

Dwyer 2002

Dwyer Magnehelic Differential Pressure Gauge User Manual

Model: 2002 / 6806208

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Dwyer Magnehelic Differential Pressure Gauge, Model 2002. This gauge is designed for accurate measurement of low air or gas pressures, including positive, negative, or differential pressures.



Figure 1: Dwyer Magnehelic Differential Pressure Gauge, showing the gauge, its packaging, and included accessories.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury and damage to the instrument:

- Ensure the gauge is used only with compatible media: air and non-combustible gases.
- Do not exceed the maximum pressure rating of the gauge. The gauge is designed for low pressure applications.
- Handle the gauge with care to avoid shock or vibration, which can affect accuracy.
- Installation should be performed by qualified personnel in accordance with local codes and regulations.
- Do not attempt to repair or modify the gauge. Refer to qualified service personnel for maintenance beyond routine cleaning.

3. COMPONENTS AND WHAT'S INCLUDED

The Dwyer Magnehelic Differential Pressure Gauge package includes the following items:

- Dwyer Magnehelic Differential Pressure Gauge (Model 2002)
- Two (2) 1/8 inch NPT plugs
- Two (2) 1/8 inch rubber tubing adapters
- Three (3) mounting adapters with screws



Figure 2: Detailed view of the gauge face, showing the "INCHES OF WATER" scale and "MAGNEHELIC" branding.

4. SETUP AND INSTALLATION

Proper installation is crucial for accurate readings and safe operation. Follow these steps for setup:

1. **Mounting:** Use the provided mounting adapters and screws to securely fasten the gauge to a stable surface. Ensure the gauge is mounted in a vertical position for optimal accuracy.
2. **Pressure Connections:**
 - Identify the "HIGH" and "LOW" pressure ports on the side of the gauge.
 - Connect the higher pressure source to the "HIGH" port and the lower pressure source to the "LOW" port using appropriate tubing and the provided 1/8 inch NPT plugs or rubber tubing adapters.
 - Ensure all connections are tight and leak-free to prevent inaccurate readings.



Figure 3: Side view of the gauge, highlighting the "HIGH" and "LOW" pressure connection ports.

3. **Zero Adjustment:** Before applying pressure, ensure the gauge reads zero. The zero adjustment screw is conveniently located in the plastic cover and can be accessed without removing the cover. Turn the screw gently until the pointer aligns with the zero mark on the scale.

5. OPERATING INSTRUCTIONS

The Dwyer Magnehelic gauge operates on the principle of a magnetic helix, providing a direct reading of differential pressure.

1. **Applying Pressure:** Once installed and zeroed, apply the differential pressure across the "HIGH" and "LOW" ports.
2. **Reading the Gauge:** The pointer will move across the large, easy-to-read 4 inch (102 mm) dial, indicating the differential pressure in inches of water (" H₂O).
3. **Damping:** The gauge's motion is damped with high-viscosity silicone fluid, which helps stabilize the pointer for accurate readings even with fluctuating pressures.

Note: The gauge is designed for continuous operation within its specified range. Avoid applying pressures significantly beyond the maximum range to prevent damage.

6. MAINTENANCE

The Dwyer Magnehelic gauge requires minimal maintenance due to its rugged design and durable components.

- **Cleaning:** Clean the exterior of the gauge with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Zero Check:** Periodically check the zero calibration of the gauge. If the pointer does not return to zero when no pressure is applied, adjust it using the zero adjustment screw.
- **Inspection:** Regularly inspect the pressure connections and tubing for any signs of wear, cracks, or leaks. Replace damaged components immediately.
- **Storage:** When not in use for extended periods, store the gauge in a clean, dry environment within its specified operating temperature range.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your Magnehelic gauge.

Problem	Possible Cause	Solution
Inaccurate readings	Gauge not zeroed Leaking connections Gauge mounted incorrectly (not vertical) Overpressure damage	Adjust zero screw Check and tighten all connections Remount gauge vertically Gauge may need replacement if internal components are damaged
Pointer does not move	No pressure applied Blocked pressure ports/tubing Internal damage	Verify pressure source Check for obstructions in ports and tubing Contact Dwyer support for repair or replacement
Missing accessories	Packaging error	Contact your supplier or Dwyer customer service

8. SPECIFICATIONS

Attribute	Detail
Product Type	Differential Pressure Gauge
Model Number	2002 / 6806208
Brand	Dwyer
Measurement Range	0 to 2.0 inches of Water (" H2O)
Media Compatibility	Air and non-combustible gases
Wetted Materials	Plastic
Construction Materials	Plastic, Metal, Rubber
Dial Size	4 inches (102 mm)
Product Dimensions (L x W x H)	6 x 3.8 x 6.8 inches
Item Weight	1.8 Pounds
Country of Origin	USA
UPC	094700705914



Figure 4: Bottom view of the gauge, illustrating the robust casing and mounting points.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact Dwyer Instruments directly or refer to their official website. Keep your purchase receipt as proof of purchase.

Manufacturer: DWYER INSTRUMENTS

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Question

Example: How do I reset this device or fix this error?

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Model number, symptoms, what you tried, or the section of the manual you are using.

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