

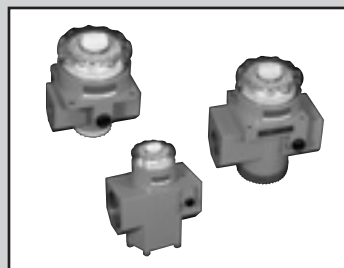
Dial air regulator

2302/2303/2304 Series

Dial provided to enable easy pressure adjustment. Control of large flow rate is also enabled.

● Port size: Rc 1/4 to Rc2

JIS symbol

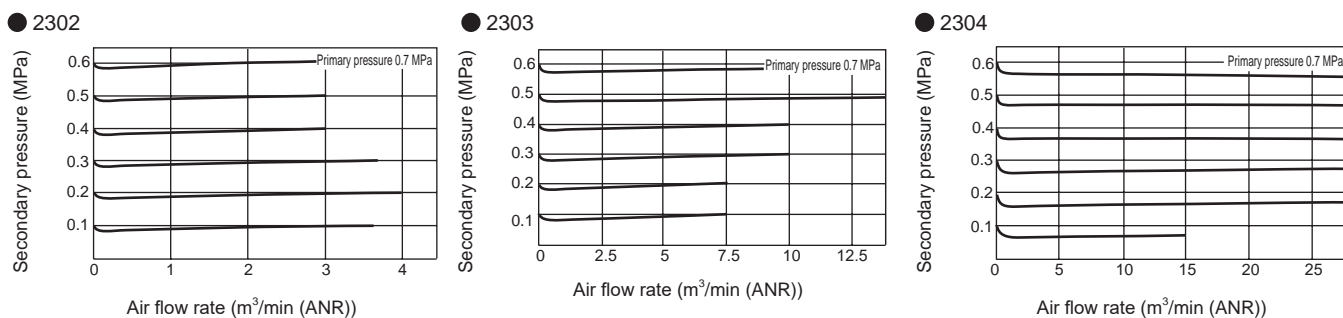


Specifications

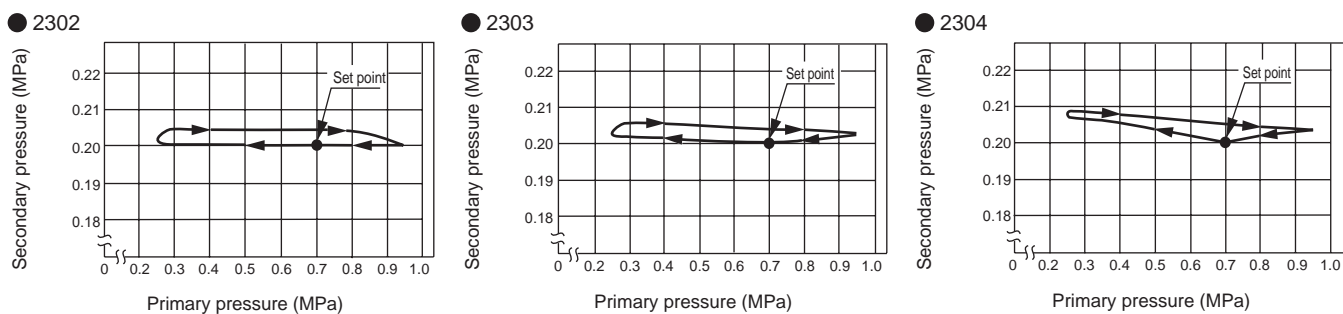
Item	2302-2C/3C/4C/6C	2303-6C/8C/10C	2304-12C/16C
Working fluid	Compressed air		
Max. working pressure MPa	2.06 (≈300 psi, 20.6 bar)		
Proof pressure MPa	3.09 (≈450 psi, 30.9 bar)		
Ambient / fluid temperatures °C	5 (41°F) to 65 (149°F)		
Set pressure MPa	0.05 (≈7.3 psi, 0.5 bar) to 1.08 (≈160 psi, 10.8 bar)		
Pressure relief	With relief mechanism		
Port size Rc	1/4 / 3/8 / 1/2 / 3/4	3/4 / 1 1/4	1 1/2 / 2
Weight kg	1	1.8	4
Constant bleed flow ℓ/min ANR	3 or less (air consumption)		

*1: Check that the primary pressure is at least 0.1 MPa or more than the set pressure .
 *2: The dial scale is a guide. Check the pressure gauge for precise secondary pressure.

