



Regulator Standard White Series

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

Compact, pressure gauge embedded.

● Port size: 1/8 to 1

JIS symbol



Specifications

Item	R1000-W	R2000-W	R3000-W	R4000-W	R6000-W	R8000-W
Appearance						
Working fluid	Compressed air					
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)					
Proof pressure MPa	1.5 (≈220 psi, 15 bar)					
Ambient / fluid temperatures °C	5 (41°F) to 60 (140°F)					
Set pressure MPa	0.05 (≈7.3 psi, 0.5 bar) to 0.85 (≈120 psi, 8.5 bar)					
Pressure relief	With relief mechanism					
Port size Rc,NPT,G	1/8, 1/4 (3/8 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Weight kg	0.16	0.31	0.45	0.7	1.0	1.6
Standard accessories	Pressure gauge, nut for panel mount					Pressure gauge

*1: The ambient / fluid temperatures is 5 to 50°C for pressure switch with display PPR assembly "RN"/"RP" or digital pressure sensor PPX attachment "R2".

Option weight

* Add to the weight of the standard accessories.

Unit: kg

Code	Pressure gauge		Pipe adaptor set							Attachment		
	T*	RN/RP	A6*W	A8*W	A10*W	A15*W	A20*W	A25*W	A32*W	BW	B3W	B4W
R1000	0	0.04	0.09	0.09	0.09					0.1	0.04	
R2000	0	0.04		0.16	0.16	0.16				0.15	0.06	0.17
R3000	0	0.04		0.16	0.16	0.16				0.17	0.07	
R4000	0	0.04		0.16	0.16	0.16	0.16			0.21	0.11	
R6000	0	0.04					0.53	0.53	0.53	0.34	0.11	
R8000	0	0.04					0.53	0.53	0.53	0.36		

Code	Attachment					
	G45P	G49P	G59P	G40P	G52P	R2
R1000	0.074	0.086	0.115	0.085	0.15	0.04
R2000	0.074	0.086	0.115	0.085	0.15	0.04
R3000	0.074	0.086	0.115	0.085	0.15	0.04
R4000	0.074	0.086	0.115	0.085	0.15	0.04
R6000	0.074	0.086	0.115	0.085	0.15	0.04
R8000	0.074	0.086	0.115	0.085	0.15	0.04

Ozone-proof specs (Ending Page 12)

Clean-room specs (Catalog No. CB-033SA)

Specs for rechargeable battery (Catalog No. CC-1226A)

R*000 - ... - W... - P11

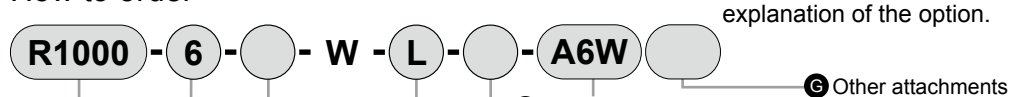
● Anti-dust generation structure for use in cleanrooms

● Structure compatible with rechargeable battery manufacturing process

R*000 - - P7*

R*000 - - P4*

How to order



		A Model No.					
		R1000	R2000	R3000	R4000	R6000	R8000
B Port size							
Code	Description						
6	1/8	●					
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							
Pressure range	Blank	0.05 to 0.85 MPa	●	●	●	●	●
	L	0.05 to 0.35 MPa *3	●	●	●	●	●
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 included option *4	●	●	●	●	●
	RN	Pressure switch with display PPR mounted (NPN output 1 point)	●	●	●	●	●
Flow direction	Blank	Standard flow (left → right)	●	●	●	●	●
	X1	Reverse flow (right → left)	●	●	●	●	●
E Display unit							
Blank	MPa display (Rc thread), psi display (NPT thread), bar display (G thread)	●	●	●	●	●	●
J1	MPa display (NPT, G thread)	●	●	●	●	●	●
F Pipe adaptor set (included)							
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	●	●	●	●	●	●
G Other attachments							
Blank	Not included	●	●	●	●	●	●
BW	C type bracket	●	●	●	●	●	●
B3W	L type bracket *8	●	●	●	●	●	●
B4W	B type bracket		●				
G45P	G45D-8-P10(L:G45D-8-P04)	●	●	●	●	●	●
G49P	G49D-8-P10(L:G49D-8-P04)	●	●	●	●	●	●
G59P	G59D-8-P10(L:G59D-8-P04)	●	●	●	●	●	●
G40P	G40D-8-P10(L:G40D-8-P04)	●	●	●	●	●	●
G52P	G52D-8-P10(L:G52D-8-P10)	●	●	●	●	●	●
R2 *4	Digital pressure sensor: PPX-R10N-6M	●	●	●	●	●	●

⚠ Precautions for model No. selection

- *1: G threads and NPT threads are available for IN, OUT and gauge ports.
- *2: When selecting options for several items, list options in order from the top.
- *3: The pressure gauge's indication range is 0 to 0.4 MPa for the option "L".
- *4: 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.
- *5: The pipe adaptor set and C type bracket cannot be used together.
- *6: The joiner set is enclosed with the pipe adaptor set.
- *7: The pressure gauge and digital pressure sensor (included) can be selected only when **C** Port thread is Rc thread.
- *8: For details on mounting the L type bracket, refer to (2. Regulator) of "⚠ Cautions and Installation & Adjustment" (page 357).
- *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 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

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

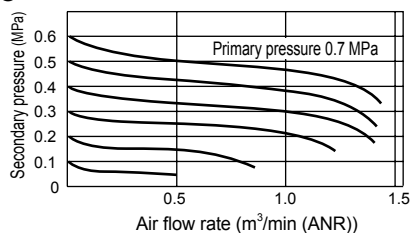
Dischrg

etc

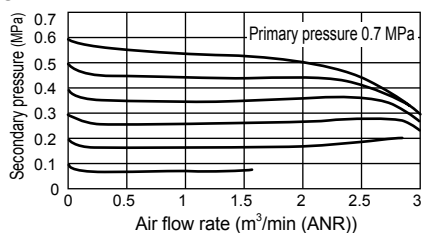
Ending

Flow characteristics

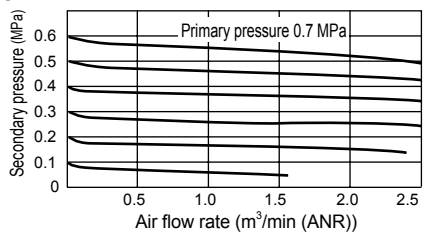
● R1000-6-W



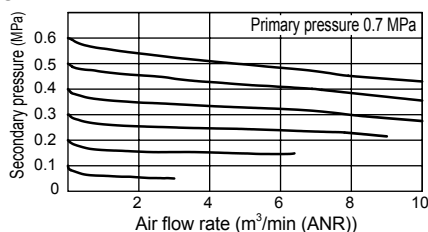
● R2000-10-W



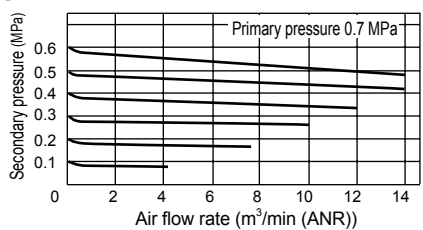
● R4000-8-W



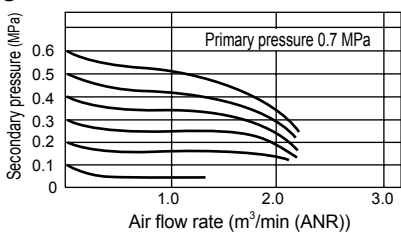
● R6000-20-W



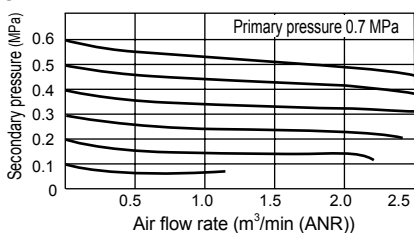
● R8000-20-W



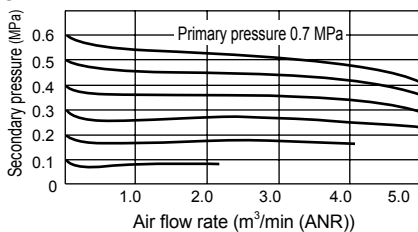
● R1000-8-W



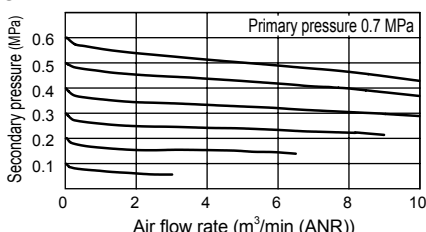
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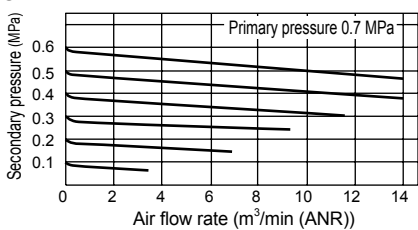
● R4000-10-W



