



Filter/regulator Standard White Series

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

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

● Port size: 1/8 to 1

JIS symbol



Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Descriptions	W1000-W	W2000-W	W3000-W	W4000-W	W8000-W
Appearance					
Working fluid	Compressed air				
Max. working pressure MPa	1.0 (≈150 psi, 10 bar) *1, 2, 3				
Proof pressure MPa	1.5 (≈220 psi, 15 bar) *1				
Ambient / fluid temperatures °C	5 (41°F) to 60 (140°F) *4				
Filtration rating µm	5		5 or 0.3		
Set pressure MPa	0.05 to 0.85 *1	0.05 (≈7.3 psi, 0.5 bar) to 0.85 (≈120 psi, 8.5 bar)			
Pressure relief	With relief mechanism				
Drain capacity cm ³	12	25	45	80	80 (*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	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Weight kg	0.175	0.40	0.6	0.9	2.0
Standard accessories	Pressure gauge and bowl guard				

- *1: When using W1000-W Series "F1" with auto-drain, the min. working pressure is 0.2 MPa, the max. working pressure is 0.7 MPa and the proof pressure is 1.05 MPa. For the max. working flow rate, refer to the max. working flow rate table of F1000-W-F1 with auto-drain (page 96). Set the working flow rate to less than or equal to the max. working flow rate.
- *2: In the case of "F" with auto-drain, the min. working pressure of auto-drain is 0.1 MPa.
Air is purged with initial drainage until pressure reaches 0.1 MPa.
- *3: In the case of "F1" with auto-drain, the min. working pressure of auto-drain is 0.15 MPa.
- *4: The ambient / fluid temperatures for "RN" or "RP" (pressure switch with display PPR is mounted) and "R2" (digital pressure sensor PPX is attached) is 5 to 50°C.
- *5: Up to 170 cm³ is stored with the manual drain cock only.
- *6: W2000-W Series with "F1" (with auto-drain) must be used at equal to or less than the max. working flow rate. (Refer to the F2000-W section on page 96 for max. flow rate.)

Option weight

* Add to the weight of the standard accessories.

Unit: kg

Code	Drain discharge				Bowl material		Pressure gauge		Pipe adaptor set			
	F	F1	FF	FF1	M	M1	T*	RN/RP	A6*W	A8*W	A10*W	A15*W
W1000		0.007					0	0.04	0.09	0.09	0.09	
W2000		0.02				0.1	0			0.16	0.16	0.16
W3000	0.02	0.02			0.1	0.1	0	0.04		0.16	0.16	0.16
W4000	0.02	0.02			0.1	0.1	0	0.04		0.16	0.16	0.16
W8000	0.02	0.02	0.02	0.02	0.1	0.1	0	0.04				

Code	Pipe adaptor set			Attachment							
	A20*W	A25*W	A32*W	BW	B3W	G45P	G49P	G59P	G40P	G52P	R2
W1000				0.1	0.04	0.074	0.086	0.115	0.085	0.15	0.04
W2000				0.15	0.06	0.074	0.086		0.085	0.15	0.04
W3000				0.17	0.07	0.074	0.086	0.115	0.085	0.15	0.04
W4000	0.16			0.21	0.11	0.074	0.086	0.115	0.085	0.15	0.04
W8000	0.53	0.53	0.53	0.36		0.074	0.086	0.115	0.085	0.15	0.04

Ozone-proof specs (Ending Page 11) **Clean-room specs** (Catalog No. CB-033SA) **Specs for rechargeable battery** (Catalog No. CC-1226A)

W*000 - ... - W - ... -

P11

● Anti-dust generation structure for use in cleanrooms

● Structure compatible with rechargeable battery manufacturing process

W*000 - -

P7*

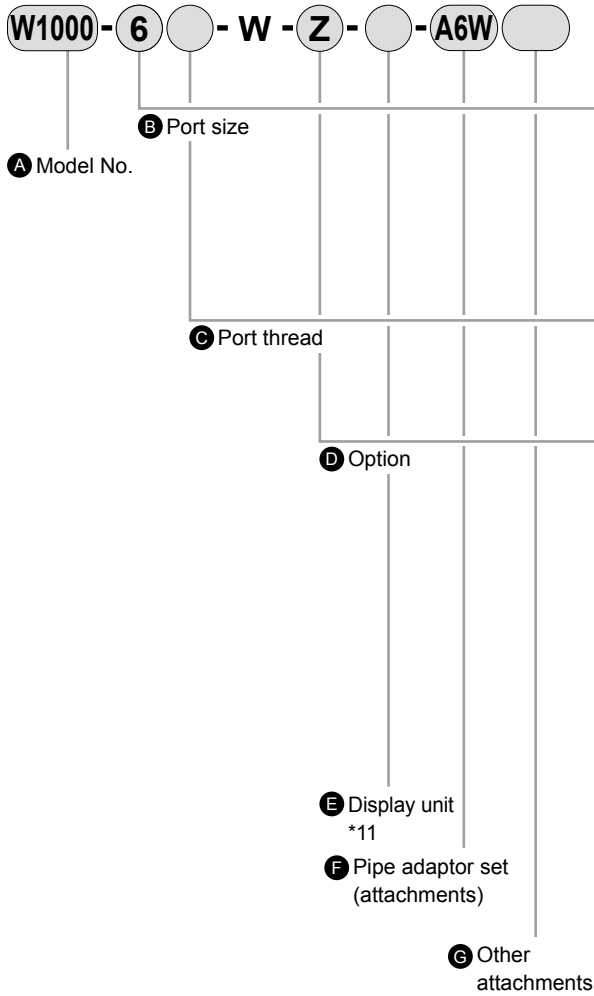
W*000 - -

P4*

Filter/Regulator Series

How to order

How to order



* Refer to page 28 for the explanation of the option.

A Model No.

W1000	W2000	W3000	W4000	W8000
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●

Code	Content	W1000	W2000	W3000	W4000	W8000
B Port size						
6	1/8	●				
8	1/4	●	●	●	●	
10	3/8		●	●	●	
15	1/2			●	●	
20	3/4					●
25	1					●

C Port thread *1						
Blank	Rc thread	●	●	●	●	●
N	NPT thread	●	●	●	●	●
G	G thread	●	●	●	●	●

D Option *2						
Drain discharge	Blank	Manual drain cock	●	●	●	●
	F	Auto-drain with manual override (NO: Exhaust when not pressurized)		●	●	●
	F1	Auto-drain with manual override (NC: No exhaust when not pressurized)	●	●	●	●
	FF	Large auto-drain with manual override (NO: Exhaust when not pressurized)				●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●
	Z	Nylon bowl	●	●	●	●
	M	Metal bowl				●
	M1	Metal bowl with manual drain cock		●	●	●
Element	Blank	5 μm	●	●	●	●
	Y	0.3 μm (submicron) *4			●	●
Pressure range	Blank	0.05 to 0.85 MPa	●	●	●	●
	L	0.05 to 0.35 MPa *5	●	●	●	●
Pressure relief	Blank	With relief mechanism	●	●	●	●
	N	Non-relief	●	●	●	●
Pressure gauge	Blank	With standard pressure gauge (G401-W)	●	●	●	●
	T	No pressure gauge (gauge port (1/4) is assembled sealed)	●	●	●	●
	T8	Pressure gauge ready (gauge port (1/4) is left open)	●	●	●	●
	T6	Digital pressure sensor PPX attachment option *6	●	●	●	●
	RN	Pressure switch with display PPR mounted (NPN output 1 point)	●		●	●
Flow direction	Blank	Standard flow (left → right)	●	●	●	●
	X1	Reverse flow (right → left)	●	●	●	●

E Display unit *11						
Blank	MPa display, Rc thread	●	●	●	●	●
J1	MPa display, NPT, G thread	●	●	●	●	●

F Pipe adaptor set (attachments) Page 270 *7, *8						
Blank	Not attached	●	●	●	●	●
A6*W	1/8 pipe adaptor set	●				
A8*W	1/4 pipe adaptor set	●	●	●	●	
A10*W	3/8 pipe adaptor set	●	●	●	●	
A15*W	1/2 pipe adaptor set		●	●	●	
A20*W	3/4 pipe adaptor set					●
A25*W	1 pipe adaptor set					●
A32*W	1 1/4 pipe adaptor set					●

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

G Other attachments Page 267, 289 *9						
Blank	Not attached	●	●	●	●	●
BW	C type bracket	●	●	●	●	●
B3W	L type bracket *10	●	●	●	●	●
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)	●	●	●	●	●
G52P	G52D-8-P10(L:G52D-8-P10)	●	●	●	●	●
R2*6	Digital pressure sensor: PPX-R10N-6M	●	●	●	●	●

⚠ Precautions for model No. selection

- *1: G threads and NPT threads are available for IN, OUT, gauge port and drain outlet (metal bowl with auto-drain).
- *2: Select options for the drainage, bowl material, element, and regulator. When selecting options for several items, list options in order from the top.
- *3: Refer to page 280 for the auto-drain usage conditions.
- *4: Refer to page 98 for max. processing flow rate when option "Y" is selected.
- *5: The pressure gauge's indication range is 0 to 0.4 MPa for the option "L".
- *6: When the option "T6" is selected, only "Blank" or "R2" can be selected for **G** Other attachments. The digital pressure sensor PPX mounting port (Rc1/8) is left open.
- *7: The pipe adaptor set and C type bracket cannot be used together.
- *8: The joiner set is enclosed with the pipe adaptor set.
- *9: If NPT is selected for **C** Port thread, an NPT pressure gauge is supplied. If Rc or G thread is selected, an R thread pressure gauge is supplied.
- *10: For details on mounting the L type bracket, refer to (2. Regulator) of "⚠ Cautions and Installation & Adjustment" (page 283).
- *11: Display unit options when selecting NPT threads: If Blank is selected, the pressure unit is psi and the temperature display unit is °F. When G thread and Blank display unit option are selected, the pressure unit will be bar and the temperature display unit will be °C. When NPT/G thread and "J1" display unit option are selected, the pressure unit will be MPa and the temperature display unit will be °C.

