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› LeTkingok Digital Vacuum Gauge ST-VG90 User Manual

LeTkingok ST-VG90

LeTkingok Digital Vacuum Gauge ST-VG90 User Manual

Model: ST-VG90

1. INTRODUCTION

This manual provides instructions for the proper use and maintenance of the LeTkingok Digital Vacuum Gauge, model ST-VG90. This device is designed for accurate measurement of vacuum levels in atmospheric environments. It features a digital display, multiple unit options, and a durable design for field use.



Figure 1: LeTkingok Digital Vacuum Gauge ST-VG90, carrying case, and brass adapter.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating the device. Failure to follow these instructions may result in injury or damage to the product.

- This device is intended for use in atmospheric environments only. Do not use it for measurements in environments containing refrigerants or other corrosive substances, as this may damage the sensor and affect accuracy.
- Ensure proper battery installation and replacement. Use only specified battery types.
- Avoid dropping the device or subjecting it to severe impacts.
- Do not attempt to disassemble or modify the device. Refer all servicing to qualified personnel.
- Keep the device away from extreme temperatures and direct sunlight.

3. PACKAGE CONTENTS

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

- 1 x Digital Vacuum Gauge (ST-VG90)
- 1 x Extension Connector (brass adapter)
- 1 x Carrying Case
- 1 x User Manual (this document)



Figure 2: Contents of the ST-VG90 package, including the gauge, case, and manual.

4. PRODUCT OVERVIEW

The ST-VG90 Digital Vacuum Gauge features a compact design with an integrated display and control buttons. The sensor port is located at the bottom of the device for connection to the vacuum system.



Figure 3: Front view of the ST-VG90 showing the digital display and control buttons (Power, Unit, Set, Save/Cal).

4.1. Controls and Display

- **Display:** Digital screen for showing vacuum readings and settings.
- **Power Button ():** Press to turn the device ON or OFF.
- **UNIT Button:** Press to cycle through available measurement units (Pa, mBar, mmHg, Micron).
- **SET Button:** Used to enter settings mode or confirm selections.
- **SAVE/CAL Button:** Used to save settings or initiate calibration.

5. SETUP

5.1. Battery Installation

1. Locate the battery compartment cover on the back of the device.
2. Open the cover and insert three (3) AAA batteries, ensuring correct polarity.
3. Close the battery compartment cover securely.

4. The device is designed for low power consumption, allowing for approximately 3 to 6 months of normal use on a single set of batteries.

5.2. Connecting the Gauge

1. Ensure the vacuum system is depressurized before connecting the gauge.
2. Thread the extension connector (brass adapter) onto the sensor port at the bottom of the ST-VG90.
3. Connect the gauge (via the extension connector) to the vacuum system or manifold where the vacuum measurement is required. Ensure a tight, leak-free connection.

6. OPERATION

6.1. Powering On/Off

- To turn ON the device, press and hold the Power button () until the display illuminates.
- To turn OFF the device, press and hold the Power button () until the display turns off.

6.2. Selecting Measurement Units

- After powering on, press the **UNIT** button repeatedly to cycle through the available measurement units: Pa (Pascals), mBar (millibars), mmHg (millimeters of mercury), and Micron (microns of mercury).
- The selected unit will be displayed on the screen.

6.3. Setting Vacuum Target and Alarm

The device features a buzzer alarm that can be set to a specific vacuum target value.

1. Press the **SET** button to enter the target setting mode.
2. Use the **UNIT** and **SAVE/CAL** buttons to adjust the target vacuum value. (Specific button functions for adjustment may vary; refer to on-screen prompts if available).
3. Press **SET** again to confirm the target value.
4. When the measured vacuum reaches or exceeds the set target, the buzzer will sound (90 decibel volume) for 10 seconds.

6.4. Calibration

The **SAVE/CAL** button is used for calibration. Specific calibration procedures may vary. Typically, calibration involves exposing the sensor to a known vacuum or atmospheric pressure and pressing the CAL button to zero or adjust the reading. Consult the device's on-screen prompts or a more detailed technical manual if precise calibration steps are required.

6.5. Power Prompt

The device includes a power prompt feature to indicate the remaining battery level on the display.

7. MAINTENANCE

7.1. Cleaning

The ST-VG90 has an IP54 dust-proof design. To clean the exterior of the device:

- Wipe the surface with a soft, damp cloth.
- Do not use abrasive cleaners or solvents.

- Ensure no moisture enters the sensor port or battery compartment.

7.2. Battery Replacement

When the power prompt indicates low battery, replace all three AAA batteries as described in Section 5.1. Remove batteries if the device will not be used for an extended period to prevent leakage.

7.3. Sensor Care

The Pirani sensor is a delicate component. Avoid exposing it to contaminants, high pressures beyond its maximum overload, or refrigerants. Always ensure the system is clean and dry before connecting the gauge.

8. TROUBLESHOOTING

If you encounter issues with your ST-VG90, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed batteries.	Replace batteries with new ones, ensuring correct polarity.
Inaccurate readings.	Contaminated sensor, device used outside specified operating temperature, or calibration needed.	Ensure sensor is clean. Operate within 0~50°C. Perform calibration if necessary.
Buzzer alarm not sounding.	Target value not set, or vacuum level not reached.	Verify target vacuum setting. Ensure the system reaches the set vacuum level.
Display is dim or flickering.	Low battery power.	Replace batteries.

If the problem persists after attempting these solutions, contact customer support for further assistance.

9. SPECIFICATIONS

Detailed technical specifications for the LeTkingok Digital Vacuum Gauge ST-VG90:



Figure 4: Dimensions of the ST-VG90 Digital Vacuum Gauge (135mm length, 65mm width, 30mm depth).

Parameter	Value
Model	ST-VG90
Maximum Overload Pressure	0.5 MPa
Measurement Range	0-10000 Pa / 0-100.00 mBar / 0-75.000 mmHg / 0-75000 Micron
Operating Temperature	0~50°C (32~122°F)
Measurement Accuracy	±% of reading (at 20°C, for 2~100 Pa)
Sensor Type	1x Pirani sensor
Backlight Time	20 seconds
Buzzer Volume	90 dB, automatic shut-off after 10 seconds
Weight	Approximately 125g (without batteries)

Parameter	Value
Dust-proof Rating	IP54
Power Source	3 x AAA batteries (not included)
Battery Life	3-6 months (typical use)
Application Scope	Atmospheric environment (not for use with refrigerants)

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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

Answered questions about this manual

Why does my LeTkingok ST-VG90 digital vacuum gauge display only '00000' for all values even when in service, regardless of the units chosen?

If your LeTkingok ST-VG90 is displaying "00000" across all units while in service, it typically indicates that the sensor is not detecting a change in pressure or is unable to communicate a reading. Please...

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