

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 Filt
 Film
 Resist FR
 Oil-ProhrR
 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
 DesiccDry
 HiPolymDry
 MainFiltr
 Dischrg
 etc
 Ending

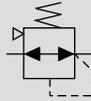


Vacuum regulator

VRA2000 Series

● Port size: Rc1/4, Rc3/8, G1/4, G3/8, 1/4NPT, 3/8NPT

JIS symbol



Specifications

1 MPa = 10 bar

Model No.	VRA2000-8	VRA2000-10
Set pressure	kPa -100 (≈-15 psi) to -1 (≈-0.2 psi)	
Ambient / fluid temperatures	°C 5 (41°F) to 50 (122°F)	
Balance leak flow rate	ℓ/min(ANR) 1 *3	
Max. flow rate	ℓ/min(ANR) 200 *1	
Port size	IN/OUT	1/4 3/8
	Gauge	1/8
Weight	kg 0.29	

- *1: The max. flow rate is the flow rate when the secondary side is completely closed and the primary pressure is at -101.3 kPa, and then after adjusting the secondary pressure to -100kPa, the secondary side is fully opened.
- *2: Available only for port size Rc.
- *3: Flow rate when primary pressure is set to -95 kPa or less and secondary pressure to -45 kPa while closed.

Specifications for rechargeable battery (Catalog No. CC-1226A)

- Structure compatible with rechargeable battery manufacturing process

VRA2000-.....- **P4**

How to order

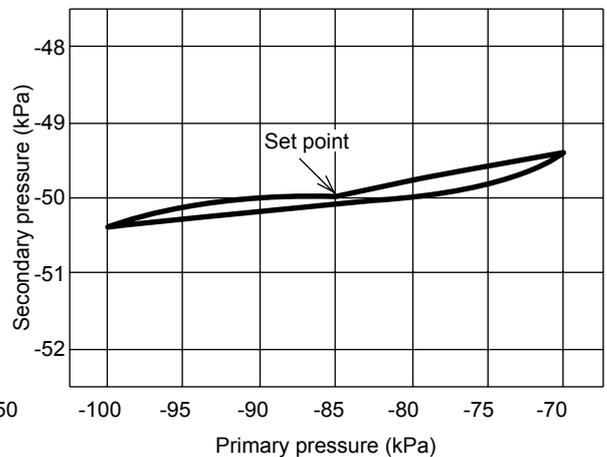
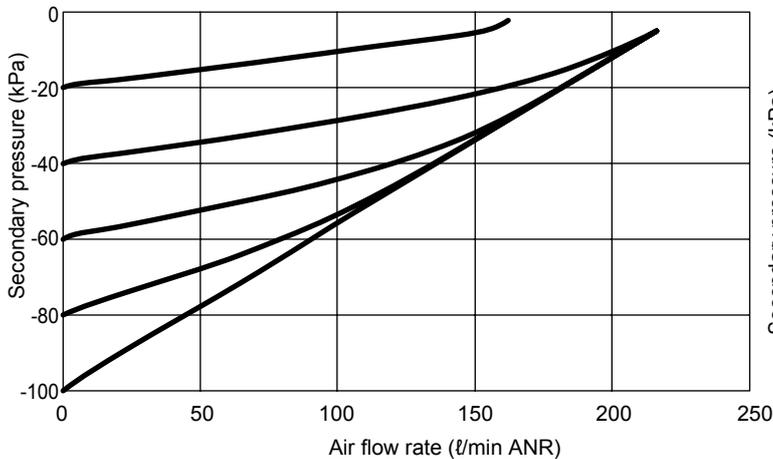
VRA2000 - **8** - **GB**

A Port size

B Option (Enclosed product)

