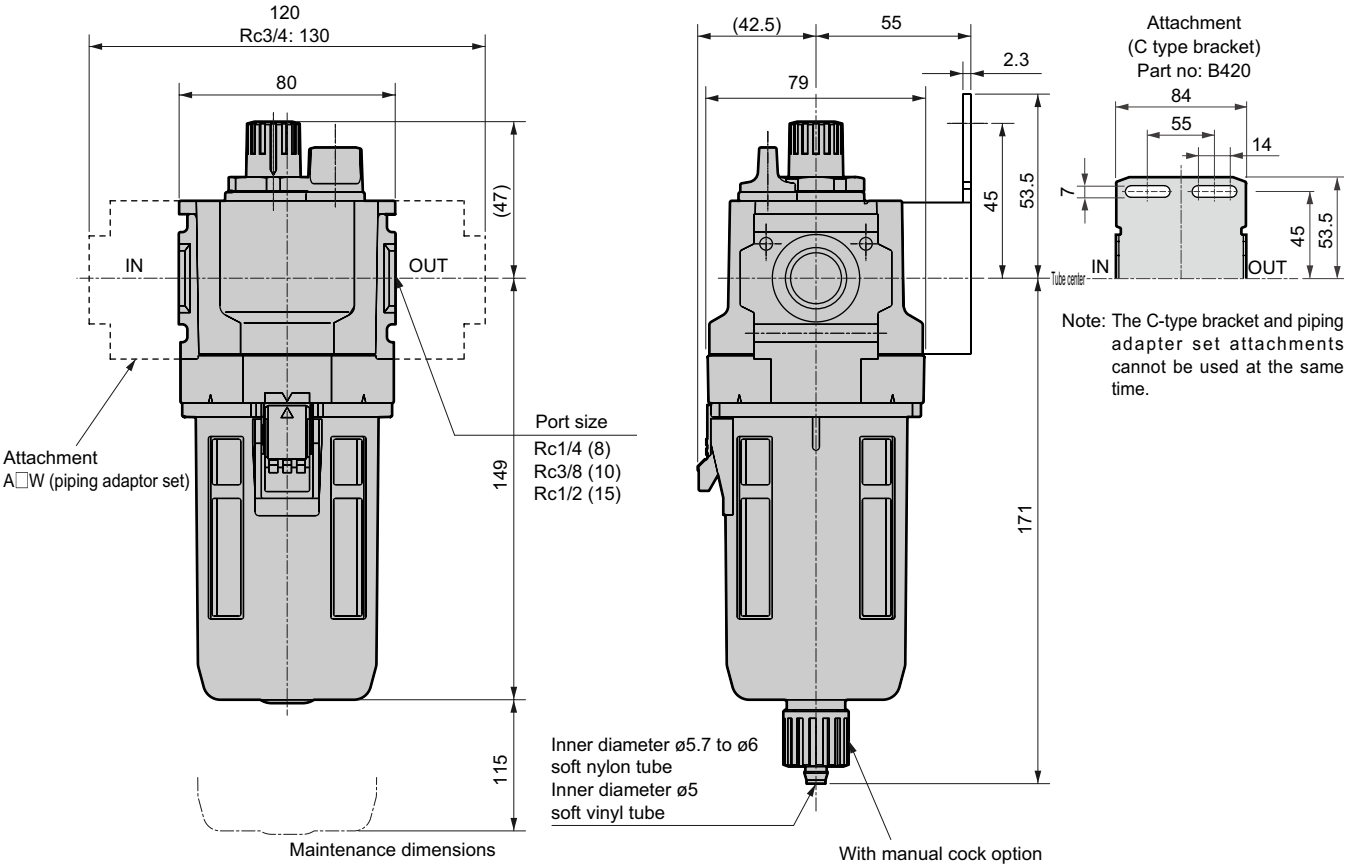




Note: The C-type bracket and piping adapter set attachments cannot be used at the same time.

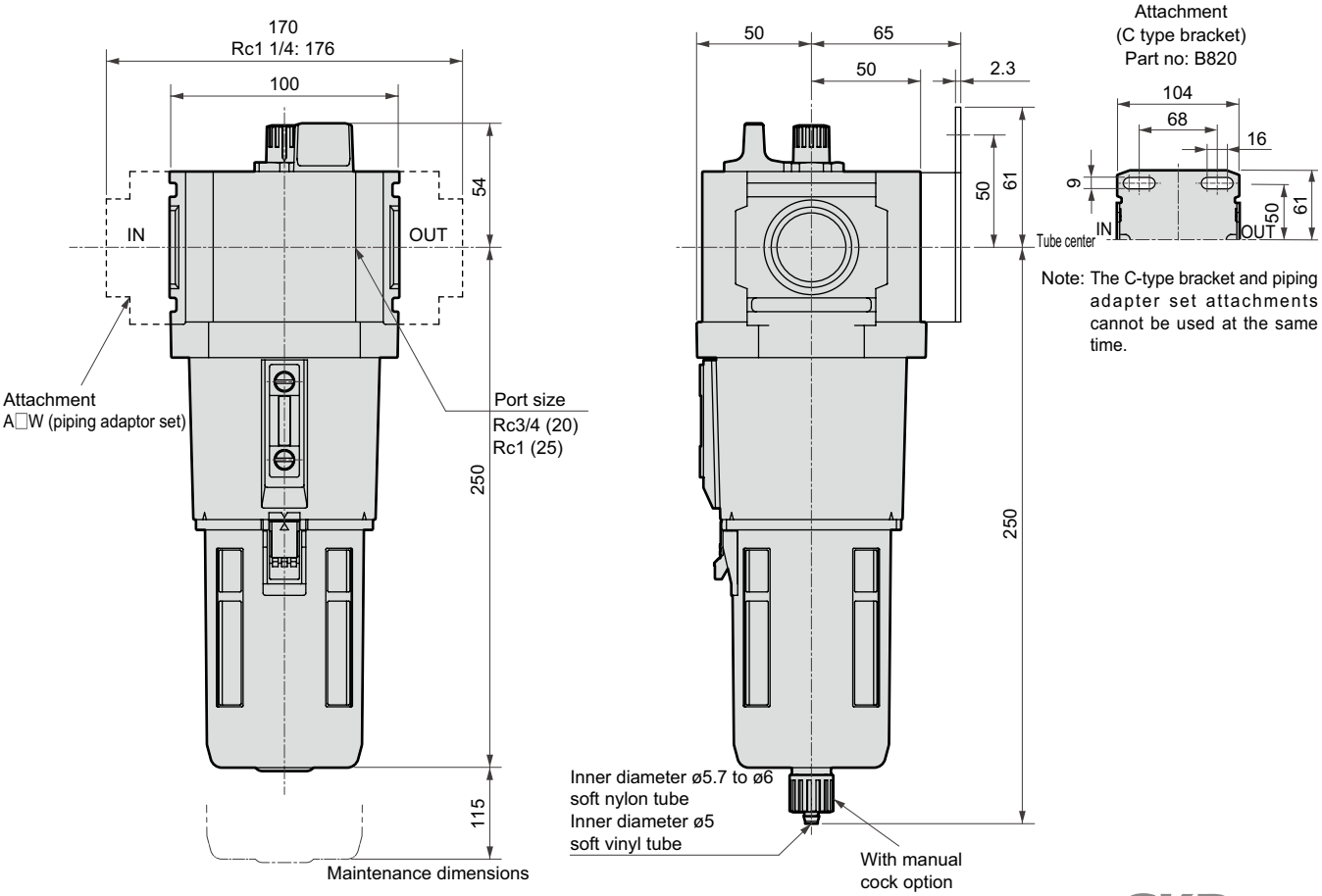
Dimensions

● L4000-W



Note: C-type bracket and piping adapter set attachments cannot be used at the same time.

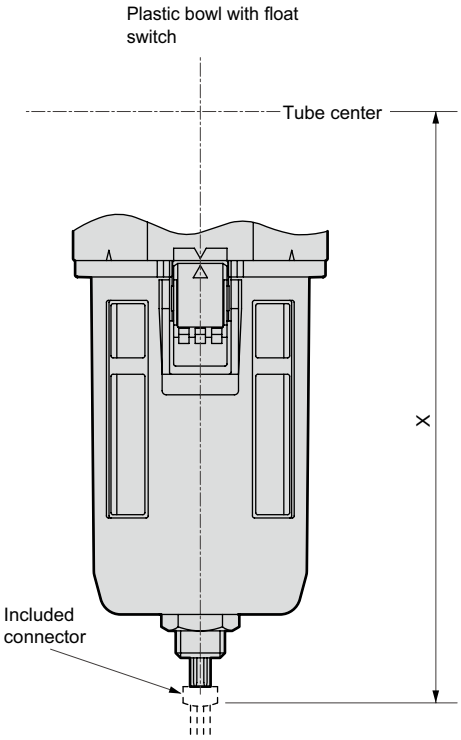
● L8000-W



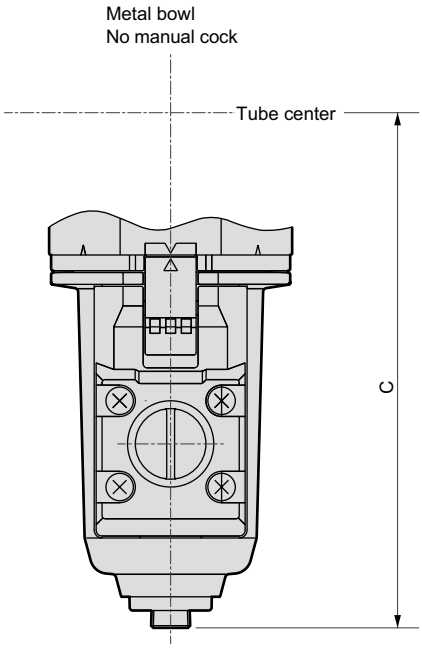
Option dimensions

Other options [L3000-W, 4000-W, 8000-W]

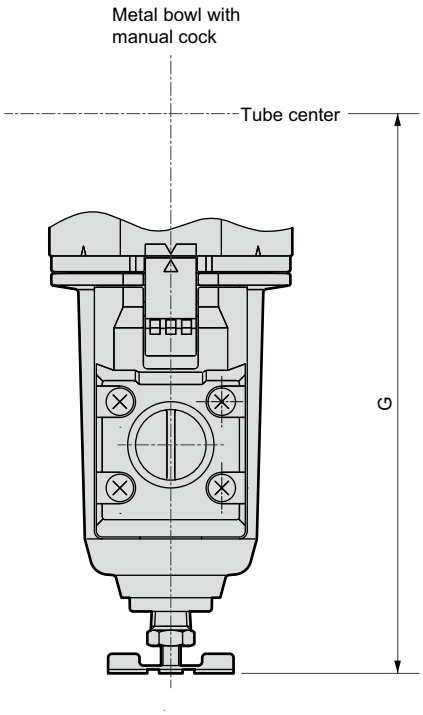
● Plastic bowl (Blank)



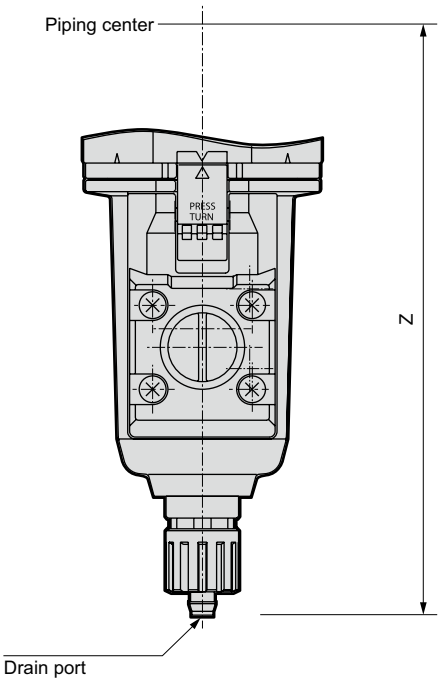
● Metal bowl (manual cock) (M)



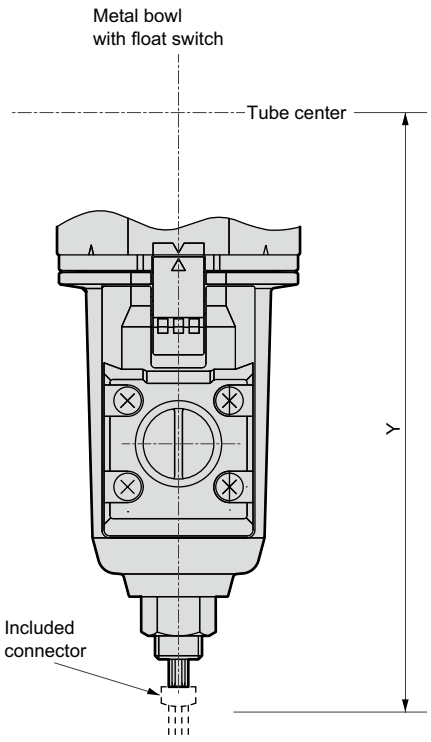
● Metal bowl with manual cock (CM)



● Metal bowl with manual drain cock (CM1)

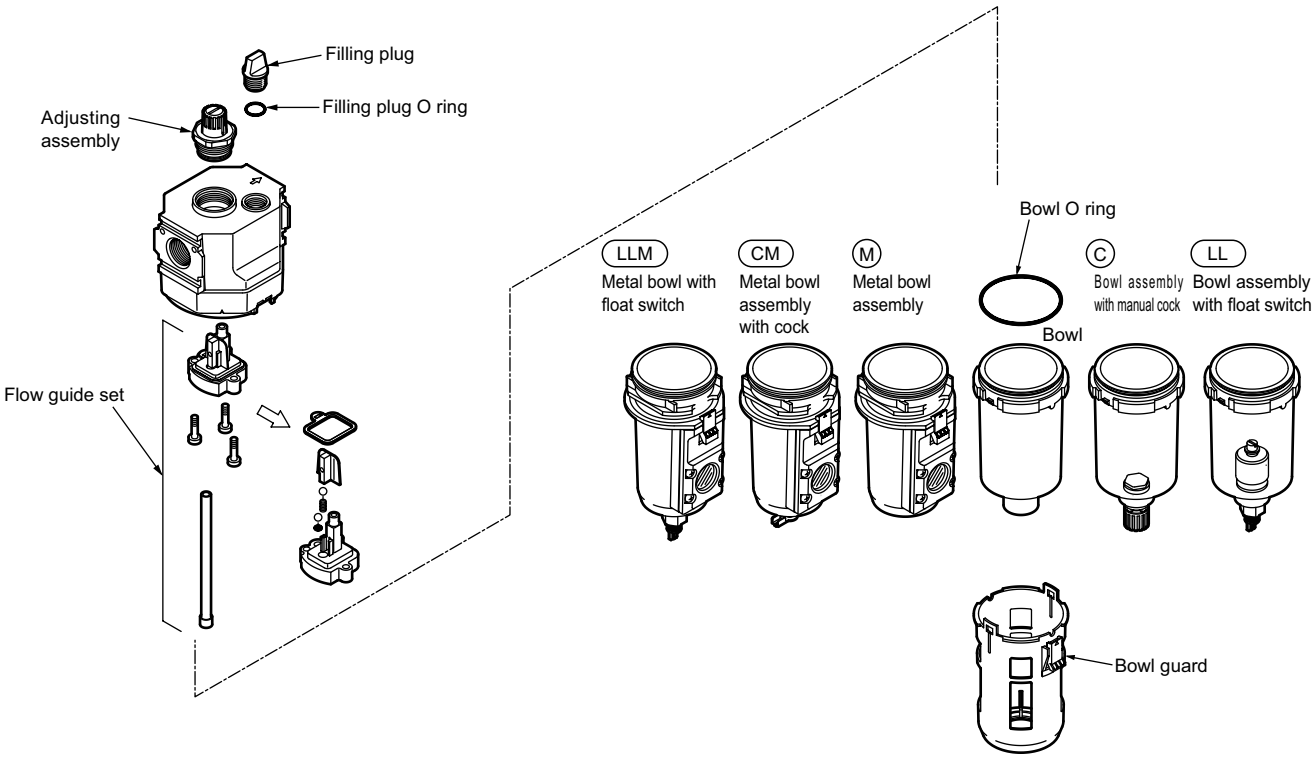


● Metal bowl with float switch (LLM)



Model no.	C	G	X	Y	Z
L3000-W	129	143.5	147	153.5	154
L4000-W	152	166.5	170	177	177
L8000-W	231.5	245.5	249	256	256

Option dimensions



Repair parts (filling plug O ring, adjusting assembly, flow guide set, bowl O ring set)

Model no.	Repair kit model no. for polycarbonate bowl	Repair kit model no. for nylon bowl and metal bowl
L3000-W	L3000-W-KIT	L3000-W-KIT-Z
L4000-W	L4000-W-KIT	L4000-W-KIT-Z
L8000-W	L8000-W-KIT	L8000-W-KIT-Z

Bowl assembly (Set of bowl assembly and bowl O ring)

Bowl assembly model no. / Model no.	Polycarbonate bowl without cock (Blank)	Nylon bowl without cock (Z)	Metal bowl without cock (M)	Polycarbonate bowl with cock (C)	With cock Nylon bowl (CZ)	Metal bowl with cock (CM)	Polycarbonate bowl with float switch (LL)	Nylon bowl with float switch (LLZ)	Metal bowl with float switch (LLM)
L1000-W	L1000-BOWL	L1000-BOWL-Z	-	F1000-W-BOWL	F1000-W-BOWL-Z	-	-	-	-
L3000-W	L3000-BOWL	L3000-BOWL-Z	L3000-W-BOWL-M	F3000-W-BOWL	F3000-W-BOWL-Z	F3000-W-BOWL-M	L3000-BOWL-LL	L3000-BOWL-LLZ	L3000-W-BOWL-LLM
L4000-W, L8000-W	L4000-BOWL	L4000-BOWL-Z	L4000-W-BOWL-M	F4000-W-BOWL	F4000-W-BOWL-Z	F4000-W-BOWL-M	L4000-BOWL-LL	L4000-BOWL-LLZ	L4000-W-BOWL-LLM

* Refer to air filter options and parts table for details on bowl guard.

Adjusting assembly

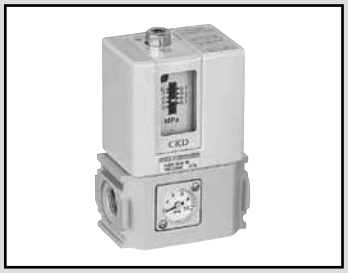
Model no.	Adjusting assembly model no. (for polycarbonate bowl)	Adjusting assembly model no. (for nylon and metal bowl)
L3000-W, L4000-W, L8000-W	L3000-W-AJ-KIT	L3000-W-AJ-KIT-Z

Flow guide set

Model no.	Flow guide set model no.
L3000-W	L3000-FLOW-GUIDE
L4000-W	L4000-FLOW-GUIDE
L8000-W	L8000-FLOW-GUIDE

Filling plug set (fill plug and fill plug O ring)

Model no.	Filling plug set model no.
L3000-W, L4000-W	L3000-W-PLUG
L8000-W	L8000-W-PLUG



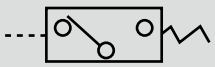
Mechanical pressure switch Standard white series

P4000-W Series

Wide pressure setting range covers 0.1 to 0.8 MPa.

● Port size: 1/4 to 1/2

JIS symbol



RoHS CAD

Specifications

Descriptions	P4000-8-W	P4000-10-W	P4000-15-W
Working fluid	Compressed air		
Max. working pressure MPa	1.0		
Withstanding pressure MPa	1.5		
Pressure adjusting range MPa	0.1 to 0.8		
Fluid temperature ℃	5 to 60		
Port size Rc	1/4	3/8	1/2
Microswitch model no.	Z15GD-B (OMRON)		
Contact configuration ab	1		
Hysteresis MPa	Hysteresis 0.049 or less at 0.1 to 0.49.		
	Hysteresis 0.078 or less at 0.5 to 0.8.		
Repeatability MPa	±0.02 of set pressure range		
Withstanding cycle frequiency cycles/min	20		
Insulation resistance MΩ	100 or more (at CD500V megger)		
Product weight kg	0.5		
Mounting	Install adjusting screw vertically.		

Microswitch rated

Load	Noninductive load (A)				Inductive load (A)			
Circuit	Resistance load		Lamp load		Inductive load		Electric motor load	
Voltage	N.C	N.O	N.C	N.O	N.C	N.O	N.C	N.O
AC125V	15	15	3.0	1.5	15	15	5.0	2.5
AC250V	15	15	2.5	1.25	15	15	3.0	1.5
DC30V	6.0	6.0	3.0	1.5	5.0	5.0	5.0	2.5

How to order

P4000 - 8 - W - 1N - BW

Ⓐ Port size

Ⓑ Option

Ⓒ Attachment

Symbol	Descriptions
Ⓐ Port size	
8	Rc1/4
10	Rc3/8
15	Rc1/2
Ⓑ Option	
Blank	Without indicator light
1N	For AC100V/200V with indicator light
3N	For DC24V with indicator light
T	Without pressure gauge
Ⓒ Attachment	**Note 1, Note 3**
Blank	Not attached
A8W	Rc1/4 piping adaptor set
A10W	Rc3/8 piping adaptor set
A15W	Rc1/2 piping adaptor set
A20W	Rc3/4 piping adaptor set
BW	C type bracket

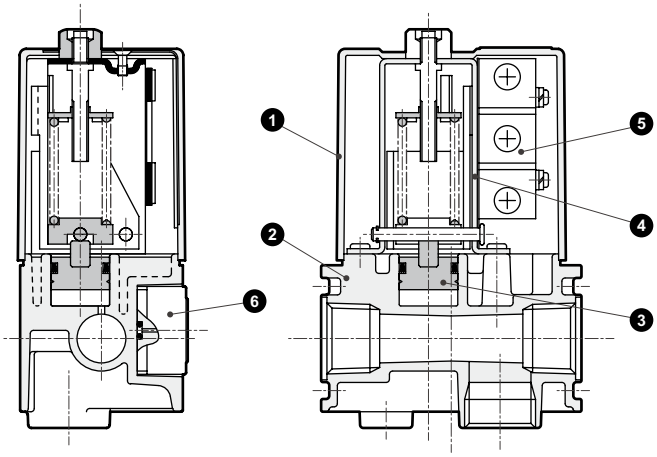
⚠ Cautions for model No. selection

Note 1: C type bracket and piping adapter set can not be used together.

Note 2: Due to modular design, a gasket is attached.

Note 3: A joiner set is attached with the piping adapter set.

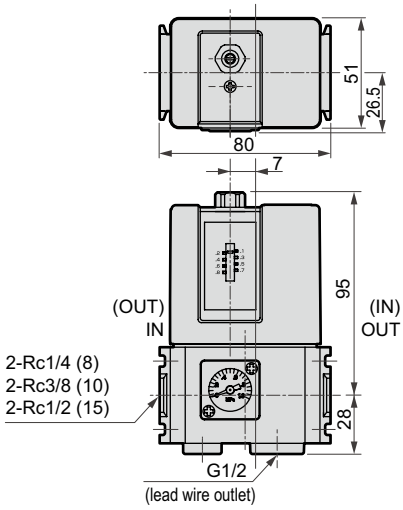
Internal structure and parts list



No.	Part name	Material	No.
1	Cover	Resin	-
2	Body	Aluminum alloy die-casting	-
3	Piston assembly	Polyacetal resin, nitrile rubber	-
4	Frame	Steel	-
5	Microswitch	-	ZI5GD-B (OMRON)
6	Pressure gauge assembly	PBT resin, brass	G401-W

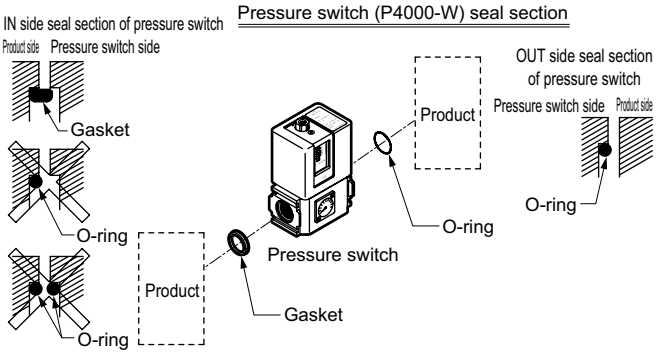
* Remove cover ① and wire directly to the microswitch ⑤.
* 1 gasket attached

Dimensions CAD



Reduction rate 0.24.
(Photocopy at 141% four times to see actual dimensions.)

How to assemble



Safety precautions

■Design & Selection

⚠ CAUTION

1 Microswitch contact specification.
Closed circuit Maximum 30 A Open circuit Maximum 15A
Rush current should be measured beforehand.

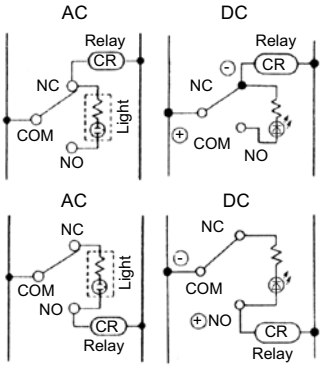
■Installation & Adjustment

⚠ CAUTION

1 When wiring, loosen cover mounting screws, remove the cover, then wire to the microswitch inside.

2 Wiring the sensor with light

- The light is connected to the microswitch's NC terminal and NO terminal. A fine current flows even when the load (relay, etc.) is not energized, so take care when selecting the load.
  AC100V 1.5mA AC200V 2.0mA DC24V 4.5mA
- To turn the light on at a level higher than the set pressure and off at a level less than the set pressure, wire to the microswitch COM terminal and NC terminal. Also, attach it on the cover where it is easily visible
  Name plate post pressure up → lights on
- To turn the light on at a level less than the set pressure and off at a level higher than the set pressure, wire to the microswitch COM terminal and NO terminal. Also, attach it on the cover where it is easily visible.
  Name plate post pressure up → lights off
- If there is a large amount of drainage, pipe so that the pressure adjustment screw is facing upward.



3 Avoid using in hot places because the cover is made of resin.

4 Hold the body when piping or installing.

5 Use with air that has been passed through an air filter.

6 Use the pressure absorbing nipple (6556) to detect sudden changes in pressure such as when confirming air cylinder pressure.

7 Use the pressure absorbing nipple (6556) if pressure rise/lower pulsation is frequent. The product life could be shortened if the pressure absorbing nipple is not used.

8 Loosen the nut on the top of the cover, and adjust the pressure with the adjustment screw. The set pressure will rise when the screw is turned to the plus (+) side and will drop when turned to the minus (-) side. Use an 13mm wrench and a slotted screw driver to fix the nut after setting.

9 The scale is only for reference. (scale margin of error within ±0.05MPa)

Reed switch type compact mechanical pressure switch standard white series

P1100-W/P4100-W/P8100-W Series

Compatible with modular connection with FRL

JIS symbol 

RoHS CAD

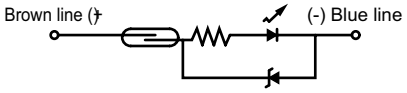
Specifications

Descriptions	P□100-W
Working fluid	Compressed air
Max. working pressure MPa	1
Set pressure range MPa	0.1 to 0.6
Hysteresis MPa	0.08 or less
Repeatability MPa	±0.02 or less
Contact configuration	1a Note 1
Wiring	Lead wire 1m (oil resistant vinyl cabtire cable 2-conductor 0.2 mm^2)
Ambient temperature and fluid temperature.	5 to 60℃
Protective structure Note 2	Equivalent to IP20

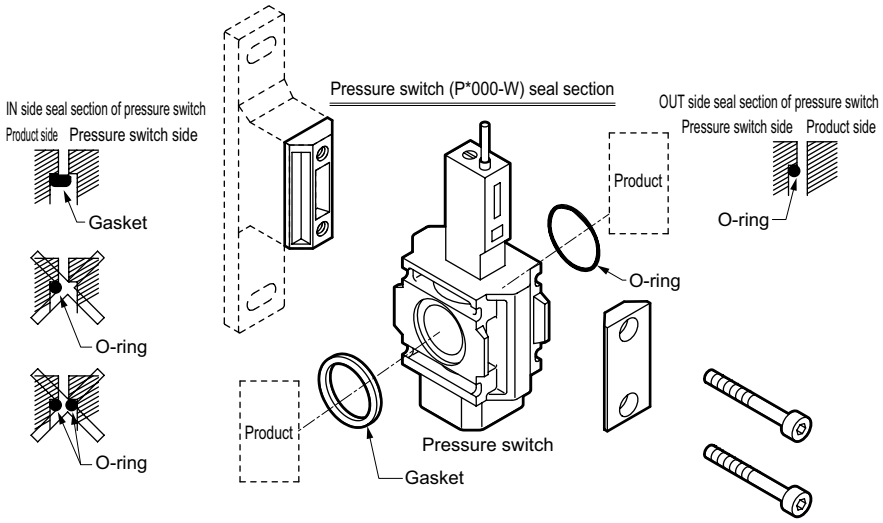
Note 1: The contact turns on if air pressure exceeding the scale setting pressure is applied.
Note 2: The protective structure is IP 65 or equivalent if an optional joint is connected to the atmospheric pressure introduction port and extended with tubes to a place free of water. This port can not be used outdoors.

Electric component section specification		
Load voltage	DC12/24V	AC100V
Load voltage	5 to 50mA	7 to 20mA
Internal voltage drop	3V or less	
Light	LED(ON lighting)	
Maximum shock resistance	294m/S^2	
Insulation resistance	20MΩ and over at 500 VDC megger	
Withstanding voltage	No abnormality after application of AC1000V for 1 minute.	

