



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

Item	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 106). 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 106 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 10) **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

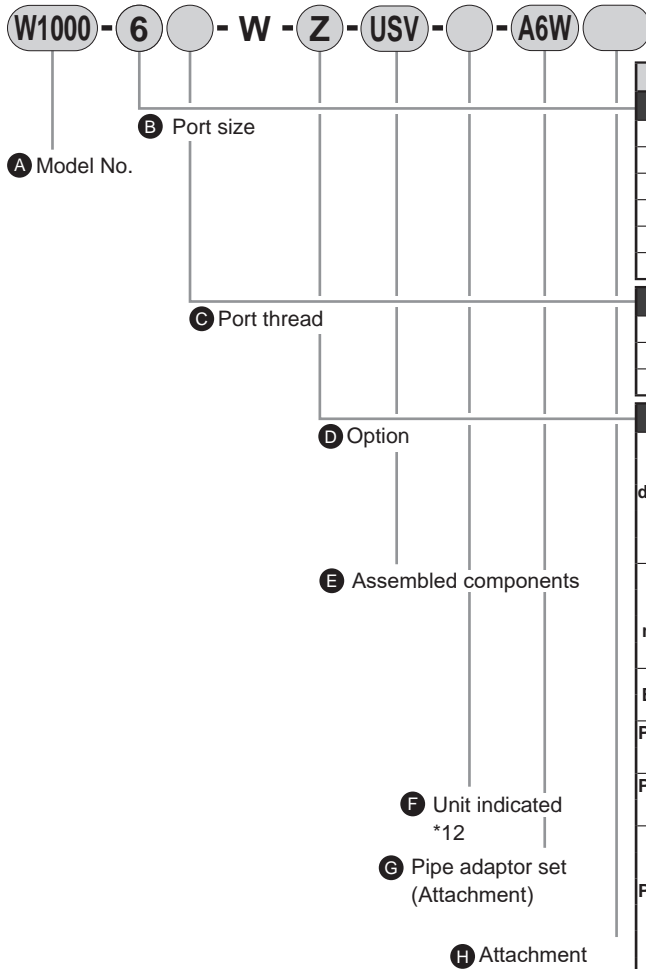
W*000 - -

P7*

W*000 - -

P4*

How to order



* Refer to page 30 for the explanation of the option.

⚠ Precautions for model No. selection

- *1: G threads and NPT threads are available for IN, OUT, gauge port and drain discharge port (metal bowl with auto-drain).
- *2: Select options for drainage, bowl material, element, and regulator sections. When selecting options for several items, list options in order from the top.
- *3: Refer to page 354 for the auto-drain usage conditions.
- *4: Refer to page 108 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: Mounting position for assembled components

Code	Installation position for attachments	Compatibility
S	W+(S)	W1000-W to W4000-W
V	W+(V)	W1000-W to W4000-W
SV	W+(S)+(V)	W1000-W to W4000-W

- *8: The pipe adaptor set and C-bracket cannot be used together.
- *9: The joiner set is enclosed with the pipe adaptor set.
- *10: The pressure gauge and digital pressure sensor (included) can be selected only when **C** Port thread is Rc thread.
- *11: For details on mounting the L-bracket, refer to (2. Regulator) of "⚠ Cautions and Installation & Adjustment" (page 357).
- *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.
- *13: Assembled components can be selected only with port size and drain discharge options. When selecting other options, they are handled as customized combinations.

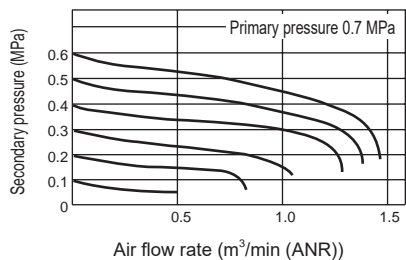
		A Model No.					F.R.L.
		W1000	W2000	W3000	W4000	W8000	F.R.
Code		Description					F (Filtr)
B Port size							R (Reg)
6	1/8	●					L (Lub)
8	1/4	●	●	●	●		Drain Separ
10	3/8		●	●	●		Mech Press SW
15	1/2			●	●		Res press exh valve
20	3/4					●	SlowStart
25	1					●	Anti-bac/Bac-remove Filtr
C Port thread							Film Resist FR
Blank	Rc thread	●	●	●	●	●	Oil-ProhR
N	NPT thread	●	●	●	●	●	Med Press FR
G	G thread	●	●	●	●	●	No Cu/ PTFE FRL
D Option							Outdris FRL
Drain discharge							Adapter Joiner
*3	Blank	Manual drain cock	●	●	●	●	Press Gauge
	F	Auto-drain with manual override (NO: Exhaust when not pressurized)			●	●	CompFRL
	F1	Auto-drain with manual override (NC: No exhaust when not pressurized)	●	●	●	●	LgFRL
	FF	Large auto-drain with manual override (NO: Exhaust when not pressurized)				●	PrecsR
FF1	Large auto-drain with manual override (NC: No exhaust when not pressurized)				●	VacF/R	
Bowl material	Blank	Polycarbonate bowl	●	●	●	●	Clean FR
	Z	Nylon bowl		●	●	●	ElecPneuR
	M	Metal bowl			●	●	AirBoost
M1	Metal bowl with manual drain cock			●	●	Speed Ctrl	
Element	Blank	5 μm	●	●	●	●	Silncr
	Y	0.3 μm (submicron) *4			●	●	CheckV/ other
Pressure range	Blank	0.05 to 0.85 MPa	●	●	●	●	Fit/Tube
	L	0.05 to 0.35 MPa *5	●	●	●	●	Nozzle
Pressure relief	Blank	With relief mechanism	●	●	●	●	Air Unit
	N	Non-relief	●	●	●	●	PrecsCompn
Pressure gauge	Blank	With standard pressure gauge (G401-W)	●	●	●	●	Electro Press SW
	T	No pressure gauge (gauge port (1/4) is assembled sealed)	●	●	●	●	ContactSW
	T8	Pressure gauge ready (gauge port (1/4) is left open)	●	●	●	●	AirSens
	T6	Digital pressure sensor PPX attachment option *6	●	●	●	●	PresSW Cool
	RN	Pressure switch with display, PPR assembled (NPN output 1 point)	●	●	●	●	Air Flo Sens/Ctrl
RP	Pressure switch with display, PPR assembled (PNP output 1 point)	●	●	●	●	WaterRSens	
Flow direction	Blank	Standard flow (left → right)	●	●	●	●	TotAirSys (Total Air)
	X1	Reverse flow (right → left)	●	●	●	●	TotAirSys (Gamma) Gas generator
E Assembled components							RefrDry
Assembled components	U	*13 Assembled component type *7	●	●	●	●	DesicDry
	S	Pressure switch (P1100-W, P4100-W)	●	●	●	●	HiPolymDry
	V	Residual pressure exhaust valve (V1000-W, V3000-W)	●	●	●	●	MainFiltr
	SV	Pressure switch (P1100-W, P4100-W) + Residual pressure exhaust valve (V1000-W, V3000-W)	●	●	●	●	Dischrg etc
F Unit indicated							Ending
Blank	MPa display (Rc thread), psi display (NPT thread), bar display (G thread)	●	●	●	●	●	
J1	MPa display (NPT, G threads)	●	●	●	●	●	
G Pipe adaptor set (attachments)		Page 350 *8, *9					
Blank	Not included	●	●	●	●	●	
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	●	●	●	●	●	
H Attachment		Pages 346 and 363 *10					
Blank	Not included	●	●	●	●	●	
BW	C-bracket	●	●	●	●	●	
B3W	L-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 *6	Digital pressure sensor: PPX-R10N-6M	●	●	●	●	●	

Filter/Regulator Series

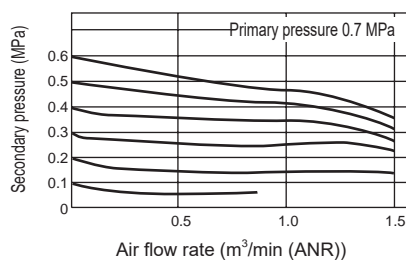
F.R.L. Flow characteristics

- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain
- Separ
- Mech
- Press SW
- Res press
- exh valve
- SlowStart
- Anti-bac/Bac-
- remove Filtr
- Film
- Resist FR
- Oil-ProhR
- Med
- Press FR
- No Cu/
- PTFE FRL
- Outdrs FRL
- Adapter
- Joiner
- Press
- Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneR
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/
- other
- Fit/Tube
- Nozzle
- Air Unit
- PrecsCompn
- Electro
- Press SW
- ContactSW
- AirSens
- PresSW
- Cool
- Air Flo
- Sens/Ctrl
- WaterRiSens
- TotAirSys
- (Total Air)
- TotAirSys
- (Gamma)
- Gas
- generator
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg
- etc
- Ending