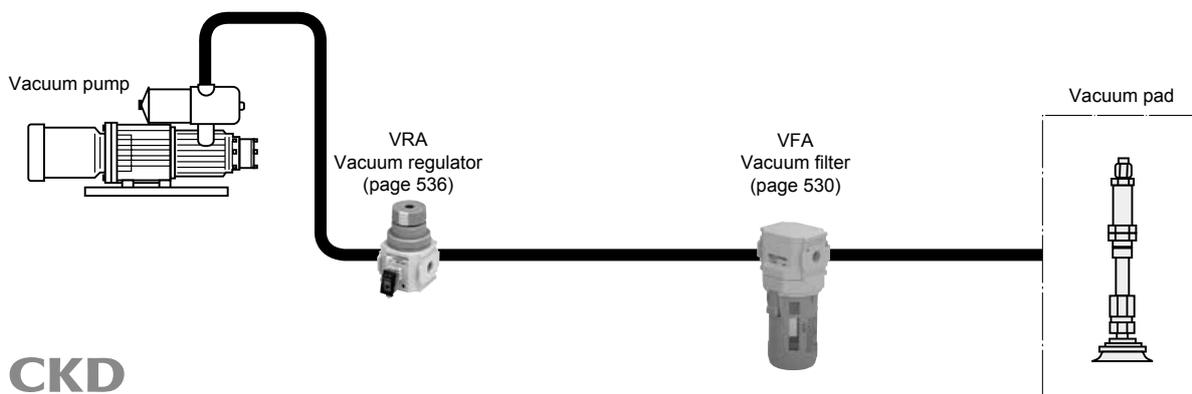
Code	Description
A Port size	
8	Rc1/4
10	Rc3/8
8G	G 1/4
10G	G 3/8
8N	1/4NPT
10N	3/8NPT
B Option	
Blank	None
G	Pressure gauge *2
P	Pressure switch *2
B	C type bracket
B3	L type bracket
B4	B type bracket
R2	Digital pressure sensor *2

Characteristic curve

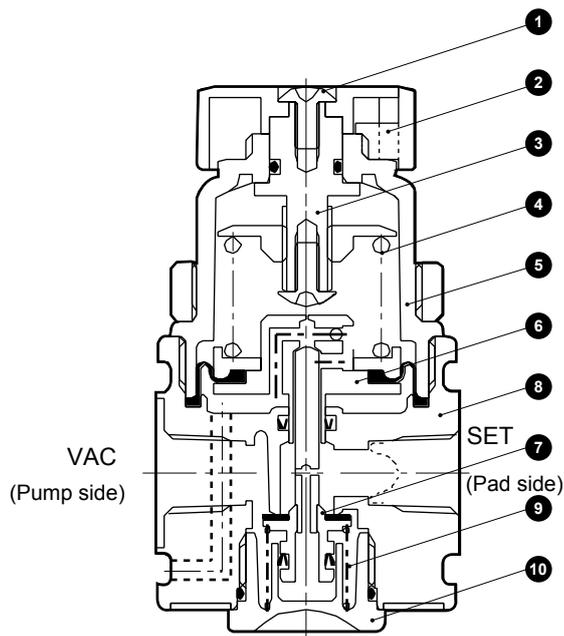


*1: The primary side vacuum pump is measured with using discharge rate 500 ℓ/min.

Applications



Internal structure and parts list



Parts list

No.	Part name	Material
1	Cross-recessed truss machine screw	Steel
2	Knob assembly	Polybutylene terephthalate
3	Adjusting screw assembly	Copper alloy/steel/nitrile rubber
4	Adjusting spring	Stainless steel
5	Cover assembly	Aluminum alloy/PBT
6	Diaphragm assembly	Aluminum alloy/steel/nitrile rubber
7	Valve assembly	Aluminum alloy/copper alloy/hydrogenated nitrile rubber
8	Body assembly	Aluminum alloy/stainless steel/nitrile rubber
9	Bottom spring	Stainless steel
10	Bottom plug assembly	Polybutylene terephthalate/nitrile rubber

Repair parts list

Part name	Model No.
Diaphragm assembly	VRA2000-D
Valve assembly	VRA2000-V

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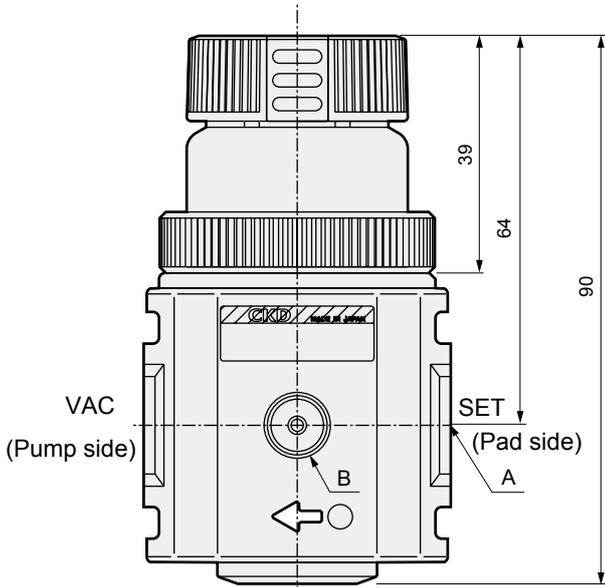
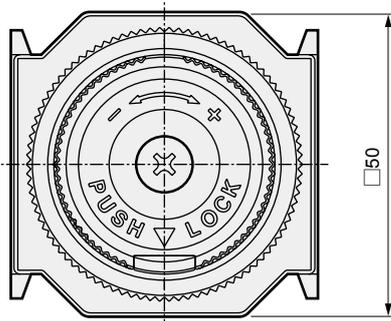
VRA2000 Series