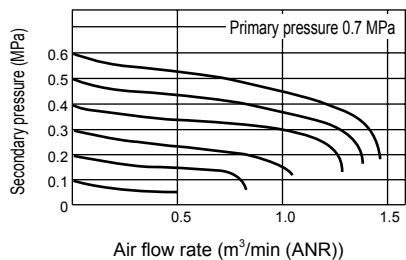
F.R.L
F (Filtr)
R (Reg)
L (Lub)
PresSW
Shutoff
SlowStart
FimResistFR
Oil-ProhR
MedPresFR
No Cu/ PTFE FRL
Outdrs FR
F.R.L (Related)
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
SpdContr
Silncr
CheckV/ other
Jnt/tube
AirUnt
PrecsCompn
Mech/ ElecPresSw
ContactSW
AirSens
PresSW Cool
AirFloSens/ Contr
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

Filter/Regulator Series

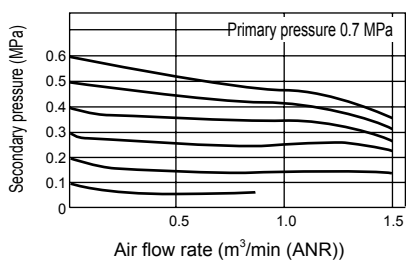
F.R.L Flow characteristics

- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FimResistFR
- Oil-ProHR
- MedPresFR
- No Cu/PTFE FRL
- Outdrs FR
- F.R.L (Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- SpdContr
- Silncr
- CheckV/other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/ElecPresSw
- ContactSW
- AirSens
- PresSW Cool
- AirFloSens/Contr
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

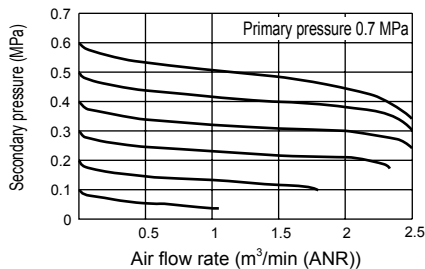
● W1000-6-W



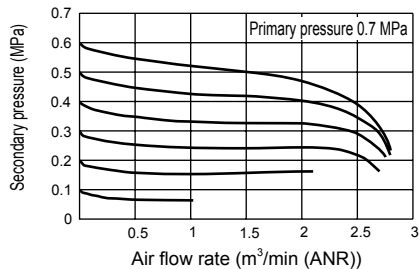
● W1000-8-W



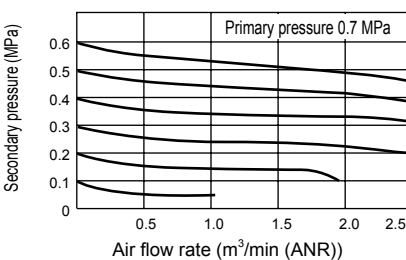
● W2000-8-W



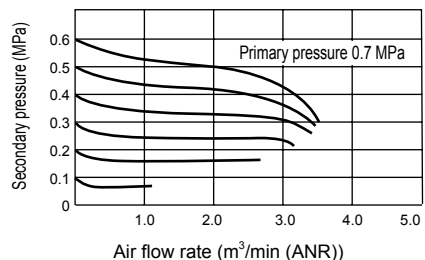
● W2000-10-W



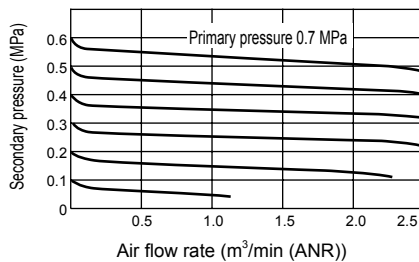
● W3000-8-W



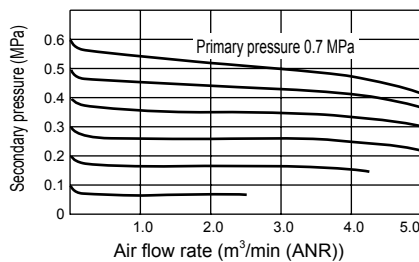
● W3000-10-W/W3000-15-W



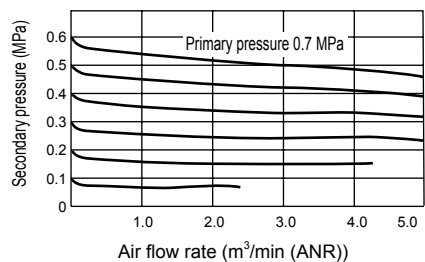
● W4000-8-W



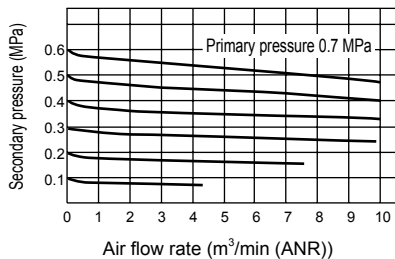
● W4000-10-W



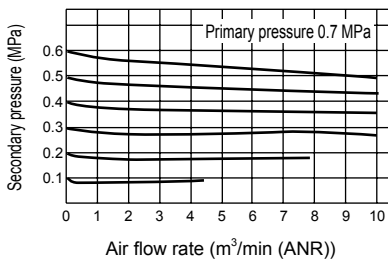
● W4000-15-W



● W8000-20-W

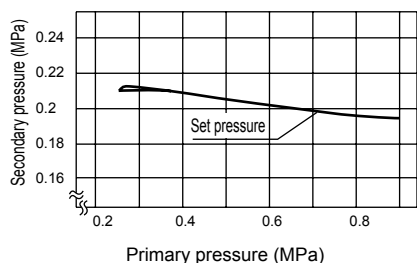


● W8000-25-W

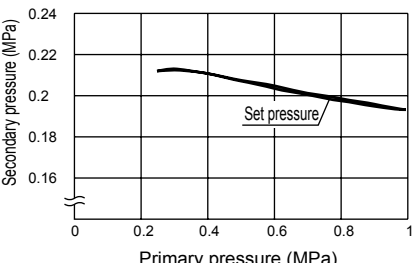


Pressure characteristics

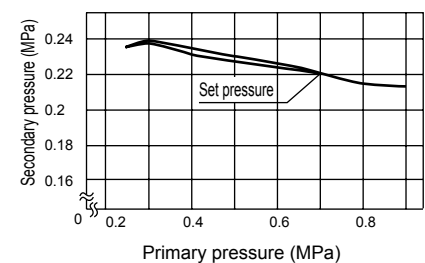
● W1000-W



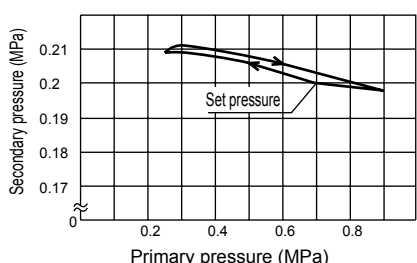
● W2000-W



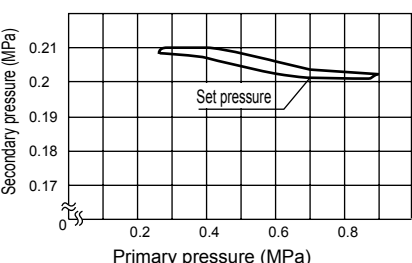
● W3000-W



● W4000-W



● W8000-W

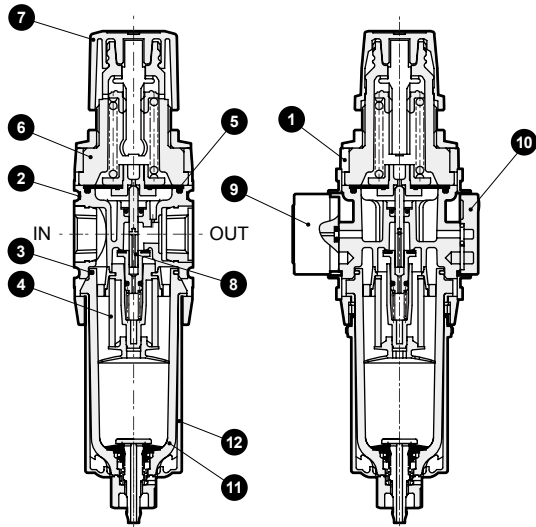


Filter/Regulator Series

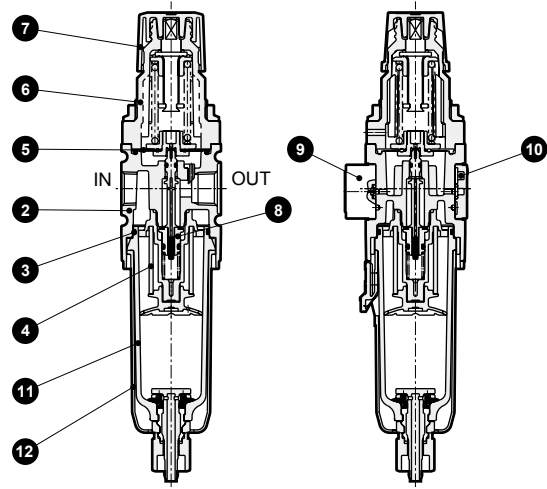
Internal structure and parts list

Internal structure and parts list

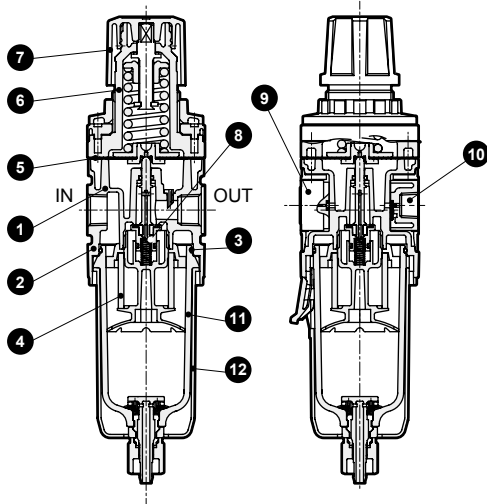
● W1000-W



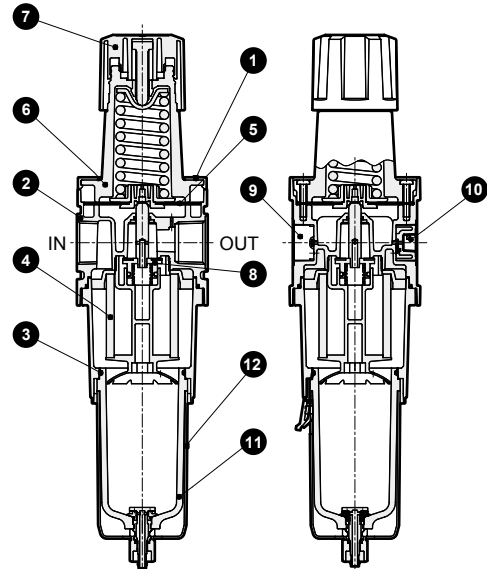
● W2000-W



● 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 *2	Special nitrile rubber				
4	Element *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	Copper alloy, hydrogenated nitrile rubber (polyacetal resin: W2000-W, W3000-W and W4000-W only)				
9	Pressure gauge assembly	PBT resin, polyacetal resin, polycarbonate resin, nitrile rubber, copper alloy, steel				
10	Gauge 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			

*1: The W1000-W has an assembled element.

