

Model 17



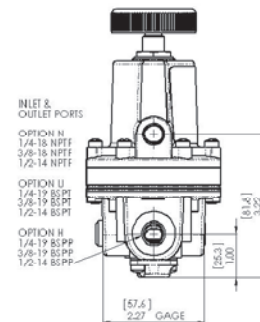
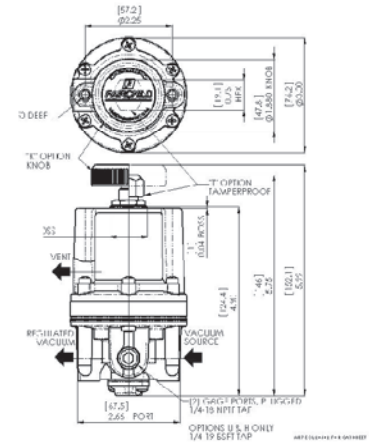
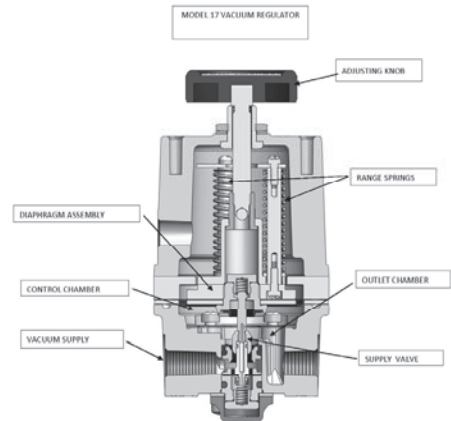
### Features

- The Model 17 Vacuum Regulator is designed for systems that require system vacuum control up to full vacuum.
- Control sensitivity of 1/2" water column allows use in precision applications.
- High flow capacity
- A balanced vacuum Valve minimizes the effects of variation.
- An Aspirator Tube compensates downstream vacuum droop under flow conditions.
- A separate Control Chamber isolates the diaphragm from the main flow to eliminate hunting and buzzing.
- Unit construction lets you service the Model 17 without removing it from the line.
- Mounting Bracket is available.

### Operating Principles

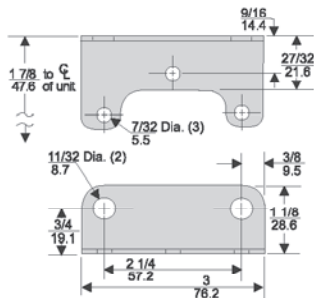
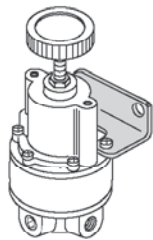
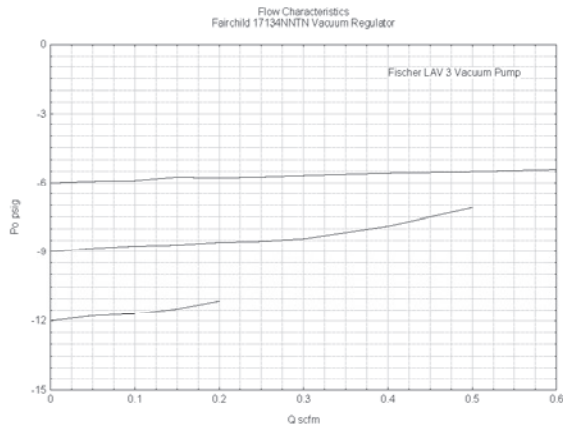
The model 17 is a true vacuum regulator in that a vacuum supply is provided at one port and controlled vacuum is made available at the other. The model 17 uses force balance principals to control the movement of the main valve. Since the vacuum regulator operates below atmospheric pressure, atmospheric pressure is employed to provide the motive force to operate the vacuum regulator.

Referencing the diagram above, turning the control knob clockwise draws the lower spring seat upward compressing the range springs. The upper spring seat, connected to the diaphragm assembly, is spring biased in an upward direction as a result. The upward bias of the diaphragm assembly opens the supply valve and ports the vacuum supply to the outlet. As the vacuum level increases, the diaphragm assembly is drawn downward and closes the supply valve as the setpoint is reached. If the vacuum setpoint is exceeded, the diaphragm assembly continues in a downward direction and unseats the relief valve allowing atmospheric pressure to enter the system and reduces the vacuum level to the setpoint.



*Specialists in Valves, Controls, Pneumatics, Fluid Measurement*

**Technical Information**



**Model 17 Regulator Kits & Accessories**

Mounting Bracket Kit . . . . . 09921 (sold separately)

**Specifications**

**Max Vacuum Capacity**  
30 in Hg (762 Torr) (102 kPa), up to "Full" Vacuum

**Flow Capacity**  
12 SCFM (20.4 m<sup>3</sup>/HR)

**Relief Capacity**  
2.0 SCFM (3.4 m<sup>3</sup>/HR)

**Vacuum Supply Effect**  
Less than 0.1 % of change in supply vacuum

**Ambient Temperature**  
-40°F to +200°F, (-40°C to 93.3°C)

**Hazardous Locations**  
Acceptable for use in Zones 1 and 2 for gas atmosphere; Groups IIA and IIB and Zones 21 and 22 for dust atmospheres

**Materials of Construction**  
Body and Housing . . . . . Aluminum  
Diaphragms . . . . . Buna N on Dacron (Std. unit only)  
Trim . . . . . Stainless, Zinc Plated Steel

**Ordering Information**

**Catalog Number 171**

**Vacuum Range**

in Hg	[Torr]	(kPa)	Option
0-5	[127]	(17)	1
0-15	[381]	(51)	2
0-30	[762]	(102)	3

**Pipe Size**

1/4" NP	Option 2
3/8" NPT	Option 3
1/2" NPT	Option 4

**Port Threads**

NPT	Option N
BSPP	Option U
BSPT	Option H

**Elastomer**

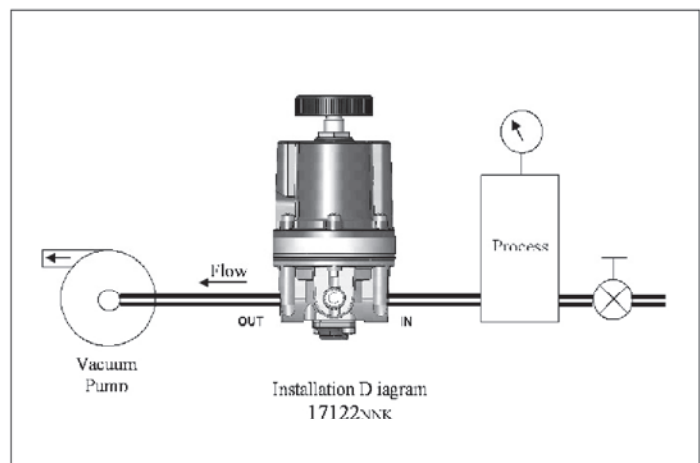
Nitrile	Option N
Fluorocarbon	Option J

**Actuator Type**

Knob Assembly	Option K
Tamperproof	Option T

**Relief**

Relieving	Option R
Non-Relieving	Option N



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