F.R.L. Dimensions

F.R. ● VRA2000-8/VRA2000-10

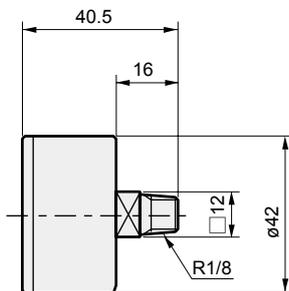
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- Adapter Joiner
- Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R**
- Clean FR
- ElecPneur
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/other
- Fit/Tube
- Nozzle
- Air Unit
- PrecsCompn
- Electro Press SW
- ContactSW
- AirSens
- PresSW Cool
- Air Flo Sens/Ctrl
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Gas generator
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending



Hole dimension for panel mount: $\phi 38.5$

Model No.	A	B
VRA2000-8	Rc1/4	Rc1/8
VRA2000-10	Rc3/8	Rc1/8

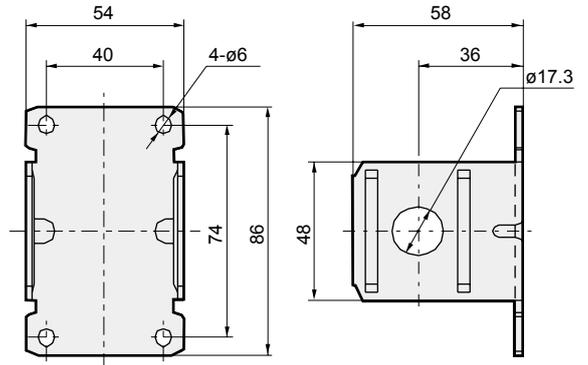
● Pressure gauge (G)
VG41D-6-P01



With limit marker
-100 to 0 kPa

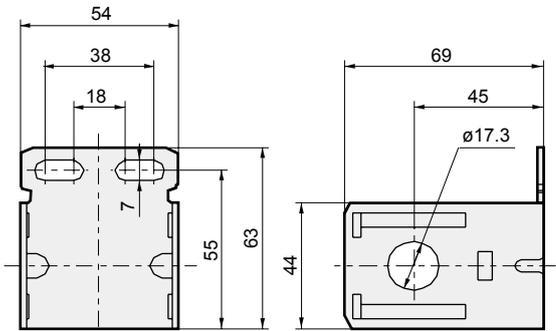
Weight: 82g

● B type bracket (B4)
B240



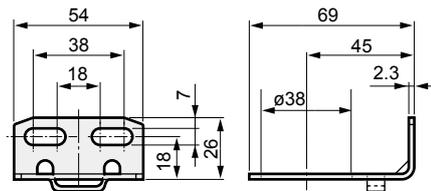
Weight : 0.16kg
Material : Steel
Zinc plated

● C type bracket (B)
B220



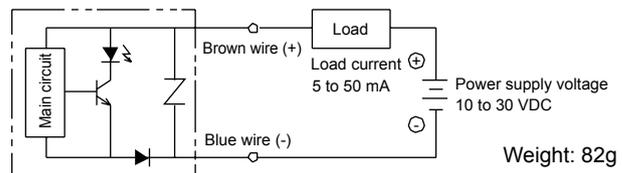
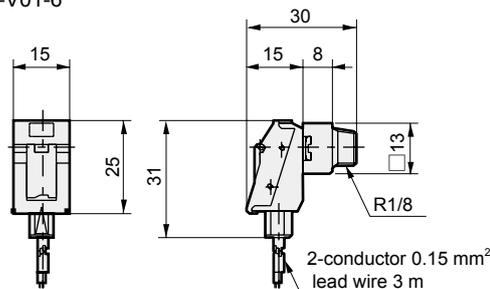
Weight : 0.15kg
Material : Steel
Zinc plated