*2: The O-ring of the W1000-W has a special shape.

F.R.L

F (Filtr)

R (Reg)

L (Lub)

PresSW

Shutoff

SlowStart

FmResistFR

Oil-ProhR

MedPresFR

No Cu/
PTFE FRL

Outdrs FR

F.R.L
(Related)

CompFRL

LgFRL

PrecsR

VacF/R

Clean FR

ElecPneuR

AirBoost

SpdContr

Silncr

CheckV/
other

Jnt/tube

AirUnt

PresCompn

Mech/
ElecPresSw

ContactSW

AirSens

PresSW
Cool

AirFloSens/
Contr

WaterRISens

TotAirSys
(Total Air)

TotAirSys
(Gamma)

RefrDry

DesicDry

HiPolymDry

MainFiltr

Dischrg
etc

Ending

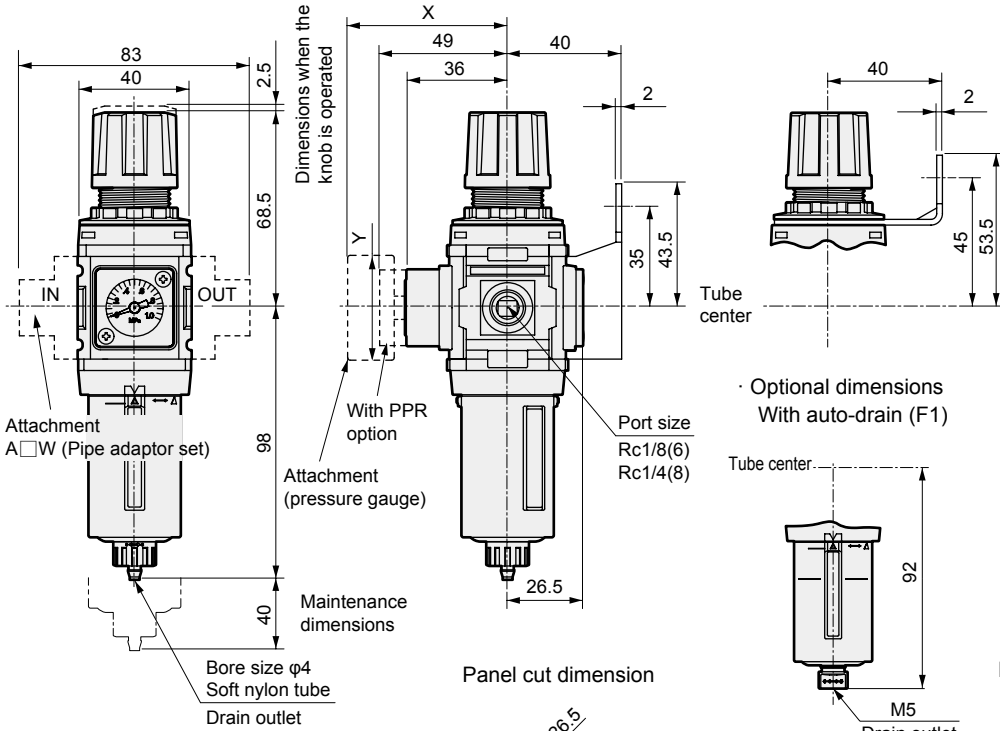
Filter/Regulator Series



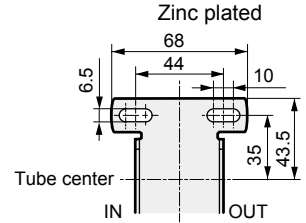
Dimensions

- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FimResistFR
- Oil-ProhR
- MedPresFR
- No Cu/ PTFE FRL
- Outdrs FR
- F.R.L (Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneur
- AirBoost
- SpdContr
- Silncr
- CheckV/ other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/ ElecPresSw
- ContactSW
- AirSens
- PresSW Cool
- AirFloSens/ Contr
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

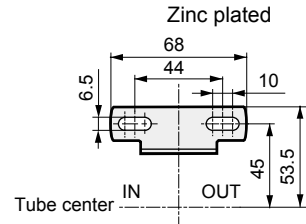
● W1000-W



- Attachment
- C type bracket (-BW)
- Part model No.: B120
- Material: Steel



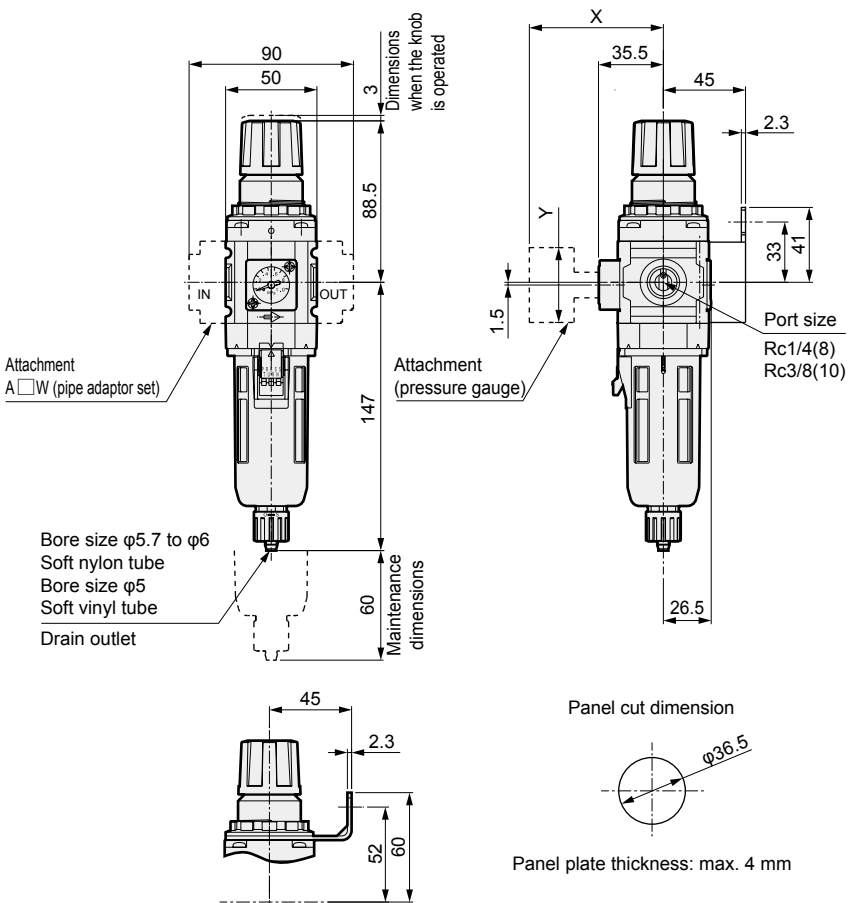
- L type bracket (-B3W)
- Part model No.: B130
- Material: Steel



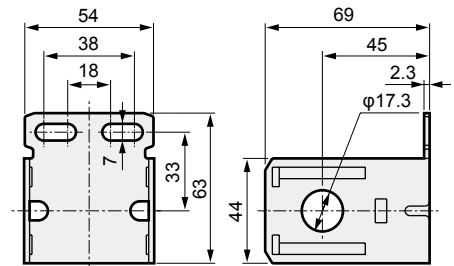
Pressure gauge attached optional dimensions table

Pressure gauge	X	Y
G45P	(74)	$\phi 39$
G49P	(73.5)	$\phi 43.5$
G59P	(76)	$\phi 52$
G40P	(75.5)	$\phi 42.5$
G52P	(86)	$\phi 52.5$
R2	(74)	$\square 30$

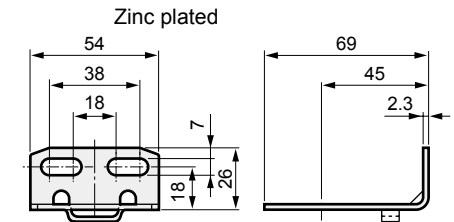
● W2000-W



- Attachment
- C type bracket (-BW)
- Part model No.: B220
- Material: Steel



- L type bracket (-B3W)
- Part model No.: B230
- Material: Steel

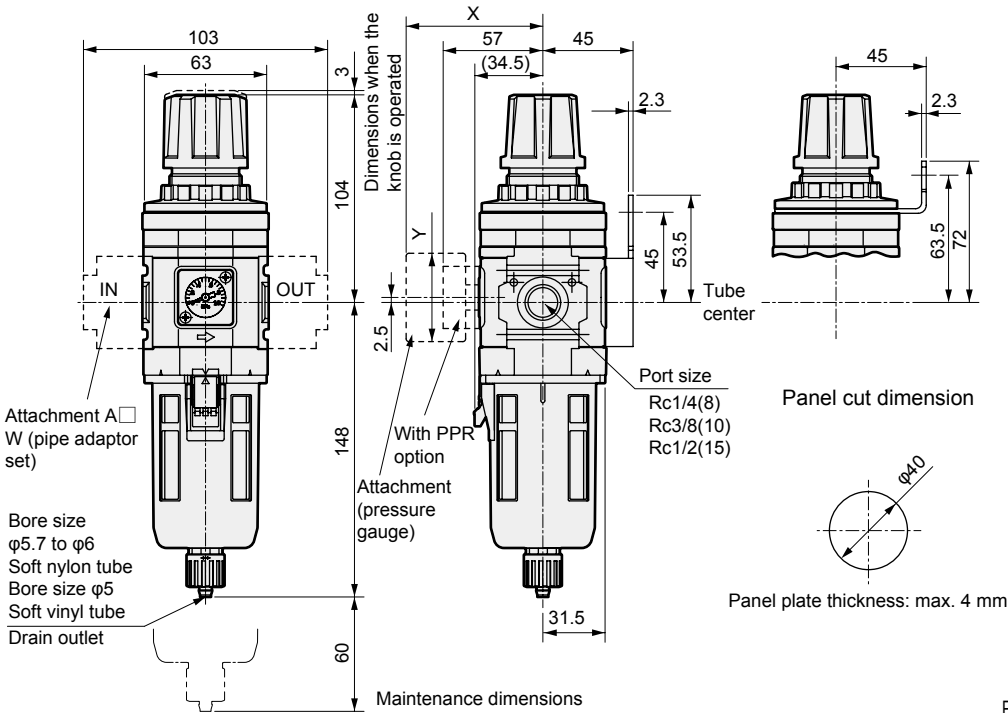


Pressure gauge attached optional dimensions table

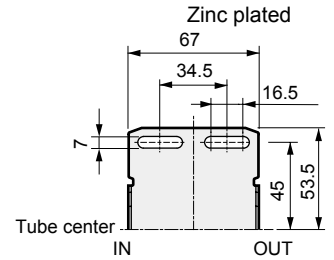
Pressure gauge	X	Y
G45P	(73.5)	$\phi 39$
G49P	(73)	$\phi 43.5$
G40P	(75)	$\phi 42.5$
G52P	(85.5)	$\phi 52.5$
R2	(73)	$\square 30$

