

Filter and regulator Flame-resistant series

# W3000/W4000/W8000-G4 Series

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

● Port size: 1/4 to 1

JIS symbol 




## Specifications

| Item                            | W3000-G4                                             |                                     | W4000-G4                       | W8000-G4 |
|---------------------------------|------------------------------------------------------|-------------------------------------|--------------------------------|----------|
| Working fluid                   | Compressed air                                       |                                     |                                |          |
| Max. working pressure MPa       | 1.0 (≈150 psi, 10 bar) (*1, *2)                      |                                     |                                |          |
| Proof pressure MPa              | 1.5 (≈220 psi, 15 bar)                               |                                     |                                |          |
| Ambient / fluid temperatures °C | 5 (41°F) to 60 (140°F)                               |                                     |                                |          |
| Filtration rating μm            | 5 or 0.3                                             |                                     |                                |          |
| Set pressure MPa                | 0.05 (≈7.3 psi, 0.5 bar) to 0.85 (≈120 psi, 8.5 bar) |                                     |                                |          |
| Pressure relief                 | With relief mechanism                                |                                     |                                |          |
| Drain capacity cm <sup>3</sup>  | 45                                                   | 80                                  | 80 (*3)                        |          |
| Port size Rc,NPT,G              | 1/4, 3/8 (1/2 uses an adaptor)                       | 1/4, 3/8, 1/2 (3/4 uses an adaptor) | 3/4, 1 (1 1/4 uses an adaptor) |          |
| Weight kg                       | 0.72                                                 | 1.08                                | 2.16                           |          |
| Standard specifications         | Exterior: Flame-resistant material, metal bowl       |                                     |                                |          |

\*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: Up to 170 cm<sup>3</sup> is stored with the manual drain cock only.

## Option weight

\* Add to the weight of the standard accessories. Unit: kg

| Code     | Drain discharge |      |      |      | Bowl material | Press.gauge | Pipe adaptor set |       |       |       |       |       |
|----------|-----------------|------|------|------|---------------|-------------|------------------|-------|-------|-------|-------|-------|
|          | F               | F1   | FF   | FF1  | M             | T*          | A8*W             | A10*W | A15*W | A20*W | A25*W | A32*W |
| W3000-G4 | 0.02            | 0.02 |      |      | 0             | 0           | 0.16             | 0.16  | 0.16  |       |       |       |
| W4000-G4 | 0.02            | 0.02 |      |      | 0             | 0           | 0.16             | 0.16  | 0.16  | 0.16  |       |       |
| W8000-G4 | 0.02            | 0.02 | 0.02 | 0.02 | 0             | 0           |                  |       |       | 0.53  | 0.53  | 0.53  |

| Code     | Attachment |      |       |       |
|----------|------------|------|-------|-------|
|          | BW         | B3W  | G49P  | G59P  |
| W3000-G4 | 0.17       | 0.07 | 0.086 | 0.115 |
| W4000-G4 | 0.21       | 0.11 | 0.086 | 0.115 |
| W8000-G4 | 0.36       |      | 0.086 | 0.115 |

### How to order

**A** Model No. **W3000** - **8** - **G4** - **T8** - **A8W** **G49P**

**B** Port size

**C** Port thread

**D** Option

**E** Display unit \*9

**F** Pipe adaptor set (included)

**G** Other attachments

Flame-resistant

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

| Code                                      |                                                                           | Description                                              | W3 | W4 | W8 |
|-------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------|----|----|----|
| B Port size                               |                                                                           |                                                          |    |    |    |
| 8                                         | 1/4                                                                       |                                                          | ●  | ●  |    |
| 10                                        | 3/8                                                                       |                                                          | ●  | ●  |    |
| 15                                        | 1/2                                                                       |                                                          |    | ●  |    |
| 20                                        | 3/4                                                                       |                                                          |    |    | ●  |
| 25                                        | 1                                                                         |                                                          |    |    | ●  |
| C Port thread                             |                                                                           |                                                          |    |    |    |
| Blank                                     | Rc thread                                                                 |                                                          | ●  | ●  |    |
| N                                         | NPT thread                                                                |                                                          | ●  | ●  | ●  |
| G                                         | G thread                                                                  |                                                          | ●  | ●  | ●  |
| D Option                                  |                                                                           |                                                          |    |    |    |
| Drain<br>discharge<br><br>*3              | 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)        |    |    | ●  |
|                                           | FF1                                                                       | Large auto-drain, man OVRD (NC: no press→no exhaust)     |    |    | ●  |
| Bowl<br>material                          | Blank                                                                     | Metal bowl (resin cock)                                  | ●  | ●  | ●  |
|                                           | M                                                                         | Metal bowl (metal cock)                                  | ●  | ●  | ●  |
| Element                                   | Blank                                                                     | 5 μm                                                     | ●  | ●  | ●  |
|                                           | Y                                                                         | 0.3 μm (submicron) *4                                    | ●  | ●  | ●  |
| Pressure<br>range                         | Blank                                                                     | 0.05 to 0.85 MPa                                         | ●  | ●  | ●  |
|                                           | L                                                                         | 0.05 to 0.35 MPa *5                                      | ●  | ●  | ●  |
| Pressure<br>relief                        | Blank                                                                     | With relief mechanism                                    | ●  | ●  | ●  |
|                                           | N                                                                         | Non-relief                                               | ●  | ●  | ●  |
| Pressure<br>gauge                         | T                                                                         | No pressure gauge (gauge port (1/4) is assembled sealed) | ●  | ●  | ●  |
|                                           | T8                                                                        | Pressure gauge ready (gauge port (1/4) is left open)     | ●  | ●  | ●  |
| Flow<br>direction                         | Blank                                                                     | Standard flow (left → right)                             | ●  | ●  | ●  |
|                                           | X1                                                                        | Reverse flow (right → left)                              | ●  | ●  | ●  |
| E Display unit                            |                                                                           |                                                          |    |    |    |
| Blank                                     | MPa display (Rc thread), psi display (NPT thread), bar display (G thread) |                                                          | ●  | ●  | ●  |
| J1                                        | MPa display (NPT, G thread)                                               |                                                          | ●  | ●  | ●  |
| F Pipe adaptor set (included) *6 Page 350 |                                                                           |                                                          |    |    |    |
| Blank                                     | Not included                                                              |                                                          | ●  | ●  | ●  |
| A8*W                                      | 1/4 pipe adaptor set (white)                                              |                                                          | ●  | ●  |    |
| A10*W                                     | 3/8 pipe adaptor set (white)                                              |                                                          | ●  | ●  |    |
| A15*W                                     | 1/2 pipe adaptor set (white)                                              |                                                          | ●  | ●  |    |
| A20*W                                     | 3/4 pipe adaptor set (white)                                              |                                                          |    | ●  | ●  |
| A25*W                                     | 1 pipe adaptor set (white)                                                |                                                          |    |    | ●  |
| A32*W                                     | 1 1/4 pipe adaptor set (white)                                            |                                                          |    |    | ●  |
| * Adaptor thread                          |                                                                           |                                                          |    |    |    |
| Blank                                     | Rc thread                                                                 |                                                          | ●  | ●  | ●  |
| N                                         | NPT thread                                                                |                                                          | ●  | ●  | ●  |
| G                                         | G thread                                                                  |                                                          | ●  | ●  | ●  |
| G Other attachments *8 Pages 346, 363     |                                                                           |                                                          |    |    |    |
| Blank                                     | Not included                                                              |                                                          | ●  | ●  | ●  |
| BW                                        | C type bracket (silver)                                                   |                                                          | ●  | ●  | ●  |
| B3W                                       | *7                                                                        | L type bracket (silver)                                  | ●  | ●  |    |
| G49P                                      | G49D-8-P10(L:G49D-8-P04)                                                  |                                                          | ●  | ●  | ●  |
| G59P                                      | G59D-8-P10(L:G59D-8-P10)                                                  |                                                          | ●  | ●  | ●  |

### ⚠ Precautions for model No. selection

- \*1: G threads and NPT threads are available for IN, OUT, gauge port and drain outlet (metal bowl (metal cock) 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 354 for the auto-drain usage conditions.
- \*4: Refer to page 268 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: The pipe adaptor set and C type bracket cannot be used together.
- \*7: For details on mounting the L type bracket, refer to (2. Regulator) of "⚠ Cautions and Installation & Adjustment" (page 357).
- \*8: The pressure gauge (included) can be selected only when ● Port thread is Rc thread.
- \*9: 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.