Flow characteristics

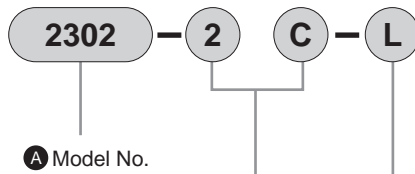


Pressure characteristics



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

How to order



A Model No.

B Port size
*1

C Option
*2

⚠ Precautions for model No. selection

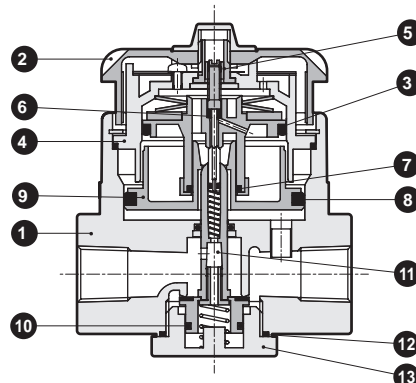
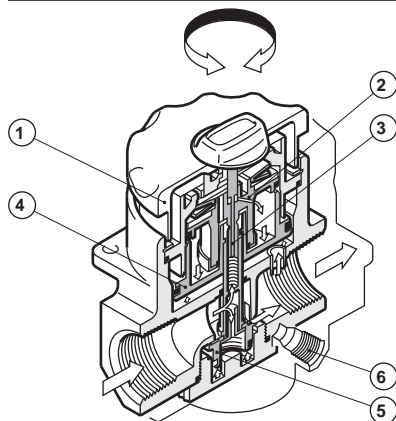
*1 : If port size NPT thread is required, do not indicate nominal size C.
(Example) 2302-2

*2 : The set pressure range for option "L" is 0.05 to 0.27 MPa.

*3 : Option "G" for low pressure is G59D-8-P04.
Refer to related products (page 363) for pressure gauge specifications.

Code	Description	A Model No.		
		2302 Standard	2303 Large	2304 Large Bore Diameter
B Port size				
2C	Rc ¹ / ₄	●		
3C	Rc ³ / ₈	●		
4C	Rc ¹ / ₂	●		
6C	Rc ³ / ₄	●	●	
8C	Rc1		●	
10C	Rc1 1/ ₄		●	
12C	Rc1 1/ ₂			●
16C	Rc2			●
C Option				
Blank	Standard	●	●	●
L	Low pressure	●	●	●
G	Pressure gage (G59D-8-P10)	●	●	●

Internal structure and parts list



No.	Part name	Material		
		2302	2303	2304
1	Body	Zinc alloy die-casting		
2	Adjusting knob	Polycarbonate resin		
3	O-ring	Fluoro rubber		
4	O-ring	Fluoro rubber		
5	Bonnet assembly	Zinc alloy die-casting/Brass, etc.		
6	O-ring	Nitrile rubber		
7	O-ring	Nitrile rubber		
8	O-ring	Fluoro rubber		
9	Bottom piston	Polyacetal resin	Aluminum	
10	O-ring	Fluoro rubber		
11	Main valve assembly	Brass/polyacetal resin/hydrogenated nitrile rubber		Brass/hydrogenated nitrile rubber
12	O-ring	Nitrile rubber		
13	Bottom plug	Polyacetal resin	Zinc alloy die-casting	

Consumable parts list

Part name		Model No.		
		2302	2303	2304
Consumable parts kit	*1	2302-KIT	2303-KIT	2304-KIT
Valve assembly kit	*2	2302-VALVE-ASSY	2303-VALVE-ASSY	2304-VALVE-ASSY

*1: Set of main valve assembly, bottom piston, O-ring, etc.

*2: Set of main valve assembly, O-ring, etc.

Functions

(1) Adjusting knob

Adjusting knob can be turned clockwise to set the pressure within a range of 0.05 to 1.08 MPa. Set secondary pressure to set pressure or more. A stopper is provided to prevent setting.

(2) Upper piston

Pilot pressure is adjusted by the upper piston and the pressure adjustment spring according to pilot signals from the pilot valve.

(3) Pilot valve

Turning the adjusting pilot knob shifts the pilot valve position to set the pilot pressure.

(4) Bottom piston

A valve system is opened and closed by the balance between the pilot pressure and secondary pressure. If the secondary pressure increases more than the set pressure, a relief valve opens to release the pressure to the atmosphere. (5) Valve system

If the pilot pressure and secondary pressure lose balance, compressed air on the primary side will be supplied as required to the secondary side. A valve with a large bore size is used to achieve excellent flow characteristics.

(6) Gauge port

Pressure scale is provided to enable rough pressure setting without another pressure gauge. If the accurate set pressure is required, install a pressure gauge to the gauge port.