● L type bracket (B3)
B230



Weight : 60g
Material : Steel
Zinc plated

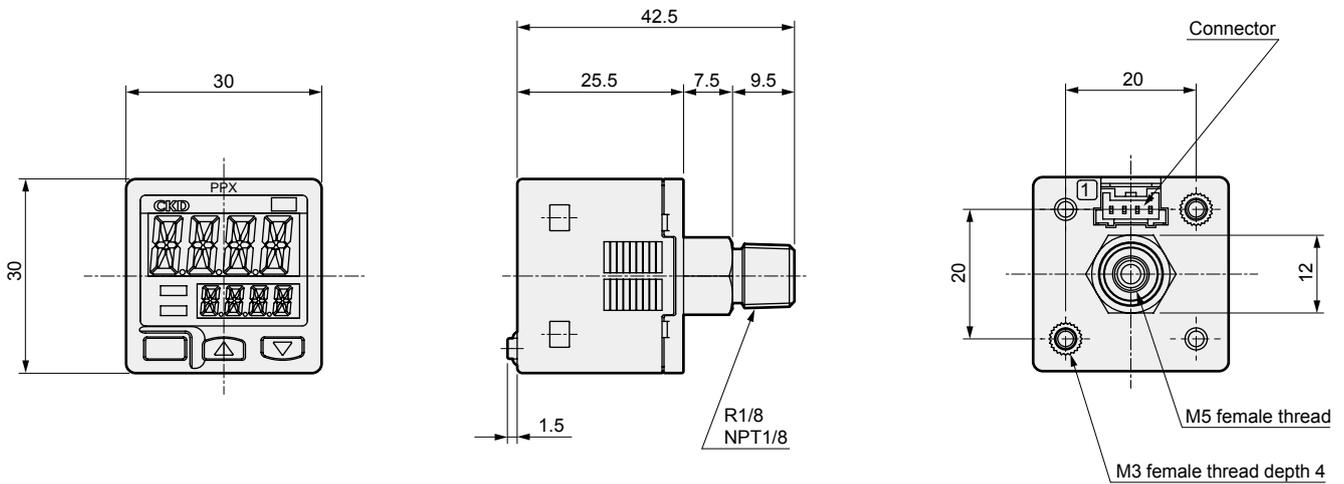
● Pressure switch (P)
PPE-V01-6



Weight: 82g

Dimensions

- Digital pressure sensor
PPX-R01N-6M



Note: Refer to page 1150 for details of digital pressure sensor PPX Series.

Weight: 40g

⚠ Safety precautions

⚠ WARNING

- 1 Use the product within specifications.
- 2 The product is a regulator for vacuum. Do not use in a pressurized state.
- 3 Install the product where it is not exposed to direct sunlight.
- 4 Do not use this product in an atmosphere containing corrosive gas, chemicals, or sea water, or where these could come in contact with it, and do not use as a vacuum circuit for these substances.
- 5 Do not install this product in a location where it may be subject to vibrations or shocks.

⚠ CAUTION

- 1 Install this product vertically with the knob facing upward or downward.
- 2 Before connecting to devices, flush piping with air blow to remove foreign matter.
- 3 The set pressure changes from the initial set point based on working environment and conditions, as well as aging of part materials. Check the pressure regularly, and reset if conditions have changed.
- 4 When screwing in piping or fittings, check that swarf from port threads or sealant does not get inside.

- 6 Tighten pipes with the appropriate torque.
- 7 Limit bending moment arising from the weight of pipelines to 50 N·m or less when installing.

Port thread	Tightening torque N·m
Rc1/4	6 to 8
Rc3/8	13 to 15

- 8 Turning the knob in the + direction from the set pressure 0 activates the stopper and the knob does not turn.
Note that if torque is forcibly applied in the + direction, the knob may lock and become inoperable.

- 5 Check IN and OUT side direction before piping.
- 6 This product is adjusted with constant air leakage, so vacuum pressure may not rise if the vacuum pump capacity is too small. Please be careful.
- 7 The product has an O-ring groove for modular connection on its pump side. Select piping that can be sealed at or below the O-ring groove diameter.

Series	VRA2000
Groove diameter	ø25.4

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