

KOGANEI

**GENERAL CATALOG OF
AIR TREATMENT,
AUXILIARY, VACUUM**

**VACUUM REGULATORS
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Discontinued

Control of vacuum pressure made simple

VACUUM REGULATORS

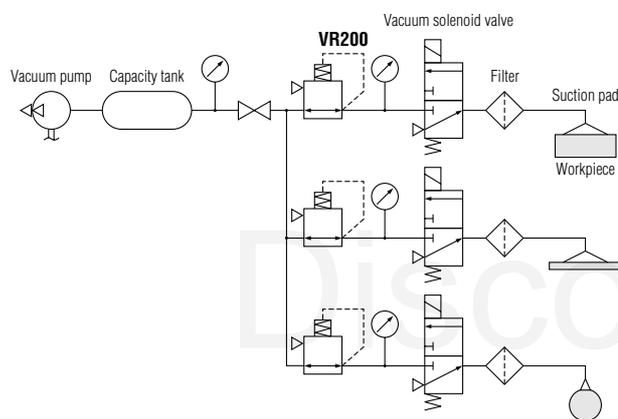
- Installation to vacuum line allows stepless regulation of vacuum pressure
- Maximum intake flow of 110l/min (ANR)
Note: Intake flow varies depending upon operating conditions.
- Light (290g), compact (56 × 52 × 103cm)
Note: Without optional attachments
- Push-lock type pressure regulating collar makes it a cinch to adjust the vacuum setting
- Easily mounted on a panel. Only requires a ϕ 46mm hole



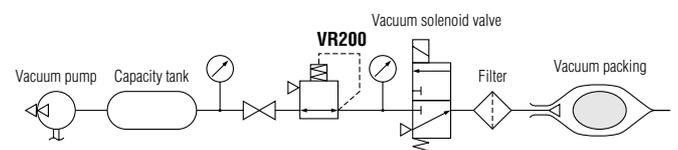
(Vacuum gauges and brackets are optional.)

Applications

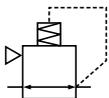
① When multiple vacuum pressures are required



