

# Mid-West<sup>®</sup> Instrument

## Model 200 “GAUGE MINDER”

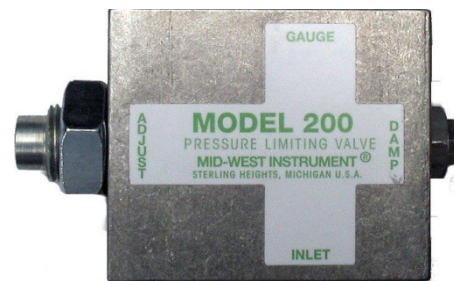
### PRESSURE LIMITING VALVE



Aluminum  
Model 200



Brass  
Model 200



Stainless  
Model 200

Pressure limiting valve prevents instrument over-range

- **Adjustable needle valve dampens pulsation**
- **Use with all types of instruments and pressure gauges**
- **Can be mounted in any position**
- **Available in Aluminum, Brass, and 316 S.S.**

Model 200 “Gauge Minder” features a pressure limiting valve that blocks off excess pressure to the instrument, preventing calibration failure, internal damage, and “blow-out” from over-ranging - a principal cause of instrument failure.

Model 200 is supplied with a set of range springs designed to set the shutoff pressure point at any pressure from 50 to 5000 PSI. The automatic shutoff valve is positive on closing and is non-chattering. Once closed, pressure need only be reduced approximately 10% of set pressure to re-open the valve. The accuracy of the instrument used with the Model 200 is in no way affected up to the set point of the pressure shutoff.

Model 200 also features an adjustable needle valve designed to dampen system pulsation reducing instrument oscillation, improving readability, and extending instrument life without the addition of a snubber. Instrument reliability is improved and the cost to repair, re-calibrate, or replace the instrument is lowered. Operating safety is also enhanced.

Model 200 is available in Aluminum, Brass, or 316 Stainless Steel with 1/4” FNPT connections for 5000 PSI working pressure and in Brass or 316 Stainless Steel with 1/2” FNPT connections for 10,000 PSI working pressure. Buna N O-rings and Teflon backup rings are standard. Optional seal materials include Viton, Neoprene, and Ethylene Propylene.

The range springs are identified by color, as follows:

| Color of Spring | Shut-off Range, PSI |
|-----------------|---------------------|
| Silver          | 50 to 120 PSI       |
| Black           | 100 to 1100 PSI     |
| Gold            | 1000 to 5000 PSI    |

# Model 200 “GAUGE MINDER” PRESSURE LIMITING VALVE

| Model  | Process Connections | Thread Size | Body Material | Valve Shut-Off Pressure Range | MAX. W.P. PSIG (bar) | Approx. Weight |
|--------|---------------------|-------------|---------------|-------------------------------|----------------------|----------------|
| 200-AO | Female x Female NPT | 1/4" FNPT   | Aluminum      | 50 to 5000 PSIG               | 5,000 (340)          | .80 oz         |
| 200-BO | Female x Female NPT | 1/4" FNPT   | Brass         | 50 to 5000 PSIG               | 5,000 (340)          | 2.2 Lbs        |
| 200-BH | Female x Female NPT | 1/2" FNPT   | Brass         | 50 to 5000 PSIG               | 10,000 (680)         | 2.2 Lbs        |
| 200-SO | Female x Female NPT | 1/4" FNPT   | 316 S.S.      | 50 to 5000 PSIG               | 5,000 (340)          | 1.25 Lbs       |
| 200-SH | Female x Female NPT | 1/2" FNPT   | 316 S.S.      | 50 to 5000 PSIG               | 10,000 (680)         | 1.25 Lbs       |

## INSTALLATION AND MAINTENANCE INSTRUCTIONS:

Model 200 “Gauge Minder” is mounted in-line with the instrument to be protected and may be mounted in any position. The automatic shutoff set point is adjusted by loosening the lock nut marked “adjust” and turning the adjustment screw. Turning “clock-wise” increases the shutoff pressure and turning “counter clock-wise” reduces the shutoff pressure. The Model 200 is shipped with a 50 to 120 PSI range spring installed, unless otherwise requested. Two additional springs for higher ranges are included as separate parts. The range spring can be changed by removing the adjustment screw.

The operating limits of the instrument to be protected must be considered when determining the point to set the Model 200 shutoff pressure. Commonly, a setting of 110% of full scale of the instrument is used. Instruments with full scale ranges above 1000 PSI generally have a lower safety factor. It is necessary in this instance to set the shutoff point to 100% of full scale of the instrument to prevent calibration failure. After adjustment of the shut-off pressure of the Model 200 is completed the instrument should be over-pressured for several minutes to verify operation. If indicated instrument pressure falls with the shut-off valve closed, there is a connection leak from the Model 200 to the instrument which must be corrected. If indicated instrument pressure rises beyond the shut-off point, the Model 200 is defective and should be returned if new or repaired by cleaning or installing new seals if previously used.

**CAUTION: Do not adjust the set point with system pressurized and in the shutoff mode. Reduce system pressure until shutoff valve is open, then make set point adjustment.**

Model 200 can be shut off manually with the needle valve marked “damp”. The lock nut must be loosened. The valve screw is turned “clock-wise” to close. Turning the valve screw “counter clock-wise” one turn from closed position gives a range of pulsation dampening. Adjust the amount of dampening necessary to stop pointer oscillation on the instrument.

**NOTE: Caution must be exercised when adjusting needle valve. Do not adjust more than one (1) turn from closed position. Leakage can occur.**



**Made in the USA**