Dimensions

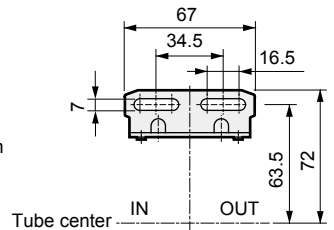
● W3000-W



- Attachment C type bracket (-BW)
- Part model No.: B320
- Material: Steel
- Zinc plated



- L type bracket (-B3W)
- Part model No.: B330
- Material: Steel
- Zinc plated

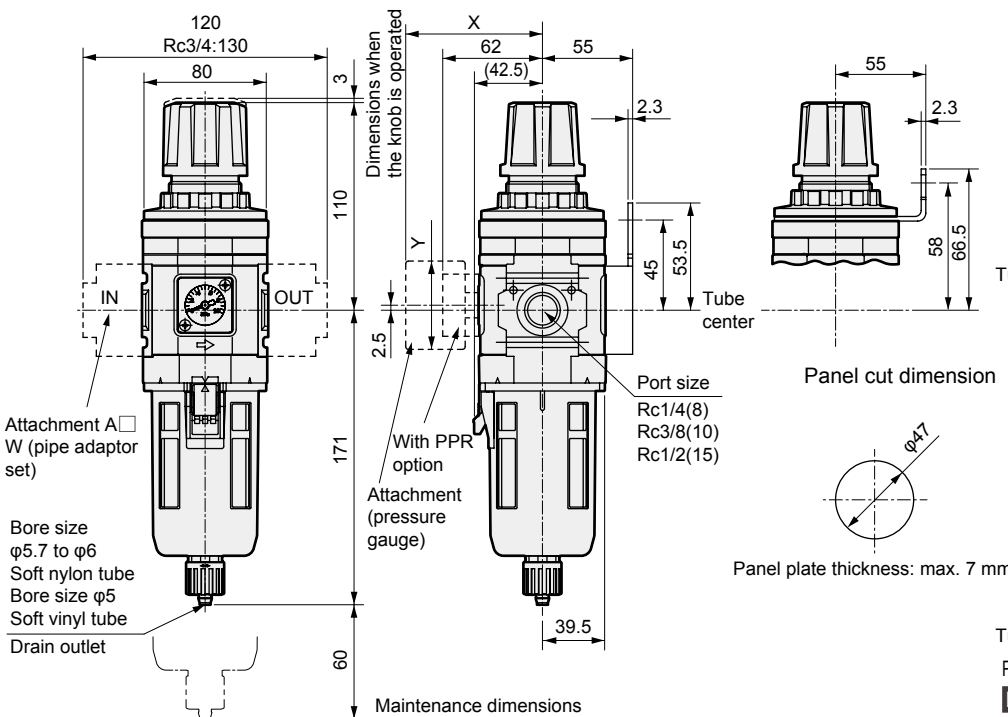


Pressure gauge attached optional dimensions table

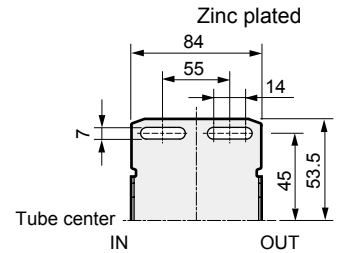
Pressure gauge	X	Y
G45P	(70)	$\phi 39$
G49P	(69.5)	$\phi 43.5$
G59P	(72)	$\phi 52$
G40P	(71.5)	$\phi 42.5$
G52P	(82)	$\phi 52.5$
R2	(69.5)	$\square 30$

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

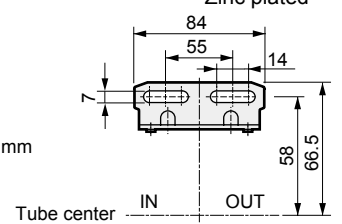
● W4000-W



- Attachment C type bracket (-BW)
- Part model No.: B420
- Material: Steel
- Zinc plated



- L type bracket (-B3W)
- Part model No.: B430
- Material: Steel
- Zinc plated



Pressure gauge attached optional dimensions table

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

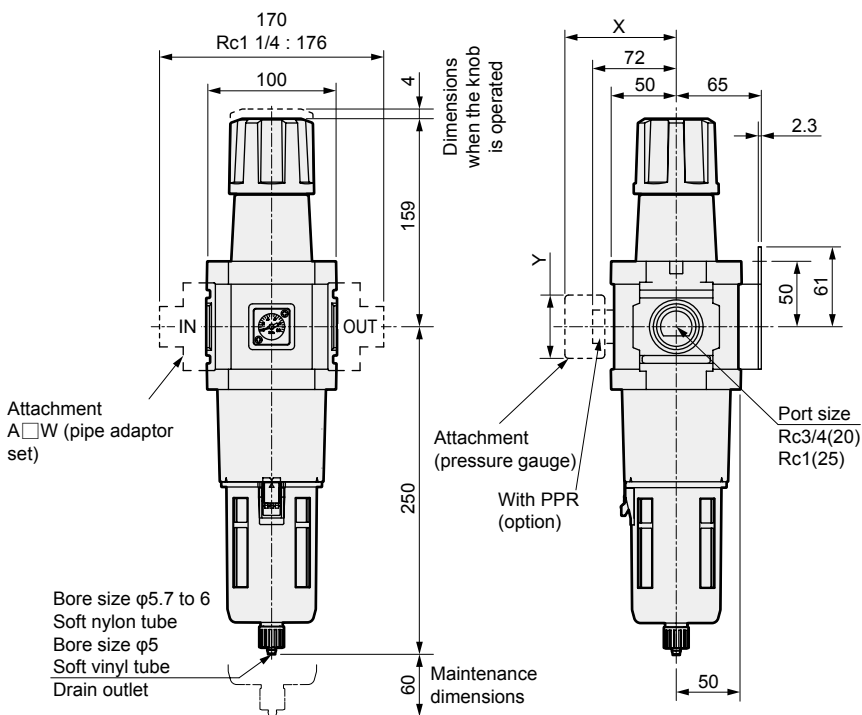
● For the plastic bowl, the dimensions of the manual cock and the auto-drain are the same.

Filter/Regulator Series

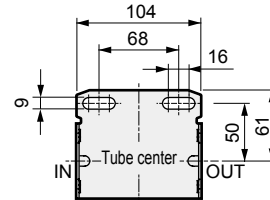


Dimensions

● W8000-W



- Attachment
- C type bracket (-BW)
- Part model No.: B820
- Material: Steel
- Zinc plated



Pressure gauge attached optional dimensions table

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

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

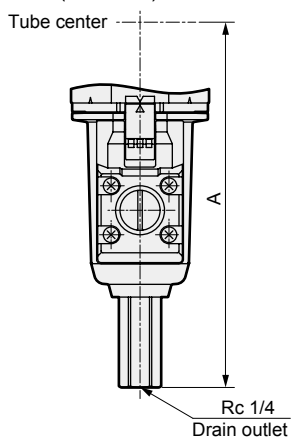
Optional dimensions



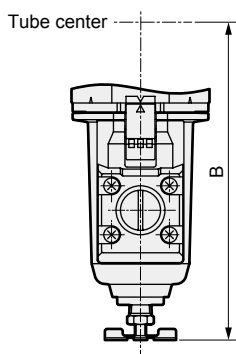
● Metal bowl (option)

[W2000-W, 3000-W, 4000-W, 8000-W]

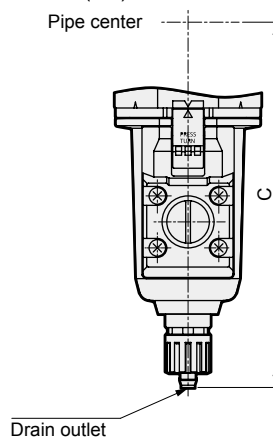
Manual metal cock (FM, F1M)



Manual cock (M)



Manual resin cock (M1)



- Material of the metal bowl is aluminum die-casting.

Dimensions table

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

F.R.L

F (Filtr)

R (Reg)

L (Lub)

PresSW

Shutoff

SlowStart

FimResistFR

Oil-ProhR

MedPresFR

No Cu/
PTFE FRL

Outdrs FR

F.R.L
(Related)

CompFRL

LgFRL

PrecsR

VacF/R

Clean FR

ElecPneuR

AirBoost

SpdContr

Silncr

CheckV/
other

Jnt/tube

AirUnt

PrecsCompn

Mech/
ElecPresSw

ContactSW

AirSens

PresSW
Cool

AirFloSens/
Contr

WaterRtSens

TotAirSys
(Total Air)

TotAirSys
(Gamma)

RefrDry

DesicDry

HiPolymDry

MainFiltr

Dischrg
etc

Ending

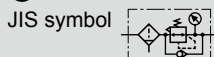


Reverse filter and regulator Standard White Series

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

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

● Port size: 1/8 to 1



Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Descriptions	W1100-W	W2100-W	W3100-W	W4100-W	W8100-W
Appearance					
Working fluid	Compressed air				
Max. working pressure MPa	1.0 (≈150 psi, 10 bar) *1, 2, 3				
Proof pressure MPa	1.5 (≈220 psi, 15 bar) *3				
Ambient / fluid temperatures °C	5 (41°F) to 60 (140°F) *4				
Filtration rating μm	5		5 or 0.3		
Set pressure (*2) MPa	0.05 to 0.85 *1	0.05 (≈7.3 psi, 0.5 bar) to 0.85 (≈120 psi, 8.5 bar)			
Pressure relief	With relief mechanism				
Drain capacity cm ³	12	25	45	80	80 (*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	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Weight kg	0.175	0.40	0.6	0.9	2.0
Standard accessories	Pressure gauge and bowl guard				

*1: In the case of "F" with auto-drain, the min. working pressure of auto-drain is 0.1 MPa. Air is purged with initial drainage until pressure reaches 0.1 MPa.

*2: In the case of "F1" with auto-drain, the min. working pressure of auto-drain is 0.15 MPa.

*3: When using W1100 Series "F1" with auto-drain, the min. working pressure is 0.2 MPa, the max. working pressure is 0.7 MPa and the proof pressure is 1.05 MPa. For the max. working flow rate, refer to the max. working flow rate table of F1000-F1 with auto-drain (page 96). Set the working flow rate to less than or equal to the max. working flow rate.

*4: The ambient / fluid temperatures for "RN" or "RP" (pressure switch with display PPR is mounted) and "R2" (digital pressure sensor PPX is attached) is 5 to 50°C.

