



Regulator

R2000/R3000/R4000/R6000 Series

JIS symbol



RoHS

CAD

Structure/treatment and material restriction

	Structure	Material restriction			Model No.
P7 Series	Exhaust treatment				— P70
	Exhaust treatment	Copper-based materials prohibited	Silicon-based materials prohibited	Halogen-based materials prohibited (fluorine, chlorine, bromine)	— P74 Custom order product

Specifications

Descriptions		R2000	R3000	R4000	R6000
Working fluid		Compressed air			
Max. working pressure	MPa	1.0			
Proof pressure	MPa	1.5			
Ambient temperature/fluid temperature	°C	5 to 50			
Set pressure	MPa	0.05 to 0.85			
Pressure relief		Nonrelief			
Weight	kg	0.29	0.51	0.75	1.1

How to order

R2000 — **8** — **W** — **N** — **P70** — **B** *7
R3000 — **8** — **N** — **P70** — **B**

A Model No.

B Port size

C Option

D Clean room specifications

E Other attachments

A Model No.

	R2000	R3000	R4000	R6000
B Port size				
8	●	●	●	●
10	●	●	●	●
15			●	
20				●
25				●

Code	Content				
B Port size					
8	Rc1/4	●	●	●	●
10	Rc3/8	●	●	●	●
15	Rc1/2			●	
20	Rc3/4				●
25	Rc1				●

C Option *2 *3 *4					
Pressure range	Blank	0.05 to 0.85 MPa	●	●	●
	L	0.05 to 0.35 MPa	●	●	●
Pressure relief	N	Nonrelief	●	●	●
	Blank	With standard pressure gauge (G401) *1	●	●	●
Pressure gauge *8	T	Without pressure gauge (gauge port (Rc1/4) is assembled with sealed)	●	●	●
	T8	For attaching pressure gauge (gauge port (Rc1/4) is assembled with ventilated)	●	●	●
	T6	For attaching pressure gauge (gauge port (Rc1/8) is assembled with ventilated)	●	●	●
Flow direction	Blank	Standard flow (left → right)	●	●	●
	X1	Reverse flow (right → left)	●	●	●

D Clean room specifications					
	Structure				
P70	Exhaust treatment	●	●	●	●

E Other attachments *5 *6					
Blank	Without attachment	●	●	●	●
A8	Rc1/4 piping adaptor set	●	●	●	●
A10	Rc3/8 piping adaptor set	●	●	●	●
A15	Rc1/2 piping adaptor set	●	●	●	●
A20	Rc3/4 piping adaptor set			●	●
A25	Rc1 piping adaptor set				●
A32	Rc1 1/4 piping adaptor set				●
B	C bracket	●	●	●	●
B3	L bracket	●	●	●	●
B4	B bracket	●			
E1	Fitting (pressure relief port) *1	●	●	●	●
GX59	G59D-8-P10-P70 (L: G59D-8-P04-P70) *1	●	●	●	●
GY59	G59D-8-P10-P94 (L: G59D-8-P04-P94)	●	●	●	●

⚠ Precautions for model No. selection

- *1: Attachment for options made of brass. All others are attachments for options not made of copper-based materials.
- *2: When selecting options for several items, list options in order from the top. Be sure to select "N" non-pressure relief.
- *3: If "L" is selected for pressure range, a low pressure gauge (0 to 0.4 MPa) is used.
- *4: For "T", "T8", "T6", a gauge plug is assembled instead of a pressure gauge. The gauge port for "T", "T8" is Rc1/4 and T6 is Rc1/8.
- *5: Piping adaptor set A *00-*P70 (page 804) is attached.
- *6: Refer to pages 804 to 806 for adaptor, 858 for pressure gauge. The piping adaptor set and C bracket cannot be used at the same time.
- *7: Add "-W" only for R2000.
- *8: When option "T6" is selected, the attachment "GX59", "GY59" has a different thread size, so it cannot be selected together.

How to order (custom order product)

R2000 — 8 — W — N — P74 — B *6
R3000 — 8 — — N — P74 — B

A Model No.

B Port size

C Option

D Clean room specifications

E Other attachments

⚠ Precautions for model No. selection

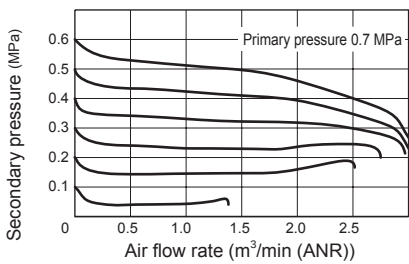
- *1: When selecting options for several items, list options in order from the top. Be sure to select "N" non-pressure relief.
- *2: If "L" is selected for pressure range, a low pressure gauge (0 to 0.4 MPa) is used.
- *3: For "T", "T8", "T6", a gauge plug is assembled instead of a pressure gauge. The gauge port for "T", "T8" is Rc1/4 and T6 is Rc1/8.
- *4: Piping adaptor set A *00-*P70 (page 784) is attached.
- *5: Refer to pages 784 to 786 for adaptor, 838 for pressure gauge.
The piping adaptor set and C bracket cannot be used at the same time.
- *6: Add "-W" only for R2000.
- *7: For the fittings, copper-based materials are used.
- *8: When option "T6" is selected, the attachment "GY59" has a different thread size, so it cannot be selected together.

		A Model No.			
		R2000	R3000	R4000	R6000
Code	Content				
B Port size					
8	Rc1/4	●	●	●	●
10	Rc3/8	●	●	●	●
15	Rc1/2	●	●	●	●
20	Rc3/4	●	●	●	●
25	Rc1	●	●	●	●
C Option *1 *2 *3					
Pressure range	Blank	0.05 to 0.85 MPa	●	●	●
	L	0.05 to 0.35 MPa	●	●	●
Pressure relief	N	Nonrelief	●	●	●
	T	Without pressure gauge (gauge port (Rc1/4) is assembled with sealed)	●	●	●
Pressure gauge *8	T8	For attaching pressure gauge (gauge port (Rc1/4) is assembled with ventilated)	●	●	●
	T6	For attaching pressure gauge (gauge port (Rc1/8) is assembled with ventilated)	●	●	●
Flow direction	Blank	Standard flow (left → right)	●	●	●
	X1	Reverse flow (right → left)	●	●	●
D Clean room specifications					
	Structure	Material restriction			
P74	Exhaust treatment	Copper-based/silicon-based/halogen-based materials (fluorine, chlorine, bromine) are prohibited	●	●	●
E Other attachments *4 *5					
Blank	Without attachment		●	●	●
A8	Rc1/4 piping adaptor set		●	●	●
A10	Rc3/8 piping adaptor set		●	●	●
A15	Rc1/2 piping adaptor set		●	●	●
A20	Rc3/4 piping adaptor set		●	●	●
A25	Rc1 piping adaptor set		●	●	●
A32	Rc1 1/4 piping adaptor set		●	●	●
B	C bracket		●	●	●
B3	L bracket		●	●	●
B4	B bracket		●	●	●
E1	Fitting (pressure relief port) *7		●	●	●
GY59	G59D-8-P10-P94 (L: G59D-8-P04-P94)		●	●	●

