



Engineered for life

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WARNING

Conoflow products are designed and manufactured using materials and workmanship required to meet all applicable standards. The use of these products should be confined to services specified and/or recommended in the Conoflow catalogs, instructions, or by Conoflow application engineers.

To avoid personal injury or equipment damage resulting from misuse or misapplication of a product, it is necessary to select the proper materials of construction and pressure-temperature ratings which are consistent with performance requirements.

INSTRUCTION AND MAINTENANCE MANUAL Model GH20VT Series Vacuum Regulator

STANDARD SPECIFICATIONS

Connections: 1/4" NPT with 1/8" NPT Vacuum Sensing Port
Regulated Vacuum: 0-15" and 30" Hg (38.1 and 76.2 cm Hg)
Flow Capacity (Max): 1.5 SCFM (40 SLPM)
Sensitivity: 0.2" H₂O (0.5 cm)
Temperature Range: -20 to 150 °F (-29 to 66 °C)
Approximate Shipping Weight: 2.75 lb (1.25 kg)

PRINCIPLE OF OPERATION

The GV20VT and GH40VT regulators are used to provide a regulated vacuum. Turning the handwheel changes the force exerted by the range spring on the diaphragm assembly, and changes the setting of the vacuum regulator. Clockwise rotation increases the force of the range spring on the diaphragm assembly, and increases the regulated vacuum setting accordingly.

Counterclockwise rotation reduces the setting of the regulator, allowing atmospheric air to bleed into the vacuum, increasing the absolute pressure of the regulated vacuum.

INSTALLATION

The bonnet vacuum sensing port is 1/8" NPT. All other connections are 1/4" NPT. The user pipes the vacuum pump to the port marked "PUMP". The regulated vacuum port is branched to the vacuum sensing port by the user.

The regulator can be mounted by hard piping, or by panel mounting at the bonnet with the panel nuts (standard) or behind the panel (optional configuration).

MAINTENANCE

Periodic replacement of the diaphragm and nozzle assembly is recommended for services where the regulator is on stream continuously and where consistent high accuracy regulation is required. The frequency of replacement will depend on the nature of the service, cleanliness of air, moisture levels in the air, and other environmental variables such as vibration or heat.

To replace the diaphragm assembly, relieve any vacuum from the system. Unscrew the handwheel and stem until adjustment compression is relieved from the range spring. Loosen and remove the fillister head machine screws and lift off bonnet, spring button, range spring, spacer and diaphragm assembly. Install the spacer in the new diaphragm assembly, and install with the diaphragm plate and staked side face upward (away from the body). Place the range spring, spring button, restrictor plate (if applicable) and bonnet over the diaphragm assembly then secure the bonnet with the fillister head machine screws tightened to 30 in-lb

To replace the nozzle assembly, disassemble the regulator as previously described, then remove the baffle plate and the nozzle assembly. Use a 5/8" socket wrench to remove and install the nozzle assembly.

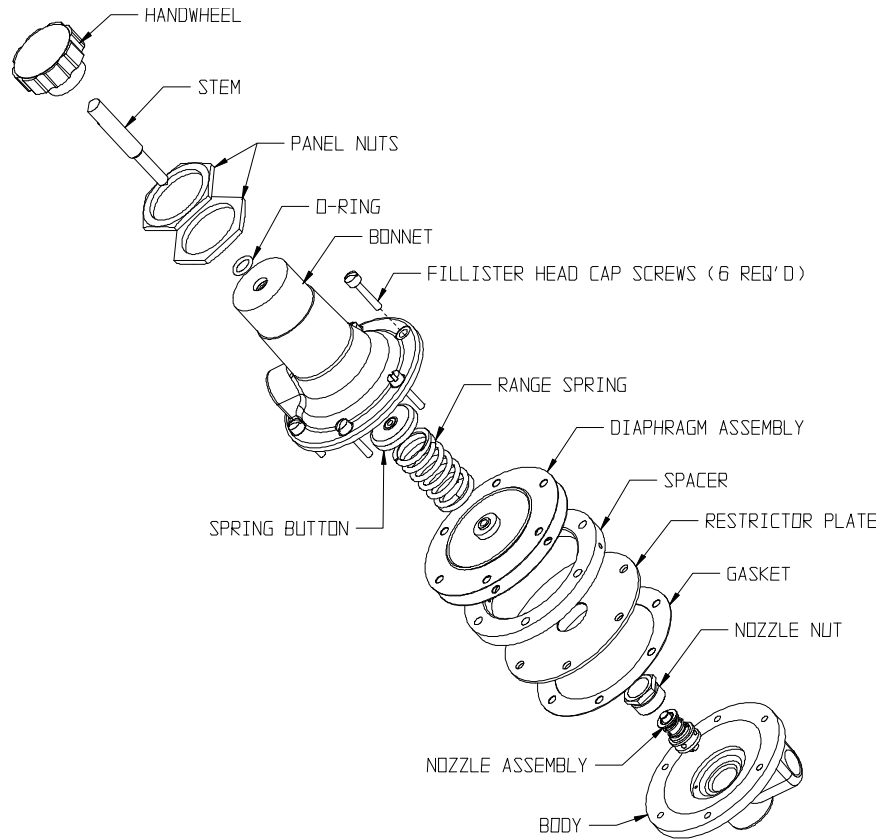
An all metal nozzle assembly may be cleaned in solvent, however a nozzle assembly that uses any rubber components must be replaced with the equivalent factory part.

When replacing the nozzle assembly, the GH20VT metal to metal seal nozzles are installed with 80 in-lb assembly torque; the GH40VT rubber bottom nozzle assemblies are installed with 30 in-lb assembly torque. Incorrect torque can create leakage and damage the nozzle assembly.

ORDERING INSTRUCTIONS

When ordering replacement parts and spare parts, specify the complete model number, serial number and description from the product nameplate. This information will permit positive identification and rapid processing of the order.

Note: For certified dimensional drawing, refer to A17-5.



<u>Character Position</u>	<u>Feature by Code Character</u>
1-5 Model	GH20V = Regulator with All-Metal Nozzle GH40V = Regulator with Rubber Seat Nozzle
6 – Bonnet Options	F = Tapped Bonnet for Flush Back Panel Mounting S = Plain Bonnet T = Threaded Bonnet (Standard)
7 - Adjustment Selections	H = Handwheel (Standard) K = Knob (Wrench Style)
8 – Diaphragm Selections	D = Neoprene (w/Relief, No Bleed) E = Buna “N” (w/Relief, No Bleed) F = Viton on Nomex (No Bleed, No Relief) G = Silicone on Glass (w/Relief, No Bleed) H = Teflon (Sandwich Type - w/Relief, No Bleed) J = Viton on Nomex (w/Relief, No Bleed) L = Nordel on Nomex (EPDM) (w/Relief, No Bleed)
9 – Seat Selections	A = Buna “N” – GH40V Only B = Neoprene – GH40V Only C = Viton – GH40V Only N = Nordel – GH40V Only X = Metal to Metal – GH20V only
10 – Material Options	X = Brass (Standard) - Unless option code is specified K = Stainless Steel Construction (Stainless Steel Internals)
11 – Cleaning Options	A = Cleaned for Oxygen Service X = Standard - Unless option code is specified
12 – Range Selections	N = 0-15” Hg (0-5 psi) P = 0-30” Hg (0-15 psi)