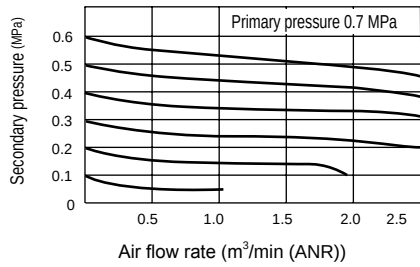
|                            |
|----------------------------|
| F.R.L.                     |
| F.R.                       |
| F (Filtr)                  |
| R (Reg)                    |
| L (Lub)                    |
| Drain Separ                |
| Mech Press SW              |
| Res press exh valve        |
| SlowStart                  |
| Anti-bac/Bac-remove Filt   |
| Film Resist FR             |
| Oil-ProhR                  |
| Med Press FR               |
| No Cu/ PTFE FRL            |
| Outdrs FRL                 |
| Adaptor 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

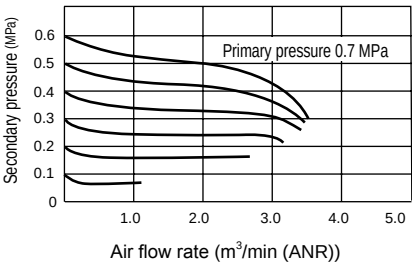
|                              |
|------------------------------|
| F.R.L.                       |
| F.R.                         |
| F (Filtr)                    |
| R (Reg)                      |
| L (Lub)                      |
| Drain<br>Separ               |
| Mech<br>Press SW             |
| Res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

## Flow characteristics

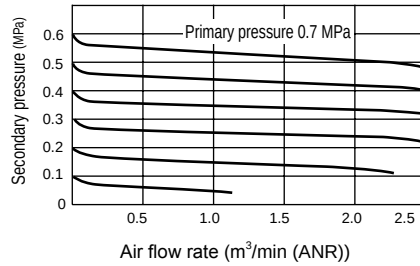
● W3000-8-G4



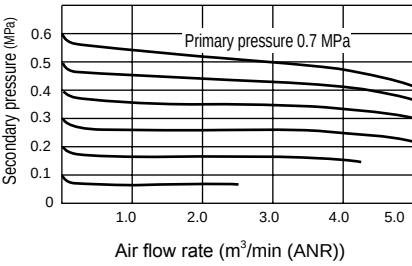
● W3000-10-G4



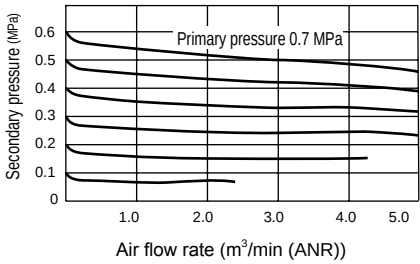
● W4000-8-G4



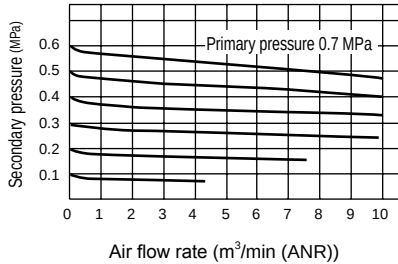
● W4000-10-G4



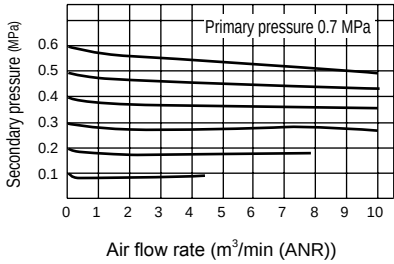
● W4000-15-G4



● W8000-20-G4

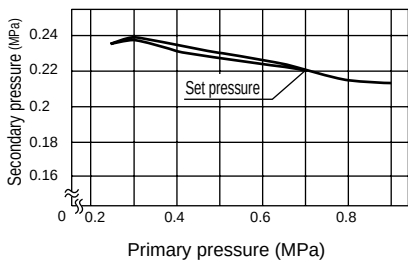


● W8000-25-G4

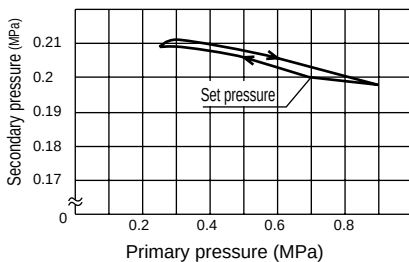


## Pressure characteristics

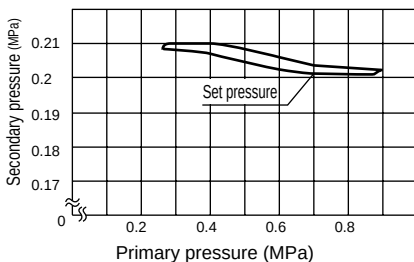
● W3000-G4



● W4000-G4



● W8000-G4

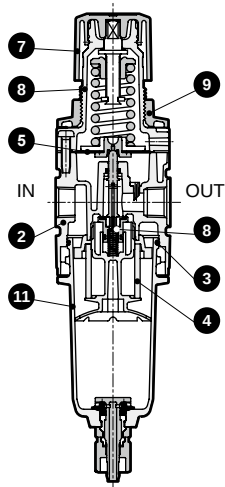


# Filter/Regulator Series

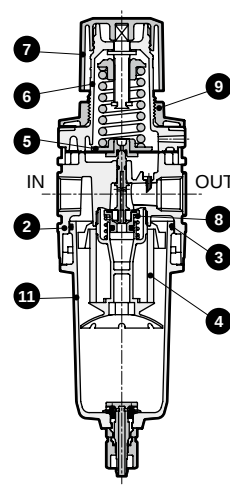
Internal structure and parts list

## Internal structure and parts list

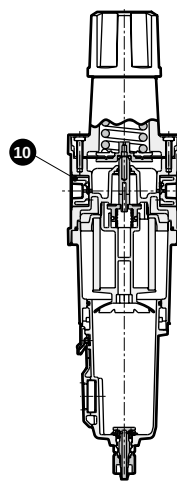
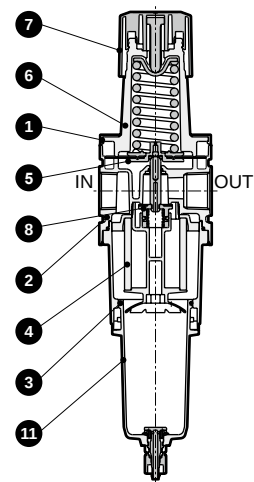
● W3000-G4



