VIHELM DY517

VIHELM DY517 Digital Manifold Pressure Tester User Manual

Model: DY517 | Brand: VIHELM

1. Introduction

The VIHELM DY517 Digital Manifold Pressure Tester is a multi-functional instrument designed for HVAC/R system analysis. It accurately measures double pressure (gauge pressure) and dual temperature simultaneously. Equipped with an automatic multi-unit pressure conversion and temperature conversion (Celsius/Fahrenheit), it caters to diverse operational needs. The device features a built-in database of 93 refrigerants for pressure-evaporation temperature, enabling direct reading of subcooling and superheat. It also performs vacuum measurement, pressure leak measurement, and records leak time speed.
Key features include a large-size liquid crystal display (LCD) with backlight support for clear data display, convenient light operation, and a long-life valve switch. The 1/4-inch standard interface design ensures durability and versatility.

2. Package Contents

Please verify that all items listed below are included in your package:

- 1x DY517 Refrigerant Digital Manifold Gauge
- 1x User Manual (in English)
- Batteries (not included)

Note: The DY517 model does not include the test clip; it must be purchased separately. The DY517 PLUS model includes the test clip.



Image: Overview of product features and the standard packing list for the DY517 model.

3. Product Overview

The VIHELM DY517 is designed with high-strength engineering plastics, ensuring a solid and comfortable grip. It features a hook design for convenient testing and anti-slip design on both sides for secure handling.

Product features:
Large-size liquid crystal display, LCD backlight support, data display clear and easy to read, convenient light operation. Long-life valve switch, 1/4-inch standard interface design to ensure that the instrument's durability and versatility.

The instrument can measure double pressure (gauge pressure) at the same time, as well as dual temperature measurement , with automatic multi-unit pressure conversion, automatic conversion of temperature Celsius / Fahrenheit, to facilitate different needs.

Built-in 93 kinds of refrigerant pressure-evaporation temperature database, also calculate the subcooling superheat, to facilitate direct reading of operating process data.

Also it tests percentage of vacuum measurement; pressure leak measurement, leak time speed record. It is deserved to have this multi-functional, accurate and simply operated digital manifold let you do the job right.

*Note:

DY517 does not include the test clip (need to be purchased separately).

DY517 PLUS include the test clip

DY517 Packing list:

1x Refrigerantion Digital Manifold Gauge
1x User manual (in English)
(Battery not included)

DY517 SET Packing list:

1x Refrigerantion Digital Manifold Gauge
1x User manual (in English)
(Battery not included)

Image: Front view of the DY517 Digital Manifold Pressure Tester highlighting its capabilities such as evaporation pressure & temp. test, condensing pressure & temp. test, pressure leakage test, vacuum measurement, supercooling/superheating test, HD backlight LED display, and support for 89 refrigerant fillings.

3.1 Component Identification



Image: A detailed diagram labeling the various components and controls of the DY517 Digital Manifold Pressure Tester, including the LCD display, clamp-on temperature probe socket, Run/Stop button, Function button, R+/R- Refrigerant Type Selection Buttons, Unit button, C/F button, Power button, Backlit button, Zero button, Low pressure valve, High pressure valve, 1/4 inch low pressure inlet, 1/4 inch high pressure inlet, pressure release valve, refrigerant inlet/vacuum pump inlet, and refrigerant observation window.

LCD Display: Shows pressure, temperature, vacuum, and other test data.

Clamp-on Temperature Probe Socket: For connecting temperature sensors.

Run/Stop Button: Initiates or pauses measurement processes.

Function Button (FUN): Cycles through different measurement modes.

R+/R- Buttons: Selects refrigerant types.

Unit Button (UNIT): Changes measurement units (e.g., kPa, psi, bar, inHg).

C/F Button: Toggles between Celsius and Fahrenheit temperature units.

Power Button: Turns the device on or off.

Backlit Button: Activates or deactivates the LCD backlight.

Zero Button (ZERO): Resets pressure readings to zero.

Low Pressure Valve (Blue): Controls the low-pressure side.

