The Dwyer® Differential Pressure Gage consists of two pressure-tight compartments separated by a molded flexible diaphragm.

The interior of the gage case serves as the “low” pressure compartment and a sealed chamber behind the diaphragm serves as the “high” pressure compartment.

Differences in pressure between the “high” and “low” sides of the diaphragm cause the diaphragm to assume a balanced position between the two pressures. The support plate of the diaphragm is linked to a leaf spring which is anchored at one end. The spring provides calibrated resistance to the diaphragm motion. Motion of the spring is transmitted through an exclusive magnetic linkage to the pointer.

The Dwyer® Differential Pressure Gage requires no maintenance. The only field adjustable requirement is occasional zeroing of the pointer.

STANDARD GAGE ACCESSORIES
Mounting hardware kit for flush mounting or panel mounting.

OVER PRESSURE PROTECTION
Standard Dwyer® Differential Pressure Gages are rated for a maximum pressure of 2 psig (0.14 bar) and should not be used where that limit could be exceeded. Models employ a rubber plug on the rear which functions as a relief valve by unseating and venting the gage interior when overpressure reaches approximately 4 psig (0.28 bar). To provide a free path for the pressure relief, 4 holes cored into the side of the gage allow a free path for pressure relief when the gage is surface mounted. Do not plug or obstruct these holes.

SPECSIFICATIONS
Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Housing & Cover: Polycarbonate plastic.
Accuracy: ±2% of full scale (±3% on .5 in wc, 125 Pa, 100 Pa), (±4% on .25 in wc, 60 Pa) throughout range at 70°F (21°C).
Pressure Limits: -2 psig to 2 psig (-0.14 bar to 0.14 bar).
Temperature Limits: 20 to 140°F (-6.67 to 60°C).
Size: 4” (101.6 mm) diameter dial face.
Mounting Orientation: Diaphragm in vertical position.
Process Connection: 3/16” diameter straight tube fittings for use with 3/16” I.D. tubing.
Weight: 10 oz (284 g).
INSTALLATION
Select a location free from excessive vibration and where the ambient temperature will not exceed 140°F (60°C). Also, avoid direct sunlight which accelerates discoloration of the clear plastic cover. Sensing lines may be run the necessary distance. Long tubing lengths will not affect accuracy but will increase response time slightly. Do not restrict lines. If pulsating pressure or vibration cause excessive pointer oscillation, consult factory for ways to dampen movement.

All standard Differential Pressure Gages are calibrated with the diaphragm vertical and should be used in that position for maximum accuracy.

SURFACE MOUNTING
Locate mounting holes, 120° apart on a 4-1/8˝ dia. circle. Use No. 6 X 5/8 high-low screws provided in hardware kit.

FLUSH MOUNTING
Provide a 4-1/2˝ dia. (114 mm) opening in panel. Insert gage and secure the mounting lugs to the gage using the No. 6 X 5/8 high-low screws. Install the 2 inch jack screws into the mounting lugs and secure against panel.

OPERATION
Positive Pressure: Connect tubing from source of pressure to the high pressure port (+). Vent low pressure port (-) to atmosphere.

Negative Pressure: Connect tubing from source of vacuum or negative pressure to the low pressure port (-). Vent high pressure port (+) to atmosphere.

Differential Pressure: Connect tubing from the greater of two pressure sources to the high pressure port (+) and the lower to the low pressure port (-).

TO ZERO GAGE AFTER INSTALLATION
Set the indicating pointer exactly on the zero mark, using the external zero adjust screw at the bottom of the gage face next to the word ZERO. Note that the zero check or adjustment can only be made with the high and low pressure taps both open to atmosphere.

TROUBLE SHOOTING TIPS
Gage won’t indicate or is sluggish.
1. Diaphragm ruptured due to overpressure.
2. Fittings or sensing lines blocked, pinched, or leaking.
3. Cover loose or “O” ring damaged, missing.
4. Pressure sensor, (static tips, Pitot tube, etc.) improperly located.
5. Ambient temperature too low or too high.

MAINTENANCE
No lubrication or periodic servicing is required. Keep case exterior and cover clean. Occasionally disconnect pressure lines to vent both sides of gage to atmosphere and re-zero if necessary. The Differential Pressure Gage is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return goods authorization number before shipping.

NOTICE
Do not overtighten.

NOTICE
Attempted field repair may void your warranty. Recalibration or repair by the user is not recommended.