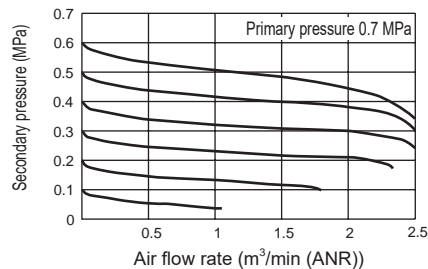
● W1000-6-W



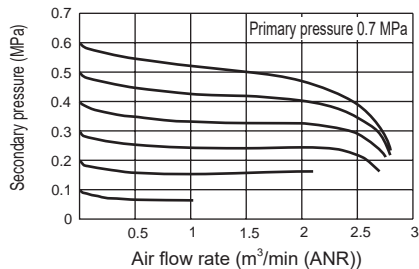
● W1000-8-W



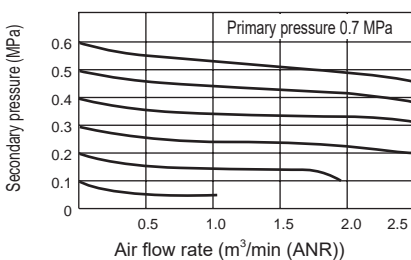
● W2000-8-W



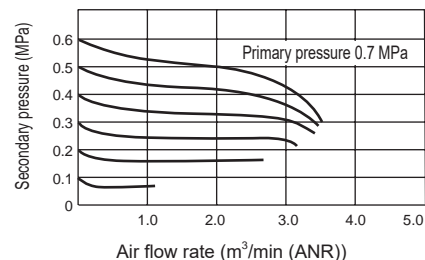
● W2000-10-W



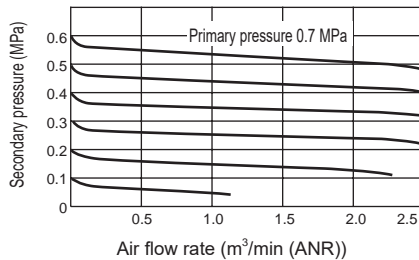
● W3000-8-W



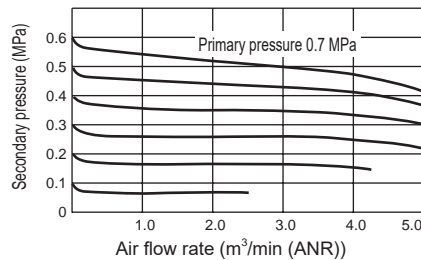
● W3000-10-W/W3000-15-W



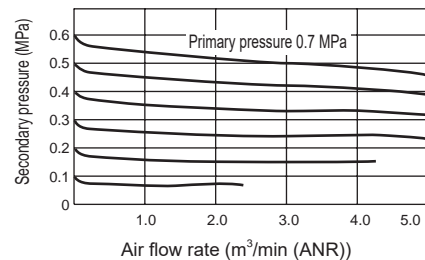
● W4000-8-W



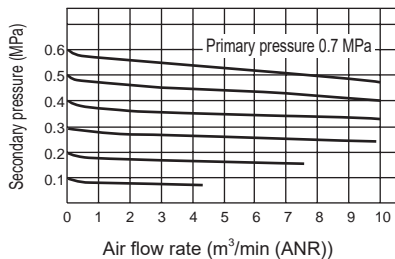
● W4000-10-W



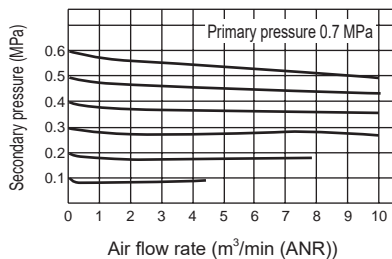
● W4000-15-W



● W8000-20-W

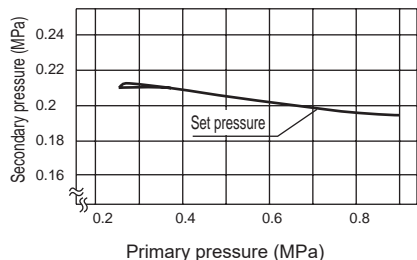


● W8000-25-W

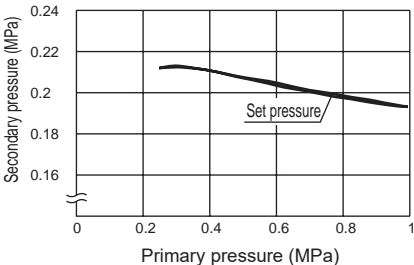


Pressure characteristics

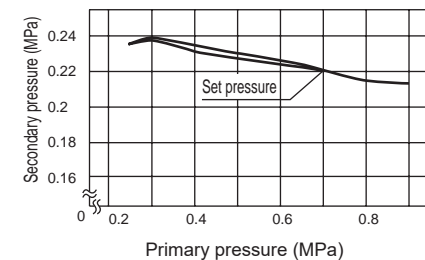
● W1000-W



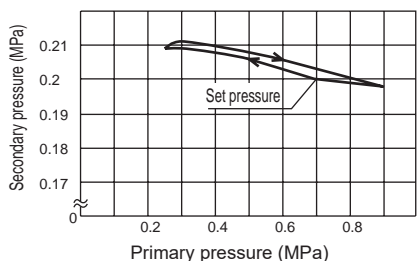
● W2000-W



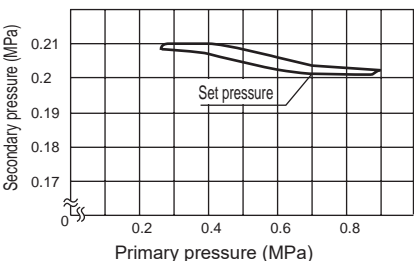
● W3000-W



● W4000-W



● W8000-W

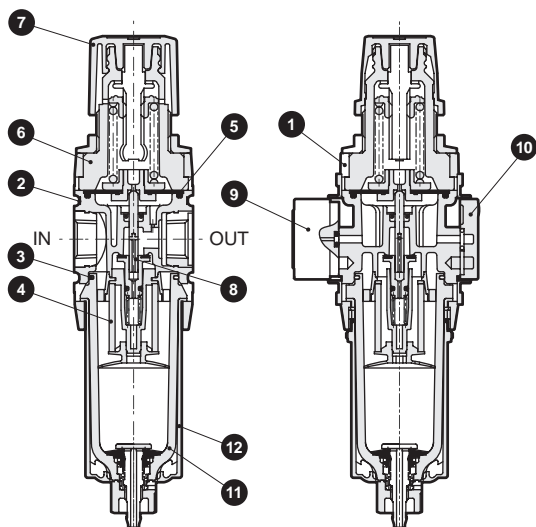


Filter/Regulator Series

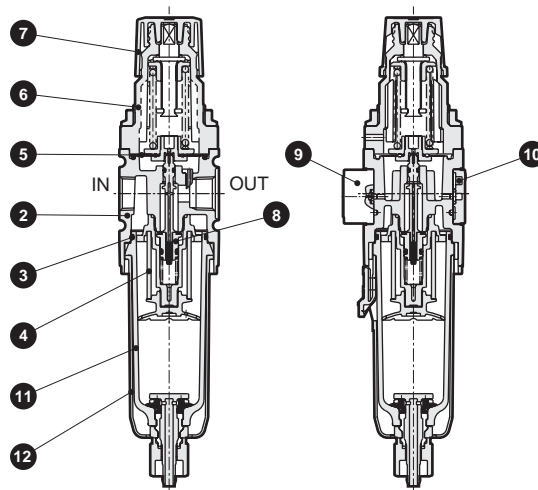
Internal structure and parts list

Internal structure and parts list

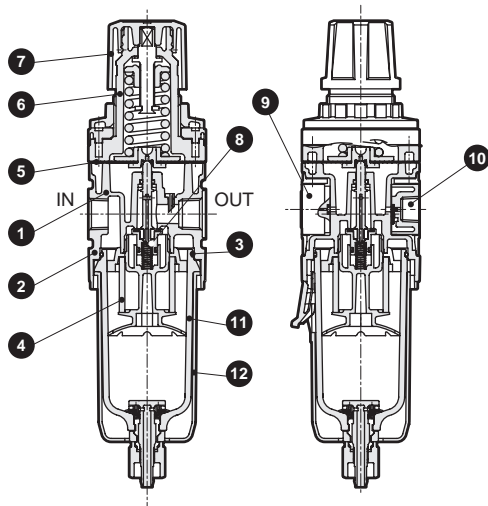
● W1000-W



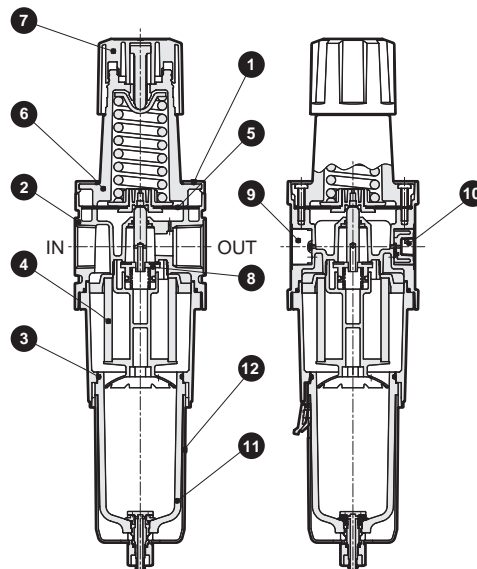
● W2000-W



● 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.R.