Internal circuit diagram



How to assemble (P1100-W, P4100-W, P8100-W)



How to order (modular connection compatible)

P 1100 - 6 L - W - B11W - 3 -
(White type)

Symbol	Descriptions
Ⓐ Series model no	
1100	For 1000-W Series modular connection
4100	For 2500-W, 3000-W, 4000-W Series modular connection
8100	For 6000-W, 8000-W Series modular connection

Ⓐ Series model no

Ⓑ Port size

		1100	4100	8100
6	Rc1/8	●		
8	Rc1/4	●	●	
10	Rc3/8		●	
15	Rc1/2		●	
20	Rc3/4			●
25	Rc1			●

Ⓑ Port size

Ⓒ Branching direction Note 1

Blank Note 2	L	R
		

Ⓒ Branching direction

Ⓓ Attachment

		1100	4100	8100
Blank	Joiner set and gasket	●	●	●
B11W	T type bracket and gasket	●		
B31W	T type bracket and gasket		●	
B41W	T type bracket and gasket		●	
B81W	T type bracket and gasket			●
4	Fitting for atmospheric releas port attached (M3 elbow)	●	●	●

Ⓓ Attachment

Ⓔ Lead wire length

Blank	1m
3	3m
5	5m

Ⓔ Lead wire length

Ⓕ Option

Blank	None
P6	Copper and PTFE free (custom order)

Ⓕ Option

⚠ Cautions for 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.
Note 3: When piping the isolated P*100-W unit, use piping adapter A*00-W.
(The horizontal direction port does not have threads)

Specification for LiB production

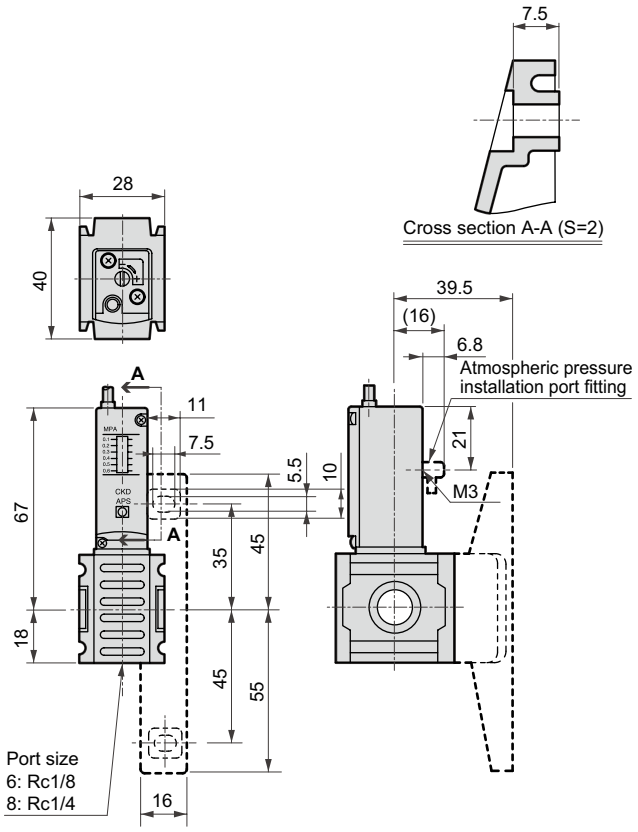
(Catalog No.CC-947A)

● Specification for LiB manufacturing process

P4100 - ····· - P4

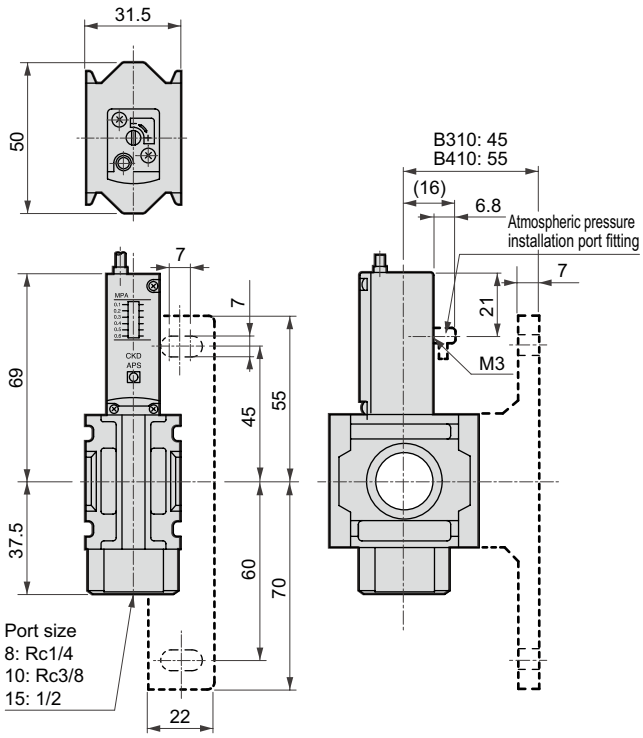
Dimensions CAD

● P1100-W



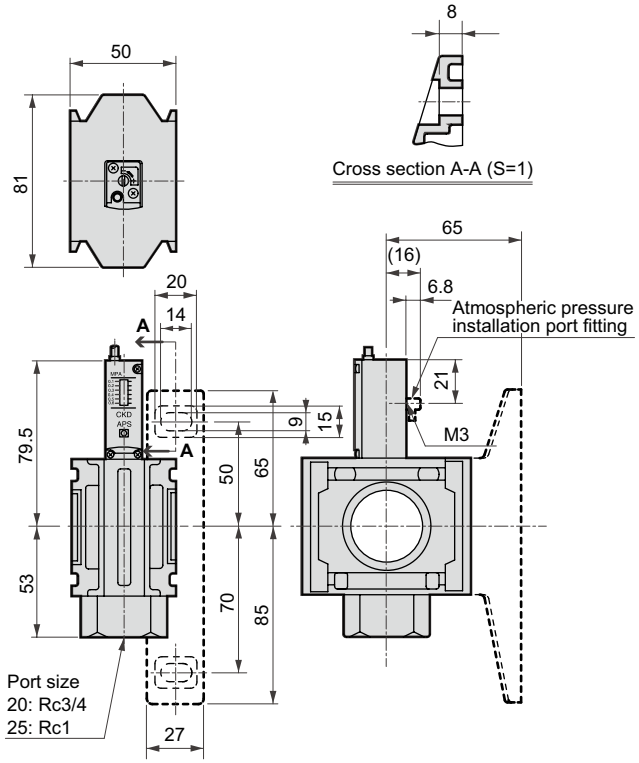
Weight 126g

● P4100-W



Weight 190g

● P8100-W



Weight 467g

⚠ Safety precautions

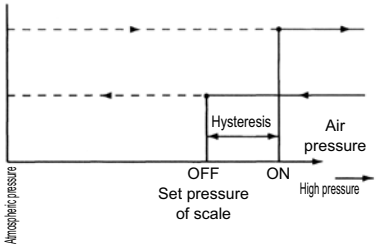
■ Installation & Adjustment

⚠ CAUTION

1 Setting pressure Settings are applied when the value is changed.

- Pressure displayed on the scale plate is used as the reference. When setting pressure, refer to the separate pressure gauge.
- Pressure displayed on the scale plate is the value when the contact is off. To set the value when the contact is on, set the pressure displayed on the scale plate to a value smaller than that from which hysteresis has been subtracted. If not set, operation may not take place at the set value.
  (Hysteresis is the the difference of pressure it is required to turn the switch off after it has been turned on at the set pressure)

Operation chart



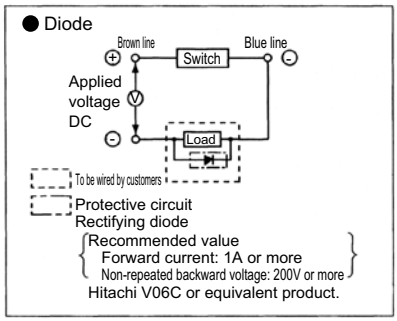
2 Installation

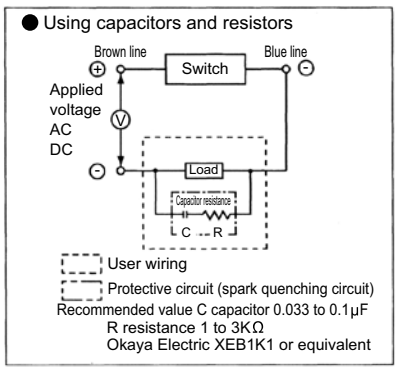
- Do not drop or bump the panel when handling it.
- Wire the lead so that the repeated bending strain and tensile strength are not applied to the wire as it may lead to disconnection
- Do not use this sensor near a strong magnetic field or large current (large magnet or spot welder, etc.) because the sensor could malfunction.
- The pressure switch is equivalent to IP-20, but the installation direction is limited to upward vertical. If water enters the introduction port for atmospheric pressure from below, pipe an M3 joint and extend with tubing to where water will not enter. Do not plug the fork lift holes as recycled air is discharged. (Only SHD Series) This port can not be used outdoors.

- P*100 Series
  If there is drainage in pneumatic piping, install so that the pressure switch is higher than the drain.
- Do not pressurize suddenly. Product performance could drop or the product could be damaged.

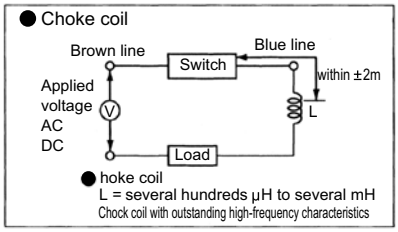
3 Wiring

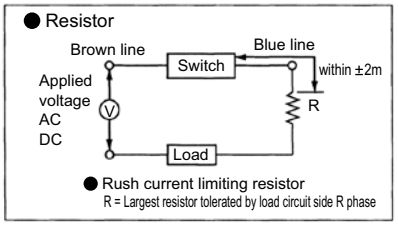
- Connecting the lead wire
  ① Do not connect the lead directly to the power supply. Connect the load serially. Failure to do so could lead to disconnection.
  ② When using for DC, connect the brown wire to the ⊕ side and the blue wire to the ⊖ side. The light will not light if wires are connected in reverse.
  ③ When connected to the AC relay or PC input, if half wave rectification is done with these circuits, the switch light may not light. In this case, the light will light if the switch lead polarity is reversed.
- Contact capacity
  Do not exceed the specified load voltage and load current range.
  Failure to do so could lead to disconnection or blown light.
  The light may not light if the current is less than the rated current value.
- Contact protection
  ① When using this sensor with a conductive load such as a relay, provide the contact protection circuit shown at right. The contact could melt if this protection circuit is not provided.





② If DC wiring exceeds 50 m or AC wiring exceeds 10 m, the wiring capacity will be attained. A inrush current will occur, damaging the switch or shortening life.
Install a contact protection circuit if the wiring length is exceeded.





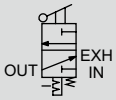
Shut-off valve Standard white series

V1000-W/V3000-W Series

1 action exhaust operation Prevent accidents caused by residual pressure.

Port size: 1/8 to 1/2

JIS symbol

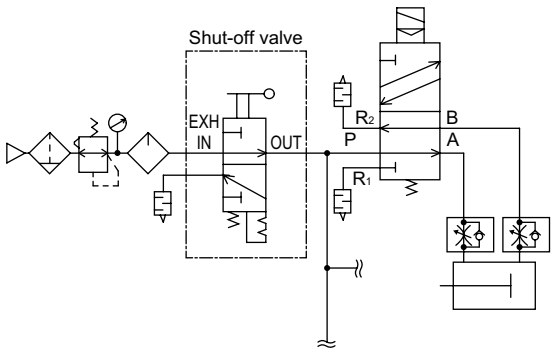


Specifications

Descriptions		V1000-W		V3000-W		
Exterior						
Descriptions		**V1000-6-W**	**V1000-8-W**	**V3000-8-W**	**V3000-10-W**	**V3000-15-W**
Working fluid		Compressed air				
Max. working pressure MPa		1.0				
Withstanding pressure MPa		1.5				
Fluid temperature ℃		5 to 60				
Operation lever switching angle		90°				
Operating force	Pushing force N	18		80		
	Torque N·m	0.5		2		
Valve section leakage ℓ/min (ANR)		10				
External leakage ℓ/min (ANR)		10				
Port size	IN-OUT	1/8	1/4	1/4	3/8	1/2
(Rc, NPT, G)	EXH	1/8		3/8		
Product weight kg		0.17		0.25		
Effective sectional area (mm^2)	IN·OUT	15	18	40	70	85
	OUT·EXH	5		40	50	50

Applications

Explanation: When a solenoid valve and an air cylinder, etc. are repaired and adjusted, to ensure the safety, exhaust compressed air in the pneumatic circuit with a shut-off valve before starting work.



How to order

● For FRL 1000 Series

V1000 - 6 ○ - W - ○ - ○ - A6W
(White type)

● For FRL 3000, 4000 Series

V3000 - 8 ○ - W - ○ - ○ - A6W
(White type)

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Displayed unit
Ⓕ Attachment

Symbol	Descriptions	Ⓐ Model no. V1000	Ⓐ Model no. V3000
Ⓑ Port size			
6	Rc1/8	●	
8	Rc1/4	●	●
10	Rc3/8		●
15	Rc1/2		●
Ⓒ Port thread type			
Blank	Rc thread	●	●
N	NPT thread	●	●
G	G thread	●	●
Ⓓ Option			
Blank	Standard flow (left to right)	●	●
X1	In/out reverse flow (right to left)	●	●
Ⓔ Displayed unit			
Blank	MPa display, Rc thread	●	●
J1	MPa display, NPT, G thread	●	●
Ⓕ Attachment		**Note 1, Note 2**	
Blank	No attachments	●	●
A6*W	1/8 piping adaptor set	●	
A8*W	1/4 piping adaptor set	●	●
A10*W	3/8 piping adaptor set	●	●
A15*W	1/2 piping adaptor set		●
A20*W	3/4 piping adaptor set		●
BW	C type bracket	●	●
S	Silencer	●	●
*** Adaptor thread type**			
Blank	Rc thread	●	●
N	NPT thread	●	●
G	G thread	●	●

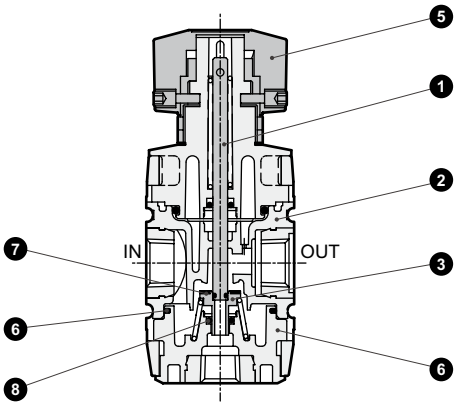
⚠ Cautions for model No. selection

Note 1: The piping adapter set and C bracket cannot be used together.
Note 2: A joiner set is attached with the piping adapter set.

⚠ Select the reverse regulator (R*100-W) or reverse filter regulator (W*100-W) when installing the V*000-W onto the primary side of the regulator or filter regulator.

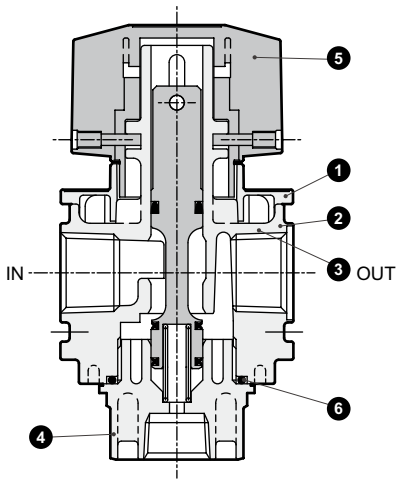
Internal structure and parts list

● V1000-W



No.	Part name	Material
1	Spool	Steel
2	Body assembly	Polyamide resin, steel
3	Valve element	Brass, nitrile rubber
4	Bottom plug	Polyamide resin, steel
5	Knob	Polyacetal resin
6	Packing	Nitrile rubber
7	O-ring	Nitrile rubber
8	O-ring	Nitrile rubber

● V3000-W

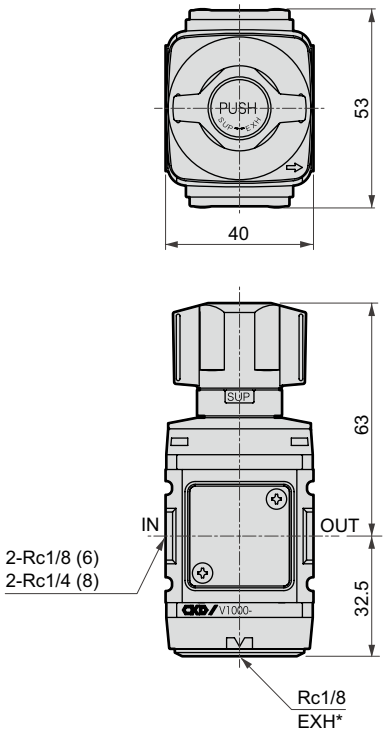


No.	Part name	Material
1	Plate cover	ABS resin
2	Body	Aluminum alloy die-casting
3	Spool assembly	Aluminum alloy urethane resin
4	Bottom plug	PBT resin Note 1
5	Knob	Polyacetal resin
6	O-ring	Nitrile rubber

Note 1: The metal bottom plug is used as a custom-order part.

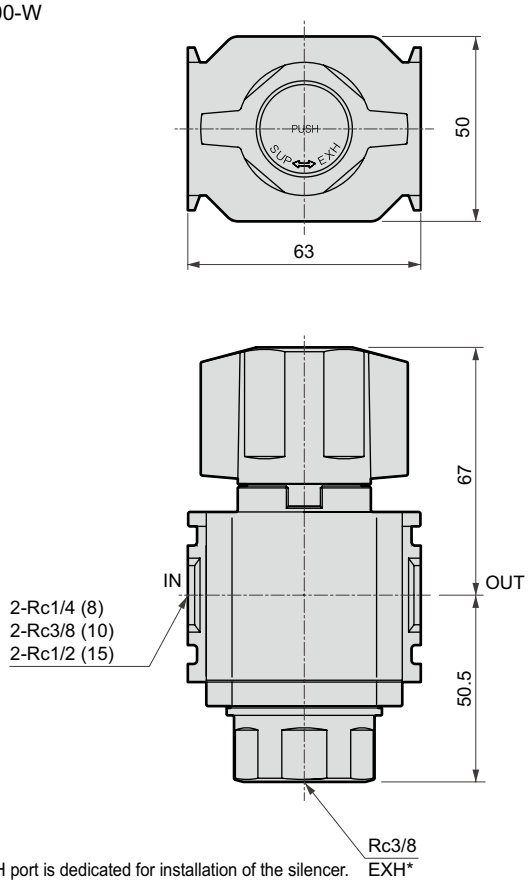
Dimensions CAD

● V1000-W



* The EXH port is dedicated for installation of the silencer.

● V3000-W



* The EXH port is dedicated for installation of the silencer.

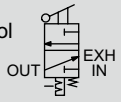
Lockout valve (OSHA compliant) Standard white series

V3010-W/V6010-W Series

Prevent accidents caused by residual pressure.

Port size: 1/4 to 1

JIS symbol



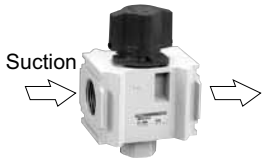
RoHS

Specifications

Descriptions		V3010-8-W	V3010-10-W	V3010-15-W	V6010-20-W	V6010-25-W
Working fluid		Compressed air				
Max. working pressure MPa		1				
Withstanding pressure MPa		1.5				
Fluid temperature ℃		5 to 60				
Operation lever switching angle		90°				
Operating force	Pushing force N	80 or less				
	Torque N·m	2.5 or less				
Valve seat leakage cm^3/min (ANR)		10 or less				
External leakage cm^3/min (ANR)		10 or less				
Port size	IN-OUT	1/4	3/8	1/2	Rc 3/4	Rc1
(Rc, NPT, G)	EXH	3/8			Rc1/2	
Product weight kg		0.3			0.8	
Effective sectional area(mm^2)	IN→OUT	40	70	85	145	150
	OUT→EXH	40	50	50	105	110

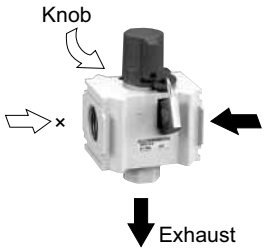
How to use

● Regular use



● Maintenance work

It can be locked at the position where residual pressure is released.



OSHA (Occupational Safety and Health Administration)

Standards for worker safety set by the United States.

<Lockout-Tagout>

When servicing or maintaining machinery, the air source shall be closed with a shut-off valve (lockout valve), and residual pressure shall be 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 order

● FRL 2000, 4000 Series

V3010 - 8 ○ - W - ○ - ○ - A8W

● For FRL 6000, 8000 Series

V6010 - 20 ○ - W - ○ - ○ - A20W

(White type)

Ⓐ Model no.

Ⓑ Port size

Ⓒ Port thread type

Ⓓ Option

Ⓔ Displayed unit

Ⓕ Attachment

Symbol	Descriptions	Ⓐ Model no. V3010	Ⓐ Model no. V6010
Ⓑ Port size			
8	1/4	●	
10	3/8	●	
15	1/2	●	
20	3/4		●
25	1		●
Ⓒ Port thread type			
Blank	Rc thread	●	●
N	NPT thread	●	●
G	G thread	●	●
Ⓓ Option			
Blank	None	●	●
X1	IN/out reverse flow (right to left)	●	●
Ⓔ Displayed unit			
Blank	MPa display, Rc thread	●	●
J1	MPa display, NPT, G thread	●	●
Ⓕ Attachment	**Note 1, Note 2**		
Blank	No attachments	●	●
A8W	1/4 piping adaptor set	●	
A10W	3/8 piping adaptor set	●	
A15W	1/2 piping adaptor set	●	
A20W	3/4 piping adaptor set	●	●
A25W	1 piping adaptor set	●	●
A32W	1 1/4 piping adaptor set		●
BW	C type bracket	●	●
S	Silencer	●	●
*** Adaptor thread type**			
Blank	Rc thread	●	●
N	NPT thread	●	●
G	G thread	●	●

⚠ Cautions for model No. selection

Note 1: The piping adapter set and C bracket cannot be used together.

Note 2: A joiner set is attached with the piping adapter set.

⚠ Select the reverse regulator (R*100-W) or reverse filter regulator (W*100-W) when installing the V*010-W onto the primary side of the regulator or filter regulator.

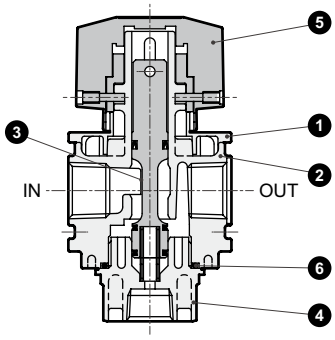
Specification for LiB production (Catalog No.CC-947A)

● Design applicable for LiB manufacturing process

V3010 - ····· - P4*

Internal structure and parts list

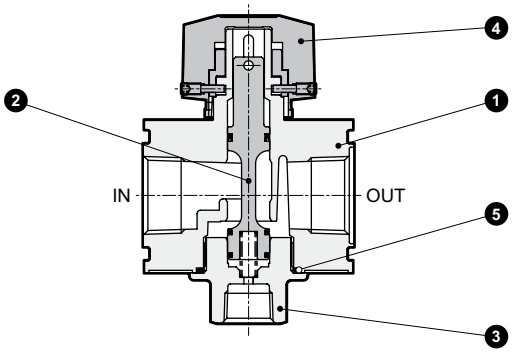
● V3010-W



No.	Part name	Material
1	Plate cover	ABS Resin (Note 2)
2	Body	Aluminum alloy die-casting
3	Spool assembly	Aluminum alloy urethane resin
4	Bottom plug	PBT Resin (Note 1) (Note 2)
5	Knob	Aluminum alloy die-casting
6	O-ring	Nitrile rubber

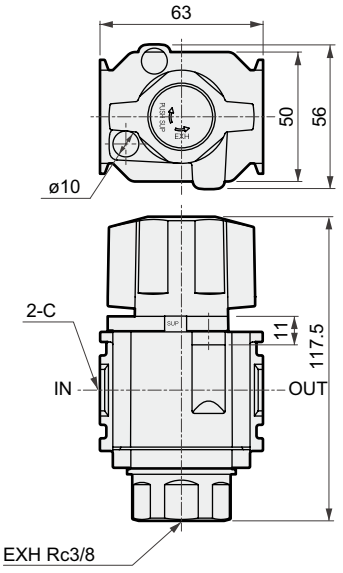
Note 1: The metal bottom plug is used as a custom-order part.
Note 2: Flame resistant resin UL94 standard equivalent

● V6010-W



No.	Part name	Material
1	Body	Aluminum alloy die-casting
2	Spool assembly	Aluminum alloy, hydrogenated nitrile rubber
3	Bottom plug	Aluminum alloy die-casting
4	Knob	Aluminum alloy die-casting
5	O-ring	Nitrile rubber

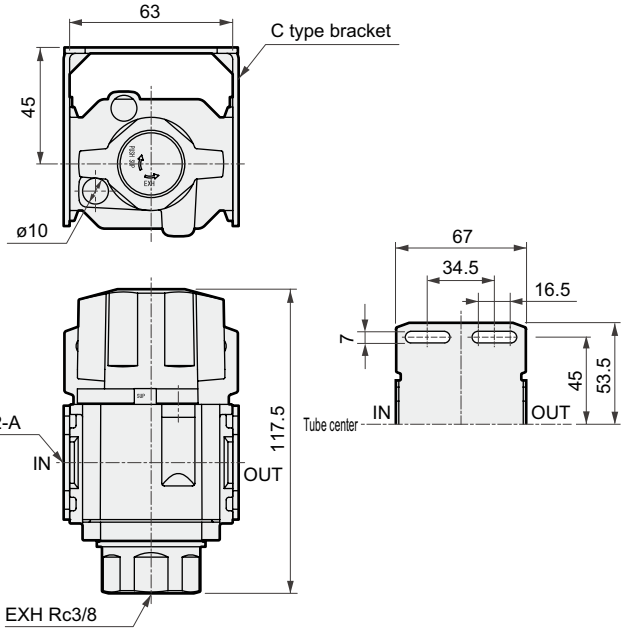
Dimensions (V3010-W)



* The EXH port is dedicated for installation of the silencer.

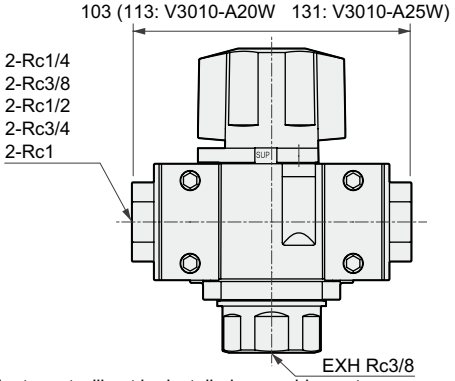
Descriptions	C
V3010-8-W	Rc1/4
V3010-10-W	Rc3/8
V3010-15-W	Rc1/2

● C type bracket (-BW)
Part no: B320



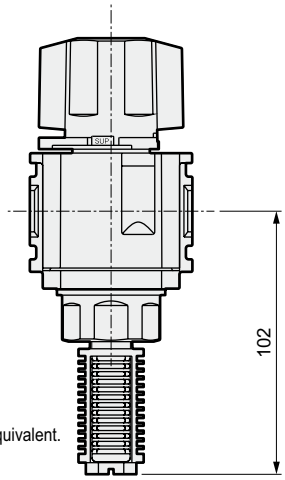
The C type bracket is attached at shipment.
C type bracket and piping adapter set can not be used together.

● Adaptor attachment



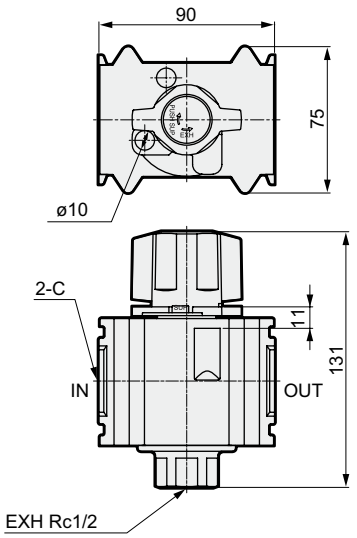
Piping adaptor set will not be installed upon shipment.

● Silencer (-S)
Part no: SLW-10A



Silencer will not be installed upon shipment.
Silencer is flame resistant resin UL94 standard V-0 equivalent.
However, element is not flame resistant.

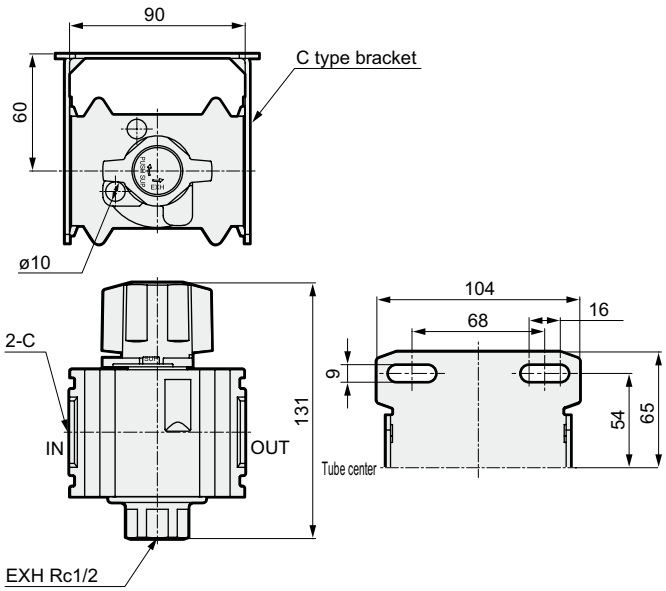
Dimensions (V6010-W)



* The EXH port is dedicated for installation of the silencer.

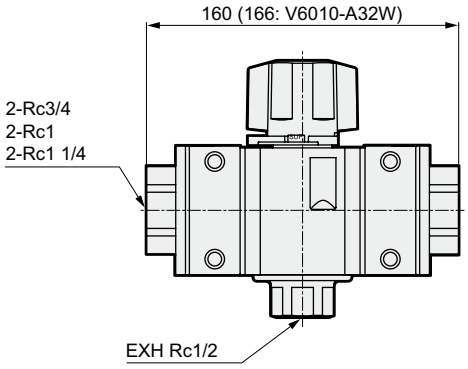
Descriptions	C
V6010-20-W	Rc3/4
V6010-25-W	Rc1

● C type bracket (-BW)
Part no: B620



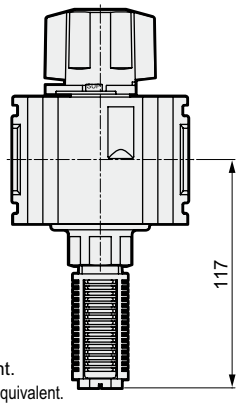
The C type bracket is attached at shipment.
C type bracket and piping adapter set can not be used together.

● Adaptor attachment



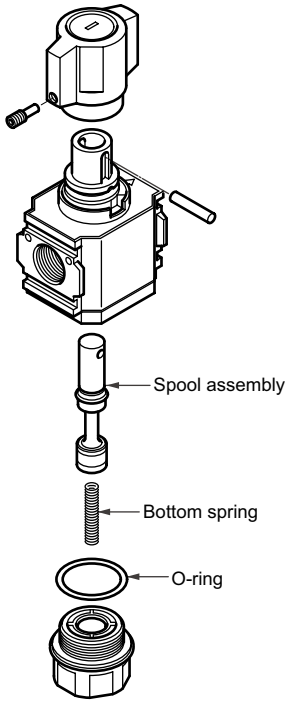
Piping adaptor set will not be installed upon shipment.

● Silencer (-S)
Part no.: SLW-15A



Silencer will not be installed upon shipment.
Silencer is flame resistant resin UL94 standard V-0 equivalent.
However, element is not flame resistant.

Shut off valve (V3000-W, V3010-W) optional parts drawing



Spool assembly

(Spool assembly and bottom spring set)

Model	Spool assembly model no.
V3000, V3010	V3000-SPOOL

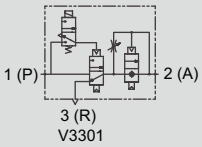
Slow start valve standard white series

V3301-W/V3321-W Series

Securing safety at starts and stops.

● Port size: Rc1/4 to Rc1/2

JIS symbol



RoHS

Specifications

Descriptions		V3301-W/V3321-W		
Operating method		Pilot operated soft spool valve		
Working fluid		Compressed air (excluding super dry air) Note 1		
Working pressure range MPa		0.2 to 1.0		
Withstanding pressure MPa		1.5		
Ambient temperature range ℃		5 to 60		
Port size	1 (P), 2 (A) port	Rc1/4	Rc3/8	Rc1/2
	3 (R) port	Rc3/8		
	Gauge port	Rc1/4		
Effective sectional area mm^2	Low speed intake	6		
	High speed intake	40	64	76
	High speed exhaust	50	74	78
Response time		0.2sec or less		
Lubrication		Oil-free Note 2		
Weight g		V3301-W: 635 V3321-W: 515		
Solenoid valve specification		**V3301-W**		
Rated voltage V		AC100 (50/60Hz)	AC200 (50/60Hz)	DC24
Starting current A		0.076/0.058	0.038/0.030	0.092
Holding current A		0.038/0.029	0.019/0.015	
Power consumption W		2.2/1.7	2.2/1.7	2.2
Temperature increase K		40 or less		
Voltage fluctuation range		±10%		
Insulation class		B class		
Electric connection		Grommet lead wire, terminal box		

Note 1: Contact CKD when using ultra dry compressed air.
Note 2: Use the turbine oil Class 1 ISO VG32 if lubricated.

How to order

● Solenoid valve **V3301 - 8 - W - ○○ - 1 - BW** (White type)

● Manual **V3321 - 8 - W ——— BW**

Ⓐ Port size
Ⓑ Manual override
Ⓒ Electric connection
Ⓓ Voltage
Ⓔ Attachment

Symbol	Descriptions	
Ⓐ Port size		
1 (P), 2 (A) port		
08	Rc1/4	
10	Rc3/8	
15	Rc1/2	
Ⓑ Manual override		
Blank	Non-locking type	
M1	Locking type	
Ⓒ Electric connection		
Blank	Grommet lead wire	
S	Grommet lead wire with surge supressor	
B	Terminal box	
LS	Terminal box surge supressor with lamp	
Ⓓ Voltage		
1	AC100V 50/60Hz	Standard
2	AC200V 50/60Hz	
3	DC24V	Option
4	DC12V	
5	AC110V 50/60Hz	
6	AC220V 50/60Hz	
Ⓔ Attachment		
Blank	No attachments	
BW	C type bracket	
G49P	Pressure gauge: G49D-8-P10	
S	Silencer	

⚠ Select the reverse regulator (R*100-W) or reverse filter regulator (W*100-W) when installing the V3301-W or V3321-W onto the primary side of the regulator or filter regulator.

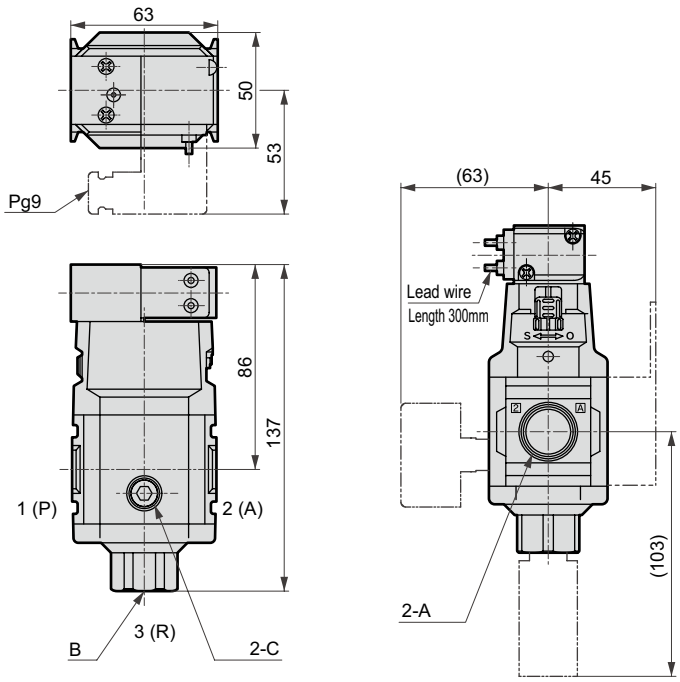
Specification for LiB production (Catalog No.CC-947A)

● Specification for LiB manufacturing process

V3301 - ····· - P4*

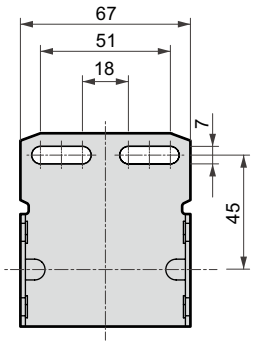
Dimensions

● V3301-W

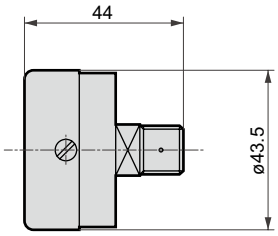


	A	B	C
V3301-08-W	Rc1/4	Rc3/8	Rc1/4
V3301-10-W	Rc3/8		
V3301-15-W	Rc1/2		

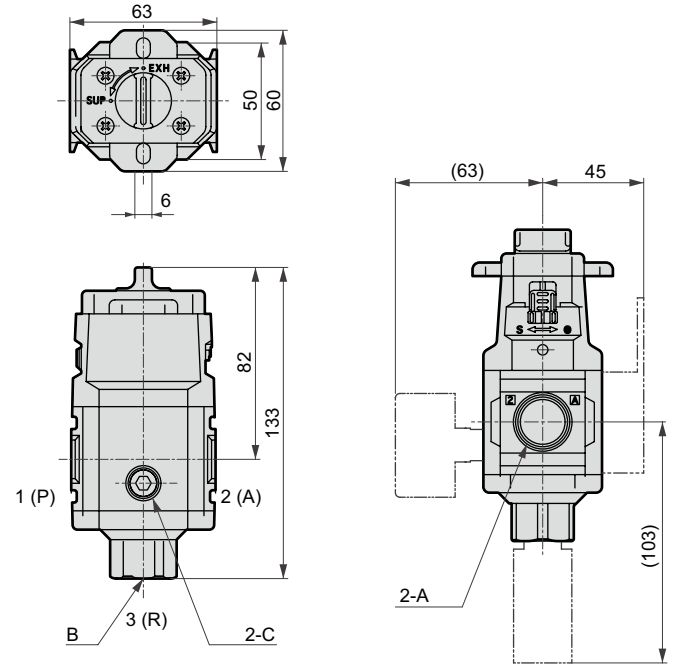
● Bracket: B320



● Pressure gauge: G49D-8-P10

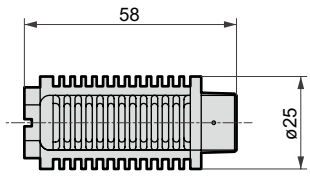


● V3321-W



	A	B	C
V3321-08-W	Rc1/4	Rc3/8	Rc1/4
V3321-10-W	Rc3/8		
V3321-15-W	Rc1/2		

● Silencer: SLW-10A

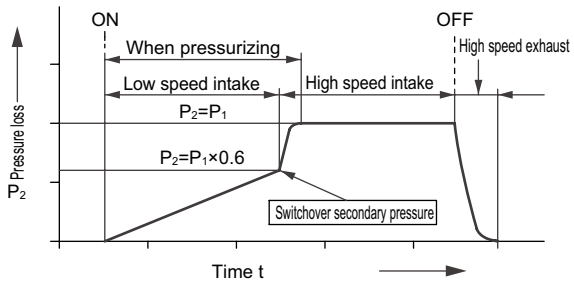


Operational explanation (refer to operating principles)

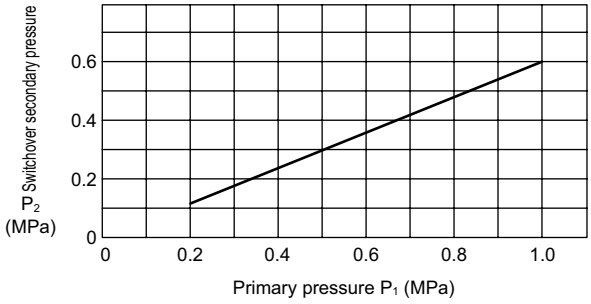
The slow start valve turns on when the solenoid valve is energized or the manual section is set to SUP. The valve turns off when the solenoid valve is deenergized or the manual section is set to EXH.