High Pressure Valve (Red): Controls the high-pressure side.

1/4 inch Low Pressure Inlet: Connection for low-pressure hose.

1/4 inch High Pressure Inlet: Connection for high-pressure hose.

Pressure Release Valve: For safely releasing pressure.

Refrigerant Inlet/Vacuum Pump Inlet: Central connection point.

Refrigerant Observation Window: Allows visual inspection of refrigerant flow.

4. Setup

4.1 Battery Installation

The DY517 requires 4 x 1.5V AA (LR6) batteries for operation. To install or replace batteries:

1. Locate the battery compartment cover on the back of the device.
2. Open the cover by sliding or unlatching it.
3. Insert four AA batteries, ensuring correct polarity (+/-) as indicated inside the compartment.
4. Close the battery compartment cover securely.



Image: The back of the DY517 Digital Manifold Pressure Tester with the battery compartment open, showing the slots for four AA batteries and the serial number label.

5. Operating Instructions

5.1 Power On/Off and Basic Display Functions

1. **Power On:** Press the Power button ( ) to turn on the instrument. If the LCD displays vacuum test status, press the Function button to switch it.
2. **Unit Selection:** Press the UNIT button to adjust the reading unit (e.g., kPa, psi, bar, inHg).
3. **Zero Function:** When the instrument is turned on, there may be 10 digits in the high and low pressure display area. Press the ZERO button long until it returns to zero.
4. **Backlight:** Press the Backlit button to toggle the LCD backlight.
5. **Temperature Units:** Press the C/F button to switch between Celsius (°C) and Fahrenheit (°F).

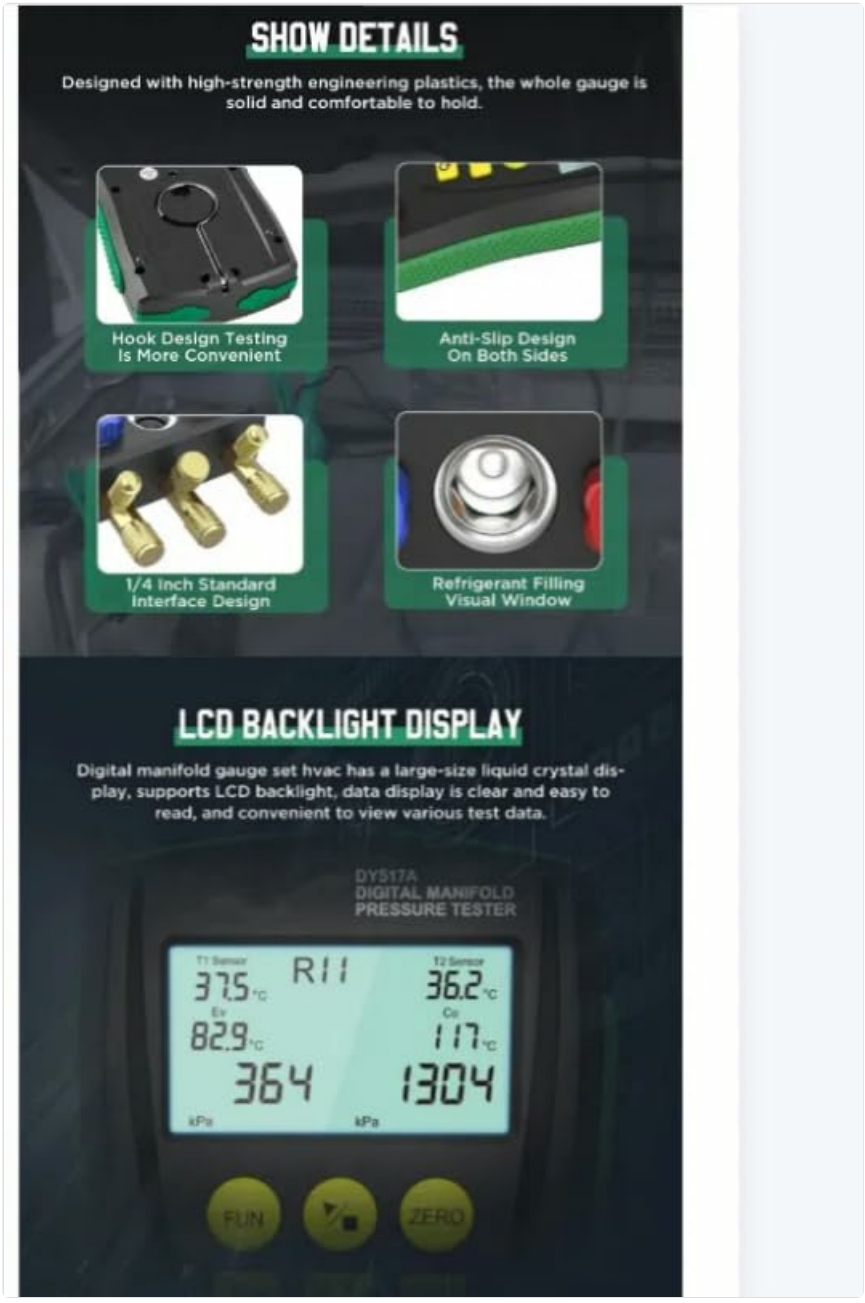


Image: Details of the DY517's design features (hook, anti-slip, 1/4 inch interface, refrigerant filling visual window) and a close-up of the LCD backlight display showing temperature and pressure readings.

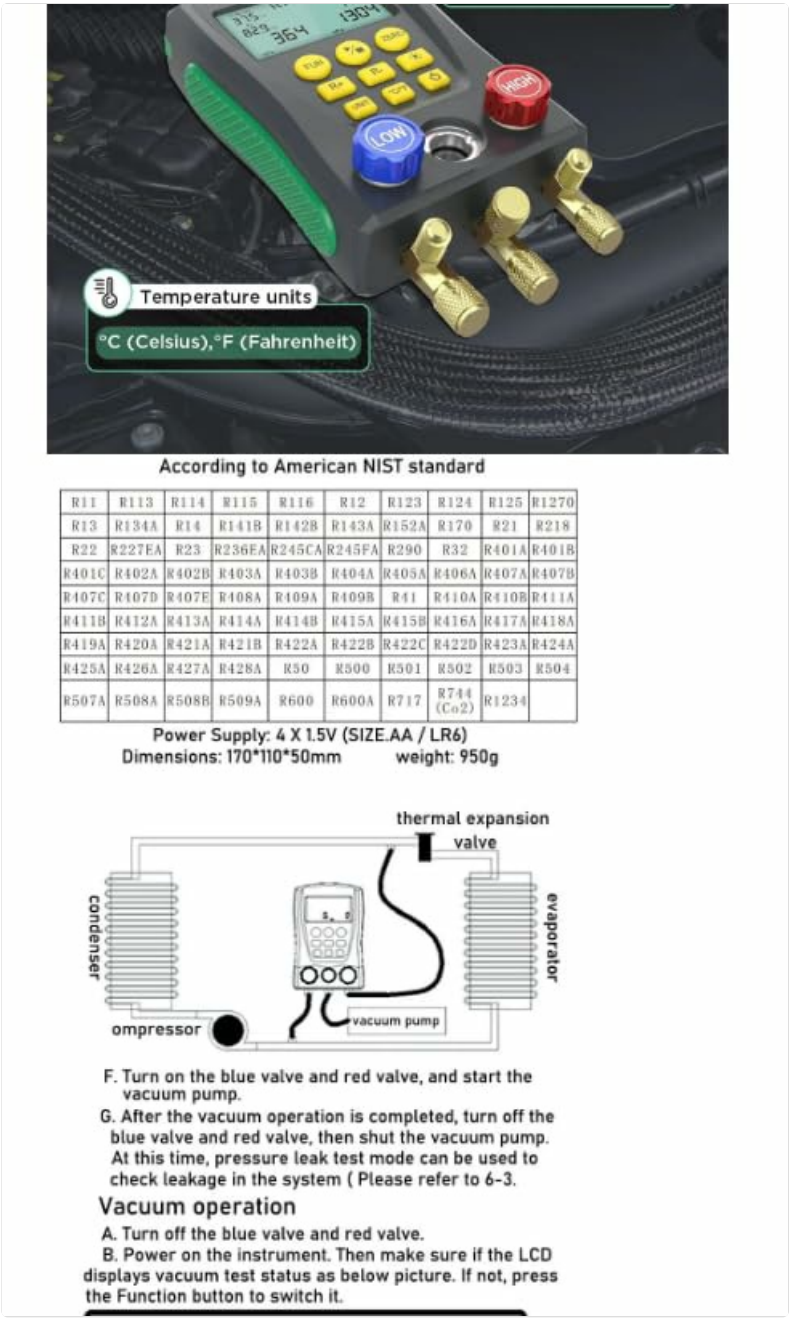


Image: Illustrates the temperature unit selection (°C/°F) and a comprehensive table of 93 refrigerants according to the American NIST standard, supported by the device.

5.2 Refrigerant Selection

The DY517 has a built-in database of 93 refrigerants according to the US NIST standard. Use the R+ and R- buttons to select the appropriate refrigerant type for your application.

5.3 Connecting to a Refrigeration System

Connect the instrument to the refrigeration system according to the provided diagram. Pay attention to the direction of the refrigerant flow. Connected clamp-on temperature probes will not affect the operation.

5.4 Vacuum Operation

To perform a vacuum operation:

A. Turn off the blue valve and red valve.

B. Power on the instrument. Then make sure if the LCD displays vacuum test status as below picture. If not, press the Function button to switch it.

C. Turn on the blue valve and red valve, and start the vacuum pump.

D. After the vacuum operation is completed, turn off the blue valve and red valve, then shut the vacuum pump. At this time, pressure leak test mode can be used to check leakage in the system (Please refer to section 5.5).



Image: Illustrates the Condensing Pressure & Temperature Test display and a diagram showing the setup for vacuum operation with the DY517 connected to a refrigeration system.

5.5 Pressure Leakage Test

The pressure leakage test calculates the pressure difference between the initial test pressure and the second test pressure. This allows you to observe any leakage in the refrigeration system pipeline and record the leakage time speed.

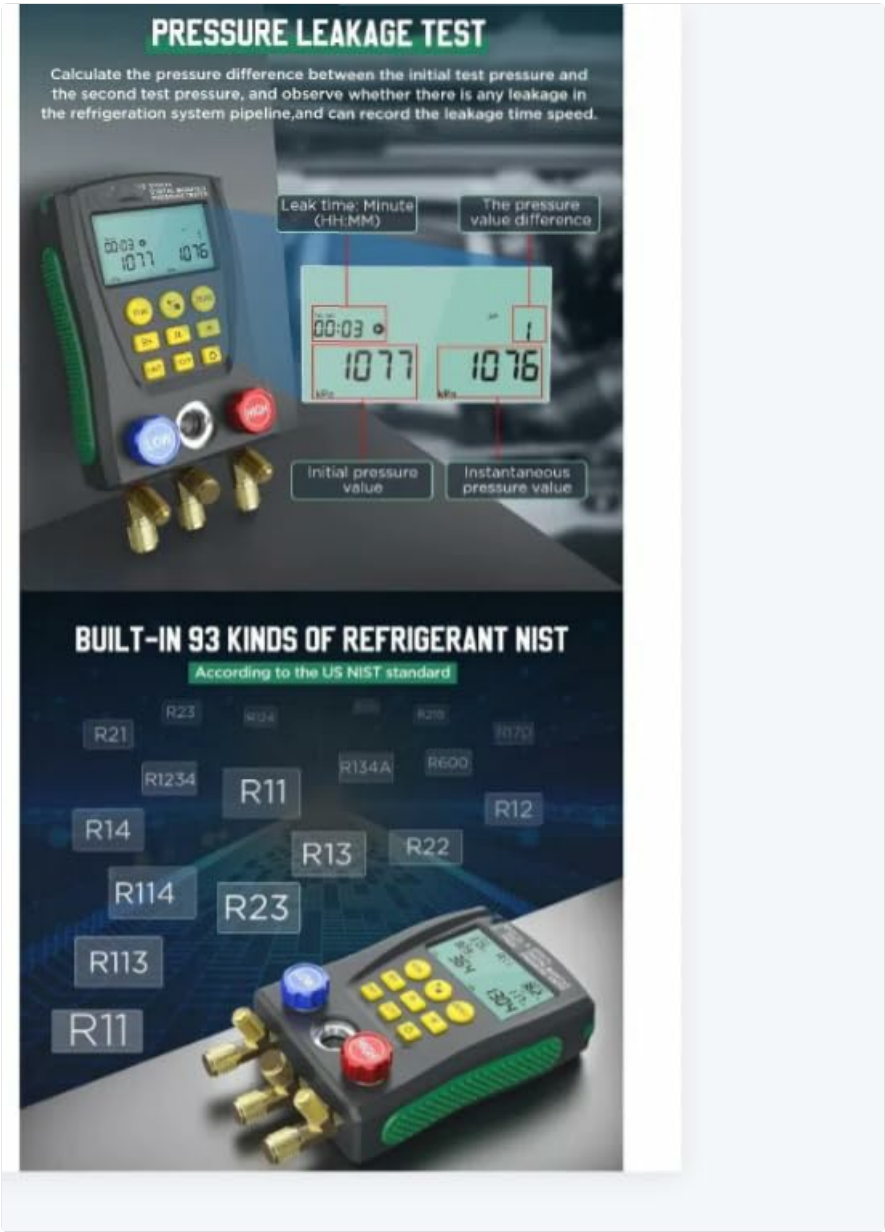


Image: A visual representation of the pressure leakage test, showing the leak time (HH:MM), initial pressure value, instantaneous pressure value, and the calculated pressure value difference.

5.6 Condensing Pressure & Temperature Test

The DY517 can perform condensing pressure and temperature tests. The lower the evaporative (EV) and condensing (CO) pressure and temperature, the better the cooling effect.



Image: A close-up of the DY517 display during a Condensing Pressure & Temperature Test, showing evaporative temp, condensing temp, evaporative pressure, and condensing pressure readings.

6. Maintenance

To ensure the longevity and accuracy of your VIHELM DY517 Digital Manifold Pressure Tester, follow these maintenance guidelines:

- **Cleaning:** Wipe the instrument with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the device in a cool, dry place away from direct sunlight and extreme temperatures. If storing for an extended period, remove the batteries to prevent leakage.
- **Inspection:** Regularly check hoses and connections for wear or damage. Replace any damaged components immediately.

7. Troubleshooting

If you encounter issues with your DY517, please refer to the following common troubleshooting steps:

- **Device not powering on:** Check battery installation and ensure batteries are not depleted. Replace with fresh AA batteries if necessary.
- **Inaccurate readings:** Ensure all connections are secure and free of leaks. Perform a zero calibration if pressure readings are off.
- **Display issues:** If the display is dim, check battery level. If the display is frozen, try restarting the device.

For persistent issues or technical support, please contact VIHELM customer service.

8. Specifications

Feature	Specification
Model	DY517
Power Supply	4 x 1.5V (SIZE AA / LR6)
Dimensions	170*110*50mm
Weight	950g
Interface Design	1/4-inch Standard
Display	Large-size Liquid Crystal Display (LCD) with Backlight
Refrigerant Database	Built-in 93 kinds (NIST standard)
Functions	Double Pressure Measurement, Dual Temperature Measurement, Vacuum Measurement, Pressure Leak Measurement, Subcooling/Superheat Calculation

9. Warranty and Support

For warranty information, technical support, or service inquiries regarding your VIHELM DY517 Digital Manifold Pressure Tester, please refer to the warranty card included with your product or contact the manufacturer directly. Keep your purchase receipt as proof of purchase.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

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

Details

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

Submit question