F (Filtr)

R (Reg)

L (Lub)

Drain

Separ

Mech

Press SW

Res press

exh valve

SlowStart

Anti-bac/Bac-

remove Filtr

Film

Resist FR

Oil-ProhR

Med

Press FR

No Cu/

PTFE FRL

Outdrs FRL

Adapter

Joiner

Press

Gauge

CompFRL

LgFRL

PrecsR

VacF/R

Clean FR

ElecPneuR

AirBoost

Speed Ctrl

Silncr

CheckV/

other

Fit/Tube

Nozzle

Air Unit

PressCompn

Electro

Press SW

ContactSW

AirSens

PresSW

Cool

Air Flo

Sens/Ctrl

WaterRSens

TotAirSys

(Total Air)

TotAirSys

(Gamma)

Gas

generator

RefrDry

DesicDry

HiPolymDry

MainFiltr

Dischrg

etc

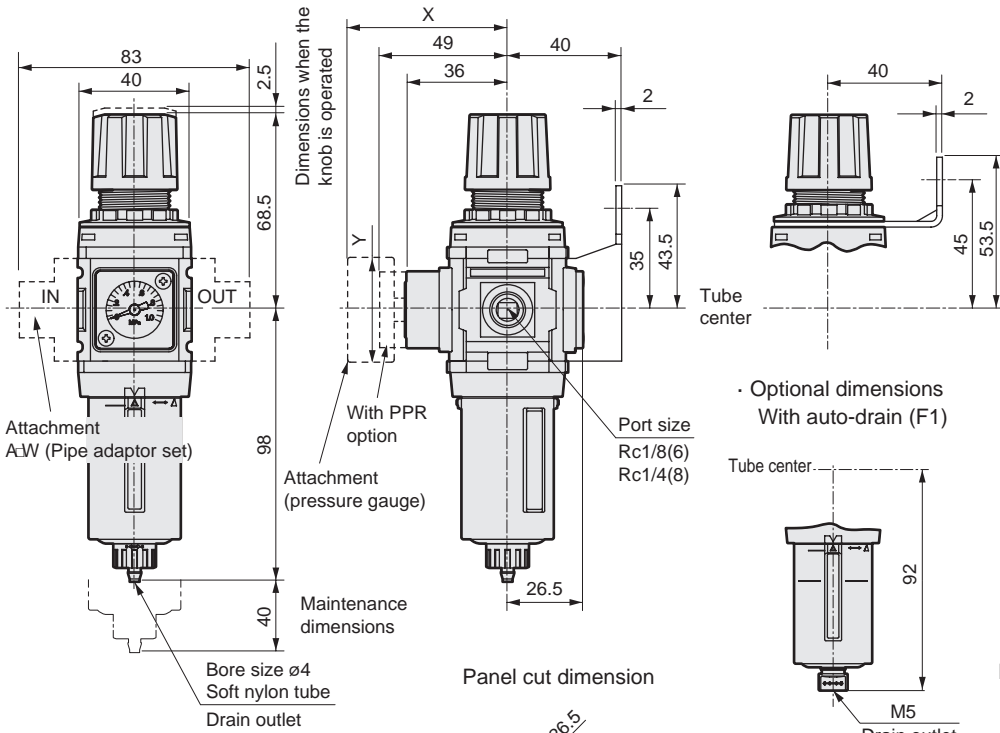
Ending

Filter/Regulator Series



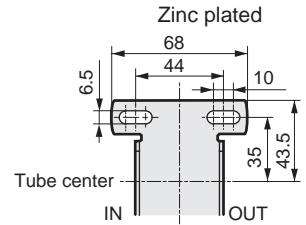
F.R.L. Dimensions

F.R. ● W1000-W

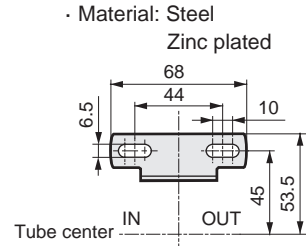


Panel plate thickness: max. 6 mm

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



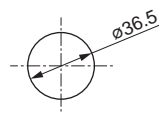
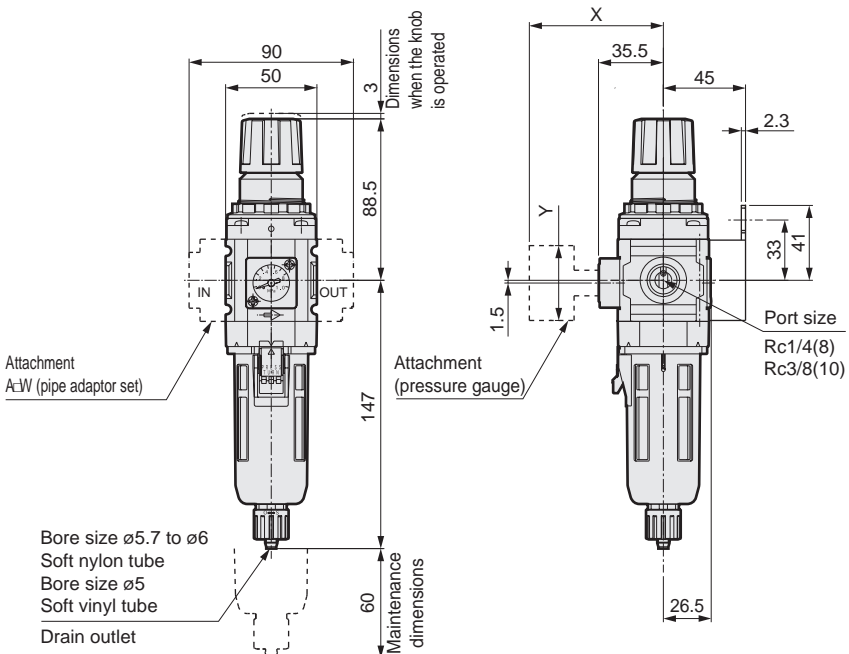
- Attachment L-bracket (-B3W) Part model No.: B130
- Material: Steel



Pressure gauge attached optional dimensions table

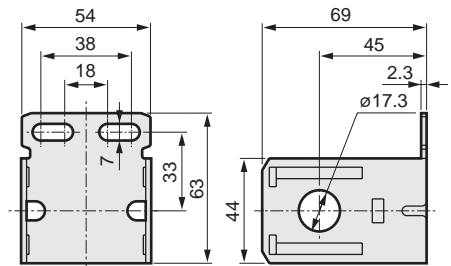
Pressure gauge	X	Y
G45P	(74)	$\phi 39$
G49P	(73.5)	$\phi 43.5$
G59P	(76)	$\phi 52$
G40P	(75.5)	$\phi 42.5$
G52P	(86)	$\phi 52.5$
R2	(74)	$\square 30$

● W2000-W

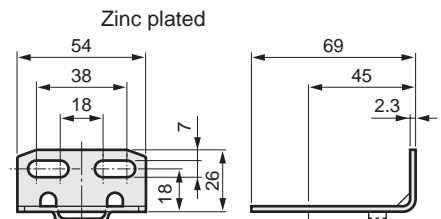


Panel plate thickness: max. 4 mm

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



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

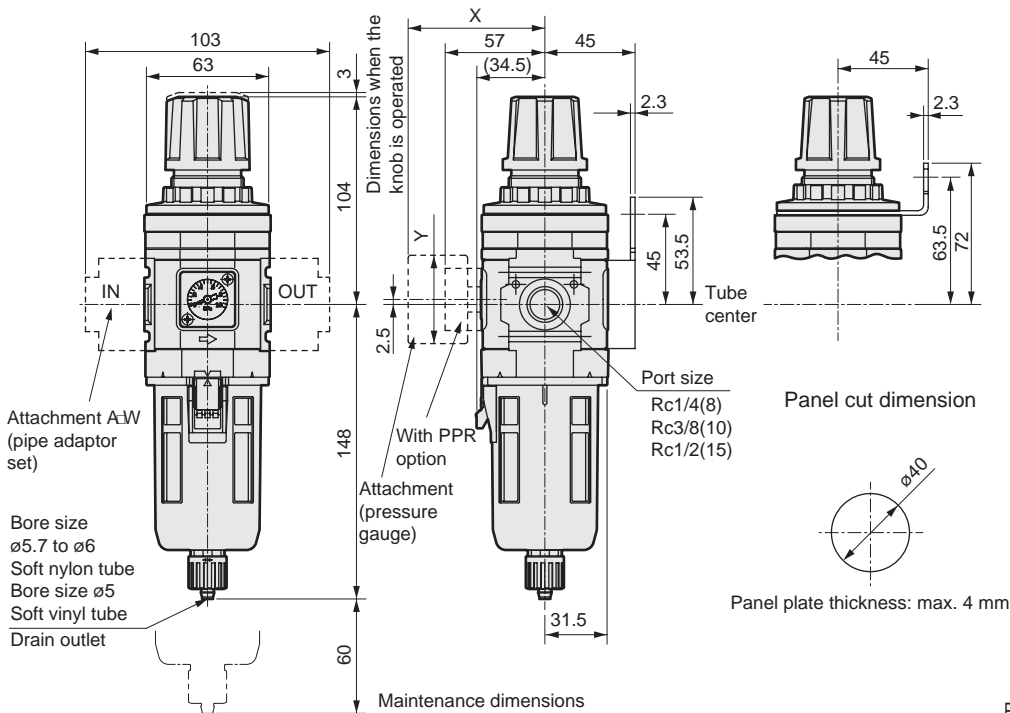


Pressure gauge attached optional dimensions table

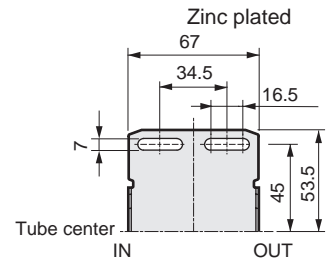
Pressure gauge	X	Y
G45P	(73.5)	$\phi 39$
G49P	(73)	$\phi 43.5$
G40P	(75)	$\phi 42.5$
G52P	(85.5)	$\phi 52.5$
R2	(73)	$\square 30$