(1) First, when the main unit is turned on, the low-speed supply path opens, and the compressed air starts to flow to the secondary side. The secondary pressure gradually starts to rise. The operable cylinders in the unit will start moving at a low speed and thus will not pop out.
(2) Next, when secondary pressure exceeds 60% of primary pressure, the hight speed supply path opens. Secondary pressure suddenly rises tot he same pressure as primary pressure. (fully open)
(3) When the main unit is turned OFF, high speed exhaust starts and residual pressure in the unit is exhausted.

● Operational properties



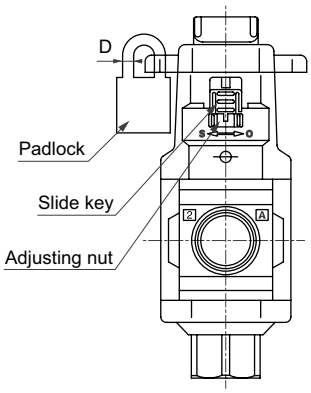
● Switchover secondary pressure



How to adjust slow start function (refer to side view)

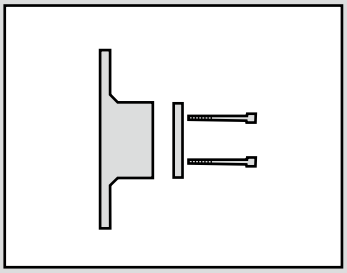
(1) Press the slide key up and release the adjustment nut lock.
(2) Turn the main unit on, and confirm the cylinder operation speed and secondary pressure rise time. Then turn the main unit off.
(3) Turn the adjustment nut as explained below, and adjust the state.
Cylinder pops out → Turn to the S side
Low speed operation time is too long → Turn to the O side
Repeat steps (2) and (3) as necessary, and adjust to the optimum state.
(4) Align the adjustment nut keyway to the projection on the slide key.
(5) Press down the slide key and lock the adjustment nut.
(6) Confirm that the main unit is off.

● Side view



⚠ Safety precautions

Note 1: This valve is dedicated for starting and stopping (including emergency stop) the device. This valve should not be used for cylinder repeat operation or as a normal 3-way valve.
Note 2: If the minimum operating pressure of the cylinder, which is to be kept from popping out, is less than 50% of the working pressure, popping out will not be prevented.
Note 3: The manual override is locked with the manual valve type. Select a padlock with a D dimension of 3.8 to 5.8 mm.
Note 4: Connect a silencer or exhaust filter, etc., to the exhaust port for safety and sound absorption.



Bracket Standard white series

B-W/B Series

Joiner Standard white series

J-W Series

RoHS

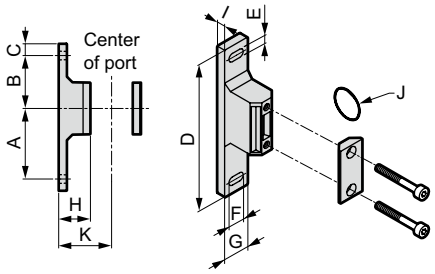
Dimensions and applications

T type bracket set

● Model no.: B110-W･B310-W･B410-W･B810-W

● Applications

Note: Select B410-W when using the 3000-W Series and 4000-W Series combined.

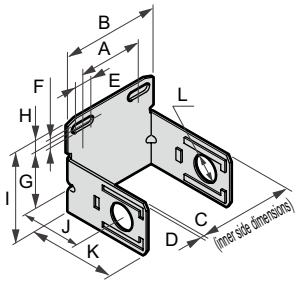


Model no.	Applicable model	A	B	C	D	E	F	G	H	I	J	K
B110-W	1000 Series	45	35	10	100	5.5	7.5	16	25	7.5	JASO-2013	40
B310-W	2000 Series 3000 Series	60	45	10	125	7	14	22	27	7	JISB2401-P21	45
B410-W	4000 Series	60	45	10	125	7	14	22	37	7	JISB2401-P21	55
B810-W	6000 Series 8000 Series	70	50	15	150	9	14	27	37	8	AS568-127	65

C type bracket

● Model no.: B120･B220･B320･B420･B620･B820

● Attachment: BW



● Applications

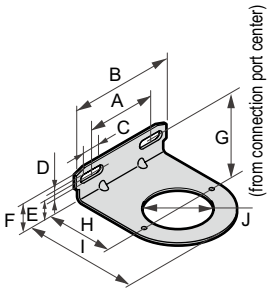
Model no.	Applicable model	A	B	C	D	E	F	G	H	I	J	K	L
B120	1000 Series	44	68	40	t2.0	10	6.5	35	8.5	61.5	40	60	ø19.5
B220	2000 Series	28	54	50	t2.3	10	7	33	8	63	45	69	17.3
B320	3000 Series	34.5	67	63	t2.3	16.5	7	45	9	75.5	45	69	ø21.7
B420	4000 Series	55	84	80	t2.3	14.0	7	45	9	75.5	55	79	ø21.7
B620	6000 Series	68	104	90	t2.3	16	9	54	11	97.5	60	97	ø35
B820	8000 Series	68	104	100	t2.3	16	9	50	11	93.5	65	102	ø35

L type bracket

● Model no: B130･B230･B330･B430

● Attachment: B3W

Loosen the mounting nut to remove the knob. After inserting L type bracket, fix the bracket by the mounting nut. Press the knob in manually after fixing.
Refer to page 15 for the details.

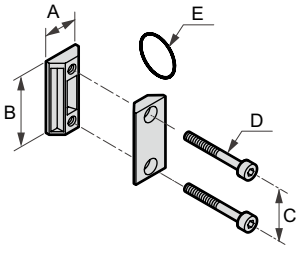


● Applications

Model no.	Applicable model	A	B	C	D	E	F	G	H	I	J	Other
B130	1000 Series	44	68	10	6.5	16	24.5	45	40	59	ø26.5	
B230	2000 Series	28	54	10	7	18	26	52	45	69	38	
B330	3000 Series	34.5	67	16.5	7	17.5	26	58 (63.5)	45	76	ø40	Values in( ) are for W3000･3100
B430	4000 Series 6000 Series	55	84	14	7	17.5	26	58	55	94	ø47	

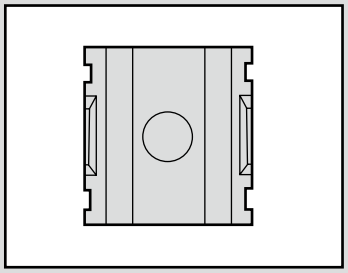
Joiner set

● Model no.: C1000-J100-W
C4000-J400-W
C8000-J800-W



● Applications

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	
C8000-J800-W	6000 Series 8000 Series	26	65	50	M6	AS568-127	



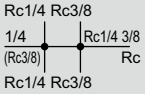
Distributor Standard white series

D101 / D401 / D801 / D300-W Series

Applicable for pipe branching.

Port size: 1/8 to 1

JIS symbol



RoHS

Specifications

Descriptions	D101-00-W	D401-00-W	D801-00-W	D300-W
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Withstanding pressure MPa	1.5			
No. of branch ports	1			4
Port size Rc, PT,	1/8, 1/4	1/4, 3/8, 1/2	3/4, 1	1/4, 3/8
Working temperature ℃	5 to 60			
Product weight kg	0.045	0.13	0.35	0.26

How to order

D101 - 00 - 6 ( ) - W - B11W

- Ⓐ Model no.
- (White type)
- Ⓑ Port size
- Ⓒ Port thread type
- Ⓓ T type bracket

Symbol	Descriptions
Ⓐ Model no.	
D101	For 1000 Series
D401	For 2000, 3000, 4000 Series
D801	For 6000, 8000 Series

Ⓑ Port size		D101	D401	D801
6	1/8	●		
8	1/4	●	●	
10	3/8		●	
15	1/2		●	
20	3/4			●
25	1			●

Ⓒ Port thread type	
Blank	Rc thread
N	NPT thread
G	G thread

Ⓓ T type bracket				
Blank	None	●	●	●
B11W	For 1000 Series	●		
B31W	For 2000 3000 Series		●	
B41W	For 4000 Series		●	
B81W	For 6000 8000 Series			●

Cautions for model No. selection

Note 1: A joiner set (joiner/bolt/O-ring) and a gasket are attached as standard.
Note 2: Consult with CKD for 2 way branch.
Note 3: D401-W can be connected to both 3000-W and 4000-W series.

D300 - 8 ( ) - W - Q

- Distributor
- (White type)
- Ⓐ Port size
- Ⓑ Port thread type
- Ⓒ Option

Symbol	Descriptions
Ⓐ Port size	
8	1/4
10	3/8

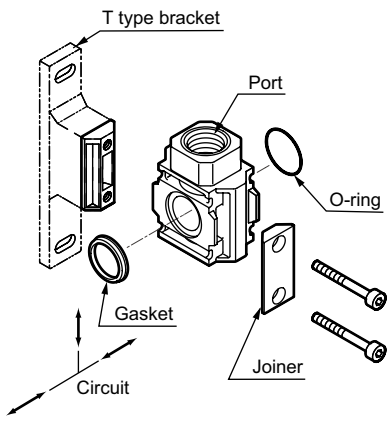
Ⓑ Port thread type	
Blank	Rc thread
N	NPT thread
G	G thread

Ⓒ Option	
Blank	None
Q	1/4 blanking plug Two each of the following are enclosed: 1/4 blank plug, 3/8 blank plug

Cautions for model No. selection

Note 1: When using with C3000-W, C4000-W, a joiner set C4000-J400-W, or T type bracket set B310-W or B410-W is required to connect.
Note 2: Joiner set C4000-J400-W or T type bracket set should be ordered separately. (Refer to page 152)

How to install (D101-00-W, D401-00-W, D801-00-W)

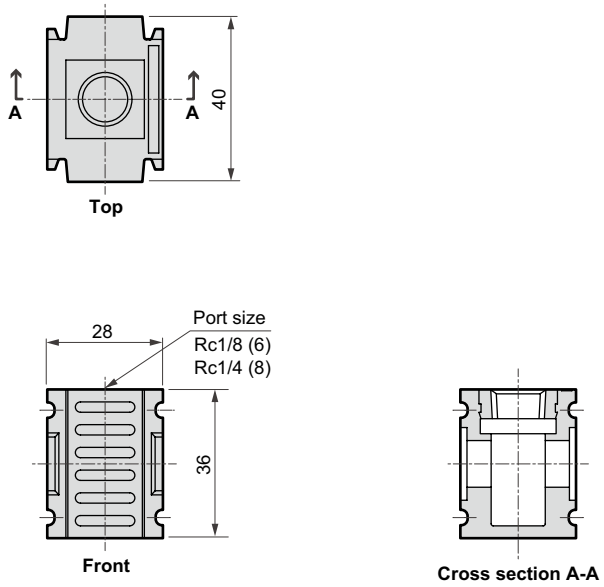


Note 1: When installing at the primary side, insert an O ring, while installing at the secondary side, insert a gasket.
Note 2: When inserting O ring and gasket to assemble, O ring and gasket must not be folded.

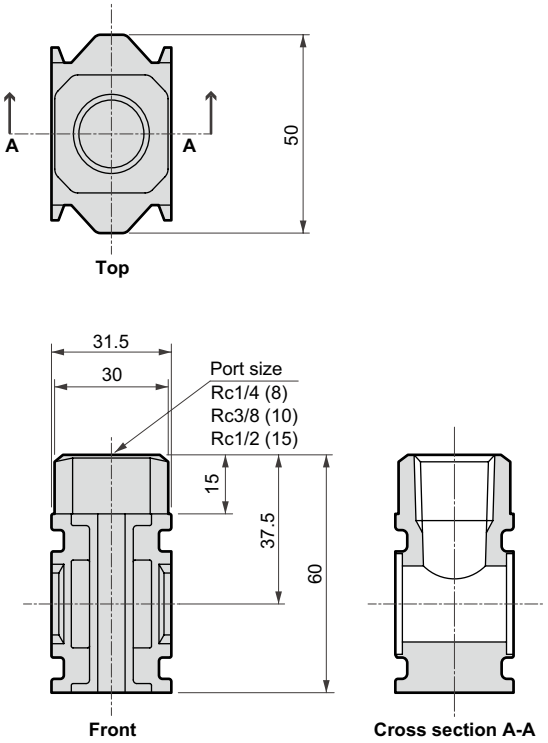
Example (D101-00-W, D401-00-W, D801-00-W)

Dimensions

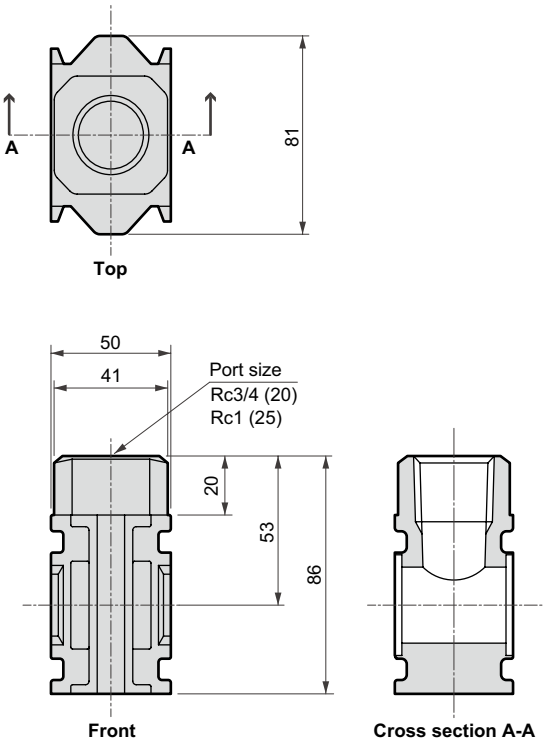
● D101-00-W



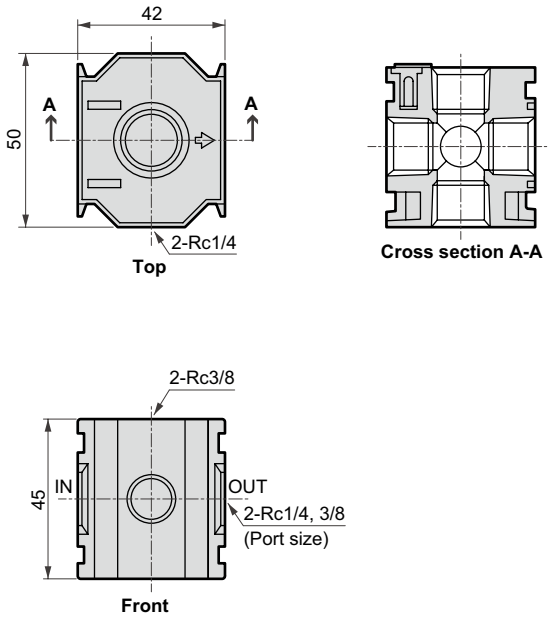
● D401-00-W

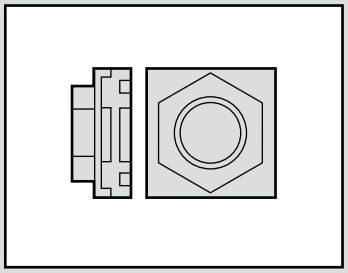


● D801-00-W



● D300-W





Piping adapter standard white series

A100 / A400 / A800-W Series

Port size: 1/8 to 1

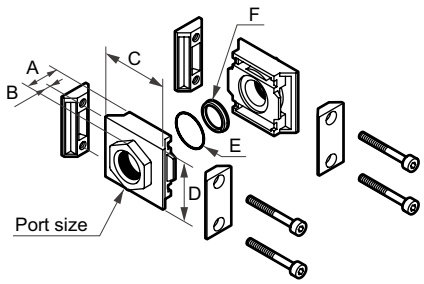
RoHS

Dimensions and applications

Piping adaptor set

● Model no.: A100-6, 8, 10-W
A400-8, 10, 15, 20-W
A800-20, 25, 32-W

● Applications



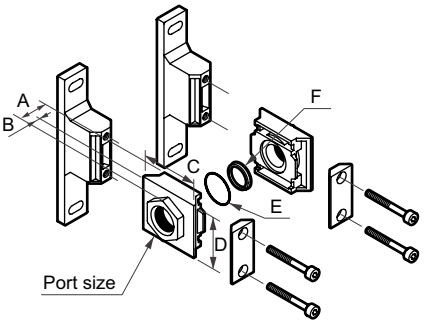
Model no.	Port size	Applicable model	A	B	C	D	E (O-ring)	F (Gasket)	Other
A100-6*-W	1/8	1000 Series	21.5	13.5	40	36	JASO-2013 1 programs	1 programs	-
A100-8*W	1/4								
A100-10*-W	3/8								
A400-8*-W	1/4	2000 3000 Series / 4000 Series	20 (25) {34}	6 (11) {20}	50	45	JISB2401 P21 1 programs	1 programs	Numbers in ( ) are for 3/4 Numbers in{ } are for 1
A400-10*-W	3/8								
A400-15*-W	1/2								
A400-20*-W	3/4								
A400-25*-W	1								
A800-20*-W	3/4	6000 8000 Series	35 (38)	15 (18)	81	66	AS568-127 1 programs	1 programs	Numbers in ( ) are for1 1/4
A800-25*-W	1								
A800-32*-W	1 1/4								

* Blank: Rc thread/N: NPT thread/G: G thread

Piping adaptor set with T type bracket

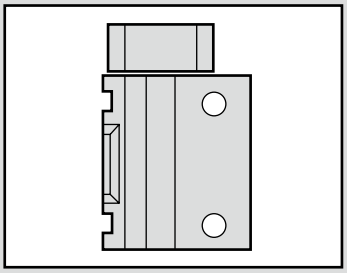
● Model no.: A100-6, 8, 10-W-B11W
A400-8, 10, 15-W-B31W
A400-8, 10, 15, 20-W-B41W
A800-20, 25, 32-W-B81W
(T type bracket)

● Applications



Model no.	Port size	Applicable model	A	B	C	D	E (O-ring)	F (Gasket)	Other
A100-6*-W-B11W	1/8	1000 Series	21.5	13.5	40	36	JASO-2013 1 programs	1 programs	-
A100-8*-W-B11W	1/4								
A100-10*-W-B11W	3/8								
A400-8*-W-B31W	1/4	2000 3000 Series	20	6	50	45	JISB2401 P21 1 programs	1 programs	
A400-10*-W-B31W	3/8								
A400-15*-W-B31W	1/2								
A400-8*-W-B41W	1/4	4000 Series	20 (25) {34}	6 (11) {20}	50	45	JISB2401 P21 1 programs	1 programs	Numbers in ( ) are for 3/4 Numbers in{ } are for 1
A400-10*-W-B41W	3/8								
A400-15*-W-B41W	1/2								
A400-20*-W-B41W	3/4								
A400-25*-W-B41W	1								
A800-20*-W-B81W	3/4	6000 8000 Series	35 (38)	15 (18)	81	66	AS568-127 1 programs	1 programs	Numbers in ( ) are for1 1/4
A800-25*-W-B81W	1								
A800-32*-W-B81W	1 1/4								

* Blank: Rc thread/N: NPT thread/G: G thread



Lpiping adaptor White Series

A101 / A401 / A801-W Series

Port size: 1/8 t 1

RoHS

Specifications

Descriptions	A101-W	A401-W Note 1	A801-W
Working fluid	Compressed air		
Max. working pressure MPa	1.0		
Withstanding pressure MPa	1.5		
Port size Rc, PT,	1/8, 1/4	1/4, 3/8, 1/2	3/4, 1
Working temperature ℃	5 to 60		
Product weight kg	0.045	0.13	0.4

Note 1: A401-W can be connected to both 3000-W Series and ·4000-W Series.

How to order

A101 - 6 ( ) - W - B11W

- A Model no.
- (White type)
- B Port size
- C Port thread type
- D T type bracket

Symbol	Descriptions
A Model no.	
A101	L type piping adapter
A401	L type piping adapter
A801	L type piping adapter

B Port size		A101	A401	A801
6	1/8	●		
8	1/4	●	●	
10	3/8		●	
15	1/2		●	
20	3/4			●
25	1			●

C Port thread type	
Blank	Rc thread
N	NPT thread
G	G thread

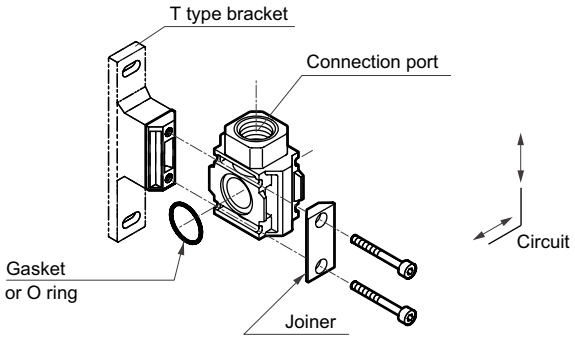
D T bracket				
Blank	None Note 1	●	●	●
B11W	For 1000 Series	●		
B31W	For 2000 Series For 3000 Series		●	
B41W	For 4000 Series		●	
B81W	For 6000 Series For 8000 Series			●

・Applicable models
- ・A101-6, 8-W
  ····· 1000-W Series
- ・A401-8, 10, 15-W
  ····· 2000, 3000, 4000-W Series
- ・A801-20, 25-W
  ····· 6000, 8000-W Series

⚠ Cautions for model No. selection

Note 1: Joiner set (joiner, bolt, O ring) and 1 gasket included.

L type piping adapter



● Applications

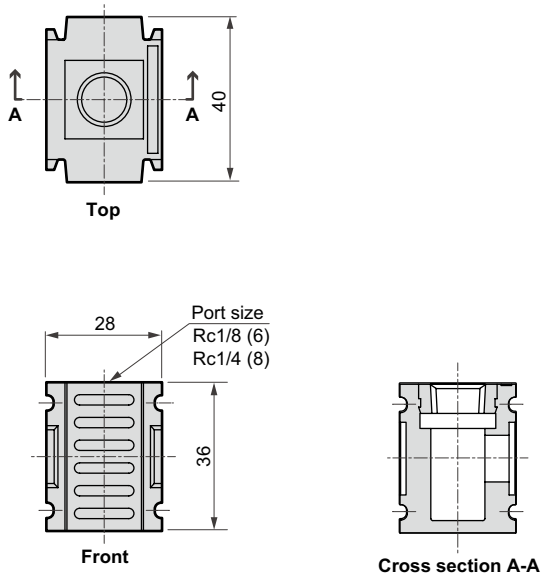
Note: Insert the fitting for replacement vertically until it reaches the back. Insert the O ring when mounting on the primary side for the air flow, and insert the gasket when mounting on the secondary side.

Note:Refer to the next page for dimensions.

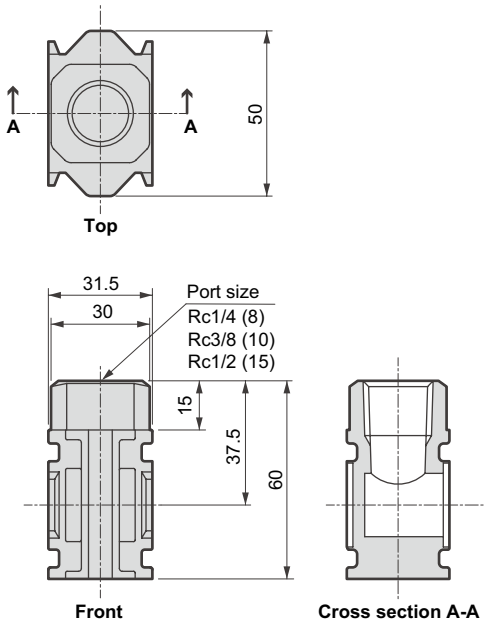
Piping adaptor

Dimensions CAD

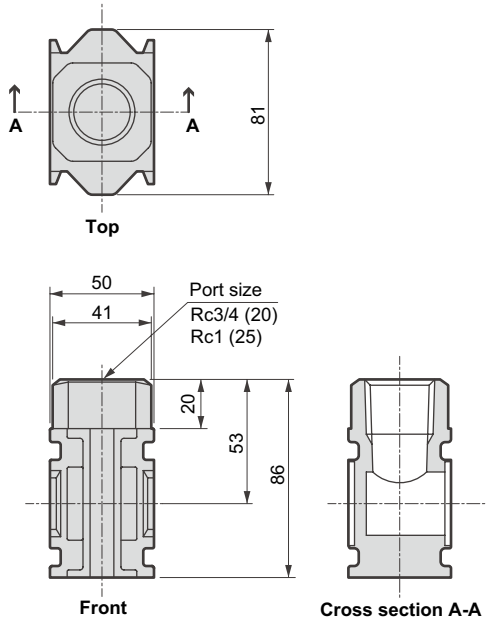
● A101-W



● A401-W



● A801-W



F.R.L.
Modular type

Medium pressure

■ **Components for air preparation/F.R.L. unit**

CONTENTS

Air filter medium pressure type

FM3000-W·FM4000-W·FM6000-W·FM8000-W Series

F3000 to 8000 Series with medium pressure specification
Port size: 1/4 to 1

JIS symbol 

RoHS

Specifications

Model no.	FM3000-W	FM4000-W	FM6000-W	FM8000-W
Exterior				
Working fluid	Compressed air			
Max. working pressure MPa	1.6 (Note2, 3)			
Withstanding pressure MPa	2.4			
Ambient temperature ℃	-5 to 60 (to be unfrozen)			
Fluid temperature ℃	5 to 60			
Filtration rating μm	5 or 0.3			
Drain capacity cm^3	45	80	80	80 Note 1
Port size Rc, PT,	1/4, 3/8	1/4, 3/8, 1/2	3/4, 1	3/4, 1
Product weight kg	0.35	0.55	1.0	1.26

Note 1: Drainage accumulates up to 170 cm^3 only with the manual drain cock.
Note 2: The min. working pressure of the automatic drain for models with automatic drain "F" is 0.1MPa.
Air will purge with drain until it reaches 0.1MPa. Other specificaation will be as follows: max. working pressure 1.5MPa, withstanding pressure 2.25MPa, ambient temperature -5 to 45℃, fluid temperature 5 to 45℃.
Note 3: The min. working pressure of the automatic drain for models with automatic drain "F" is 0.15MPa.
Other specificaation will be as follows: max. working pressure 1.5MPa, withstanding pressure 2.25MPa, ambient temperature -5 to 45, fluid temperature 5 to 45.

How to order

* Refer top page 9 for an explanation of the options.

FM3000 - 8 ○ - W - F - ○ - A8W ○

Ⓐ Model no. (White type) Ⓑ Port size Ⓒ Port thread type Ⓓ Option Ⓔ Displayed unit Ⓕ Attachment (included) Ⓖ Bracket (included)

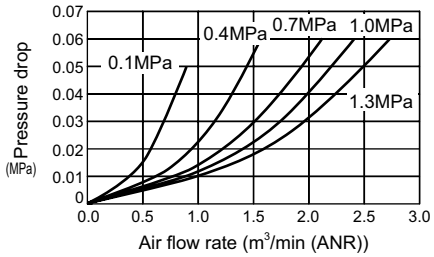
Symbol	Descriptions	Ⓐ Model no. FM3000	FM4000	FM6000	FM8000
Ⓑ Port size					
8	1/4	●	●		
10	3/8	●	●		
15	1/2		●		
20	3/4			●	●
25	1			●	●
Ⓒ Port thread type					**Note 1**
Blank	Rc thread	●	●	●	●
N	NPT thread	●	●	●	●
G	G thread	●	●	●	●
Ⓓ Option					**Note 2**
Drainage Note 3, Note 4	**Blank** With manual drain cock	●	●	●	●
	F NO type automatic drain Drain port Rc1/8 Max. working pressure 1.5 MPa, Max. working temperature 45°C	●	●	●	●
	F1 N.C. type automatic drain (exhaust without pressurized): drain port Rc1/8 Max. working pressure 1.5 MPa, Max. working temperature 45°C	●	●	●	●
Bowl material	**Blank** Metal bowl	●	●	●	●
Element	**Blank** 5μm	●	●	●	●
	Y 0.3μm	●	●	●	●
Differential pressure detection	**Blank** Without differential pressure detection port	●	●	●	●
	Q With differential pressure detection port (Rc1/4)			●	●
Flow direction	**Blank** Standard flow (left to right)	●	●	●	●
	X1 Reverse flow (right to left)	●	●	●	●
Ⓔ Displayed unit					
Blank	MPa display, Rc thread	●	●	●	●
J1	MPa display, NPT, G thread	●	●	●	●
Ⓕ Attachment	**Note 5**	**pages 155 to 157**			**Note 6**
Blank	Not attached	●	●	●	●
A8*W	1/4 piping adaptor set	●	●		
A10*W	3/8 piping adaptor set	●	●		
A15*W	1/2 piping adaptor set	●	●		
A20*W	3/4 piping adaptor set		●	●	●
A25*W	1 piping adaptor set			●	●
A32*W	1 1/4 piping adaptor set			●	●
*** Adaptor thread type**					
Blank	Rc thread	●	●	●	●
N	NPT thread	●	●	●	●
G	G thread	●	●	●	●
Ⓖ Bracket (attached)					**Page 152**
Blank	Not attached	●	●	●	●
BW	C type bracket	●	●	●	●

⚠ Cautions for model No. selection

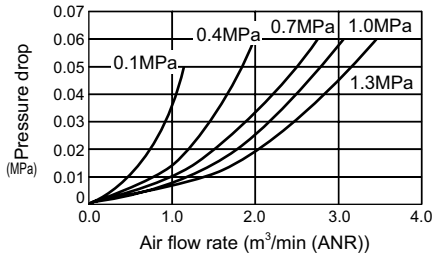
Note 1: When G threads or NPT threads are selected, the IN, OUT, and drainage discharge port are available.
Note 2: Select the option from drain exhaust, bowl material and differential pressure detection. When selecting options for several items, list options in order from the top.
Note 3: Refer to page 12 for the working conditions of the automatic drain
Note 4: The large discharge automatic drain is provided only when "F" or "F1" is selected for FM8000-W drain discharge.
Note 5: The piping adapter set and C bracket cannot be used together.
Note 6: A joiner set is attached with the piping adapter set.

