



B2019/A2000/2001/2215/2216 Series

Regulator

Low pressure type is also available.

● Port size: Rc 1/8 to Rc2

JIS symbol



Turbin Girişindeki Regülatör

Specifications

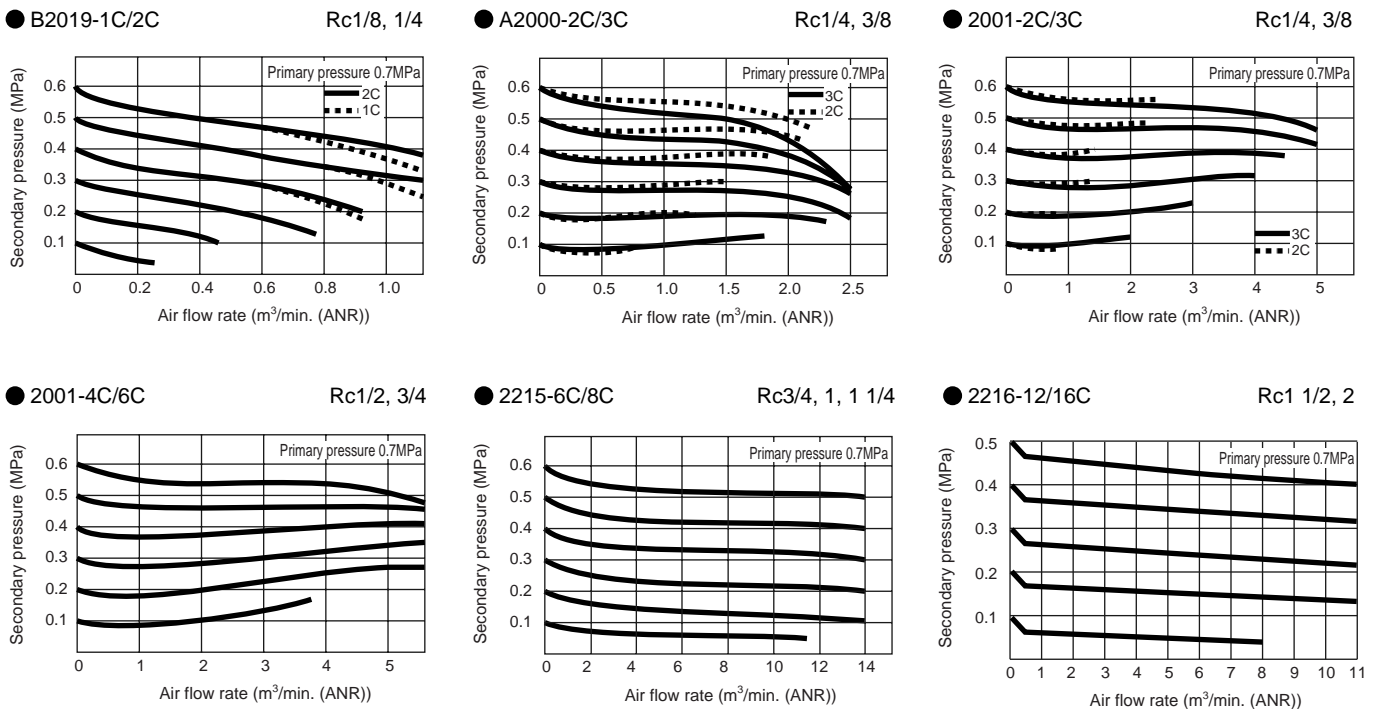
Discontinued

Descriptions	B2019-1C/2C	A2000-2C/3C	2001-2C/3C/4C/6C	2215-6C/8C/10C	2216-1/16C
Appearance					 Custom order
Working fluid	Compressed air				
Max. working pressure	MPa 2.06	1.0		2.06	
Withstanding pressure	MPa 3.09	1.5		3.09	
Fluid temperature (ambient temperature)	°C 5 to 65				
Set pressure range	MPa 0.04 to 0.83	0.03 to 0.83		0.07 to 0.83	
Relief	With relief mechanism				
Port size	Rc 1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2, 3/4	3/4, 1, 1 1/4	1 1/2, 2
Product weight	kg 0.2	0.6	1.2	2.5	4.6

Note 1: Pressure gauge of "LG" has 0 to 0.4MPa range, while "HG" has 0 to 2.0MPa range.

Note 2: For high pressure type (H), relief starts when the pressure 0.13MPa higher than set pressure is reached.

Flow characteristic



Ozone specifications (Ending 17)

Copper and PTFE free (page 605)

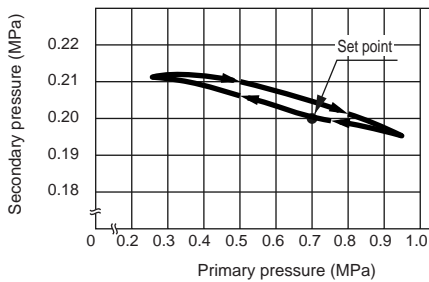
B2019- - **P11**

B2019- - **P6**

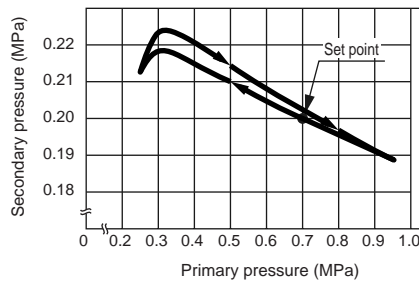
A2000- - **P11**

Pressure characteristic

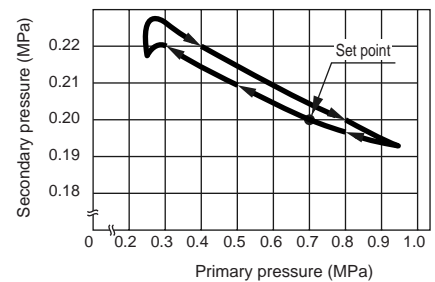
● B2019



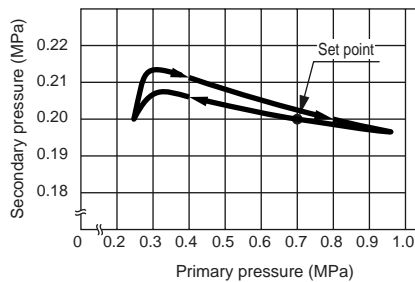
● A2000



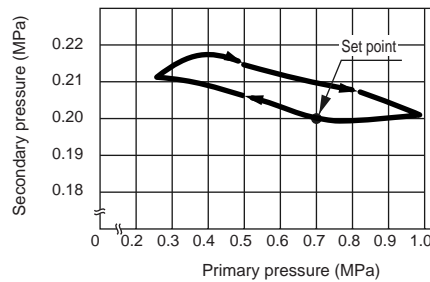
● 2001



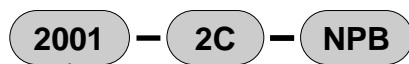
● 2215



● 2216



How to order



A Model no.

B Port size
Note 1

<Example of model number>

2001-2C-NPB

Model: Regulator

B Port size: Rc 1/4

C Option: Non-relief,
panel mount,
bracket attached

C Option
Note 2 to 7

Note on model no. selection

Note 1: If NPT thread is required, do not indicate nominal size C. (E.g.) B2019-1

If a pressure gauge is selected, the NPT thread pressure gauge is enclosed.

Note 2: Options can be combined. However, combination of "L" and "H" is not available.

Note 3: Refer to page 612 for pressure adjusting range and panel mount prepared hole diameter of "L" low pressure and "H" high pressure.

Note 4: If option "B" and "G" are indicated, a pressure gauge and a bracket are attached.

A pressure gauge, G49D-6-P10 is attached to B2019 type, while G59D-8-P10 is attached to A2000, 2001, 2215 and 2216 types (G59D-8-P04 for low pressure, while G59D-8-P20 for high pressure). Refer to related components on page 691 for the specifications on pressure gauge.

Note 5: Consult with CKD when assembly products are required.

Note 6: Consult with CKD, if maximum working pressure specifications (2.06 MPa) and metal bottom plug of A2000 are requires.

Note 7: If option B (bracket) of B2019 is selected, "6506" is attached, while if PB (bracket for panel mount) is selected, bracket of "6166" is attached. Refer to page 608 and 609 for attachment "B" bracket.

Note 8: Refer to page 605 for How to order B2019 copper and PTFE free.

A Model no.

	Miniature	Compact	Standard	Large type	Large bore size type
B2019	●				
A2000		●			
2001			●		
2215				●	
2216					●

B Port size

Symbol	Descriptions	B2019	A2000	2001	2215	2216
1C	Rc1/8	●				
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 Option

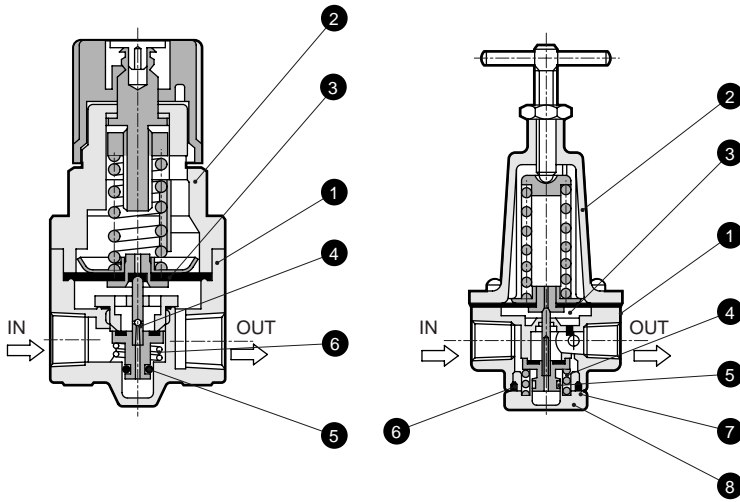
Regulator	Blank	Standard	B2019	A2000	2001	2215	2216
	N	Nonrelief		●	●	●	●
L	Low pressure (0.02 to 0.34MPa)		●	●	●		
H	High pressure (MPa)				● (0.07 to 1.72)	● (0.07 to 1.23)	● (0.07 to 1.23)
K	Plastic knob			●	●	●	●
P	Panel mount		●	●	●		
Attachment	Blank	Not attached	●	●	●	●	●
	G	Pressure gauge	●	●	●	●	●
	B	Bracket	●	●	●		

- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter
- Auto. drain / others
- F.R.L. (Module unit)
- F.R.L. (Separate)
- Compact F.R.
- Precise regulator
- F.R.L. (Related products)
- Clean F.R.
- Electro pneumatic regulator
- Air booster
- Speed control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum filter
- Vacuum regulator
- Suction plate
- Magnetic spring buffer
- Mechanical pressure SW
- Electronic pressure SW
- Contact / close contact conf. SW
- Air sensor
- Pressure SW for coolant
- Small flow sensor
- Small flow controller
- Flow sensor for air
- Flow sensor for water
- Total air system
- Total air system (Gamma)
- Ending

Regulator
F.R.L. unit

Regulator series

Internal structure and parts list



Functional explanation

(1) Adjusting screw

Adjusting screw to adjust secondary side pressure is turned clockwise to increase pressure.

(2) Relief valve

If the secondary pressure increases higher than the set pressure, the valve stem and diaphragm section separate to release compressed air to the atmosphere from the relief valve, so this prevents the secondary side set pressure from increasing abnormally.

(3) Diaphragm

The balance between the force of pressure adjusting spring and the force applied to diaphragm bottom (the secondary pressure) is maintained, and valve system is opened and closed to supply accurate and stable set pressure to the secondary side. Large type regulator 2215 balances pressure adjustment spring by the piston.

(4) Valve system

If the diaphragm and the pressure adjustment spring turn to off-balance, the compressed air on the primary side is supplied as required as to the secondary side. A valve with large port size is used to achieved excellent flow characteristics.

(5) Gauge port

A gauge port is placed near to OUT side from the center section to measure the secondary side pressure accurately. Two gauge ports are provided.

No.	Part name	Material				
		B2019	A2000	2001	2215	2216
1	Body	Zinc alloy die-casting				
2	Guard	Zinc alloy die-casting				
3	Diaphragm assembly	Nitrile rubber, zinc alloy die-casting, steel		Nitrile rubber, zinc alloy die-casting (Piston assembly) zinc alloy die-casting, nitrile rubber		
4	Valve assembly	Brass, hydrogen nitrile rubber				
5	O ring	Nitrile rubber			Fluoro rubber	
6	Bottom spring	Stainless steel				
7	O ring	-	Nitrile rubber			
8	Bottom plug	-	Polyacetal resin	Zinc alloy die-casting		

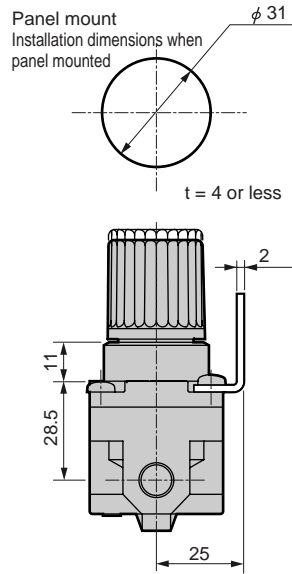
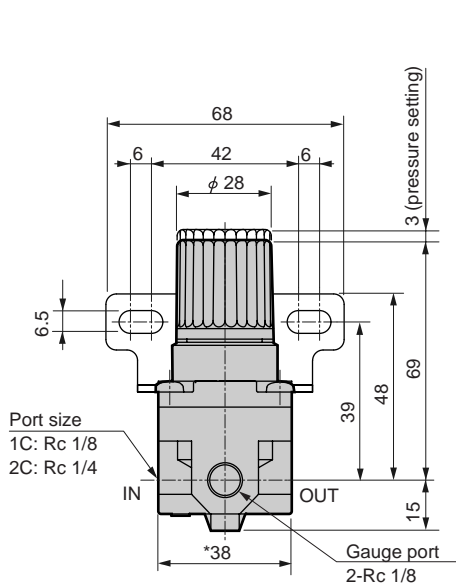
Repair parts list

No.	Part name		Model no.				
			B2019	A2000	2001	2215	2216
3	Diaphragm assembly	Relief type	B2019-DIAPHRAGM-ASSY	A2000-DIAPHRAGM-ASSY	2001-DIAPHRAGM-ASSY	2215-PISTON-ASSY	2215-PISTON-ASSY
		Nonrelief type	B2019-DIAPHRAGM-ASSY-N	A2000-DIAPHRAGM-ASSY-N	2001-DIAPHRAGM-ASSY-N	2215-PISTON-ASSY-N	2215-PISTON-ASSY-N
		Relief type/ high pressure	-	-	2001-DIAPHRAGM-ASSY-H	-	-
		Nonrelief type/ high pressure	-	-	2001-DIAPHRAGM-ASSY-HN	-	-
4	Valve assembly		B2019-VALVE-ASSY	A2000-VALVE-ASSY	2001-VALVE-ASSY	2215-VALVE-ASSY	2216-VALVE-ASSY
5							

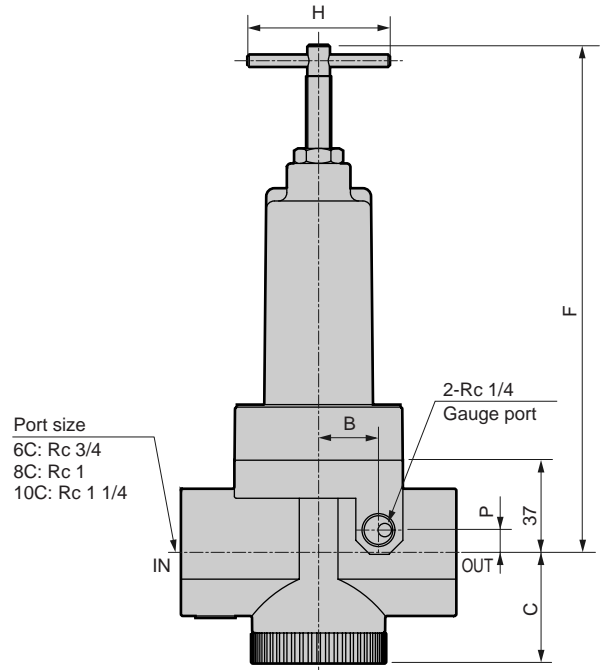
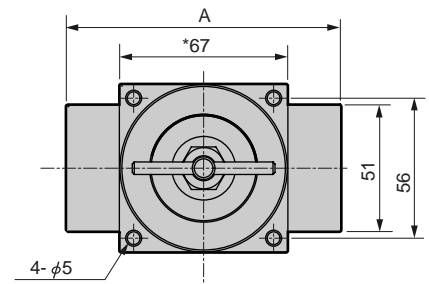
Dimensions



● B2019

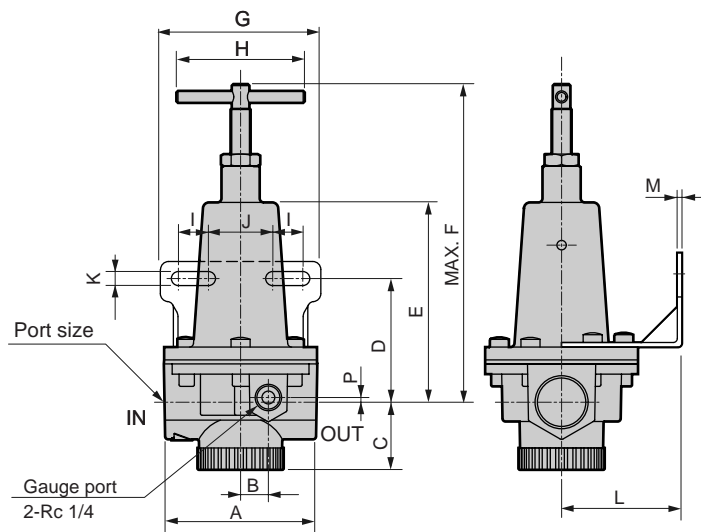
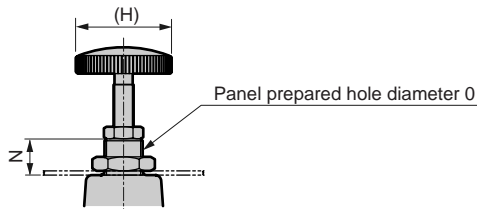


● 2215, 2216



● A2000

● 2001



- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter
- Auto. drain / others
- F.R.L. (Module unit)
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- Contact / close contact cont. SW
- Air sensor
- Pressure SW for coolant
- Small flow sensor
- Small flow controller
- Flow sensor for air
- Flow sensor for water
- Total air system
- Total air system (Gamma)

Ending

Regulator
F.R.L. unit

Model no.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Port size
A2000	61	7	31	58	56.5	109	80	57 (φ48)	16	32	6.6	62.5	2.3	18	φ18	0	Rc1/4, 3/8
2001-2/3/4C	76.5	14	35	62	97	160	80	63 (φ48)	15	32	7	60	2.3	20	φ20	0	Rc1/4, 3/8, 1/2
2001-6C	76.5	14	33	64	99	162	80	63 (φ48)	15	32	7	60	2.3	20	φ20	2.35	Rc3/4
2215	110	24	44	-	-	206	-	63 (φ48)	-	-	-	-	-	-	-	9	Rc3/4, 1, 1 1/4
2216	135	38	72	-	-	216	-	63 (φ48)	-	-	-	-	-	-	-	15	Rc1 1/2, 2

Note: Refer to pages 608 to 609 for dimensions of bracket.