Dimensions

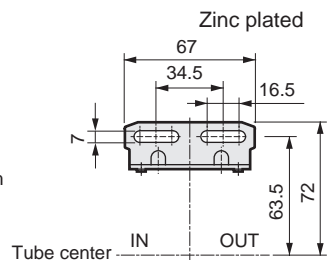
● W3000-W



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



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

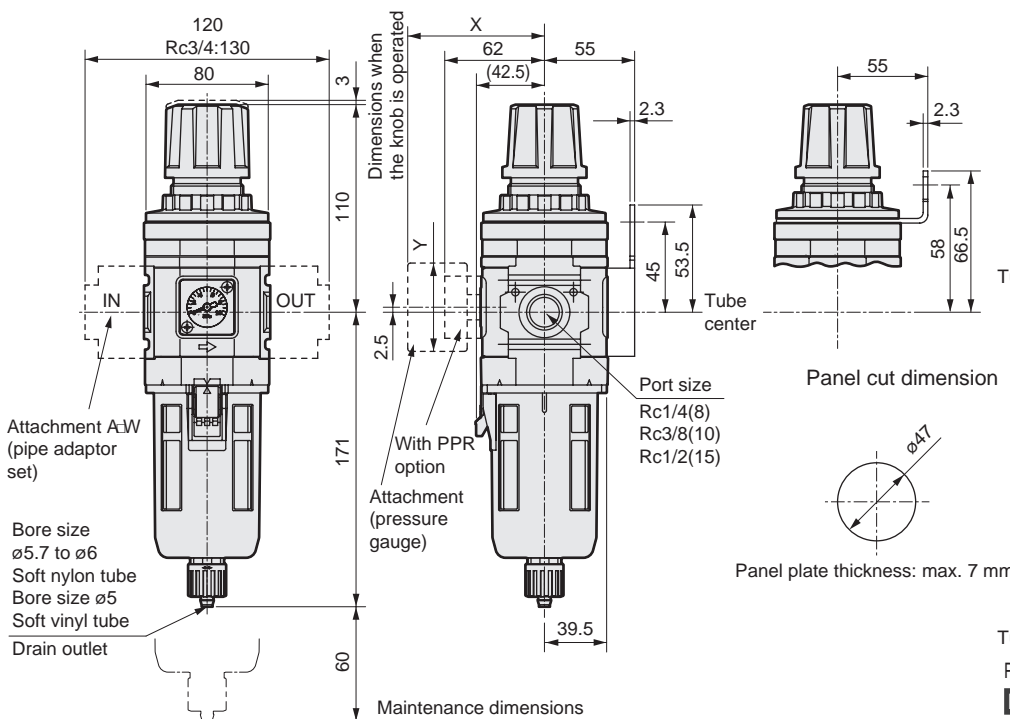


Pressure gauge attached optional dimensions table

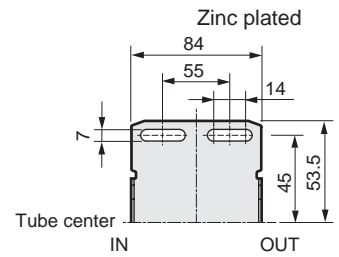
Pressure gauge	X	Y
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G52P	(82)	ø52.5
R2	(69.5)	□30

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

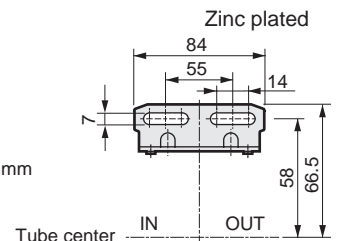
● W4000-W



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



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



Pressure gauge attached optional dimensions table

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

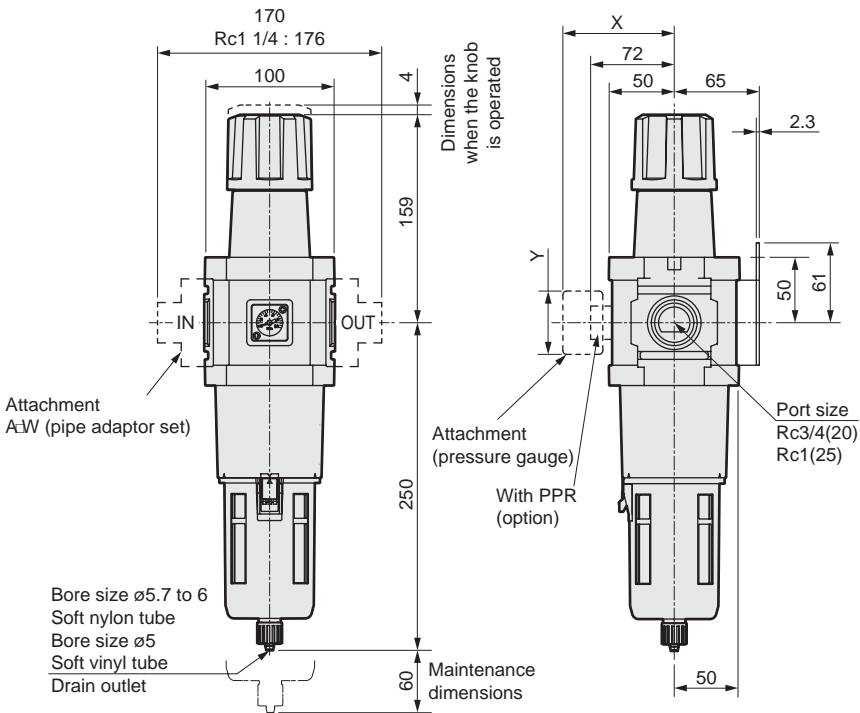
● For the plastic bowl, the dimensions of the manual cock and the auto-drain are the same.

Filter/Regulator Series

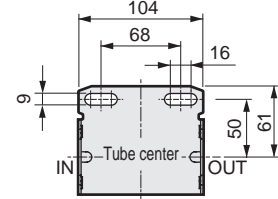


F.R.L. Dimensions

F.R. ● W8000-W



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



Pressure gauge attached optional dimensions table

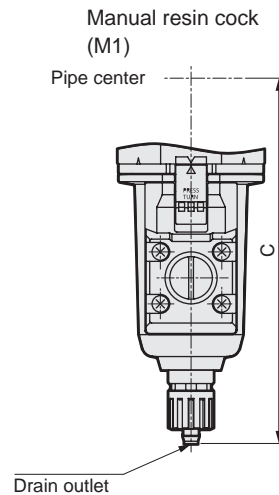
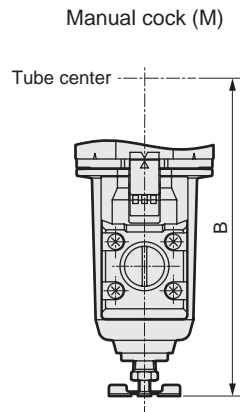
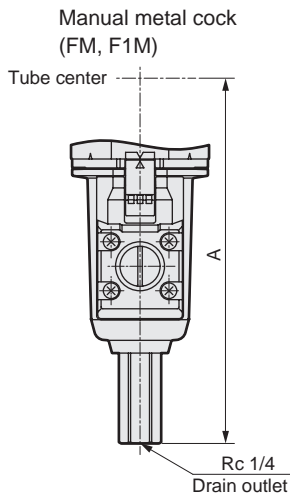
Pressure gauge	X	Y
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G52P	(98)	ø52.5
R2	(85)	□30

● 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]



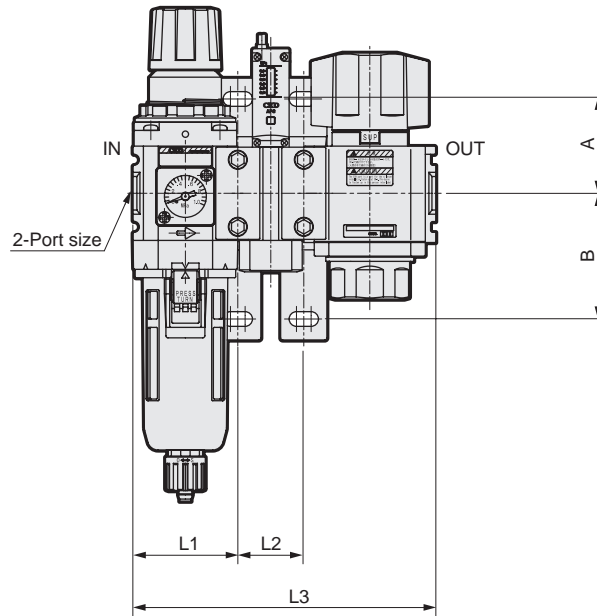
● Material of the metal bowl is aluminum die-casting.

Dimensions table

Model No.	F1M	M	M1
	A	B	C
W2000-W	-	-	147
W3000-W	164	143.5	154
W4000-W	187	166.5	177
W8000-W	266	245.5	256

Option assembly dimensions

● W1000-W to W4000-W



Assembled option Model No.	S			V			SV			A	B
	L1	L2	L3	L1	L2	L3	L1	L2	L3		
W1000-W	40	28	89.5	40	-	80	40	28	108	35	45
W2000-W	50	31.5	102	50	-	113	50	31.5	145	45	60
W3000-W	63	31.5	115	63	-	126	63	31.5	158		
W4000-W	80	31.5	132	80	-	143	80	31.5	175		

- F.R.L.
- F.R.**
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filtr
- Film Resist FR
- Oil-ProhR
- Med Press FR
- No Cu/PTFE FRL
- Outdrs FRL
- Adapter Joiner
- Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/other
- Fit/Tube
- Nozzle
- Air Unit
- PresCompn
- Electro Press SW
- ContactSW
- AirSens
- PresSW Cool
- Air Flo Sens/Ctrl
- WaterRSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Gas generator
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