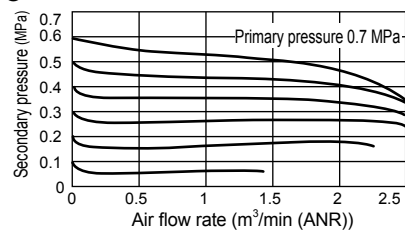
● R6000-25-W



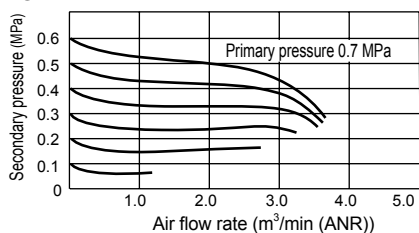
● R8000-25-W



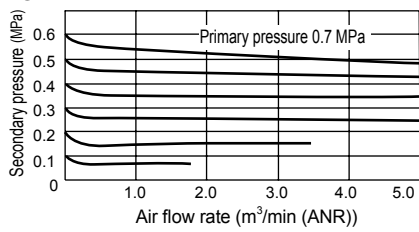
● R2000-8-W



● R3000-10-W

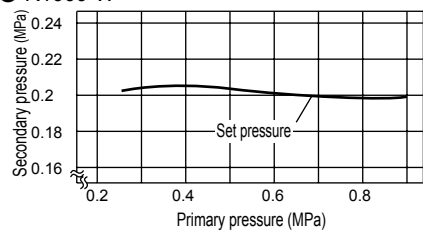


● R4000-15-W

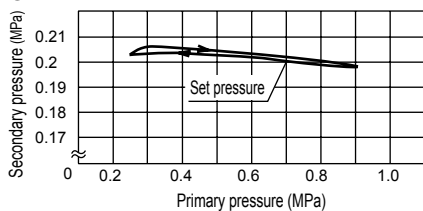


Pressure characteristics

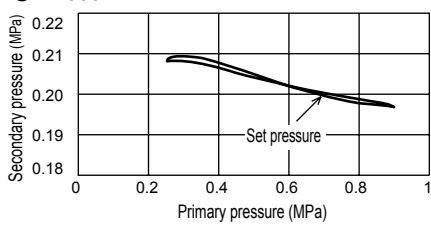
● R1000-W



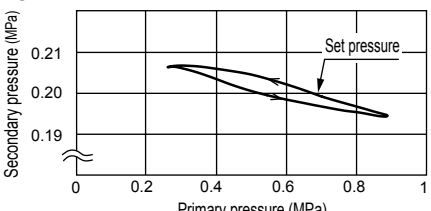
● R4000-W



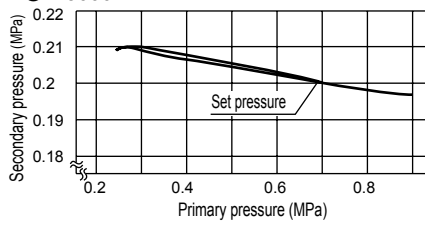
● R2000-W



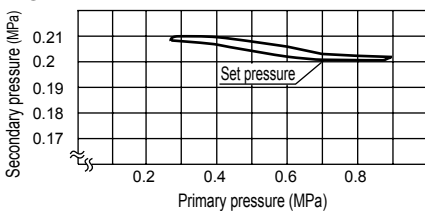
● R6000-W



● R3000-W

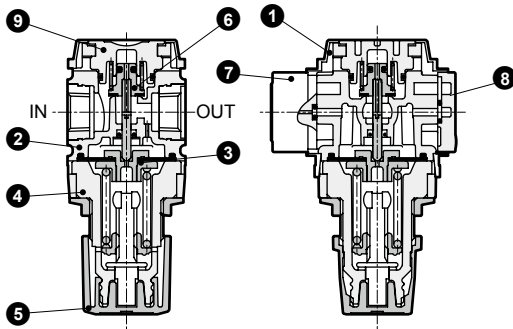


● R8000-W

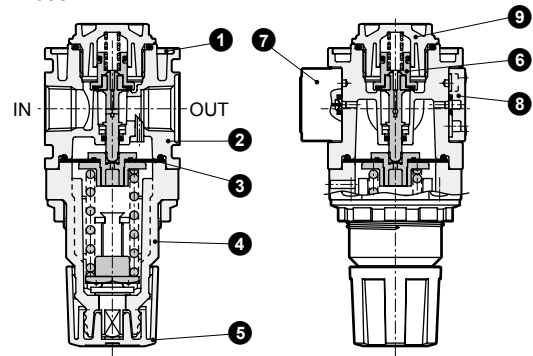


Internal structure and parts list

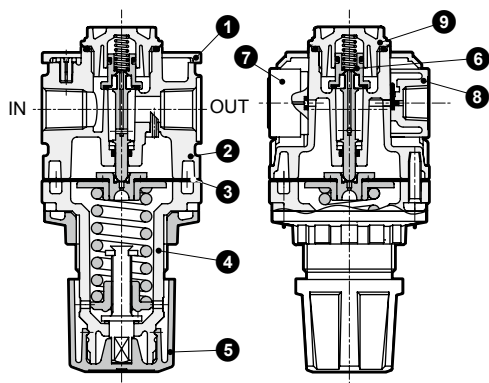
● R1000-W



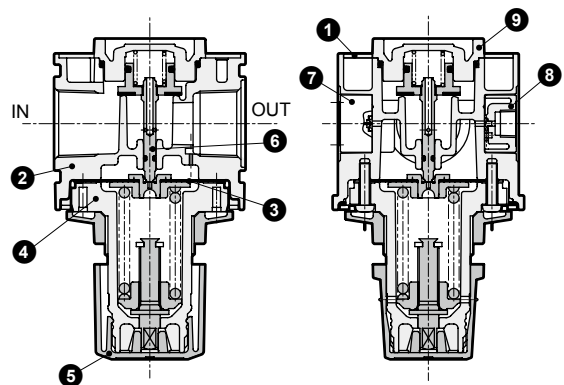
● R2000-W



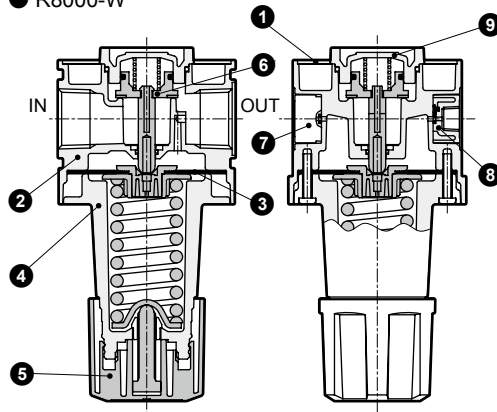
● R3000-W/R4000-W



● R6000-W



● R8000-W



No.	Part name	Material					
		R1000-W	R2000-W	R3000-W	R4000-W	R6000-W	R8000-W
1	Plate cover	ABS resin					
2	Body	Polyamide resin, steel	Aluminum alloy die-casting	Aluminum alloy die-casting			
3	Diaphragm assembly	Polyacetal resin nitrile rubber		Zinc alloy die-casting, nitrile rubber *3			
4	Cover	Polyamide resin	PBT resin				Aluminum alloy die-casting
5	Knob	Polyacetal resin					
6	Valve assembly	Copper alloy, hydrogenated nitrile rubber (polyacetal resin: R2000, R3000, 4000, 8000)					
7	Pressure gauge assembly	PBT resin, nitrile rubber, polyacetal resin, polycarbonate resin, copper alloy, steel					
8	Gauge plug assembly	-	-	Polyamide resin, nitrile rubber, steel			
	Blanking plug assembly *1	PBT resin, nitrile rubber, copper		-		-	-
9	Bottom plug *4	Polyacetal resin				Aluminum alloy die-casting	

*1: A blanking plug is attached to R1000-W and R2000-W standard types.

*2: Refer to page 151 for repair parts.

*3: Aluminum is added for the R6000-W low-pressure type.

