



Filter/regulator standard white Series

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

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

Port size: 1/8 to 1

JIS symbol



Specifications

Descriptions	W1000-W	W2000-W	W3000-W	W4000-W	W8000-W
Appearance					
Working fluid	Compressed air				
Max. working pressure MPa	1.0 Notes 1, 2, 3				
Withstanding pressure MPa	1.5 Note 1				
Ambient temperature range °C	5 to 60				Note 4
Filtration rating µm	5		5 or 0.3		
Set pressure range MPa	0.05 to 0.85 ^{Note 1}	0.05 to 0.85			
Relief	With relief mechanism				
Drain capacity cm ³	12	25	45	80	80 (Note 5)
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	0.40	0.6	0.9	2.0
Standard accessories	Pressure gauge and bowl guard				

Note 1: 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 withstanding pressure is 1.05 MPa. Refer to the maximum processing flow table (page 350) for the F1000-W-F1 automatic drain for the maximum working flow. Set the working flow to less than the maximum working flow.

Note 2: When "F" with an automatic drain is selected, minimum operation pressure must be 0.1 MPa.
Air is purged with initial drainage until pressure reaches 0.1 MPa.

Note 3: When "F1" with an automatic drain is selected, minimum operation pressure must be 0.15 MPa.

Note 4: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.

Note 5: Drainage accumulates up to 170 cm³ only with the manual drain cock.

Note 6: When using the "F1" with automatic drain, use the W2000-W Series at less than the maximum flow rate. (Refer to F2000-W on page 350 for the maximum flow rate.)

Ozone specifications

(Ending 11)

W*000 - - W - -

P11

Clean room specifications

(catalog No. CB-033S)

- Dust generation preventing structure for use in cleanrooms

W*000 - -

P7*

Secondary battery compatible specifications

(catalog No. CC-947)

- Structured for use in secondary battery manufacturing processes

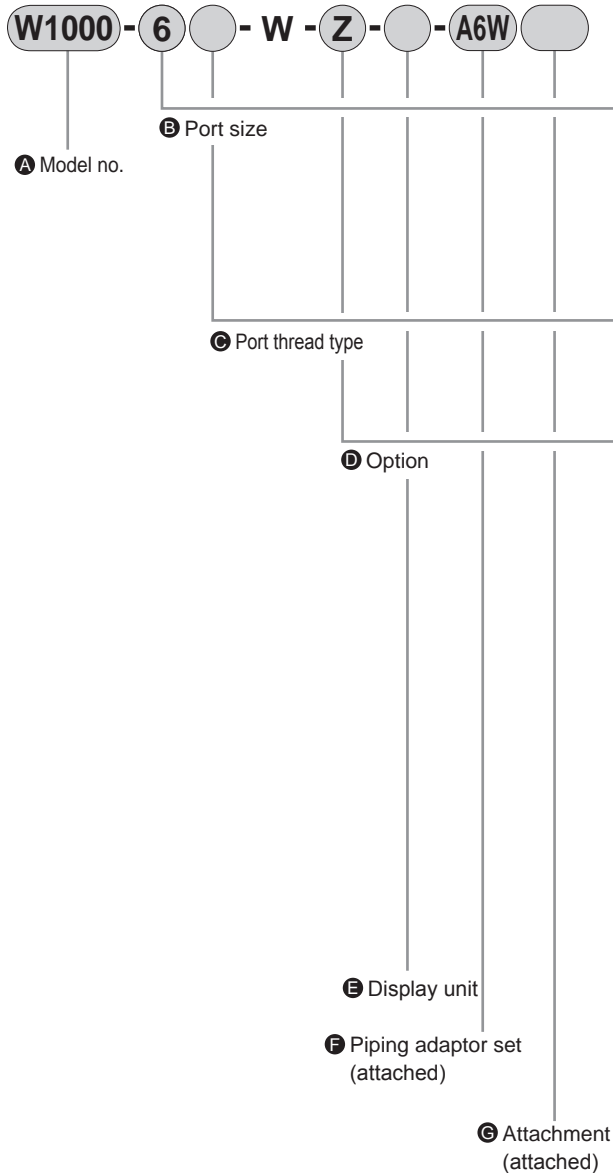
W*000 - -

P4*

Filter/Regulator series

How to order

How to order



* Refer to page 274 for the explanation of the option.

A Model no.

W	W	W	W	W
1	2	3	4	8
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

Symbol	Descriptions					
B Port size						
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 Option						
	Blank	With manual drain cock	●	●	●	●
Drainage	F	Auto. drain with manual override (NO type: Exhaust w/o pressurized)			●	●
	F1	Auto. drain with manual override (NC type: No exhaust w/o pressurized)	●	●	●	●
	FF	Large auto. drain with manual override (NO type: Exhaust w/o pressurized)				●
	FF1	Large auto. drain with manual override (NC type: No exhaust w/o pressurized)				●
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	Nonrelief type	●	●	●	●
Pressure gauge	Blank	With standard pressure gauge (G401-W)	●	●	●	●
	T	W/o pressure gauge (pressure gauge port (Rc1/4) is assembled with sealed)	●	●	●	●
	T8	Pressure gauge attached (pressure gauge port (Rc1/4) is assembled by open)	●	●	●	●
	T6	Digital pressure sensor PPX attachment option Note 6	●	●	●	●
Flow Direction	Blank	Standard flow (left → right)	●	●	●	●
	X1	Reverse flow (right → left)	●	●	●	●
E Display unit						
Blank	MPa display, Rc thread	●	●	●	●	●
J1	MPa display, NPT, G thread	●	●	●	●	●
F Piping adaptor set (attached)						
Blank	Not attached	●	●	●	●	●
A6*W	Rc1/8 piping adaptor set	●				
A8*W	Rc1/4 piping adaptor set	●	●	●	●	
A10*W	Rc3/8 piping adaptor set	●	●	●	●	
A15*W	Rc1/2 piping adaptor set				●	●
A20*W	Rc3/4 piping adaptor set					●
A25*W	Rc1 piping adaptor set					●
A32*W	Rc1 1/4 piping adaptor set					●
*Adaptor screw type						
Blank	Rc thread	●	●	●	●	●
N	NPT thread	●	●	●	●	●
G	G thread	●	●	●	●	●
G Attachment (attached)						
Blank	Not attached	●	●	●	●	●
BW	C type bracket	●	●	●	●	●
B3W	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	Digital pressure sensor: PPX-R10N-6M	●	●	●	●	●

Note on 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.
- 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 276 for the automatic drain use conditions.
- Note 4:Refer to page 352 for maximum processing flow when option "Y" is selected.
- Note 5:The pressure gauge's indication range is 0 to 0.4MPa for option "L".
- Note 6:When "D" option "T6" is selected, only "Blank" or "R2" can be selected for pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled by open.
- Note 7:The output type is NPN transistor output. Consult with CKD when the PNP transistor output is required.
- Note 8:The C-type bracket and piping adaptor set attachments cannot be used at the same time.
- Note 9:The joiner set is enclosed with the piping adaptor set.
- Note 10:If NPT is selected for the "C" piping thread, 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 279) for details on mounting the L-type bracket.

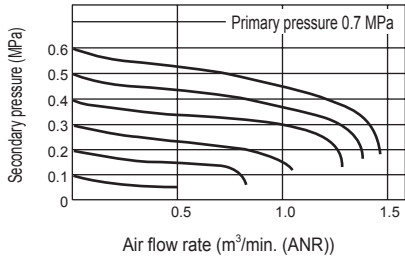
- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane type dryer
- Air filter
- Auto. drain / others
- F.R.L. (Module unit)
- F.R.L. (Separate)
- Compact F.R.
- Precise regulator
- F.R.L. (Related products)
- Clean F.R.
- Electro pneumatic regulator
- Air booster
- Speed control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum filter
- Vacuum regulator
- Suction plate
- Magnetic spring buffer
- Mechanical pressure SW
- Electronic pressure SW
- Contact / close contact cont. SW
- Air sensor
- Pressure SW for coolant
- Small flow sensor
- Small flow controller
- Flow sensor for air
- Flow sensor for water
- Total air system
- Total air system (Gamma)
- Ending