F.R.L.
 F.R.
 F (Filtr)
 R (Reg)
 L (Lub)
 Drain
 Separ
 Mech
 Press SW
 Res press
 exh valve
 SlowStart
 Anti-bac/Bac-
 remove Filtr
 Film
 Resist FR
 Oil-ProhR
 Med
 Press FR
 No Cu/
 PTFE FRL
 Outdrs FRL
 Adapter
 Joiner
 Press
 Gauge
 CompFRL
 LgFRL
 PrecsR
 VacF/R
 Clean FR
 ElecPneUR
 AirBoost
 Speed Ctrl
 Silncr
 CheckV/
 other
 Fit/Tube
 Nozzle
 Air Unit
 PrecsCompn
 Electro
 Press SW
 ContactSW
 AirSens
 PresSW
 Cool
 Air Flo
 Sens/Ctrl
 WaterRtSens
 TotAirSys
 (Total Air)
 TotAirSys
 (Gamma)
 Gas
 generator
 RefrDry
 DesiccDry
 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 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

Item	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 106). 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 100 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 106 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*

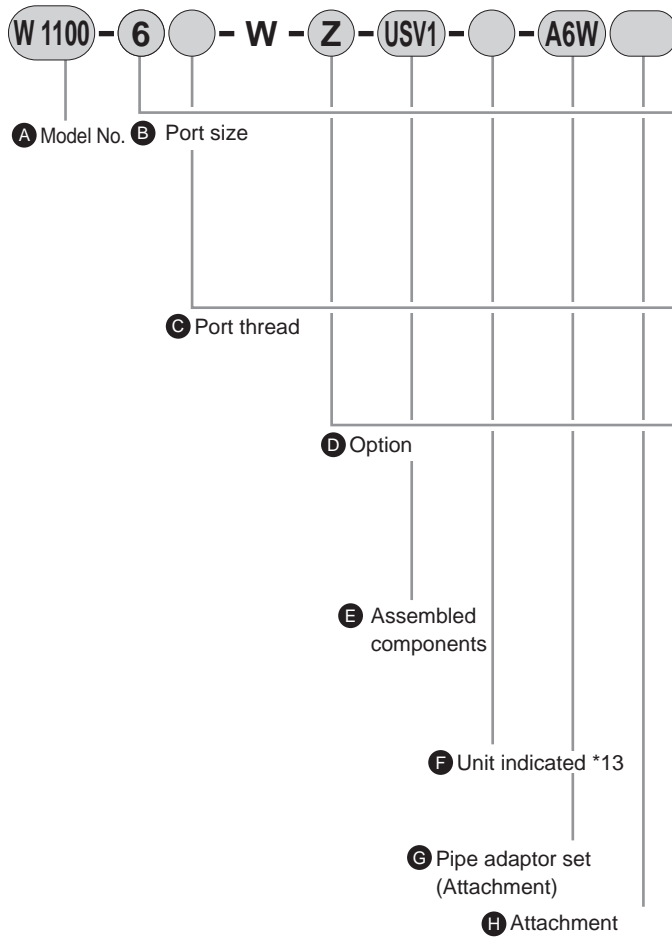
W*100 - -

P4*

Filter/Regulator Series

How to order

How to order



* Refer to page 30 for the explanation of the option.

A Model No.				
W1100	W2100	W3100	W4100	W8100

Code	Description	W1100	W2100	W3100	W4100	W8100
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, *3						
Drain discharge *4	Blank	Manual drain cock	●	●	●	●
	F	Auto-drain with manual override (NC: Exhaust when not pressurized)			●	●
	F1	Auto-drain with manual override (NC: No exhaust when not pressurized)	●	●	●	●
	FF	Large auto-drain with manual override (NC: Exhaust when not pressurized)				●
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	●	●	●	●
	RP	Pressure switch with display, PPR assembled (PNP output 1 point)	●	●	●	●
Flow direction	Blank	Standard flow (left → right)	●	●	●	●
	X1	Reverse flow (right → left)	●	●	●	●

E Assembled components						
Assembled components	U	*14 Assembled component type *8	●	●	●	●
	S	Pressure switch (P1100-W, P4100-W)	●	●	●	●
	V1	Residual pressure exhaust valve (V1000-W, V3000-W)	●	●	●	●
	SV1	Pressure switch (P1100-W, P4100-W) + Residual pressure exhaust valve (V1000-W, V3000-W)	●	●	●	●

F Unit indicated						
Blank	MPa display (Rc thread), psi display (NPT thread), bar display (G thread)	●	●	●	●	●
J1	MPa display (NPT, G threads)	●	●	●	●	●

G Pipe adaptor set (attachments) *9, *10 Page 350						
Blank	Not included	●	●	●	●	●
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	●	●	●	●	●

H Attachment *11 Pages 346 and 363						
Blank	Not included	●	●	●	●	●
BW	C-bracket	●	●	●	●	●
B3W	L-bracket *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)	●	●	●	●	●
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 354 for the auto-drain usage conditions.
- *5: Refer to page 108 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: Installation position for assembled components

Code	Installation position for attachments	Compatibility
S	W+(S)	W1100-W to W4100-W
V1	(V1)+W	W1100-W to W4100-W
SV1	(V1)+W+(S)	W1100-W to W4100-W

- *9: The pipe adaptor set and C-bracket cannot be used together.
- *10: The joiner set is enclosed with the pipe adaptor set.
- *11: The pressure gauge and digital pressure sensor (included) can be selected only when C Port thread is Rc thread.
- *12: For details on mounting the L-bracket, refer to (2. Regulator) of "⚠ Cautions and Installation & Adjustment" (page 357).
- *13: 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.
- *14: Assembled components can be selected only with port size and drain discharge options. When selecting other options, they are handled as customized combinations.

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterR/Sens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr Dischrg etc
Ending

Filter/Regulator Series



F.R.L. Flow characteristics

F.R.

F (Filtr)

R (Reg)

L (Lub)

Drain

Separ

Mech

Press SW

Res press

exh valve

SlowStart

Anti-bac/Bac-

remove Filtr

Film

Resist FR

Oil-Prohr

Med

Press FR

No Cu/

PTFE FRL

Outdrs FRL

Adapter

Joiner

Press

Gauge

CompFRL

LgFRL

PrecsR

VacF/R

Clean FR

ElecPneur

AirBoost

Speed Ctrl

Silncr

CheckV/

other

Fit/Tube

Nozzle

Air Unit

PrecsCompn

Electro

Press SW

ContactSW

AirSens

PresSW

Cool

Air Flo

Sens/Ctrl

WaterRtSens

TotAirSys

(Total Air)

TotAirSys

(Gamma)