● W4000-G4



● W8000-G4



| No. | Part name           | Material                                                                                                   |          |          |
|-----|---------------------|------------------------------------------------------------------------------------------------------------|----------|----------|
|     |                     | W3000-G4                                                                                                   | W4000-G4 | W8000-G4 |
| 1   | Plate cover         | ABS resin (*1)                                                                                             |          |          |
| 2   | Body                | Aluminum alloy die-casting                                                                                 |          |          |
| 3   | O-ring              | Special nitrile rubber                                                                                     |          |          |
| 4   | Element             | Polypropylene                                                                                              |          |          |
| 5   | Diaphragm assembly  | Zinc alloy die-casting/nitrile rubber                                                                      |          |          |
| 6   | Cover               | Aluminum alloy die-casting                                                                                 |          |          |
| 7   | Knob                | PBT resin (*1)                                                                                             |          |          |
| 8   | Valve assembly      | Copper alloy, hydrogenated nitrile rubber (polyacetal resin: W3000, 4000)                                  |          |          |
| 9   | Mounting nut        | PBT resin (*1)                                                                                             |          | -        |
| 10  | Gauge plug assembly | Polyamide resin (*1), nitrile rubber, steel                                                                |          |          |
| 11  | Bowl assembly       | Aluminum alloy die-casting, PBT resin (*1), glass, nitrile rubber, steel, polyacetal resin, urethane resin |          |          |

\*1: Flame-resistant resin, UL94 Standards V-0 or equivalent

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

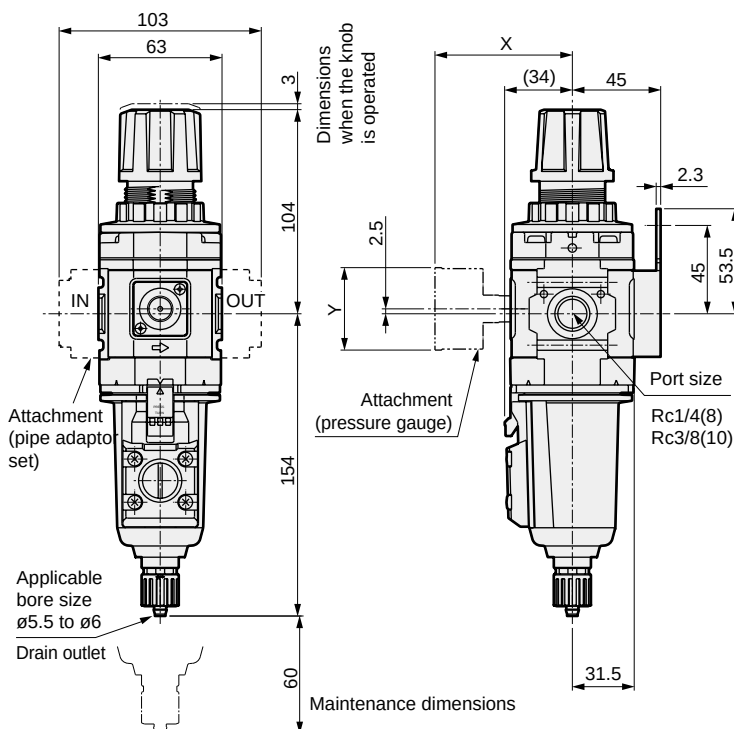
# Filter/Regulator Series



F.R.L.  
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-ProhrR  
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

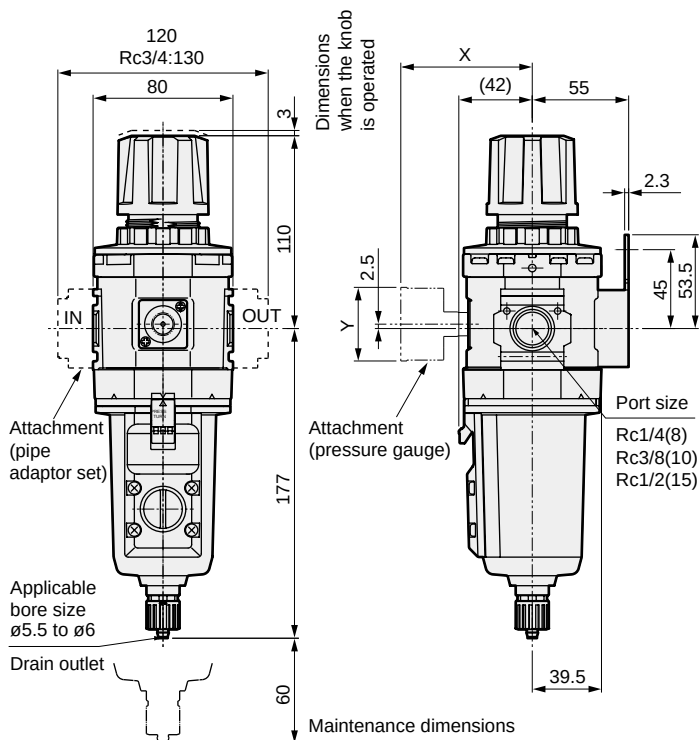
## Dimensions

### ● W3000-G4



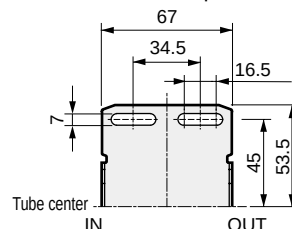
· For the metal bowl (resin cock), the dimensions of the manual drain cock and the auto-drain manual override are the same.  
Note: The C type bracket and pipe adaptor set attachments cannot be used together.

### ● W4000-G4

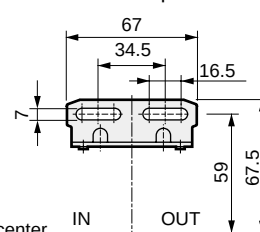


· For the metal bowl (resin cock), the dimensions of the manual drain cock and the auto-drain manual override are the same.  
Note: The C type bracket and pipe adaptor set attachments cannot be used together.

· 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

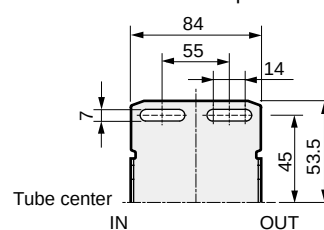


Pressure gauge attached optional dimensions table

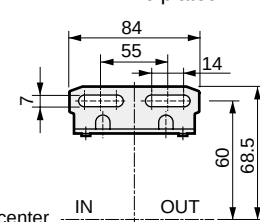
| Pressure gauge | X      | Y           |
|----------------|--------|-------------|
| G49P           | (69.5) | $\phi 43.5$ |
| G59P           | (72)   | $\phi 52$   |

Panel plate thickness: max. 6 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