Flow characteristics

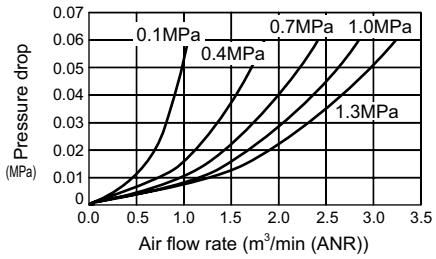
● FM3000-8-W



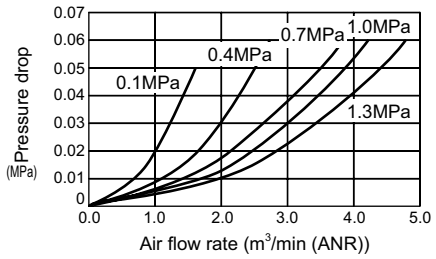
● FM3000-10-W



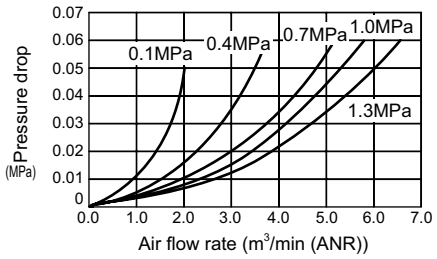
● FM4000-8-W



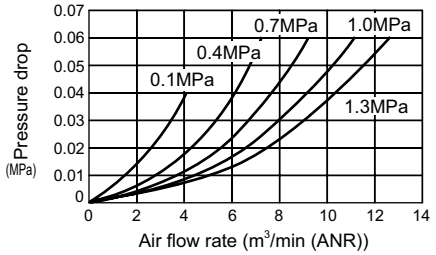
● FM4000-10-W



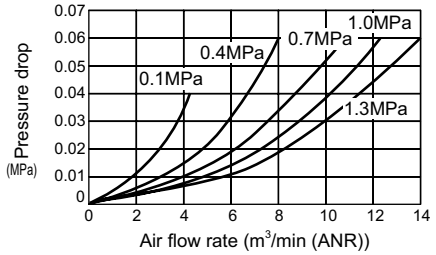
● FM4000-15-W



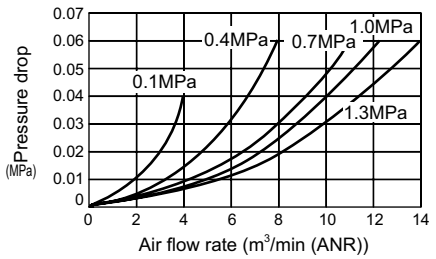
● FM6000-20-W



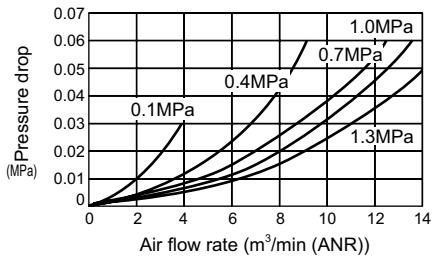
● FM6000-25-W



● FM8000-20-W

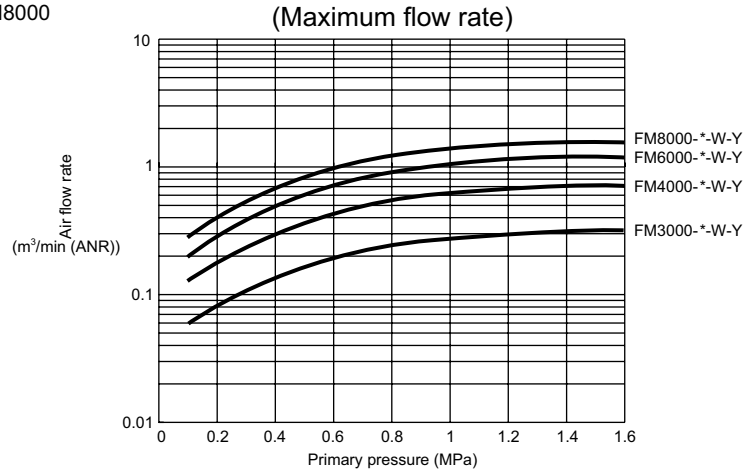


● FM8000-25-W



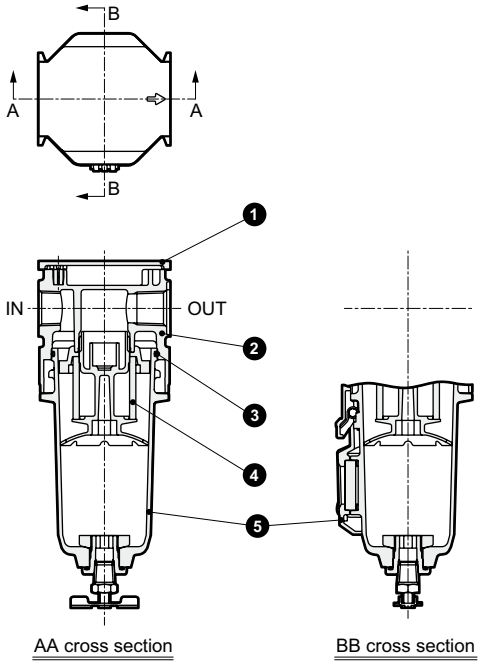
● FM3000
FM4000
FM6000
FM8000
-*-W-Y (0.3μm element)

(Maximum flow rate)

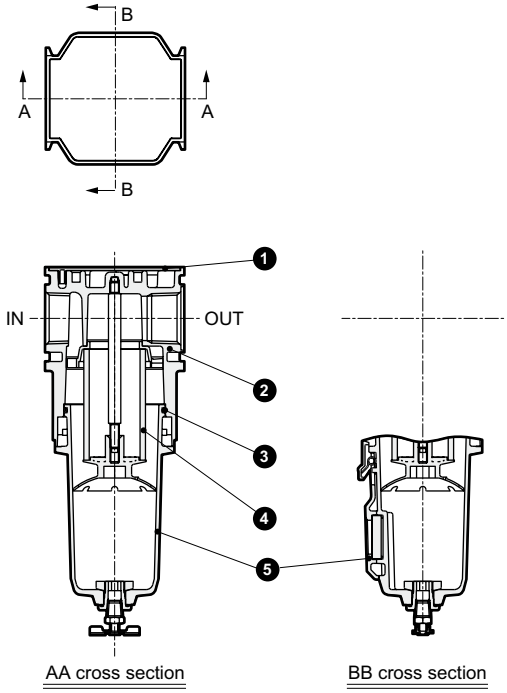


Internal structure and parts list

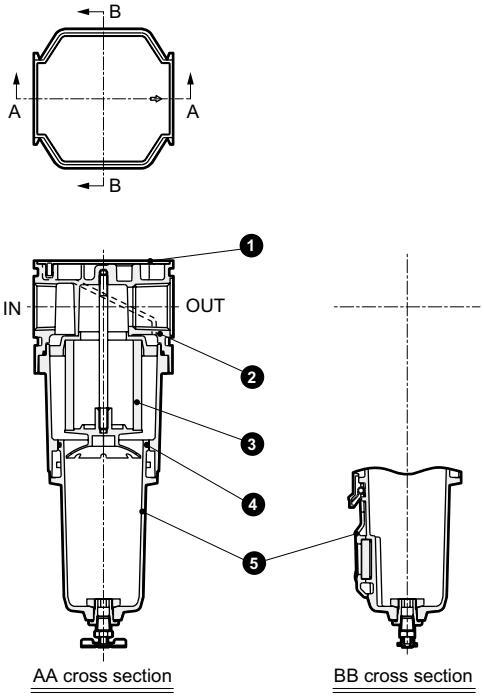
● FM3000-W･FM4000-W



● FM6000-W



● FM8000-W

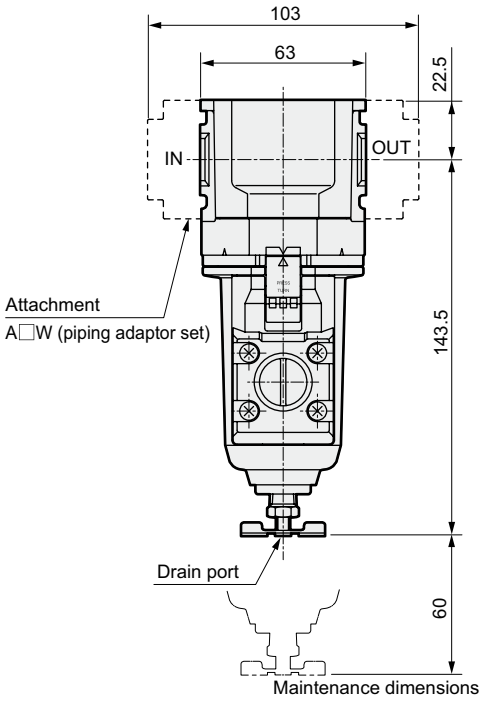


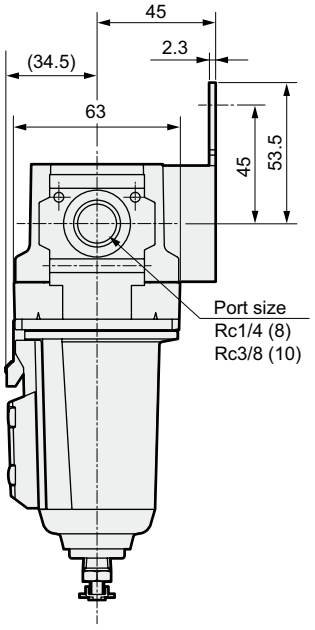
No.	Part name	Material
①	Plate cover	ABS resin
②	Body	Aluminum alloy die-casting
③	O-ring	Special nitrile rubber
④	Element (5μm)	Polypropylene
	Element (0.3μm)	-
⑤	Metal bowl assembly	Aluminum alloy die casting, brass, glass, nitrile rubber, steel, stainless steel

Note 1: Refer to page 93 and 94 for elements(consumable), repair parts kit and bowl assembly.

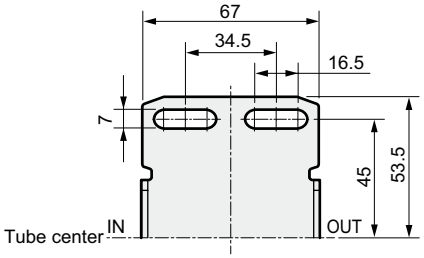
Dimensions

● FM3000-W

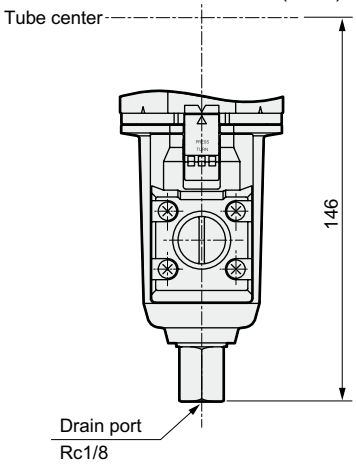




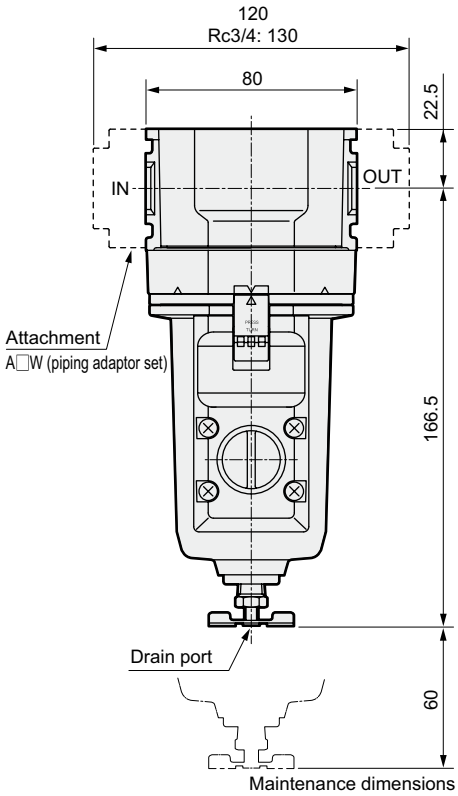
・Attachment
C type bracket (-BW)
Part no: B320

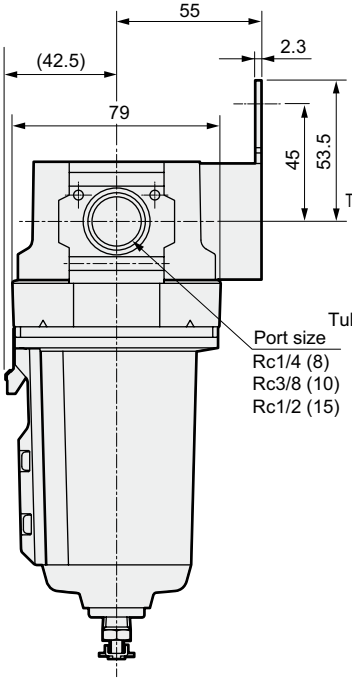


・Option dimensions
Automatic drain (F, F1)

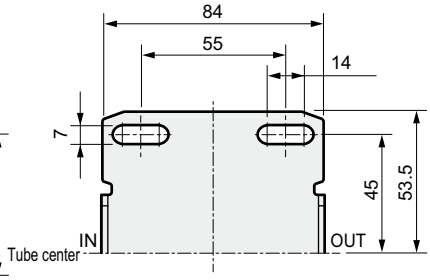


● FM4000-W

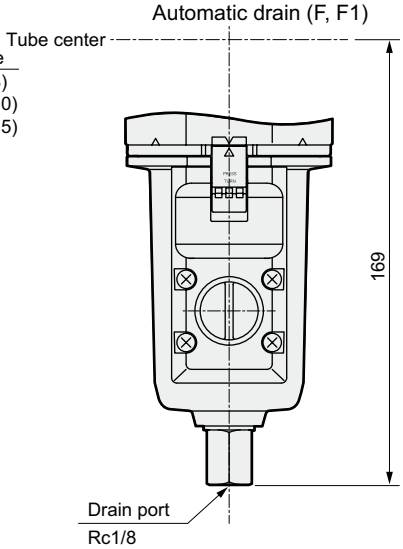




・Attachment
C type bracket (-BW)
Part no: B420



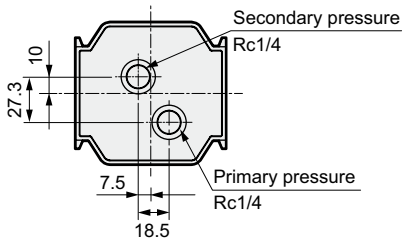
・Option dimensions
Automatic drain (F, F1)

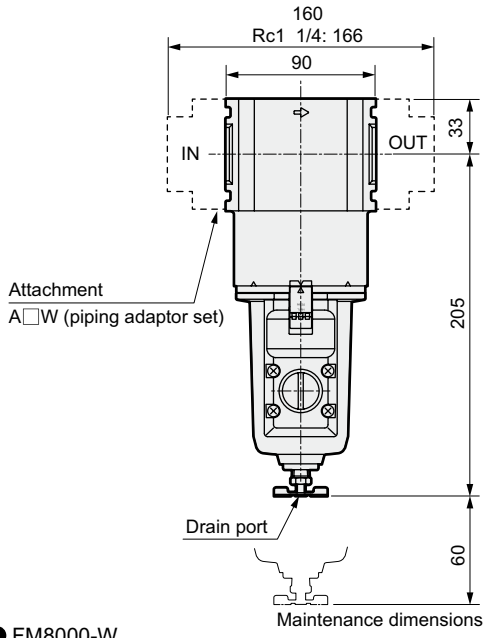


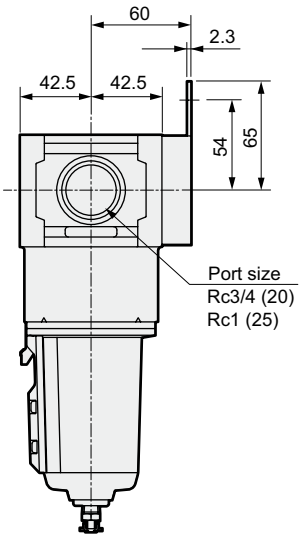
Dimensions

● FM6000-W

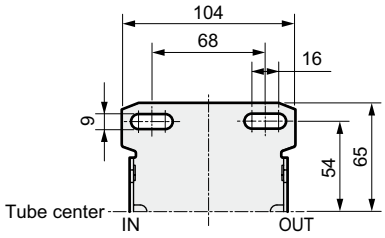
・Option dimensions
With differential pressure detection port (Q)



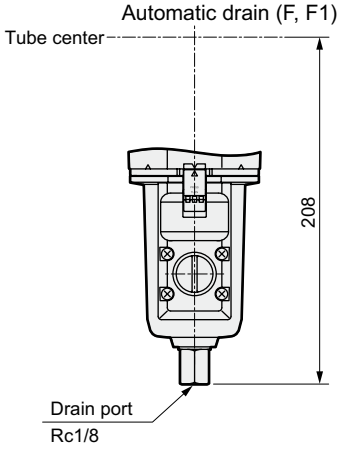




・Attachment
C type bracket (-BW)
Part no: B620

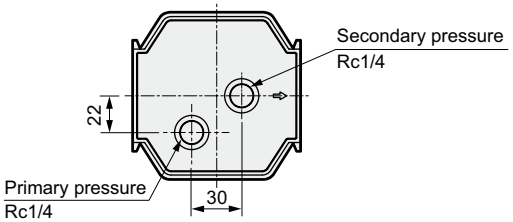


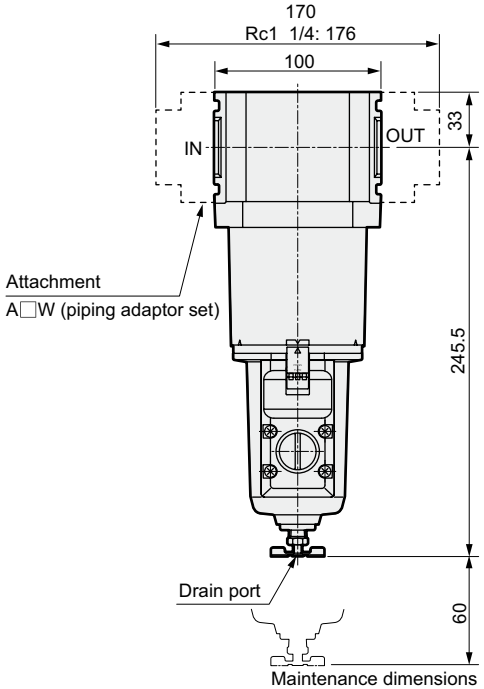
・Option dimensions
Automatic drain (F, F1)

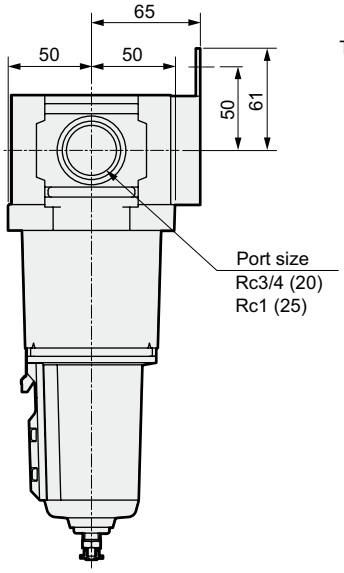


● FM8000-W

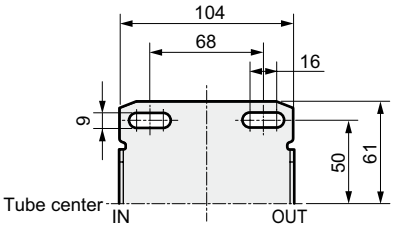
・Option dimensions
With differential pressure detection port (Q)



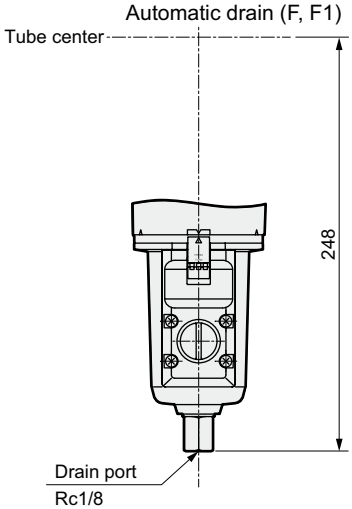




・Attachment
C type bracket (-BW)
Part no: B820



・Option dimensions
Automatic drain (F, F1)



Oil mist filter for medium pressure

MM3000-W/MM4000-W/MM6000-W/MM8000-W Series

M3000 to 8000 Series medium pressure specification
Port size: 1/4 to 1

JIS symbol 

RoHS

Specifications

Model no.	MM3000-W	MM4000-W	MM6000-W	MM8000-W
Exterior				
Working fluid	Compressed air			
Max. working pressure MPa	0.1 to 1.6 Note 7			
Withstanding pressure MPa	2.4			
Drain capacity cm^3	45	80	80	804
Port size Rc, PT,	1/4, 3/8	1/4, 3/8, 1/2	3/4, 1	3/4, 1
Product weight kg	0.35	0.55	1	1.48

Mantle option name		Blank (M type)	S (S type)	X (X type)
Processing flow	MM3000-□-W	490	610	610
ℓ/min (ANR)	MM4000-□-W	1130	1370	1370
Primary pressure 1.4 MPa	MM6000-□-W	1740	1920	1920
Pressure drop 0.01 MPa	MM8000-□-W	3560	3980	3980
Ambient temperature ℃		-5 to 60 (to be unfrozen)		-5 to 30 (to be unfrozen)
Fluid temperature ℃		5 to 60		5 to 30
Filtration rating μm		0.01 (nominal)	0.3	Adsorption by activated charcoal Note 4
Secondary oil concentration mg/m^3		0.01 or less Note 2, Note 3	0.5 or less Note 2	0.003 or less Note 2, Note 5
Mantle (element) replacement		1 year (6000 hours) or pressure drop of 0.1MPa		- Note 6

Note 1: Use within the maximum processing flow rate.
If the maximum processing flow is exceeded temporarily, or if the filter is installed at a place with high levels of pulsation, the mantle could be damaged or oil or drainage, etc., could splatter to the secondary side and result in faults at the terminal.
Note 2: Primary side oil concentration 30mg/m^3 when inlet air temperature is 21℃.
Note 3: Install an oil mist filter (S type) as a prefilter on the primary side to prevent early clogging.
Note 4: Activated carbon particles could flow to the secondary side, so install an air filter (F Series) or oil mist filter (M Series M type or S type) on the secondary side.
Note 5: When an oil mist filter (M Series M type) is installed on the primary side.
Note 6: The X type mantle (element) replacement period depends on odor density in compressed air and cannot be clearly indicated.
Consider the total period from initial installation to when the smell of oil is confirmed as the effective deodorizing period, and replace the mantle (element) regularly.
The primary air temperature must be 30°C or less. Deodorizing decreases if the temperature is high, so provide measures to dissipate heat.
Note 7: The minimum operation pressure of the automatic drain is 0.15 MPa for the "F1" with an automatic drain. Max. working pressure 1.5MPa, withstanding pressure2.25MPa, ambient temperature-5 to 45℃, fluid temperature 5 to 45℃.

How to order

* Refer top page 9 for an explanation of the options.

MM3000 - 8 ( ) - W - F1 - ( ) - A8W ( )

- Ⓐ Model no.
- (White type)
- Ⓑ Port size
- Ⓒ Port thread type
- Ⓓ Option
- Ⓔ Displayed unit
- Ⓕ Attachment
- Ⓖ Bracket (included)

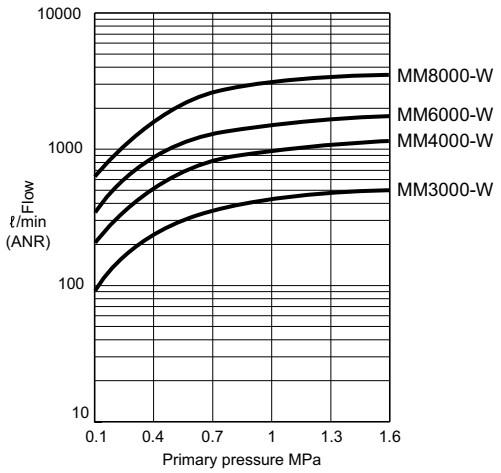
Symbol	Descriptions	Ⓐ Model no. MM3000	MM4000	MM6000	MM8000
Ⓑ Port size					
8	1/4	●	●		
10	3/8	●	●		
15	1/2		●		
20	3/4			●	●
25	1			●	●
Ⓒ Port thread type					**Note 1**
Blank	Rc thread	●	●	●	●
N	NPT thread	●	●	●	●
G	G thread	●	●	●	●
Ⓓ Option					**Note 2**
Drainage Note 3, Note 4	**Blank** With manual drain cock	●	●	●	●
	F1 N.C. type automatic drain (exhaust without pressurized): drain port Rc1/8 Max. working pressure 1.5 MPa, Max. working temperature 45°C	●	●	●	●
Bowl material	**Blank** Metal bowl	●	●	●	●
Element	**Blank** M type (nominal 0.01 µm; remaining oil 0.01 mg/m^3)	●	●	●	●
	S S type (0.3 µm; remaining oil 0.5 mg/m^3)	●	●	●	●
	X X type (deodorization; remaining oil 0.003mg/m^3) Note 5	●	●	●	●
Differential pressure detection	**Blank** Without differential pressure detection port	●	●	●	●
	Q With differential pressure detection port (Rc1/4)			●	●
Flow direction	**Blank** Standard flow (left to right)	●	●	●	●
	X1 Reverse flow (right to left)	●	●	●	●
Ⓔ Displayed unit					
Blank	MPa display, Rc thread	●	●	●	●
J1	MPa display, NPT, G thread	●	●	●	●
Ⓕ Attachment	**Note 6**	**pages 155 to 157**			**Note 7**
Blank	Not attached	●	●	●	●
A8*W	1/4 piping adaptor set	●	●		
A10*W	3/8 piping adaptor set	●	●		
A15*W	1/2 piping adaptor set	●	●		
A20*W	3/4 piping adaptor set		●	●	●
A25*W	1 piping adaptor set			●	●
A32*W	1 1/4 piping adaptor set			●	●
*** Adaptor thread type**					
Blank	Rc thread	●	●	●	●
N	NPT thread	●	●	●	●
G	G thread	●	●	●	●
Ⓖ Bracket (included)					**Page 152**
Blank	Not attached	●	●	●	●
BW	C type bracket	●	●	●	●

⚠ Cautions for model No. selection

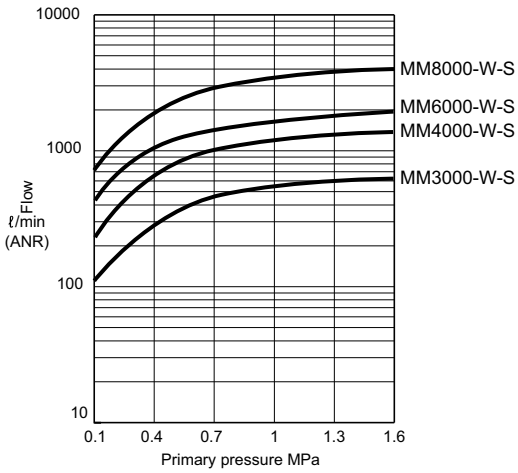
Note 1: When G threads or NPT threads are selected, the IN, OUT, and drainage discharge port are available.
Note 2: Select the option from drain exhaust, bowl material and differential pressure detection. When selecting options for several items, list options in order from the top.
Note 3: The NO automatic drain cannot be selected.
Note 4: Refer to page 12 for working conditions of the automatic drain.
Note 5: Combination with option F1 is not possible.
Note 6: The piping adapter set and C bracket cannot be used together.
Note 7: A joiner set is attached with the piping adapter set.

Flow characteristics (Maximum flow rate)

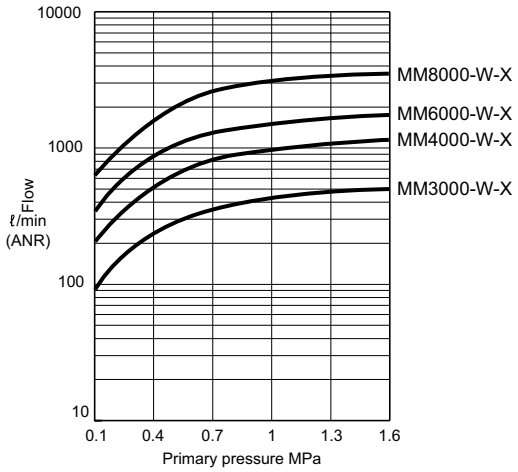
● MM*000-W



● MM*000-W-S



● MM*000-W-X



Selecting optional mantle for oil mist filters

Recommended circuit

◆ S type

Applications

General industrial air
- Air tools
  Air drill, air driver
  air grinder
- Labor saving device and components
- Pneumatic jigs and tools
- Air chuck
- Air vice
- Air for cleaning precision parts

◆ M type

Oil free air
- Instrumentation
- Measurement
- Sequence control
  Movable element, pure fluid element
- Luxury painting
- Precision industry

◆ X type

Deodorized air
- Food industry
- Pharmaceutical industry
- Stirring
- Transportation
- Drying
- Packaging
- Air for brewing

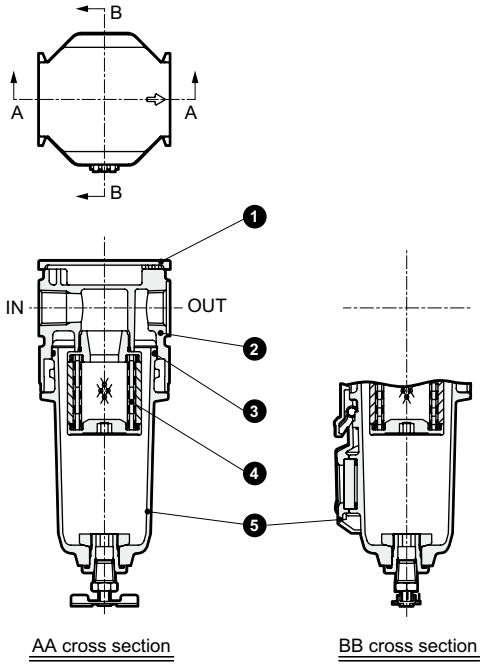
Option symbol and shap of mantles

Option symbol	Appearance
Blank (M type)	End plate black; Plastic foam red
S (S type)	End plate green; Plastic foam red
X (X type)	End plate black; Punching metal

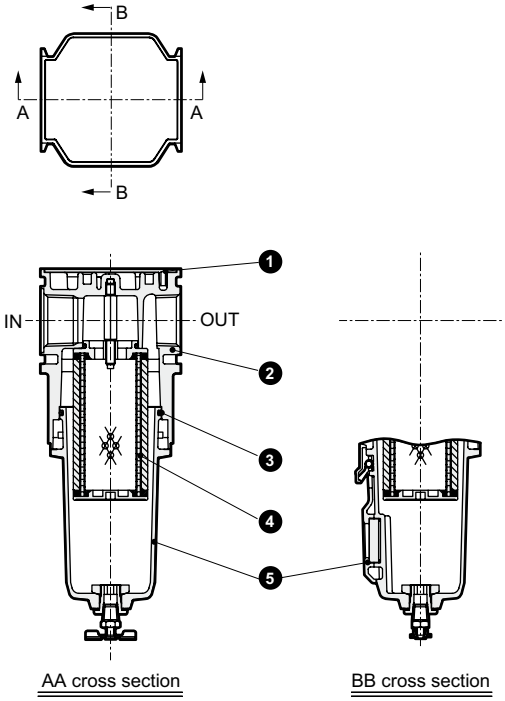
Note: Changes for product upgrades may be made without prior notice. When placing an order, confirm the option symbol for the part model given here.

Internal structure and parts list

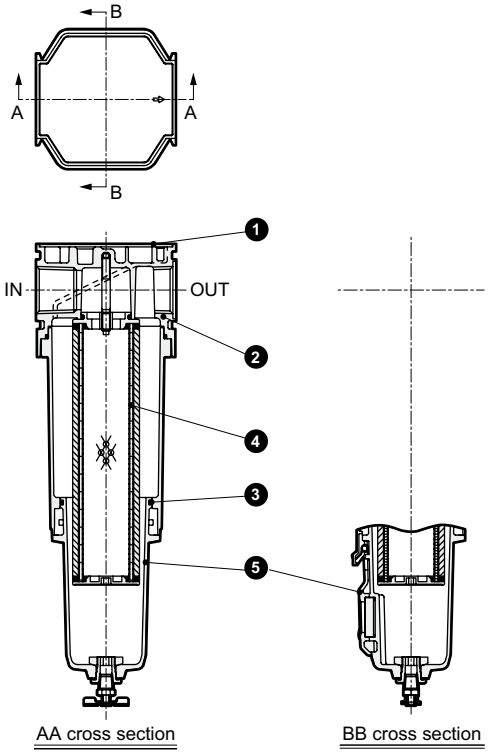
● MM3000-W･MM4000-W



● MM6000-W



● MM8000-W

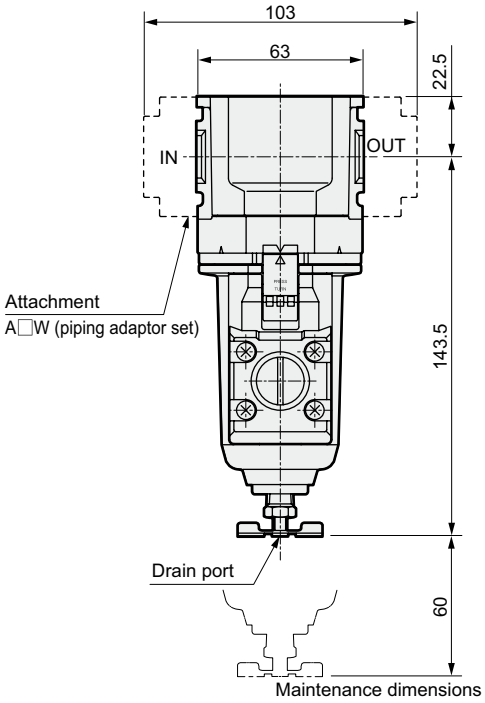


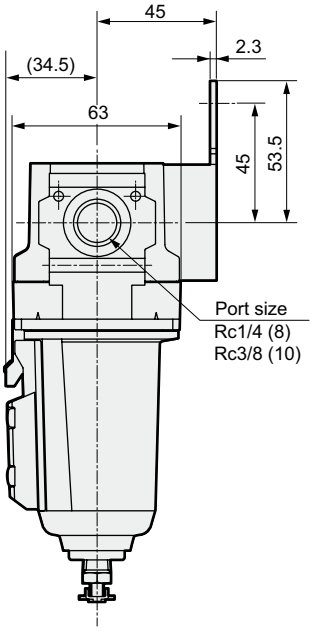
No.	Part name	Material
①	Plate cover	ABS resin
②	Body	Aluminum alloy die-casting
③	O-ring	Special nitrile rubber
④	Mantle assembly	-
⑤	Metal bowl assembly	Aluminum alloy die casting, brass, glass, nitrile rubber, steel, stainless steel

Note 1: The same repair parts kit and mantle are same as M*000-W. Refer to repair parts on page 102.

