

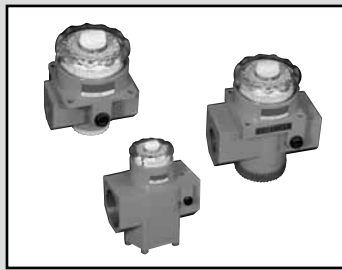
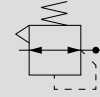
Dial air regulator

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

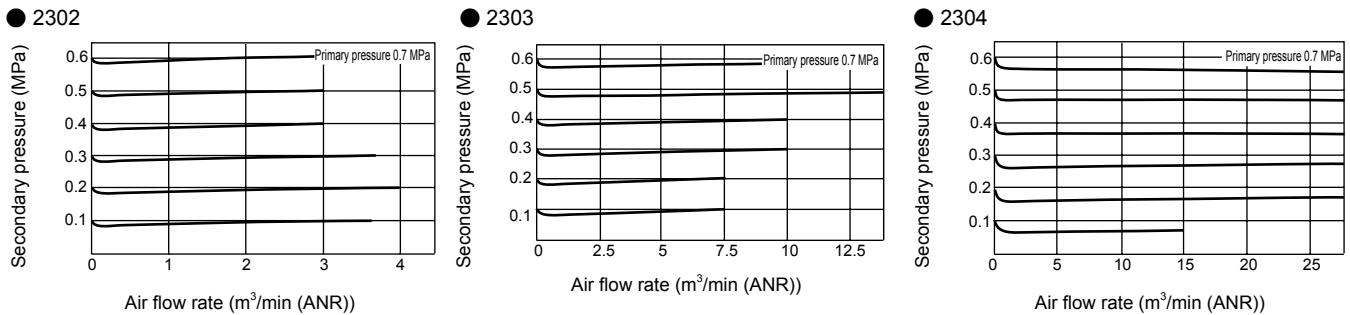


Specifications

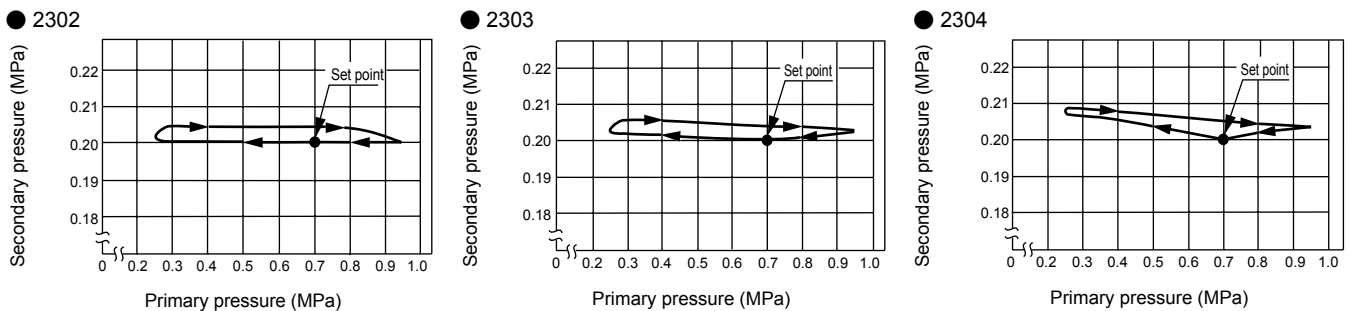
Descriptions	2302-2C/3C/4C/6C	2303-6C/8C/10C	2304-12C/16C
Working fluid	Compressed air		
Max. working pressure MPa	2.06 (≈300 psi, 20.6 bar)		
Proof pressure MPa	3.09 (≈450 psi, 30.9 bar)		
Ambient / fluid temperatures °C	5 (41°F) to 65 (149°F)		
Set pressure MPa	0.05 (≈7.3 psi, 0.5 bar) to 1.08 (≈160 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