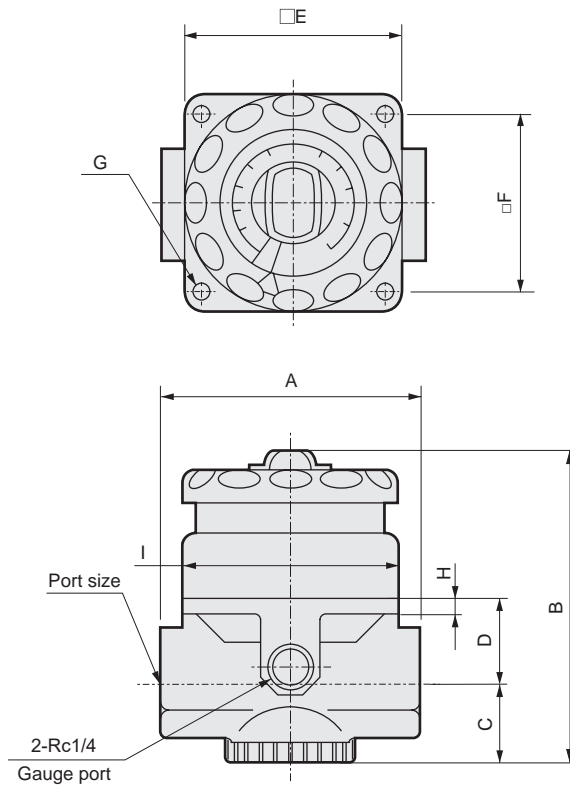
F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdris FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other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

2302/2303/2304 Series



F.R.L. Dimensions

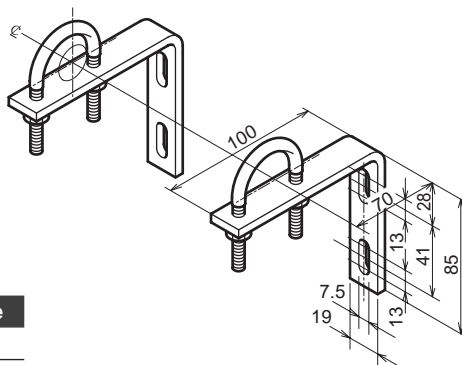
- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filt
- Film Resist FR
- Oil-ProhR
- Med Press FR
- No Cu/PTFE FRL
- Outdrs FRL
- Adapter Joiner
- Press Gauge
- CompFRL
- LgFRL**
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost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



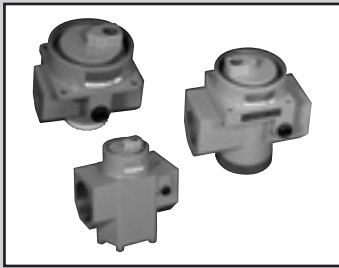
Item	Port size	A	B	C	D	E	F	G	H	I
2302-2C/3C/4C/6C	Rc ¹ / ₄ / ³ / ₈ / ¹ / ₂ / ³ / ₄	81	99	24	28	67.5	56	4-ø5.6 through	6	ø67
2303-6C/8C/10C	Rc ³ / ₄ / 1 / ¹ / ₄	110	129	44	37	67.5	56	4-ø5.1 depth 11	-	ø67
2304-12C/16C	Rc1 ¹ / ₂ / 2	135	170	71	36	-	-	-	-	ø67

*1: The dial scale resolution may differ depending on the product.

- Pipe bracket: 6132
 - Material: Steel
 - Zinc plated
- Bracket - Pipe bracket thickness 4.5 mm



Model No.	Port size
6132-2C	¹ / ₄ B
6132-3C	³ / ₈ B
6132-4C	¹ / ₂ B
6132-6C	³ / ₄ B
6132-8C	1B



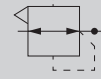
Remote dial air regulator

2302/2303/2304 Series

With pilot port for pressure setting/Remote control is enabled.

● Port size: Rc 1/4 to Rc2

JIS symbol



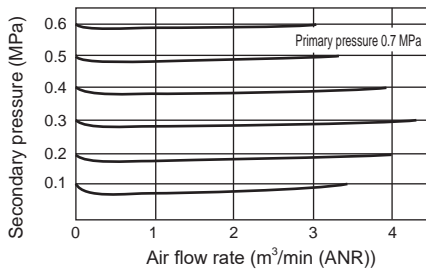
Specifications

Item	2302-2C/3C/4C/6C-R	2303-6C/8C/10C-R	2304-12C/16C-R
Working fluid	Compressed air		
Max. working pressure	MPa	2.06 (≈300 psi, 20.6 bar)	
Proof pressure	MPa	3.09 (≈450 psi, 30.9 bar)	
Ambient / fluid temperatures	°C	5 (41°F) to 65 (149°F)	
Set pressure	MPa	0.05 (≈7.3 psi, 0.5 bar) to 1.08 (≈160 psi, 10.8 bar)	
Pressure relief	With relief mechanism		
Port size	Rc	1/4 / 3/8 / 1/2 / 3/4	3/4/1 1/4
Weight	kg	1	1.8
Constant bleed quantity	ℓ/min ANR	3 or less (air consumption)	