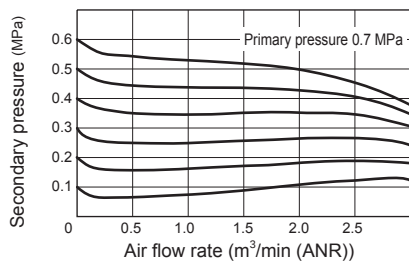
SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R.(module unit)
Clean F.R
Precision R
Press.gauge Diff. press.gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/tube
Clean air unit
Pressure sensor
Flow rate sensor
Valve for air blow
Ending

Flow characteristics

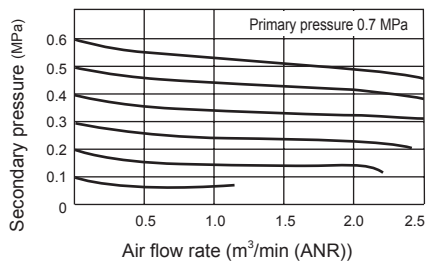
R2000-8



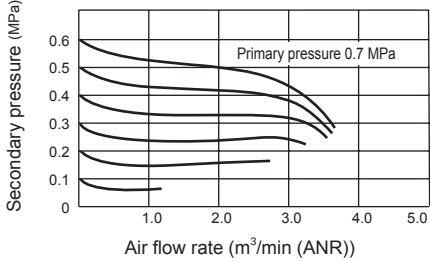
R2000-10



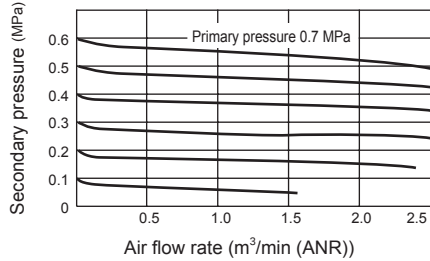
R3000-8



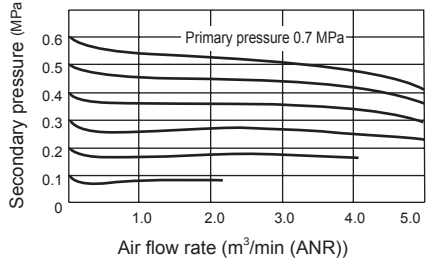
R3000-10



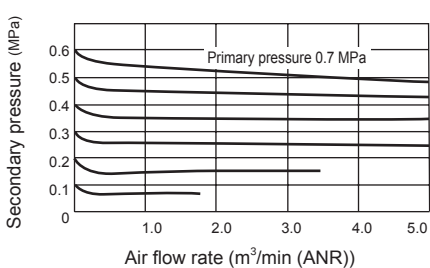
R4000-8



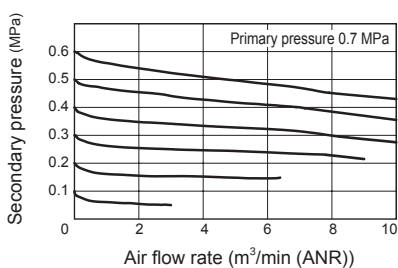
R4000-10



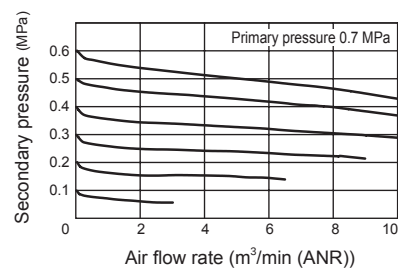
R4000-15



R6000-20

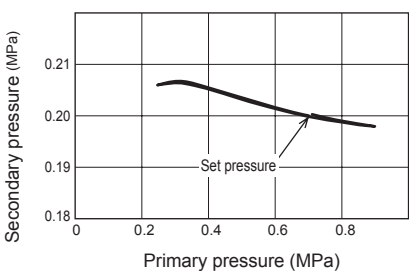


R6000-25

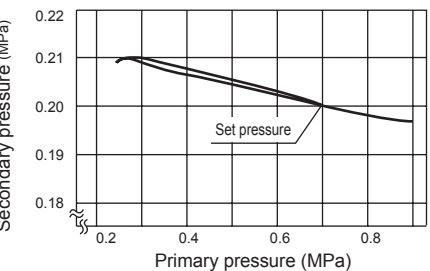


Pressure characteristics

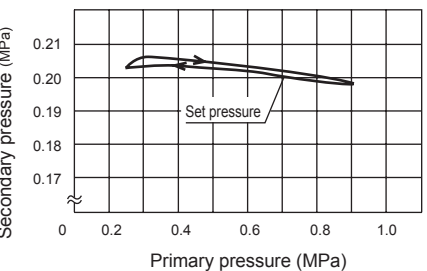
R2000



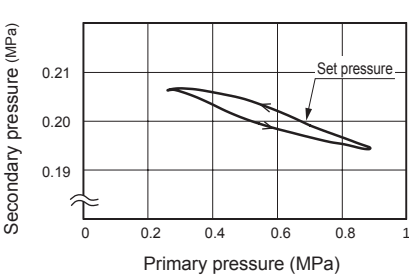
R3000



R4000



R6000



MEMO

SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R.(module unit)
Clean F.R
Precision R
Press.gauge Diff.press.gauge
Electro- pneumatic R
Speed controller
Auxiliary valve
Fitting/ tube
Clean air unit
Pressure sensor
Flow rate sensor
Valve for air blow
Ending

Regulator series

Dimensions

● R2000-P70/P74

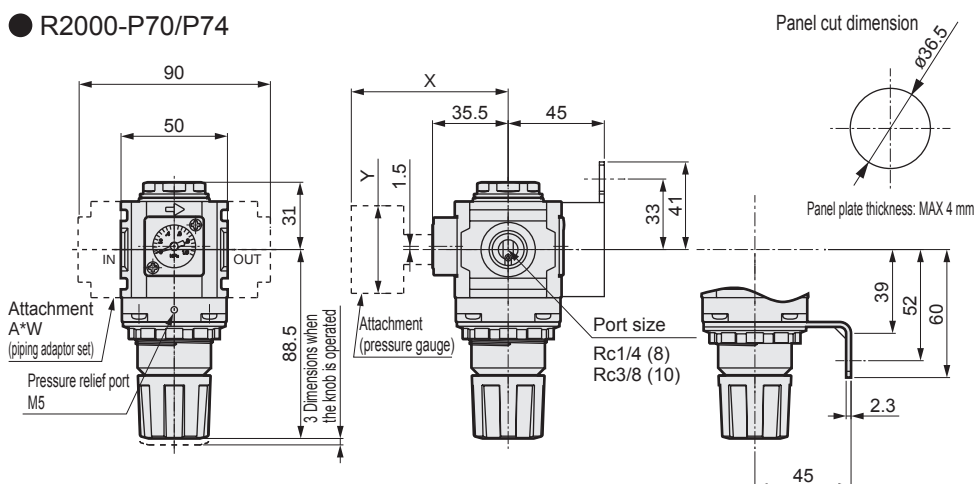


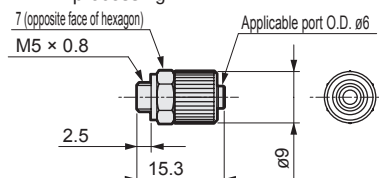
Table of optional dimensions with pressure gauge