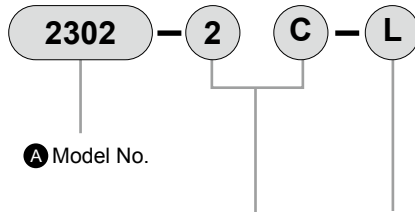


Pressure characteristics



- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FimResistFR
- Oil-Prohr
- MedPresFR
- No Cu/PTFE FRL
- Outdrs FR
- F.R.L (Related)
- CompFRL
- LgFRL
- PrecsR
- VacFR
- Clean FR
- ElecPneur
- AirBoost
- SpdContr
- Silncr
- CheckV/other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/ElecPresSw
- ContactSW
- AirSens
- PresSW Cool
- AirFloSens/Contr
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- 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

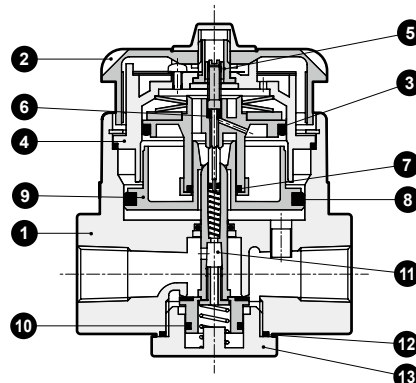
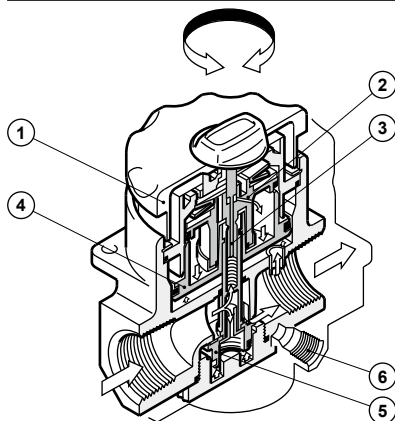
*1 : If port size NPT thread is required, do not indicate nominal size C.
(Example) 2302-2

*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 289) for pressure gauge specifications.

		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 gauge (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/copper alloy, 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	Copper alloy/polyacetal resin/hydrogenated nitrile rubber	Copper alloy/hydrogenated nitrile rubber	
12	O-ring	Nitrile rubber		
13	Bottom plug	Polyacetal resin	Zinc alloy die-casting	

Functions

(1) Adjusting knob

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

(2) Upper piston

Pilot pressure is adjusted by the upper piston and the pressure adjustment spring according to pilot singles 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 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.

(5) 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.

(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.

Repair parts list

Part name		Model No.		
		2302	2303	2304
Repair 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.

F.R.L

F (Filtr)

R (Reg)

L (Lub)

PresSW

Shutoff

SlowStart

FimResistFR

Oil-ProhR

MedPresFR

No Cu/
PTFE FRL

Outdrs FR

F.R.L
(Related)

CompFRL

LgFRL

PresCR

VacF/R

Clean FR

ElecPneur

AirBoost

SpdContr

Silncr

CheckV/
other

Jnt/tube

AirUnt

PresCompn

Mech/
ElecPresSw

ContactSW

AirSens

PresSW
Cool

AirFloSens/
Contr

WaterRISens

TotAirSys
(Total Air)

TotAirSys
(Gamma)