*5: Up to 170m³ is stored with the manual drain cock only.

*6: Check that the primary pressure is at least 0.05 MPa more than the secondary pressure.

*7: Refer to the set pressure range for the back pressure given on page 90 when selecting the model.

*8: W2100-W Series with "F1" (with auto-drain) must be used at equal to or less than the max. working flow rate. (Refer to the F2000-W section on page 96 for max. flow rate.)

Option weight

* Add to the weight of the standard accessories.

Unit: kg

Code	Drain discharge				Bowl material		Pressure gauge		Pipe adaptor set			
	F	F1	FF	FF1	M	M1	T*	RN/RP	A6*W	A8*W	A10*W	A15*W
W1100		0.007					0	0.04	0.09	0.09	0.09	
W2100		0.02				0.1	0			0.16	0.16	0.16
W3100	0.02	0.02			0.1	0.1	0	0.04		0.16	0.16	0.16
W4100	0.02	0.02			0.1	0.1	0	0.04		0.16	0.16	0.16
W8100	0.02	0.02	0.02	0.02	0.1	0.1	0	0.04				

Code	Pipe adaptor set			Attachment							
	A20*W	A25*W	A32*W	BW	B3W	G45P	G49P	G59P	G40P	G52P	R2
W1100				0.1	0.04	0.074	0.086	0.115	0.085	0.15	0.04
W2100				0.15	0.06	0.074	0.086		0.085	0.15	0.04
W3100				0.17	0.07	0.074	0.086	0.115	0.085	0.15	0.04
W4100	0.16			0.21	0.11	0.074	0.086	0.115	0.085	0.15	0.04
W8100	0.53	0.53	0.53	0.36		0.074	0.086	0.115	0.085	0.15	0.04

Ozone-proof specs

(Ending Page 11)

Clean-room specs

(Catalog No. CB-033SA)

Specs for rechargeable battery

(Catalog No. CC-1226A)

W*100 - ... - W - ... -

P11

● Anti-dust generation structure for use in cleanrooms

● Structure compatible with rechargeable battery manufacturing process

W*100 - ... - ... - ... -

P7*

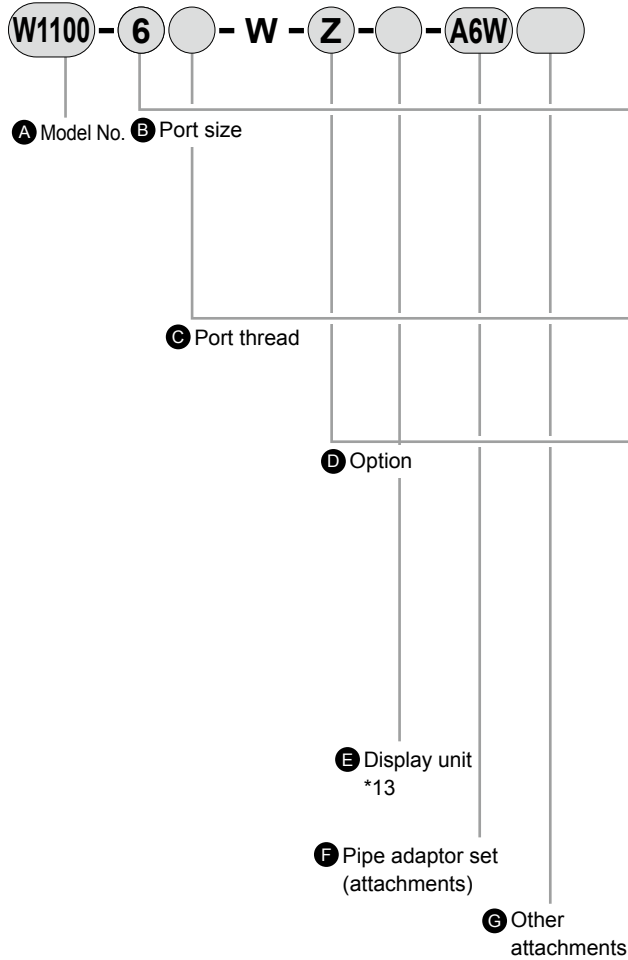
W*100 - -

P4*

Filter/Regulator series

How to order

How to order



* Refer to page 28 for the explanation of the option.

		A Model No.					F.R.L
		W1100	W2100	W3100	W4100	W8100	F (Filtr)
							R (Reg)
							L (Lub)
							PresSW
							Shutoff
							SlowStart
							FimResistFR
							Oil-ProhR
							MedPresFR
							No Cu/ PTFE FRL
							Outdrs FR
							F.R.L (Related)
							CompFRL
							LgFRL
							PrecsR
							VacF/R
							Clean FR
							ElecPneuR
							AirBoost
							SpdContr
							Silncr
							CheckV/ other
							Jnt/tube
							AirUnt
							PrecsCompn
							Mech/ ElecPresSw
							ContactSW
							AirSens
							PresSW Cool
							AirFloSens/ Contr
							WaterRISens
							TotAirSys (Total Air)
							TotAirSys (Gamma)
							RefrDry
							DesicDry
							HiPolymDry
							MainFiltr
							Dischrg etc
							Ending
Code	Content						
B Port size							
6	1/8	●					
8	1/4	●	●	●	●		
10	3/8		●	●	●		
15	1/2			●	●		
20	3/4					●	
25	1					●	
C Port thread							
Blank	Rc thread	●	●	●	●	●	*1
N	NPT thread	●	●	●	●	●	
G	G thread	●	●	●	●	●	
D Option							
Drain discharge *4	Blank	Manual drain cock	●	●	●	●	●
	F	Auto-drain, man OVRD (NO: no press→Exhaust)			●	●	●
	F1	Auto-drain, man OVRD (NC: no press→no exhaust)	●	●	●	●	●
	FF	Large auto-drain, man OVRD (NO: no press→Exhaust)					●
Bowl material	Blank	Polycarbonate bowl	●	●	●	●	●
	Z	Nylon bowl	●	●	●	●	●
	M	Metal bowl					●
Element	Blank	5 μm	●	●	●	●	●
	Y	0.3 μm (submicron) *5			●	●	●
Pressure range	Blank	0.05 to 0.85 MPa	●	●	●	●	●
	L	0.05 to 0.35 MPa *6	●	●	●	●	●
Pressure relief	Blank	With relief mechanism	●	●	●	●	●
	N	Non-relief	●	●	●	●	●
Pressure gauge	Blank	With standard pressure gauge (G401-W)	●	●	●	●	●
	T	No pressure gauge (gauge port (1/4) is assembled sealed)	●	●	●	●	●
	T8	Pressure gauge ready (gauge port (1/4) is left open)	●	●	●	●	●
	T6	Digital pressure sensor PPX attachment option *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 Pipe adaptor set (attachments) *8, *9 Page 270							
Blank	Not attached	●	●	●	●	●	
A6*W	1/8 pipe adaptor set	●					
A8*W	1/4 pipe adaptor set	●	●	●	●		
A10*W	3/8 pipe adaptor set	●	●	●	●		
A15*W	1/2 pipe adaptor set		●	●	●	●	
A20*W	3/4 pipe adaptor set					●	
A25*W	1 pipe adaptor set					●	
A32*W	1 1/4 pipe adaptor set					●	
* Adaptor thread							
Blank	Rc thread	●	●	●	●	●	
N	NPT thread	●	●	●	●	●	
G	G thread	●	●	●	●	●	
G Other attachments *10 Pages 270, 289							
Blank	Not attached	●	●	●	●	●	
BW	C type bracket	●	●	●	●	●	
B3W	L type bracket *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)	●	●	●	●	●	
G52P	G52D-8-P10(L:G52D-8-P10)	●	●	●	●	●	
R2 *7	Digital pressure sensor: PPX-R10N-6M	●	●	●	●	●	

⚠ Precautions for model No. selection

- *1: G threads and NPT threads are available for IN, OUT, gauge port and drain outlet (metal bowl with auto-drain).
- *2: Select options for the drainage, bowl material, element, and regulator.
When selecting options for several items, list options in order from the top.
- *3: **Positions of check valve and pressure gauge cannot be changed.**
If the IN and OUT directions must be reversed, indicate "X1" at the end of the option field.
- *4: Refer to page 280 for the auto-drain usage conditions.
- *5: Refer to page 98 for max. processing flow rate when option "Y" is selected.
- *6: The pressure gauge's indication range is 0 to 0.4 MPa for the option "L".
- *7: When the option "T6" is selected, only "Blank" or "R2" can be selected for **G** Other attachments. The digital pressure sensor PPX mounting port (Rc1/8) is left open.
- *8: The pipe adaptor set and C type bracket cannot be used together.
- *9: The joiner set is enclosed with the pipe adaptor set.
- *10: If NPT is selected for **C** Port thread, an NPT pressure gauge is supplied. If Rc or G thread is selected, an R thread pressure gauge is supplied.
- *11: For details on mounting the L type bracket, refer to (2. Regulator) of "⚠ Cautions and Installation & Adjustment" (page 283).
- *12: Display unit options when selecting NPT threads: If Blank is selected, the pressure unit is psi and the temperature display unit is °F.
When G thread and Blank display unit option are selected, the pressure unit will be bar and the temperature display unit will be °C.
When NPT/G thread and "J1" display unit option are selected, the pressure unit will be MPa and the temperature display unit will be °C.