Standard series
F.R.L. unit

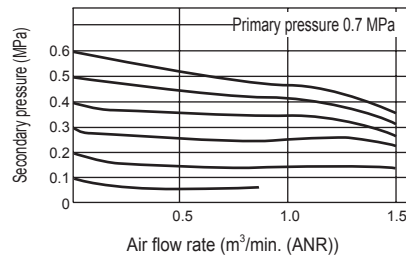
Filter/Regulator series

Flow characteristic

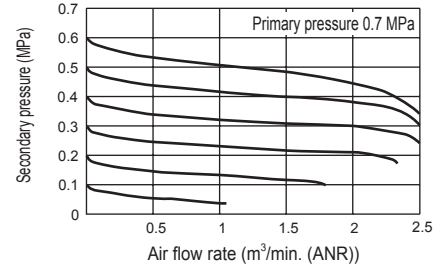
● W1000-6-W



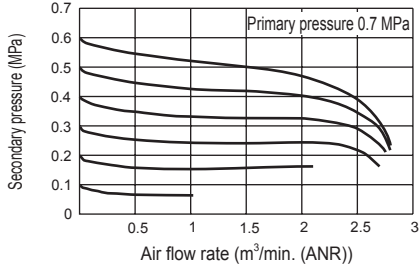
● W1000-8-W



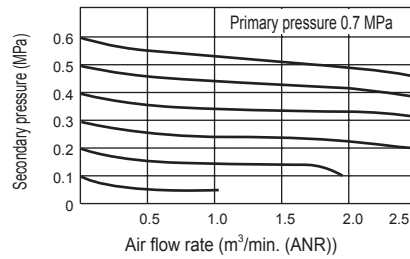
● W2000-8-W



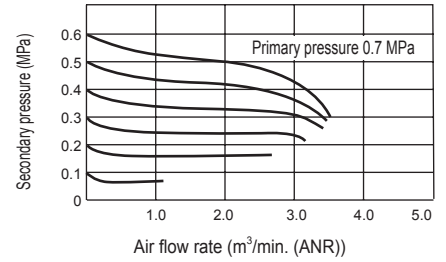
● W2000-10-W



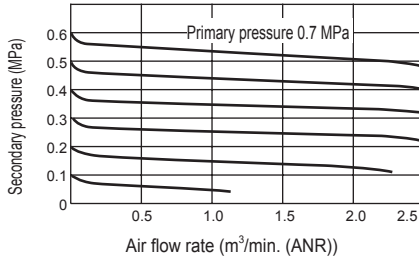
● W3000-8-W



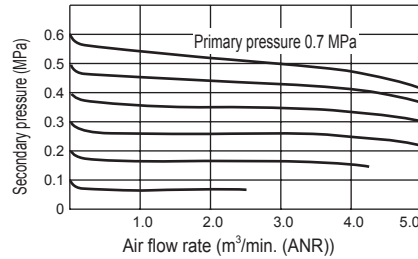
● W3000-10-W



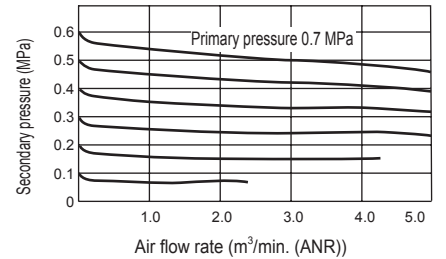
● W4000-8-W



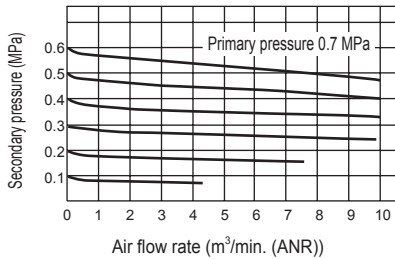
● W4000-10-W



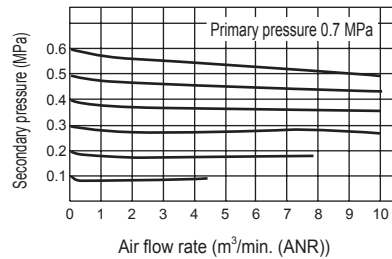
● W4000-15-W



● W8000-20-W

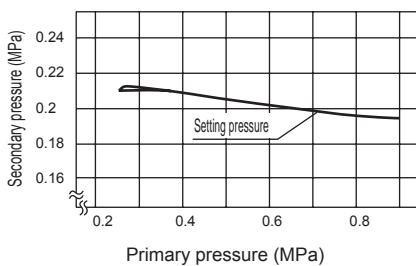


● W8000-25-W

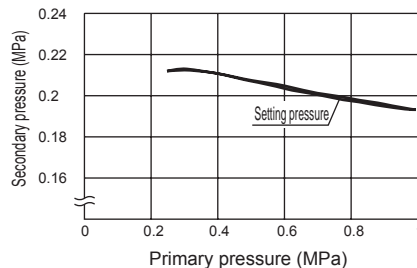


Pressure characteristic

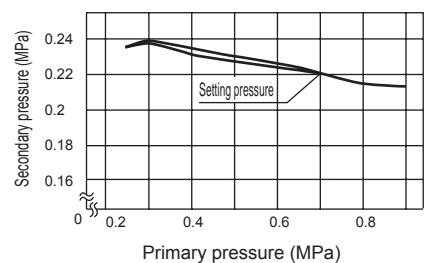
● W1000-W



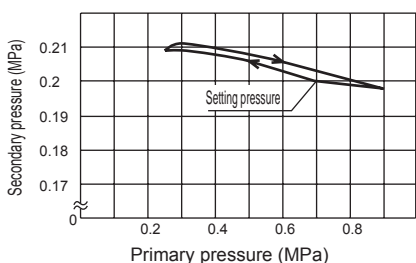
● W2000-W



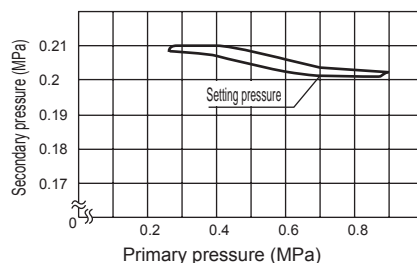
● W3000-W



● W4000-W



● W8000-W

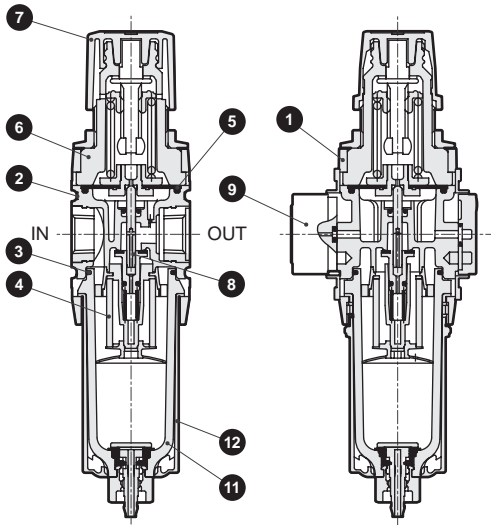


Filter/Regulator series

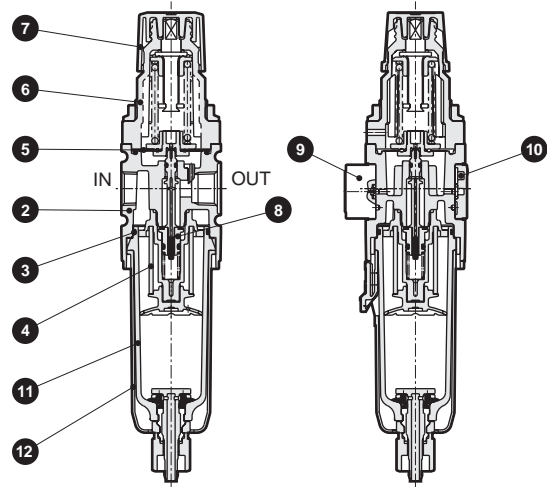
Internal structure and parts list

Internal structure and parts list

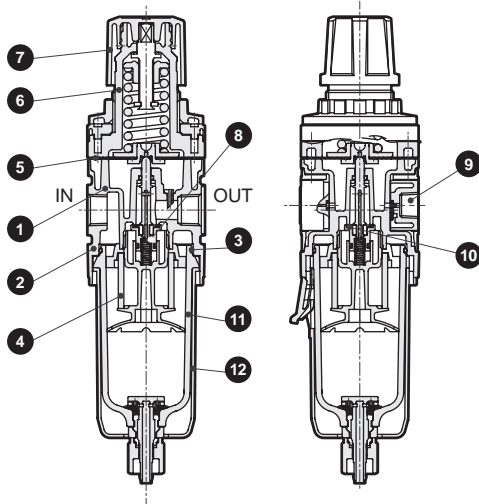
● W1000-W



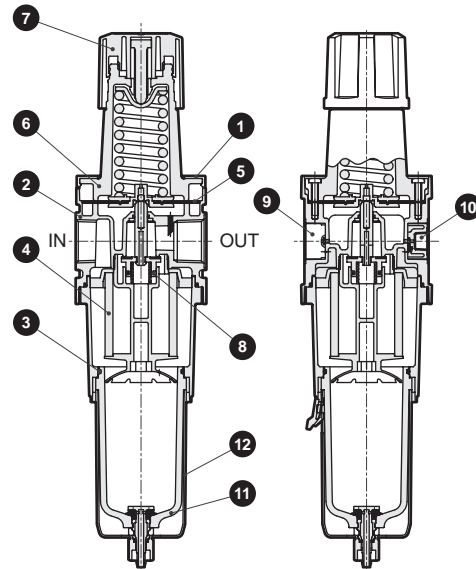
● W2000-W



● W3000-W/W4000-W



● W8000-W



No.	Parts 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 <small>Note 2</small>	Special nitrile rubber				
4	Element <small>Note 1</small>	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, hydrogen nitrile 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	Gage plug assembly	-			Polyamide resin, nitrile rubber, steel	
	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 element assembly.

Note 2: O-ring of W1000-W is special shaped.