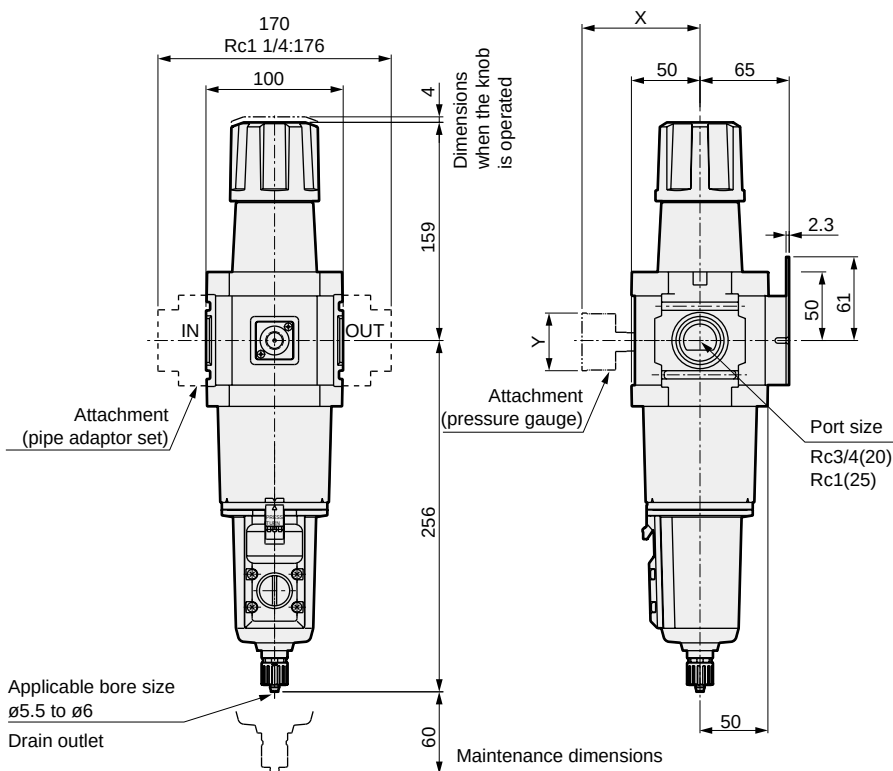
| Pressure gauge | X      | Y           |
|----------------|--------|-------------|
| G49P           | (74.5) | $\phi 43.5$ |
| G59P           | (77)   | $\phi 52$   |

Panel plate thickness: max. 4 mm

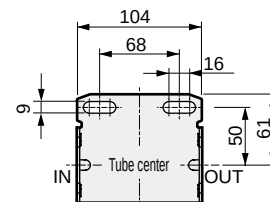
### Dimensions



#### ● W8000-G4



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



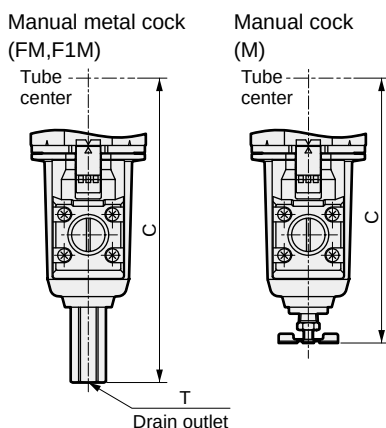
- For the metal bowl (resin cock), the dimensions of the manual drain cock and the auto-drain manual override are the same.
- Note: The C type bracket and pipe adaptor set attachments cannot be used together.

Pressure gauge attached optional dimensions table

| Pressure gauge | X      | Y     |
|----------------|--------|-------|
| G49P           | (84.5) | ø43.5 |
| G59P           | (87)   | ø52   |

### Optional dimensions

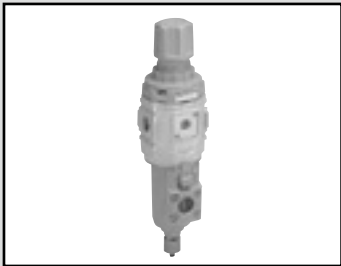
#### ● Metal bowl (metal cock) W3000/4000/8000-G4



Dimensions table

| Model No. | With auto-drain |       | Manual cock |
|-----------|-----------------|-------|-------------|
|           | C               | T     | C           |
| W3000-G4  | 164             | Rc1/4 | 143.5       |
| W4000-G4  | 187             | Rc1/4 | 166.5       |
| W8000-G4  | 266             | Rc1/4 | 245.5       |

|                            |
|----------------------------|
| 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 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                     |

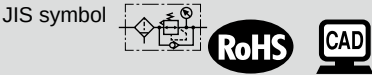


Reverse filter and regulator Flame-resistant series

# W3100/W4100/W8100-G4 Series

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

● Port size: 1/4 to 1



## Specifications

| Item                            | W3100-G4                                             | W4100-G4                            | W8100-G4                       |
|---------------------------------|------------------------------------------------------|-------------------------------------|--------------------------------|
| Working fluid                   | Compressed air                                       |                                     |                                |
| Max. working pressure MPa       | 1.0 (≈150 psi, 10 bar) (*2, *3)                      |                                     |                                |
| Proof pressure MPa              | 1.5 (≈220 psi, 15 bar)                               |                                     |                                |
| Ambient / fluid temperatures °C | 5 (41°F) to 60 (140°F)                               |                                     |                                |
| Filtration rating µm            | 5 or 0.3                                             |                                     |                                |
| Set pressure (*1) MPa           | 0.05 (≈7.3 psi, 0.5 bar) to 0.85 (≈120 psi, 8.5 bar) |                                     |                                |
| Pressure relief                 | With relief mechanism                                |                                     |                                |
| Drain capacity cm <sup>3</sup>  | 45                                                   | 80                                  | 80 (*4)                        |
| Port size Rc,NPT,G              | 1/4, 3/8 (1/2 uses an adaptor)                       | 1/4, 3/8, 1/2 (3/4 uses an adaptor) | 3/4, 1 (1 1/4 uses an adaptor) |
| Weight kg                       | 0.72                                                 | 1.08                                | 2.16                           |
| Standard specifications         | Exterior: Flame-resistant material, metal bowl       |                                     |                                |

\*1: Refer to the set pressure range for the back pressure given on page 260 when selecting the model.

\*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 drain 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: Up to 170m<sup>3</sup> is stored with the manual drain cock only.

\*5: Check that the primary pressure is at least 0.05 MPa more than the secondary pressure.

## Option weight

\* Add to the weight of the standard accessories.

Unit: kg

| Code     | Drain discharge |      |      |      | Bowl material | Press.gauge | Pipe adaptor set |       |       |       |       |       |
|----------|-----------------|------|------|------|---------------|-------------|------------------|-------|-------|-------|-------|-------|
|          | F               | F1   | FF   | FF1  |               |             | A8*W             | A10*W | A15*W | A20*W | A25*W | A32*W |
| W3100-G4 | 0.02            | 0.02 |      |      | 0             | 0           | 0.16             | 0.16  | 0.16  |       |       |       |
| W4100-G4 | 0.02            | 0.02 |      |      | 0             | 0           | 0.16             | 0.16  | 0.16  | 0.16  |       |       |
| W8100-G4 | 0.02            | 0.02 | 0.02 | 0.02 | 0             | 0           |                  |       |       | 0.53  | 0.53  | 0.53  |

| Code     | Attachment |      |       |       |
|----------|------------|------|-------|-------|
|          | BW         | B3W  | G49P  | G59P  |
| W3100-G4 | 0.17       | 0.07 | 0.086 | 0.115 |
| W4100-G4 | 0.21       | 0.11 | 0.086 | 0.115 |
| W8100-G4 | 0.36       |      | 0.086 | 0.115 |



