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› MR CARTOOL L302 Digital Refrigerant Manifold Gauge User Manual

MR CARTOOL L302

MR CARTOOL L302 Digital Refrigerant Manifold Gauge User Manual

Model: L302

1. OVERVIEW

The MR CARTOOL L302 Digital Refrigerant Manifold Gauge is a professional tool designed for the installation and maintenance of refrigeration systems. It accurately measures low and high side pressures, provides real-time saturation temperatures, and supports a wide range of refrigerants. This device features multiple operating modes for comprehensive system diagnostics.

L302

MANOMETRO DIGITALE A DUE VIE



Test Doppia
Pressione



Test Doppia
Temperatura



90 Tipi di Dati
Refrigerante Integrati



Test Pressione di
Perdita

C/F

Commutazione
Multi-unità



Misurazione del
Vuoto



Image 1.1: MR CARTOOL L302 Digital Refrigerant Manifold Gauge in use.

Key Features:

- **Digital Manifold Set:** Determines low and high side pressure, providing real-time saturation temperature for convenient refrigeration system installation and maintenance.
- **High Precision:** Incorporates data for 90 refrigerants and corresponding temperature charts based on US NIST standards. Features a visible window to observe refrigerant filling status.
- **Multiple Functions:** Includes Refrigerant Pressure Mode, Vacuum Percentage Mode, and Leak Detection Mode. Supports multi-unit conversion for pressure (KPa, Bar, PSI, InHg, KgF/cm²) and temperature (Celsius, Fahrenheit).
- **2-Way Valves & 3 Hoses:** Equipped with a 2-way valve block and three connections for measuring high and low pressure lines. Comes with color-coded hoses (red for high pressure, blue for low pressure, yellow for refrigerant cylinder) for easy identification.

2. PACKAGE CONTENTS

Verify that all items listed below are present in your package:

- MR CARTOOL L302 Digital Manifold Gauge Unit
- Red High-Pressure Hose
- Blue Low-Pressure Hose
- Yellow Service Hose
- User Manual



Image 2.1: Package contents of the MR CARTOOL L302.

3. PRODUCT DIAGRAM

Familiarize yourself with the components of the MR CARTOOL L302 Digital Refrigerant Manifold Gauge:

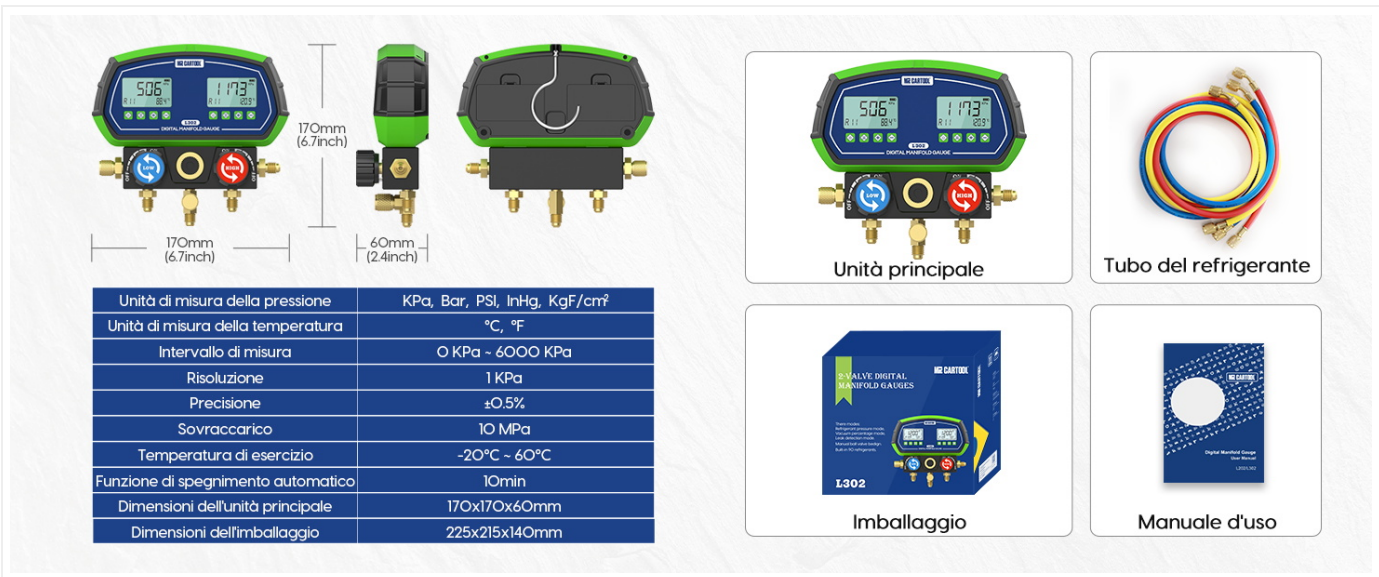


Image 3.1: L302 Digital Manifold Gauge with labeled parts.

No.	Component
1	Low Pressure Display Interface

No.	Component
2	High Pressure Display Interface
3	Low Pressure Button
4	High Pressure Button
5	Blue Low Pressure Rotary Switch
6	Red High Pressure Rotary Switch
7	Low Pressure Input Connection
8	High Pressure Input Connection
9	Hook
10	Battery Cover
11	Universal Output Connector

4. SETUP AND CONNECTIONS

4.1 Battery Installation

The L302 requires two 9V batteries for operation. To install:

1. Locate the battery cover (10) on the back of the unit.
2. Open the battery cover.
3. Insert two 9V batteries, ensuring correct polarity.
4. Close the battery cover securely.

4.2 Hose Connections

Connect the color-coded hoses to the appropriate ports on the manifold gauge and the refrigeration system:

- **Red Hose:** Connect to the high-pressure input connection (8) on the gauge and the high-pressure side of the refrigeration system.
- **Blue Hose:** Connect to the low-pressure input connection (7) on the gauge and the low-pressure side of the refrigeration system.
- **Yellow Hose:** Connect to the universal output connector (11) on the gauge. This hose is typically used for connecting to a vacuum pump or a refrigerant cylinder.



Image 4.1: High-performance hoses for the L302 gauge.

5. OPERATING INSTRUCTIONS

5.1 Power On/Off

Press the power button to turn the unit on. The display will illuminate. To turn off, press and hold the power button until the display shuts down. The unit has an automatic power-off function after 10 minutes of inactivity.

5.2 Unit Selection (Pressure/Temperature)

The L302 allows you to switch between various pressure and temperature units:

- **Pressure Units:** KPa, Bar, PSI, InHg, KgF/cm²
- **Temperature Units:** Celsius (°C), Fahrenheit (°F)

Refer to the user manual for specific button presses to cycle through these units.



Image 5.1: Adjustable backlight and unit conversion display.

5.3 Operating Modes

The L302 features three primary operating modes:

3 COMMON WORKING MODES



Image 5.2: Three common working modes.

5.3.1 Refrigerant Measurement Mode

In this mode, the dual screens display real-time high/low side pressures and the corresponding saturation temperature of the selected refrigerant. This allows for intuitive assessment of system pressure matching and refrigerant status.

MODALITÀ DI MISURAZIONE REFRIGERANTE

I doppi schermi visualizzano in tempo reale le pressioni lato alta/bassa e la temperatura di saturazione del refrigerante, per una valutazione intuitiva della corrispondenza della pressione del sistema e dello stato del refrigerante.



Image 5.3: Refrigerant Measurement Mode display.

5.3.2 Vacuum Percentage Mode

This mode precisely measures the vacuum level and vacuum pressure during the evacuation of refrigeration systems. It helps ensure proper system evacuation before refrigerant charging.

MODALITÀ PERCENTUALE VUOTO

Misura con precisione il livello di vuoto e la pressione di vuoto durante l'evacuazione dei sistemi di refrigerazione.



Image 5.4: Vacuum Percentage Mode display.

5.3.3 Leak Detection Mode

The leak detection mode provides real-time display of the current system pressure, leakage pressure, and detection time, allowing for intuitive assessment of the leak status.

MODALITÀ RILEVAMENTO PERDITE

Visualizzazione in tempo reale della pressione corrente del sistema, della pressione di perdita e del tempo di rilevamento, per una valutazione intuitiva dello stato di perdita.