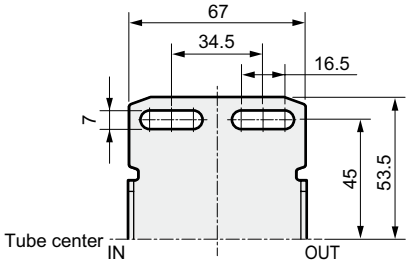
Dimensions

● MM3000-W

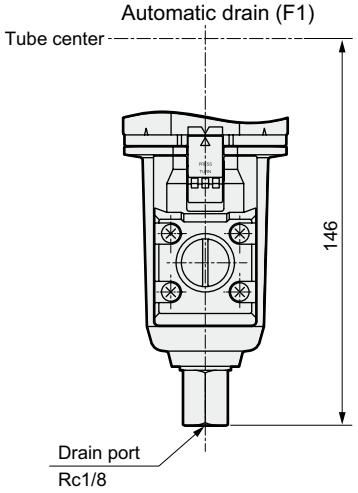




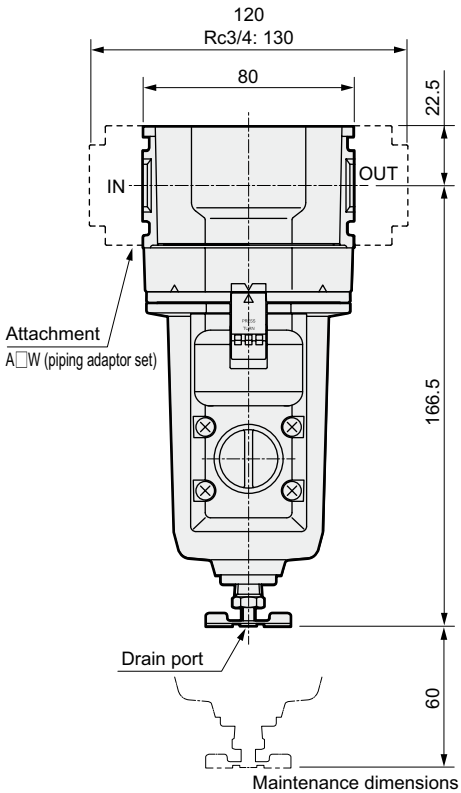
・Attachment
C type bracket (-BW)
Part no: B320

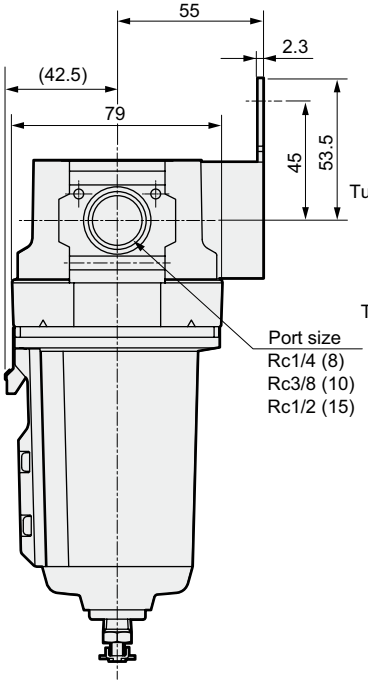


・Option dimensions
Automatic drain (F1)

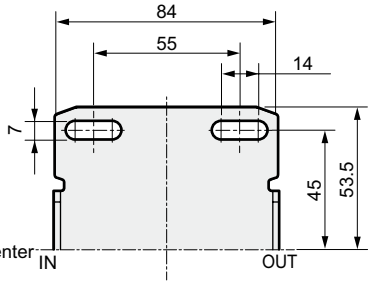


● MM4000-W

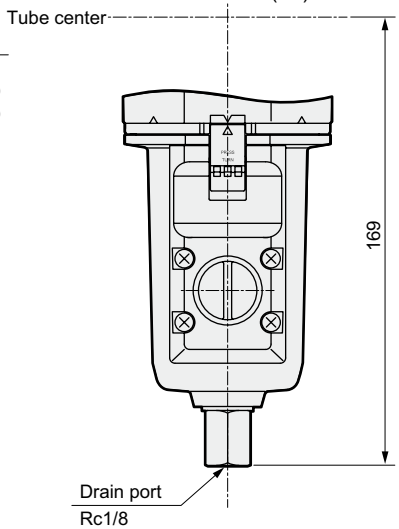




・Attachment
C type bracket (-BW)
Part no: B420



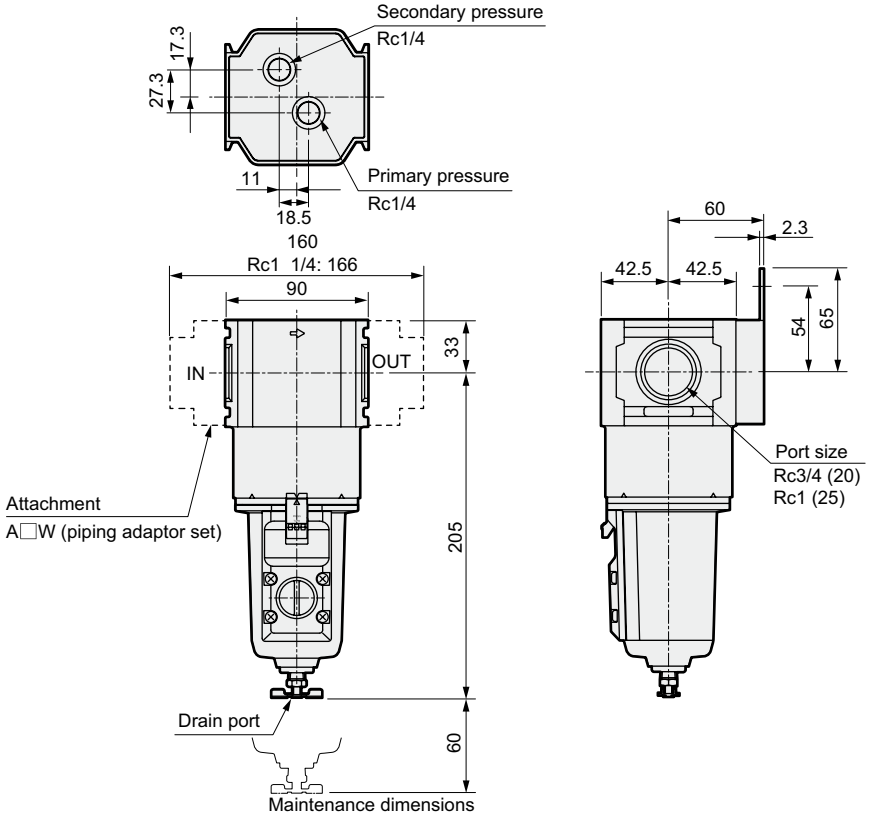
・Option dimensions
Automatic drain (F1)



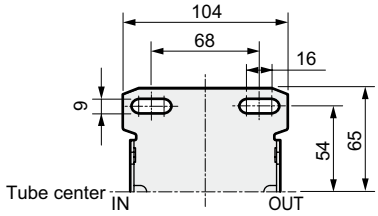
Dimensions

● MM6000-W

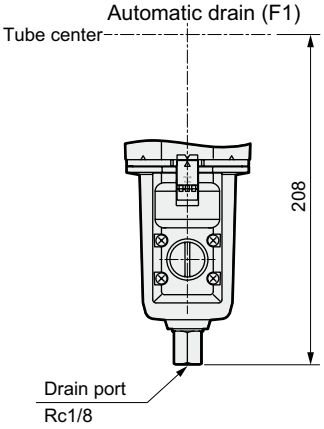
・Option dimensions
With differential pressure detection port (Q)



・Attachment
C type bracket (-BW)
Part no: B620

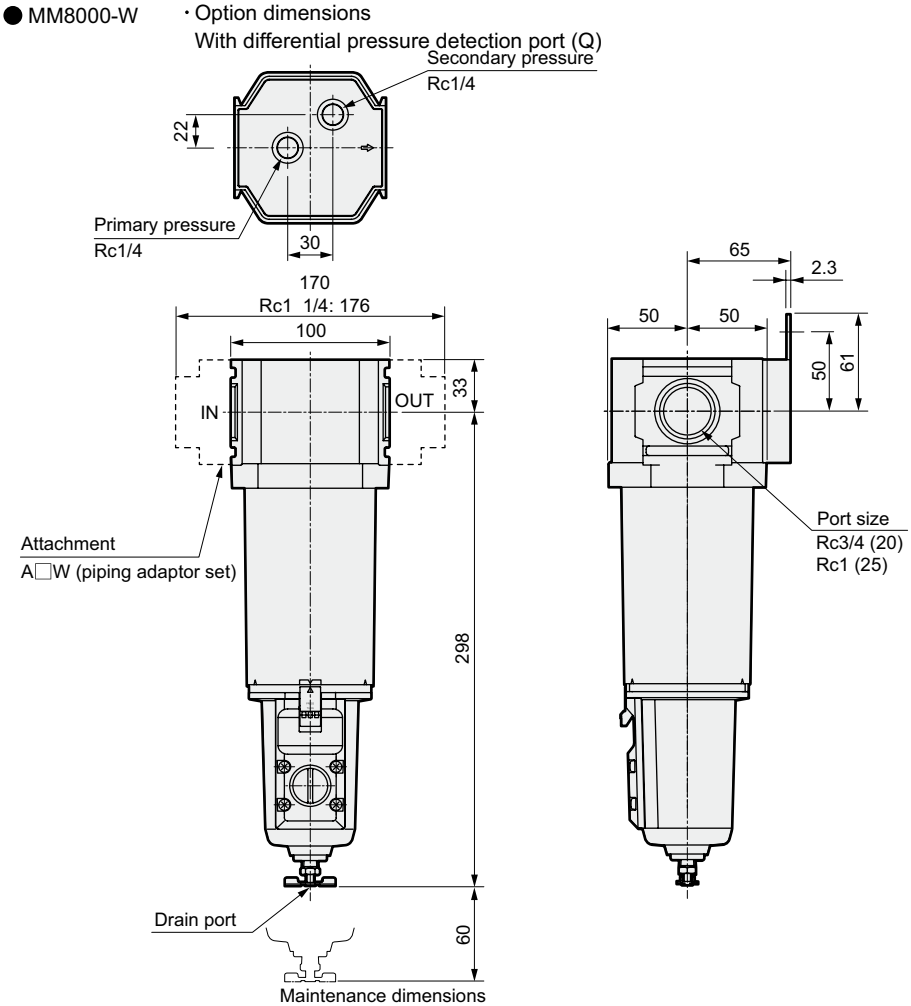


・Option dimensions
Automatic drain (F1)

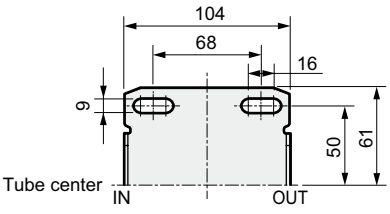


● MM8000-W

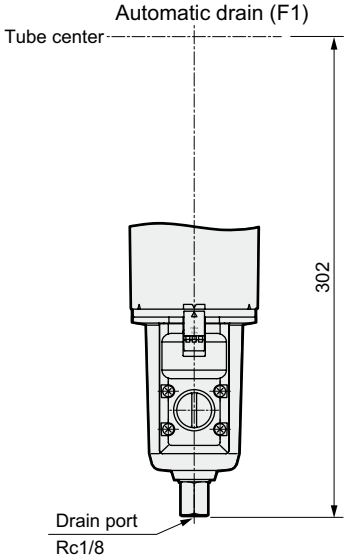
・Option dimensions
With differential pressure detection port (Q)



・Attachment
C type bracket (-BW)
Part no: B820



・Option dimensions
Automatic drain (F1)



Regulator for medium pressure

RM3000-W/RM4000-W Series

Medium pressure specification R3000-W･R4000-W Series
Port size: 1/4 to 1/2

JIS symbol 

RoHS

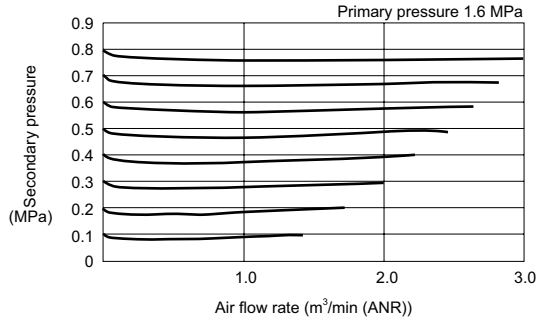
Specifications

Descriptions		RM3000-W	RM4000-W
Working fluid		Compressed air	
Max. working pressure	MPa	1.6	
Withstanding pressure	MPa	2.4	
Ambient temperature range	℃	-5 to 60 (not freezing) (Note 1)	
Set pressure range	MPa	0.05 to 0.85	
Relief		With relief mechanism	
Port size	Rc, PT,	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)
Product weight	g	0.45	0.7
Standard accessories		Pressure gauge, nut for panel mount	

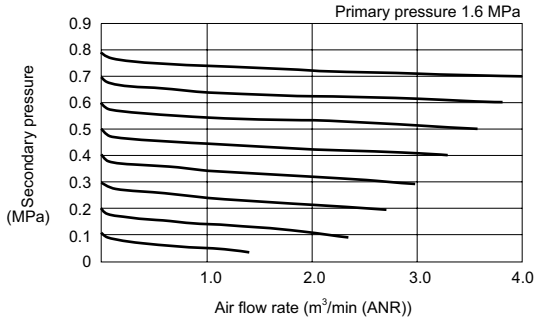
Note 1: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.

Flow characteristics

● RM3000-10-W

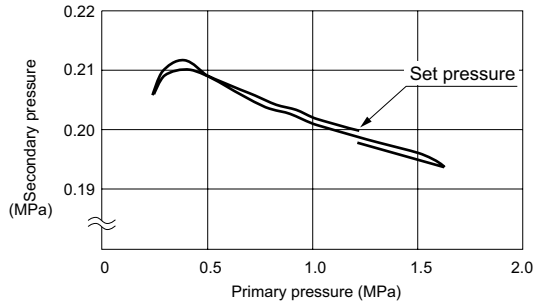


● RM4000-15-W

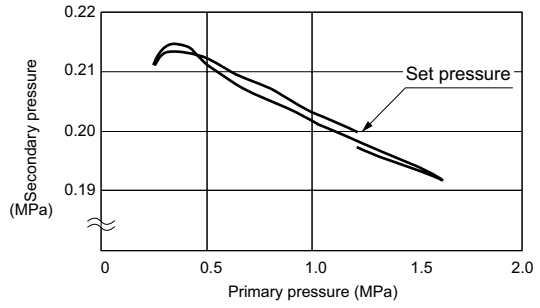


Pressure characteristics

● RM3000-W



● RM4000-W



How to order

RM3000 - 8 ○ - W - N - ○ - A8W ○

(White type)

Ⓐ Model no.

Ⓖ Attachment

* Refer top page 9 for an explanation of the options.

Symbol		Descriptions	Ⓐ Model no. RM3000	Ⓐ Model no. RM4000
Ⓑ Port size				
8		1/4	●	●
10		3/8	●	●
15		1/2		●
Ⓒ Port thread type			**Note 1**	
Blank		Rc thread	●	●
N		NPT thread	●	●
G		G thread	●	●
Ⓓ Option			**Note 2**	
Relief	**Blank**	With relief mechanism	●	●
	N	Non-relief type	●	●
Pressure gauge	**Blank**	With standard pressure gauge (G401)	●	●
	T Note 3	Without pressure gauge (gauge port (Rc1/4) assembled sealed)	●	●
	T8	Pressure gauge attachable (gauge port (Rc1/4) assembled open)	●	●
	R1	Pressure switch with display PPD assembled	●	●
Flow Direction	**Blank**	Standard flow (left to right)	●	●
	X1	Reverse flow (right to left)	●	●
Ⓔ Displayed unit				
Blank		MPa display, Rc thread	●	●
J1		MPa display, NPT, G thread	●	●
Ⓕ Piping adaptor set (included)		**Note 4 pages 155 to 157**	**Note 9**	
Blank		Not attached	●	●
A8*W		1/4 piping adaptor set	●	●
A10*W		3/8 piping adaptor set	●	●
A15*W		1/2 piping adaptor set	●	●
A20*W		3/4 piping adaptor set		●
*** Adaptor thread type**				
Blank		Rc thread	●	●
N		NPT thread	●	●
G		G thread	●	●
Ⓖ Attachment		**Note 5, 6 Page 152, 183**		
Blank		Not attached	●	●
BW		C type bracket	●	●
B3W Note 8		L type bracket	●	●
G45P		Pressure gauge: G45D-8-P10	●	●
G49P		Pressure gauge: G49D-8-P10	●	●
G59P		Pressure gauge: G59D-8-P10	●	●
G40P		Pressure gauge: G40D-8-P10	●	●
G50P		Pressure gauge: G50D-8-P10	●	●
G41P		Pressure gauge: G41D-8-P10	●	●

Ⓑ Port size

Ⓒ Port thread type

Ⓓ Option

Ⓔ Displayed unit

Ⓕ Piping adaptor set (included)

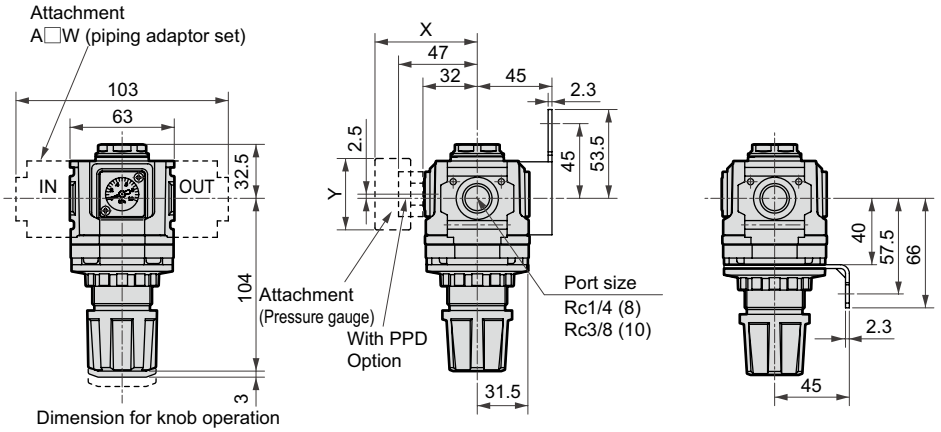
⚠ Cautions for model No. selection

Note 1: G and NPT threads are available for IN, OUT, and gauge ports.
Note 2: When selecting options for several items, list options in order from the top.
Note 3: When "T" is selected, the gauge plug is assembled instead of the pressure gauge.
Note 4: Refer to Pneumatic, Vacuum and Auxiliary Components Catalog (No. CB-024S) for details on "R1"
Note 5: Piping adaptor set A*00-**-W (Refer to related components page 155) included.
Note 6: Refer to related components for details on attachments. The piping adapter set and C bracket cannot be used together.
Note 7: If NPT is selected for the "C" piping thread, an NPT pressure gauge is included. If an Rc or G thread is selected, an R thread pressure gauge is included.
Note 8: Refer to Safety Precautions for the F.R.L. Unit for details on mounting the L-type bracket.
Note 9: A joiner set is attached with the piping adapter set.

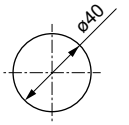
- The internal structure and parts list are common with the R*-000-W. Refer to page 116 for details.
- Refer page 128 for more details of options.

Dimensions

● RM3000-W

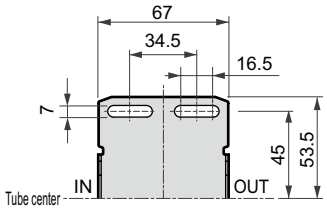


Panel cut dimensions

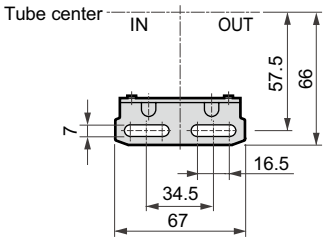


Panel thickness: Max. 7mm

・Attachment (C type bracket)
C type bracket (-BW)
Part no: B320



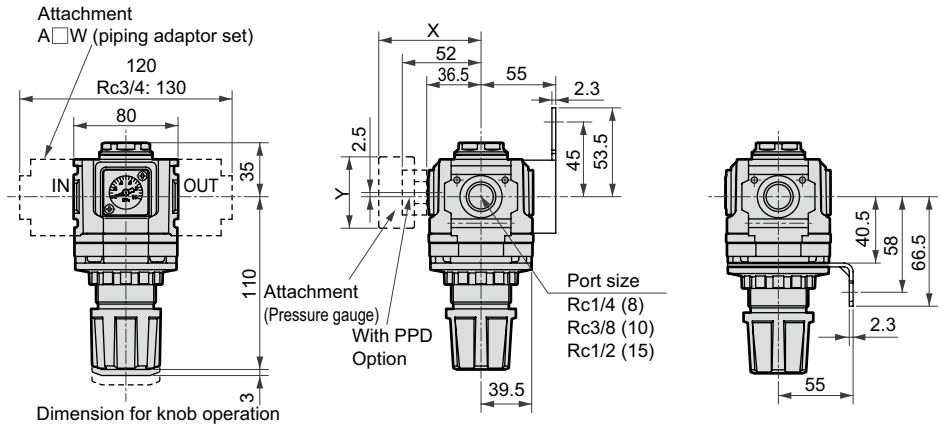
L type bracket (-B3W)
Part no: B330



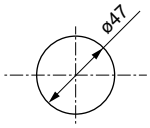
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42

● RM4000-W

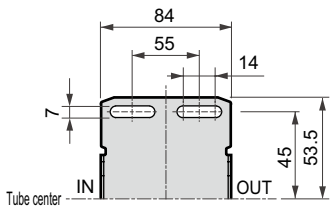


Panel cut dimensions

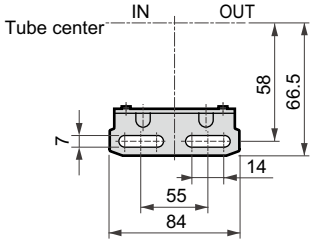


Panel thickness: Max. 7mm

・Attachment
C type bracket (-BW)
Part no: B420



L type bracket (-B3W)
Part no: B430



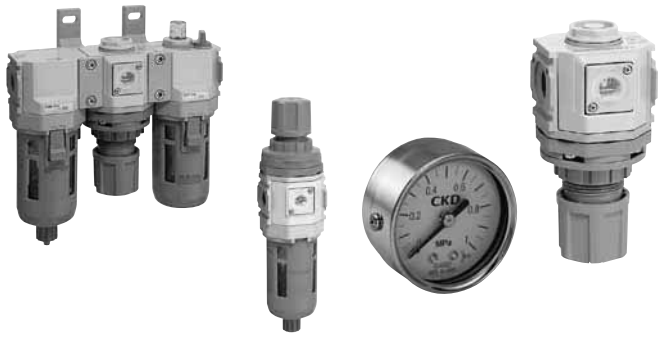
Option dimensions with pressure gauge attached

Attached pressure gauge	X	Y
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42

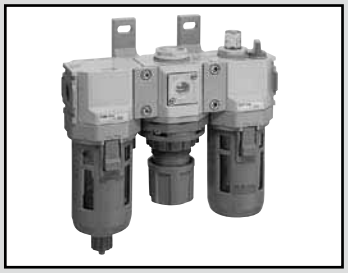
F.R.L.
Modular type

Copper and PTFE free series

■ **Components for air preparation/F.R.L. unit**



CONTENTS

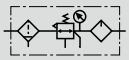


F.R.L. combination: copper and PTFE free specification

C1000/C2500/C3000 C4000/C6500/C8000-W-P6 Series

Copper ion prevention treatment

Port size: 1/8 to 1

JIS symbol 

RoHS

How to order

C1000 - 6 ( ) - W - CT P6 - ( ) A6W VW

- A Model no.
- B Port size
- (White type)
- C Port thread type
- Copper and PTFE free specification
- D Option
- E Displayed unit
- F Piping adaptor set (included)
- G Shut-off valve (included)

* Refer top page 9 for an explanation of the options.

Symbol		Descriptions	A Model no. C1000	C2500	C3000	C4000	C6500	C8000
B Port size								
6		1/8	●					
8		1/4	●	●	●	●		
10		3/8		●	●	●		
15		1/2				●		
20		3/4					●	●
25		1					●	●
C Port thread type								**Note 2**
Blank		Rc thread	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●
D Option								**Note 3**
Drainage	Blank	Filter with manual drain cock, lubricator without manual drain cock	●	●	●	●	●	●
	C	Lubricator with manual cock	●	●	●	●	●	●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●	●
Element	Blank	5μm	●	●	●	●	●	●
	Y	0.3μm (submicron)		●	●	●	●	●
Differential pressure detection	Blank	Without differential pressure detection port	●	●	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)					●	●
Regulator	T	Without pressure gauge, setting: 0.05 to 0.85 MPa, relief type	●	●	●	●	●	●
	LT	Without pressure gauge, setting: 0.05 to 0.35 MPa, relief type	●	●	●	●	●	●
	NT	Without pressure gauge, setting: 0.05 to 0.85 MPa, non-relief type	●	●	●	●	●	●
	LNT	Without pressure gauge, setting: 0.05 to 0.35 MPa, non-relief type	●	●	●	●	●	●
Flow Direction	Blank	Standard flow (left to right)	●	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●	●
E Displayed unit								
Blank		MPa display, Rc thread	●	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●	●
F Piping adaptor set (included)							**Pages 155 to 157**	**Note 5**
Blank		Not included	●	●	●	●	●	●
A6*W		1/8 piping adaptor set	●					
A8*W		1/4 piping adaptor set	●	●	●	●		
A10*W		3/8 piping adaptor set	●	●	●	●		
A15*W		1/2 piping adaptor set		●	●	●		
A20*W		3/4 piping adaptor set				●	●	●
A25*W		1 piping adaptor set					●	●
A32*W		1 1/4 piping adaptor set					●	●
*** Adaptor thread type**								
Blank		Rc thread	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●
G Shut-off valve (included)								**Page 142**
Blank		Not included	●	●	●	●	●	●
VW		Shut-off valve (V3000-W) + joiner set		●	●	●		

⚠ Cautions for model No. selection

Note 1: Refer to page 21 to 28 for specifications, dimensions and flow characteristics.

Note 2: G and NPT threads are available for IN, OUT, and gauge ports, drain port. including the attachment V.

Note 3: Select options from drain exhaust, bowl material, element, differential pressure detection, regulator, and regulator. When selecting options for several items, list options in order from the top.
Select one of the regulator options.

Note 4: Combinations other than those above are used as custom combinations (Page 189).

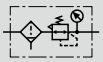
Note 5: A joiner set is attached with the piping adapter set.

Filter with regulator: copper and PTFE free specification

W1000/W3000 W4000/W8000-W-P6 Series

Copper ion prevention treatment

Port size: 1/8 to 1

JIS symbol 

RoHS

How to order

* Refer top page 9 for an explanation of the options.

W1000 - 6 ( ) - W - ZT P6 - ( ) A6W ( )

- W1000: Ⓐ Model no.
- 6: Ⓑ Port size
- ( ): (White type)
- W: Ⓒ Port thread type
- ZT: Ⓓ Option
- P6: Copper and PTFE free specification
- ( ): Ⓔ Displayed unit
- A6W: Ⓕ Piping adaptor set (included)
- ( ): Ⓖ Bracket (attached)

Symbol		Descriptions	Ⓐ Model no. W1000	W3000	W4000	W8000
Ⓑ Port size						
6		1/8	●			
8		1/4	●	●	●	
10		3/8		●	●	
15		1/2			●	
20		3/4				●
25		1				●
Ⓒ Port thread type						**Note 2**
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓓ Option						**Note 3**
Drainage	Blank	With manual drain cock	●	●	●	●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●
	Z	Nylon bowl	●	●	●	●
Element	Blank	5μm	●	●	●	●
	Y	0.3μm (submicron)		●	●	●
Regulator	T	Without pressure gauge, setting: 0.05 to 0.85 MPa, relief type	●	●	●	●
	LT	Without pressure gauge, setting: 0.05 to 0.35 MPa, relief type	●	●	●	●
	NT	Without pressure gauge, setting: 0.05 to 0.85 MPa, non-relief type	●	●	●	●
	LNT	Without pressure gauge, setting: 0.05 to 0.35 MPa, non-relief type	●	●	●	●
Flow Direction	Blank	Standard flow (left to right)	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●
Ⓔ Displayed unit						
Blank		MPa display, Rc thread	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●
Ⓕ Piping adaptor set (included)		**Note 4 pages 155 to 157**				**Note 5**
Blank		Not attached	●	●	●	●
A6*W		1/8 piping adaptor set	●			
A8*W		1/4 piping adaptor set	●	●	●	
A10*W		3/8 piping adaptor set	●	●	●	
A15*W		1/2 piping adaptor set		●	●	
A20*W		3/4 piping adaptor set			●	●
A25*W		1 piping adaptor set				●
A32*W		1 1/4 piping adaptor set				●
*** Adaptor thread type**						
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓖ Bracket (attached)						**Page 152**
Blank		Not attached	●	●	●	●
BW		C type bracket	●	●	●	●
B3W		L type bracket	●	●	●	

⚠ Cautions for model No. selection

Note 1: Refer to page 69 to 74 for specifications, dimensions and flow characteristics.

Note 2: G and NPT threads are available for IN, OUT, and gauge ports, drain port.

Note 3: Select options per drainage, bowl material, element, and regulator sections. When selecting options for several items, list options in order from the top.
Select one of the regulator options.

Note 4: The piping adapter set and C bracket cannot be used together.

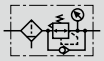
Note 5: A joiner set is attached with the piping adapter set.

Reverse filter with regulator: copper and PTFE free specification

W1100·W3100 W4100·W8100-W-P6 Series

Copper ion prevention treatment

Port size: 1/8 to 1

JIS symbol 

RoHS

How to order

W1100 - 6 ( ) - W - ZT P6 - ( ) - A6W ( )

- W1100 — Ⓐ Model no.
- 6 — Ⓑ Port size
- ( ) — Ⓒ Port thread type
- W — (White type)
- ZT — Option
- P6 — Copper and PTFE free specification
- ( ) — Displayed unit
- A6W — Ⓕ Piping adaptor set (included)
- ( ) — Ⓖ Bracket (attached)

* Refer top page 9 for an explanation of the options.

Symbol		Descriptions	Ⓐ Model no. W1100	W3100	W4100	W8100
Ⓑ Port size						
6		1/8	●			
8		1/4	●	●	●	
10		3/8		●	●	
15		1/2			●	
20		3/4				●
25		1				●
Ⓒ Port thread type						Note 2
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓓ Option						Note 3
Drainage	Blank	With manual drain cock	●	●	●	●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●
	Z	Nylon bowl	●	●	●	●
Element	Blank	5μm	●	●	●	●
	Y	0.3μm (submicron)		●	●	●
Regulator	T	Without pressure gauge, setting: 0.05 to 0.85 MPa, relief type	●	●	●	●
	TL	Without pressure gauge, setting: 0.05 to 0.35 MPa, relief type	●	●	●	●
	NT	Without pressure gauge, setting: 0.05 to 0.85 MPa, non-relief type	●	●	●	●
	LNT	Without pressure gauge, setting: 0.05 to 0.35 MPa, non-relief type	●	●	●	●
Flow Direction	Blank	Standard flow (left to right)	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●
Ⓔ Displayed unit						
Blank		MPa display, Rc thread	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●
Ⓕ Piping adaptor set (included)		Note 4 pages 155 to 157				Note 6
Blank		Not attached	●	●	●	●
A6*W		1/8 piping adaptor set	●			
A8*W		1/4 piping adaptor set	●	●	●	
A10*W		3/8 piping adaptor set	●	●	●	
A15*W		1/2 piping adaptor set		●	●	
A20*W		3/4 piping adaptor set			●	●
A25*W		1 piping adaptor set				●
A32*W		1 1/4 piping adaptor set				●
*** Adaptor thread type**						
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓖ Bracket (attached)						Page 152
Blank		Not attached	●	●	●	●
BW		C type bracket	●	●	●	●
B3W		L type bracket	●	●	●	

⚠ Cautions for model No. selection

Note 1: Refer to page 77 to 84 for specifications, dimensions and flow characteristics.

Note 2: G and NPT threads are available for IN, OUT, and gauge ports, drain port.

Note 3: Select options per drainage, bowl material, element, and regulator sections. When selecting options for several items, list options in order from the top.
Select one of the regulator options.

Note 4: The piping adapter set and C bracket cannot be used together.

Note 5: Position of the check valve and pressure gauge can not be changed. If the reverse direction of IN and OUT are required, indicate "X1" in the end of optional section.

Note 6: A joiner set is attached with the piping adapter set.

Air filter: copper and PTFE free specification

F1000/F3000 F4000/F6000/F8000-W Series

Copper ion prevention treatment　　Copper and PTFE free specification as standard.

Port size: 1/8 to 1

JIS symbol 

RoHS

How to order

F1000 - 6 [ ] - W - Z - [ ] - A6W [ ]

* Refer top page 9 for an explanation of the options.

Ⓐ Model no.