Attached pressure gauge	X	Y
GX59	80	ø52
GY59	82.5	ø52

● Fitting

Part model No.: R4000-E1-P70

Material: brass, nickel plate processing

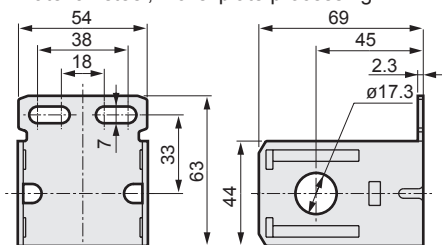


[Bracket dimensions]

● C bracket

Part model No.: B220-P70

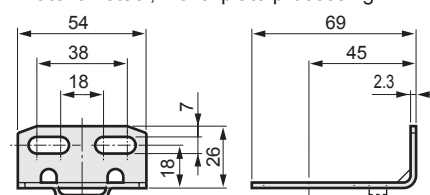
Material: steel, nickel plate processing



● L bracket

Part model No.: B230-P70

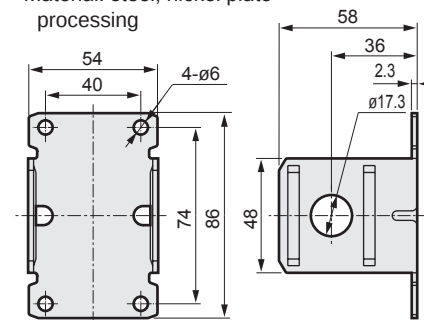
Material: steel, nickel plate processing



● B bracket

Part model No.: B240-P70

Material: steel, nickel plate processing



● R3000-P70/P74

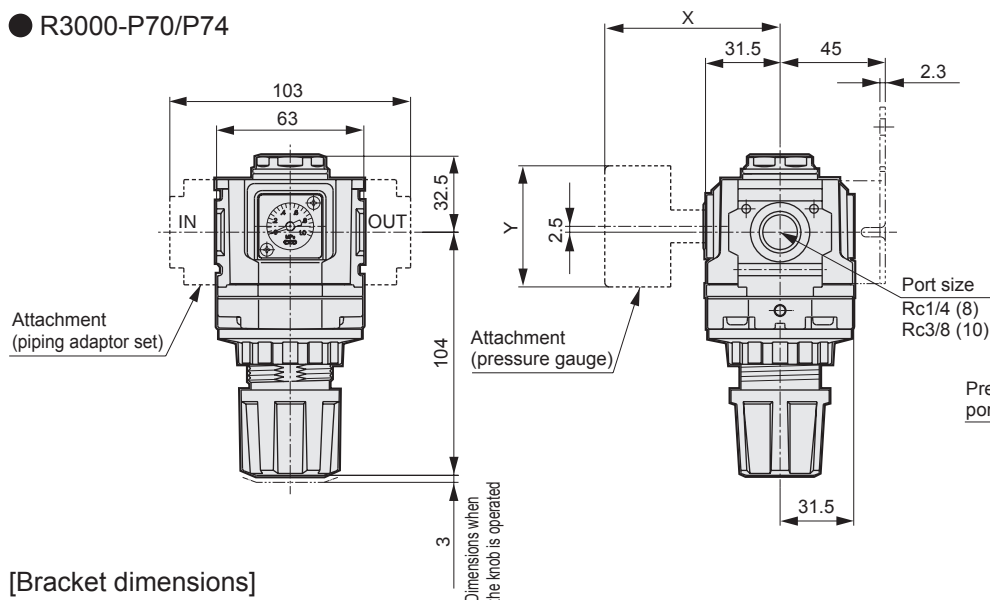


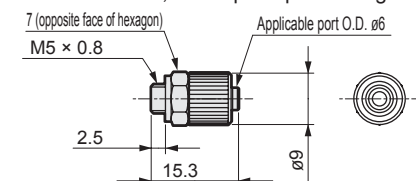
Table of optional dimensions with pressure gauge

Attached pressure gauge	X	Y
GX59	76.5	ø52
GY59	79	ø52

● Fitting

Part model No.: R4000-E1-P70

Material: brass, nickel plate processing

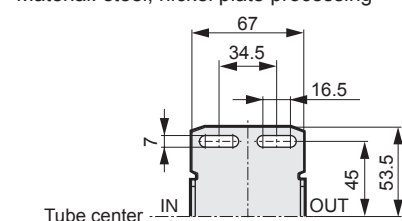


[Bracket dimensions]

● C bracket

Part model No.: B320-P70

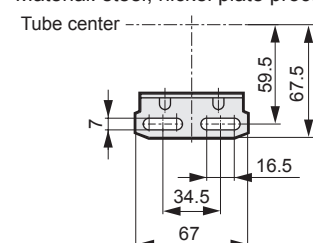
Material: steel, nickel plate processing



● L bracket

Part model No.: B330-P70

Material: steel, nickel plate processing



Dimensions

● R4000-P70/P74

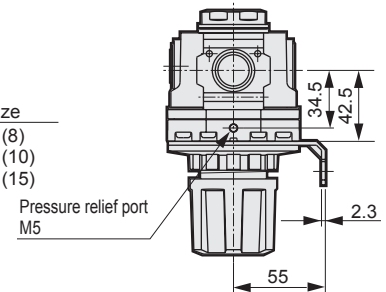
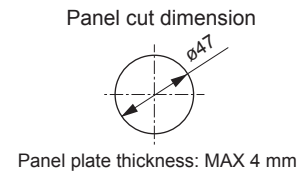
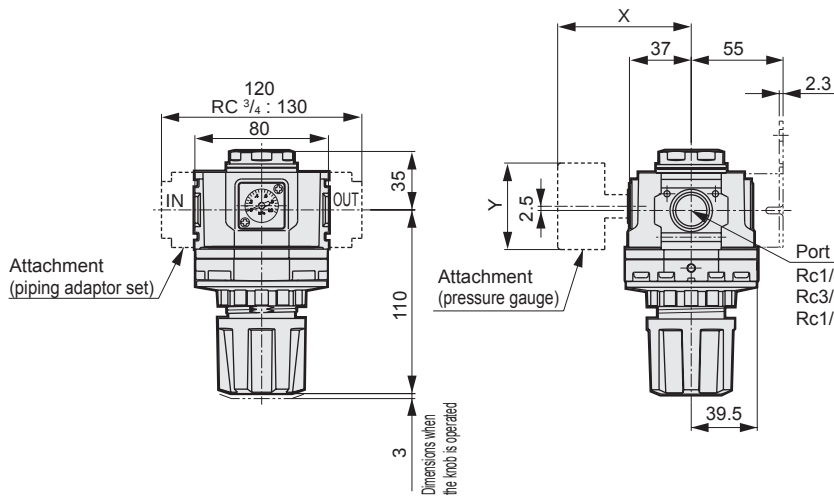
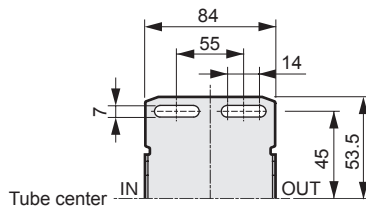