Image 5.5: Leak Detection Mode display.

5.4 Refrigerant Database

The L302 has an integrated database of 90 refrigerants, allowing for accurate measurements and calculations based on the specific refrigerant being used. This includes common refrigerants like R134A, R32, R410A, and many others.

DATABASE INTEGRATO DI 90 REFRIGERANTI

R11	R113	R114	R115	R116	R12
R123	R124	R125	R1270	R13	R134A
R14	R141B	R142B	R143A	R152A	R170
R21	R218	R22	R227EA	R23	R236EA
R245CA	R245FA	R290	R32	R401A	R401B
R401C	R402A	R402B	R403A	R403B	R404A
R405A	R406A	R407A	R407B	R407C	R407D
R407E	R408A	R409A	R409B	R41	R410A
R410B	R411A	R411B	R412A	R413A	R414A
R414B	R415A	R415B	R416A	R417A	R418A
R419A	R420A	R421A	R421B	R422A	R422B
R422C	R422D	R423A	R424A	R425A	R426A
R427A	R428A	R50	R500	R501	R502
R503	R504	R507A	R508A	R508B	R509A
R600	R600A	R717	R744 _(Co2)	R1234YF	

Image 5.6: Integrated database of 90 refrigerants.

6. MAINTENANCE

6.1 Cleaning

- Wipe the unit with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- Ensure all connections are free from debris before and after use.

6.2 Storage

- Store the manifold gauge in a clean, dry environment when not in use.
- Remove batteries if the unit will not be used for an extended period to prevent leakage.
- Utilize the hidden hook for convenient storage, keeping the unit safe and accessible.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your L302 Digital Refrigerant Manifold Gauge.

Problem	Possible Cause	Solution
Unit does not power on	Low or dead batteries; Incorrect battery installation	Replace batteries; Ensure correct polarity during installation
Inaccurate readings	Incorrect refrigerant selected; Sensor contamination; Loose connections	Verify the correct refrigerant is selected in the menu; Clean sensors if accessible; Tighten all hose connections
Display is dim or flickering	Low battery power; Backlight setting too low	Replace batteries; Adjust backlight brightness using the unit's controls
Cannot switch units	Incorrect operating mode; Button malfunction	Ensure you are in a mode that allows unit switching; Refer to the manual for specific button functions or contact support

8. SPECIFICATIONS

Detailed technical specifications for the MR CARTOOL L302 Digital Refrigerant Manifold Gauge:

Feature	Specification
Brand	MR CARTOOL
Model	L302
Material	Plastic
Item Dimensions (LxWxH)	17 x 17 x 6 cm (6.7 x 6.7 x 2.4 inches)
Item Weight	1.9 Kilograms
Pressure Measurement Units	KPa, Bar, PSI, InHg, KgF/cm²
Temperature Measurement Units	°C, °F
Measurement Range	0 KPa - 6000 KPa
Resolution	1 KPa
Accuracy	±0.5%
Overload Pressure	10 MPa
Operating Temperature	-20°C - 60°C
Auto Power Off	10 minutes

Feature	Specification
Power Source	2 x 9V Batteries
Supported Refrigerants	90 types (e.g., R11, R12, R22, R32, R134A, R410A, R1234YF)

9. WARRANTY AND SUPPORT

9.1 Product Warranty

MR CARTOOL offers a **24-month warranty** for the L302 Digital Refrigerant Manifold Gauge from the date of purchase. This warranty covers manufacturing defects and ensures the product functions as intended under normal use. Please retain your proof of purchase for warranty claims.

9.2 Customer Support

For any questions, technical assistance, or warranty claims, please contact MR CARTOOL customer service. Our team is available **7 days a week, 24 hours a day**, to provide friendly and helpful support. Contact information can typically be found on the official MR CARTOOL website or through your purchase platform.

10. VERSATILE APPLICATIONS

The MR CARTOOL L302 Digital Refrigerant Manifold Gauge is suitable for a wide range of applications in refrigeration and air conditioning systems, including:



Image 10.1: Versatile use cases for the L302 gauge.

- Residential Air Conditioners
- Automotive Air Conditioners
- Commercial Air Conditioners
- General Refrigeration Equipment
- Cold Storage Units

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