### How to order

**A** Model No. **W3100** - **8** - **G4** - **T8** - **A8W** **G49P**

**B** Port size

**C** Port thread

**D** Option

**E** Display unit  
\*10

**F** Pipe adaptor set  
(included)

**G** Other attachments

Flame-resistant

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

**A** Model No.

**W3100** **W4100** **W8100**

| Code               | Description | W3100 | W4100 | W8100 |
|--------------------|-------------|-------|-------|-------|
| <b>B Port size</b> |             |       |       |       |
| <b>8</b>           | 1/4         | ●     | ●     |       |
| <b>10</b>          | 3/8         | ●     | ●     |       |
| <b>15</b>          | 1/2         |       | ●     |       |
| <b>20</b>          | 3/4         |       |       | ●     |
| <b>25</b>          | 1           |       |       | ●     |

|                      |            |   |   |   |    |
|----------------------|------------|---|---|---|----|
| <b>C Port thread</b> |            |   |   |   | *1 |
| <b>Blank</b>         | Rc thread  | ● | ● | ● |    |
| <b>N</b>             | NPT thread | ● | ● | ● |    |
| <b>G</b>             | G thread   | ● | ● | ● |    |

|                 |              |                                                          |    |   |        |
|-----------------|--------------|----------------------------------------------------------|----|---|--------|
| <b>D Option</b> |              |                                                          |    |   | *2, *3 |
| Drain discharge | <b>Blank</b> | Manual drain cock                                        | ●  | ● | ●      |
|                 | <b>F</b>     | Auto-drain, man OVRD (NO: no press→Exhaust)              | ●  | ● | ●      |
|                 | <b>F1</b>    | Auto-drain, man OVRD (NC: no press→no exhaust)           | ●  | ● | ●      |
|                 | <b>FF</b>    | Large auto-drain, man OVRD (NO: no press→Exhaust)        |    |   | ●      |
| Bowl material   | <b>Blank</b> | Metal bowl (resin cock)                                  | ●  | ● | ●      |
|                 | <b>M</b>     | Metal bowl (metal cock)                                  | ●  | ● | ●      |
| Element         | <b>Blank</b> | 5 μm                                                     | ●  | ● | ●      |
|                 | <b>Y</b>     | 0.3 μm (submicron)                                       | *5 | ● | ●      |
| Pressure range  | <b>Blank</b> | 0.05 to 0.85 MPa                                         | ●  | ● | ●      |
|                 | <b>L</b>     | 0.05 to 0.35 MPa                                         | *6 | ● | ●      |
| Pressure relief | <b>Blank</b> | With relief mechanism                                    | ●  | ● | ●      |
|                 | <b>N</b>     | Non-relief                                               | ●  | ● | ●      |
| Pressure gauge  | <b>T</b>     | No pressure gauge (gauge port (1/4) is assembled sealed) | ●  | ● | ●      |
|                 | <b>T8</b>    | Pressure gauge ready (gauge port (1/4) is left open)     | ●  | ● | ●      |
| Flow direction  | <b>Blank</b> | Standard flow (left → right)                             | ●  | ● | ●      |
|                 | <b>X1</b>    | Reverse flow (right → left)                              | ●  | ● | ●      |

|                       |                                                                           |   |   |   |
|-----------------------|---------------------------------------------------------------------------|---|---|---|
| <b>E Display unit</b> |                                                                           |   |   |   |
| <b>Blank</b>          | MPa display (Rc thread), psi display (NPT thread), bar display (G thread) | ● | ● | ● |
| <b>J1</b>             | MPa display (NPT, G thread)                                               | ● | ● | ● |

|                                      |                                |   |   |   |             |
|--------------------------------------|--------------------------------|---|---|---|-------------|
| <b>F Pipe adaptor set (included)</b> |                                |   |   |   | Page 350 *7 |
| <b>Blank</b>                         | Not included                   | ● | ● | ● |             |
| <b>A8*W</b>                          | 1/4 pipe adaptor set (white)   | ● | ● |   |             |
| <b>A10*W</b>                         | 3/8 pipe adaptor set (white)   | ● | ● |   |             |
| <b>A15*W</b>                         | 1/2 pipe adaptor set (white)   | ● | ● |   |             |
| <b>A20*W</b>                         | 3/4 pipe adaptor set (white)   |   | ● | ● |             |
| <b>A25*W</b>                         | 1 pipe adaptor set (white)     |   |   | ● |             |
| <b>A32*W</b>                         | 1 1/4 pipe adaptor set (white) |   |   | ● |             |

|                         |            |   |   |   |
|-------------------------|------------|---|---|---|
| <b>* Adaptor thread</b> |            |   |   |   |
| <b>Blank</b>            | Rc thread  | ● | ● | ● |
| <b>N</b>                | NPT thread | ● | ● | ● |
| <b>G</b>                | G thread   | ● | ● | ● |

|                            |                            |   |   |   |                   |
|----------------------------|----------------------------|---|---|---|-------------------|
| <b>G Other attachments</b> |                            |   |   |   | Pages 346, 363 *9 |
| <b>Blank</b>               | Not included               | ● | ● | ● |                   |
| <b>BW</b>                  | C type bracket (silver)    | ● | ● | ● |                   |
| <b>B3W</b>                 | *8 L type bracket (silver) | ● | ● |   |                   |
| <b>G49P</b>                | G49D-8-P10(L:G49D-8-P04)   | ● | ● | ● |                   |
| <b>G59P</b>                | G59D-8-P10(L:G59D-8-P04)   | ● | ● | ● |                   |

### ⚠ Precautions for model No. selection

- \*1: G threads and NPT threads are available for IN, OUT, gauge port and drain outlet (metal bowl (metal cock) 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 direction 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 268 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: The pipe adaptor set and C type bracket cannot be used together.
- \*8: For details on mounting the L type bracket, refer to (2. Regulator) of "⚠ Cautions and Installation & Adjustment" (page 357).
- \*9: The pressure gauge (included) can be selected only when **C** Port thread is Rc thread.
- \*10: 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.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  
Outdris 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

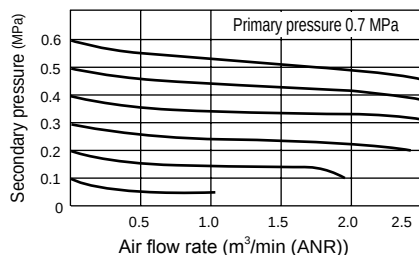


# Filter/Regulator Series

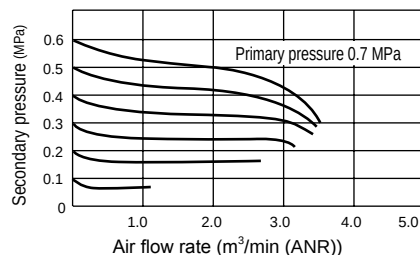
|               |
|---------------|
| F.R.L.        |
| F.R.          |
| F (Filtr)     |
| R (Reg)       |
| L (Lub)       |
| Drain         |
| Separ         |
| Mech          |
| Press SW      |
| Res press     |
| exh valve     |
| SlowStart     |
| Anti-bac/Bac- |
| remove Filtr  |
| Film          |
| 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        |

## Flow characteristics

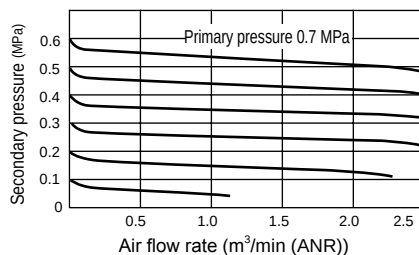
### ● W3100-8-G4



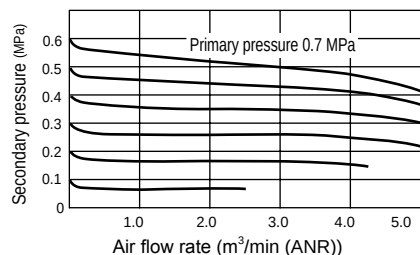
### ● W3100-10-G4



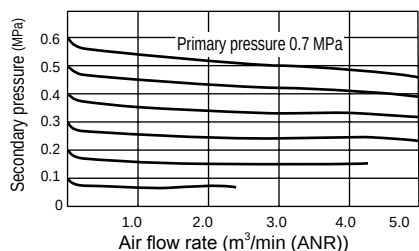
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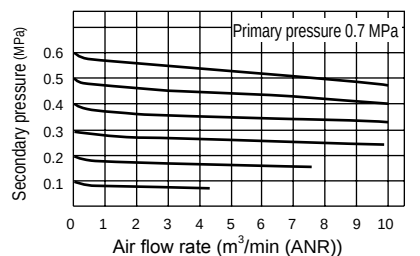
### ● W4100-10-G4