(White type)

Ⓖ Bracket (included)

Ⓑ Port size

Ⓒ Port thread type

Ⓓ Option

Ⓔ Displayed unit

Ⓕ Piping adaptor set (included)

Symbol		Descriptions	Ⓐ Model no. F10000	F30000	F40000	F60000	F80000
Ⓑ Port size							
6		1/8	●				
8		1/4	●	●	●		
10		3/8		●	●		
15		1/2			●		
20		3/4				●	●
25		1				●	●
Ⓒ Port thread type							Note 2
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓓ Option							Note 3
Drainage	**Blank**	With manual drain cock	●	●	●	●	●
Bowl material	**Blank**	Polycarbonate bowl	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●
Element	**Blank**	5μm	●	●	●	●	●
	Y	0.3μm (submicron)		●	●	●	●
Differential pressure detection	**Blank**	Without differential pressure detection port	●	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)				●	●
Flow Direction	**Blank**	Standard flow (left to right)	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●
Ⓔ Displayed unit							
Blank		MPa display, Rc thread	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●
Ⓕ Piping adaptor set (included)		Note 4　pages 155 to 157					Note 5
Blank		Not included	●	●	●	●	●
A6*W		1/8 piping adaptor set	●				
A8*W		1/4 piping adaptor set	●	●	●		
A10*W		3/8 piping adaptor set	●	●	●		
A15*W		1/2 piping adaptor set		●	●		
A20*W		3/4 piping adaptor set			●	●	●
A25*W		1 piping adaptor set				●	●
A32*W		1 1/4 piping adaptor set				●	●
*** Adaptor thread type**							
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓖ Bracket (included)							Page 152
Blank		Not included	●	●	●	●	●
BW		C type bracket	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Refer to page 85 to 94 for specifications, dimensions and flow characteristics.

Note 2: When G threads or NPT threads are selected, the IN, OUT, gauge port, and drainage discharge port (metal bowl automatic drain) are the target, as are attachments P and V.

Note 3: Select options for each drainage discharge, bowl material and element. When selecting options for several items, list options in order from the top.

Note 4: The piping adapter set and C bracket cannot be used together.

Note 5: A joiner set is includedd with the piping adapter set.

Oil mist filter: copper and PTFE free specification

M1000/M3000 M4000/M6000/M8000-W Series

Copper ion prevention treatment Copper and PTFE free specification as standard.

Port size: 1/8 to 1

JIS symbol

RoHS

How to order

M1000 - 6 ( ) - W - S - ( ) - A6W ( )

- Ⓐ Model no. (M1000)
- (White type) (W)
- Ⓑ Port size (6)
- Ⓒ Port thread type ( )
- Ⓓ Option (S)
- Ⓔ Displayed unit ( )
- Ⓕ Piping adaptor set (included) (A6W)
- Ⓖ Bracket (attached) ( )

* Refer top page 9 for an explanation of the options.

Symbol		Descriptions	Ⓐ Model no. M10000	M30000	M40000	M60000	M80000
Ⓑ Port size							
6		1/8	●				
8		1/4	●	●	●		
10		3/8		●	●		
15		1/2			●		
20		3/4				●	●
25		1				●	●
Ⓒ Port thread type							Note 2
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓓ Option							Note 3
Drainage	**Blank**	With manual drain cock	●	●	●	●	●
Bowl material	**Blank**	Polycarbonate bowl	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●
Differential pressure detection	**Blank**	Without differential pressure detection port	●	●	●	●	●
	Q	With differential pressure detection port (Rc1/4)				●	●
Flow Direction	**Blank**	Standard flow (left to right)	●	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●	●
Ⓔ Displayed unit							
Blank		MPa display, Rc thread	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●
Ⓕ Piping adaptor set (included)		Note 4 pages 155 to 157					Note 5
Blank		Not attached	●	●	●	●	●
A6*W		1/8 piping adaptor set	●				
A8*W		1/4 piping adaptor set	●	●	●		
A10*W		3/8 piping adaptor set	●	●	●		
A15*W		1/2 piping adaptor set		●	●		
A20*W		3/4 piping adaptor set			●	●	●
A25*W		1 piping adaptor set				●	●
A32*W		1 1/4 piping adaptor set				●	●
*** Adaptor thread type**							
Blank		Rc thread	●	●	●	●	●
N		NPT thread	●	●	●	●	●
G		G thread	●	●	●	●	●
Ⓖ Bracket (included)							Page 152
Blank		Not included	●	●	●	●	●
BW		C type bracket	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Refer to page 95 to 102 for specifications, dimensions and flow characteristics.

Note 2: When G threads or NPT threads are selected, the IN, OUT, and drainage discharge port are available.

Note 3: Select options for each drainage discharge, bowl material and differential pressure detection.
When selecting options for several items, list options in order from the top.

Note 4: The piping adapter set and C bracket cannot be used together.

Note 5: A joiner set is included with the piping adapter set.

Regulator: copper and PTFE free specification

R1000·R2000·R3000 R4000·R6000·R8000-W-P6 Series

Copper ion prevention treatment

Port size: 1/8 to 1

JIS symbol 

RoHS

How to order

R1000 - 6 [ ] - W - T P6 - [ ] - A6W [ ]

Ⓐ Model no. (R1000)

Ⓑ Port size (6, [ ])

(White type) (W)

Ⓒ Port thread type (T)

Copper and PTFE free specification (P6)

Ⓓ Option ([ ])

Ⓔ Displayed unit ([ ])

Ⓕ Piping adaptor set (included) (A6W)

Ⓖ Bracket (attached) ([ ])

* Refer top page 9 for an explanation of the options.

Symbol	Descriptions	Ⓐ Model no. R10000	R20000	R30000	R40000	R60000	R80000
Ⓑ Port size							
6	1/8	●					
8	1/4	●	●	●	●		
10	3/8		●	●	●		
15	1/2				●		
20	3/4					●	●
25	1					●	●
Ⓒ Port thread type							**Note 2**
Blank	Rc thread	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●
Ⓓ Option							**Note 3**
Regulator **T**	Without pressure gauge, setting: 0.05 to 0.85 MPa, relief type	●	●	●	●	●	●
Regulator **LT**	Without pressure gauge, setting: 0.05 to 0.35 MPa, relief type	●	●	●	●	●	●
Regulator **NT**	Without pressure gauge, setting: 0.05 to 0.85 MPa, non-relief type	●	●	●	●	●	●
Regulator **LNT**	Without pressure gauge, setting: 0.05 to 0.35 MPa, non-relief type	●	●	●	●	●	●
Flow Direction **Blank**	Standard flow (left to right)	●	●	●	●	●	●
Flow Direction **X1**	Reverse flow (right to left)	●	●	●	●	●	●
Ⓔ Displayed unit							
Blank	MPa display, Rc thread	●	●	●	●	●	●
J1	MPa display, NPT, G thread	●	●	●	●	●	●
Ⓕ Piping adaptor set (included)	**Note 4** **pages 155 to 157**						**Note 5**
Blank	Not attached	●	●	●	●	●	●
A6*W	1/8 piping adaptor set	●					
A8*W	1/4 piping adaptor set	●	●	●	●		
A10*W	3/8 piping adaptor set	●	●	●	●		
A15*W	1/2 piping adaptor set		●	●	●		
A20*W	3/4 piping adaptor set				●	●	●
A25*W	1 piping adaptor set						●
A32*W	1 1/4 piping adaptor set						●
*** Adaptor thread type**							
Blank	Rc thread	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●
Ⓖ Bracket (attached)							**Page 152**
Blank	Not attached	●	●	●	●	●	●
BW	C type bracket	●	●	●	●	●	●
B3W	L type bracket	●	●	●	●	●	
B4W	B type bracket		●				

⚠ Cautions for model No. selection

Note 1: Refer to page 113 to 120 for specifications, dimensions and flow characteristics.

Note 2: G and NPT threads are available for IN, OUT, and gauge ports.

Note 3: Select one option.

Note 4: The piping adapter set and C bracket cannot be used together.

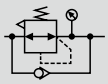
Note 5: A joiner set is attached with the piping adapter set.

Reverse regulator: copper and PTFE free specification

R1100/R2100/R3100 R4100/R6100/R8100 -W-P6 Series

Copper ion prevention treatment

Port size: 1/8 to 1

JIS symbol 

RoHS

How to order

R1100 - 6 ( ) - W - T P6 - ( ) - A6 ( )

* Refer top page 9 for an explanation of the options.

Ⓐ Model no.

(White type)

Copper and PTFE free specification

Ⓖ Bracket (included)

Ⓕ Piping adaptor set (included)

Ⓑ Port size

Ⓒ Port thread type

Ⓓ Option

Ⓔ Displayed unit

Symbol	Descriptions	Ⓐ Model no. R1100	R2100	R3100	R4100	R6100	R8100
Ⓑ Port size							
6	1/8	●					
8	1/4	●	●	●	●		
10	3/8		●	●	●		
15	1/2				●		
20	3/4					●	●
25	1					●	●
Ⓒ Port thread type							Note 2
Blank	Rc thread	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●
Ⓓ Option							Note 3
Regulator **T**	Without pressure gauge, setting: 0.05 to 0.85 MPa, relief type	●	●	●	●	●	●
Regulator **TL**	Without pressure gauge, setting: 0.05 to 0.35 MPa, relief type	●	●	●	●	●	●
Regulator **NT**	Without pressure gauge, setting: 0.05 to 0.85 MPa, non-relief type	●	●	●	●	●	●
Regulator **LNT**	Without pressure gauge, setting: 0.05 to 0.35 MPa, non-relief type	●	●	●	●	●	●
Flow Direction **Blank**	Standard flow (left to right)	●	●	●	●	●	●
Flow Direction **X1**	Reverse flow (right to left)	●	●	●	●	●	●
Ⓔ Displayed unit							
Blank	MPa display, Rc thread	●	●	●	●	●	●
J1	MPa display, NPT, G thread	●	●	●	●	●	●
Ⓕ Piping adaptor set (included)	Note 4 pages 155 to 157 Note 6						
Blank	Not attached	●	●	●	●	●	●
A6*W	1/8 piping adaptor set	●					
A8*W	1/4 piping adaptor set	●	●	●	●		
A10*W	3/8 piping adaptor set	●	●	●	●		
A15*W	1/2 piping adaptor set		●	●	●		
A20*W	3/4 piping adaptor set				●	●	●
A25*W	1 piping adaptor set						●
A32*W	1 1/4 piping adaptor set						●
*** Adaptor thread type**							
Blank	Rc thread	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●
Ⓖ Bracket (included)							Page 152
Blank	Not attached	●	●	●	●	●	●
BW	C type bracket	●	●	●	●	●	●
B3W	L type bracket	●	●	●	●	●	
B4W	B type bracket		●				

⚠ Cautions for model No. selection

Note 1: Refer to page 121 to 128 for specifications, dimensions and flow characteristics.

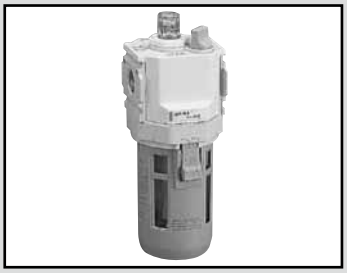
Note 2: G and NPT threads are available for IN, OUT, and gauge ports.

Note 3: Note 3: Select one option.

Note 4: The piping adapter set and C bracket cannot be used together.

Note 5: Position of the check valve and pressure gauge can not be changed. If the reverse direction of IN and OUT are required, indicate "X1" in the end of optional section.

Note 6: A joiner set is included with the piping adapter set.



Lubricator: copper and PTFE free specification

L1000·L3000 L4000·L8000-W Series

Copper ion prevention treatment

Copper and PTFE free specification as standard.

Port size: 1/8 to 1

JIS symbol

RoHS

How to order

L1000 - 6 ( ) - W - C - ( ) - A6 ( )

- Ⓐ Model no.
- (White type)
- Ⓑ Port size
- Ⓒ Port thread type
- Ⓓ Option
- Ⓔ Displayed unit
- Ⓕ Piping adaptor set (included)
- Ⓖ Bracket (attached)

* Refer top page 9 for an explanation of the options.

Symbol		Descriptions	Ⓐ Model no. L1000	L3000	L4000	L8000
Ⓑ Port size						
6		1/8	●			
8		1/4	●	●	●	
10		3/8		●	●	
15		1/2			●	
20		3/4				●
25		1				●
Ⓒ Port thread type						Note 2
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓓ Option						Note 3
Drainage	**Blank**	No manual cock	●	●	●	●
Bowl material Note 4	**Blank**	Polycarbonate bowl	●	●	●	●
	Z	Nylon bowl	●	●	●	●
	M	Metal bowl		●	●	●
Flow Direction	**Blank**	Standard flow (left to right)	●	●	●	●
	X1	Reverse flow (right to left)	●	●	●	●
Ⓔ Displayed unit						
Blank		MPa display, Rc thread	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●
Ⓕ Piping adaptor set (included) Note 5		pages 155 to 157				Note 6
Blank		Not attached	●	●	●	●
A6*W		1/8 piping adaptor set	●			
A8*W		1/4 piping adaptor set	●	●	●	
A10*W		3/8 piping adaptor set	●	●	●	
A15*W		1/2 piping adaptor set		●	●	
A20*W		3/4 piping adaptor set			●	●
A25*W		1 piping adaptor set			●	●
A32*W		1 1/4 piping adaptor set				●
*** Adaptor thread type**						
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓖ Bracket (attached)						Page 152
Blank		Not attached	●	●	●	●
BW		C type bracket	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Refer to page 129 to 136 for specifications, dimensions and flow characteristics.

Note 2: G and NPT threads are available for IN, OUT.

Note 3: Select options for drainage discharge, bowl material and others.
When selecting options for several items, list options in order from the top.

Note 4: The side dome is polycarbonate even for nylon or metal bowls. Consult with CKD if a different material is required.

Note 5: The piping adapter set and C bracket cannot be used together.

Note 6: A joiner set is attached with the piping adapter set.

Other components: copper and PTFE free specification
Pressure gauge Shut-off valve Exhaust cleaner

G49D-P6 V3000-W FA*31 Series
G59D-P6 V3010-W V6010-W RoHS

How to order

● Pressure gauge

G49D - 6 - ○ - P6

- 6: Port size: R1/8
- ○: Ⓒ Pressure display
- P6: Copper and PTFE free specification

Symbol	Descriptions
Ⓒ Pressure display (MPa) Note 1	
P02	0 to 0.2MPa
P04	0 to 0.4MPa
P10	0 to 1.0MPa

G59D - 8 - ○ - P6

- 8: Port size: R1/4
- ○: Ⓒ Pressure display
- P6: Copper and PTFE free specification

Symbol	Descriptions
Ⓒ Pressure display (MPa) Note 1	
P02	0 to 0.2MPa
P04	0 to 0.4MPa
P10	0 to 1.0MPa
P20	0 to 2.0.0MPa

⚠ Cautions for model No. selection

Note 1: Refer to page 203 for dimensions.

Other components

● Shut-off valve
- V3000-W (Page 143)
- V3010-W/V6010-W (Page 146)

● Exhaust cleaner
- FA*31 (Pneumatics, Vacuum, Auxiliary Components No.CB-024S)

* The above products are copper and PTFE free as standard.

F.R.L.
Modular type

Ozone proof

■ **Components for air preparation/F.R.L. unit**

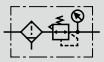
CONTENTS

Filter regulator: ozone proof

W1000/W3000 W4000/W8000-W-P11 Series

Fluorine rubber and hydrogenated nitrile rubber, etc., used for rubber part materials.

・Port size: Rc1/8 to Rc1

JIS symbol 

RoHS CAD

How to order

W1000 - 6 ○ - W - Z P11 - ○ - A6W - ○

(White type)

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Note 2
Note 3
Note 4
Note 5
Note 6
* Refer top page 9 for an explanation of the options.
Ozone specifications
Ⓔ Displayed unit
Ⓕ Piping adaptor set (included)
Note 8
Note 9
Ⓖ Attachment

Symbol		Descriptions	Ⓐ Model no. W1000	W3000	W4000	W8000
Ⓑ Port size						
6		1/8	●			
8		1/4	●	●	●	
10		3/8		●	●	
15		1/2			●	
20		3/4				●
25		1				●
Ⓒ Port thread type						Note 10
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓓ Option						
Drainage	Blank	With manual drain cock	●	●	●	●
	F	Automatic drain with manual override NO type		●	●	●
	F1	Automatic drain with manual override NC type		●	●	●
	FF	Large automatic drain with manual override NO type				●
	FF1	Large automatic drain with manual override NC type				●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●
	Z	Nylon bowl	●	●	●	●
	M	Metal bowl		●	●	●
	M1	Metal bowl with manual drain cock		●	●	●
Element	Blank	5μm	●	●	●	●
	Y	0.3μm (submicron)		●	●	●
Pressure Range	Blank	0.05 to 0.85MPa	●	●	●	●
	L	0.05 to 0.35MPa	●	●	●	●
Relief	Blank	With relief mechanism	●	●	●	●
	N	Non-relief type	●	●	●	●
Pressure gauge	Blank	With standard pressure gauge (G401)	●	●	●	●
	T	Without pressure gauge (gauge port assembled sealed)	●	●	●	●
	T8	Compatibility with pressure gauge option (gauge port assembled open)	●	●	●	●
	T6 Note 7	Compatibility with digital pressure sensor PPX	●	●	●	●
X1		IN/OUT reverse flow (right to left)	●	●	●	●
Ⓔ Displayed unit						
Blank		MPa display, Rc thread	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●
Ⓕ Piping adaptor set (included)						Note 11, Note 13
Blank		No attachments	●	●	●	●
A6*W		1/8 piping adaptor set	●			
A8*W		1/4 piping adaptor set	●	●	●	
A10*W		3/8 piping adaptor set	●	●	●	
A15*W		1/2 piping adaptor set		●	●	
A20*W		3/4 piping adaptor set			●	●
A25*W		1 piping adaptor set				●
A32*W		1 1/4 piping adaptor set				●
*** Adaptor thread type**						
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓖ Attachment						Note 12
Blank		No attachments	●	●	●	●
BW		C type bracket	●	●	●	●
B3W		L type bracket	●	●	●	
G45P		Pressure gauge: G45D-8-P10	●	●	●	●
G49P		Pressure gauge: G49D-8-P10	●	●	●	●
G59P		Pressure gauge: G59D-8-P10	●	●	●	●
G40P		Pressure gauge: G40D-8-P10	●	●	●	●
G50P		Pressure gauge: G50D-8-P10	●	●	●	●
G41P		Pressure gauge: G41D-8-P10	●	●	●	●
R2 Note 7		Digital pressure sensor: PPX-R10N-6M	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Refer to page 69 to 70 for specifications for specifications and attachments.

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 low-pressure gauge (0 to 0.4 MPa) is used when "L" is selected for the pressure range option.

Note 4: Minimum operating pressure of automatic drain is 0.1MPa for option symbol "F".
Initially generated drainage and air are purged until pressure reaches 0.1 MPa.

Note 5: Minimum operating pressure of automatic drain is 0.15MPa for option symbol "F1".

Note 6: When "T" is selected, the gauge plug is assembled instead of the pressure gauge.

Note 7: When option "T6" is selected, only "blank" or "R2" is selected for the (H) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.

Note 8: Piping adaptor set A*00-**-W is attached.

Note 9: The piping adapter set and C bracket cannot be used together.

Note 10: G threads and NPT threads are available for IN, OUT, gauge port and drain discharge port (metal bowl with automatic drain).

Note 11: The adapter port size can be selected from Rc, NPT or G.
Blank: Rc thread/N: NPT thread/G: G thread
(e.g.) A8G

Note 12: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

Note 13: A joiner set is included with the piping adapter set.

Dimensions

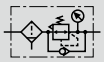
Same as standard parts. Refer to page 73 to 75.

Reverse filter, regulator: ozone proof

W1100/W3100 W4100/W8100-W-P11 Series

Fluorine rubber and hydrogenated nitrile rubber, etc., used for rubber part materials.

・Port size: Rc1/8 to Rc1

JIS symbol 

RoHS CAD

How to order

W1100 - 6 ○ - W - Z P11 - ○ - A6W - ○

(White type)

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ozone specifications
Note 2
Note 3
Note 4
Note 5
Note 6
Note 7
* Refer top page 9 for an explanation of the options.
Ⓔ Displayed unit
Ⓕ Piping adaptor set (included)
Note 9
Note 10
Ⓖ Attachment

Symbol		Descriptions	Ⓐ Model no. W1100	W3100	W4100	W8100
Ⓑ Port size						
6		1/8	●			
8		1/4	●	●	●	
10		3/8		●	●	
15		1/2			●	
20		3/4				●
25		1				●
Ⓒ Port thread type						Note 11
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓓ Option						
Drainage	Blank	With manual drain cock	●	●	●	●
	F	Automatic drain with manual override NO type		●	●	●
	F1	Automatic drain with manual override NC type		●	●	●
	FF	Large automatic drain with manual override NO type				●
	FF1	Large automatic drain with manual override NC type				●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●
	Z	Nylon bowl	●	●	●	●
	M	Metal bowl		●	●	●
	M1	Metal bowl with manual drain cock		●	●	●
Element	Blank	5μm	●	●	●	●
	Y	0.3μm (submicron)		●	●	●
Pressure Range	Blank	0.05 to 0.85MPa	●	●	●	●
	L	0.05 to 0.35MPa	●	●	●	●
Relief	Blank	With relief mechanism	●	●	●	●
	N	Non-relief type	●	●	●	●
Pressure gauge	Blank	With standard pressure gauge (G401)	●	●	●	●
	T	Without pressure gauge (gauge port assembled sealed)	●	●	●	●
	T8	Compatibility with pressure gauge option (gauge port assembled open)	●	●	●	●
	T6	Compatibility with digital pressure sensor PPX	●	●	●	●
X1		IN/OUT reverse flow (right to left)	●	●	●	●
Ⓔ Displayed unit						
Blank		MPa display, Rc thread	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●
Ⓕ Piping adaptor set (included)						Note 12, Note 14
Blank		No attachments	●	●	●	●
A6*W		1/8 piping adaptor set	●			
A8*W		1/4 piping adaptor set	●	●	●	
A10*W		3/8 piping adaptor set	●	●	●	
A15*W		1/2 piping adaptor set		●	●	
A20*W		3/4 piping adaptor set			●	●
A25*W		1 piping adaptor set				●
A32*W		1 1/4 piping adaptor set				●
*** Adaptor thread type**						
Blank		Rc thread	●	●	●	●
N		NPT thread	●	●	●	●
G		G thread	●	●	●	●
Ⓖ Attachment						Note 13
Blank		No attachments	●	●	●	●
BW		C type bracket	●	●	●	●
B3W		L type bracket	●	●	●	
G45P		Pressure gauge: G45D-8-P10	●	●	●	●
G49P		Pressure gauge: G49D-8-P10	●	●	●	●
G59P		Pressure gauge: G59D-8-P10	●	●	●	●
G40P		Pressure gauge: G40D-8-P10	●	●	●	●
G50P		Pressure gauge: G50D-8-P10	●	●	●	●
G41P		Pressure gauge: G41D-8-P10	●	●	●	●
R2 Note		Digital pressure sensor: PPX-R10N-6M	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Refer to page 77 to 78 for specifications for specifications and attachments.

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 low-pressure gauge (0 to 0.4 MPa) is used when "L" is selected for the pressure range option.

Note 4: **Position of the check valve and pressure gauge can not be changed. If the reverse direction of IN and OUT are required, indicate "X1" in the end of optional section.**

Note 5: Minimum operating pressure of automatic drain is 0.1MPa for option symbol "F".
Initially generated drainage and air are purged until pressure reaches 0.1 MPa.

Note 6: Minimum operating pressure of automatic drain is 0.15MPa for option symbol "F1".

Note 7: When "T" is selected, the gauge plug is assembled instead of the pressure gauge.

Note 8: When option "T6" is selected, only "blank" or "R2" is selected for the (H) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.

Note 9: A piping adaptor set A*00-**-W is included.

Note 10: The piping adapter set and C bracket cannot be used together.

Note 11: G threads and NPT threads are available for IN, OUT, gauge port and drain discharge port (metal bowl with automatic drain).

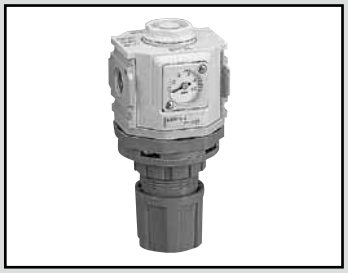
Note 12: The adapter port size can be selected from Rc, NPT or G. Blank: Rc thread/N: NPT thread/G: G thread
(e.g.) A8G

Note 13: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

Note 14: A joiner set is included with the piping adapter set.

Dimensions

Same as standard parts. Refer to page 81 to 83.



Regulator: ozone proof

R1000 / R2000 / R3000 R4000 / R6000 / R8000-W-P11 Series

Fluorine rubber and hydrogenated nitrile rubber, etc., used for rubber part materials.

Port size: Rc1/8 to Rc1

JIS symbol 

RoHS CAD

How to order

R1000 - 6 ○ - W - L P11 - ○ - A6 - ○

- R1000 — Ⓐ Model no.
- 6 — Ⓑ Port size
- ○ (White type) — Ⓒ Port thread type
- L — Ⓓ Option
- P11 — Ozone specifications
- ○ — Ⓔ Displayed unit
- A6 — Ⓕ Piping adaptor set (included)
- ○ — Ⓖ Attachment

Symbol		Descriptions	Ⓐ R1000	R2000	R3000	R4000	R6000	R8000
Ⓑ Port size								
6		1/8	●					
8		1/4	●	●	●	●		
10		3/8		●	●	●		
15		1/2				●		
20		3/4					●	●
25		1					●	●
Ⓒ Port thread type								Note 2
Blank		Rc thread	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●
Ⓓ Option								Note 3
Pressure Range	**Blank**	0.05 to 0.85MPa	●	●	●	●	●	●
	L	0.05 to 0.35MPa Note 4	●	●	●	●	●	●
Relief	**Blank**	With relief mechanism	●	●	●	●	●	●
	N	Non-relief type	●	●	●	●	●	●
Pressure gauge	**Blank**	With standard pressure gauge (G401)	●	●	●	●	●	●
	T	Without pressure gauge (gauge port assembled sealed) Note 5	●	●	●	●	●	●
	T8	Compatibility with pressure gauge option (gauge port assembled open)	●	●	●	●	●	●
	T6	Compatibility with digital pressure sensor PPX Note 6	●	●	●	●	●	●
X1		IN/OUT reverse flow (right to left)	●	●	●	●	●	●
Ⓔ Displayed unit								
Blank		MPa display, Rc thread	●	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●	●
Ⓕ Piping adaptor set (included)								Note 7, 8
Blank		No attachments	●	●	●	●	●	●
A6*W		1/8 piping adaptor set	●					
A8*W		1/4 piping adaptor set	●	●	●	●		
A10*W		3/8 piping adaptor set	●	●	●	●		
A15*W		1/2 piping adaptor set		●	●	●		
A20*W		3/4 piping adaptor set				●	●	●
A25*W		1 piping adaptor set					●	●
A32*W		1 1/4 piping adaptor set					●	●
*** Adaptor thread type**								Note 9
Blank		Rc thread	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●
Ⓖ Attachment								Note 10
Blank		No attachments	●	●	●	●	●	●
BW		C type bracket Note 11	●	●	●	●	●	●
B3W		L type bracket	●	●	●	●	●	
B4W		B type bracket		●				
G45P		Pressure gauge: G45D-8-P10	●	●	●	●	●	●
G49P		Pressure gauge: G49D-8-P10	●	●	●	●	●	●
G59P		Pressure gauge: G59D-8-P10	●	●	●	●	●	●
G40P		Pressure gauge: G40D-8-P10	●	●	●	●	●	●
G50P		Pressure gauge: G50D-8-P10	●	●	●	●	●	●
G41P		Pressure gauge: G41D-8-P10	●	●	●	●	●	●
R2 Note 5		Digital pressure sensor: PPX-R10N-6M	●	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Refer to page 113 to 114 for specifications for specifications and attachments.

Note 2: G and NPT threads are available for IN, OUT, and gauge ports.

Note 3: When selecting options for several items, list options in order from the top.

Note 4: The low-pressure gauge (0 to 0.4 MPa) is used when "L" is selected for the pressure range option.

Note 5: When "T" is selected, the gauge plug is assembled instead of the pressure gauge.
Working temperature is 5 to 50℃.

Note 6: When option "T6" is selected, only "blank" or "R2" is selected for the (H) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.

Note 7: A piping adaptor set A*00-**-W is included.

Note 8: A joiner set is included with the piping adapter set.

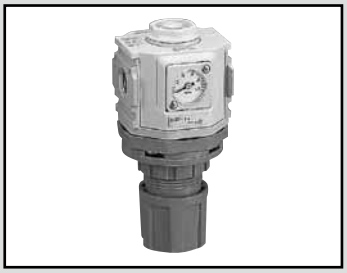
Note 9: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

Note 10: The adapter port size can be selected from Rc, NPT or G.
Blank: Rc thread/N: NPT thread/G: G thread
(e.g.) A8G

Note 11: The piping adapter set and C bracket cannot be used together.

Dimensions

Same as standard parts. Refer to page 117 to 119.



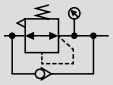
Reverse regulator: ozone proof

R1100/R2100/R3100 R4100/R6100/R8100-P11 Series

Fluorine rubber and hydrogenated nitrile rubber, etc., used for rubber part materials.

Port size: Rc1/8 to Rc1

JIS symbol



RoHS CAD

How to order

R1100 - 6 ○ - W - L P11 - ○ - A6 - ○

(White type)

Ozone specifications

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Displayed unit
Ⓕ Piping adaptor set (included) Note 6 Note 7
Ⓖ Attachment

Symbol		Descriptions	Ⓐ R1100	R2100	R3100	R4100	R6100	R8100
Ⓑ Port size								
6		1/8	●					
8		1/4	●	●	●	●		
10		3/8		●	●	●		
15		1/2				●		
20		3/4					●	●
25		1					●	●
Ⓒ Port thread type								Note 2
Blank		Rc thread	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●
Ⓓ Option								Note 3, 4
Pressure Range	**Blank**	0.05 to 0.85MPa	●	●	●	●	●	●
	L	0.05 to 0.35MPa Note 5	●	●	●	●	●	●
Relief	**Blank**	With relief mechanism	●	●	●	●	●	●
	N	Non-relief type	●	●	●	●	●	●
Pressure gauge	**Blank**	With standard pressure gauge (G401)	●	●	●	●	●	●
	T	Without pressure gauge (gauge port assembled sealed) Note 6	●	●	●	●	●	●
	T8	Compatibility with pressure gauge option (gauge port assembled open)	●	●	●	●	●	●
	T6	Compatibility with digital pressure sensor PPX Note 7	●	●	●	●	●	●
X1		IN/OUT reverse flow (right to left)	●	●	●	●	●	●
Ⓔ Displayed unit								
Blank		MPa display, Rc thread	●	●	●	●	●	●
J1		MPa display, NPT, G thread	●	●	●	●	●	●
Ⓕ Piping adaptor set (included)								Note 8, 9
Blank		No attachments	●	●	●	●	●	●
A6*W		1/8 piping adaptor set	●					
A8*W		1/4 piping adaptor set	●	●	●	●		
A10*W		3/8 piping adaptor set	●	●	●	●		
A15*W		1/2 piping adaptor set		●	●	●		
A20*W		3/4 piping adaptor set				●	●	●
A25*W		1 piping adaptor set					●	●
A32*W		1 1/4 piping adaptor set					●	●
*** Adaptor thread type**								Note 10
Blank		Rc thread	●	●	●	●	●	●
N		NPT thread	●	●	●	●	●	●
G		G thread	●	●	●	●	●	●
Ⓖ Attachment								Note 11
Blank		No attachments	●	●	●	●	●	●
BW		C type bracket Note 12			●	●		
B3W		L type bracket			●	●		
B4W		B type bracket		●				
G45P		Pressure gauge: G45D-8-P10	●	●	●	●	●	●
G49P		Pressure gauge: G49D-8-P10	●	●	●	●	●	●
G59P		Pressure gauge: G59D-8-P10	●	●	●	●	●	●
G40P		Pressure gauge: G40D-8-P10	●	●	●	●	●	●
G50P		Pressure gauge: G50D-8-P10	●	●	●	●	●	●
G41P		Pressure gauge: G41D-8-P10	●	●	●	●	●	●
R2 Note 7		Digital pressure sensor: PPX-R10N-6M	●	●	●	●	●	●

⚠ Cautions for model No. selection

Note 1: Refer to page 121 to 122 for specifications for specifications and attachments.
Note 2: G and NPT threads are available for IN, OUT, and gauge ports.
Note 3: When selecting options for several items, list options in order from the top.
Note 4: Position of the check valve and pressure gauge can not be changed. If the reverse direction of IN and OUT are required, indicate "X1" in the end of optional section.
Note 5: The low-pressure gauge (0 to 0.4 MPa) is used when "L" is selected for the pressure range option.
Note 6: When "T" is selected, the gauge plug is assembled instead of the pressure gauge.
Note 7: When option "T6" is selected, only "blank" or "R2" is selected for the (H) pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled ventilated.
Note 8: Piping adaptor set A*00-**-W is included.
Note 9: A joiner set is included with the piping adapter set.
Note 10: The adapter port size can be selected from Rc, NPT or G. Blank: Rc thread/N: NPT thread/G: G thread (e.g.) A8G
Note 11: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.
Note 12: The piping adapter set and C bracket cannot be used together.

Dimensions

Same as standard parts. Refer to page 125 to 127.

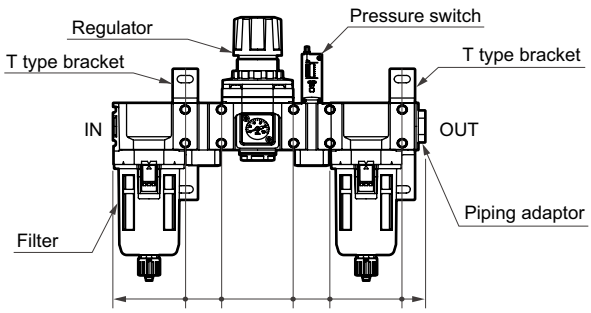
Custom combination specifications

General Description

Customized combinations are customer-oriented combinations that meet user needs for diverse combinations.
Place orders by filling out the specifications below.

Preparing custom combination specifications

- See individual pages for component ordering and details, etc.
- 3000 and 4000 Series combinations are used for products other than the pressure switch.
  Refer to specifications for C4000 in this case.