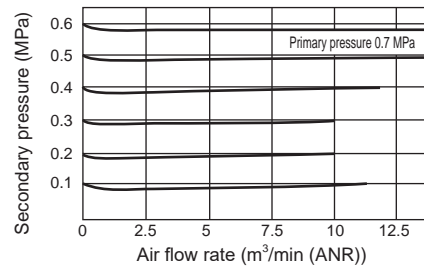
Note: Check that the primary pressure is at least 0.1 MPa higher than the set pressure .

Flow characteristics

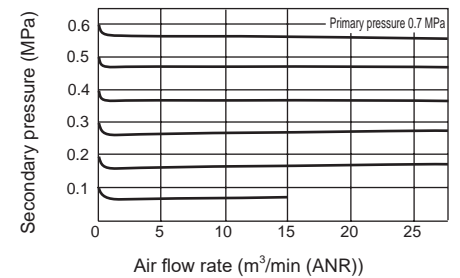
● 2302-2/3/4/6C-R



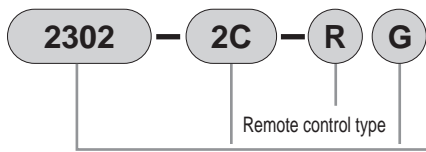
● 2303-6/8/10C-R



● 2304-12/16C-R



How to order



A Model No.

B Port size

C Pressure gauge

Code	Description	A Model No.		
		2302 Standard	2303 Large	2304 Large bore size
B Port size				
2C	Rc1/4	●		
3C	Rc3/8	●		
4C	Rc1/2	●		
6C	Rc3/4	●	●	
8C	Rc1		●	
10C	Rc1 1/4		●	
12C	Rc1 1/2			●
16C	Rc2			●
C Pressure gauge				
Blank	Not included	●	●	●
G	Pressure gauge (G59D-8-P10)	●	●	●

Precautions for model No. selection

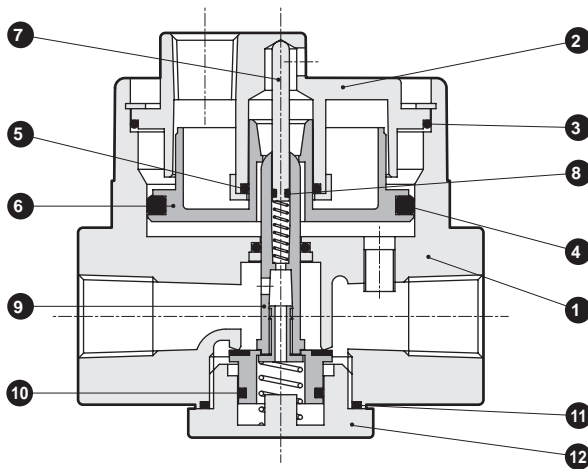
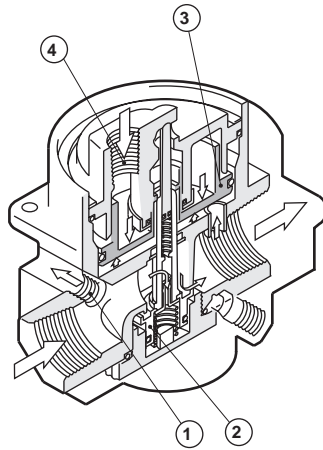
*1 : If port size NPT thread is required, do not indicate nominal size C. (Example) 2302-2-R

*2 : Refer to Related Products (page 363) for the included "G" pressure gauge.

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

2302/2303/2304 Series

F.R.L. Internal structure and parts list



Functions

(1) Air outlet for control

Compressed air on the primary side is supplied to the pilot regulator. (Excluding 2302-R)

(2) Valve stem

If the pilot pressure and secondary pressure lose balance, compressed air on the primary side will be supplied as required to the secondary side. A valve with a large bore size is used to achieve excellent flow characteristics.

