

# Model 329 Vacuum Regulator



## APPLICATION

The Model 329 is a precision, high-flow capacity (12.5 SCFM at 3.4 Cv) vacuum regulator which installs in series between the volume being controlled and the vacuum pump. This regulator is widely used to control vacuum in such applications as precision clamping and parts handling, calibration and instrumentation, vacuum degassing of liquids, altitude simulation chambers, and low absolute pressure regulation required in cryogenic systems and laboratory applications. Three different model variations are available which provide optimized performance according to the normal operating mode. Low differential vacuum models allow for pressure settings relatively close to ambient pressure. Higher vacuum applications with pressure settings closer to perfect vacuum conditions are served by the low absolute pressure models. When operating primarily at either high or low vacuum levels, response and control are maximized by using the appropriate Model 329 variation.

Normal Operating Mode	Minimum Differential Vacuum	Minimum Absolute Pressure	Model Number
Standard	1.50 in. Hg (38.10 mm Hg)	0.30 in. Hg (7.62 mm Hg)	329 329-500
Low Differential Vacuum	0.30 in. Hg (7.62 mm Hg)	0.40 in. Hg (10.16 mm Hg)	329L 329L-500
Low Absolute Pressure	3.00 in. Hg (76.20 mm Hg)	0.20 in. Hg (5.08 mm Hg)	329H 329H-500

## FEATURES

The Model 329 is a non-relieving design which references absolute pressure. Regulators without the self-relieving feature will not reduce the differential vacuum levels if there is no leakage in the system. Air must be vented into the system or some leakage must be present to reduce the vacuum level.

**Absolute Pressure Reference** controls vacuum relative to a perfect vacuum. An absolute reference is most commonly used in laboratory, calibration, altitude simulation, and other applications requiring absolute pressure control.

**Atmospheric Pressure Reference** controls vacuum relative to ambient atmospheric pressure. Atmospheric references vacuum measurement and control is useful in applications where precise control of vacuum relative to atmospheric pressure is desired. Atmospheric pressure reference is specified by adding the letters DP after 329, i.e., 329DP.

**Note:** Self-relieving Models are available for applications controlling vacuums in systems with no leakage.



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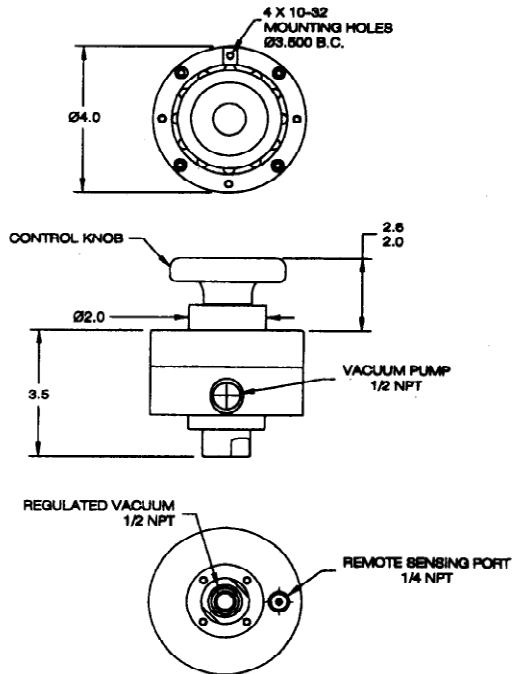
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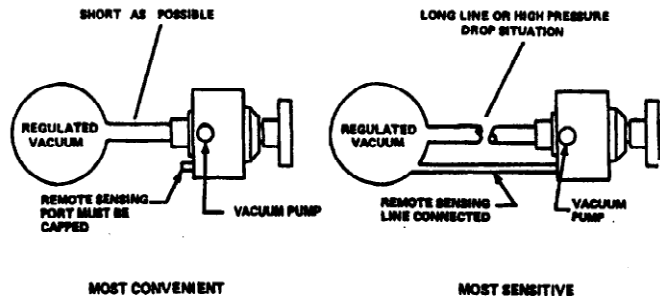
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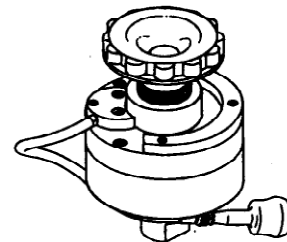
## STANDARD INSTALLATION



## INSTALLATION SCHEMATIC



## 329-500 WITH REMOTE FILTER



## SPECIFICATIONS

Flow Passage at full flow:

0.48 in. diameter 3.4 Cv at 12.5 SCFM

Adjustability Range:

From 0.3 in. Hg below atmospheric pressure to near-zero absolute pressure (select model for desired vacuum range of operation)

Hysteresis:

Approximately 0.004 in. Hg (0.1 mm Hg)

Flow Sensitivity:

Flow variation from 0 to 350 liters per minute with setpoint shift less than 0.1 in. Hg

Weight:

3.6 lb (Model 329-500- 3.9 lb)

### MODEL 329-500 (329 with Remote Filter)

Remote filter protects vacuum regulator from contamination when operating in dusty environments.

Quick-disconnect fitting provides for easy field replacement of filter element.

Standard Model 329 can be converted in the field using available Filter Kit (Part Number 329-300).