

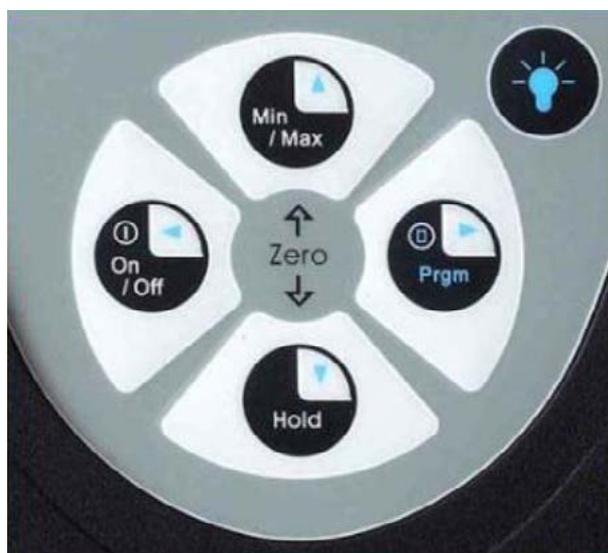


Performing a Rotary Meter Differential Test

The Meriam Manometer is commonly used for testing differential pressure (DP) across our rotary type meters. The test is used to check the health of the meter. The test measures the resistance across the differential ports to indicate if there is any friction within the meter. The differential pressure can be affected by line pressure, specific gravity of the gas, flow rate, and internal friction. This is not an accuracy test. Prover testing is used to check the accuracy of rotary meters.

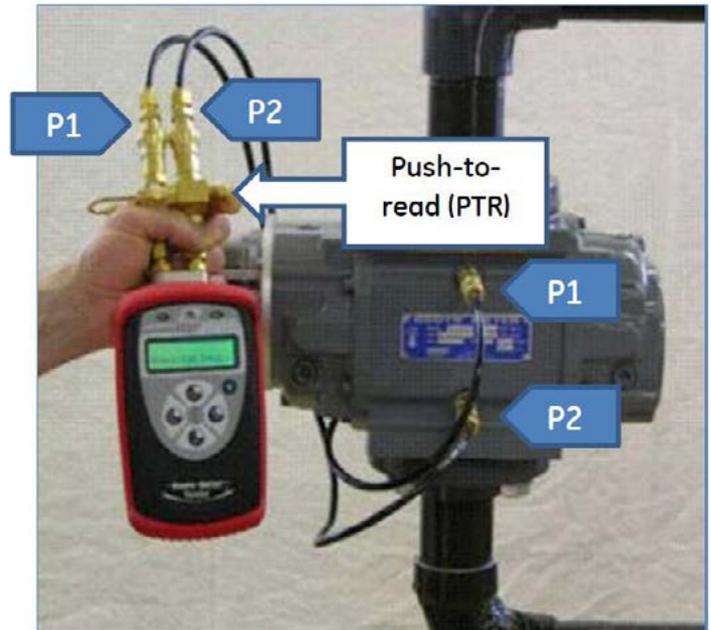
The differential test is performed across the meter at a gas flow rate within the meter's range of capacity. It is recommended that a flow rate of 30% or higher of the meter's maximum capacity will provide accurate results. If the differential rises more than 50% of the original differential pressure value, then we suggest performing a Prover test. Plot points on a curve to verify changes in the meter's differential pressure over time.

Power on the manometer and verify that the temperature value is set at 60 degrees and measuring value is inches of water column (units of H₂O). The values are set when you depress the Program button on the manometer. Zero the Manometer by holding the Min /Max and HOLD buttons at the same time. The manometer will count down on the LCD screen from 10 seconds until it reaches zero. Zero complete will be shown on the LCD screen upon completion.



Differential Testing of Dresser Rotary Meters – Connection and Operation of the Meriam Manometer

1. Insert each of the manifold fittings into the manometer until you hear a click.
2. Power on the manometer and zero out the values.
 - a. Hold the Min/Max and HOLD button at the same time.
3. Set the Damp rate 25S
 - a. Press the prgm button to “PROGRAM MODE”
 - b. Press the min/max button to set “DAMP RATE SELECT”
 - c. Press the min/max or “HOLD” button to change the Damp rate to 25S
 - d. Press the prgm button to confirm the change
 - e. Press Hold button to exit the program mode
 - f. Press prgm button to the reading page
4. Connect P1 of the manometer to the inlet differential tap of the meter.
5. Connect P2 of the manometer to the outlet differential tap of the meter.
6. Press the HOLD button to start the test and depress the PTR – push-to-read manifold button.
7. Release the HOLD button while continuing to press the PTR button for 30 seconds.
The manometer takes a 2-average so the sensor takes 10 readings a second.
8. Before releasing the PTR button press the HOLD button to capture the reading.
9. Press the Min/Max button for test information – top line shows Minimum and Maximum DP value over test period. Bottom line reads “R” for result and shows the average DP over the test period.



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