Gas

generator

RefrDry

DesicDry

HiPolymDry

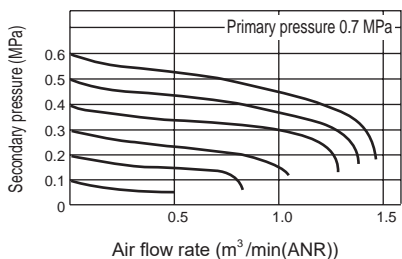
MainFiltr

Dischrg

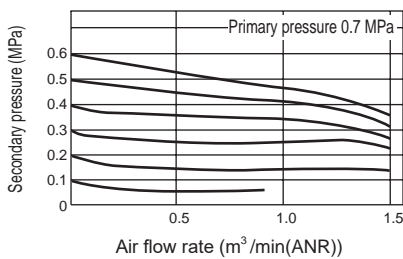
etc

Ending

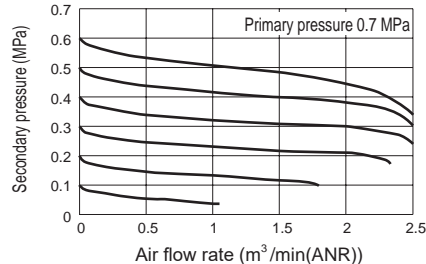
● W1100-6-W



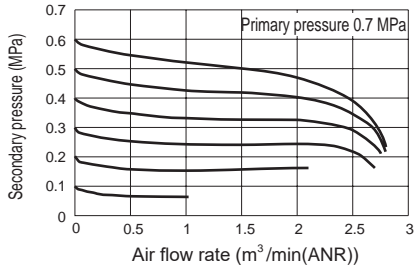
● W1100-8-W



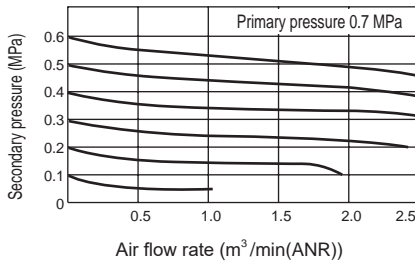
● W2100-8-W



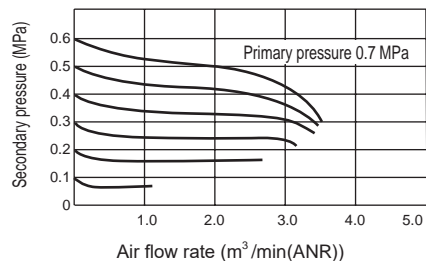
● W2100-10-W



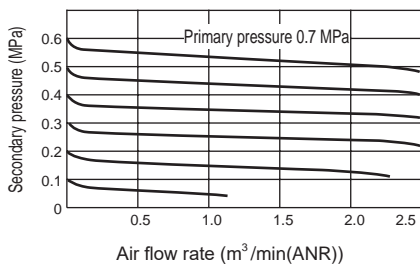
● W3100-8-W



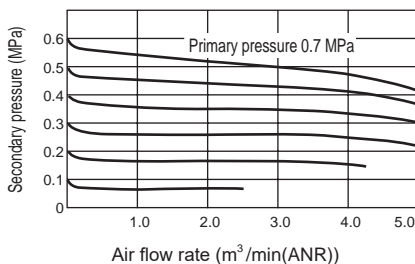
● W3100-10-W/W3100-15-W



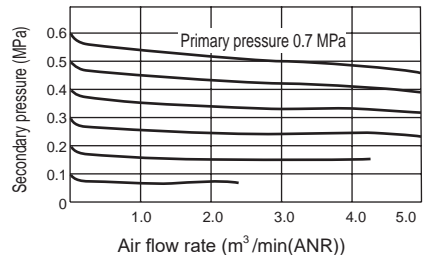
● W4100-8-W



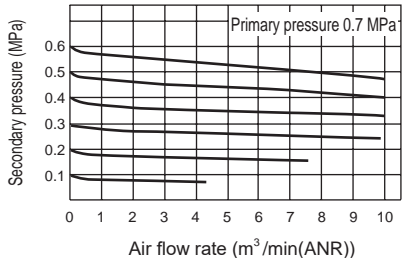
● W4100-10-W



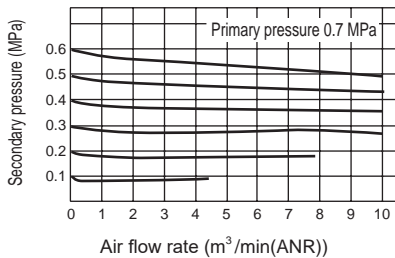
● W4100-15-W



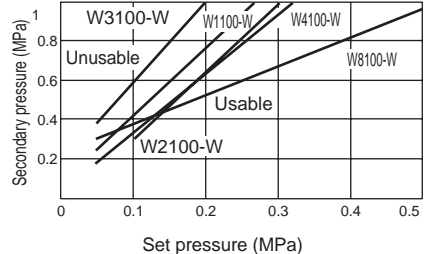
● W8100-20-W



● W8100-25-W



● Set pressure range to back pressure

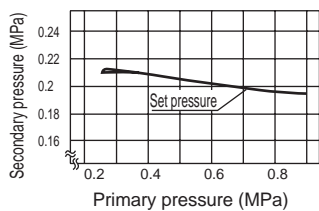


Note: The area above the graph line shows the unusable range and that below the graph line shows the usable range.

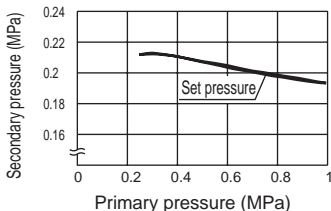
Example: If the set pressure of W4100-W is set to 0.2MPa and the secondary back pressure is set to 0.6MPa or more, the secondary side pressure will not be released to the primary side.

Pressure characteristics

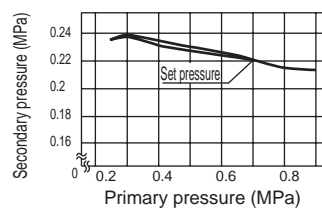
● W1100-W



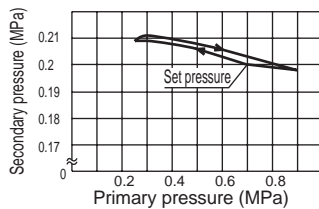
● W2100-W



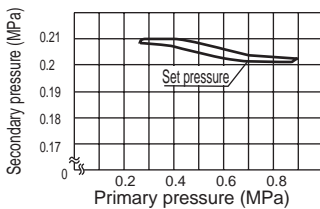
● W3100-W



● W4100-W

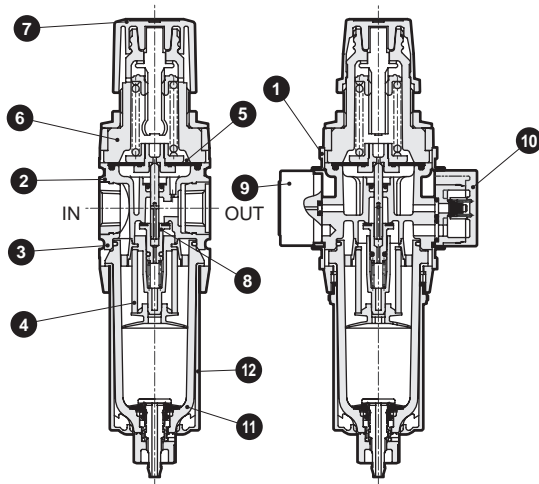


● W8100-W

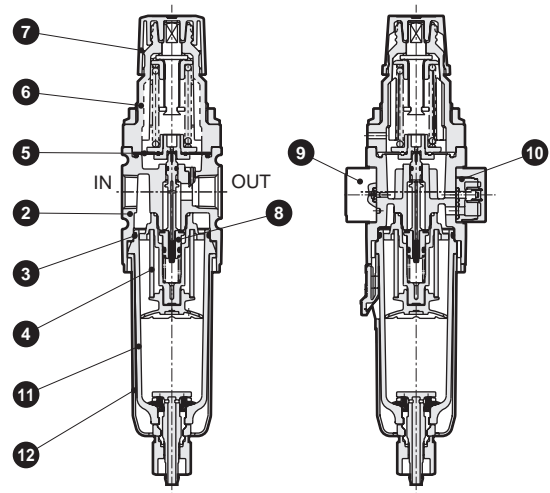


Internal structure and parts list

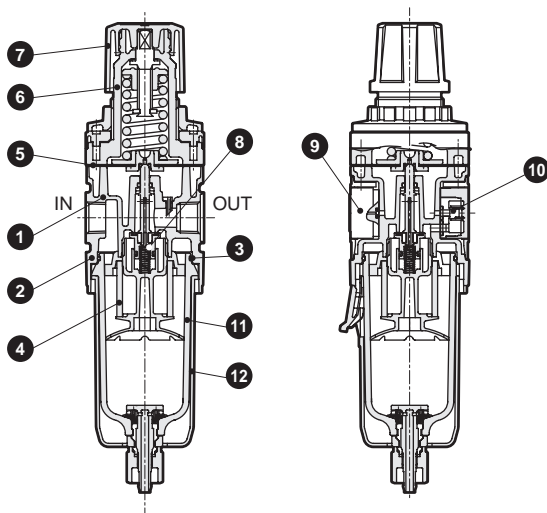
● W1100-W



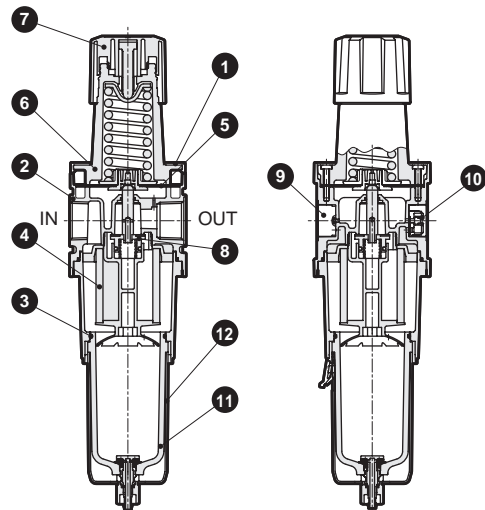
● W2100-W



● W3100-W/W4100-W



● W8100-W



No.	Part name	Material			
		W1100-W	W2100-W	W3100-W	W4100-W
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	Polypropylene			
5	Diaphragm assembly	Polyacetal resin polypropylene	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 105 for repair parts kit model No.

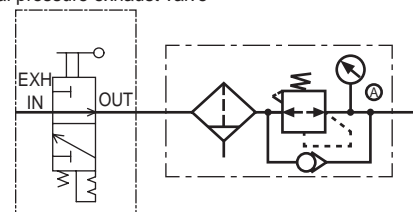
Functions

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 residual pressure exhaust 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 100 for the graph)

● Circuit diagram

Residual pressure exhaust valve



When using residual pressure exhaust valve in front of reverse filter and regulator.

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

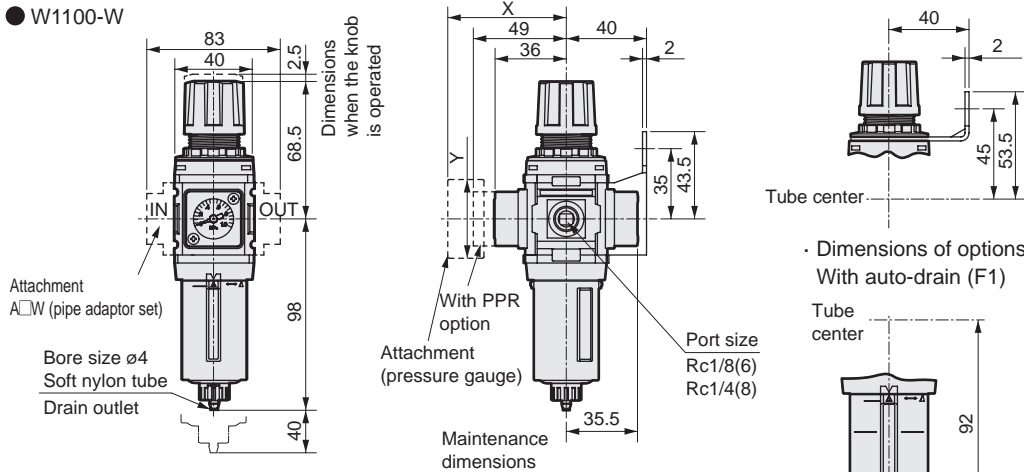
Filter/Regulator Series



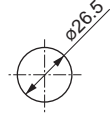
F.R.L. Dimensions

- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filt
- Film
- Resist FR
- Oil-Prohr
- Med Press FR
- No Cu/PTFE FRL
- Outdrs FRL
- Adapter Joiner
- Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneUR
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/other
- Fit/Tube
- Nozzle
- Air Unit
- PrecsCompn
- Electro Press SW
- ContactSW
- AirSens
- PresSW Cool
- Air Flo Sens/Ctrl
- WaterRiSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Gas generator
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

