

THROTTLING DEVICES

A throttling device should be used when a pressure gauge is subjected to rapid pressure fluctuations, which make the gauge difficult to read because of rapid pointer movement. Such a device reduces pressure impact, slows the speed and range of pointer movement, and prolongs gauge life.

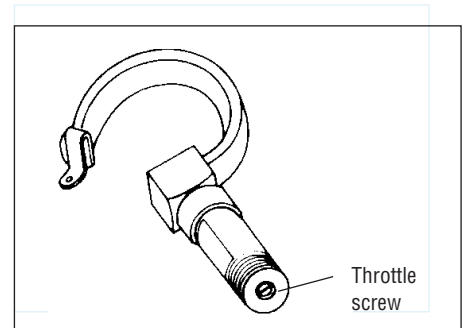
Throttling effect is obtained by installing a restricting orifice between the gauge socket connection and the bourdon tube. Several types are available: throttle screws, pressure snubbers, pulsation dampeners, Gauge Saver® and the Campbell MICRO-BEAN.

Severe service applications are characterized by the presence of significant levels of pressure pulsation and/or vibration. Gauges should be protected from severe pressure pulsation by the inclusion of a dampener such as a throttle plug/screw or porous metal snubber. If the pulsation is extreme, a liquid-filled gauge, with dampener, should be used. A liquid-filled gauge will also last significantly longer than a comparable dry gauge when vibration is present. If the vibration levels are extreme, the only solution may be to remotely mount the gauge away from the source of vibration. In that case capillary tubing may be used to connect the gauge to the pressure source.

THROTTLE SCREWS

The simplest means of providing a restriction in the socket, a throttle screw, should be ordered with the gauge. Threaded or pressed into an instrument socket, the throttle screw orifice selected is based on the viscosity of the pressure fluid, rapidity of pressure fluctuations, and the amount of dampening effect desired. A smaller orifice should be used for low viscosities, high frequencies, high pres-

sure and reduced pointer amplitude. To accommodate these variables, throttle screws are available in these sizes: 0.0135, 0.020, 0.031, 0.040, and 0.070 inches, in brass and stainless steel. When orifice size or service condition is not specified, a 0.020-inch orifice will be supplied on Royal pressure gauges 0.0135, on 3½" Regal Gauges.



STATIONARY RED SET HAND



Stationary Red Set Hand
to indicate a specific pressure. Ring must be removed to move the hand.

OVERLOAD STOP



Overload Stop
to protect gauge system against extreme overpressure.

SPECIAL DIAL



Special Dial
ranges different from standards, or custom artwork, available on application.

MAXIMUM POINTER



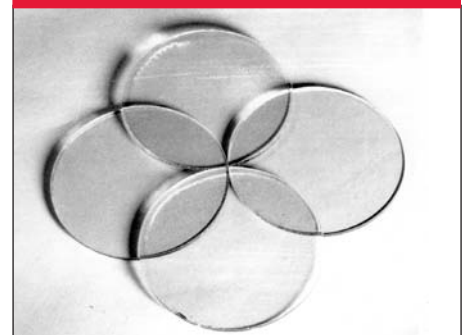
Maximum Pointer
available for gauges 4½" size and larger. Indicates maximum pressure attained. Can be reset by a knob on outside of window.

VACUUM STOP



Vacuum Stop
to protect low range gauges against vacuum.

OPTIONAL WINDOWS



Plastic Disc – optional for glass window
Laminated Safety Glass – optional for glass window
Nonglare Glass – optional for glass window