*4: The material of RM3000-W and RM4000-W Series is aluminum die-casting.

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

Regulator Series



F.R.L.

Dimensions

F.R.

● R1000-W

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

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

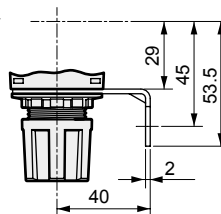
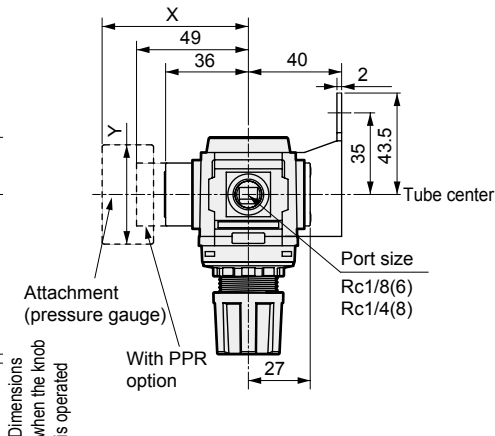
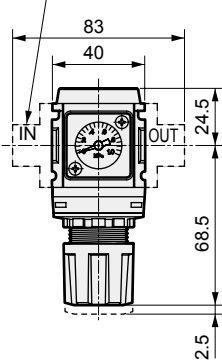
MainFiltr

Dischrg

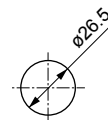
etc

Ending

Attachment
A□W (pipe adaptor set)



Panel cut dimension



Panel plate thickness: max. 6 mm

Pressure gauge attached optional dimensions table

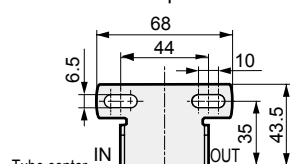
Pressure gauge	X	Y
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G52P	(86)	ø52.5
R2	(74)	□30

Attachment

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

Material: Steel

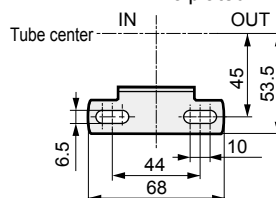
Zinc plated



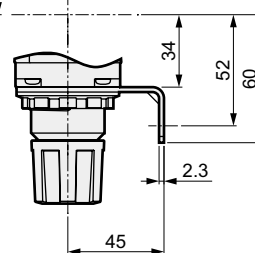
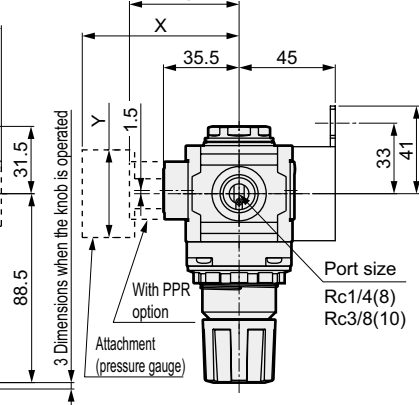
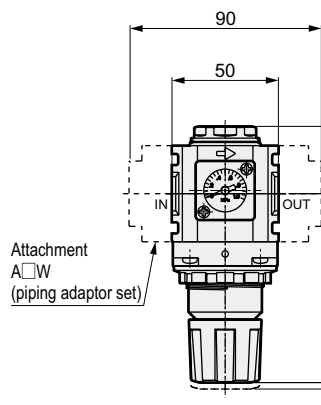
L type bracket (-B3W)
Part model No.: B130

Material: Steel

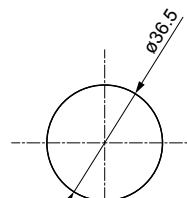
Zinc plated



● R2000-W



Panel cut dimension



Panel plate thickness: max. 4 mm

Pressure gauge attached optional dimensions table

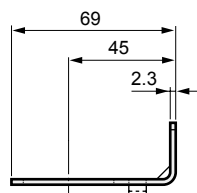
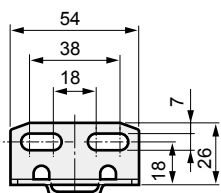
Pressure gauge	X	Y
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G59P	(75.5)	ø52
G40P	(75)	ø42.5
G52P	(85.5)	ø52.5
R2	(73)	□30

● L type bracket (-B3W)

Part model No.: B230

Material: Steel

Zinc plated

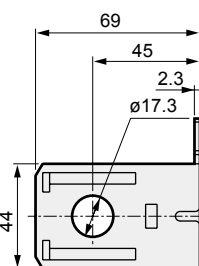
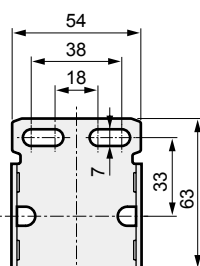


● C type bracket (-BW)

Part model No.: B220

Material: Steel

Zinc plated

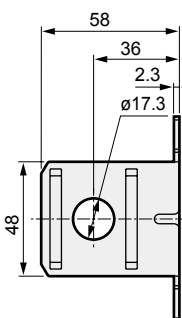
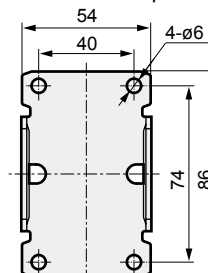


● B type bracket (-B4W)

Part model No.: B240

Material: Steel

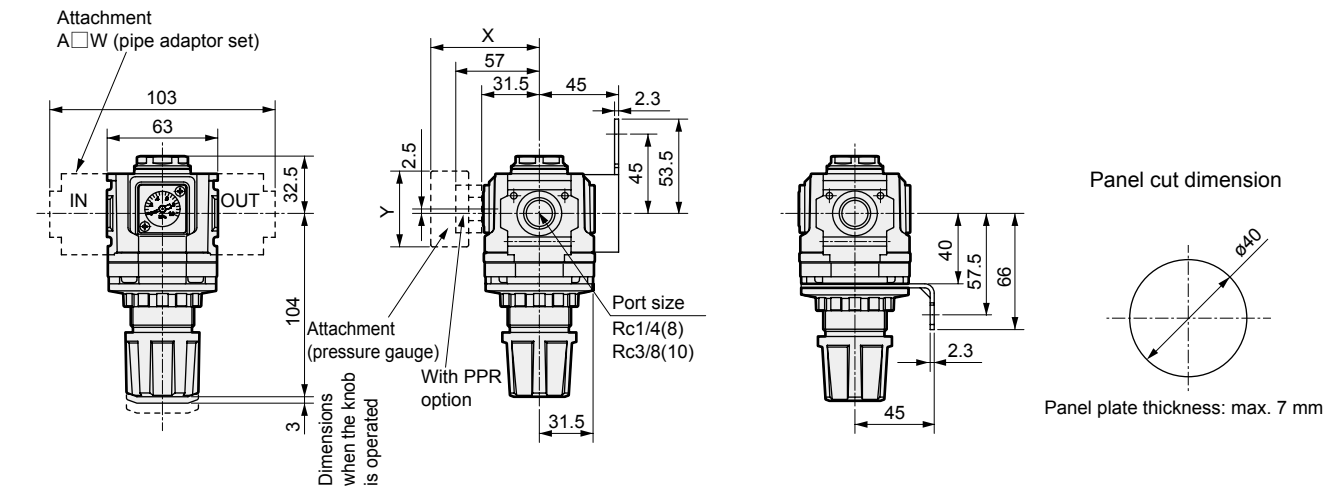
Zinc plated



Dimensions



● R3000-W



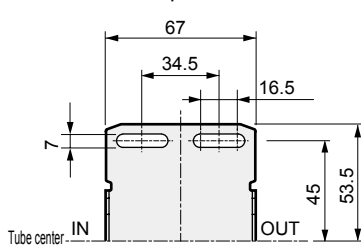
· Attachment (C type bracket)

C type bracket (-BW)

Part model No.: B320

· Material: Steel

Zinc plated

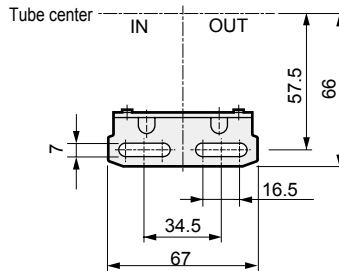


L type bracket (-B3W)

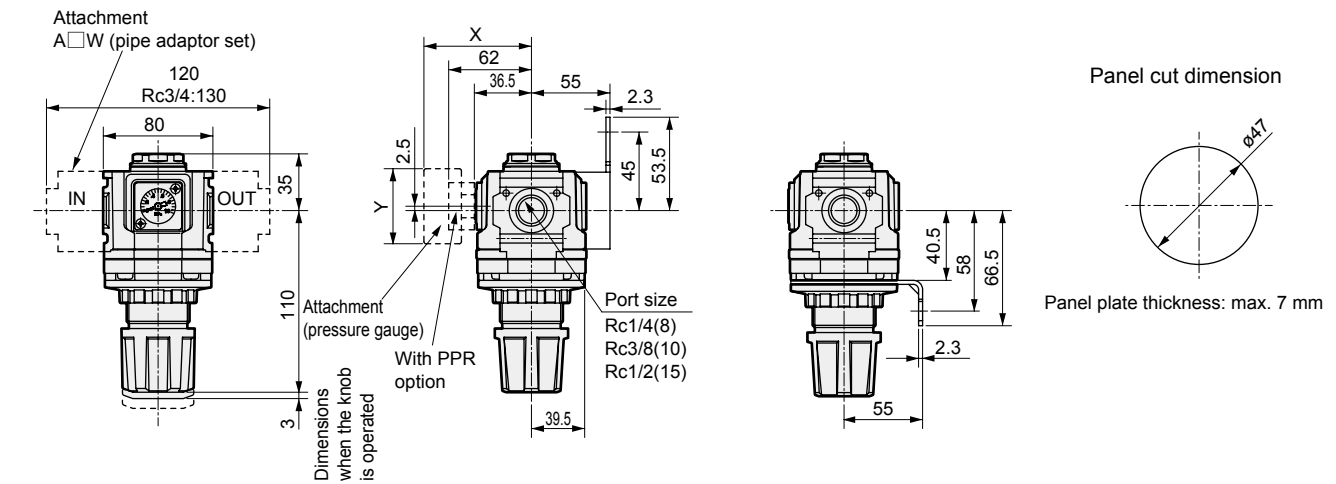
Part model No.: B330

· Material: Steel

Zinc plated



● R4000-W



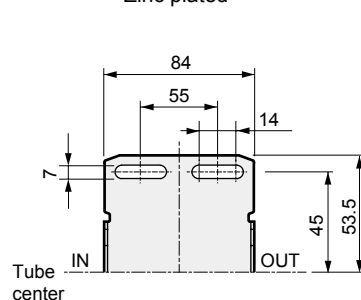
· Attachment

C type bracket (-BW)

Part model No.: B420

· Material: Steel

Zinc plated

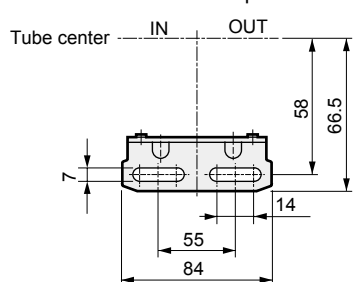


L type bracket (-B3W)

Part model No.: B430

· Material: Steel

Zinc plated



Pressure gauge attached optional dimensions table

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

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

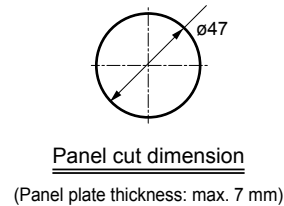
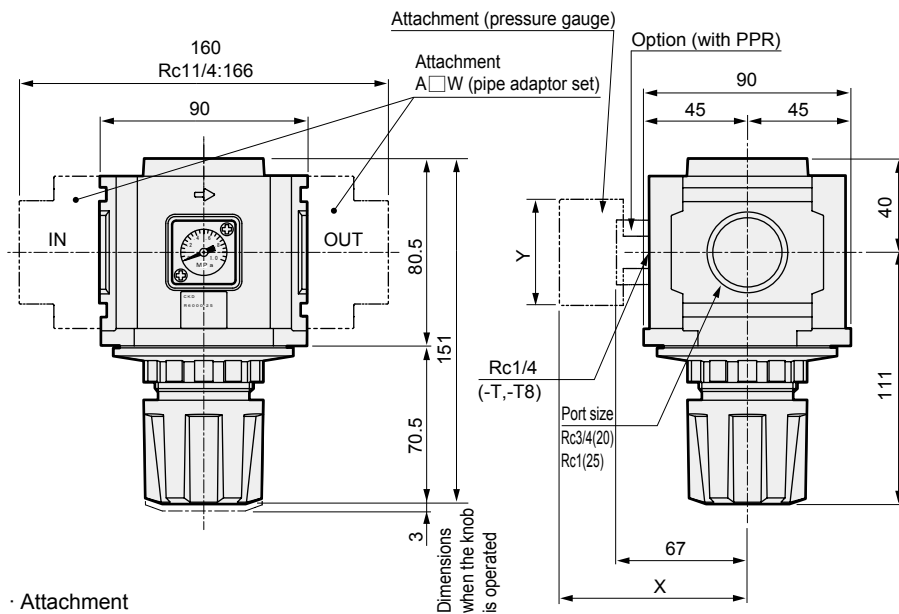
Regulator series



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

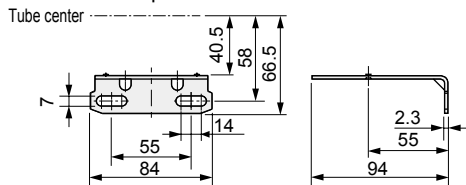
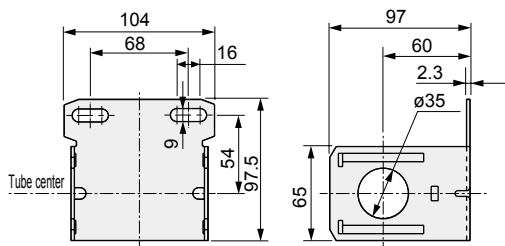
Dimensions

● R6000-W



· Attachment
C type bracket (-BW)
Part model No.: B620
· Material: Steel
Zinc plated

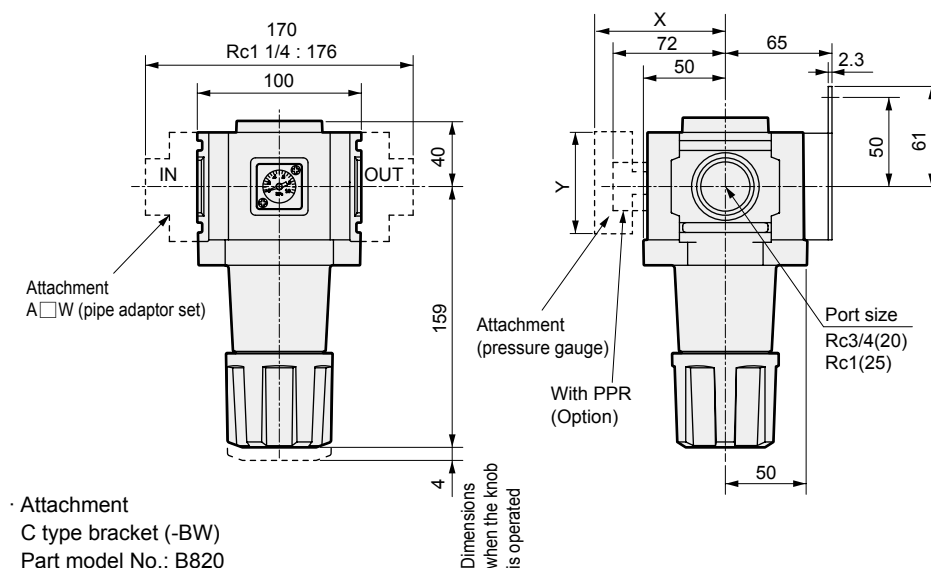
L type bracket (-B3W)
Part model No.: B430
· Material: Steel
Zinc plated



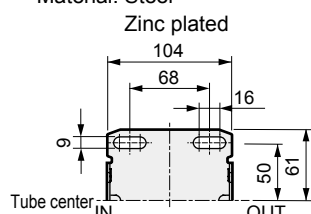
Pressure gauge attached optional dimensions table

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

● R8000-W



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



Pressure gauge attached optional dimensions table

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

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

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
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



Reverse regulator Standard White Series
**R1100/R2100/R3100
R4100/R6100/R8100-W Series**
From secondary pressure to primary side with reverse flow function built in.
● Port size: 1/8 to 1
JIS symbol



Specifications

Item	R1100-W	R2100-W	R3100-W	R4100-W	R6100-W	R8100-W
Appearance						
Working fluid	Compressed air					
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)					
Proof pressure MPa	1.5 (≈220 psi, 15 bar)					
Ambient / fluid temperatures °C	5 (41°F) to 60 (140°F)					
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					
Port size Rc,NPT,G	1/8,1/4 (3/8 uses an adaptor)	1/4,3/8 (1/2 uses an adaptor)	1/4,3/8 (1/2 uses an adaptor)	1/4,3/8,1/2 (3/4 uses an adaptor)	3/4,1 (1 1/4 uses an adaptor)	3/4,1 (1 1/4 uses an adaptor)
Weight kg	0.16	0.31	0.45	0.7	1.0	1.6
Standard accessories	Pressure gauge, nut for panel mount					Pressure gauge

*1: Refer to the set pressure range for the back pressure given on page 146 when selecting the model.
*2: The ambient / fluid temperatures is 5 to 50°C for the pressure switch with display PPR assembly "RN"/"RP" or digital pressure sensor PPX attachment "R2".
*3: 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	Pressure gauge		Pipe adaptor set							Attachment		
	T*	RN/RP	A6*W	A8*W	A10*W	A15*W	A20*W	A25*W	A32*W	BW	B3W	B4W
R1100	0	0.04	0.09	0.09	0.09					0.1	0.04	
R2100	0	0.04		0.16	0.16	0.16				0.15	0.06	0.17
R3100	0	0.04		0.16	0.16	0.16				0.17	0.07	
R4100	0	0.04		0.16	0.16	0.16	0.16			0.21	0.11	
R6100	0	0.04					0.53	0.53	0.53	0.34	0.11	
R8100	0	0.04					0.53	0.53	0.53	0.36		

Code	Attachment					
	G45P	G49P	G59P	G40P	G52P	R2
R1100	0.074	0.086	0.12	0.085	0.15	0.04
R2100	0.074	0.086	0.12	0.085	0.15	0.04
R3100	0.074	0.086	0.12	0.085	0.15	0.04
R4100	0.074	0.086	0.12	0.085	0.15	0.04
R6100	0.074	0.086	0.12	0.085	0.15	0.04
R8100	0.074	0.086	0.12	0.085	0.15	0.04

Ozone-proof specs (Ending Page 13) Clean-room specs (Catalog No. CB-033SA) Specs for rechargeable battery (Catalog No. CC-1226A)

R*100 - ...W... - P11

● Anti-dust generation structure for use in cleanrooms ● Structure compatible with rechargeable battery manufacturing process

R*100 - - P7*

R*100 - - P4*

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



A Model No.

B Port size

C Port thread

D Option

● Display unit
*10

Precautions for model No. selection

- *1: G and NPT threads are available for IN, OUT and gauge ports.
- *2: 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: The pressure gauge's indication range is 0 to 0.4 MPa for the option "L".
- *5: When the option "T6" is selected, only "Blank" or "R2" can be selected for  Other attachments. The digital pressure sensor PPX mounting port (Rc1/8) is left open.
- *6: The pipe adaptor set and C type bracket cannot be used together.
- *7: The joiner set is enclosed with the pipe adaptor set.
- *8: The pressure gauge and digital pressure sensor (included) can be selected only when  Rc thread is Rc thread.
- *9: For details on mounting the L type bracket, refer to (2. Regulator) of " Cautions and Installation & Adjustment" (page 357).
- *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.

- **G** Other attachments

Refer to page 30 for the explanation of the option.

A6W

Other attachments

Pipe adaptor set (included)

		Model No.					
		R1100	R2100	R3100	R4100	R6100	R8100
Code	Description						
B Port size							
6	1/8	●					
8	1/4	●	●	●	●		
10	3/8		●	●	●		
15	1/2				●		
20	3/4					●	●
25	1					●	●
C Port thread							
Blank	Rc thread	●	●	●	●	●	●
N	NPT thread	●	●	●	●	●	●
G	G thread	●	●	●	●	●	●
D Option							
Pressure range	Blank	0.05 to 0.85 MPa		●	●	●	●
	L	0.05 to 0.35 MPa *4		●	●	●	●
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 included option *5		●	●	●	●
	RN	Pressure switch with display PPR mounted (NPN output 1 point)		●	●	●	●
	RP	Pressure switch with display PPR mounted (PNP output 1 point)		●	●	●	●
Flow 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)							
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		●	●	●	●	●
G Other attachments							
Blank	Not included		●	●	●	●	●
BW	C type bracket		●	●	●	●	●
B3W	L type bracket *9		●	●	●	●	
B4W	B type bracket			●			
G45P	G45D-8-P10(L:G45D-8-P04)		●	●	●	●	●
G49P	G49D-8-P10(L:G49D-8-P04)		●	●	●	●	●
G59P	G59D-8-P10(L:G59D-8-P04)		●	●	●	●	●
G40P	G40D-8-P10(L:G40D-8-P04)		●	●	●	●	●
G52P	G52D-8-P10(L:G52D-8-P10)		●	●	●	●	●
R2 *5	Digital pressure sensor: PPX-R10N-6M		●	●	●	●	●

F.R.L.
F.R.
F (Filter)
R (Reg)
L (Lub)
Drain
Separ
Mech
Press SW
Res press
exh valve
SlowStart
Anti-bac/Bac-
remove Filtr
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 Ctr
Silncr
CheckV/
other
Fit/Tube
Nozzle
Air Unit
PrecsCompr
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

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-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

WaterRtSens

TotAirSys

(Total Air)

TotAirSys

(Gamma)

Gas

generator

RefrDry

DesicDry

HiPolymDry

MainFiltr

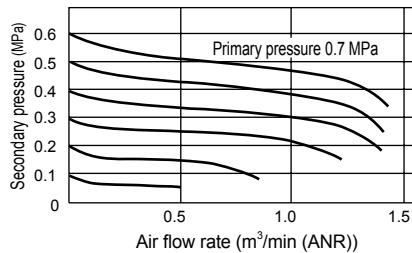
Dischrg

etc

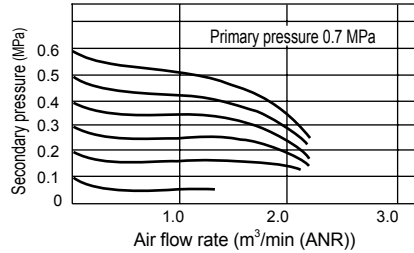
Ending

Flow characteristics

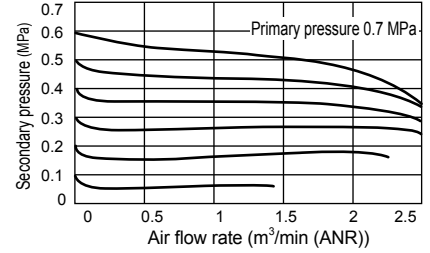
● R1100-6-W



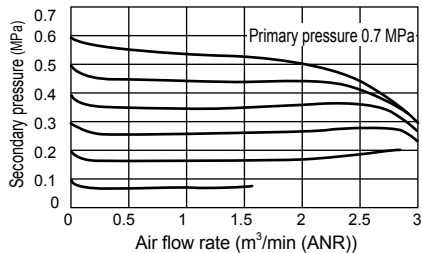
● R1100-8-W



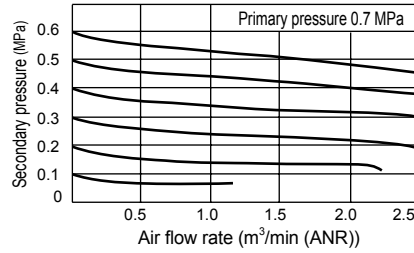
● R2100-8-W



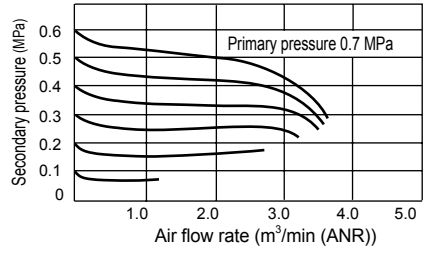
● R2100-10-W



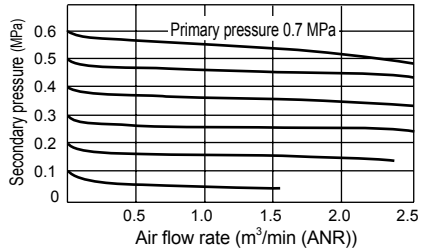
● R3100-8-W



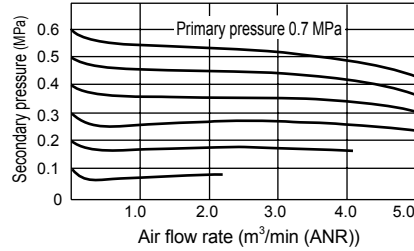
● R3100-10-W



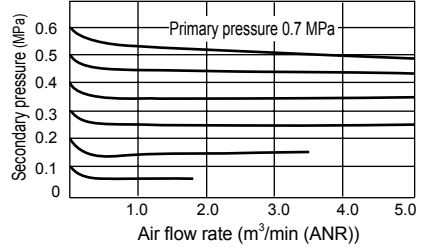
● R4100-8-W



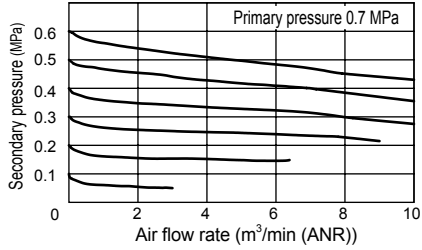
● R4100-10-W



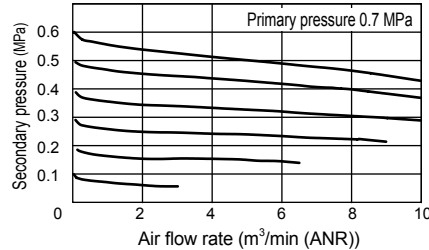
● R4100-15-W



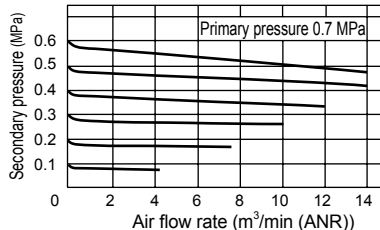
● R6100-20-W



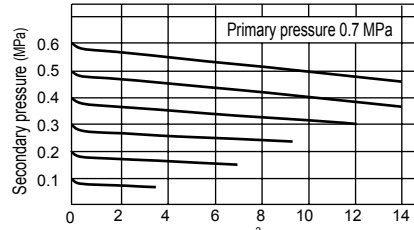
● R6100-25-W



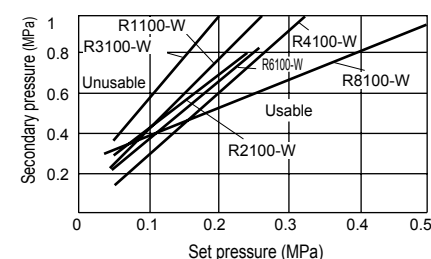
● R8100-20-W



● R8100-25-W



● Set pressure range to back pressure

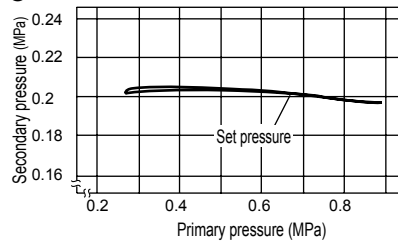


Note: The area above the graph line shows the unusable range and that below the graph line shows the usable range.

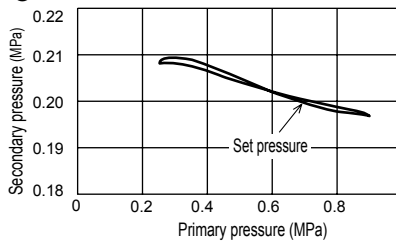
Example: If R4100-W is set to the set pressure 0.2 MPa and the secondary back pressure is 0.6 MPa and over, the secondary pressure will not be released to the primary side.

Pressure characteristics

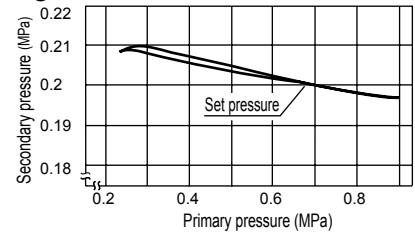
● R1100-W



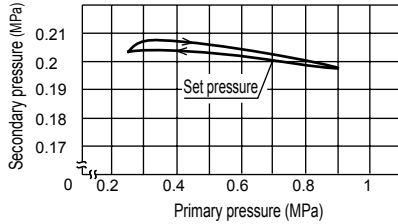
● R2100-W



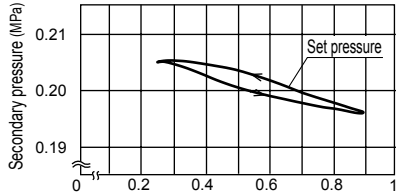
● R3100-W



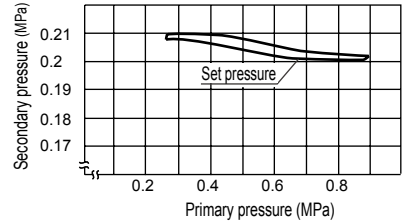
● R4100-W



● R6100-W

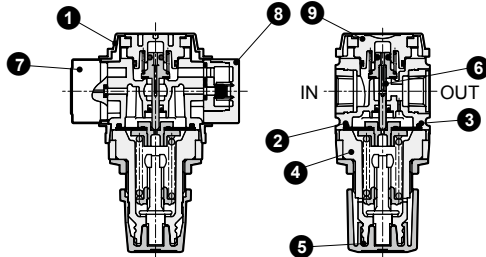


● R8100-W

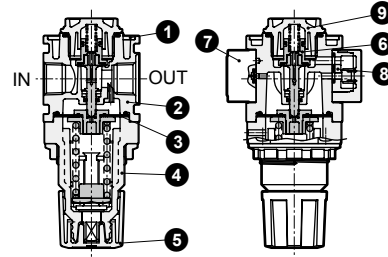


Internal structure and parts list

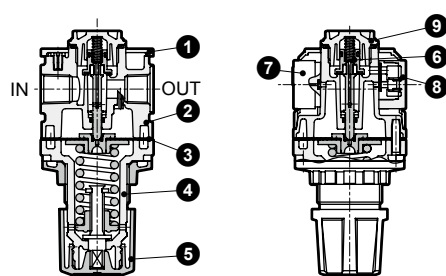
● R1100-W



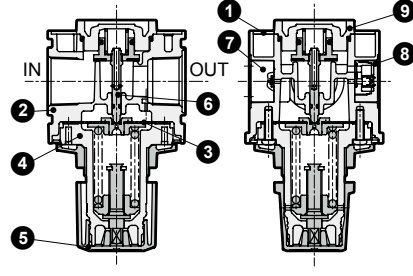
● R2100-W



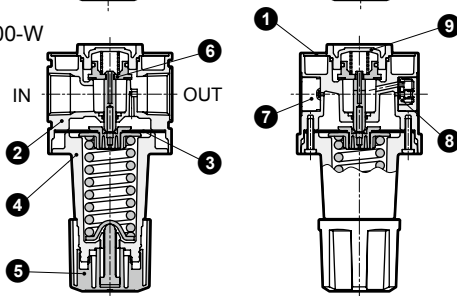
● R3100-W/R4100-W



● R6100-W



● R8100-W



No.	Part name	Material					
		R1100-W	R2100-W	R3100-W	R4100-W	R6100-W	R8100-W
1	Plate cover	ABS resin					
2	Body	PA resin, steel	Aluminum alloy die-casting				
3	Diaphragm assembly	Polyacetal resin nitrile rubber		Zinc alloy die-casting, nitrile rubber *2			
4	Cover	Polyamide resin	PBT resin				Alum die-cast
5	Knob	Polyacetal resin					
6	Valve assembly	Copper alloy, hydrogenated nitrile rubber (polyacetal resin: R2100-W, R3100-W, 4100-W, 8100-W)					
7	Pressure gauge assembly	PBT resin, nitrile rubber, polyacetal resin, polycarbonate resin, copper alloy, copper					
8	Check valve total assembly	PBT resin, nitrile rubber, stainless steel wire, steel					
9	Bottom plug	Polyacetal resin				Aluminum alloy die-casting	

*1: Refer to page 151 for repair parts kits.

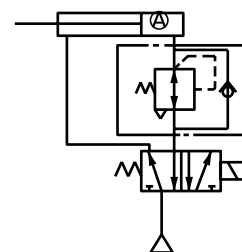
*2: Aluminum is added for the R6100-W low-pressure type.

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.

● Circuit diagram

When cylinder head side and rod side pressures differ



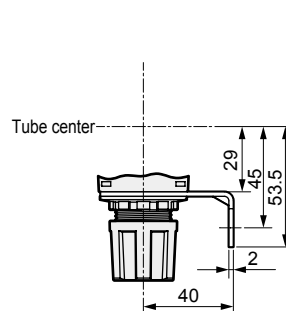
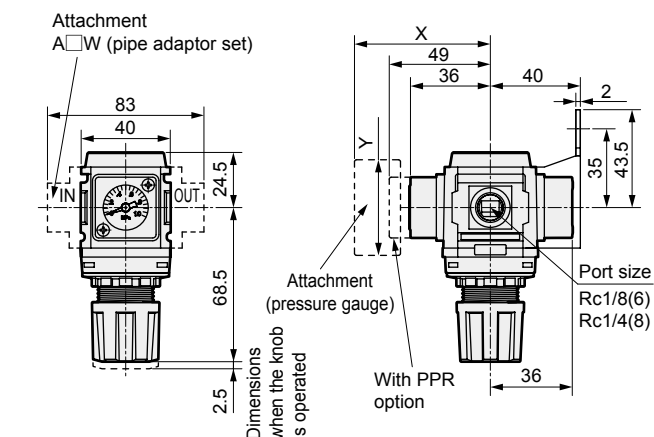
Note: When the primary side pressure is released, back pressure A must be equal to or less than the set pressure range of the regulator corresponding to the back pressure shown in the graph.

Regulator Series

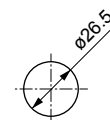


Dimensions

● R1100-W

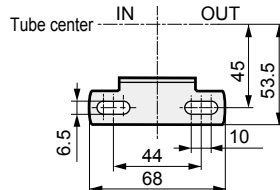
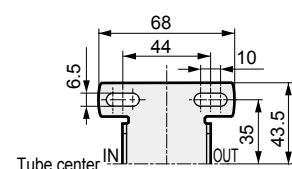


Panel cut dimension



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

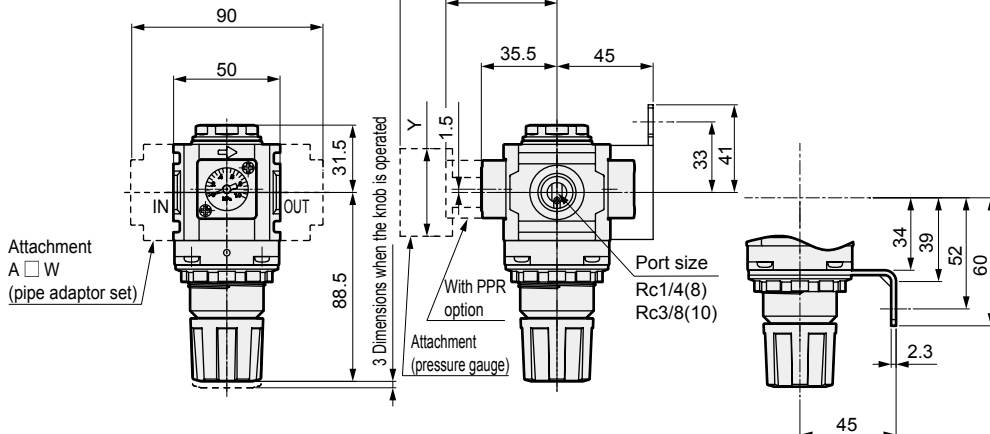
L type bracket (-B3W)
Part model No.: B130
Material: Steel
Zinc plated



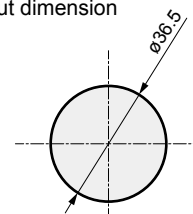
Pressure gauge attached optional dimensions table

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

● R2100-W



Panel cut dimension



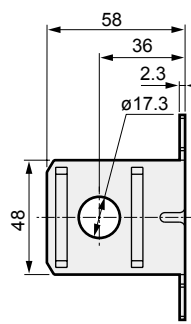
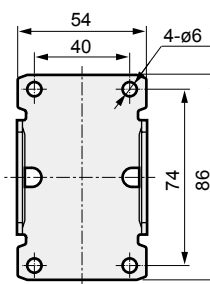
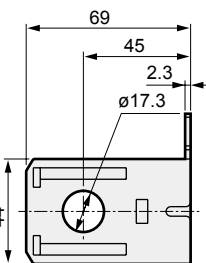
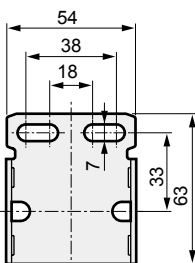
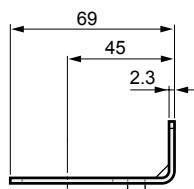
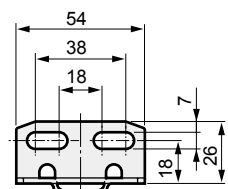
Pressure gauge attached optional dimensions table

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

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

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

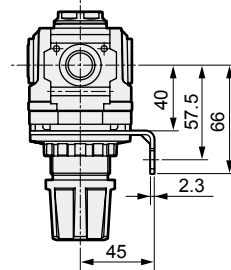
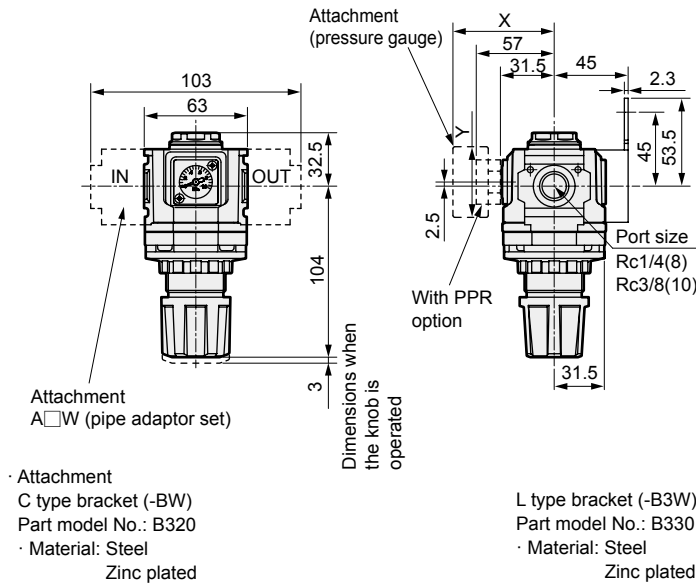
● B type bracket (-B4W)
Part model No.: B240
Material: Steel
Zinc plated



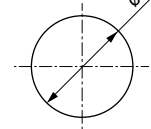
Dimensions



● R3100-W



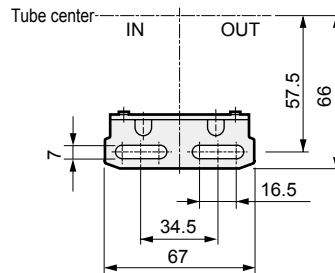
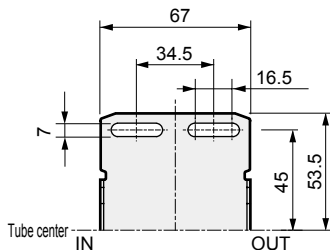
Panel cut dimension



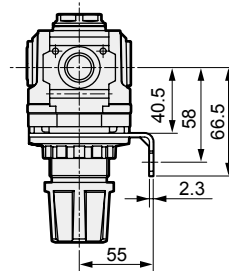
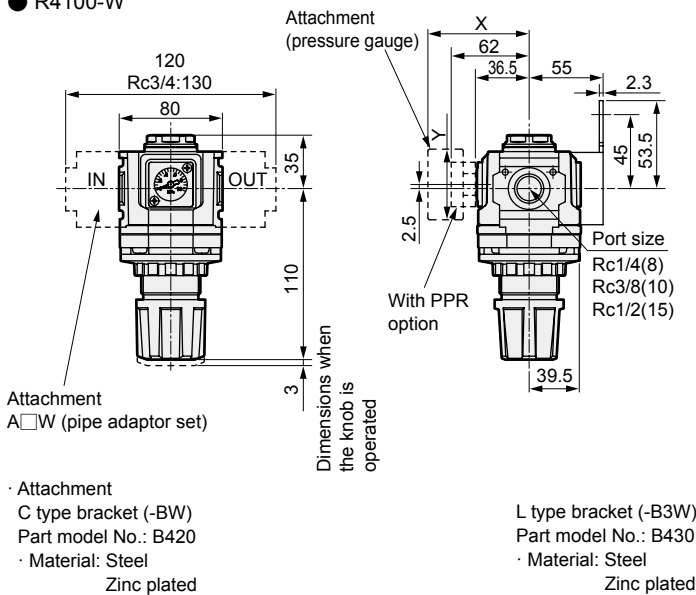
Panel plate thickness: max. 7 mm