Table of optional dimensions with pressure gauge

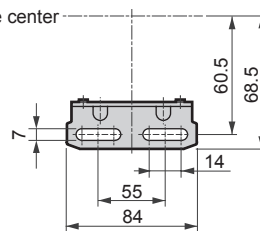
Attached pressure gauge	X	Y
GX59	81.5	Ø52
GY59	84	Ø52

[Bracket dimensions]

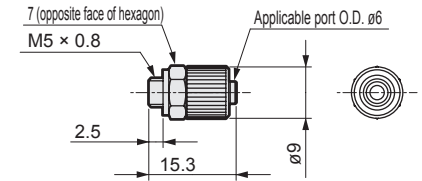
- C bracket
Part model No.: B420-P70
• Material: steel, nickel plate processing



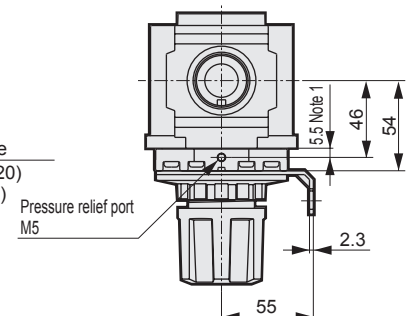
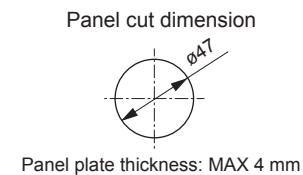
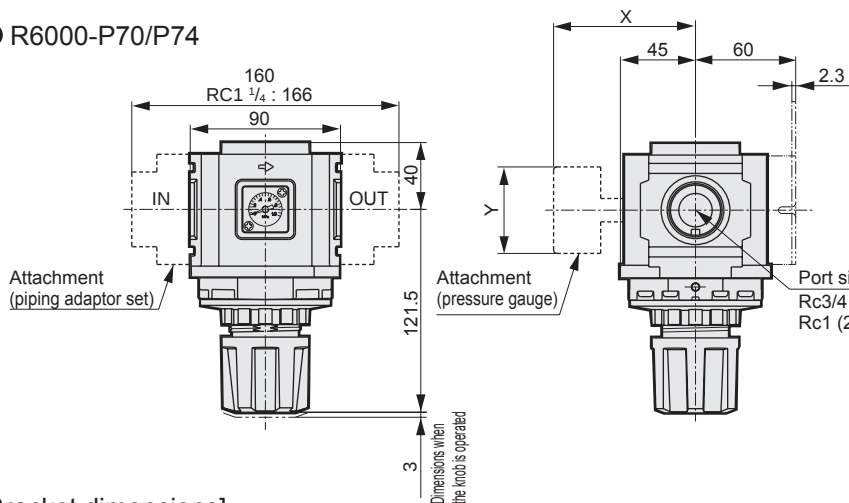
- L bracket
Part model No.: B430-P70
• Material: steel, nickel plate processing



- Fitting
Part model No.: R4000-E1-P70
• Material: brass, nickel plate processing



● R6000-P70/P74



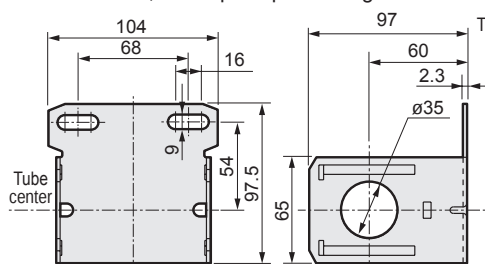
Note 1: Dimensions table is applied. Use fittings available for mounting.

Table of optional dimensions with pressure gauge

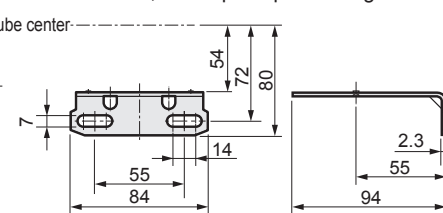
Attached pressure gauge	X	Y
GX59	85	Ø52
GY59	87.5	Ø52

[Bracket dimensions]

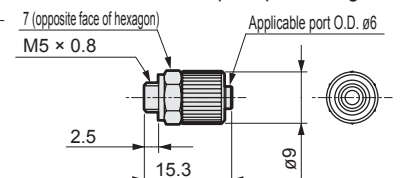
- C bracket
Part model No.: B620-P70
• Material: steel, nickel plate processing



- L bracket
Part model No.: B430-P70
• Material: steel, nickel plate processing



- Fitting
Part model No.: R4000-E1-P70
• Material: brass, nickel plate processing

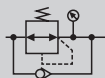




Reverse regulator

R2100/R3100/R4100/R6100 Series

JIS symbol



RoHS

CAD

Structure/treatment and material restriction

	Structure	Material restriction			Model No.
P7 Series	Exhaust treatment				— P70
	Exhaust treatment	Copper-based materials prohibited	Silicon-based materials prohibited	Halogen-based materials prohibited (fluorine, chlorine, bromine)	— P74 Custom order product

Specifications

Descriptions		R2100	R3100	R4100	R6100
Working fluid		Compressed air			
Max. working pressure	MPa	1.0			
Proof pressure	MPa	1.5			
Ambient temperature/fluid temperature	°C	5 to 50			
Set pressure	MPa	0.05 to 0.85			
Pressure relief		Nonrelief			
Weight	kg	0.29	0.51	0.75	1.1

How to order

R2100 — **8** — **-W-** **N** — **P70** — **B** *8
R3100 — **8** — **-** **N** — **P70** — **B**

A Model No.

B Port size

C Option

D Clean room specifications

E Other attachments

A Model No.