Dimensions are calculated by totaling the face to face dimensions of each component. The bracket mounting position is also calculated.

C3000 Series custom combination specifications

Contact
Slip no.
Quantity sets
Request date
Issue date
Your company name
Contact
Purchase order no.

CKD Sales will have the factory check the specifications, and fill the number in if it passes.

● Model no. **C3000-UN-** ( ) - ( )

Designate the direction of compressed air flow as seen from the front.
Leave blank when selecting "blank".

Flow direction	
Blank	Left→Right
X1	Right→Left

Technical confirmation no.

★ For products with an asterisk (*), indicate up/down.
Indicate up or down for the regulator's knob direction, and the port up/down for other components.

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

Only one piping adapter is included. Indicate required fields for more.

Part name:	Face to face dimensions	Model no.	Direction	Mounting position								Field for Engineers
Piping adaptor	20	A400-UN-10-W							○			
Air filter	63	F3000-8-W		○								
Filter･regulator	63	W3000-W										
		W3100-W										
Regulator*	63	R3000-8-W	Up			○						
		R3100-W										
Oil mist filter	63	M3000-8-W						○				
Lubricator	63	L3000-W										
Distributor*	31.5	D401-UN-00-8-W	Down		○							
Distributor	42	D300-W										
Pressure switch	31.5	P4100-UN-8-W					○					
	80	P4000-W										
Shut-off valve	63	V3000-W										
L type piping adapter*	31.5	A401-UN-W										
T type bracket set	*1	B310-UN-W			○				○			
Joiner set		C4000-J400-UN-W			○	○	○					

Sample for completing form for above product.

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

*1: The distance from the pipe center to the mounting surface is 45mm.

CKD Sales will have the factory check the specifications, and fill the number in if it passes.

Cautions

"UN" in the model no. indicate that it is a discrete part that does not include joiner set, etc.
"UN" my also be indicated for the T-type bracket set and joiner set. In this case, this is the model dedicated to custom combination.

Technical confirmation no.

Approval	Inspector	Contact

Field for confirmation stamp by CKD.

Engineer Comment Field		

C1000 Series custom combination specifications

Contact
Slip no.
Quantity sets
Request date
Issue date
Your company name
Contact
Purchase order no.

● Model no. **C1000-UN-** ( ) - ( )

Flow direction	
Blank	Left→Right
X1	Right→Left

Technical confirmation no.

★ For products with an asterisk (*), indicate up/down.
Indicate up or down for the regulator's knob direction, and the port up/down for other components.

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

Part name:	Face to face dimensions	Model no.	Direction	Mounting position								Field for Engineers
Piping adaptor	21.5	A100-UN- -W										
Air filter	40	F1000- -W										
Filter･regulator	40	W1000- -W										
		W1100- -W										
Regulator*	40	R1000- -W										
		R1100- -W										
Oil mist filter	40	M1000- -W										
Lubricator	40	L1000- -W										
Distributor*	28	D101-UN-00- -W										
Pressure switch	28	P1100-UN- -W										
Shut-off valve	40	V1000- -W										
L type piping adapter*	28	A101-UN- -W										

T type bracket set	✻1	B110-UN-W									
Joiner set		C1000-J100-UN-W									

Cautions

"UN" in the model no. indicate that it is a discrete part that does not include joiner set, etc.
"UN" my also be indicated for the T-type bracket set and joiner set. In this case, this is the model dedicated to custom combination.

When selecting the pressure switch P*100-UN-W for the combination end, select the piping adaptor A*00-UN-W on the end side. (The horizontal direction port does not have threads)

*1: The distance from the pipe center to the mounting surface is 40mm.

Technical confirmation no.

Approval	Inspector	Contact

Engineer Comment Field		

C2000 Series custom combination specifications

Contact
Slip no.

Quantity sets
Request date

Issue date
Your company name
Contact
Purchase order no.

● Model no. **C2000-UN-** ( ) - ( )

Flow direction	
Blank	Left→Right
X1	Right→Left

Technical confirmation no.

★ For products with an asterisk (*), indicate up/down.
Indicate up or down for the regulator's knob direction, and the port up/down for other components.

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

Part name:	Face to face dimensions	Model no.	Direction	Mounting position								Field for Engineers
Piping adaptor	20	A400-UN- -W										
Air filter	50	F2000- -W										
	63	F3000- -W										
Filter･regulator	50	W2000- -W										
		W2100- -W										
Regulator*	50	R2000- -W										
		R2100- -W										
Oil mist filter	50	M2000- -W										
	63	M3000- -W										
Lubricator	63	L3000- -W										
Distributor*	31.5	D401-UN-00- -W										
Distributor	42	D300- -W										
Pressure switch	31.5	P4100-UN- -W										
	80	P4000- -W										
Shut-off valve	63	V3000- -W										
L type piping adapter*	31.5	A401-UN- -W										

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

Cautions

"UN" in the model no. indicate that it is a discrete part that does not include joiner set, etc.
"UN" my also be indicated for the T-type bracket set and joiner set. In this case, this is the model dedicated to custom combination.

When selecting the pressure switch P*100-UN-W for the combination end, select the piping adaptor A*00-UN-W on the end side. (The horizontal direction port does not have threads)
Select the reverse regulator R2100-W or reverse filter regulator W2100-W when installing the shut-off valve V3000-W and lockout valve V3010-W onto the primary side of the regulator or filter regulator.

*1: The distance from the pipe center to the mounting surface is 45mm.

Technical confirmation no.

Approval	Inspector	Contact

Engineer Comment Field		

C2000 Series custom combination specifications

Contact
Slip no.
Quantity sets
Request date
Issue date
Your company name
Contact
Purchase order no.

● Model no. **C2500-UN-** ( ) - ( )

Flow direction	
Blank	Left→Right
X1	Right→Left

Technical confirmation no.

★ For products with an asterisk (*), indicate up/down.
Indicate up or down for the regulator's knob direction, and the port up/down for other components.

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

Part name:	Face to face dimensions	Model no.	Direction	Mounting position								Field for Engineers
Piping adaptor	20	A400-UN- -W										
Air filter	63	F3000- -W										
Filter･regulator	63	W3000- -W										
		W3100- -W										
Regulator*	50	R2000- -W										
		R2100- -W										
Oil mist filter	63	M3000- -W										
Lubricator	63	L3000- -W										
Distributor*	31.5	D401-UN-00- -W										
Distributor	42	D300- -W										
Pressure switch	31.5	P4100-UN- -W										
	80	P4000- -W										
Shut-off valve	63	V3000- -W										
L type piping adapter*	31.5	A401-UN- -W										
T type bracket set ※1		B310-UN-W										
Joiner set		C4000-J400-UN-W										

Cautions

"UN" in the model no. indicate that it is a discrete part that does not include joiner set, etc.
"UN" my also be indicated for the T-type bracket set and joiner set. In this case, this is the model dedicated to custom combination.

When selecting the pressure switch P*100-UN-W for the combination end, select the piping adaptor A*00-UN-W on the end side. (The horizontal direction port does not have threads)

*1: The distance from the pipe center to the mounting surface is 45mm.

Technical confirmation no.

Approval	Inspector	Contact

Engineer Comment Field		

C3000 Series custom combination specifications

Contact
Slip no.
Quantity sets
Request date
Issue date
Your company name
Contact
Purchase order no.

● Model no. **C3000-UN-** ( ) - ( )

Flow direction	
Blank	Left→Right
X1	Right→Left

Technical confirmation no.

★ For products with an asterisk (*), indicate up/down.
Indicate up or down for the regulator's knob direction, and the port up/down for other components.

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

Part name:	Face to face dimensions	Model no.	Direction	Mounting position								Field for Engineers
Piping adaptor	20	A400-UN- -W										
Air filter	63	F3000- -W										
Filter･regulator	63	W3000- -W										
		W3100- -W										
Regulator*	63	R3000- -W										
		R3100- -W										
Oil mist filter	63	M3000- -W										
Lubricator	63	L3000- -W										
Distributor*	31.5	D401-UN-00- -W										
Distributor	42	D300- -W										
Pressure switch	31.5	P4100-UN- -W										
	80	P4000- -W										
Shut-off valve	63	V3000- -W										
L type piping adapter*	31.5	A401-UN- -W										
T type bracket set ∗1		B310-UN-W										
Joiner set		C4000-J400-UN-W										

Cautions

"UN" in the model no. indicate that it is a discrete part that does not include joiner set, etc.
"UN" my also be indicated for the T-type bracket set and joiner set. In this case, this is the model dedicated to custom combination.

When selecting the pressure switch P*100-UN-W for the combination end, select the piping adaptor A*00-UN-W on the end side. (The horizontal direction port does not have threads)

*1: The distance from the pipe center to the mounting surface is 45mm.

Technical confirmation no.

Approval	Inspector	Contact

Engineer Comment Field		

C4000 Series custom combination specifications

Contact
Slip no.
Quantity sets
Request date
Issue date
Your company name
Contact
Purchase order no.

● Model no. **C4000-UN-** ( ) - ( )

*1: Port size 8, 10, 15 are 20mm, 20is 25mm.
*2: The distance from the pipe center to the mounting surface is 55 mm.

Flow direction	
Blank	Left→Right
X1	Right→Left

Technical confirmation no.

★ For products with an asterisk (*), indicate up/down.
Indicate up or down for the regulator's knob direction, and the port up/down for other components.

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

Part name:	Face to face dimensions	Model no.	Direction	Mounting position								Field for Engineers
Piping adaptor	∗1	A400-UN- -W										
Air filter	63	F3000- -W										
	80	F4000- -W										
Filter･regulator	63	W3000- -W										
		W3100- -W										
	80	W4000- -W										
		W4100- -W										
Regulator*	63	R3000- -W										
		R3100- -W										
	80	R4000- -W										
		R4100- -W										
Oil mist filter	63	M3000- -W										
	80	M4000- -W										
Lubricator	63	L3000- -W										
	80	L4000- -W										
Distributor*	31.5	D401-UN-00- -W										
Distributor	42	D300- -W										
Pressure switch	31.5	P4100-UN- -W										
	80	P4000- -W										
Shut-off valve	63	V3000- -W										
L type piping adapter*	31.5	A401-UN- -W										

T type bracket set	∗2	B410-UN-W									
Joiner set		C4000-J400-UN-W									

Cautions

"UN" in the model no. indicate that it is a discrete part that does not include joiner set, etc.
"UN" my also be indicated for the T-type bracket set and joiner set. In this case, this is the model dedicated to custom combination.

When selecting the pressure switch P*100-UN-W for the combination end, select the piping adaptor A*00-UN-W on the end side. (The horizontal direction port does not have threads)

Technical confirmation no.

Approval	Inspector	Contact

Engineer Comment Field		

C6000 Series custom combination specifications

Contact
Slip no.
Quantity sets
Request date
Issue date
Your company name
Contact
Purchase order no.

● Model no. **C6000-UN-** ( ) - ( )

Flow direction	
Blank	Left→Right
X1	Right→Left

Technical confirmation no.

★ For products with an asterisk (*), indicate up/down.
Indicate up or down for the regulator's knob direction, and the port up/down for other components.

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

Part name:	Face to face dimensions	Model no.	Direction	Mounting position								Field for Engineers
Piping adaptor	∗1	A800-UN- -W										
Air filter	90	F6000- -W										
	100	F8000- -W										
Filter･regulator	100	W8000- -W										
		W8100- -W										
Regulator*	90	R6000- -W										
		R6100- -W										
	100	R8000- -W										
		R8100- -W										
Oil mist filter	90	M6000- -W										
	100	M8000- -W										
Lubricator	100	L8000- -W										
Distributor*	50	D801-UN-00- -W										
Pressure switch	50	P8100-UN- -W										
L type piping adapter*	50	A801-UN- -W										

T type bracket set	∗2	B810-UN-W								
Joiner set		C8000-J800-UN-W								

Cautions

"UN" in the model no. indicate that it is a discrete part that does not include joiner set, etc.
"UN" my also be indicated for the T-type bracket set and joiner set. In this case, this is the model dedicated to custom combination.

When selecting the pressure switch P*100-UN-W for the combination end, select the piping adaptor A*00-UN-W on the end side. (The horizontal direction port does not have threads)

*1: Port size 20, 25 are 35mm, 32is 38mm.
*2: The distance from the pipe center to the mounting surface is 65mm.

Technical confirmation no.

Approval	Inspector	Contact

Engineer Comment Field		

C8000 Series custom combination specifications

Contact
Slip no.

Quantity sets
Request date

Issue date
Your company name
Contact
Purchase order no.

● Model no. **C8000-UN-** ( ) - ( )

Flow direction	
Blank	Left→Right
X1	Right→Left

Technical confirmation no.

*1: Port size 8, 10, 15 are 35mm, 32 is 38mm.
*2: The distance from the pipe center to the mounting surface is 65mm.

★ For products with an asterisk (*), indicate up/down.
Indicate up or down for the regulator's knob direction, and the port up/down for other components.

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

Part name:	Face to face dimensions	Model no.	Direction	Mounting position								Field for Engineers
Piping adaptor	∗1	A800-UN- -W										
Air filter	100	F8000- -W										
Filter･regulator	100	W8000- -W										
		W8100- -W										
Regulator*	100	R8000- -W										
		R8100- -W										
Oil mist filter	100	M8000- -W										
Lubricator	100	L8000- -W										
Distributor*	50	D801-UN-00- -W										
Pressure switch	50	P8100-UN- -W										
L type piping adapter*	50	A801-UN- -W										
T type bracket set	∗2	B810-UN-W										
Joiner set		C8000-J800-UN-W										

Cautions

"UN" in the model no. indicate that it is a discrete part that does not include joiner set, etc.
"UN" my also be indicated for the T-type bracket set and joiner set. In this case, this is the model dedicated to custom combination.

When selecting the pressure switch P*100-UN-W for the combination end, select the piping adaptor A*00-UN-W on the end side. (The horizontal direction port does not have threads)

Technical confirmation no.

Approval	Inspector	Contact

Engineer Comment Field		

MEMO

Pressure gauge/indicator

Related products

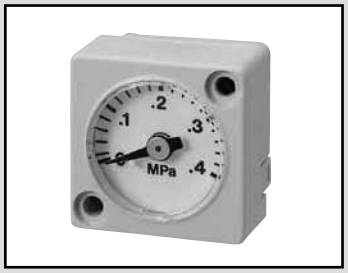
■ **Components for air preparation/F.R.L. unit**

CONTENTS

⚠ Handling the pressure gauge

Repeated and sudden increase and decrease in the pressure and pressure pulsation must be avoided because this could adversely affect the life of the pressure gauge. Either ease the pressure fluctuation in the circuit or check with CKD so that a pressure gauge with a cushioning screw is prepared.

⚠ Refer to "Pneumatics, Vacuum, Auxiliary Components Catalog" (No. CB-024SA) for general precautions fo pneumatic components, refer to "⚠Safety Precautions" in this catalog for detailed precautions for each series.



Thin pressure gauge

G401-W Series

Thin, compact design ideal for incorporating devices.
Suitable for filter regulator, regulator, and pressure switch (P4000-W).

● Connection: O ring seal, set screw

JIS symbol

RoHS

Specifications

Descriptions		G401-W
Working fluid		Compressed air
Fluid temperature ℃		5 to 60
Ambient temperature ℃		5 to 60
Precision Class		±3%F.S. (at 5 to 35℃)
Shape		Square shaped, set screw
Length of display section		ø26
Material	Housing	PBT Resin
	Lens	Polycarbonate resin
Pressure range MPa		0 to 0.4 0 to 1.0
Connection		O ring seal, set screw
Weight g		11

How to order

G401 - W - 0P - P04

(Standard white series)

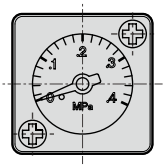
Ⓐ Connection

Ⓑ Pressure display

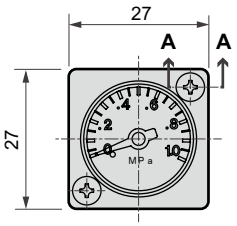
Symbol	Descriptions
Ⓐ Connection	
Blank	Set screw for metal (nominal 3 tapping screw) (R3000, 4000, 8000 Series / R3100, 4100, 8100 Series provided as standard)
OP	Set screw for resin (nominal 3 tapping screw) (R1000, W1000 Series provided as standard)
Ⓑ Pressure display [MPa]	
P04	0 to 0.4MPa
P10	0 to 1.0MPa

Dimensions and parts matrial

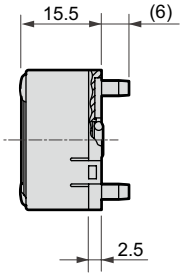
● G401

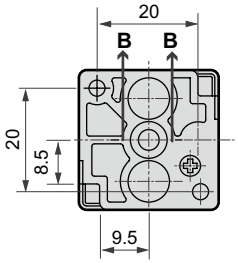


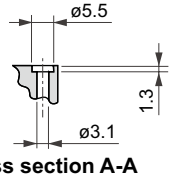
Pressure display: P04



Pressure display: P10





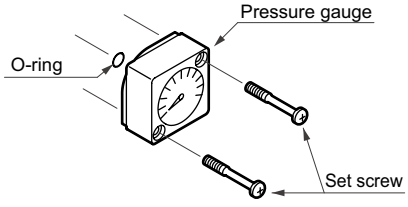


Cross section A-A

Cross section B-B

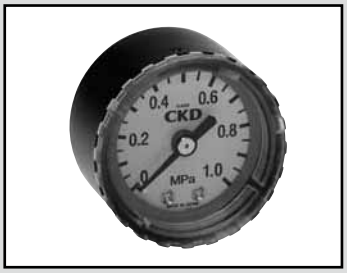
Part name:	Material
Bourdon tube	Phosphor bronze
Case	PBT Resin
Lens	Polycarbonate resin

● Pressure gauge assembly



* Tighten the mounting screw to 0.6 N·m or less.

Applications



Pressure gauge with safety mark

G40D / G50D Series

Green zone and red zone for easy management.

● Port size: Rc1/8 to Rc1/4

JIS symbol 

RoHS

Specifications

Descriptions	G40D, G50D	
	P10	P04
Working fluid	Compressed air	
Full scale MPa	1	0.4
Safety mark setting range MPa	0.15 to 1.0	0.06 to 0.4
Maximum setting range MPa	0.45	0.18
Ambient temperature ℃	5 to 60	
Fluid temperature ℃	5 to 60	
Port size R	1/8, 1/4	
Precision	±3%F.S. (at 5 to 35℃)	
Weight g	G40D: 85	G50D: 100

How to order

G40D - 8 - P10

Ⓐ Model no.

Ⓑ Port size

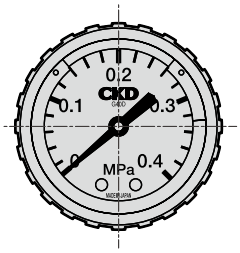
Ⓒ Pressure display

Symbol	Descriptions
Ⓐ Model no.	
G40D	Pressure gauge with safety mark
G50D	Pressure gauge with safety mark
Ⓑ Port size	
6	R1/8
8	R1/4
Ⓒ Pressure display	
P10	For 0 to 1.0MPa
P04	For 0 to 0.4MPa

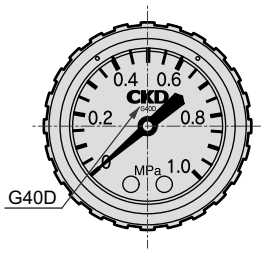
⚠ Cautions for model No. selection

* Designate R1/4 when mounting on F.R.L. Series.
* Designate G40D-8 when selecting for F.R.L. 1000 Series.

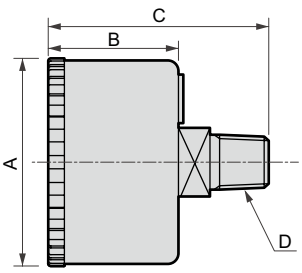
Dimensions and parts matrial



Pressure display: P04



Pressure display: P10

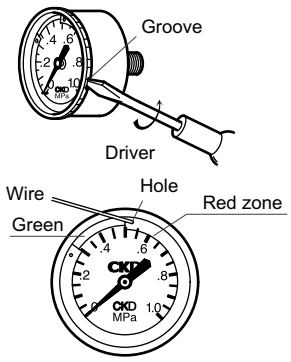


Part name:	Material
Bourdon tube, stock	Brass
Housing	Steel sheet+paint
Lens	Polyamide resin
Mark section	PBT Resin

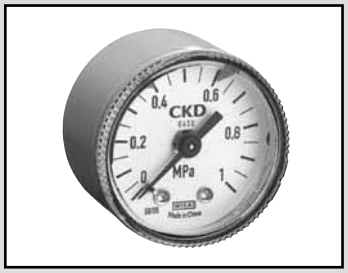
Model no.	A	B	C	D
G40D-6	ø 42.5	26.5	44	R1/8
G40D-8			46	R1/4
G50D-6	ø 52.5	27.5	44	R1/8
G50D-8			46	R1/4

How to adjust pressure range

When opening the transparent case



Remove the transparent cover and insert a wire to the hole in red zone to move the red zone. After the adjustment, always supply compressed air after assembling the transparent cover.



Pressure gauge with limit mark

G45D Series

Easy visual inspection with green arrow.

● Port size: Rc1/8 to Rc1/4

JIS symbol

RoHS

Specifications

Descriptions		G45D
Working fluid		Compressed air
Fluid temperature ℃		5 to 60
Ambient temperature ℃		5 to 60
Precision Note 1		JIS Class 2.5 equivalent
Shape		Back side thread
Length of display section		ø39
Material	Stud	Brass
	Housing	Steel sheet+paint (white)
	Lens	Polyamide resin
	Mark section	Polyacetal resin
Pressure range MPa (Setting range)		0 to 0.2 0 to 0.4 0 to 1.0
Port size		R1/8, 1/4
Weight g		74

Note 1: The guaranteed display accuracy temperature is 20 ± 15°C.

How to order

G45D - 6 - P04

Ⓐ Model no.

Ⓑ Port size

Ⓒ Pressure display

Symbol	Descriptions
Ⓐ Model no.	
G41D	Pressure gauge with limit mark
Ⓑ Port size Note 1	
6	R1/8
8	R1/4
Ⓒ Pressure display	
P02	0 to 0.2MPa
P04	0 to 0.4MPa
P10	0 to 1.0MPa

⚠ Cautions for model No. selection

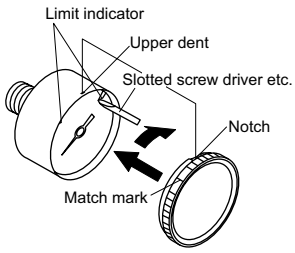
Note 1: NPT thread and G tread are custom orders.

How to adjust

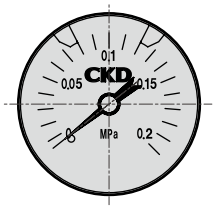
Turn the clear case counterclockwise and pull forward.

Move the green arrow with a slotted driver to set the limit mark. After the adjustment, always supply compressed air after assembling the transparent cover.

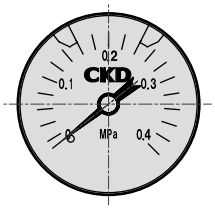
Do not bend other indicators and scale when setting the limit mark.



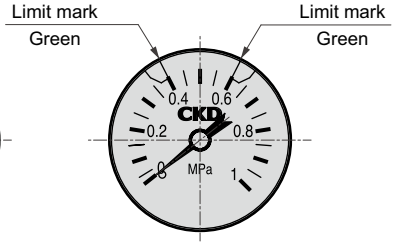
Dimensions



Pressure display: P02

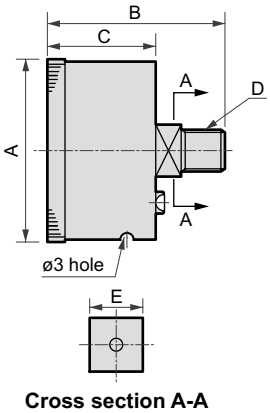


Pressure display: P04



Pressure display: P10

Model no.	A	B	C	D	E
G45D-6	ø39	41.5	26	R1/8	14
G45D-8	ø39	44.5	26	R1/4	14



Cross section A-A

Pressure gauge with limit mark

G41D Series

Easy visual inspection with green arrow.

● Port size: Rc1/8 to Rc1/4

JIS symbol 

RoHS

Specifications

Descriptions		G41D
Working fluid		Compressed air
Fluid temperature ℃		5 to 60
Ambient temperature ℃		5 to 60
Precision Note 1 Class		±3%F.S. (at 5 to 35℃)
Shape		Back side thread
Length of display section		ø42
Material	Stud	Brass
	Housing	Stainless steel
	Lens	Polycarbonate resin
	Mark section	Polyacetal resin
Pressure range MPa (setting range)		0 to 0.2 0 to 0.4 0 to 1.0
Port size Note 1		R1/8, 1/4
Weight g		82

Note 1: The guaranteed display accuracy temperature is 20 ± 15°C.

How to order

G41D - 6 - P04

Ⓐ Model no.

Ⓑ Port size

Ⓒ Pressure display

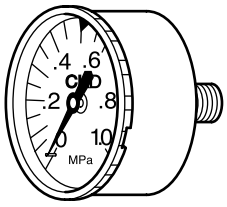
Symbol	Descriptions
Ⓐ Model no.	
G41D	Pressure gauge with limit mark
Ⓑ Port size Note 1	
6	R1/8
8	R1/4
Ⓒ Pressure display	
P02	0 to 0.2MPa
P04	0 to 0.4MPa
P10	0 to 1.0MPa

⚠ Cautions for model No. selection

Note 1: NPT thread and G tread are custom orders.

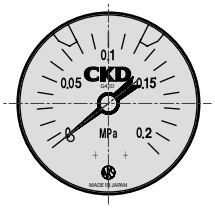
How to adjust

Remove the transparent cover, then move the green arrow with a screw driver, etc.
After the adjustment, always supply compressed air after assembling the transparent cover.

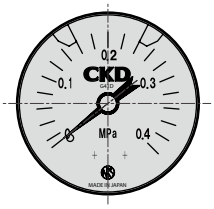


Remove the transparent cover by turning it counterclockwise and pulling it off.

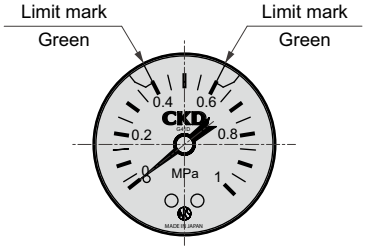
Dimensions



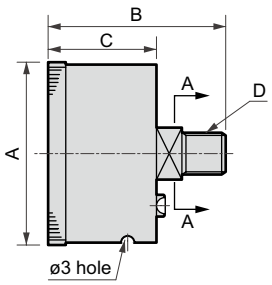
Pressure display: P02



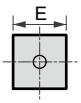
Pressure display: P04



Pressure display: P10



Model no.	A	B	C	D	E
G41D-6	ø42	40.5	24.5	R1/8	12
G41D-8	ø42	44.5	24.5	R1/4	14



Cross section A-A

General purpose pressure gauge

G49D / G59D Series

● Port size: Rc1/8 to Rc1/4

JIS symbol 

RoHS

Specifications

Descriptions		G49D	G59D
Working fluid		Compressed air	
Fluid temperature ℃		5 to 60	
Ambient temperature ℃		5 to 60	
Precision Note 1		±3%F.S. (at 5 to 35℃)	
Shape		Back side thread	
Length of display section		ø42	ø52
Material	Stud	Brass Note 2	
	Housing	Steel sheet+chrome plating	
	Lens	Glass	
Pressure range MPa		0 to 0.2 0 to 0.4 0 to 1.0 0 to 2.0	
Port size R		1/8, 1/4	
Weight g		86	115

Note 1: The guaranteed display accuracy temperature is 20 ± 15°C.
Note 2: The material of the Bourdon's tube is phosphor bronze only for pressure indication "P20."

Clean specification (Catalog No. CB-033SA)

● Dust generation preventing structure for use in cleanrooms

G49D - ····· **- P9※**

G59D - ····· **- P9※**

Copper and PTFE free specification (Page 179)

G49D - ····· **- P6**

G59D - ····· **- P6**

How to order

G49D - 6 - P02

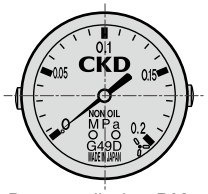
Symbol	Descriptions
Ⓐ Model no.	
G49D	
G59D	
Ⓑ Port size Note 2	
6	R1/8
8	R1/4
Ⓒ Pressure display (MPa) Note 1	
P02	0 to 0.2
P04	0 to 0.4
P10	0 to 1.0
P20	0 to 2.0

Ⓐ Model no.
Ⓑ Port size
Ⓒ Pressure display

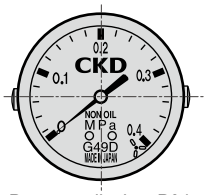
⚠ Cautions for model No. selection

Note 1: Consult with CKD for indications other than MPa.
Note 2: NPT thread are custom orders.

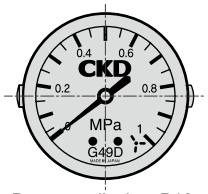
Dimensions



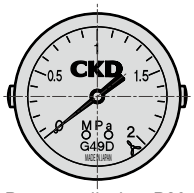
Pressure display: P02



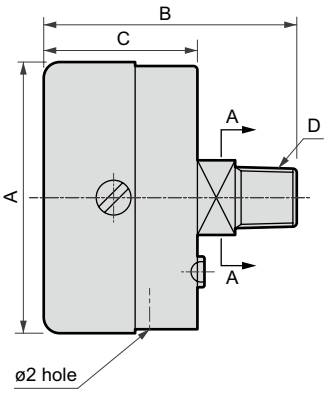
Pressure display: P04

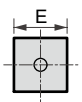


Pressure display: P10



Pressure display: P20





Cross section A-A

Model no.	A	B	C	D	E
G49D-6	ø43.5	40.5	24.5	R1/8	12
G49D-8	ø43.5	44	24.5	R1/4	14
G59D-6	ø52	44.5	28	R1/8	12
G59D-8	ø52	46.5	28	R1/4	14
G49D-6-P6	ø42.8	43.5	27.5	R1/8	12
G59D-8-P6	ø51.8	52.5	30	R1/4	14

MEMO

Pressure gauge for panel mount

G53D Series

JIS symbol 

RoHS

Main features

- Pressure gauge for panel mount
- M3 female thred port provided as standard

Specifications

Model no.			G53D
Working fluid			Compressed air
Fluid temperature		℃	5 to 60
Ambient temperature		℃	-5 to 60 (to be unfrozen)
Precision		Note 1	±3% F.S. (at 5 to 35℃)
Shape			Back side thread
Length of display section			ø52
Material	Stud		Brass
	Housing		Steel sheet+chrome plating
	Lens		Glass
Pressure range		MPa	0 to 0.2 0 to 0.4 0 to 1.0
Port size		R	1/8 (with M5 female thread), 1/4 (with M5 female thread)
Weight		g	100

Note 1: The guaranteed display accuracy temperature is 20 ± 15°C.

How to order

G53D - 8 - P02

Model no.

Ⓐ Port size

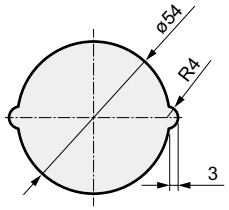
Ⓑ Pressure display

Symbol	Descriptions
Ⓐ Port size	**Note 1**
6	Rc1/8, M5 female thread
8	Rc1/4, M5 female thread
Ⓑ Pressure display	**MPa Note 2**
P02	0 to 0.2
P04	0 to 0.4
P10	0 to 1.0

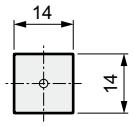
⚠ Cautions for model No. selection

Note 1: Consult with CKD when ordering NPT thread.
Note 2: Consult with CKD for indications other than MPa.

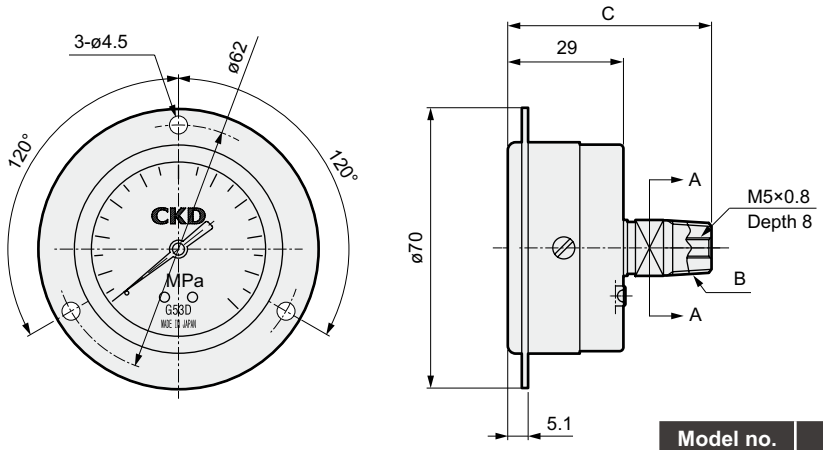
Dimensions



Panel cut dimensions

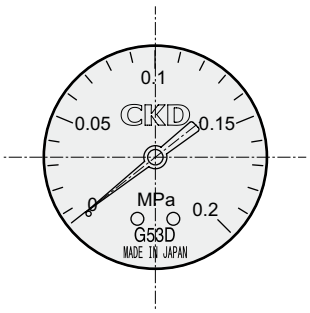


Cross section A-A

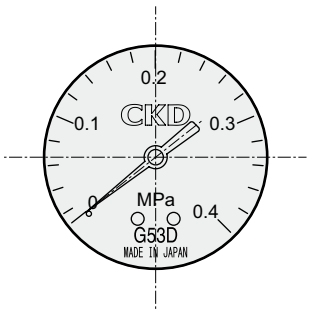


Model no.	B	C
G53D-6	Rc1/8	48
G53D-8	Rc1/4	51

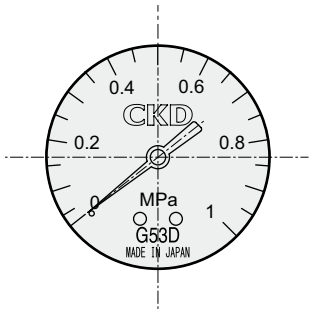
Scale indication



Pressure display: P02



Pressure display: P04



Pressure display: P10

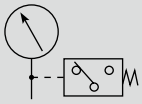
⚠ Safety precautions

- Check that no impact or vibration is applied directly to the product.
- Repeated and sudden increase and decrease in pressure and pressure pulsation must be avoided because it could adversely affect the life of the pressure gauge.
  Ease the pressure fluctuation in the circuit.