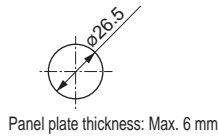
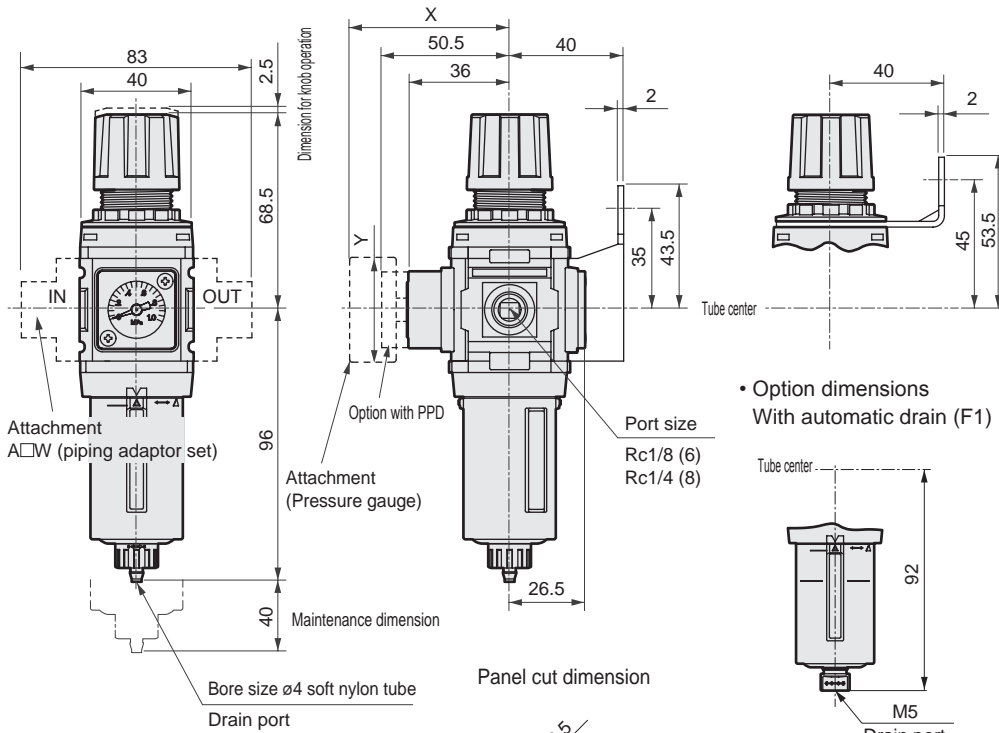
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard series
F.R.L. unit

Filter/Regulator series

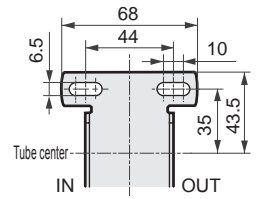
Dimensions



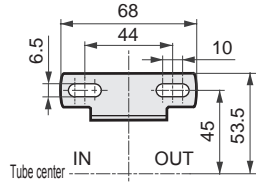
W1000-W



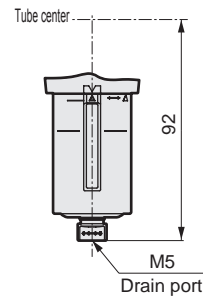
• Attachment
C type bracket (-BW)
Part model no.: B120



L type bracket (-B3W)
Part model no.: B130



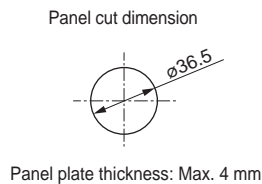
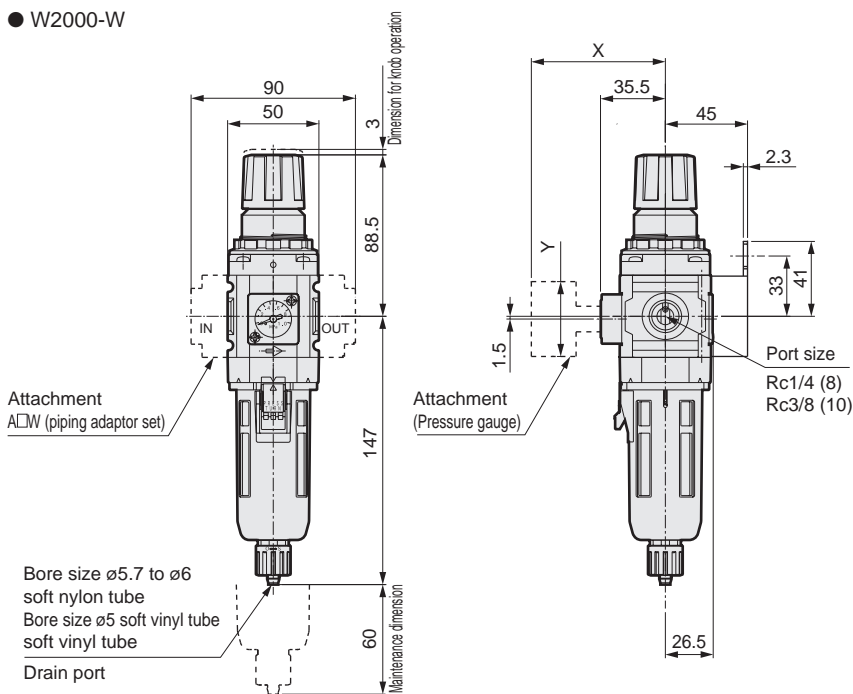
• Option dimensions
With automatic drain (F1)



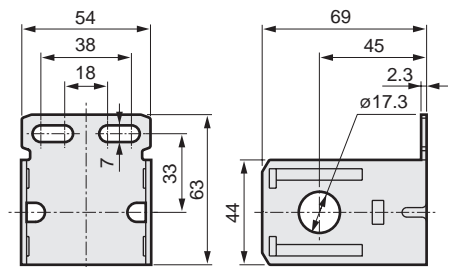
Pressure gauge attached optional dimensions table

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

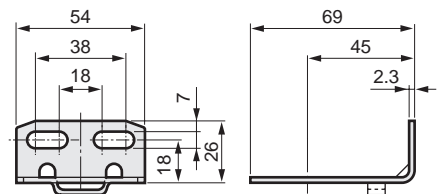
W2000-W



• Attachment
C type bracket (-BW)
Part model no.: B220



L type bracket (-B3W)
Part model no.: B230



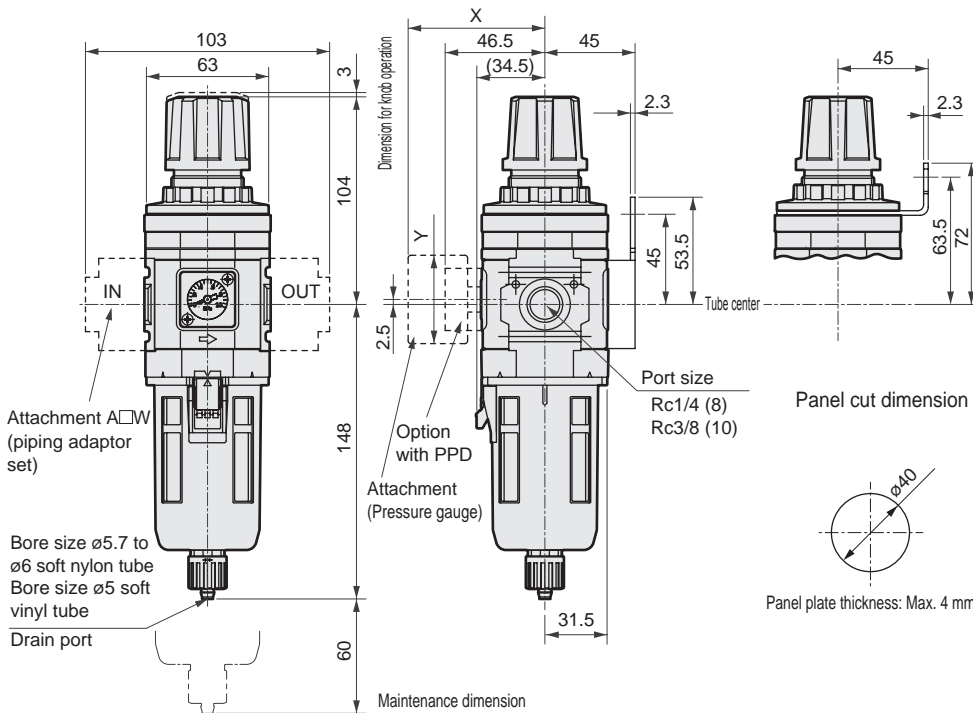
Pressure gauge attached optional dimensions table

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

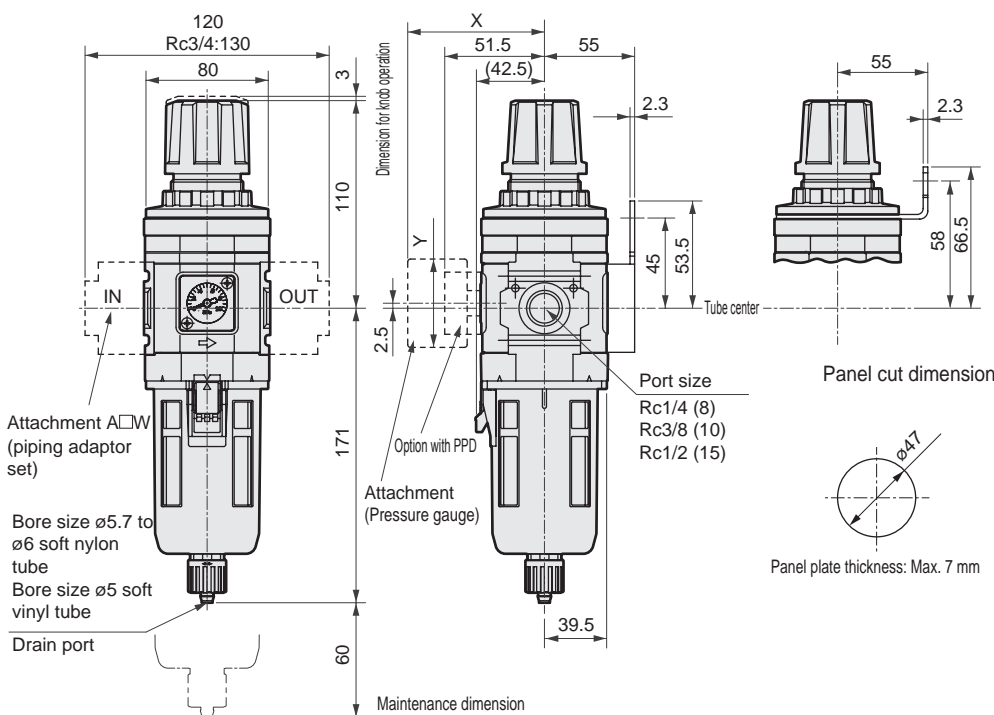


● W3000-W



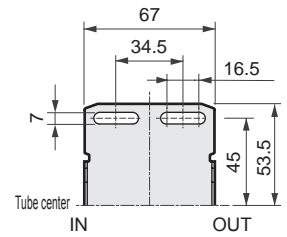
● For the plastic bowl, the dimensions of the manual cock and the automatic drain are same.