RefrDry

DesicDry

HiPolymDry

MainFiltr

Dischrg
etc

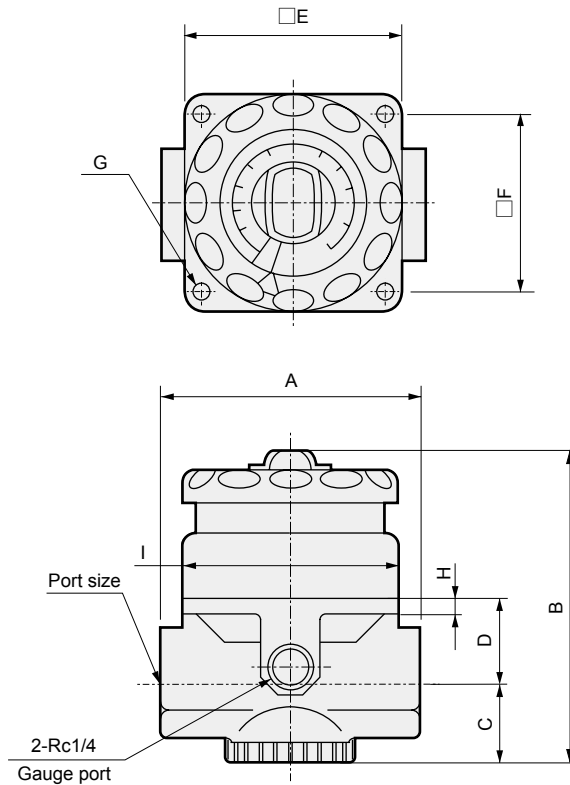
Ending

2302/2303/2304 Series



Dimensions

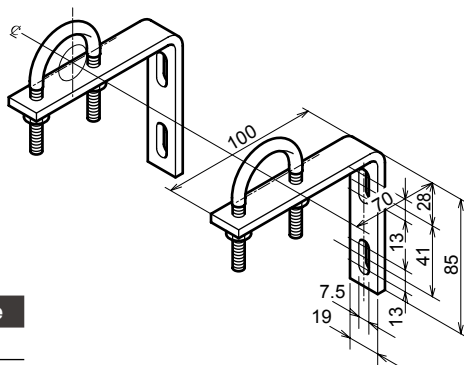
- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FilmResistFR
- Oil-ProhR
- MedPresFR
- No Cu/
PTFE FRL
- Outdrs FR
- F.R.L
(Related)
- CompFRL
- LgFRL**
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- SpdContr
- Silncr
- Check/
other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/
ElecPresSw
- ContactSW
- AirSens
- PresSW
Cool
- AirFloSens/
Contr
- WaterRtSens
- TotAirSys
(Total Air)
- TotAirSys
(Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg
etc
- Ending



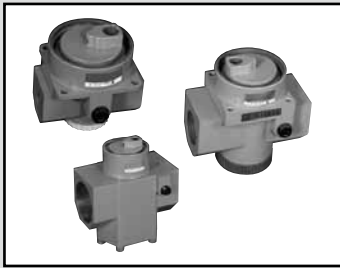
Descriptions	Port size	A	B	C	D	E	F	G	H	I
2302-2C/3C/4C/6C	Rc ¹ / ₄ / ³ / ₈ / ¹ / ₂ / ³ / ₄	81	99	24	28	67.5	56	4-φ5.6 through	φ6	φ67
2303-6C/8C/10C	Rc ³ / ₄ / 1 / 1 ¹ / ₄	110	129	44	37	67.5	56	4-φ5.1 depth 11	-	φ67
2304-12C/16C	Rc1 ¹ / ₂ / 2	135	170	71	36	-	-	-	-	φ67

*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



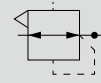
Remote dial air regulator

2302/2303/2304 Series

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

● Port size: Rc 1/4 to Rc2

JIS symbol



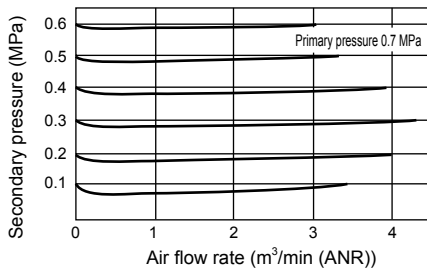
Specifications

Descriptions	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)	

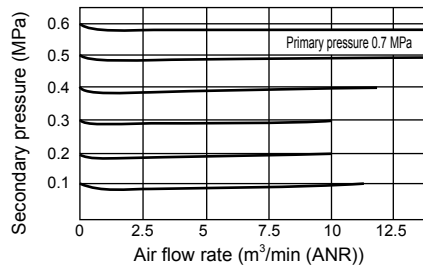
Note: Check that the primary pressure is at least 0.1 MPa higher than the set pressure .