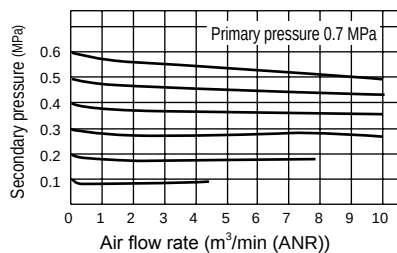
### ● W4100-15-G4



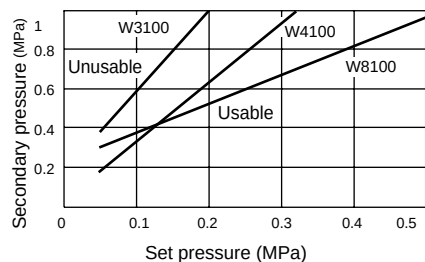
### ● W8100-20-G4



### ● W8100-25-G4



### ● Set pressure range to back pressure

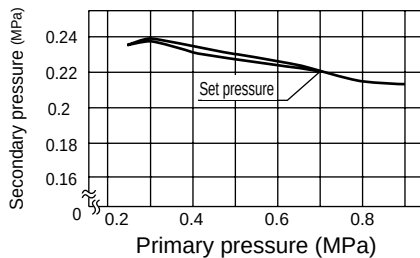


Note: The area above the graph line shows the unusable range and that below the graph line shows the usable range.

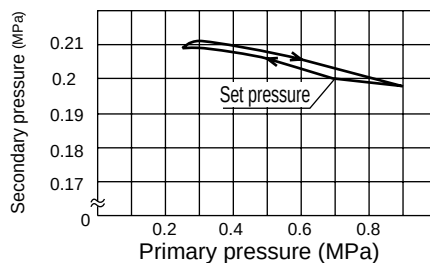
Example: If W4100 is set to set pressure 0.2 MPa and the secondary back pressure is 0.6 MPa or more, the secondary pressure will not be released to the primary side.

## Pressure characteristics

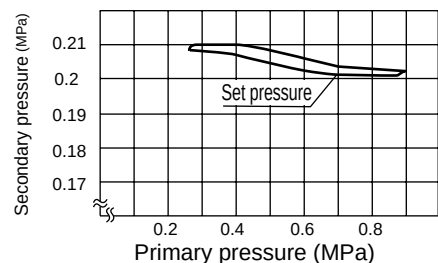
### ● W3100-G4



### ● W4100-G4



### ● W8100-G4

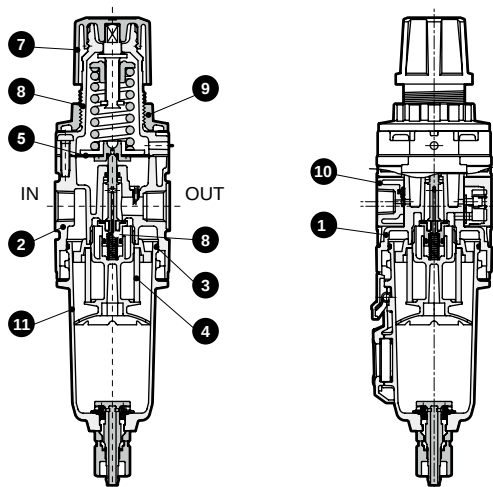


# Filter/Regulator series

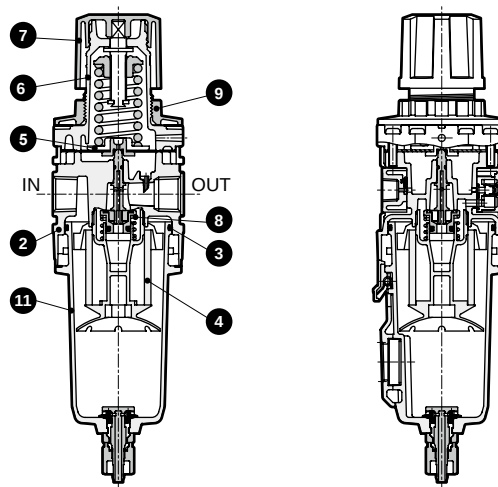
## Internal structure and parts list

### Internal structure and parts list

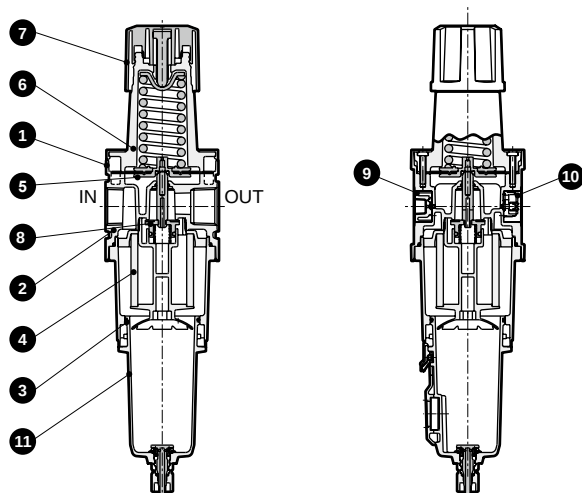
#### ● W3100-G4



#### ● W4100-G4



#### ● W8100-G4



| No. | Part name                  | Material                                                                              |          |          |
|-----|----------------------------|---------------------------------------------------------------------------------------|----------|----------|
|     |                            | W3100-G4                                                                              | W4100-G4 | W8100-G4 |
| 1   | Plate cover                | ABS resin (*1)                                                                        |          |          |
| 2   | Body                       | Aluminum alloy die-casting                                                            |          |          |
| 3   | O-ring                     | Special nitrile rubber                                                                |          |          |
| 4   | Element                    | Polypropylene                                                                         |          |          |
| 5   | Diaphragm assembly         | Zinc alloy die-casting, nitrile rubber                                                |          |          |
| 6   | Cover                      | Aluminum alloy die-casting                                                            |          |          |
| 7   | Knob                       | PBT resin (*1)                                                                        |          |          |
| 8   | Valve assembly             | Copper alloy, hydrogenated nitrile rubber (polyacetal resin: W3100, 4100)             |          |          |
| 9   | Gauge plug assembly        | Polyamide resin (*1), nitrile rubber, steel                                           |          |          |
| 10  | Check valve total assembly | PBT resin, nitrile rubber, stainless steel wire, steel, aluminum                      |          |          |
| 11  | Bowl assembly              | Al alloy die-cast, PBT resin (*1), glass, nitrile rubber, steel, POM resin, URE resin |          |          |
| 12  | Mounting nut               | PBT resin (*1)                                                                        |          |          |

\*1 : Flame-resistant resin, UL94 Standards V-0 or equivalent

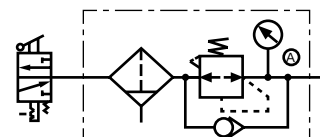
\*2 : Refer to page 264 for repair parts kit model No.