	R2100	R3100	R4100	R6100
8	●	●	●	●
10	●	●	●	●
15			●	
20				●
25				●

Code	Content				
B Port size					
8	Rc1/4	●	●	●	●
10	Rc3/8	●	●	●	●
15	Rc1/2			●	
20	Rc3/4				●
25	Rc1				●

C Option *2 *3 *4 *5					
Pressure range	Blank	0.05 to 0.85 MPa	●	●	●
	L	0.05 to 0.35 MPa	●	●	●
Pressure relief	N	Nonrelief	●	●	●
	Blank	With standard pressure gauge (G401) *1	●	●	●
Pressure gauge *9	T	Without pressure gauge (gauge port (Rc1/4) is assembled with sealed)	●	●	●
	T8	For attaching pressure gauge (gauge port (Rc1/4) is assembled with ventilated)	●	●	●
	T6	For attaching pressure gauge (gauge port (Rc1/8) is assembled with ventilated)	●	●	●
Flow direction	Blank	Standard flow (left → right)	●	●	●
	X1	Reverse flow (right → left)	●	●	●

D Clean room specifications					
Structure					
P70	Exhaust treatment	●	●	●	●

E Other attachments *6 *7					
Blank	Without attachment	●	●	●	●
A8	Rc1/4 piping adaptor set	●	●	●	●
A10	Rc3/8 piping adaptor set	●	●	●	●
A15	Rc1/2 piping adaptor set	●	●	●	●
A20	Rc3/4 piping adaptor set			●	●
A25	Rc1 piping adaptor set				●
A32	Rc1 1/4 piping adaptor set				●
B	C bracket	●	●	●	●
B3	L bracket	●	●	●	●
B4	B bracket	●			
E1	Fitting (pressure relief port) *1	●	●	●	●
GX59	G59D-8-P10-P70 (L: G59D-8-P04-P70) *1	●	●	●	●
GY59	G59D-8-P10-P94 (L: G59D-8-P04-P94)	●	●	●	●

⚠ Precautions for model No. selection

- *1: Attachment for options made of brass. All others are attachments for options not made of copper-based materials.
- *2: When selecting options for several items, list options in order from the top. Be sure to select "N" non-pressure relief.
- *3: If "L" is selected for pressure range, a low pressure gauge (0 to 0.4 MPa) is used.
- *4: Positions of a check valve and pressure gauge cannot be changed. If the reverse direction of IN and OUT is required, indicate "X1" in the end of optional section.
- *5: For "T", "T8", "T6", a gauge plug is assembled instead of a pressure gauge. The gauge port for "T", "T8" is Rc1/4 and T6 is Rc1/8.
- *6: Piping adaptor set A*00-*P70 (page 804) is attached.
- *7: Refer to pages 804 to 806 for adaptor, 858 for pressure gauge. The piping adaptor set and C bracket cannot be used at the same time.
- *8: Add "-W" only for R2100.
- *9: When option "T6" is selected, the attachment "GX59", "GY59" has a different thread size, so it cannot be selected together.

How to order (custom order product)

R2100 — 8 — W — N — P74 — B *7
R3100 — 8 — — N — P74 — B

A Model No.

B Port size

C Option

D Clean room specifications

E Other attachments

⚠ Precautions for model No. selection

- *1: When selecting options for several items, list options in order from the top. Be sure to select "N" non-pressure relief.
- *2: If "L" is selected for pressure range, a low pressure gauge (0 to 0.4 MPa) is used.
- *3: Positions of a check valve and pressure gauge cannot be changed. If the reverse direction of IN and OUT is required, indicate "X1" in the end of optional section.
- *4: For "T", "T8", "T6", a gauge plug is assembled instead of a pressure gauge. The gauge port for "T", "T8" is Rc1/4 and T6 is Rc1/8.
- *5: Piping adaptor set A*00-*.P70 (page 804) is attached.
- *6: Refer to pages 804 to 806 for adaptor, 858 for pressure gauge. The piping adaptor set and C bracket cannot be used at the same time.
- *7: Add "-W" only for R2100.
- *8: For the fittings, copper-based materials are used.
- *9: When option "T6" is selected, the attachment "GY59" has a different thread size, so it cannot be selected together

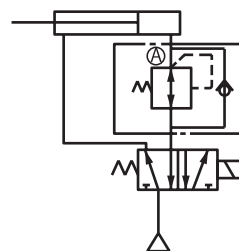
Code		Content				
B Port size						
8	Rc1/4		●	●	●	
10	Rc3/8		●	●	●	
15	Rc1/2				●	●
20	Rc3/4					●
25	Rc1					●
C Option *1 *2 *3 *4						
Pressure range	Blank	0.05 to 0.85 MPa	●	●	●	●
	L	0.05 to 0.35 MPa	●	●	●	●
Pressure relief	N	Nonrelief	●	●	●	●
Pressure gauge *9	T	Without pressure gauge (gauge port (Rc1/4) is assembled with sealed)	●	●	●	●
	T8	For attaching pressure gauge (gauge port (Rc1/4) is assembled with ventilated)	●	●	●	●
	T6	For attaching pressure gauge (gauge port (Rc1/8) is assembled with ventilated)	●	●	●	●
Flow direction	Blank	Standard flow (left → right)	●	●	●	●
	X1	Reverse flow (right → left)	●	●	●	●
D Clean room specifications						
	Structure	Material restriction				
P74	Exhaust treatment	Copper-based/silicon-based/halogen-based materials (fluorine, chlorine, bromine) are prohibited	●	●	●	●
E Other attachments *5 *6						
Blank	Without attachment		●	●	●	●
A8	Rc1/4 piping adaptor set		●	●	●	
A10	Rc3/8 piping adaptor set		●	●	●	
A15	Rc1/2 piping adaptor set		●	●	●	
A20	Rc3/4 piping adaptor set				●	●
A25	Rc1 piping adaptor set					●
A32	Rc1 1/4 piping adaptor set					●
B	C bracket		●	●	●	●
B3	L bracket		●	●	●	●
B4	B bracket		●			
E1	Fitting (pressure relief port) *8		●	●	●	●
GY59	G59D-8-P10-P94 (L: G59D-8-P04-P94)		●	●	●	●

Functional explanation

When the primary pressure is introduced from the IN side, the check valve functions as a regular regulator because it closes with primary pressure and spring load. When primary pressure is released by a switching valve such as a shut-off valve, the check valve opens with secondary pressure. Pressure in the diaphragm chamber is released and pressure drops. This causes the diaphragm to be pressed down by the pressure adjustment spring. The main valve (valve assembly) opens, and the air on the OUT side is discharged.

● Circuit diagram

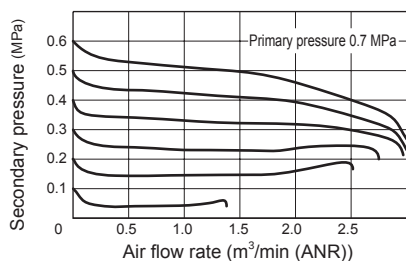
When pressure on cylinder head end and rod end differs.