● W4000-W

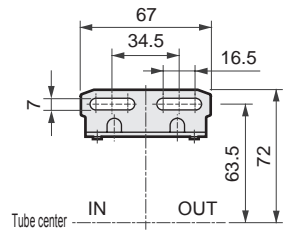


● For the plastic bowl, the dimensions of the manual cock and the automatic drain are same.

• Attachment
C type bracket (-BW)
Part model no.: B320



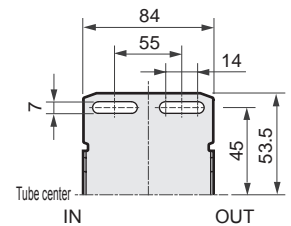
L type bracket (-B3W)
Part model no.: B330



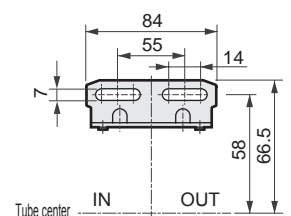
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P	(70)	$\phi 39$
G49P	(69.5)	$\phi 43.5$
G59P	(72)	$\phi 52$
G40P	(71.5)	$\phi 42.5$
G50P	(71.5)	$\phi 52.5$
G41P	(70)	$\phi 42$
G52P	(82)	$\phi 52.5$
R2	(69.5)	$\square 30$

• Attachment
C type bracket (-BW)
Part model no.: B420



L type bracket (-B3W)
Part model no.: B430



Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P	(75)	$\phi 39$
G49P	(74.5)	$\phi 43.5$
G59P	(77)	$\phi 52$
G40P	(76.5)	$\phi 42.5$
G50P	(76.5)	$\phi 52.5$
G41P	(75)	$\phi 42$
G52P	(86)	$\phi 52.5$
R2	(75)	$\square 30$

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

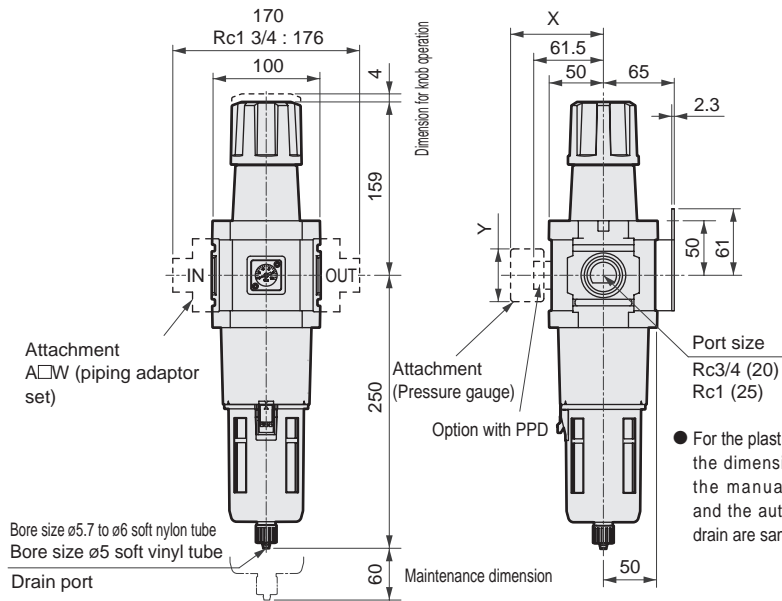
Standard series
F.R.L. unit

Filter/Regulator Series

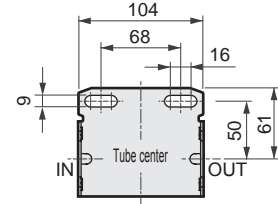
Dimensions



W8000-W



• Attachment
C type bracket (-BW)
Part model no.: B820



Pressure gauge attached optional dimensions table

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

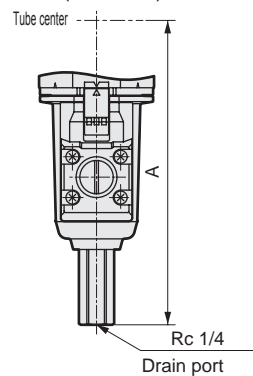
• For the plastic bowl, the dimensions of the manual cock and the automatic drain are same.

Optional dimensions

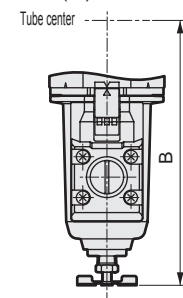


• Metal bowl (option) [W2000-W, 3000-W, 4000-W, 8000-W]

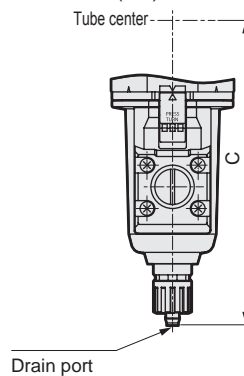
With automatic drain (FM, F1M)



Automatic drain cock (M)



Standard manual drain cock (M1)



Dimensions

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



Reverse filter/regulator standard white Series

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

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

Port size: 1/8 to 1

JIS symbol



Specifications

Descriptions	W1100-W	W2100-W	W3100-W	W4100-W	W8100-W
Appearance					
Working fluid	Compressed air				
Max. working pressure MPa	1.0 Notes 1, 2, 3				
Withstanding pressure MPa	1.5 Note 3				
Ambient temperature range °C	5 to 60 Note 4				
Filtration rating µm	5		5 or 0.3		
Set pressure range (Note 2) MPa	0.05 to 0.85 Note 1		0.05 to 0.85		
Relief	With relief mechanism				
Drain capacity cm ³	12	25	45	80	80 (Note 5)
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	0.40	0.6	0.9	2.0
Standard accessories	Pressure gauge and bowl guard				

Note 1: When "F" with an automatic drain is selected, minimum operation pressure must be 0.15MPa. Air is purged with initial drainage until pressure reaches 0.1 MPa.
 Note 2: When "F1" with an automatic drain is selected, minimum operation pressure must be 0.15MPa.
 Note 3: When "F1" with an automatic drain is selected for the W1100 series, minimum operating pressure is 0.2 MPa, maximum operation pressure is 0.7 MPa and withstanding pressure is 1.05 MPa. Refer to the maximum processing flow table (page 350) for the F1000-F1 automatic drain for the maximum working flow. Set the working flow to less than the maximum working flow.
 Note 4: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.
 Note 5: Up to 170 m³ is stored only with the manual drain cock type.
 Note 6: Check that the primary pressure is at least 0.05 MPa or more than the secondary pressure.
 Note 7: Refer to the set pressure range for the back pressure given on page 344 when selecting the model.
 Note 8: When using the "F1" with automatic drain, use the W2100-W Series at less than the maximum flow rate. (Refer to F2000-W on page 350 for the maximum flow rate.)

Ozone specifications

(Ending 11)

W*000 - - W - - P11

Clean room specifications

(catalog No. CB-033S)

● Dust generation preventing structure for use in cleanrooms

W*100 - - - P7*

Secondary battery compatible specifications

(catalog No. CC-947)

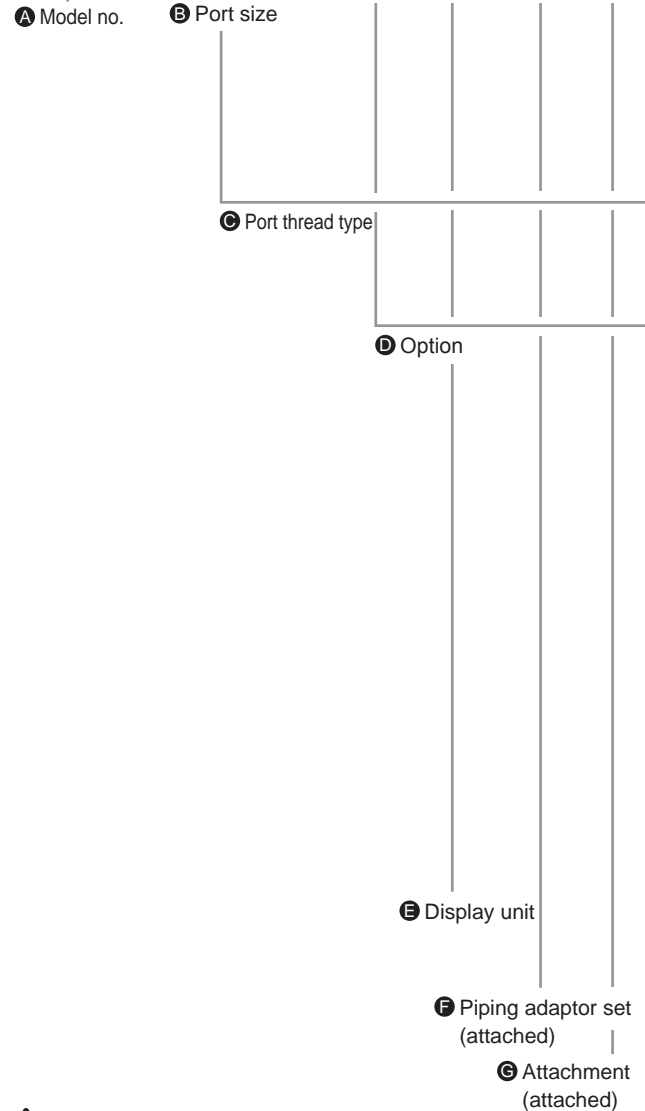
● Structured for use in secondary battery manufacturing processes

W*100 - - P4*

Filter/Regulator series

How to order

How to order



⚠ Note on 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.
- 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: **Positions of a check valve and pressure gauge can not be changed. If the IN and OUT direction must be reversed, indicate "X1" at the end of the option field.**
- Note 4: Refer to page 276 for the automatic drain use conditions.
- Note 5: Refer to page 352 for maximum processing flow when option "Y" is selected.
- Note 6: The pressure gauge's indication range is 0 to 0.4MPa for option "L".
- Note 7: When "D" option "T6" is selected, only "Blank" or "R2" can be selected for pressure gauge (enclosed). The digital pressure sensor PPX mounting port (Rc1/8) is assembled by open.
- Note 8: The output type is NPN transistor output. Consult with CKD when the PNP transistor output is required.
- Note 9: The C-type bracket and piping adaptor set attachments cannot be used at the same time.
- Note 10: The joiner set is enclosed with the piping adaptor set.
- Note 11: If NPT is selected for the "C" piping thread, 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 279) for details on mounting the L-type bracket.