### 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 range of the regulator corresponding to the back pressure shown in the graph. (Refer to page 260 for the graph)

#### ● Circuit diagram



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 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        |

# Filter/Regulator Series



F.R.L. Dimensions

F.R. ● W3100-G4

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  
Outdr 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

WaterRtSens

TotAirSys (Total Air)

TotAirSys (Gamma)

Gas generator

RefrDry

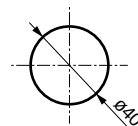
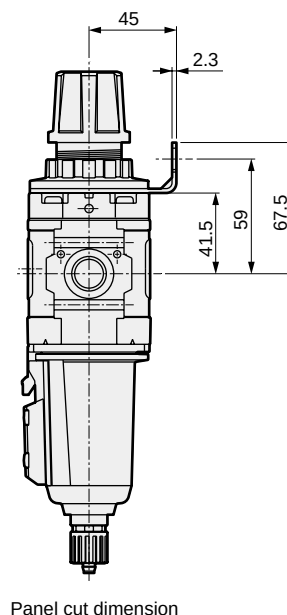
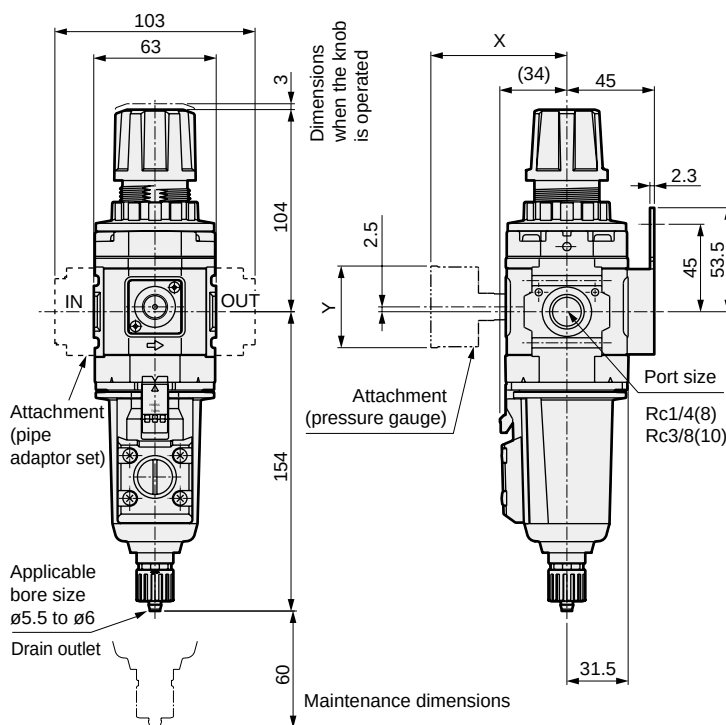
DesicDry

HiPolymDry

MainFiltr

Dischrg etc

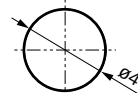
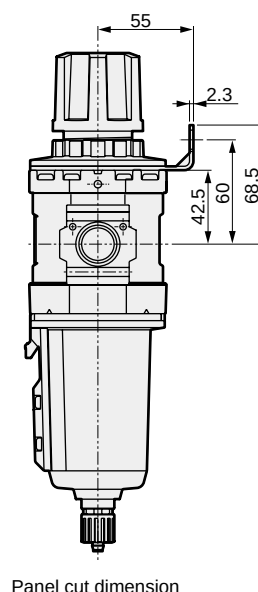
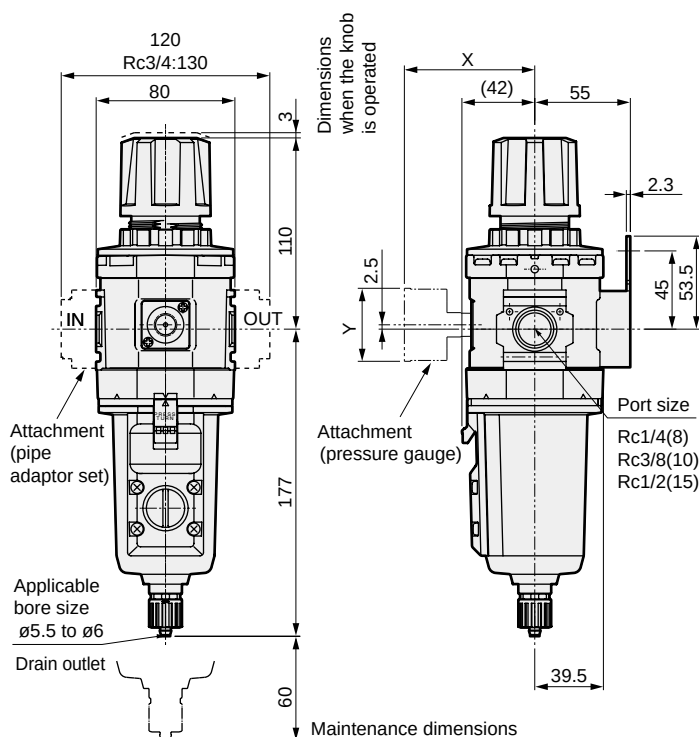
Ending



Panel plate thickness: max. 6 mm

· For the metal bowl (resin cock), the dimensions of the manual drain cock and the auto-drain manual override are the same.  
Note: The C type bracket and pipe adaptor set attachments cannot be used together.

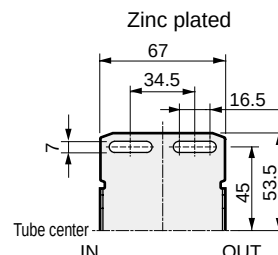
● W4100-G4



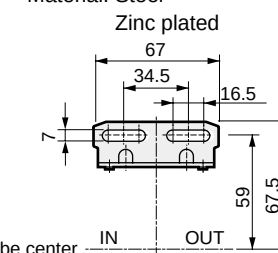
Panel plate thickness: max. 4 mm

· For the metal bowl (resin cock), the dimensions of the manual drain cock and the auto-drain manual override are the same.  
Note: The C type bracket and pipe adaptor set attachments cannot be used together.

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



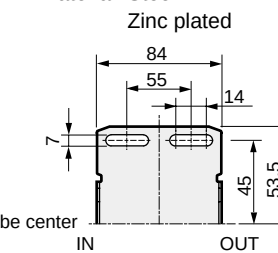
L type bracket (-B3W)  
Part model No.: B330  
· Material: Steel



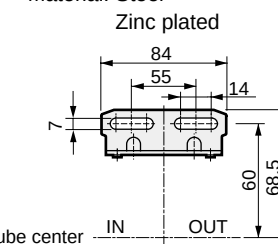
Pressure gauge attached optional dimensions table

| Pressure gauge | X      | Y     |
|----------------|--------|-------|
| G49P           | (69.5) | ø43.5 |
| G59P           | (72)   | ø52   |

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



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



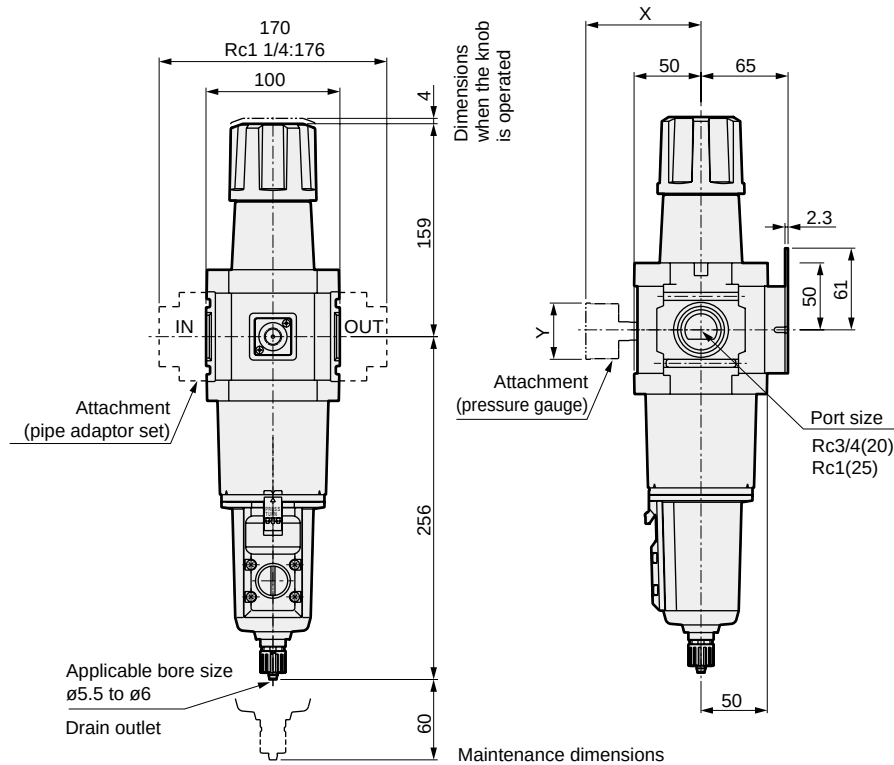
Pressure gauge attached optional dimensions table