Filter/Regulator Series

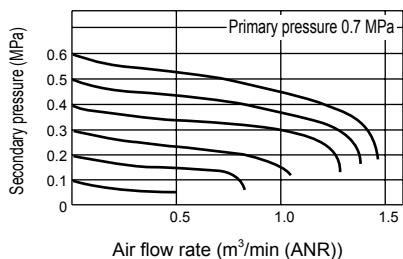


F.R.L

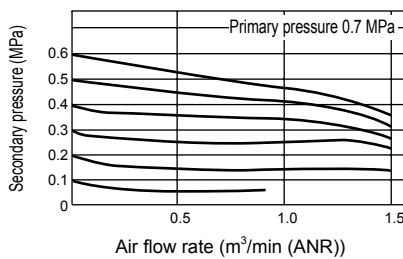
Flow characteristics

F (Filtr)

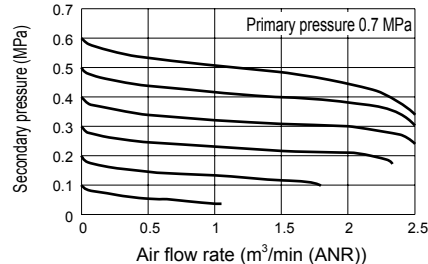
● W1100-6-W



● W1100-8-W



● W2100-8-W



R (Reg)

L (Lub)

PresSW

Shutoff

SlowStart

FilmResistFR

Oil-ProHR

MedPresFR

No Cu/PTFE FRL

Outdrs FR

F.R.L (Related)

CompFRL

LgFRL

PrecsR

VacF/R

Clean FR

ElecPneuR

AirBoost

SpdContr

Silncr

CheckV/other

Jnt/tube

AirUnt

PrecsCompn

Mech/ElecPresSw

ContactSW

AirSens

PresSW Cool

AirFloSens/Contr

WaterRtSens

TotAirSys (Total Air)

TotAirSys (Gamma)

RefrDry

DesicDry

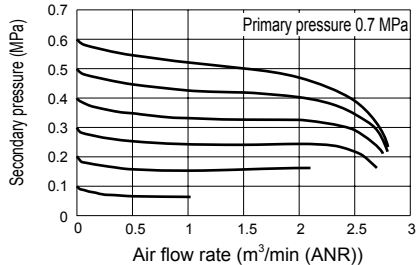
HiPolymDry

MainFiltr

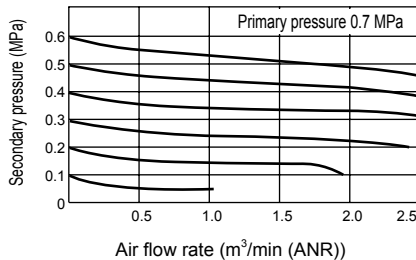
Dischrg etc

Ending

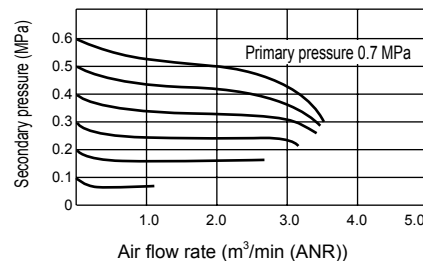
● W2100-10-W



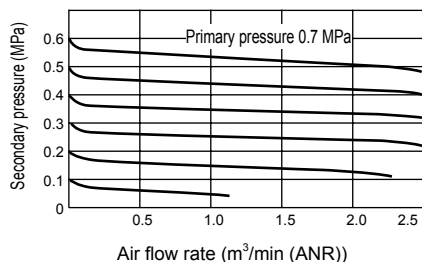
● W3100-8-W



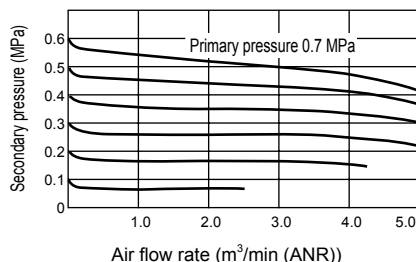
● W3100-10-W/W3100-15-W



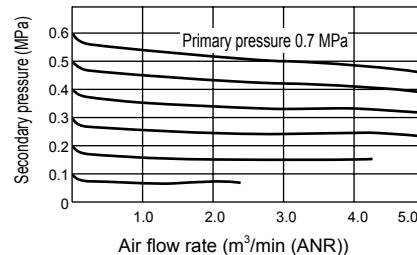
● W4100-8-W



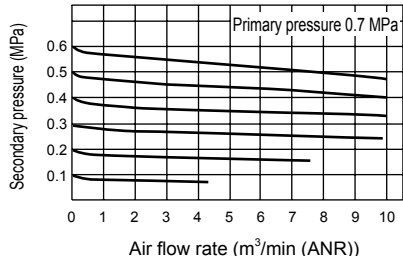
● W4100-10-W



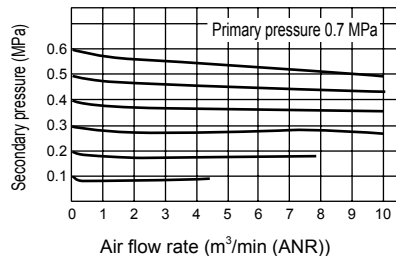
● W4100-15-W



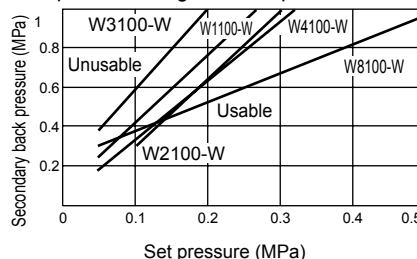
● W8100-20-W



● W8100-25-W



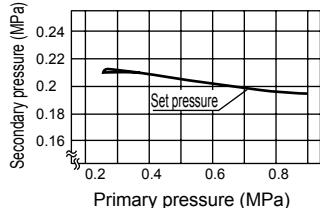
● Set pressure range to back pressure



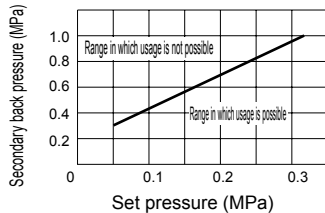
Note: The area above the graph line shows the unusable range and that below the graph line shows the usable range.
Example: If the set pressure of W4100-W is set to 0.2 MPa and the secondary back pressure is set to 0.6 MPa or more, the secondary side pressure will not be released to the primary side.

Pressure characteristics

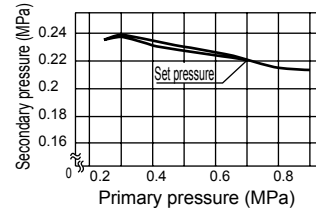
● W1100-W



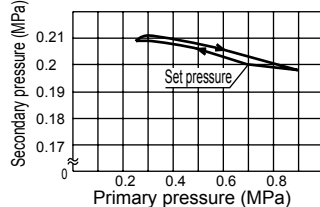
● W2100-W



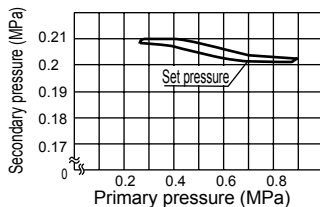
● W3100-W



● W4100-W



● W8100-W

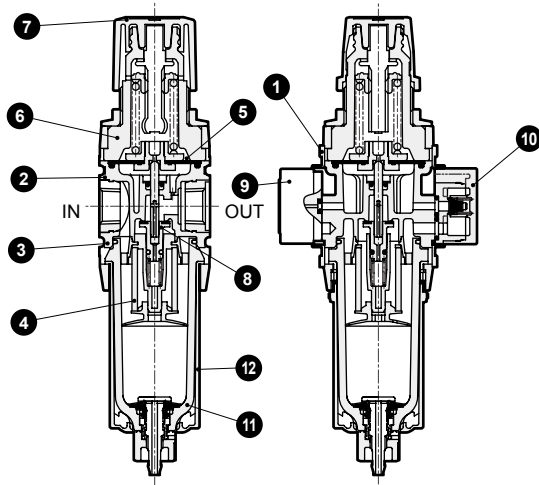


Filter/Regulator series

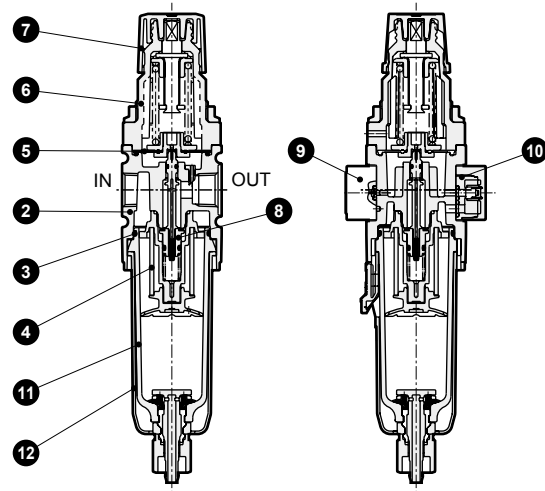
Internal structure and parts list

Internal structure and parts list

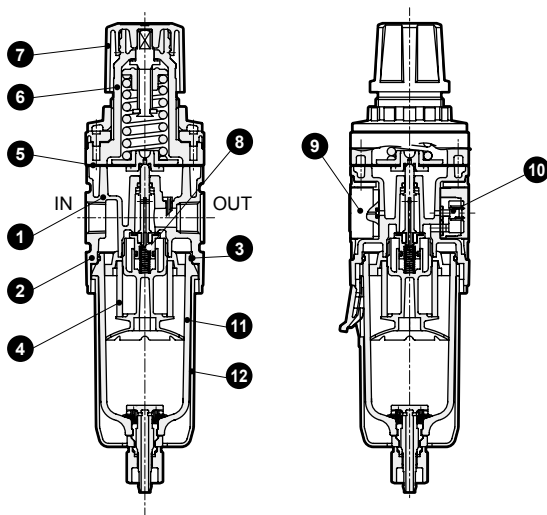
● W1100-W



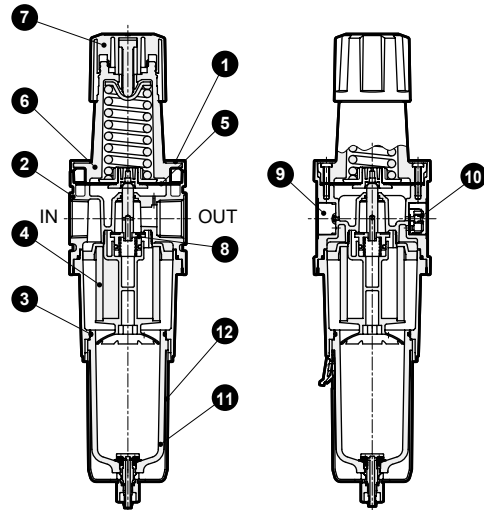
● W2100-W



● W3100-W/W4100-W



● W8100-W



No.	Part name	Material				
		W1100-W	W2100-W	W3100-W	W4100-W	W8100-W
1	Plate cover	ABS resin	-	ABS resin		
2	Body	PA resin, steel	Aluminum alloy die-casting			
3	O-ring *2	Special nitrile rubber				
4	Element *1	Polyacetal resin polypropylene	Polypropylene			
5	Diaphragm assembly	Polyacetal resin nitrile rubber	Zinc alloy die-casting, nitrile rubber			
6	Cover	Polyamide resin	PBT resin		Alum die-cast	
7	Knob	Polyacetal resin				
8	Valve assembly	CU alloy, HNBR (POM resin: W2100-W, W3100-W, W4100-W)				
9	Pressure gauge assembly	PBT resin, polyacetal resin, polycarbonate resin, nitrile rubber, copper alloy, 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			

*1: The W1100-W has an assembled element.

*2: The O-ring of the W1100-W has a special shape.