② Vacuum packing pressure adjustment

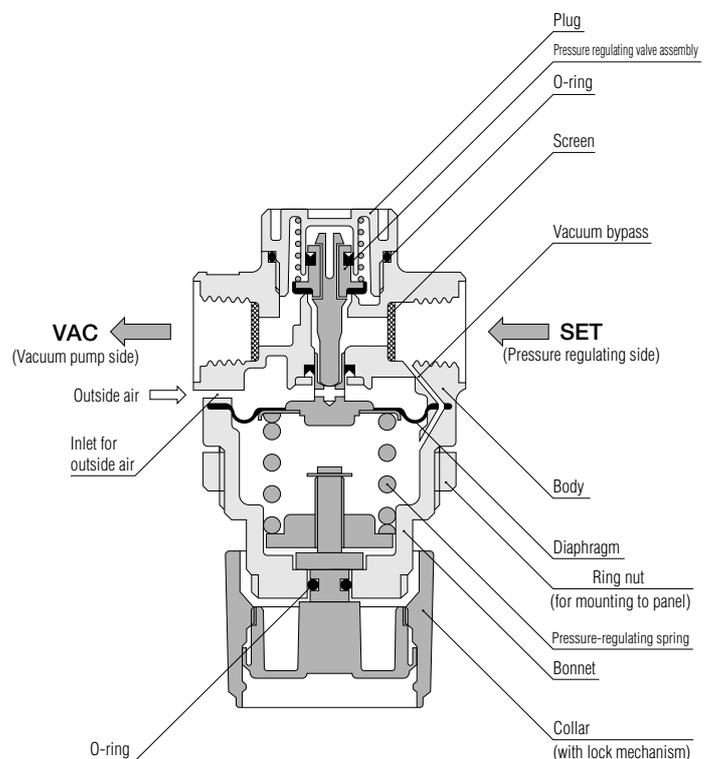


Symbol

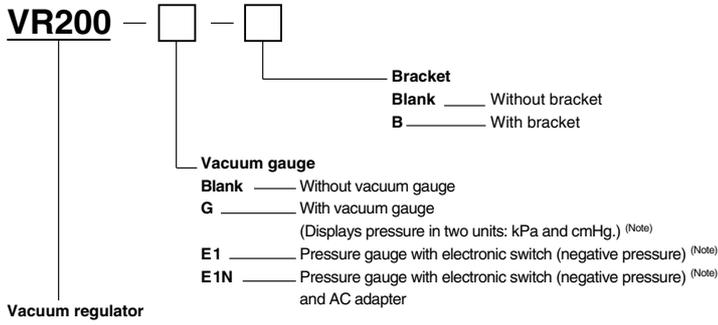


Operating Principles • Internal Structure

When the collar is pulled out all the way and turned to the right, it compresses the pressure-regulating spring, which pushes up via the diaphragm upon the pressure regulating valve assembly. The pressure regulating valve assembly moves upward, thus opening a passage between the VAC (vacuum pump) side and the SET (pressure regulating) side. The pressure on the pressure regulating side goes down. The vacuum on the pressure regulating side then travels to via the vacuum bypass to the chamber beneath the diaphragm, thereby acting upon the underside of the diaphragm in opposition to the upward pressure of the spring. The pressure regulating valve assembly is closed when the degree of vacuum reaches the level to which it has been set. When the degree of vacuum on the pressure regulating side falls below the setting, outside air enters into the pressure regulating side to return the degree of vacuum to its setting.



Order Codes

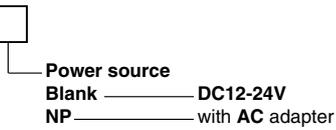


- Use the following order code to order only a vacuum gauge:

GV-40

- Use the following order code to order only a pressure gauge equipped with an electronic switch and for negative pressure: (Note)

EG110



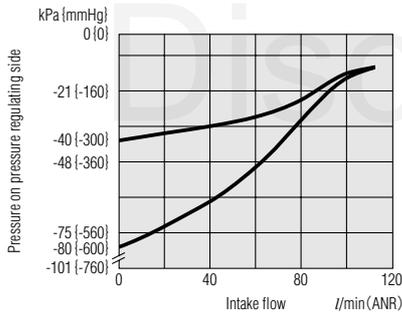
Note: See pages 191-196 for the specifications, dimensions and operating instructions for pressure gauges equipped with an electronic switch.

Specifications

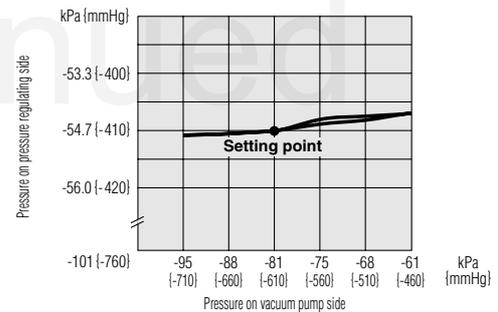
Item	Model	VR200
Media		Air
Setting pressure range	kPa (mmHg)	-1.3 ~ -100 [-10 ~ -750] (Note)
Setting pressure sensitivity	kPa (mmHg)	0.13 {1} (Note)
Repeatability	kPa (mmHg)	±0.4 {±3}
Intake flow	l/min (ANR)	max.110 (Note)
Temperature range	°C	5 ~ 60
Pressure characteristic	kPa (mmHg)	$\Delta P = 0.91 \{7\}$
Ports	Rc	1/4
Pressure gauge port	Rc	1/4
Mass	kg	0.29
Material		Aluminum die-cast

Note: Varies depending on operating conditions. Be aware that maintaining this setting will not guarantee proper performance.

Flow Characteristics

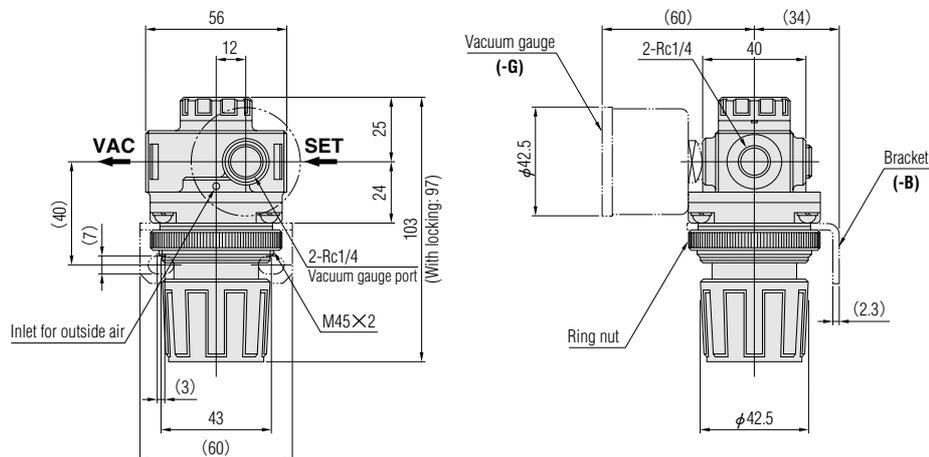


Pressure Characteristics



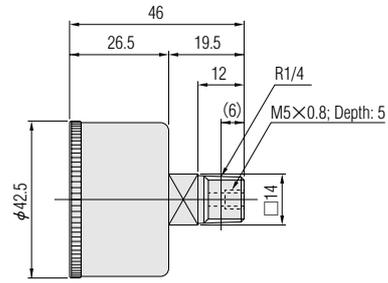
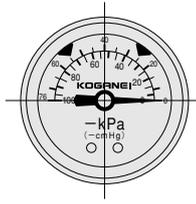
Dimensional Drawings (Scale: 1/3, Unit: mm)