| Pressure gauge | X      | Y     |
|----------------|--------|-------|
| G49P           | (74.5) | ø43.5 |
| G59P           | (77)   | ø52   |

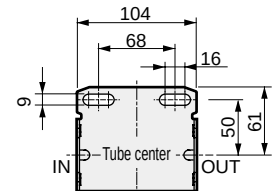
### Dimensions



#### ● W8100-G4



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



- For the metal bowl (resin cock), the dimensions of the manual drain cock and the auto-drain manual override are the same.
- Note: The C type bracket and pipe adaptor set attachments cannot be used together.

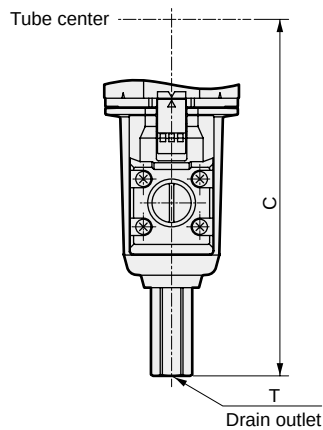
Pressure gauge attached optional dimensions table

| Pressure gauge | X      | Y     |
|----------------|--------|-------|
| G49P           | (84.5) | ø43.5 |
| G59P           | (87)   | ø52   |

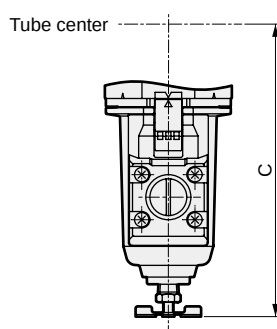
### Optional dimensions

#### ● Metal bowl (metal cock) W3100-G4/W4100-G4/W8100-G4

Manual metal cock (FM, F1M)



Manual cock (M)

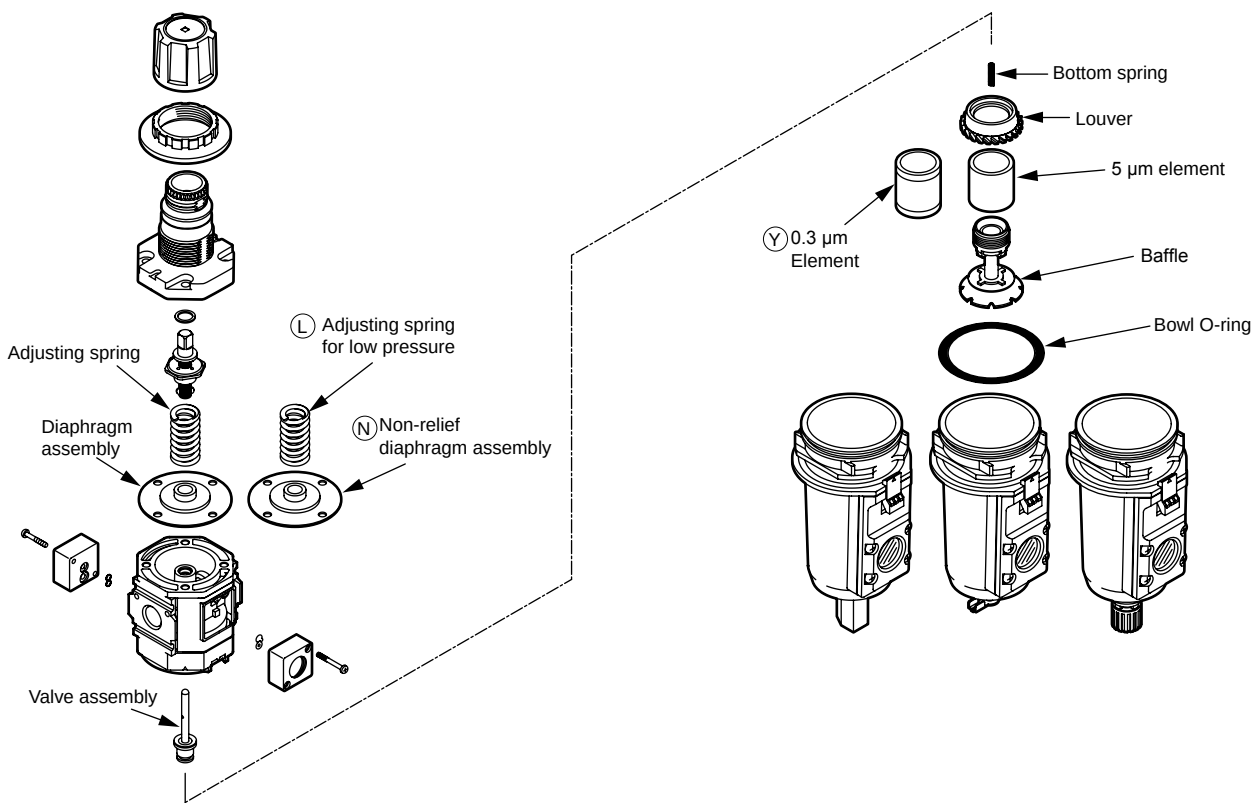


Dimensions table

| Model No. | With auto-drain |       | Manual cock |
|-----------|-----------------|-------|-------------|
|           | C               | T     | C           |
| W3100-G4  | 164             | Rc1/4 | 143.5       |
| W4100-G4  | 187             | Rc1/4 | 166.5       |
| W8100-G4  | 266             | Rc1/4 | 245.5       |

# Filter/Regulator Series

## 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)  |
| W3000-G4,W3100-G4           | W3000-KIT            | W3000-KIT-N          | W3000-KIT-Y        | W3000-KIT-NY         |
| W4000-G4,W4100-G4           | W4000-KIT            | W4000-KIT-N          | W4000-KIT-Y        | W4000-KIT-NY         |
| W8000-G4,W8100-G4           | W8000-KIT            | W8000-KIT-N          | W8000-KIT-Y        | W8000-KIT-NY         |

### Valve assembly (set of valve assembly and bottom spring)

| Model             | Valve assembly model No. |
|-------------------|--------------------------|
| W3000-G4,W3100-G4 | W3000-VALVE-ASSY         |
| W4000-G4,W4100-G4 | W4000-VALVE-ASSY         |
| W8000-G4,W8100-G4 | W8000-VALVE-ASSY         |

\* Refer to the regulator options and parts table (page 286) for details on the adjusting spring, diaphragm, check valve assembly for reverse regulator, and gauge plug assembly. Refer to the air filter options and parts table (page 272) for details on the element and bowl assembly.