



NEXGEN
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VT-0017

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CES

Differential Pressure Meter Calibration

Follow this procedure to verify calibration of both analog and electronic differential pressure gauges and transmitters.

1. Equipment Required:
 - a. Controlled pressure source.
 - b. Calibrated test gauge or digital calibrator.
 - c. Fittings and hoses

Caution:

Verify test equipment is calibrated and calibration certificates are current. Never use uncalibrated test equipment or equipment that does not have a current calibration certificate.

Principle: Differential pressure meters accurately measure two pressures and display the difference between the two pressures.

Example: A liquid level indicator measures the pressure at the bottom of the tank (pressure in the tank and the weight of the liquid) and the pressure at the top of the tank (without the liquid column). One of the above numbers is then subtracted from the other number the result being the weight of the liquid column only.

Sometimes the pressure measured on each side is a hundred PSI or more.

2. Open the equalizing valve between the two supply lines to equalize pressure on both sides of the gauge.

Warning:

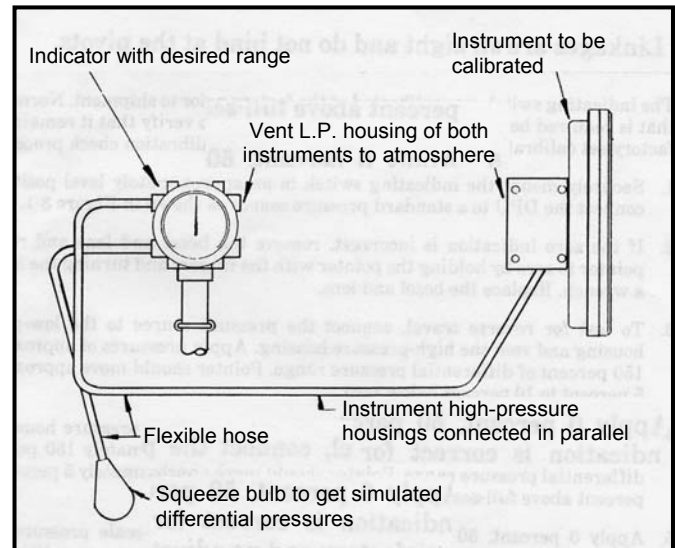
Always open equalizing valve before disconnecting any piping to avoid damaging gauge.

3. Close the liquid and vapor phase lines to the differential pressure gauge.
4. Crack (open slightly) the fittings to remove pressure from both sides of the gauge.
5. Remove both pipes leading to the gauge.

Caution:

To avoid false readings, leave low-pressure side of gauge open to the atmosphere.

6. Attach pressure source to HP (High Pressure) side of the gauge. Leave LP (Low Pressure) side open to the atmosphere.
7. Attach calibrated gauge to the line to read the pressure from the source in parallel.



Typical Portable Calibration Test Setup

8. Slowly apply pressure to the system.

This procedure is to be used by trained mechanics with experience using Liquefied Natural Gas systems. Review all station and system safety documents that apply to this procedure before starting any work.



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9. Verify the pressure registering on the test gauge is the same as the unit being tested. Pressure on unit being test must be the same as the test gauge.
10. Make adjustments, if necessary. Refer to owners manual for instructions specific to adjusting the ZERO and SPAN if gauge is not within an acceptable margin of accuracy (within 2% of full scale).
11. Remove test and calibration equipment.
12. Reattach piping removed from gauge in Step 5.
13. Crack (open slightly) the liquid and vapor phase lines to the differential pressure gauge.
14. Close the equalizing valve between the two supply lines.
15. Completely open the liquid and vapor phase lines to the differential pressure gauge.
16. Check lines for leaks.

This procedure is to be used by trained mechanics with experience using Liquefied Natural Gas systems. Review all station and system safety documents that apply to this procedure before starting any work.