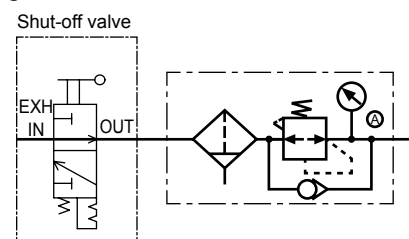
*3: Refer to page 95 for repair parts kit model No.

Functions

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: When the primary side pressure is released, back pressure A must be equal to or less than the set pressure of the regulator corresponding to the back pressure shown in the graph. (Refer to page 90 for the graph)

● Circuit diagram



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

F.R.L

F (Filtr)

R (Reg)

L (Lub)

PresSW

Shutoff

SlowStart

FimResistFR

Oil-ProhR

MedPresFR

No Cu/
PTFE FRL

Outdrs FR

F.R.L
(Related)

CompFRL

LgFRL

PrecsR

VacF/R

Clean FR

ElecPneuR

AirBoost

SpdContr

Silncr

CheckV/
other

Jnt/tube

AirUnt

PresCompn

Mech/
ElecPresSw

ContactSW

AirSens

PresSW
Cool

AirFloSens/
Contr

WaterRISens

TotAirSys
(Total Air)

TotAirSys
(Gamma)

RefrDry

DesicDry

HiPolymDry

MainFiltr

Dischrg
etc

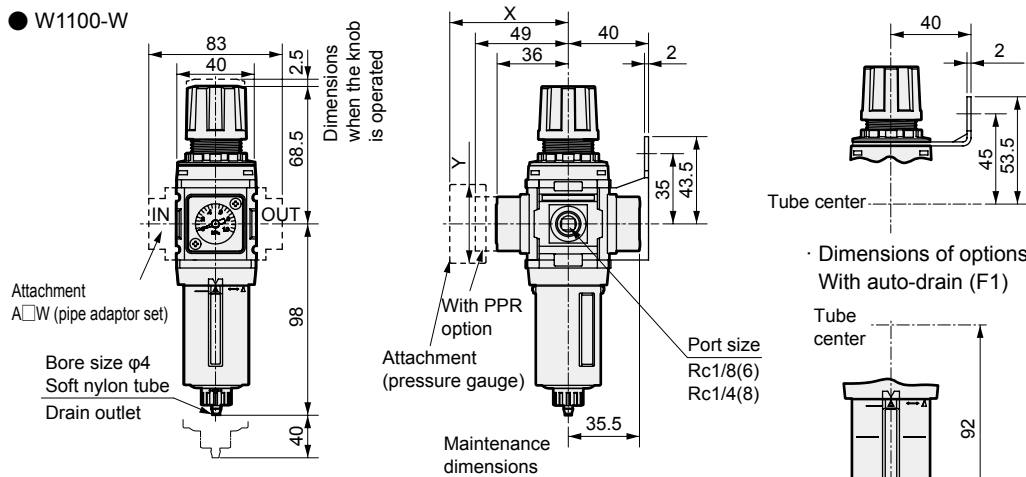
Ending

Filter/Regulator Series

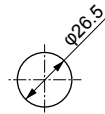


Dimensions

● W1100-W

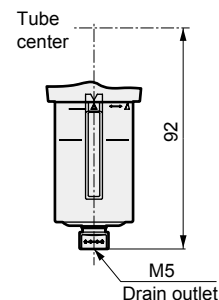


Panel cut dimension



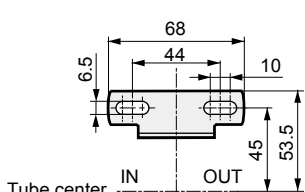
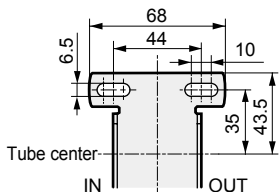
Panel plate thickness: max. 6 mm

Dimensions of options
With auto-drain (F1)



Attachment
C type bracket (-BW)
Part model No.: B120
Material: Steel
Zinc plated

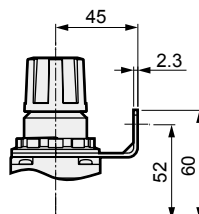
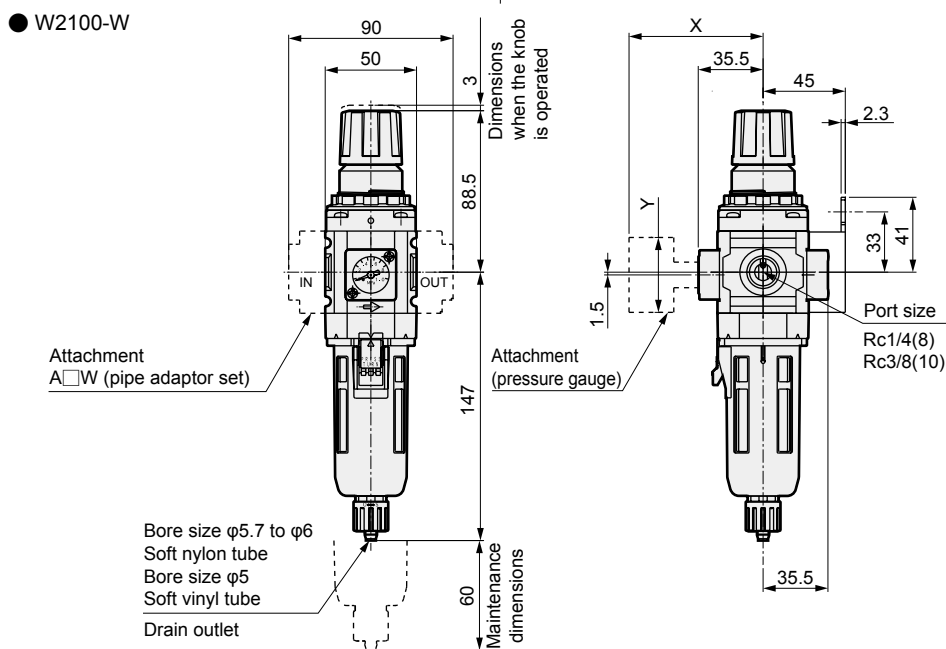
L type bracket (-B3W)
Part model No.: B130
Material: Steel
Zinc plated



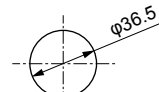
Pressure gauge attached optional dimensions table

Pressure gauge	X	Y
G45P	(74)	φ39
G49P	(73.5)	φ43.5
G59P	(76)	φ52
G40P	(75.5)	φ42.5
G52P	(86)	φ52.5
R2	(74)	□30

● W2100-W



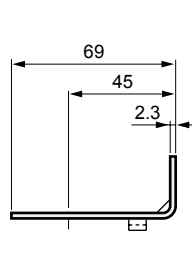
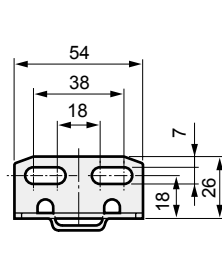
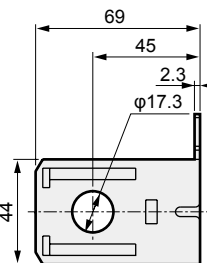
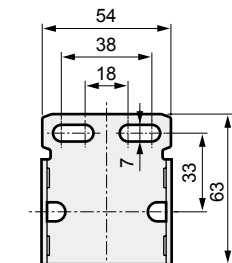
Panel cut dimension



Panel plate thickness: max. 4 mm

Attachment
C type bracket (-BW)
Part model No.: B220
Material: Steel
Zinc plated

L type bracket (-B3W)
Part model No.: B230
Material: Steel
Zinc plated



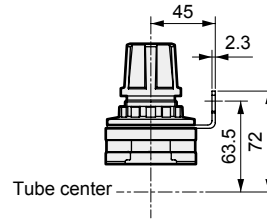
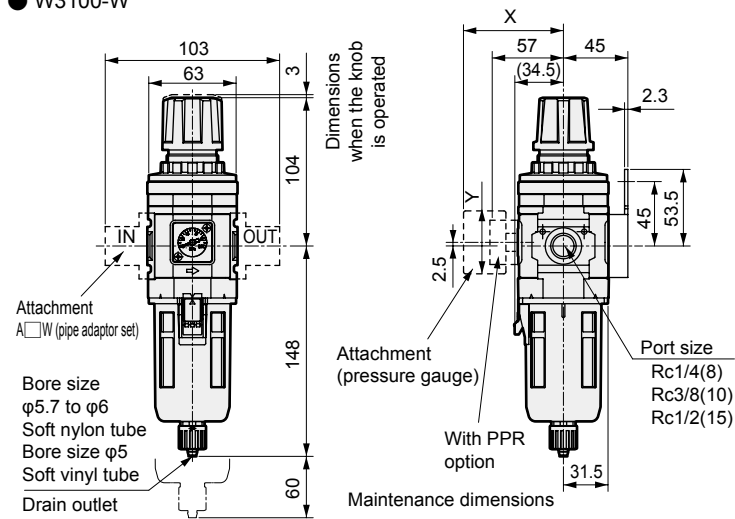
Pressure gauge attached optional dimensions table

Pressure gauge	X	Y
G45P	(73.5)	φ39
G49P	(73)	φ43.5
G40P	(75)	φ42.5
G52P	(85.5)	φ52.5
R2	(73)	□30

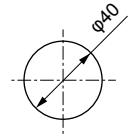
Dimensions



W3100-W



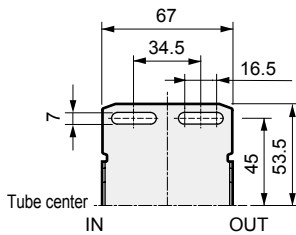
Panel cut dimension



Panel plate thickness: max. 4 mm

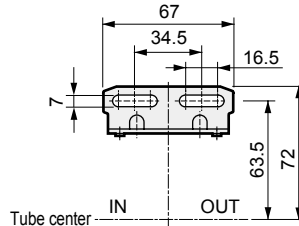
- Attachment C type bracket (-BW)
- Part model No.: B320
- Material: Steel

Zinc plated



- L type bracket (-B3W)
- Part model No.: B330
- Material: Steel

Zinc plated

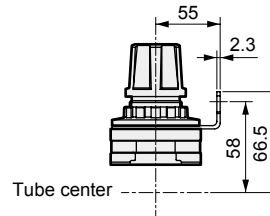
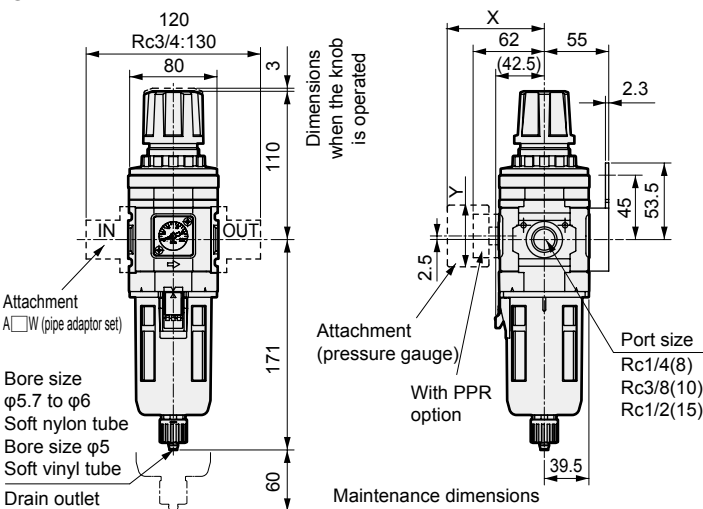