● W1100-W

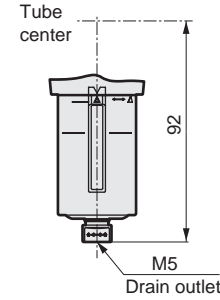


Panel cut dimension



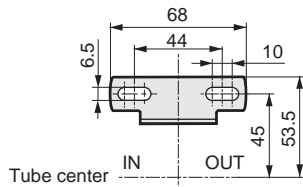
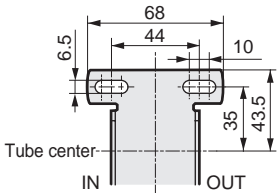
Panel plate thickness: max. 6 mm

· Dimensions of options With auto-drain (F1)



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

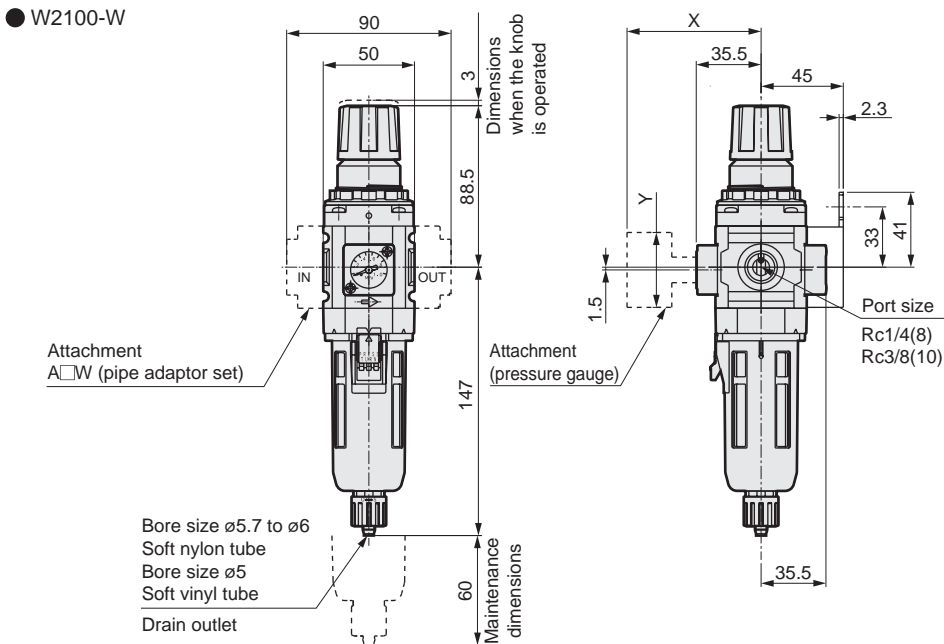
L-bracket (-B3W)
Part model No.: B130
· Material: Steel
Zinc plated



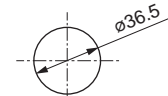
Pressure gauge attached optional dimensions table

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)	$\square 30$

● W2100-W



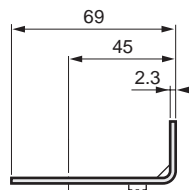
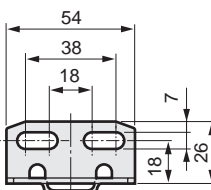
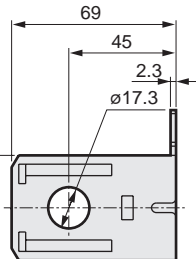
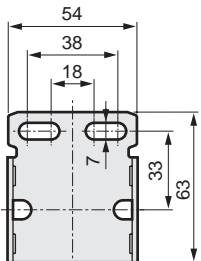
Panel cut dimension



Panel plate thickness: max. 4 mm

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

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

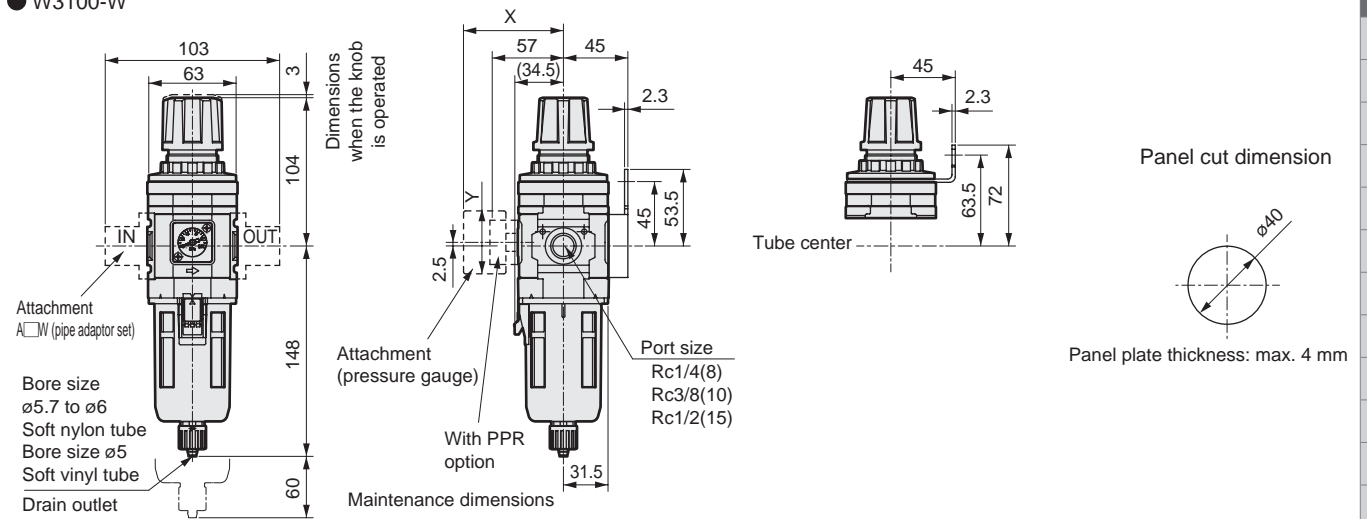


Pressure gauge attached optional dimensions table

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)	$\square 30$

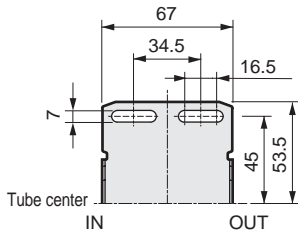
Dimensions

● W3100-W



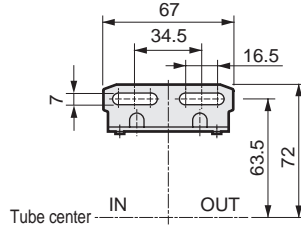
- Attachment C-bracket (-BW)
Part model No.: B320
- Material: Steel

Zinc plated



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

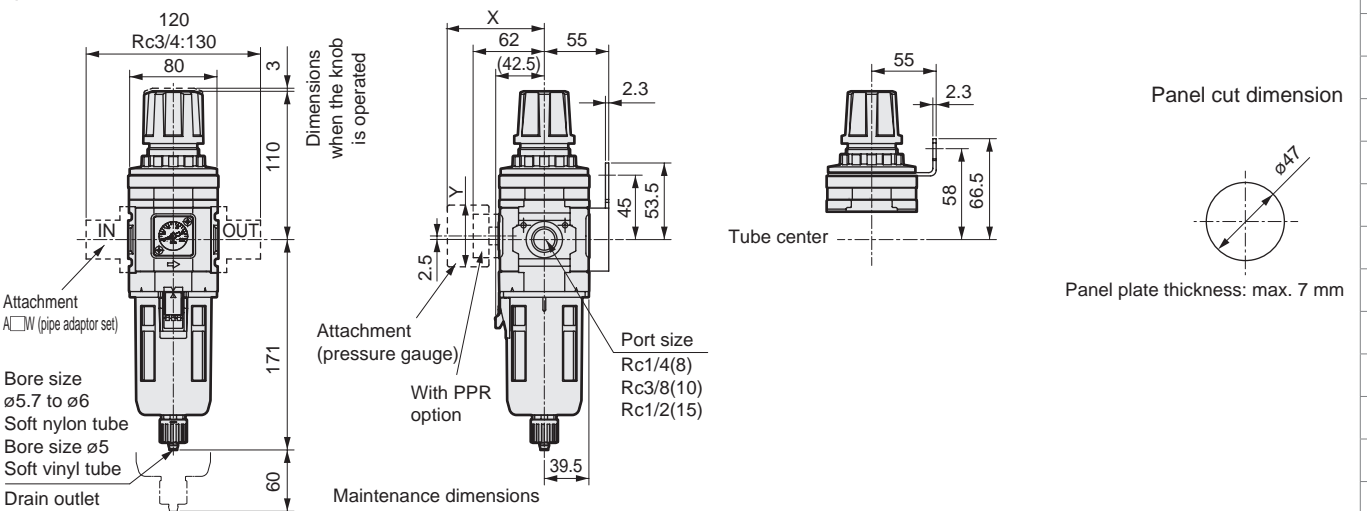
Zinc plated



Pressure gauge attached optional dimensions table

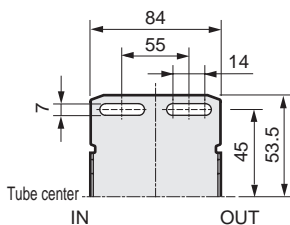
Pressure gauge	X	Y
G45P	(70)	$\phi 39$
G49P	(69.5)	$\phi 43.5$
G59P	(72)	$\phi 52$
G40P	(71.5)	$\phi 42.5$
G52P	(82)	$\phi 52.5$
R2	(69.5)	$\square 30$

● W4100-W



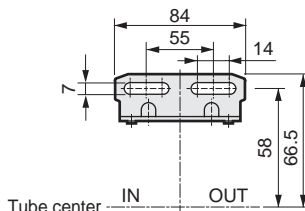
- Attachment C-bracket (-BW)
Part model No.: B420
- Material: Steel

Zinc plated



- L-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.