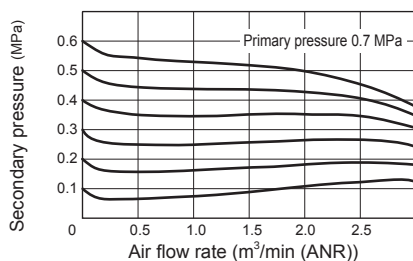
Note: For the regulator's set pressure, set the back pressure A when the primary pressure is released within the range shown in the graph "Set pressure range for back pressure". (Refer to page 800 for the graph)

Flow characteristics

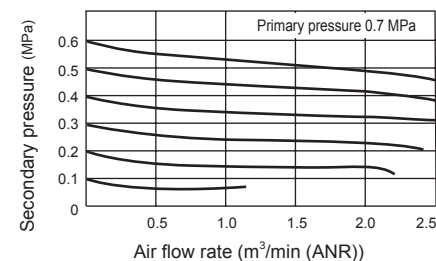
● R2100-8



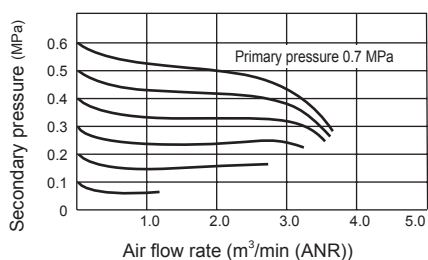
● R2100-10



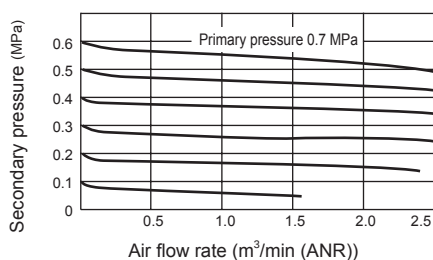
● R3100-8



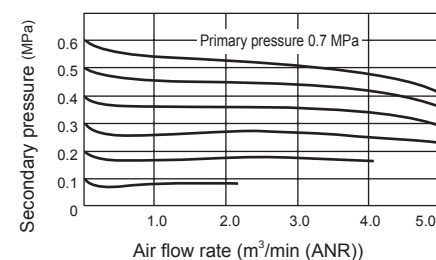
● R3100-10



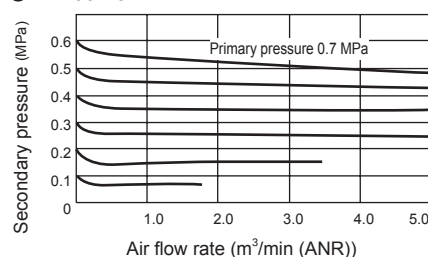
● R4100-8



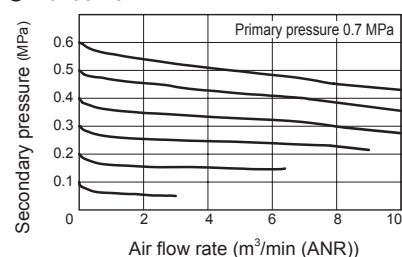
● R4100-10



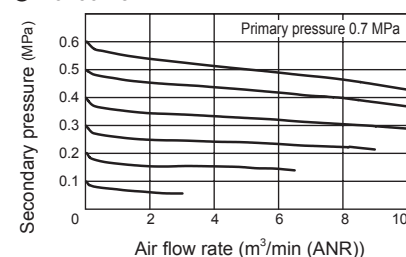
● R4100-15



● R6100-20

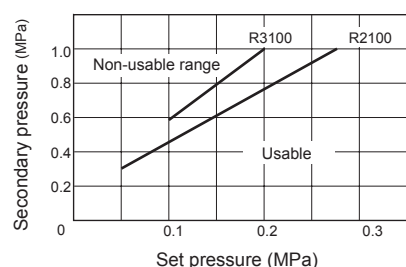


● R6100-25

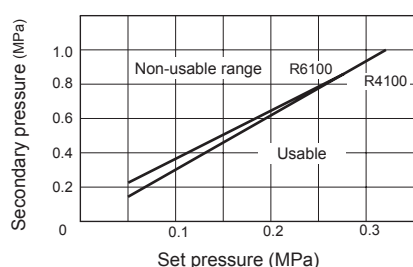


Set pressure to back pressure

● R2100/R3100



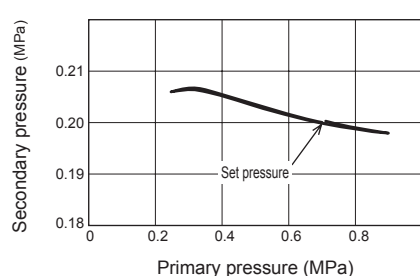
● R4100/R6100



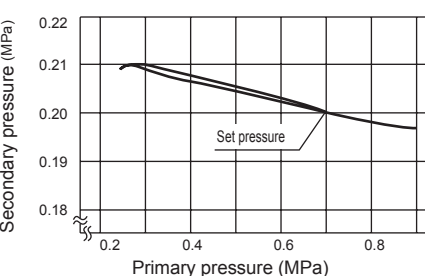
Note: The upper face of the graph is not usable and the lower side is usable.
Example: If R4100 is set to the set pressure 0.2 MPa and the secondary back pressure is 0.6 MPa and over, the secondary pressure will not be released to the primary side.