* Refer to page 274 for the explanation of the option.

Symbol	Descriptions	A Model no.			
		W1100	W2100	W3100	W4100
		0	0	0	0
		0	0	0	0
		0	0	0	0
		0	0	0	0

B Port size		Note 1			
6	1/8	●	●	●	●
8	1/4	●	●	●	●
10	3/8		●	●	●
15	1/2			●	●
20	3/4				●
25	1				●

C Port thread type		Note 2, Note 3			
Blank	Rc thread	●	●	●	●
N	NPT thread	●	●	●	●
G	G thread	●	●	●	●

D Option		Note 2, Note 3				
Drainage	Blank	With manual drain cock	●	●	●	●
	F	Auto. drain with manual override (NO type: Exhaust w/o pressurized)		●	●	●
	F1	Auto. drain with manual override (NC type: No exhaust w/o pressurized)	●		●	●
	FF	Large auto. drain with manual override (NO type: Exhaust w/o pressurized)				●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●
	Z	Nylon bowl	●	●	●	●
	M	Metal bowl		●	●	●
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	Nonrelief type	●	●	●	●
Pressure gauge	Blank	With standard pressure gauge (G401-W)	●	●	●	●
	T	W/o pressure gauge (pressure gauge port (Rc1/4) is assembled with sealed)	●	●	●	●
	T8	Pressure gauge attached (pressure gauge port (Rc1/4) is assembled by open)	●	●	●	●
	T6	Digital pressure sensor PPX attachment option Note 7	●	●	●	●
Flow Direction	Blank	Standard flow (left → right)	●	●	●	●
	X1	Reverse flow (right → left)	●	●	●	●

E Display unit					
Blank	MPa display, Rc thread	●	●	●	●
J1	MPa display, NPT, G thread	●	●	●	●

F Piping adaptor set (attached)		Note 9, Note 10 428 pages			
Blank	Not attached	●	●	●	●
A6*W	Rc1/8 piping adaptor set	●			
A8*W	Rc1/4 piping adaptor set	●	●	●	●
A10*W	Rc3/8 piping adaptor set	●	●	●	●
A15*W	Rc1/2 piping adaptor set		●	●	●
A20*W	Rc3/4 piping adaptor set			●	●
A25*W	Rc1 piping adaptor set				●
A32*W	Rc1 1/4 piping adaptor set				●

*Adaptor screw type					
Blank	Rc thread	●	●	●	●
N	NPT thread	●	●	●	●
G	G thread	●	●	●	●

G Attachment (attached)		Note 11 425, 659 pages			
Blank	Not attached	●	●	●	●
BW	C type bracket	●	●	●	●
B3W	L type bracket Note 12	●	●	●	●
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	●	●	●	●

- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane type dryer
- Air filter
- Auto. drain / others
- F.R.L. (Module unit)
- F.R.L. (Separate)
- Compact F.R.
- Precise regulator
- F.R.L. (Related products)
- Clean F.R.
- Electro pneumatic regulator
- Air booster
- Speed control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum filter
- Vacuum regulator
- Suction plate
- Magnetic spring buffer
- Mechanical pressure SW
- Electronic pressure SW
- Contact / close contact cont. SW
- Air sensor
- Pressure SW for coolant
- Small flow sensor
- Small flow controller
- Flow sensor for air
- Flow sensor for water
- Total air system
- Total air system (Gamma)
- Ending

Standard series
F.R.L. unit

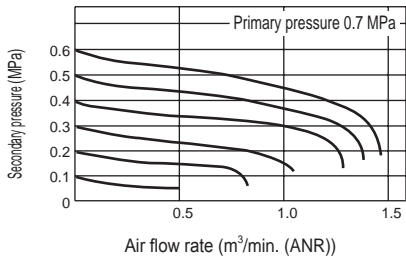
Filter/Regulator series

Flow characteristic

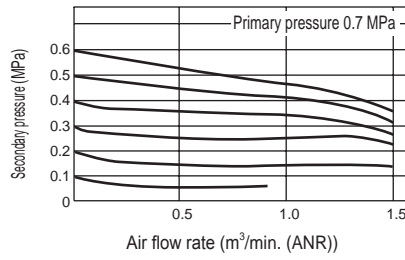


Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

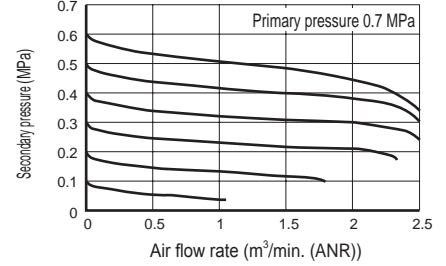
● W1100-6-W



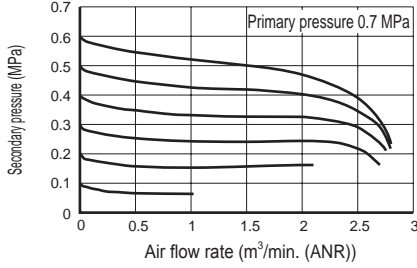
● W1100-8-W



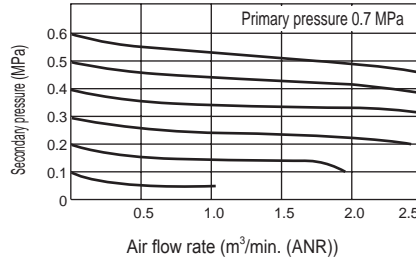
● W2100-8-W



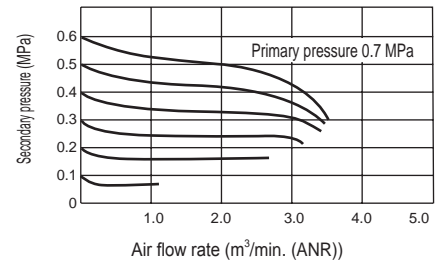
● W2100-10-W



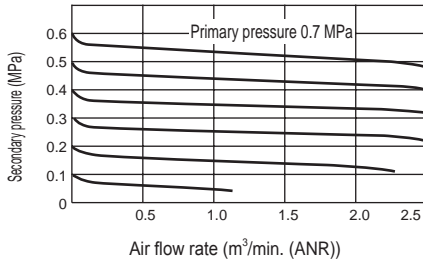
● W3100-8-W



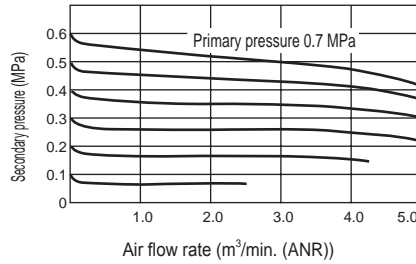
● W3100-10-W



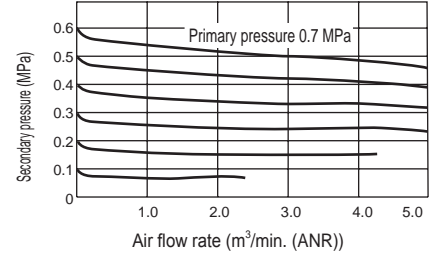
● W4100-8-W



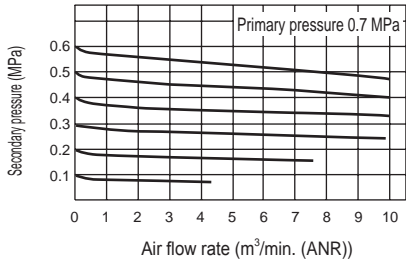
● W4100-10-W



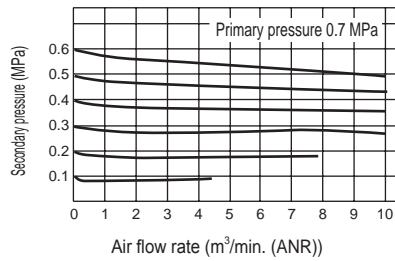
● W4100-15-W



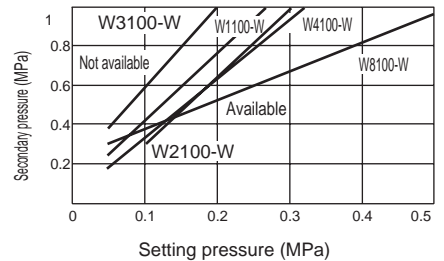
● W8100-20-W



● W8100-25-W



● Set pressure range to back pressure

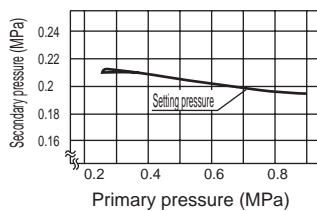


Note: The upper side of the graph is nonusable and the lower side usable.