Pressure gauge attached optional dimensions table

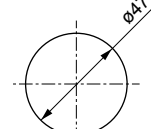
Pressure gauge	X	Y
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G52P	(82)	ø52.5
R2	(69.5)	□30



● R4100-W



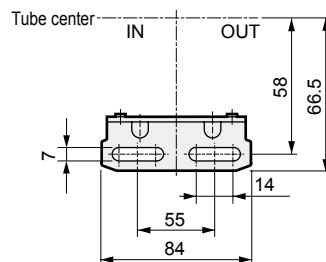
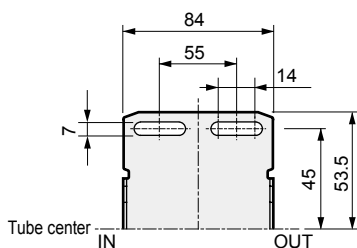
Panel cut dimension



Panel plate thickness: max. 7 mm

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

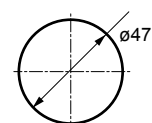
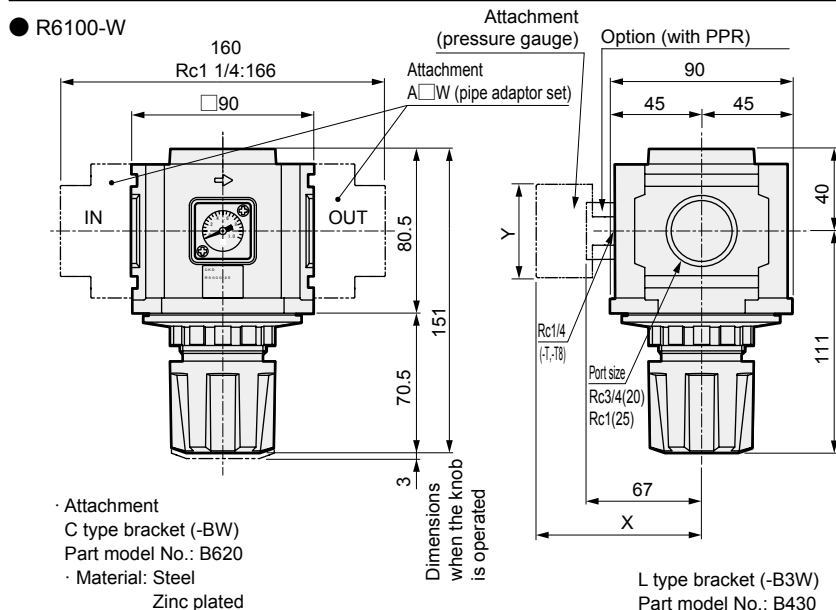


Regulator Series



Dimensions

● R6100-W

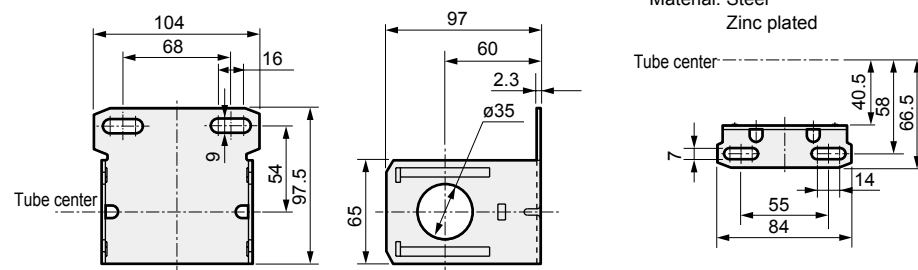


Panel cut dimension

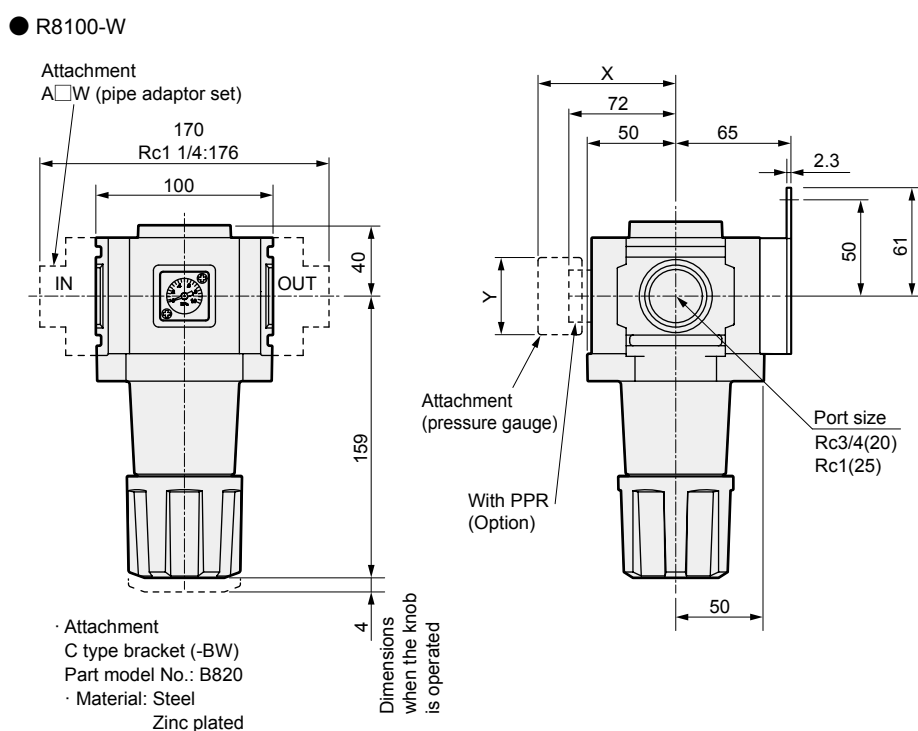
(Panel plate thickness: max. 7 mm)

Pressure gauge optional dimensions table

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



● R8100-W



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

Optional parts diagram

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

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

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

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

* Refer to page 377 for the gauge plug assembly.

Check valve assembly for reverse regulator

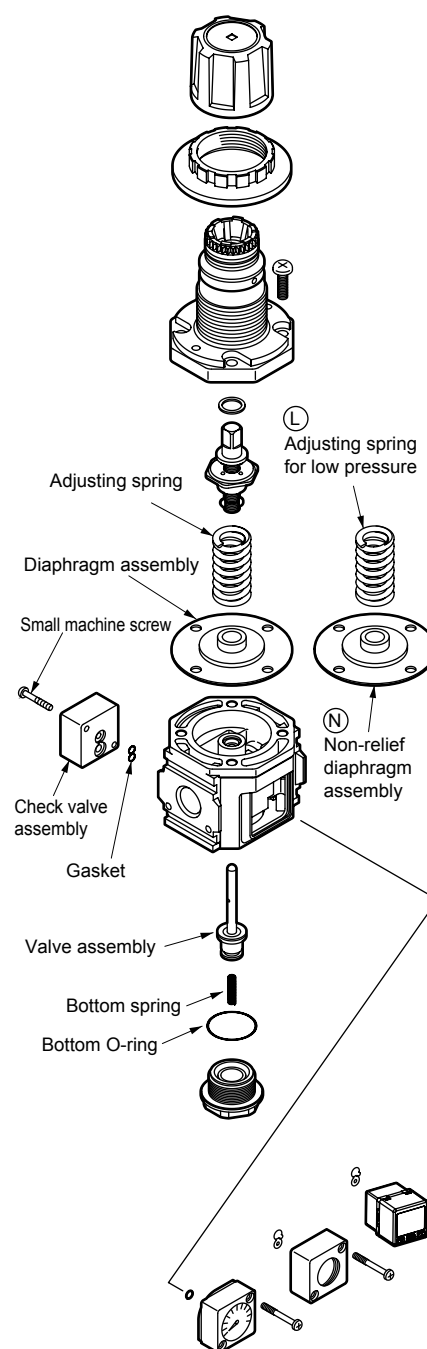
Model	Check valve assembly model No.
R1000-W,R1100-W	R1100-W-CHECK-VALVE-ASSY
R2100-W	R3100-W-CHECK-VALVE-ASSY
R3100-W,RM3000-W,W3100-W R4100-W,RM4000-W,W4100-W R6100-W,R8100-W W8100-W	R3100-W-CHECK-VALVE-ASSY

Adjusting spring

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

Diaphragm assembly (only diaphragm assembly)

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



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