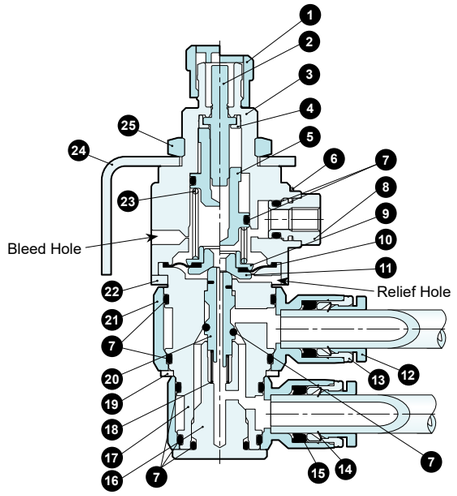
Internal Structure Diagram/Materials



Part No.	Part Name	Material
1	Adjusting Knob	Acetal Resin
2	Adjusting Screw	Steel (Electroless Nickel Plating)
3	Bonnet	Polybutylene terephthalate resin
4	Guide Bushing	Aluminum alloy
5	Adjusting Bushing	Aluminum alloy
6	Stop Pin	Stainless steel
7	O-ring	Special Nitrile Rubber
8	Cartridge	Aluminum alloy
9	Center Disc A	Aluminum alloy
10	Diaphragm	Special Nitrile Rubber
11	Center Disc B	Aluminum alloy
12	Release Ring	Acetal Resin
13	Guide Ring	Special Stainless Steel
14	Locking Finger	Special Stainless Steel
15	Elastomer Sleeve	Special Nitrile Rubber
16	Plug	Aluminum alloy
17	Metal Body	Aluminum alloy
18	Valve Spring	Stainless steel
19	Plate	Aluminum alloy
20	Valve	Aluminum alloy
21	Resin Body	Polybutylene terephthalate resin
22	Body Plate	Aluminum alloy
23	Adjusting Spring	Stainless steel
24	Bracket	Steel (Electroless Nickel Plating)
25	M16 x 1 Hex Nut	Steel (Zinc Plated)

Regarding Product Fixing Method

① Elbow Type Fixing Method

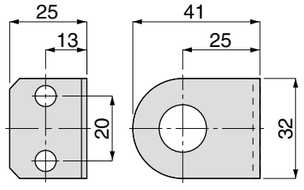
For the elbow type fixing method, use the square part(width across flats: 14 mm) and secure with a tightening torque of 12 to 14 N·m using an appropriate tool. Ensure sufficient space for rotating with tools during mounting. Also, for types with gauges and sensors, ensure sufficient space for rotation with the gauge and sensor attached.

② Fixing Method Using Bracket

●Bracket Fixing Method

Union type and elbow type with bracket are fixed by tightening with M6 screws(customer-supplied) using the bracket fixing holes.

Bracket Mounting Dimensions



Unit: mm

●Body Fixing Method

For union type and elbow type with bracket, after fixing the bracket, use the bracket's body fixing holes and tighten the included M16×1 nut to a torque of 3 to 4 N·m using an appropriate tool.
Ensure sufficient space for rotating with tools during mounting.

③ Fixing Method Using Bulkhead Mounting Hole

When fixing using the bulkhead mounting hole, tighten the included M16×1 nut to a torque of 3 to 4 N·m using an appropriate tool.
Ensure sufficient space for rotating with tools during mounting.

[Applicable Mounting Hole Dimensions]
nner Diameter: 16.5 mm to 17 mm
Thickness: 8 mm or less

Pneumatic Components

To Use This Product Safely

Be sure to read this before use.
For general pneumatic components precautions, Intro 15 for details.

Individual Precautions: Compact Vacuum Regulator VSRVV Series

Design / Selection

Warning

■ When applying positive pressure to the regulators, do not use the ø30 vacuum pressure gauge. For positive pressure use, use the large digital display vacuum pressure switch. Applying excessive positive pressure poses a risk of equipment damage.

■ Before use, carefully read the instruction manual of the vacuum source to be connected and perform sufficient tests before operating.

Caution

■ Do not apply excessive load or impact to the pressure gauge, pressure switch, or gauge port. Accurate setting is not possible in the direction of decreasing vacuum level (counterclockwise).

■ Do not apply excessive load or impact to the pressure gauge, pressure switch, or gauge port. There is a risk of equipment damage or decreased display accuracy.

■ When attaching a gauge, piping, etc., to the gauge port, use a wrench or similar tool on the hexagonal part of the gauge port(width across flats: 12 mm) to tighten it. Also, for tightening to M5 x 0.8 ports, tighten by referring to the recommended tightening torque in the table below. There is a risk of equipment damage or decreased display accuracy due to leaks.

Recommended Tightening Torque

Thread Size	Tightening Torque
M5 x 0.8 mm	1.0 to 1.5 N·m

■ If there is a possibility of inhaling dust or particulate matter, be sure to install a vacuum filter on the pressure regulating side (work side) of the vacuum regulator. Malfunction may occur due to suction of foreign matter.

■ Do not block the bleed hole or relief hole, as this will make the secondary pressure unstable.

■ When applying positive pressure to the regulator, air will flow out from the bleed hole. Exercise caution when using in cleanrooms, etc.

■ When applying break air, consider the amount of leakage from the bleed hole when setting.

■ Do not excessively turn the pressure adjusting knob counterclockwise from the fully open state, or clockwise from the fully closed state. This can cause damage to the adjusting knob and body. (The product is shipped in a fully closed state.)

■ The pressure adjusting knob is locked when pushed and released when pulled. Always lock it after adjustment. Using it unlocked may cause the adjusting knob to rotate and the pressure to change.

■ When pushing in the pressure adjusting knob, it may stop at an intermediate position between the locked state and the unlocked state depending on the rotational position. In this state, it is not completely locked, so confirm that the adjusting knob is pushed in to the locked position.

■ Forcibly rotating the adjusting knob when it is locked may damage the locking mechanism.

■ Do not use the ø30 mm negative pressure gauge in locations with large pressure fluctuations (high cycle).

■ For handling of the pressure sensor with digital display, please check the common precautions for pressure gauges and sensors in the product catalog, as well as the individual precautions for each.

■ When fixing the product, carefully read the product fixing method in the included instruction manual and tighten the appropriate locations at the specified torque. If other parts are tightened or tightened beyond the specified torque, there is a risk of body damage.

■ Adjust the elbow gauge position using the tightening position. Parts other than the fitting part and adjusting knob do not rotate. Forcibly rotating them poses a risk of body damage.