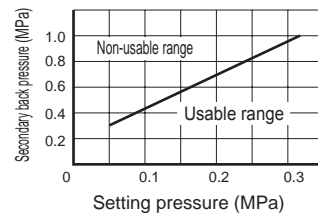
Example: If W4100-W is set to set pressure 0.2 MPa and the secondary back pressure is 0.6 MPa or more, the secondary pressure will not be released to the primary side.

Pressure characteristic

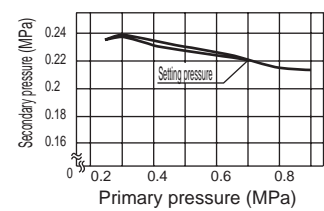
● W1100-W



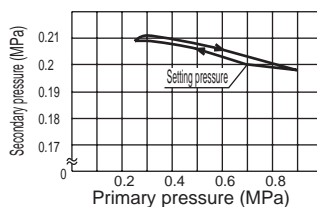
● W2100-W



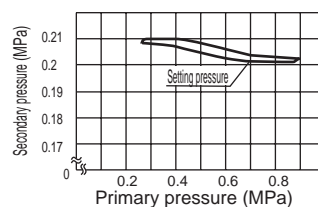
● W3100-W



● W4100-W



● W8100-W

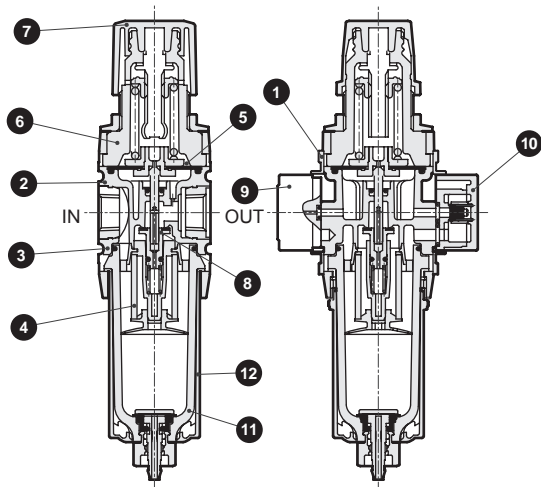


Filter/Regulator series

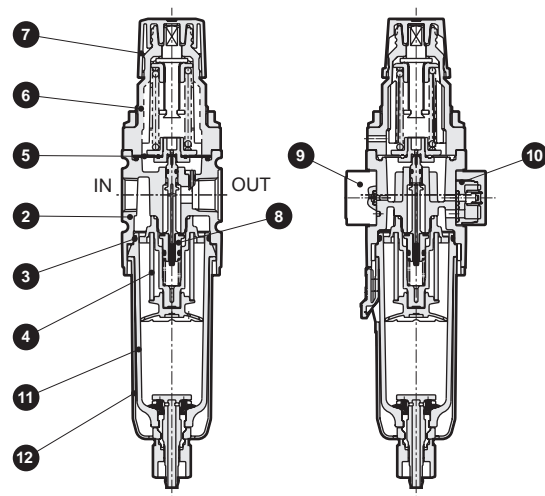
Internal structure and parts list

Internal structure and parts list

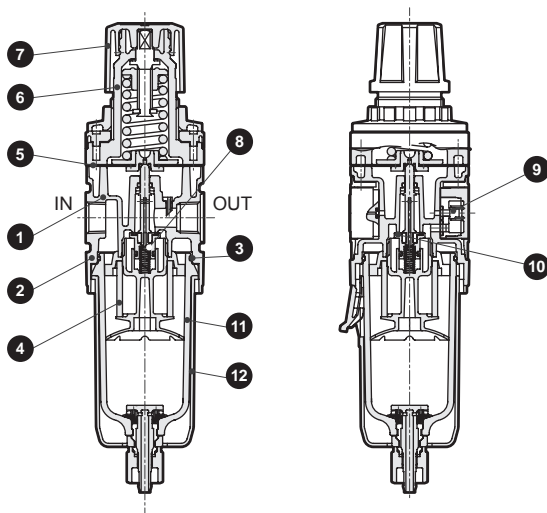
● W1100-W



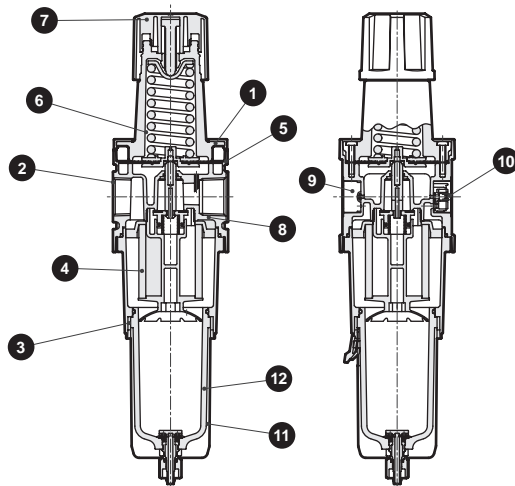
● W2100-W



● W3100-W/W4100-W



● W8100-W



No.	Parts 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, hydrogen nitrile rubber (polyacetal resin: W2100-W, W3100-W, 4100-W)				
9	Pressure gauge assembly	PBT resin, polyacetal resin, polycarbonate resin, nitrile rubber, brass, steel				
10	Check valve total 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 element assembly.

Note 2: O-ring of W1000-W is special shaped.

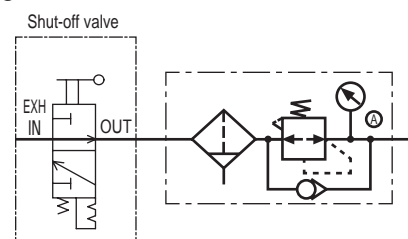
Note 3: Refer to page 349 for repair kits model No.

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 switching 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 344 for the graph)

● Circuit diagram



When using shut-off valve in front of reverse filter and regulator.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster

Speed control valve

Silencer

Check valve / others

Joint / tube

Vacuum filter

Vacuum regulator

Suction plate

Magnetic spring buffer

Mechanical pressure SW

Electronic pressure SW

Contact / close contact cont. SW

Air sensor

Pressure SW for coolant

Small flow sensor

Small flow controller

Flow sensor for air

Flow sensor for water

Total air system

Total air system (Gamma)

Ending

Standard series

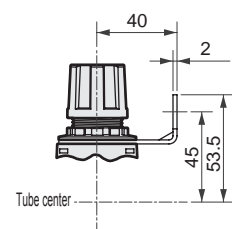
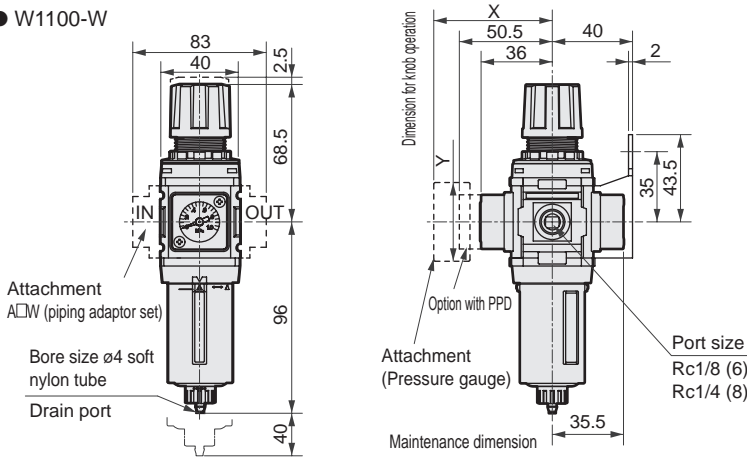
F.R.L. unit

Filter/Regulator series

Dimensions



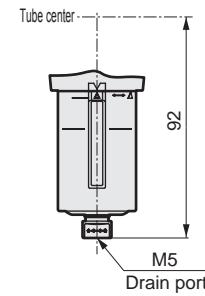
W1100-W



Panel cut dimension

Panel plate thickness: Max. 6 mm

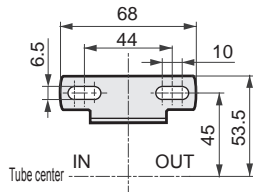
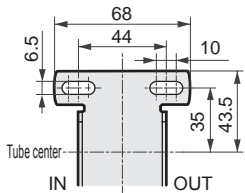
Option dimensions With automatic drain (F1)



Attachment

C type bracket (-BW)
Part model no.: B120

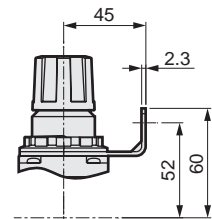
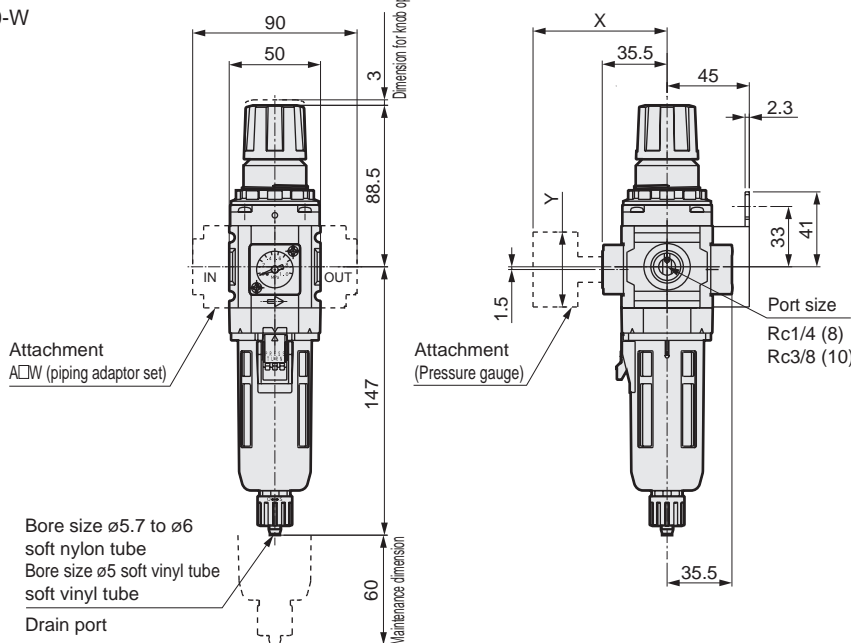
L type bracket (-B3W)
Part model no.: B130