(3) Bottom piston

A valve stem is opened and closed by the balance between the pilot pressure and secondary pressure. If the secondary pressure increases more than the set pressure, a relief valve opens to release the pressure to the atmosphere. (4)

Pilot pressure inlet

The pilot pressure set by pilot regulator is supplied.

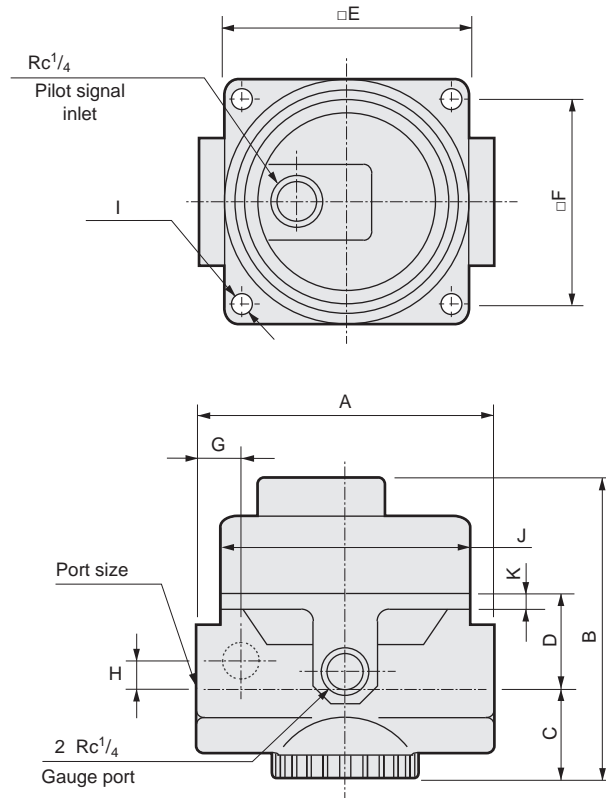
No.	Part name	Material		
		2302-R	2303-R	2304-R
1	Body	Zinc alloy die-casting		
2	Cover	Zinc alloy die-casting		
3	O-ring	Fluoro rubber		
4	O-ring	Fluoro rubber		
5	O-ring	Nitrile rubber		
6	Bottom piston	Polyacetal resin	Aluminum	
7	Pilot valve	Brass		
8	O-ring	Nitrile rubber		
9	Main valve assembly	Brass/polyacetal resin/hydrogenated nitrile rubber	Brass/hydrogenated nitrile rubber	
10	O-ring	Fluoro rubber		
11	O-ring	Nitrile rubber		
12	Bottom plug	Polyacetal resin	Zinc alloy die-casting	

Consumable parts list

Part name		Model No.		
		2302-R	2303-R	2304-R
Consumable parts kit	*1	2302-R-KIT	2303-R-KIT	2304-R-KIT
Valve assembly kit	*2	2302-R-VALVE-ASSY	2303-R-VALVE-ASSY	2304-R-VALVE-ASSY

*1: Set of main valve assembly, bottom piston, O-ring, etc.

*2: Set of main valve assembly, O-ring, etc.



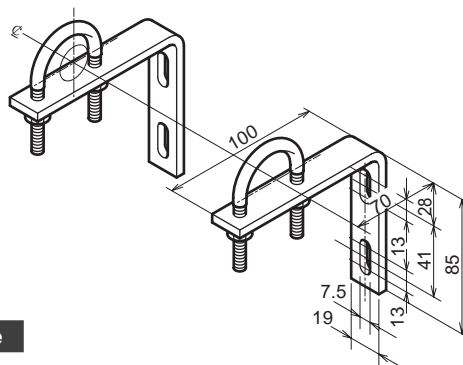
Item	Port size	A	B	C	D	E	F	G	H	I	J	K
2302-2C/3C/4C/6C-R	Rc ¹ / ₄ / ³ / ₈ / ¹ / ₂ / ³ / ₄	81	82	25	27	67.5	56	-	-	4-ø5.6 through	ø67	4.6
2303-6C/8C/10C-R	Rc ³ / ₄ / 1 / ¹ / ₄	110	111	44	37	67.5	56	25.4	0	4-ø5.1 depth 11	ø67	-
2304-12C/16C-R	Rc1 ¹ / ₂ / 2	135	152	71	36	-	-	27.5	17	-	ø67	-

Note: Refer to the following for dimensions of the bracket.

● Pipe bracket: 6132

- Material: Steel
- Zinc plated

Bracket - Pipe bracket thickness 4.5 mm



Model No.	Port size
6132-2C	¹ / ₄ B
6132-3C	³ / ₈ B
6132-4C	¹ / ₂ B
6132-6C	³ / ₄ B
6132-8C	1B

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