Pressure characteristics

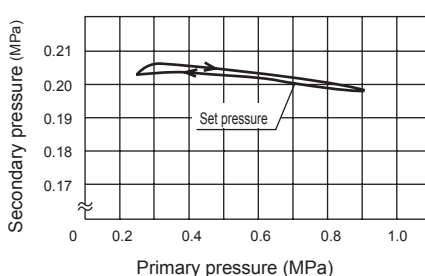
● R2100



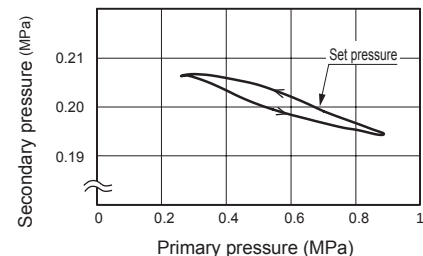
● R3100



● R4100

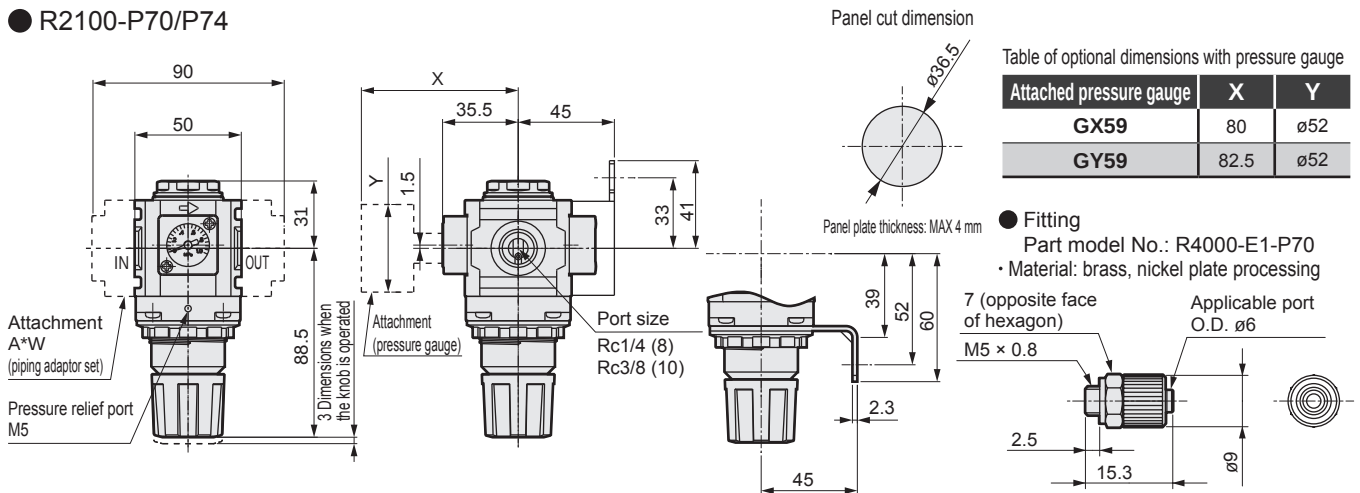


● R6100



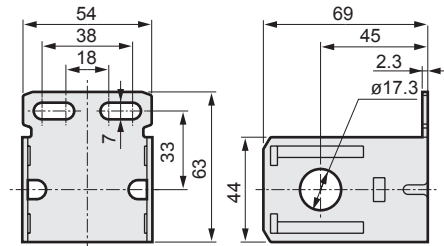
Dimensions

● R2100-P70/P74

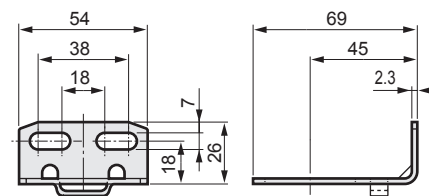


[Bracket dimensions]

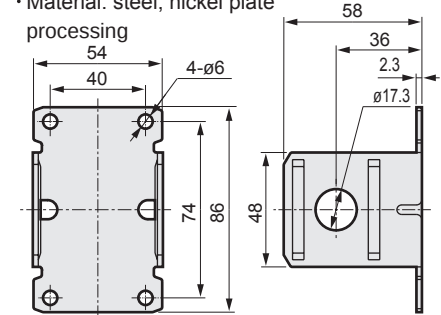
- C bracket
Part model No.: B220-P70
Material: steel, nickel plate processing



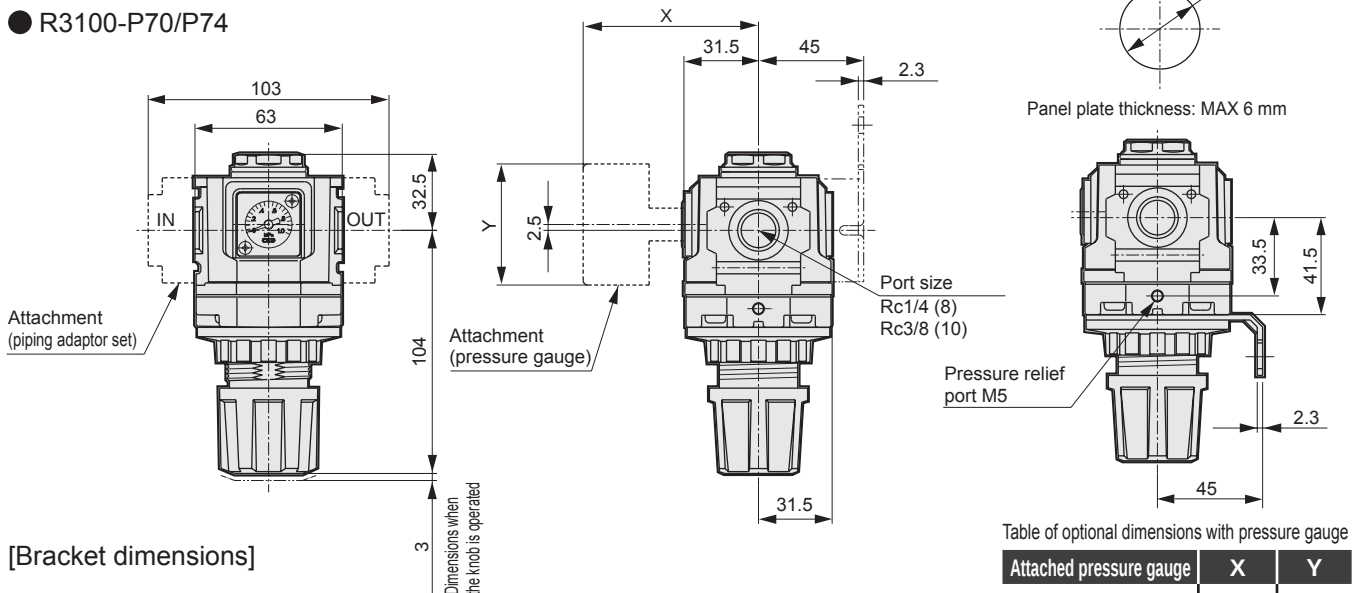
- L bracket
Part model No.: B230-P70
Material: steel, nickel plate processing



- B bracket
Part model No.: B240-P70
Material: steel, nickel plate processing

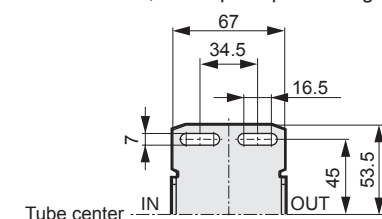


● R3100-P70/P74

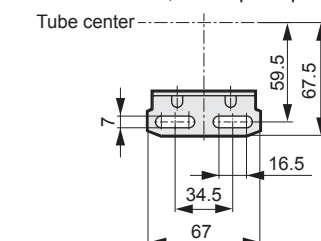


[Bracket dimensions]

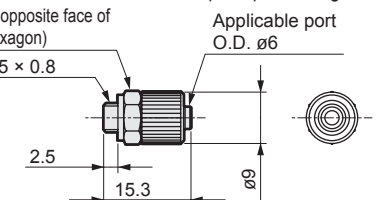
- C bracket
Part model No.: B320-P70
Material: steel, nickel plate processing



- L bracket
Part model No.: B330-P70
Material: steel, nickel plate processing



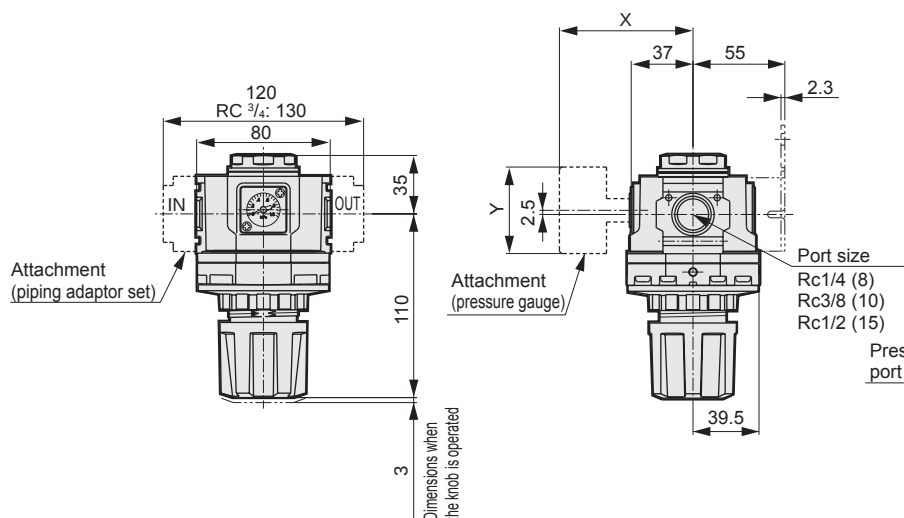
- Fitting
Part model No.: R4000-E1-P70
Material: brass, nickel plate processing



Regulator series

Dimensions

● R4100-P70/P74



Panel cut dimension

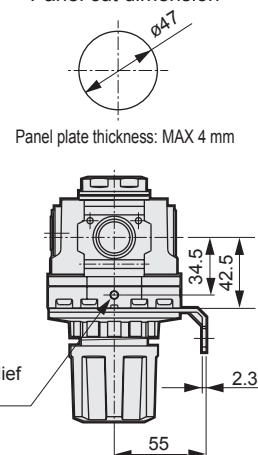
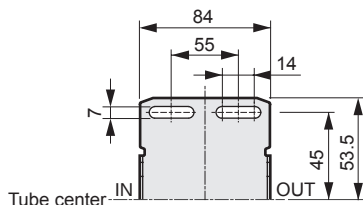


Table of optional dimensions with pressure gauge

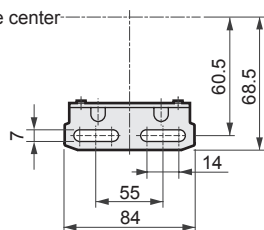
Attached pressure gauge	X	Y
GX59	81.5	$\phi 52$
GY59	84	$\phi 52$

[Bracket dimensions]

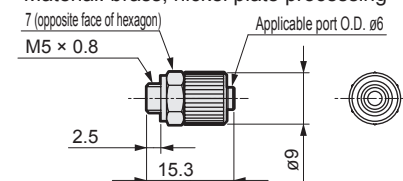
- C bracket
Part model No.: B420-P70
• Material: steel, nickel plate processing



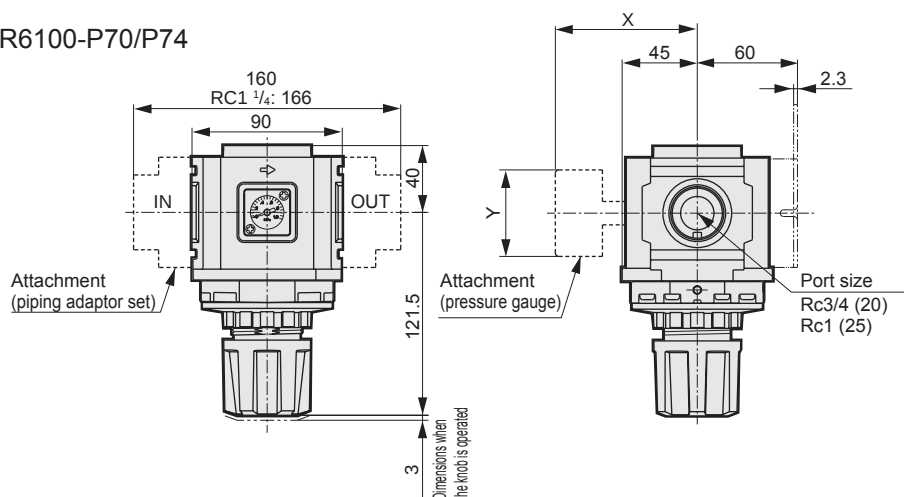
- L bracket
Part model No.: B430-P70
• Material: steel, nickel plate processing



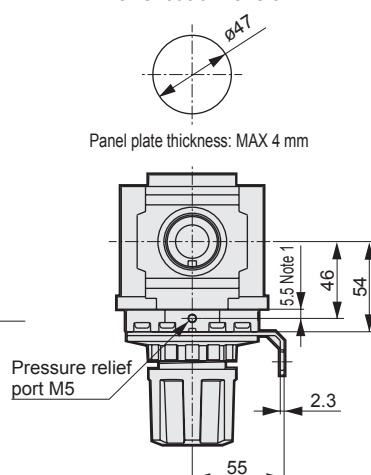
- Fitting
Part model No.: R4000-E1-P70
• Material: brass, nickel plate processing



● R6100-P70/P74



Panel cut dimension



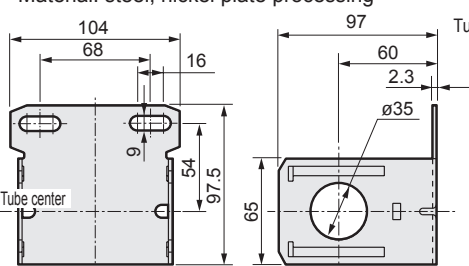
Note 1: Dimensions table is applied. Use fittings available for mounting.

Table of optional dimensions with pressure gauge

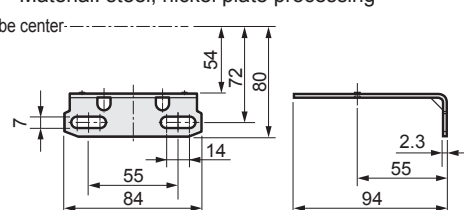
Attached pressure gauge	X	Y
GX59	85	$\phi 52$
GY59	87.5	$\phi 52$

[Bracket dimensions]

- C bracket
Part model No.: B620-P70
• Material: steel, nickel plate processing



- L bracket
Part model No.: B430-P70
• Material: steel, nickel plate processing



- Fitting
Part model No.: R4000-E1-P70
• Material: brass, nickel plate processing