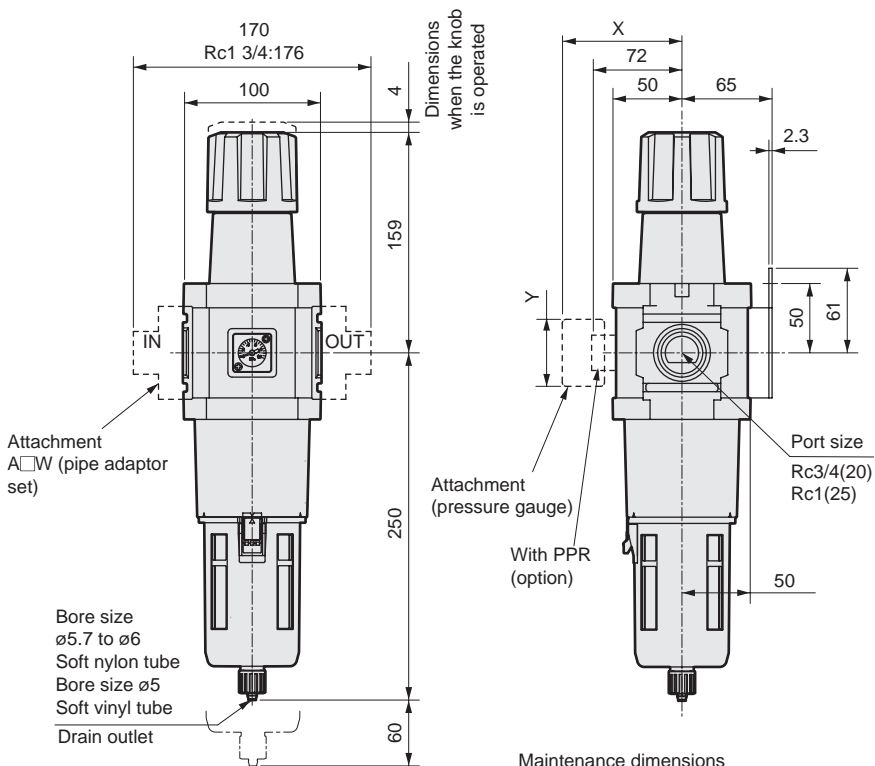
F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PreclsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PreclsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

Filter/Regulator Series



F.R.L. Dimensions

F.R. ● W8100-W



Attachment
A□W (pipe adaptor
set)

Bore size
ø5.7 to ø6
Soft nylon tube
Bore size ø5
Soft vinyl tube

Drain outlet

Dimensions
when the knob
is operated

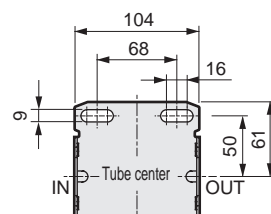
Attachment
(pressure gauge)
With PPR
(option)

Port size
Rc3/4(20)
Rc1(25)

Maintenance dimensions

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

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

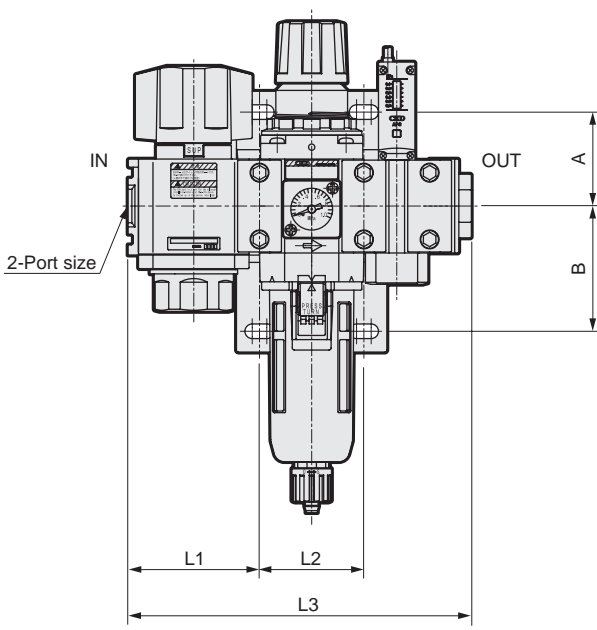


Pressure gauge attached optional dimensions table

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

Option assembly dimensions

● W1100-W to W4100-W

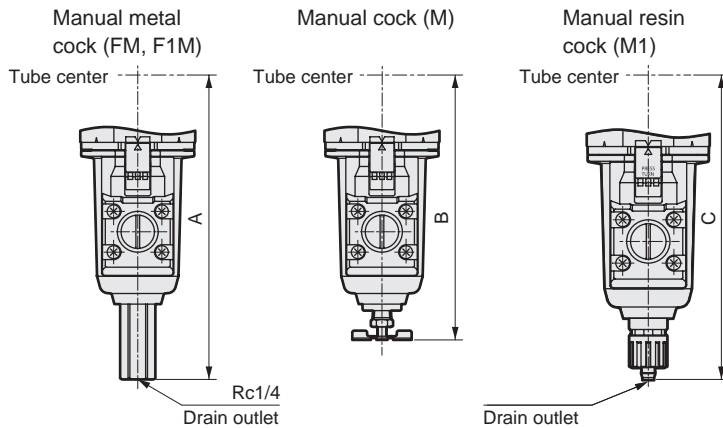


Assembled option Model No.	S			V1			SV1			A	B
	L1	L2	L3	L1	L2	L3	L1	L2	L3		
W1100-W	40	28	89.5	40	-	80	40	40	130	35	45
W2100-W	50	31.5	102	63	-	113	63	50	165	45	60
W3100-W	63	31.5	115	63	-	126	63	63	178		
W4100-W	80	31.5	132	63	-	143	63	80	195		

Optional dimensions



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

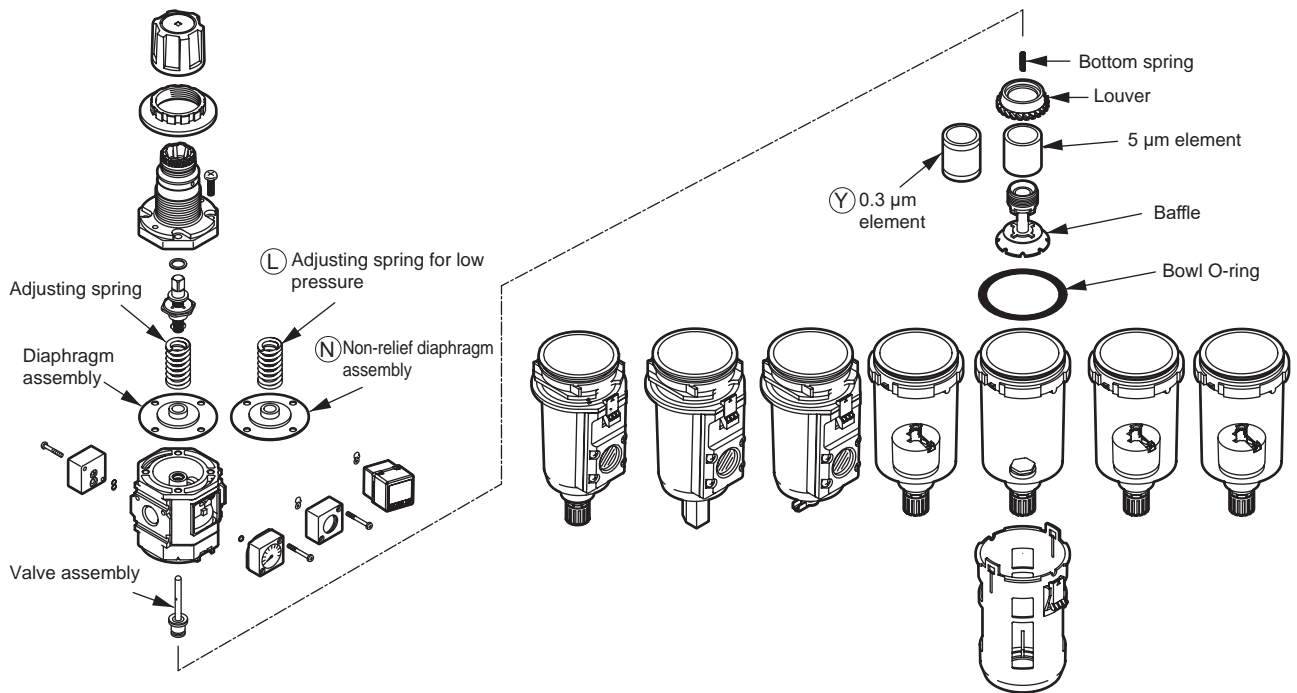


- Material of the metal bowl is aluminum die-casting.

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 151) for details on the adjusting spring, diaphragm, and gauge plug assembly. Refer to the air filter options and parts table (pages 114 and 115) for details on the element, bowl assembly, and bowl guard.

- F.R.L.
- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filtr
- Film Resist FR
- Oil-ProhR
- Med Press FR
- No Cu/ PTFE FRL
- Outdrs FRL
- Adapter Joiner
- Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/ other
- Fit/Tube
- Nozzle
- Air Unit
- PresCompn
- Electro Press SW
- ContactSW
- AirSens
- PresSW Cool
- Air Flo Sens/Ctrl
- WaterRISens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Gas generator
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending