

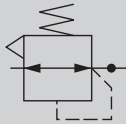


Clean regulator

RC2000 Series

● Port size: Rc1/4, Rc3/8, Rc1/2

JIS symbol



Overview

With its oil-prohibited specifications and stainless steel body, the RC2000 is ideal for clean air and N₂ pressure control in semiconductor manufacturing equipment and liquid crystal device manufacturing equipment. The compact body and large flow rate capacity are suitable for air (N₂) blowing.

Features

- Oil-prohibited specifications
Precision cleaning is performed on the gas contact parts, and the manufacturing processes from assembling to packaging are completed in clean rooms. No grease is used in gas-contacting parts.
- Compact/large flow rate
A large flow rate of 0.8 m³/min. is realized even with just 50 mm face to face. (Flow rate at 0.7 MPa primary pressure, 0.5 MPa set pressure, 0.1 MPa pressure drop)
- Reverse function (when back pressure is not applied)
This function reverses secondary pressure to the primary side when primary pressure is exhausted. This safety-oriented product has no residual pressure on the secondary side.

Specifications

Model No.		RC2000-8-P90	RC2000-10-P90	RC2000-15-P90
Working fluid		Compressed air, N ₂		
Max. working pressure MPa		1.0 (≈150 psi, 10 bar) (0.5 (≈73 psi, 5 bar) for low pressure)		
Proof pressure MPa		1.5 (≈220 psi, 15 bar)		
Ambient / fluid temperatures °C		5 (41°F) to 60 (140°F)		
Set pressure range MPa		Standard: 0.05 (≈7.3 psi, 0.5 bar) to 0.7 (≈100 psi, 7 bar) Low pressure: 0.02 (≈2.9 psi, 0.2 bar) to 0.2 (≈29 psi, 2 bar) *1		
Port size (IN/OUT)		Rc1/4	Rc3/8	Rc1/2
Pressure gauge port size		Rc1/8		
Gas contact part materials	Metal	SUS316		
	Resin	PTFE		
	Rubber	FKM		
Assembling/inspection/packaging		Integrated production in cleanroom		
Cleaning (gas contact part)		Precision cleaning		
Weight kg		0.47	0.45	0.59
Attachment weight g		G ₂ 49:90,B3:40,E1:5		

^{*1}: When using the standard with a set pressure of 0.4 MPa or less, confirm that the primary pressure difference for the set pressure is within 0.5 MPa. When using the low pressure type, confirm that the primary pressure difference for set pressure is within 0.3 MPa.

How to order

RC2000

8

LN

GY49B3E1

P90

Model No. (clean-room specifications) (oil-prohibited specifications)

A

B

C

D

A Port size

8 Rc1/4

10 Rc3/8

15 Rc1/2 (Made to order)

B Option ^{*1}

Pressure range

Blank 0.05 to 0.7 MPa

^{*2} L 0.02 to 0.2 MPa

Relief mechanism

Blank Relief

N Non-relief

C Other attachments ^{*1, *3}

Blank None

GY49 Pressure gauge (G49D-6-□-P94)

GZ49 Pressure gauge (G49D-6-□-P90)

B3 L-bracket

E1 Fitting (for exhaust port)

D Clean-room specifications

P90 Treatment

SS used Oil-prohibited

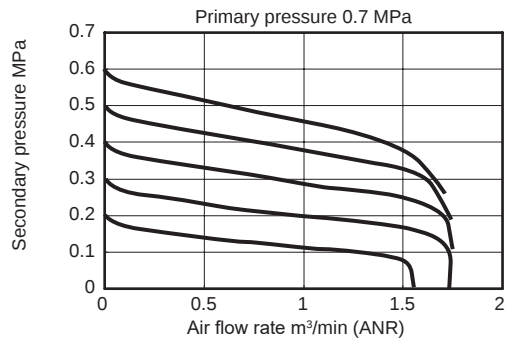
^{*1}: When selecting multiple options or attachments, indicate the model No. code in order starting from the top. If option or attachment is left blank, delete the hyphen "-". (Example: RC2000-8-P90)
^{*2}: If "Blank" is selected for the pressure range, the 1.0 MPa pressure gauge (pressure gauge model: G49D-6-P10-P9*) is used. If "L" is selected for the pressure range, the 0.2 MPa pressure gauge (pressure gauge model: G49D-6-P02-P9*) is used.
^{*3}: Two pipe plugs (R1/8) are included with the product. If a pressure gauge is selected as an attachment, one plug is included.

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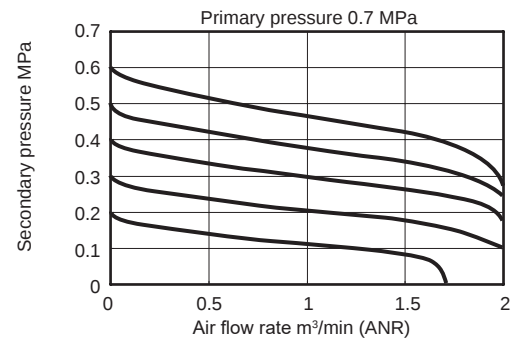
CKD

Flow characteristics

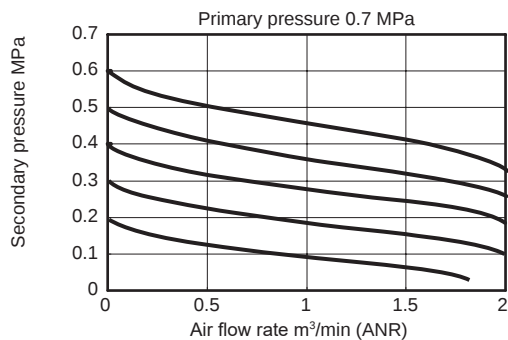
● RC2000-8-P90



● RC2000-10-P90

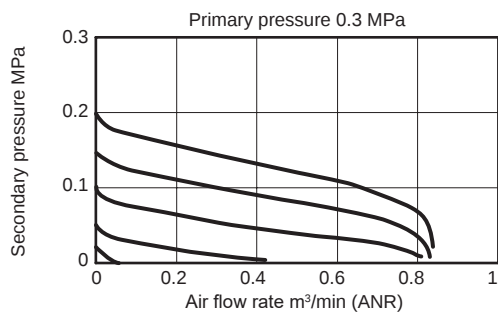


● RC2000-15-P90

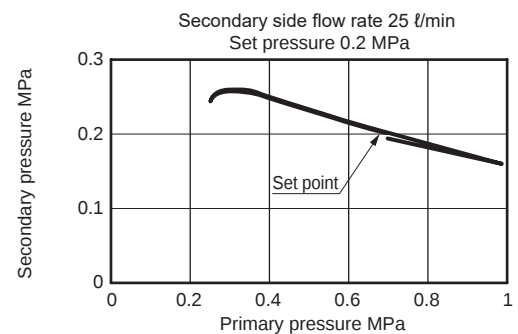


Flow characteristics (low pressure)

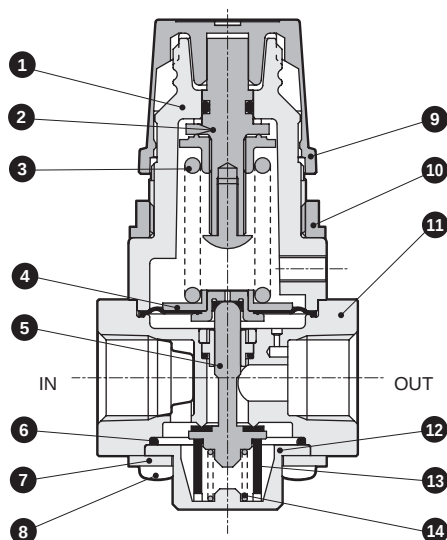
● RC2000-*-L-P90



Pressure characteristics



Internal structure and parts list

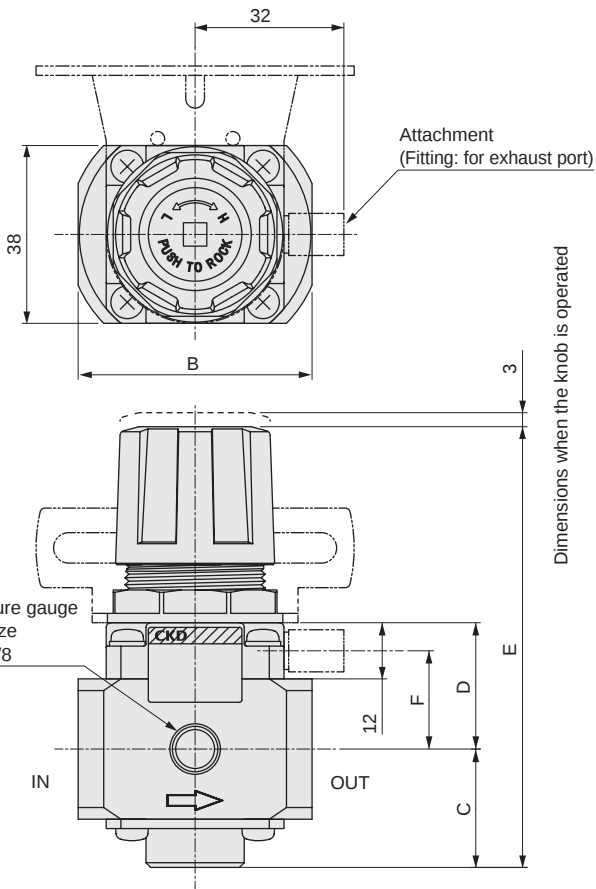


Cannot be disassembled

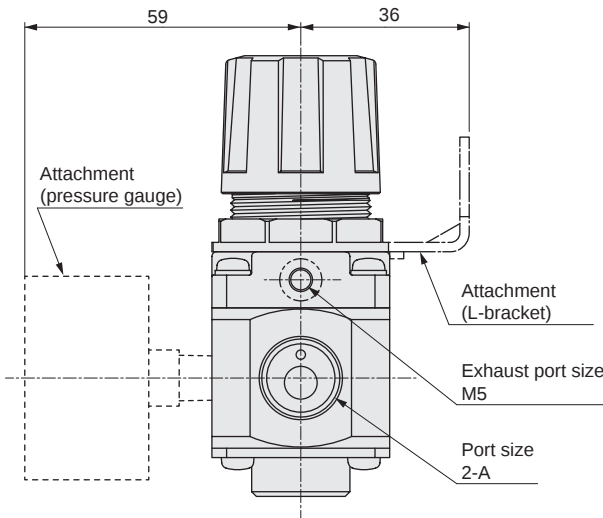
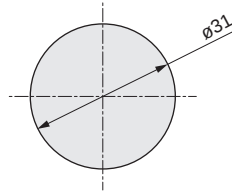
No.	Part name	Material (treatment)
1	Cover	PA66
2	Pressure adjusting screw assembly	Steel, SUS, FKM, POM
3	Spring	Steel
4	Diaphragm	SUS316, FKM, SUS303
5	Valve	SUS316, FKM
6	O-ring	FKM
7	Plate	SUS304
8	Thread	Steel (nickel plating)
9	Knob	POM
10	Mounting nut	Zinc die-casting (nickel plating)
11	Body	SUS316, FKM, PTFE
12	Bottom cap	SUS316
13	Bottom rubber	FKM
14	Spring	SUS316

* A mesh filter is installed on IN sides of RC2000-8-P90 and RC2000-10-P90.

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



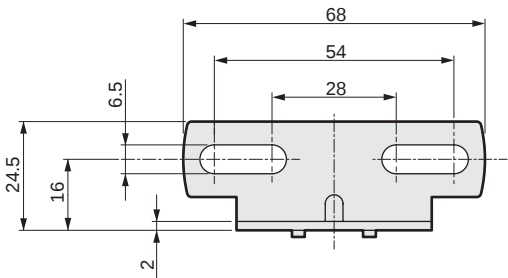
Panel cut dimension
Panel plate thickness: max. 4 mm



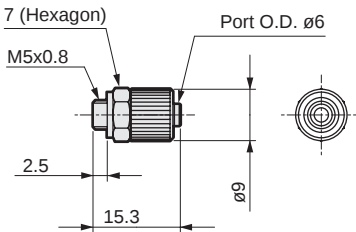
Model No.	A	B	C	D	E	F
RC2000-8	Rc1/4	50	25.5	27	95	21
RC2000-10	Rc3/8					
RC2000-15	Rc1/2	58	27.5	29	99	23

Attachment

- L-bracket (-B3)
Part model No.: RC2000-B3
· Material: Steel
Nickel plating treatment



- Fitting (-E1)
Part model No.: RC2000-E1



Model No.	RC2000-E1
Working fluid	Compressed air, N ₂
Fluid temperature °C	5 to 60
Ambient temperature °C	5 to 60
Tube used	Urethane tube
Part material	Material (treatment)
Metal parts	Copper alloy (nickel plating)
Rubber parts	NBR

Customized product

Available as a customized product. Contact CKD for details.

RC Large flow rate and large bore size

- Flow rate : 3000 l/min(ANR) *1
- Port size : Rc3/4, Rc1

*1 Flow rate at 0.7 MPa primary pressure, 0.5 MPa set pressure and 0.1 MPa pressure drop.



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