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BELEY 002

BELEY Digital Manifold HVAC Gauge Set User Manual

Model: 002

INTRODUCTION

The BELEY Digital Manifold HVAC Gauge Set is an intelligent electronic instrument designed to assist in the installation, testing, and maintenance of refrigeration equipment such as air conditioners, refrigerators, and cold storage units. This comprehensive gauge set features dual pressure and temperature testing capabilities, a clear digital readout, multi-unit switching, various functional modes, and a built-in refrigerant database.



Figure 1: BELEY Digital Manifold HVAC Gauge Set components.

WHAT'S IN THE BOX

Upon opening the package, verify that all the following items are included:

- 1 x Digital Manifold Gauge
- 2 x Temperature Clips
- 3 x 59-inch Hoses (Red, Yellow, Blue)
- 1 x User's Manual

SETUP

Before operating the device, ensure proper setup to achieve accurate measurements and safe operation.

1. Connect Refrigerant Hoses:

Attach the 59-inch hoses to the corresponding ports on the digital manifold gauge. The gauge features 1/4-inch standard interface designs for secure connections. Ensure all connections are tight to prevent leaks.



Figure 2: Connecting the refrigerant hoses to the manifold gauge.

2. Connect Temperature Sensors:

Plug the two temperature clips into the designated ports on the top of the manifold gauge. These clips are designed to grip pipes for quick and accurate temperature measurements.



Figure 3: Temperature clips for pipe temperature measurement.

3. Power On:

Press the power button to turn on the digital manifold gauge. The LCD backlight will illuminate, displaying the initial readings.

OPERATING INSTRUCTIONS

The BELEY Digital Manifold Gauge offers multiple functions for comprehensive HVAC system analysis.

1. Display Overview

The large-size liquid crystal display provides clear and easy-to-read data. It shows dual pressure and dual temperature readings simultaneously.



Figure 4: Intelligent Digital Display showing various parameters.

2. Refrigerant Mode

The device has a built-in database of 93 types of refrigerants, including R134A, R290, R404A, R407C, R410A, R507A, R744(Co2), R32, and R-1234yf. You can select the appropriate refrigerant for your system.

- Use the "R+" and "R-" buttons to navigate through the refrigerant types.
- The display will show the selected refrigerant and corresponding pressure-evaporation temperature data.
- The gauge automatically calculates subcooling and superheat values, providing direct operational data.

EVAPORATION PRESSURE & TEMP. TEST

Measure the maximum pressure and minimum temperature during the refrigerant's phase change from liquid to gas



Figure 5: Evaporation Pressure & Temperature Test.

GONDENSING PRESSURE & TEMP. TEST

Measure the minimum pressure and maximum temperature during the refrigerant's phase change from gas to liquid



Figure 6: Condensing Pressure & Temperature Test.

3. Pressure Unit Conversion

The instrument supports automatic multi-unit pressure conversion to suit different measurement needs.

- Press the "UNIT" button to cycle through available pressure units (e.g., psi, bar, kPa, inHg).

4. Temperature Unit Conversion

The device allows for automatic conversion between Celsius and Fahrenheit for temperature readings.

- Press the "°C/°F" button to switch between Celsius and Fahrenheit.

5. Vacuum Measurement

The gauge can test the percentage of vacuum measurement, crucial for proper system evacuation.

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Video 1: Demonstration of the BELEY Digital Manifold HVAC Gauge Set's features, including vacuum testing, refrigerant mode, and pressure unit conversion.

6. Pressure Leak Test

Perform a pressure leak measurement and record the leak time speed to identify system leaks.

- Initiate the leak test function (refer to the specific button on the device, often labeled with a percentage or leak icon).
- The gauge will display the initial pressure, measured pressure, and the difference value over time.

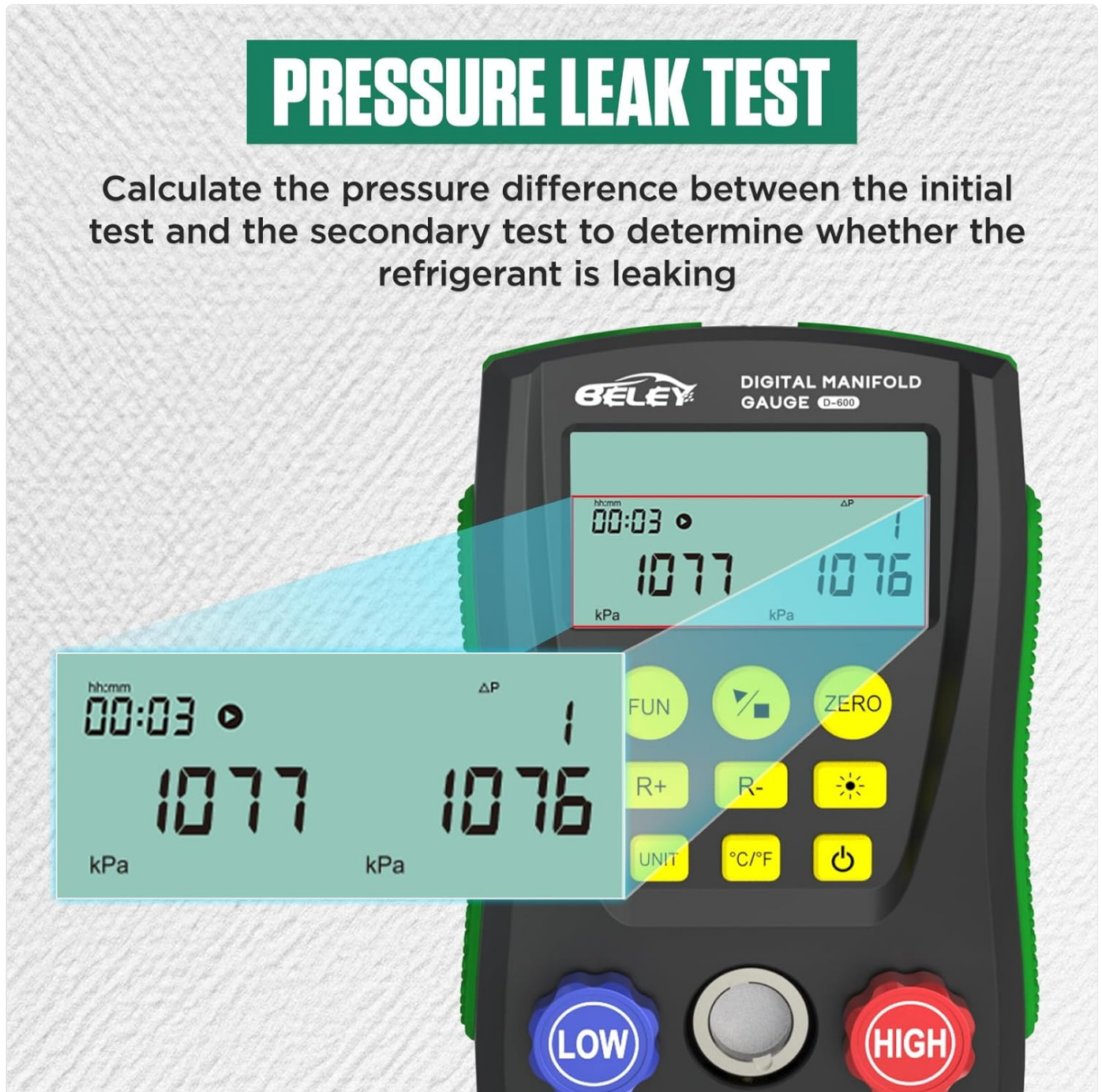


Figure 7: Pressure Leak Test interface.

MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your BELEY Digital Manifold HVAC Gauge Set.

- **Cleaning:** Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the gauge set in its protective case in a cool, dry place when not in use.
- **Hose Care:** The hoses are designed to be tough, scratch-resistant, and flexible. Avoid sharp bends or kinks that could damage them. Inspect hoses regularly for wear and tear.
- **Battery Replacement:** If the display becomes dim or the device does not power on, replace the batteries as per the

instructions in the included user manual.

TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Gauge does not power on.	Low or dead batteries.	Replace batteries.
Inaccurate pressure readings.	Loose hose connections; incorrect refrigerant selected; sensor calibration needed.	Check all hose connections for tightness. Ensure the correct refrigerant type is selected. Refer to the full user manual for calibration procedures if necessary.
Temperature readings are off.	Temperature clips not properly attached; faulty sensor.	Ensure temperature clips are securely attached to the pipes. If issues persist, contact customer support.
Cannot switch units.	Button malfunction; temporary software glitch.	Press the UNIT/°C/°F button firmly. Try restarting the device.

SPECIFICATIONS

Key technical specifications for the BELEY Digital Manifold HVAC Gauge Set:

- **Brand:** BELEY
- **Model Number:** 002
- **Material:** High-strength engineering plastic and flexible non-slip silicone
- **Item Weight:** 3 Kilograms (approx. 6.6 pounds)
- **UPC:** 733810031130
- **Refrigerant Database:** Built-in 93 kinds (e.g., R134A, R290, R404A, R407C, R410A, R507A, R744(Co2), R32, R-1234yf)
- **Pressure Test:** Dual pressure test capability
- **Temperature Test:** Dual temperature measurement capability
- **Display:** Large-size liquid crystal display with LCD backlight
- **Interface:** 1/4-inch standard interface for hoses
- **Precision:** High-precision data acquisition unit
- **Country of Origin:** China

WARRANTY AND SUPPORT

BELEY provides the following warranty and support for this product:

- **Money-back Guarantee:** 30-day money-back guarantee.
- **Warranty:** 24-month warranty.
- **Protection Plans:** Additional protection plans are available for purchase, including 2-Year and 3-Year options.
- **Customer Service:** For any inquiries or support needs, please contact BELEY customer service.

For more detailed information, please refer to the official user manual provided with your product or visit the [BELEY Store](#) on Amazon.