Pressure gauge with switch

G52D Series

JIS symbol



RoHS

Main features

- Introducing a pressure switch function to the analog pressure gauge
- Optional non polarized connector
- Optional operation indicator light

Specifications

Descriptions		Pressure gauge
Working fluid		Compressed air
Fluid temperature ℃		5 to 60
Ambient temperature ℃		-5 to 60 (to be unfrozen)
Precision Note 1		±3% F.S. (at 5 to 35℃)
Shape		Back side thread
Material	Stud	Brass
	Bourdon tube	Phosphor bronze
	Housing	Steel sheet+chrome plating
	Lens	Polycarbonate resin
	Setting needle	ABS resin (green)
Pressure range Note 2		0 to 1.0MPa
Port size R		1/4
Weight g		150

Note 1: The guaranteed display accuracy temperature is 20 ± 15°C.
Note 2: Do not apply pressure beyond max.indicated pressure. Otherwise, malfunctioning may occur.

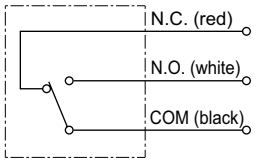
Descriptions	Pressure switch
Pressure switch setting range	0.1 to 0.8 MPa
Hysteresis	0.07MPa
Contact configuration	Without indicator light: 1ab (NO, NC), with indicator light: 1a (NO)
Setting indicator margin of error	±0.05MPa
Lead wire length	300mm
Electric connection	Without light: lead wire 3 pcs. With light:M12 connector (4 pin)
Indicator light	LED (load current: 8 to 30 mA)

Microswitch rated

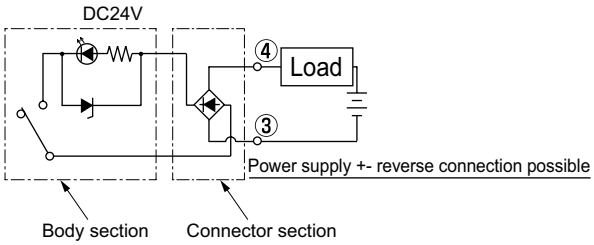
Load	Resistance load	
Rated voltage	DC30V	AC125V
Working current range	0.1 to 1A	0.1 to 1A

Wiring drawing

○ Without light



○ With light, LED



How to order

G52D - 8 - P10 - 3N

Model no.

Ⓑ Port size

Ⓒ Pressure display

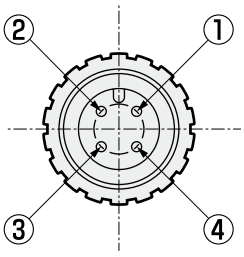
Ⓓ Option

Symbol	Descriptions
Ⓑ Port size	Note 1
8	R1/4
Ⓒ Pressure display MPa	Note 2
P10	0 to 1.0
Ⓓ Option	
Blank	Without light
3N	LED (DC24V) Not polarized

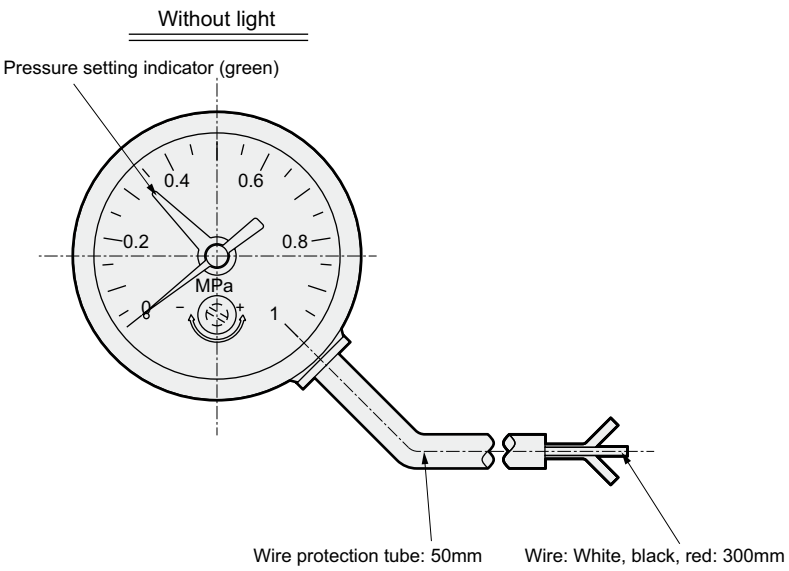
⚠ Cautions for model No. selection

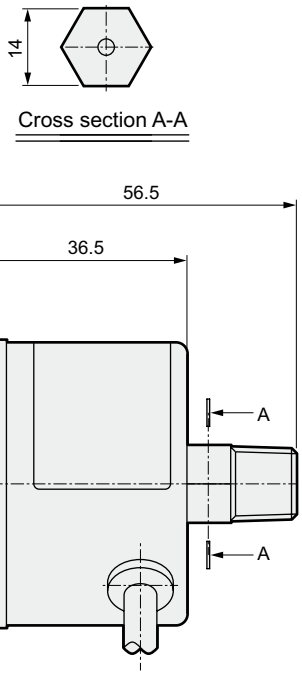
Note 1: Consult with CKD when ordering NPT thread.
Note 2: Consult with CKD for indications other than MPa.

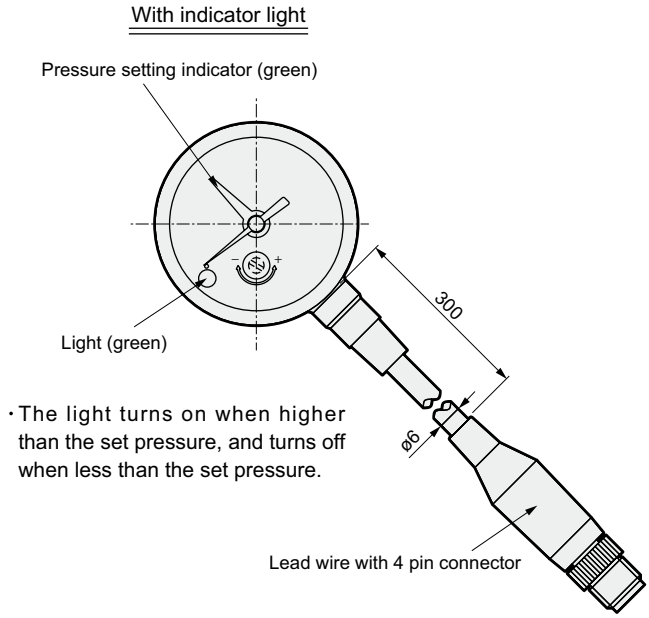
Terminal layout of male connector



Dimensions

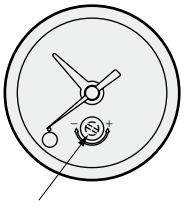






・The light turns on when higher than the set pressure, and turns off when less than the set pressure.

How to set setting indicator



○ Pass a slotted screwdriver (width 2.9mm) through the rubber cap on the lens, and turn the setting screw to set the setting needle to the required pressure.

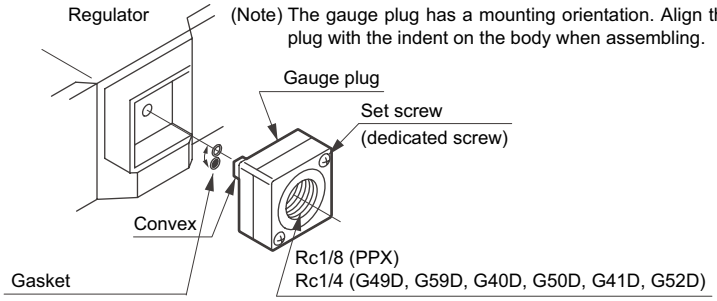
* When turning the setting screw.
・Minus (-) side (clockwise)
→Decreased set pressure range
・Plus (+) side (counterclockwise)
→Increased set pressure range

⚠ Safety precautions

- Do not apply impact or vibration directly to the product.
- Repeated and sudden increase and decrease in pressure and pressure pulsation must be avoided because it could adversely affect the life of the pressure gauge. Ease the pressure fluctuation in the circuit.
- The pressure switch uses disable operation if set pressure cannot be reached. Set the pressure switch value so that the setting indicator turns clockwise. If the setting indicator passes the setting position, turn the setting indicator counterclockwise once, then reset.
- Set the setting with a difference of 0.1 MPa or more from the working pressure (including pressure drop). Malfunctions could result if the difference is small. Refer to the drawings above for details on setting the setting needle. When using the pressure switch in the normal open state, the switch may not turn on when the pressure drops unless a pressure, to which the set indication error (± 0.05 MPa), hysteresis (0.07 MPa), and indicated accuracy (± 3%F/S) have been added, has been applied.
- Add the pressure gauge's indication accuracy to the maximum value of the setting indicator and indicator's error (set indicator error).
- When the DC light is used, the internal voltage drop is to be 4 V or less and load current 8 to 30 mA at 24 VDC.
- Wire the lead so that the repeated bending strain and tensile strength are not applied to the wire. Otherwise, braking faults may occur.

Gauge Plug Assembly (gauge plug, gasket, set screw assembly)

Use when mounting the pressure gauge.



If the gasket is turned 180° as shown in the drawing, regulator pressure flows to the pressure gauge.

* Tighten the pressure gauge with a torque of 10 to 15N·m.
* This can also be used to measure the pressure inside the regulator externally.
* Contact CKD for NPT or G thread.

Gauge plug assembly model no.	Applicable model	Applicable pressure gauge
R1000-W-G-PLUG	1000-W Series	G49D, G59D, G40D, G50D, G41D, G52D
R1000-W-T6-PLUG		PPX
R3000-W-G-PLUG	2000-W, 3000-W, 4000-W, 6000-W, 8000-W	G49D, G59D, G40D, G50D, G41D, G52D
R3000-W-T6-PLUG		PPX

Compact mechanical pressure switch

APS-W Series

・General purpose discrete specifications (APS)

JIS symbol 

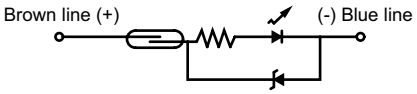
Specifications

Descriptions	APS-W
Working fluid	Compressed air
Max. working pressure MPa	1.0
Set pressure range MPa	0.1 to 0.6
Hysteresis MPa	0.08 or less
Repeatability MPa	±0.02 or less
Contact configuration	1a Note 1
Wiring	Lead wire 1m (oil resistant vinyl cabtire cable 2-conductor 0.2 mm^2)
Ambient temperature and fluid temperature	5 to 60℃
Protective structure Note 2	IP 65 equivalent

Note 1: The contact turns on if air pressure exceeding the scale setting pressure is applied.
Note 2: However mounting direction must be vertical. When water entrains into the bleed port from bottom, connect an optional joint, and extend the tube until water does not entrain. This port can not be used outdoors.

Electric component section specification		
Load voltage	DC12/24V	AC100V
Load voltage	5 to 50mA	7 to 20mA
Internal voltage drop	3V or less	
Light	LED (ON lighting)	
Maximum shock resistance	294m/S^2	
Insulation resistance	20MΩ and over at 500 VDC megger	
Withstanding voltage	No abnormality after application of AC1000V for 1 minute.	

Internal circuit diagram



How to order

APS - 6D 3 - W - 2

(White type)

- APS: Model
- 6D: Ⓐ Piping port position, port size, scale direction
- 3: Ⓑ Lead wire length
- 2: Ⓒ Option

Symbol	Descriptions	
Ⓐ Piping port position, port size, scale direction		
6B	Rear Rc1/8, vertical	Note 1
6D	Bottom Rc1/8, vertical	
6F	Bottom flange, vertical	
6L	Both sides Rc1/8, vertical	Note 1
6Y	Rear slange, side	
Ⓑ Lead wire length		
Blank	1m	
3	3m	
5	5m	
Ⓒ Option		
Blank	None	
1	DIN rail bracket attached (6D) only	
2	Nipple attached (6D) only	
4	Fitting for atmospheric release port attached (elbow for M3)	

Note 1: When installing on the bottom, be careful not to block the bleed port.

Specification for LiB production

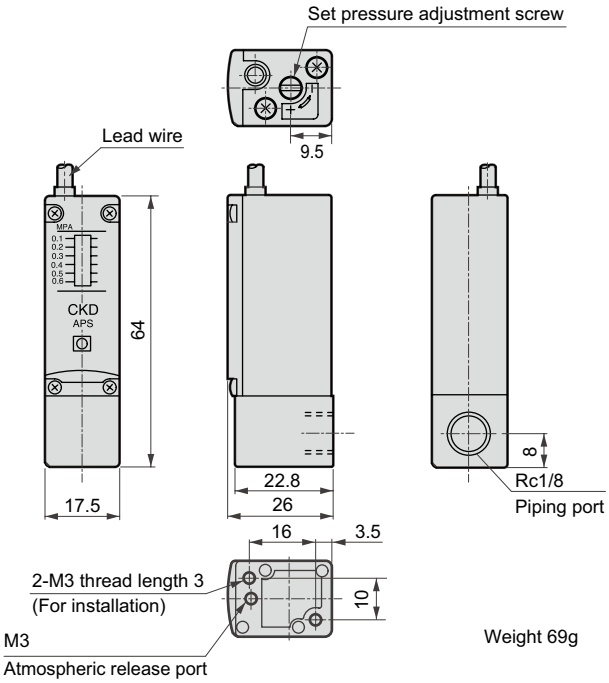
(Catalog No.CC-947A)

● Specification for LiB manufacturing process

APS - ····· - P4

Dimensions

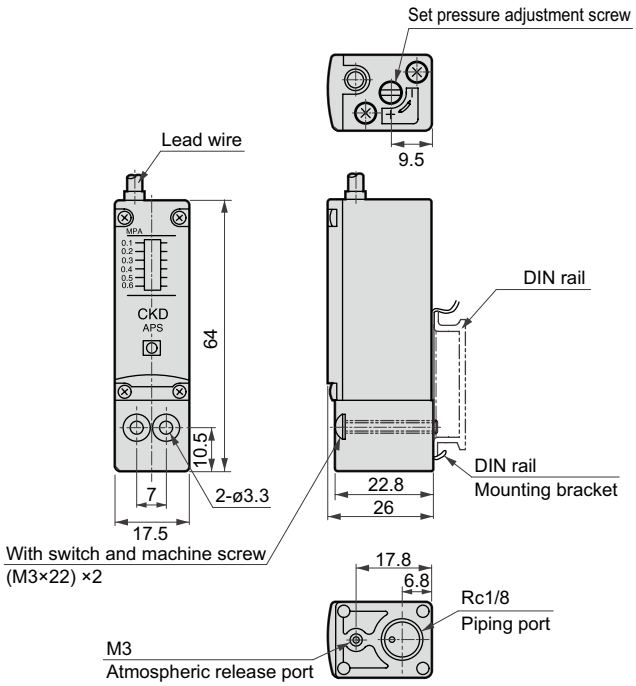
● APS-6B-W



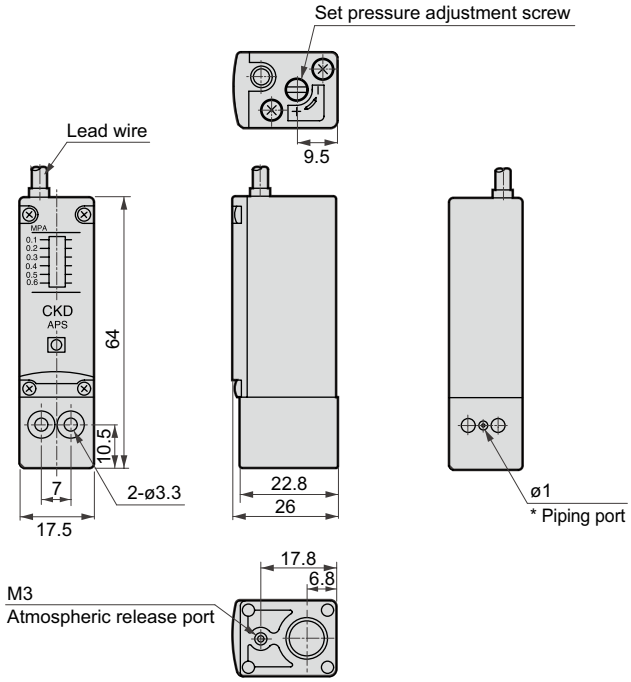
Weight 69g

Note: When installing on the bottom, be careful not to block the bleed port.

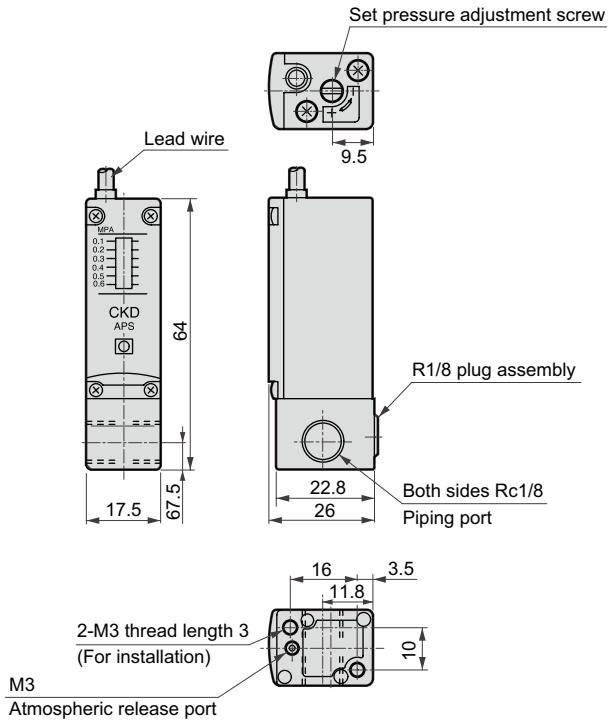
● APS-6D-W



● APS-6F-W



● APS-6L-W

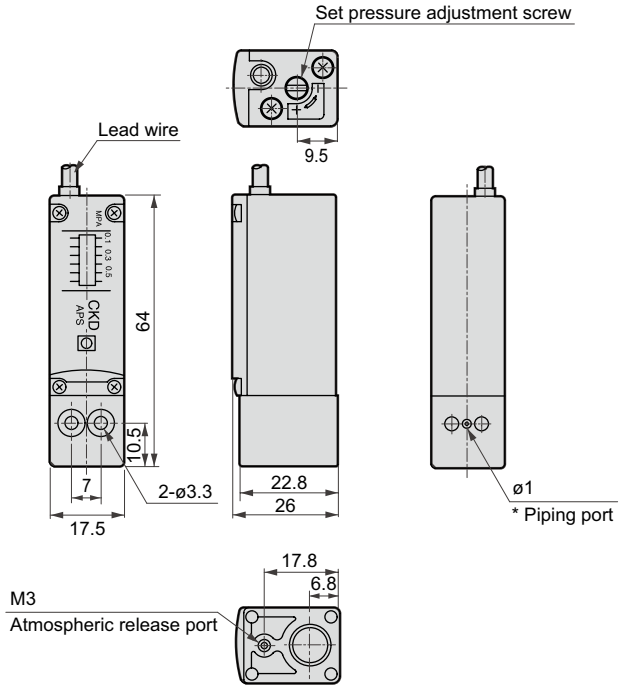


* CAUTION: The I.D. of the sealing O ring is ø1.2.
Drill a ø1 or less pressure outlet hole on the mounting face.

Note: When installing on the bottom, be careful not to block the bleed port.

Dimensions

● APS-6Y-W



* CAUTION: The I.D. of the sealing O ring is ø1.2.
Drill a ø1 or less pressure outlet hole on the mounting face.

Automatic drain

DT3000-W/DT4000-W Series

Lightweight, compact automatic drain discharger.
applicable compressor: 0.75kW to 75kW.

JIS symbol 

RoHS

Specifications

Descriptions	DT3000-W	DT4000-W	DT3010-W	DT4010-W
Type	Normally open (Note 1)		Normally closed	
Working fluid	Drain withing compressed air (water or oil)			
Withstanding pressure MPa	1.5			
Working pressure range MPa	0.1 to 1		0.15 to 1	
Ambient temperature range ℃	5 to 60			
Port size Rc, NPT, G	3/8, 1/2			
Drain port	Barbed nipple (ø5.7 to ø6 dia. Soft nylon tube can be directly connected.)			
Product weight kg	0.3	0.45	0.3	0.45

Note 1: If the working compressor is less than 0.75 kW (discharge flow 0.09 m^3/min), select the normal close type.

How to order

DT3000 - 10 ( ) -W- Z - BW
( ) (White type)

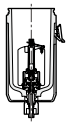
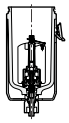
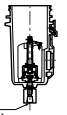
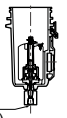
Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Attachment Note 2

Symbol		Descriptions
Ⓐ Model no.		
DT3000		NO type automatic drain
DT3010		NC type automatic drain
DT4000		NO type automatic drain
DT4010		NC type automatic drain
Ⓑ Port size		
10		3/8
15		1/2
Ⓒ Port thread type		
Blank		Rc thread
N		NPT thread
G		G thread
Ⓓ Option		
Bowl material	**Blank**	Polycarbonate bowl
	Z	Nylon bowl
	M Note 1	Metal bowl drain port with gauge Rc1/8
	M2 Note 1	Metal bowl drain port with gauge Rc1/4
Petcock included	**Blank**	Pipe plug assembly
	C Note 1	Petcock attached (without pipe plug)
Ⓔ Attachment		
Blank		Not attached
BW		C type bracket

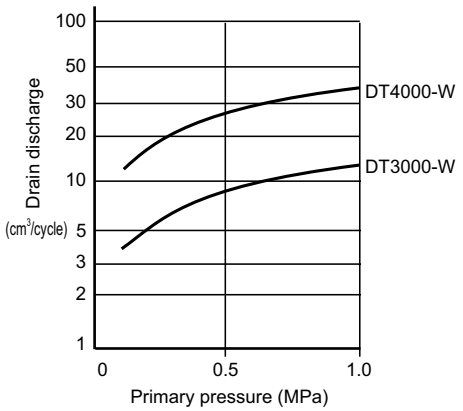
⚠ Cautions for model No. selection

Note 1: Petcock attached.
Note 2: C type bracket model no. DT3000-W……B320
DT4000-W……B420
Note 3: A masking plug matching the port size is enclosed.

Bowl types and shapes

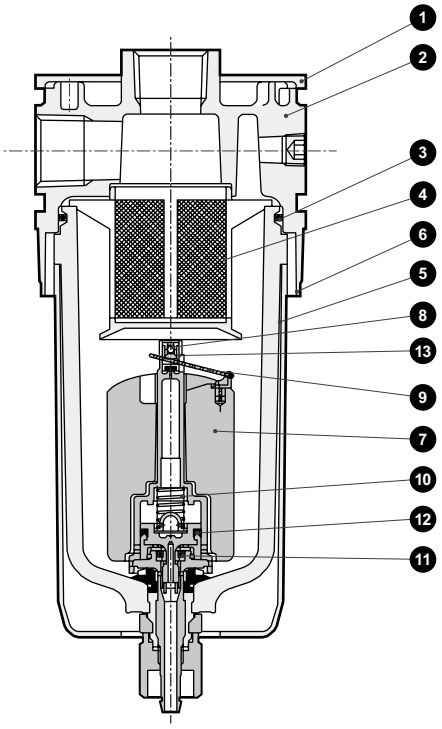
Type / Bowl material / Applicable series		NO type [Open at no pressure] DT3000-W/DT4000-W	NC type [Closed at no pressure] DT3010-W/DT4010-W
DT3000-W DT4000-W	Plastic	● With manual cock 	● With manual cock 
	Metal	● Without manual cock [M, M2]  Rc1/8 (M) Rc1/4 (M2)	● Without manual cock [M, M2]  Rc1/8 (M) Rc1/4 (M2)

Automatic drain performance graph



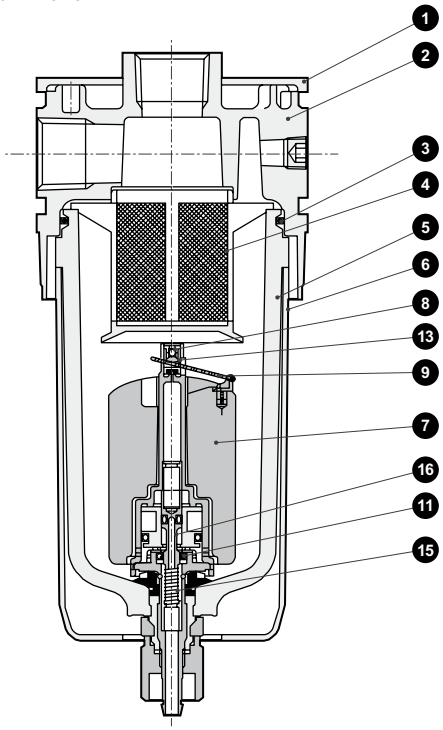
Internal structure and parts list

● NO type (open at no pressure)
DT3000-W/DT4000-W



When pressure is not applied in the bowl, valve ⓬ is pressed down by spring ⓾, and is separated from stem packing ⓫. When a pressure of 0.1 MPa or more is applied to the bowl, pressure on valve 12 increases to more than the force of spring ⓾, valve ⓬ is pressed up and is sealed by the stem packing ⓫.
When drainage accumulates in the bowl, float ❼ rises, and orifice spring ⓭ is pressed up by float level arm ❾.
Orifice seat assembly ❽ opens with a snap action of the orifice spring ⓭, and compressed air is led into the upper chamber of valve ⓬ to pressurize it. When valve ⓬ is pressed downward and separated from the stem packing ⓫, drainage is released into the atmosphere. Once released, the float ❼ drops and orifice seat assembly ❽ is closed by float level arm ❾ and the compressed air pressurizing the upper chamber of valve ⓬ is released into the atmosphere through valve ⓬ orifice. The pressure applied to valve ⓬ from the bottom exceeds the force of spring ⓾, causing valve ⓬ to rise and be sealed by stem packing ⓫.

● NC type (closed at no pressure)
DT3010-W/DT4010-W

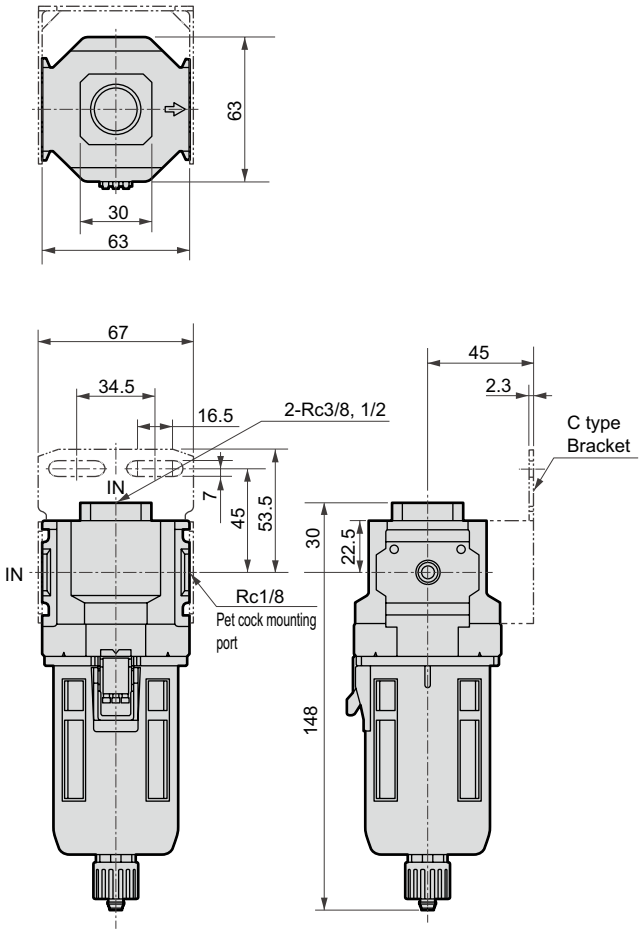


When pressure is not applied to the bowl, valve ⓰ is pressed up by spring ⓯ and sealed by stem packing ⓫.
When a pressure of 0.15 MPa or more is applied to the bowl and drainage accumulates, float ❼ rises and orifice spring ⓭ is pressed up by float level arm ❾.
Orifice seat assembly ❽ opens with a snap action of the orifice spring ⓭, and compressed air is led into the upper chamber of valve ⓰ to pressurize it. When valve ⓰ is pressed downward and separated from stem packing ⓫, drainage is released into the atmosphere.
Once released, float ❼ lowers and orifice seat assembly ❽ is closed by float level arm ❾, and the compressed air pressurizing the upper chamber of valve ⓰ is released into the atmosphere through the valve ⓰ orifice. Valve ⓰ is pressed up by the force of spring ⓯ from below, and is sealed by stem packing ⓫.

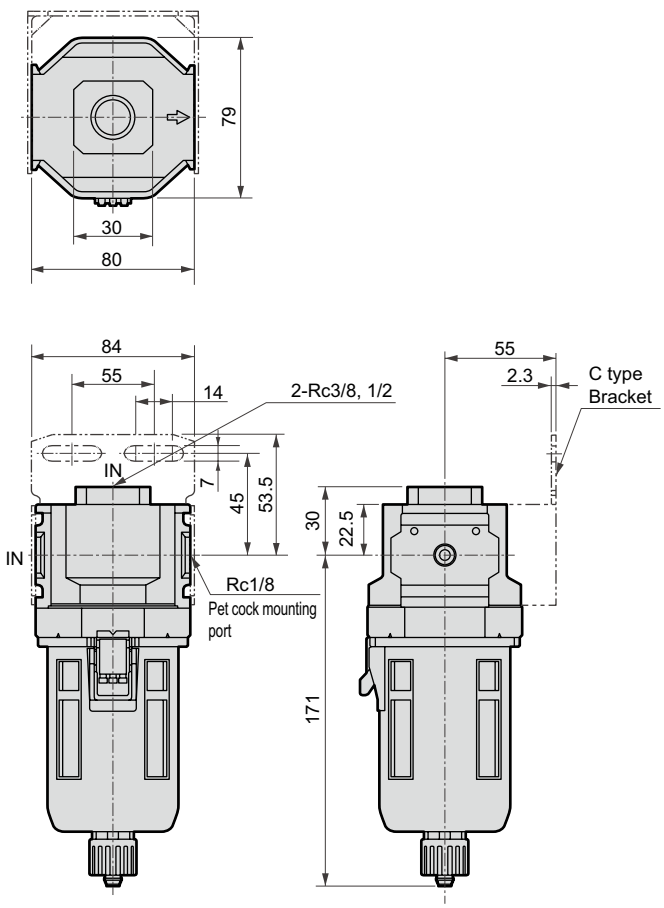
No.	Part name:	Material	Model no.			
			DT3000-W	DT3010-W	DT4000-W	DT4010-W
1	Plate cover	ABS resin	-	-	-	-
2	Body	Aluminum alloy die-casting	-	-	-	-
3	O-ring	Special nitrile rubber	F3000-ORING	F3000-ORING	F4000-ORING	F4000-ORING
4	Screen	Polyacetal resin, polyester	DT3000-SCREEN	DT3000-SCREEN	DT4000-SCREEN	DT4000-SCREEN
5	Bowl assembly (including O ring)	-	DT3000-W-BOWL	DT3010-W-BOWL	DT4000-W-BOWL	DT4010-W-BOWL
6	Bowl guard	Polyamide resin, steel	DT3000-W-BOWL-GUARD	DT3000-W-BOWL-GUARD	DT4000-W-BOWL-GUARD	DT4000-W-BOWL-GUARD

Dimensions

● DT3000-W/DT3010-W



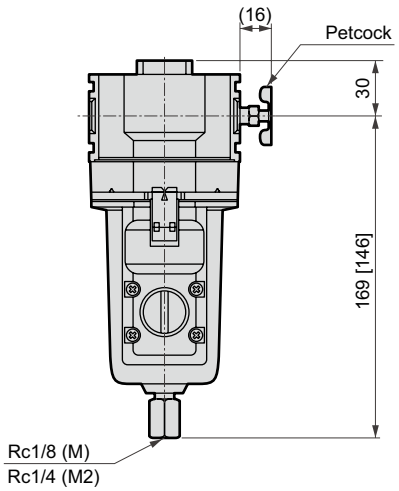
● DT4000-W/DT4010-W



Note: A ø5.7 to ø6 bore size soft nylon tube is directly connected to the drainage discharge port.
Note: Provide a space of 60 mm or more under the bowl for maintenance.

Metal bowl specification

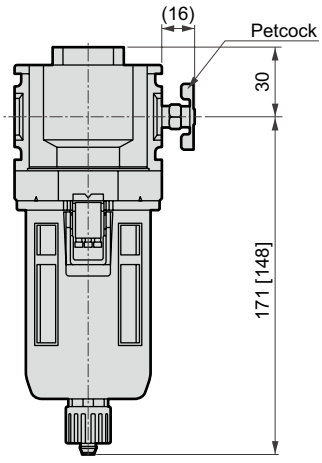
● Option [M, M2]



Note: Dimensions in [ ] is for DT3000-W.

Petcock specification

● Option [C]



Note: Dimensions in [ ] is for DT3000-W.

MEMO