Pressure gauge attached optional dimensions table

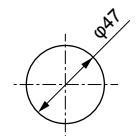
Pressure gauge	X	Y
G45P	(70)	φ39
G49P	(69.5)	φ43.5
G59P	(72)	φ52
G40P	(71.5)	φ42.5
G52P	(82)	φ52.5
R2	(69.5)	□30

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

W4100-W



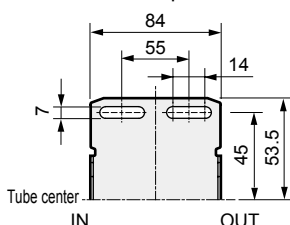
Panel cut dimension



Panel plate thickness: max. 7 mm

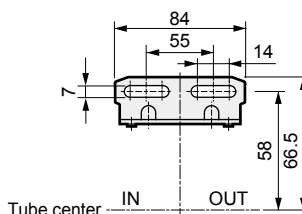
- Attachment C type bracket (-BW)
- Part model No.: B420
- Material: Steel

Zinc plated



- L type bracket (-B3W)
- Part model No.: B430
- Material: Steel

Zinc plated



Pressure gauge attached optional dimensions table

Pressure gauge	X	Y
G45P	(75)	φ39
G49P	(74.5)	φ43.5
G59P	(77)	φ52
G40P	(76.5)	φ42.5
G52P	(86)	φ52.5
R2	(75)	□30

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

Filter/Regulator Series



Dimensions

F.R.L

F (Filtr)

R (Reg)

L (Lub)

PresSW

Shutoff

SlowStart

FimResistFR

Oil-ProhR

MedPresFR

No Cu/
PTFE FRL

Outdrs FR

F.R.L
(Related)

CompFRL

LgFRL

PrecsR

VacF/R

Clean FR

ElecPneuR

AirBoost

SpdContr

Silncr

CheckV/
other

Jnt/tube

AirUnt

PrecsCompn

Mech/
ElecPresSw

ContactSW

AirSens

PresSW
Cool

AirFloSens/
Contr

WaterRtSens

TotAirSys
(Total Air)

TotAirSys
(Gamma)

RefrDry

DesicDry

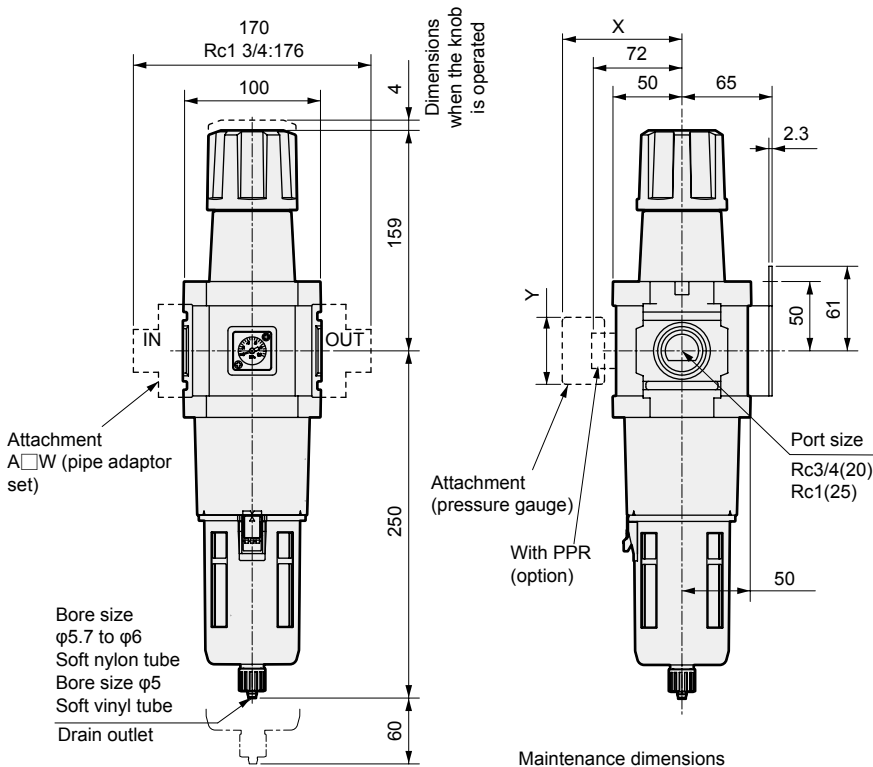
HiPolymDry

MainFiltr

Dischrg
etc

Ending

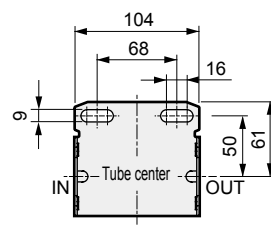
● W8100-W



Bore size
φ5.7 to φ6
Soft nylon tube
Bore size φ5
Soft vinyl tube
Drain outlet

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

- Attachment
C type bracket (-BW)
Part model No.: B820
- Material: Steel
Zinc plated



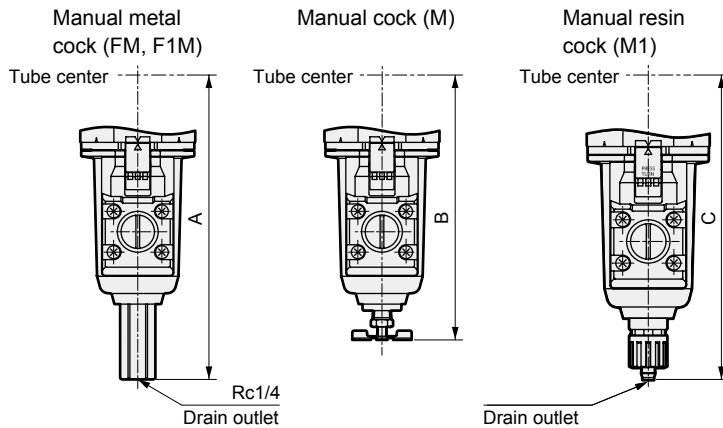
Pressure gauge attached optional dimensions table

Pressure gauge	X	Y
G45P	(85)	φ39
G49P	(84.5)	φ43.5
G59P	(87)	φ52
G40P	(86.5)	φ42.5
G52P	(98)	φ52.5
R2	(85)	□30

Optional dimensions



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

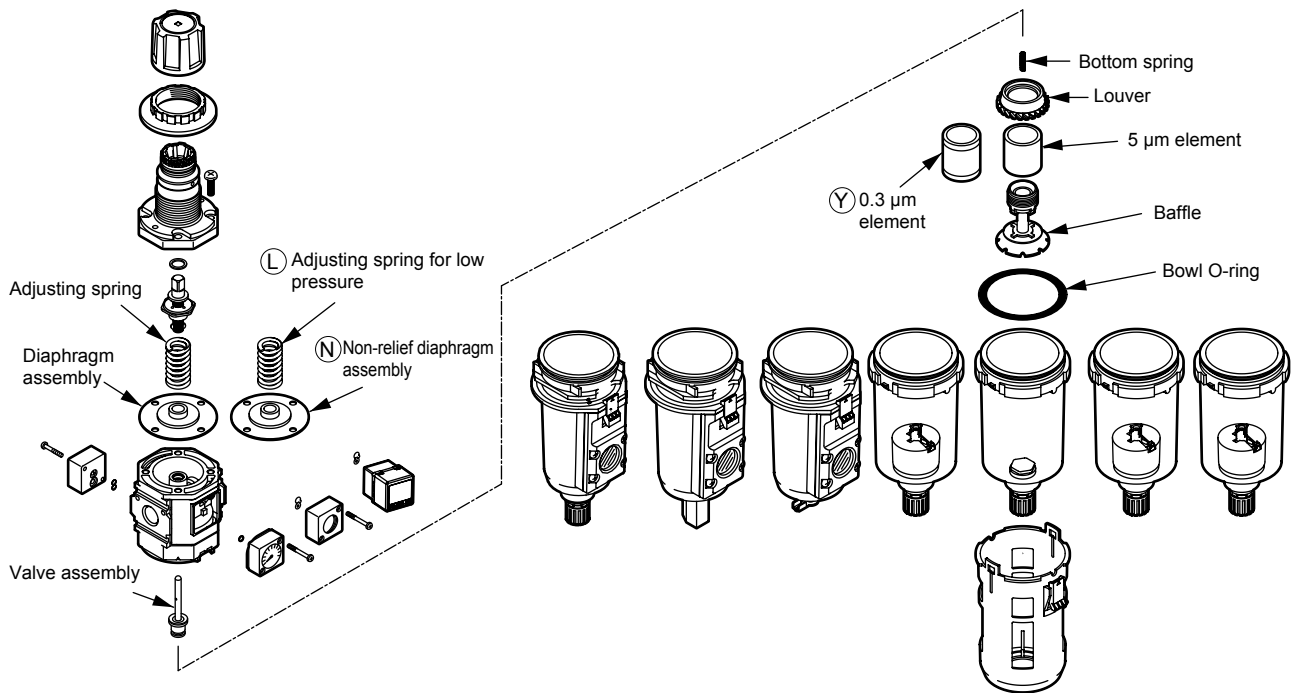


- Material of the metal bowl is aluminum die-casting.

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

Optional parts diagram



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

Repair parts kits model No.	Relief diaphragm	Non-relief diaphragm	Relief diaphragm	Non-relief diaphragm
Model	5 μm element (blank)	5 μm 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 repair parts.

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 139) for details on the adjusting spring, diaphragm, and gauge plug assembly. Refer to the air filter options and parts table (pages 104 and 105) for details on the element, bowl assembly, and bowl guard.

F.R.L
F (Filtr)
R (Reg)
L (Lub)
PresSW
Shutoff
SlowStart
FimResistFR
Oil-ProhR
MedPresFR
No Cu/PTFE FRL
Outdrs FR
F.R.L (Related)
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
SpdContr
Silncr
CheckV/other
Jnt/tube
AirUnt
PrecsCompn
Mech/ElecPresSw
ContactSW
AirSens
PresSW Cool
AirFloSens/Contr
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending