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Dwyer 2000-00C

Instruction Manual

Dwyer Instruments, Inc. 2001 Series 2000 Magnehelic Differential Pressure Gage

Product Overview

The Dwyer Magnehelic Differential Pressure Gage is a highly accurate instrument designed to measure low air or non-corrosive gas pressures, including positive, negative (vacuum), or differential pressures. Its frictionless Magnehelic gage movement ensures quick and reliable indications. This robust design is resistant to shock, vibration, and over-pressures, and it eliminates the need for manometer fluid, preventing evaporation, freezing, or toxic issues.

This gage is widely used across various applications, including measuring fan and blower pressures, filter resistance, air velocity, furnace draft, pressure drop across orifice plates, and liquid levels in bubbler systems. It is also essential for checking gas-air ratio controls, automatic valves, and monitoring blood and respiratory pressures in medical equipment.



This image displays the front view of the Dwyer Magnehelic Differential Pressure Gage. The circular dial is visible, marked in 'INCHES OF WATER' from 0 to 1.0, with major increments at .20, .40, .60, .80, and 1.0. The needle currently points near 0. The center of the dial features the 'MAGNEHELIC' brand name and the text 'MAX. PRESSURE 15 PSIG DWYER INSTRUMENTS INC. MICH. CITY, IND. 46360, U.S.A.'. Below the dial, a clear plastic cover protects a 'CAUTION' label indicating 'MAX. PRESSURE 15 PSIG (100 kPa)' and 'MAX. TEMPERATURE 140°F (60°C)'. A 'ZERO SET' screw is also visible at the bottom.

Setup and Installation

Proper installation is crucial for accurate readings and optimal performance of your Magnehelic gage.

- **Mounting Orientation:** The gage is designed for mounting with the diaphragm in a vertical position. For other mounting orientations, please consult the manufacturer for specific instructions to ensure accuracy.
- **Process Connections:** The gage features 1/8" female NPT duplicate high and low pressure taps. One pair of taps is located on the side, and another pair is on the back. Connect your pressure lines to the appropriate taps using compatible fittings.
- **Environmental Considerations:** Ensure the installation location is within the specified temperature limits of 20 to 140°F (-6.67 to 60°C) and is free from excessive vibration or physical shock that could affect readings.

Operating Instructions

The Magnehelic gage provides direct readings of differential pressure. Follow these guidelines for operation:

- **Zero Adjustment:** Before taking a reading, ensure the gage is zeroed. If the needle is not at zero when no pressure is applied, use the 'ZERO SET' screw located at the bottom of the dial to adjust it.
- **Pressure Application:** Connect the high and low pressure lines to the respective ports. The gage will instantly indicate the differential pressure.
- **Reading the Scale:** Read the pressure directly from the dial, which is calibrated in 'INCHES OF WATER'. Ensure your eye is level with the needle to avoid parallax errors.
- **Pressure Limits:** Do not exceed the maximum pressure limit of 15 PSIG (-20 in Hg. to 15 psig) to prevent damage to the instrument.

Maintenance

The Dwyer Magnehelic gage is designed for durability and low maintenance. It does not use manometer fluid, eliminating common issues like evaporation or freezing.

- **Cleaning:** Keep the gage's exterior clean using a soft, damp cloth. Avoid abrasive cleaners or solvents that could damage the casing or dial.
- **Inspection:** Periodically inspect the pressure connections for any signs of leaks or damage. Ensure all connections are secure.
- **Storage:** When not in use for extended periods, store the gage in a clean, dry environment within its specified temperature range.
- **Calibration:** While the gage is designed for long-term accuracy, periodic calibration by a qualified technician may be performed to ensure continued precision, especially in critical applications.

Troubleshooting

If you encounter issues with your Magnehelic gage, consider the following common problems and solutions:

- **No Reading or Incorrect Reading:**
  - Check all pressure connections for leaks or blockages.
  - Ensure the 'ZERO SET' screw is properly adjusted when no pressure is applied.
  - Verify that the applied pressure is within the gage's specified range (-20 in Hg. to 15 psig).
  - Confirm the mounting orientation is vertical, as specified.
- **Needle Jumps or Fluctuates Excessively:**
  - Check for pulsations in the pressure source. A dampener might be required.
  - Ensure the gage is not subjected to excessive vibration.
- **Physical Damage:**
  - If the gage has been dropped or subjected to severe impact, internal components may be damaged, affecting accuracy. Contact Dwyer Instruments for repair or replacement.

For issues not resolved by these steps, please contact Dwyer Instruments, Inc. customer support.

Specifications

Feature	Specification
Model Number	2000-00C
Product Dimensions	6 x 3.8 x 6.8 inches
Item Weight	1.2 pounds
Service	Air and non-combustible, compatible gases (Natural Gas option available)
Pressure Limits	-20 in Hg. to 15 psig
Temperature Limits	20 to 140°F (-6.67 to 60°C)
Mounting Orientation	Diaphragm in vertical position (consult factory for others)
Process Connections	1/8" female NPT duplicate high and low pressure taps (side and back)
Accuracy	Guaranteed within 2% of full scale
Manufacturer	Dwyer Instruments, Inc.
ASIN	B00QW258NY
National Stock Number	6685-01-369-5345, 6685-00-239-9295

Warranty and Support

For information regarding product warranty, technical support, or service, please contact Dwyer Instruments, Inc. directly. Refer to your purchase documentation or the official Dwyer Instruments website for the most current contact information and warranty terms.

Manufacturer: Dwyer Instruments, Inc.

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