Flow characteristics

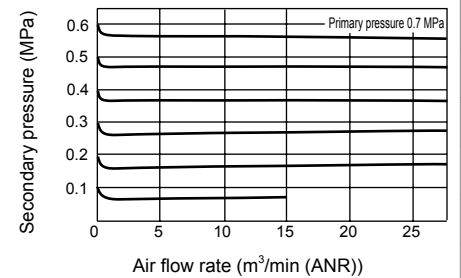
● 2302-2/3/4/6C-R



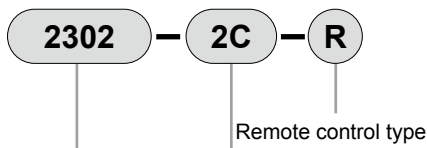
● 2303-6/8/10C-R



● 2304-12/16C-R



How to order



A Model No.

B Port size

A Model No.

Code	Content	2302 Standard	2303 Large	2304 Large Bore Diameter
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 attached	●	●	●
G	Pressure gauge (G59D-8-P10)	●	●	●

⚠ Precautions for model No. selection

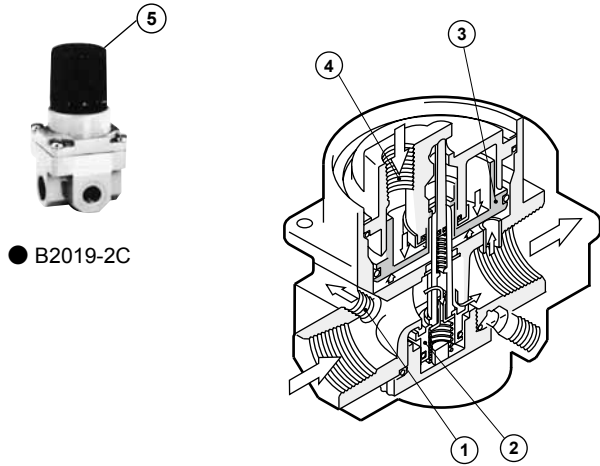
*1 : If port size NPT thread is required, do not indicate nominal size C. (Example) 2302-2-R

*2 : Refer to Related Products (page 289) for the included "G" pressure gauge.

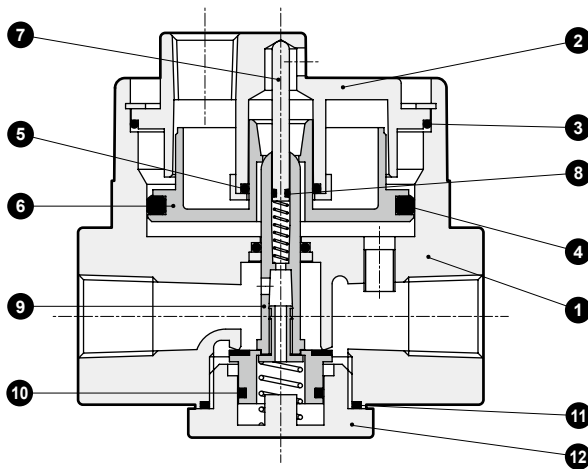
- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FimResistFR
- Oil-ProhR
- MedPresFR
- No Cu/ PTFE FRL
- Outdrs FR
- F.R.L (Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- SpdContr
- Silncr
- CheckV/ other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/ ElecPresSw
- ContactSW
- AirSens
- PresSW Cool
- AirFloSens/ Contr
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