Pressure gauge attached optional dimensions table

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



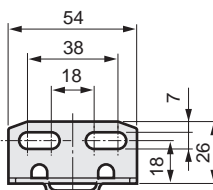
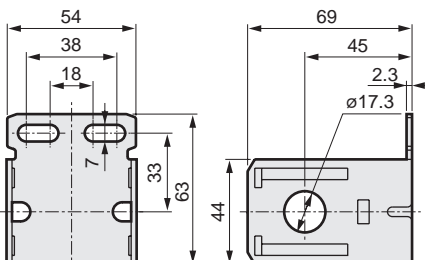
Panel cut dimension

Panel plate thickness: Max. 4 mm

Attachment

C type bracket (-BW)
Part model no.: B220

L type bracket (-B3W)
Part model no.: B230



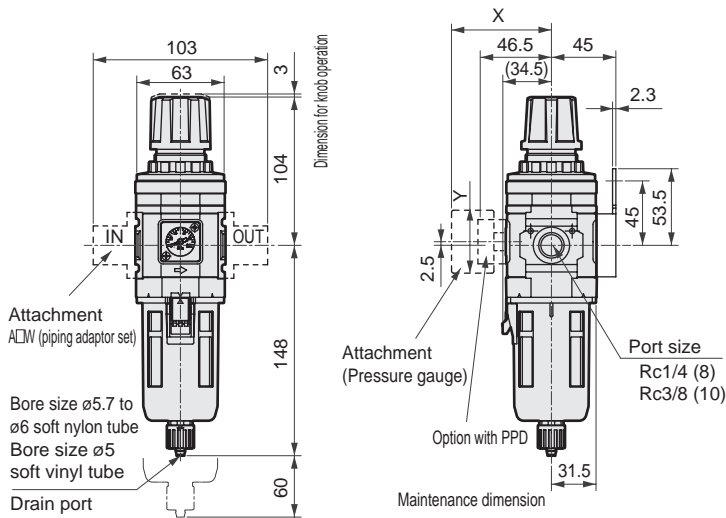
Pressure gauge attached optional dimensions table

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

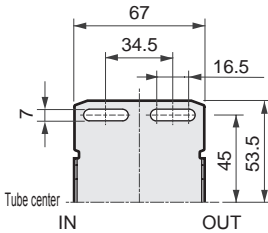
Dimensions



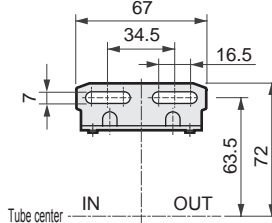
● W3100-W



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



- Attachment
L type bracket (-B3W)
Part model no.: B330

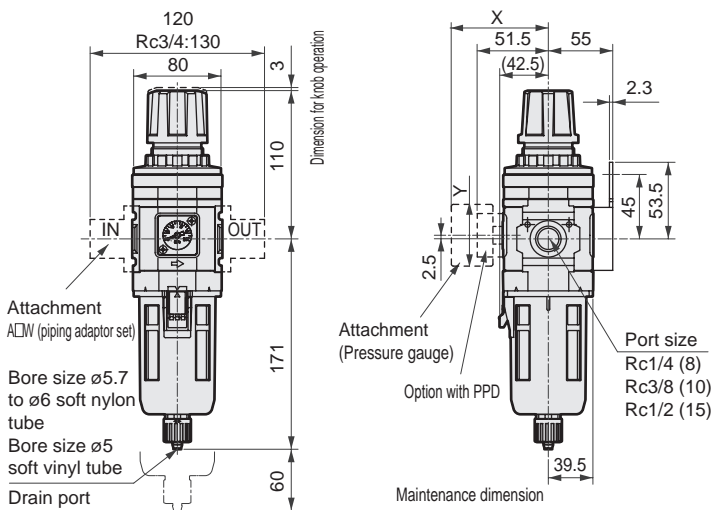


● For the plastic bowl, the dimensions of the manual cock and the automatic drain are same.

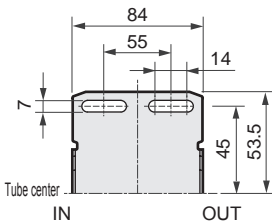
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P	(70)	∅39
G49P	(69.5)	∅43.5
G59P	(72)	∅52
G40P	(71.5)	∅42.5
G50P	(71.5)	∅52.5
G41P	(70)	∅42
G52P	(82)	∅52.5
R2	(69.5)	□30

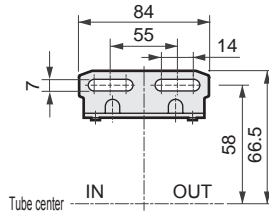
● W4100-W



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



- Attachment
L type bracket (-B3W)
Part model no.: B430



● For the plastic bowl, the dimensions of the manual cock and the automatic drain are same.

Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P	(75)	∅39
G49P	(74.5)	∅43.5
G59P	(77)	∅52
G40P	(76.5)	∅42.5
G50P	(76.5)	∅52.5
G41P	(75)	∅42
G52P	(86)	∅52.5
R2	(75)	□30

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

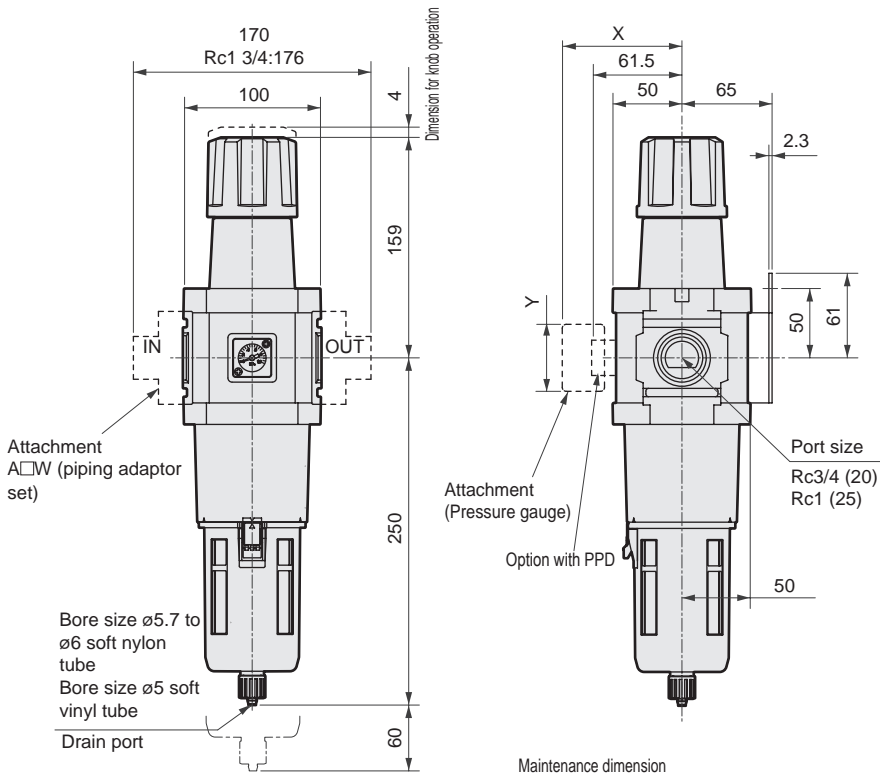
Standard series
F.R.L. unit

Filter/Regulator Series

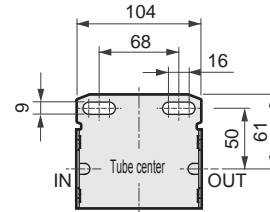
Dimensions



● W8100-W



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



Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P	(85)	$\phi 39$
G49P	(84.5)	$\phi 43.5$
G59P	(87)	$\phi 52$
G40P	(86.5)	$\phi 42.5$
G50P	(86.5)	$\phi 52.5$
G41P	(85)	$\phi 42$
G52P	(98)	$\phi 52.5$
R2	(85)	$\square 30$

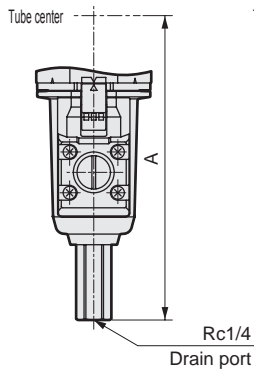
- For the plastic bowl, the dimensions of the manual cock and the automatic drain are same.

Optional dimensions

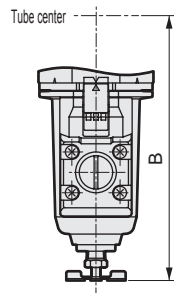


- Metal bowl W2100-W/W3100-W/W4100-W/W8100-W (option)

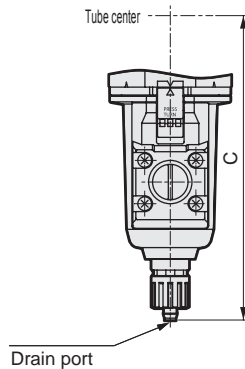
With automatic drain (FM, F1M)



Automatic drain cock (M)



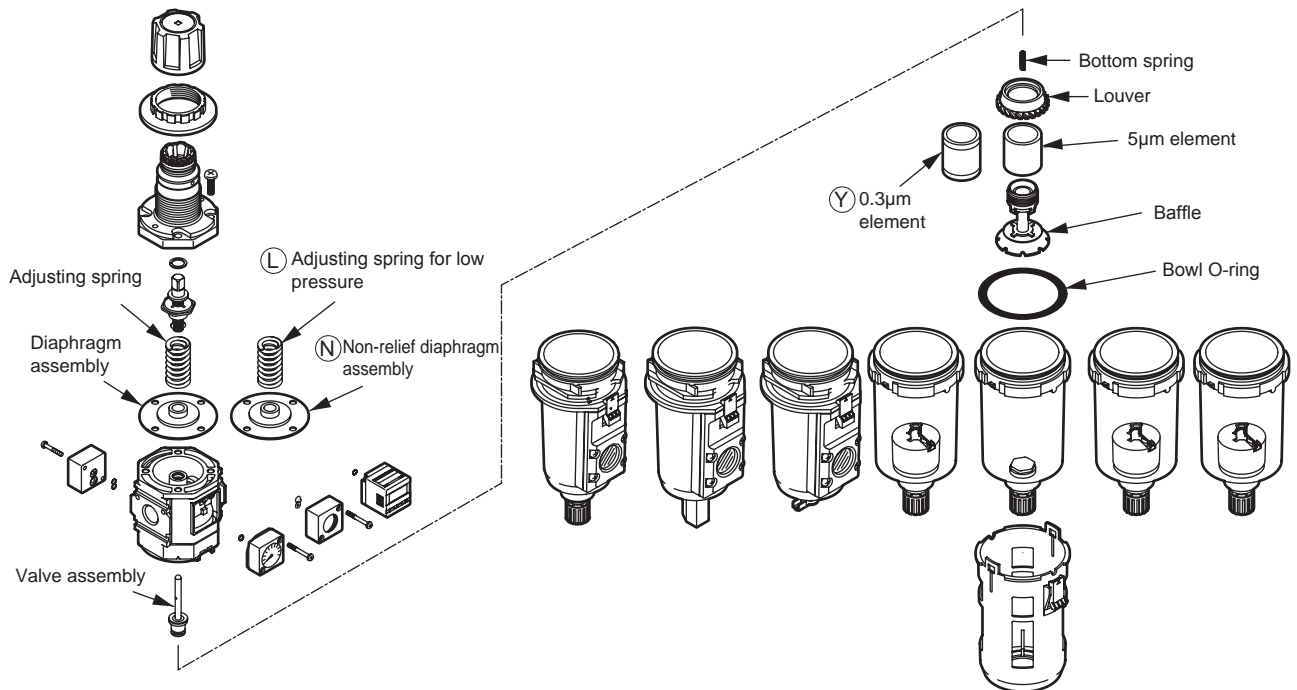
Standard manual drain cock (M1)



Dimensions

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

Optional parts diagram



Repair kits (set of diaphragm assembly, valve assembly, bottom spring, louver, element, baffle, bowl O-ring)

Repair kits model no.	Relief diaphragm assembly	Non-relief diaphragm assembly	Relief diaphragm assembly	Non-relief diaphragm assembly
Model	5µm element (blank)	5µm element (N)	0.3 µm element (Y)	0.3 µm 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 (set of valve assembly and bottom spring)

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 the regulator options and parts table (page 393) for details on the adjustment spring, diaphragm, and gauge plug assembly. Refer to air filter options and parts table (pages 358 to 359) for details on the element, bowl assembly, and bowl guard.

Refrigerating type dryer
 Desiccant type dryer
 High polymer membrane type dryer
 Air filter
 Auto, drain / others
F.R.L. (Module unit)
 F.R.L. (Separate)
 Compact F.R.
 Precise regulator
F.R.L. (Related products)
 Clean F.R.
 Electro pneumatic regulator
 Air booster
 Speed control valve
 Silencer
 Check valve / others
 Joint / tube
 Vacuum filter
 Vacuum regulator
 Suction plate
 Magnetic spring buffer
 Mechanical pressure SW
 Electronic pressure SW
 Contact / close contact cont. SW
 Air sensor
 Pressure SW for coolant
 Small flow sensor
 Small flow controller
 Flow sensor for air
 Flow sensor for water
 Total air system
 Total air system (Gamma)
 Ending
Standard series
F.R.L. unit

Air Filter Series

Optional parts diagram

Element

Element model no.	5µm Element	0.3µm Element (Y)
Model		
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: For the F1000-W and W1000-W, the baffle and element are assembly parts.

(M1)

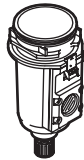
Metal bowl assembly with manual drain cock

(FM1)

Automatic drain NO type metal bowl assembly with manual drain cock

(F1M1)

Automatic drain NC type metal bowl assembly with manual drain cock



*8000 series large emission

(FFM1)

High discharge automatic drain NO type metal bowl assembly with manual drain cock

(FF1M1)

High discharge automatic drain NC type metal bowl assembly with manual drain cock

(FM)

NO type automatic drain bowl assembly with metal manual cock

(F1M)

NC type automatic drain bowl assembly with metal manual cock



Rc1/4

*8000 series large emission

(FFM)

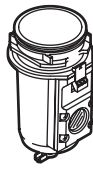
NO type large automatic drain bowl assembly with metal manual cock

(FF1M)

NC type large automatic drain bowl assembly with metal manual cock

(M)

Metal bowl assembly with cock



(F)

NO type automatic drain bowl assembly with manual cock

(F1)

NC type automatic drain bowl assembly with manual cock



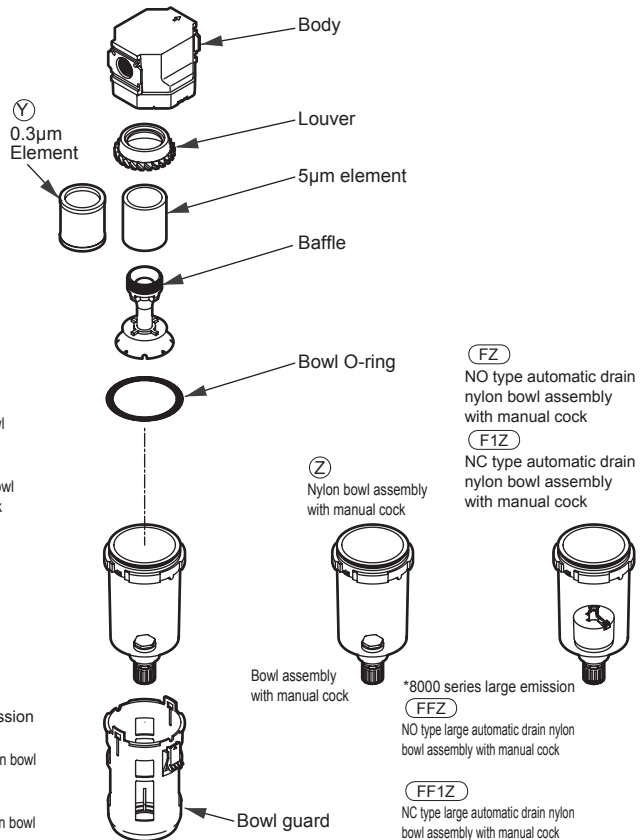
*8000 series large emission

(FF)

NO type large automatic drain bowl assembly with manual cock

(FF1)

NC type large automatic drain bowl assembly with manual cock



Repair kits model no.

(Set of louver, baffle, element, bowl O-ring)

Repair kits model no.	5µm Element	0.3µm Element (Y)
Model		
F1000-W Note 1	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 the F1000-W, the baffle and element are assembly parts, so the set consists of the element assembly and bowl O-ring.

Note 2: For the F8000-W, the set consists of the baffle, element, and bowl O-ring.

Bowl guard

Bowl guard model no.	Polycarbonate bowl	Nylon bowl
Model		
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 is "F1000-W-BOWL-BOWL-GUARD-F1".

Bowl assembly (set of bowl assembly and bowl O-ring)

Bowl assembly Model	With manual cock PC bowl assembly	With manual cock PA bowl assembly	With manual cock Metal bowl assembly	With standard manual cock Metal bowl assembly	With manual cock NO type Automatic drain PC bowl assembly Note 1	With manual cock NC type Automatic drain PC bowl assembly
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	-	M2000-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	With manual cock NO type Automatic drain PA bowl assembly Note 1	With manual cock NC type Automatic drain PA bowl assembly	With metal manual cock NO type Automatic drain Metal bowl assembly Note 1	With standard manual cock NO type Automatic drain Metal bowl assembly	With metal manual cock NC type Automatic drain Metal bowl assembly	With standard manual cock NC type Automatic drain Metal bowl assembly	For medium pressure NO type Automatic drain Bowl assembly Note 1	For medium pressure NC type Automatic drain Bowl assembly
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	With manual cock 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 metal manual cock NO type Large automatic drain Metal bowl assembly	With metal manual cock NC type Large automatic drain Metal bowl assembly	With standard manual cock NO type Large automatic drain Metal bowl assembly	With standard manual cock NC type Large automatic drain Metal bowl assembly
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: The NO automatic drain cannot be selected for the oil Mist filter M1000-W, M3000-W, M4000-W, M6000-W, or M-8000W and 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.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Standard series
F.R.L. unit