VR200

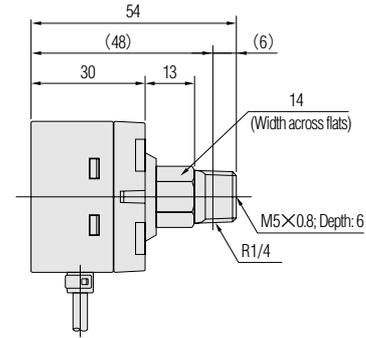
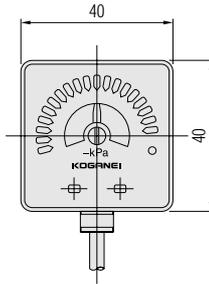


Remark: To mount model **VR200** to a panel, a hole of $\phi 46$ is required. To mount it, use the ring nut which comes with the regulator.

GV-40 (-G)



EG110-□ (-E1,-E1N)



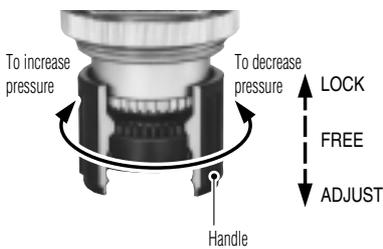
Note: Models with the **-E1N** order code come with an AC adapter regardless of whether a pressure gauge is ordered or not. See pages 191-196 for the specifications, dimensions and operating instructions.

Proper Handling and Precautions



Pressure Regulation

1. When adjusting the vacuum setting, a vacuum gauge should be installed to the vacuum gauge port (Rc1/4) on the vacuum regulator.
2. Pull the collar out all the way to adjust the vacuum setting. Turn the collar to the right (clockwise) to increase the degree of vacuum, and turn the collar to the left (counterclockwise) to decrease the degree of vacuum.
3. After finishing the vacuum setting adjustment, push the collar back in to lock it in place.



- Caution: 1. To assure that the desired pressure setting will be maintained when the user pushes the collar back to the locked position, the collar has a free position (between the locked position and the setting position) at which the setting remains unaffected even if the collar is turned. When switching between the locked and setting positions, be sure to pull the collar out (or push it in) all the way until you hear it click into place.
2. When adjusting the vacuum setting, be careful not to cover the inlet for outside air with your hand. Doing so could make it impossible to adjust the vacuum setting.



Installation • Piping

1. If installing only the vacuum regulator, use the bracket (optional). The ring nut can also be used to mount the vacuum regulator to a panel, in which case a mounting hole of $\phi 46$ is required.
2. The vacuum regulator can be installed at any angle, but be sure to leave enough room around it to manipulate the pressure regulating collar.
3. Do not modify the vacuum regulator to install it. Doing so could adversely affect the regulator's performance.
4. When installing the piping to the vacuum regulator, be sure that the side marked "VAC" is attached to the vacuum pump. The regulator will not function if the connections are reversed.
5. The performance of the vacuum regulator is dependent upon the capacity of the vacuum pump, so choose the vacuum pump with care. When changing the vacuum setting, if the change is especially large, the vacuum pump and piping should also be changed. If it is not possible to change the vacuum pump, install a capacity tank to the VAC side of the vacuum regulator.



General Precautions

1. Before installing piping to the vacuum regulator, be sure to thoroughly flush out the inside of the piping (using compressed air). Be careful not to let chips, seal tape, rust, or other foreign material get inside the vacuum regulator while installing it. Such foreign material could cause malfunctions or make it impossible to adjust the vacuum setting.
2. Air is the proper media for this product. If you wish to use some other type of media, consult us.
3. This product is designed to operate under vacuum conditions (negative pressure). Do not allow positive pressure to get into the device. The vacuum regulator will not be damaged by positive pressure of 0.5MPa max., but the vacuum gauge and vacuum pump might be damaged.
4. This product cannot be used if any of the following substances are mixed in with the media or air: organic solvents, phosphoric acid, ester-type machine oil, sulfurous gas, chlorine gas and acids.
5. When this device is used where it will be exposed to dripping water or oil, or where there is a lot of dust, protect it with a cover.