2302/2303/2304 Series

F.R.L Internal structure and parts list



● B2019-2C



Functions

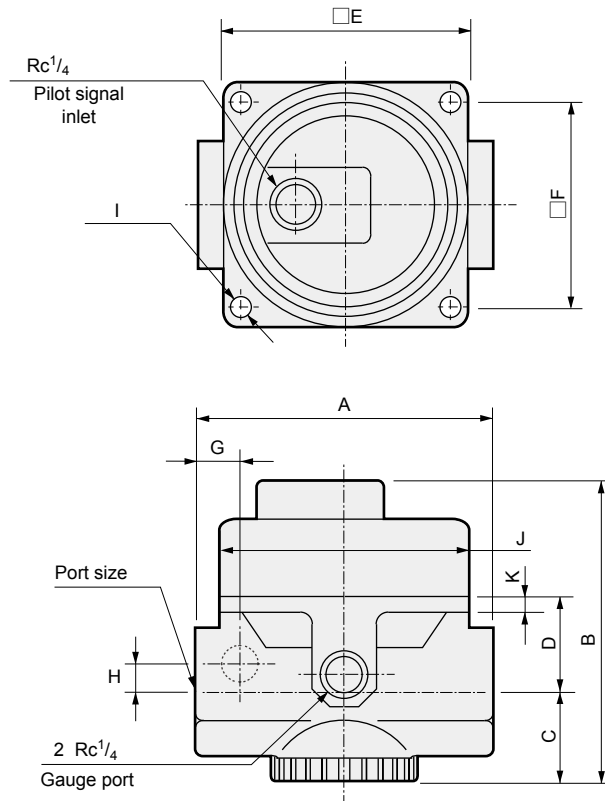
- (1) Air outlet for control
Compressed air on the primary side is supplied to the pilot regulator. (Excluding 2302-R)
- (2) Valve stem
If the pilot pressure and secondary pressure lose balance, compressed air on the primary side will be supplied as required to the secondary side. A valve with a large 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	Copper alloy		
8	O-ring	Nitrile rubber		
9	Main valve assembly	Copper alloy/PA resin/hydrogenated nitrile rubber	Copper alloy/HNB rubber	
10	O-ring	Fluoro rubber		
11	O-ring	Nitrile rubber		
12	Bottom plug	Polyacetal resin	Zinc alloy die-casting	

Repair parts list

Part name		Model No.		
		2302-R	2303-R	2304-R
Repair 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.



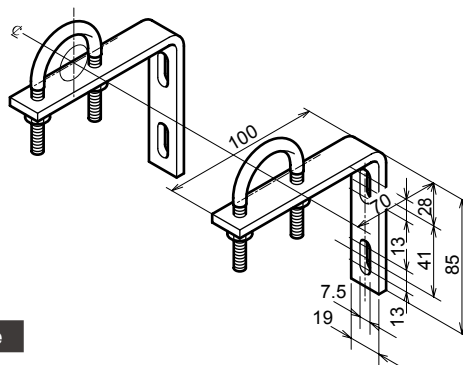
Descriptions	Port size	A	B	C	D	E	F	G	H	I	J	K
2302-2C/3C/4C/6C-R	Rc ¹ / ₄ / ³ / ₈ / ¹ / ₂ / ³ / ₄	81	82	25	27	67.5	56	-	-	4-φ5.6 through	φ67	4.6
2303-6C/8C/10C-R	Rc ³ / ₄ / 1 / ¹ / ₄	110	111	44	37	67.5	56	25.4	0	4-φ5.1 depth 11	φ67	-
2304-12C/16C-R	Rc1 ¹ / ₂ / 2	135	152	71	36	-	-	27.5	17	-	φ67	-

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 (Filtr)
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L (Lub)
PresSW
Shutoff
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MedPresFR
No Cu/ PTFE FRL
Outdrs FR
F.R.L (Related)
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
SpdContr
Silncr
CheckV/ other
Jnt/tube
AirUnt
PrecsCompn
Mech/ ElecPresSw
ContactSW
AirSens
PresSW Cool
AirFloSens/ Contr
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending