

[Manuals.plus](#) /

› [Super Stars](#) /

› Super Stars Digital Micron Vacuum Gauge ST-VG90 Instruction Manual

Super Stars ST-VG90

Super Stars Digital Micron Vacuum Gauge

MODEL: ST-VG90

Brand: Super Stars

Introduction

The Super Stars Digital Micron Vacuum Gauge ST-VG90 is a high-accuracy instrument designed for precise vacuum measurement in HVAC and refrigeration systems. Equipped with a professional Pirani vacuum sensor, it provides fast and accurate readings across a wide range, ensuring systems are moisture-free before refrigerant charging. This manual provides essential information for the proper setup, operation, and maintenance of your device.



Figure 1: Super Stars Digital Micron Vacuum Gauge ST-VG90.

Key Features

- **High Accuracy Vacuum Measurement:** Professional Pirani vacuum sensor offers fast and accurate readings from

99999 to 0.1 Pa (740000 to 0.75 micron).

- **Multiple Pressure Units:** Easily switch between Pa, mBar, mmHg, and Micron.
- **Smart Vacuum Alarm Function:** Built-in buzzer and visual alert activate upon reaching a preset vacuum level.
- **Backlit LCD & Power-saving Design:** Clear digital LCD screen with optional backlight and automatic power-off function.
- **Durable and Pump Compatibility:** Compact design with one-key calibration, suitable for vacuum pumps of 5 CFM or higher.

What's in the Box

Upon unpacking, please verify that all items listed below are present and in good condition:

- Digital Micron Vacuum Gauge (ST-VG90)
- 3 x AA Batteries
- 2 x Adapters (1/4 inch SAE)
- Storage Bag
- Instruction Manual



Figure 2: Included components: vacuum gauge, batteries, adapters, and storage bag.

Setup

1. **Battery Installation:** Open the battery compartment on the back of the device. Insert the three AA batteries, ensuring correct polarity. Close the compartment securely.
2. **Adapter Connection:** The gauge features a 7/16"-20UNF (1/4" SAE) connection. Attach the appropriate adapter (straight or 90-degree elbow) to the gauge's port. Ensure a tight seal to prevent leaks.
3. **Initial Power On:** Press and hold the power button (U) to turn on the device. The LCD will illuminate, displaying the current vacuum reading.

Your browser does not support the video tag.

Video 1: Unboxing and initial setup of the Super Stars Digital Micron Vacuum Gauge, demonstrating battery installation and adapter connection.

Operation

1. **Power On/Off:** Press and hold the power button (**U**) to turn the gauge on or off.
2. **Unit Switching:** Press the **UNIT** button to cycle through the available pressure units: Pa, mBar, mmHg, and Micron.
3. **Setting Alarm:** Press the **SET** button to enter the alarm setting mode. Use the up/down arrows (often integrated with other buttons or implied by repeated presses) to adjust the desired vacuum level for the alarm. Once the preset level is reached during evacuation, the device will provide an audible and visual alert.
4. **Calibration:** The gauge supports one-key calibration. In an open-air environment (atmospheric pressure), press and hold the **SAVE CAL** button to initiate calibration. The display will show "CAL" during the process. Ensure the sensor is clean and dry before calibration.
5. **Connecting to System:** Connect the gauge (with adapter) to the vacuum pump or system port. Begin the evacuation process. Monitor the digital display for real-time vacuum readings.



Figure 3: Display showing various measurement units and range.



Figure 4: Smart Vacuum Alarm in action, indicating a preset level has been reached.

7/16"-20UNF CONNECTION



Figure 5: The gauge in use with an HVAC system.

Maintenance

- **Cleaning:** Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Sensor Care:** Keep the Pirani sensor clean and free from oil or debris. Avoid direct contact with the sensor.
- **Storage:** Store the gauge in its provided carrying case in a cool, dry place when not in use. Remove batteries if storing for extended periods to prevent leakage.
- **Battery Replacement:** Replace batteries when the low battery indicator appears on the display.

Troubleshooting

- **No Display/Power:** Check battery installation and ensure batteries are not depleted. Replace if necessary.
- **Inaccurate Readings:** Perform a calibration in an open-air environment. Ensure all connections are tight and there are no leaks in the system being tested. Check the sensor for contamination.
- **Alarm Not Activating:** Verify that the alarm set point is correctly configured and that the vacuum level has reached or surpassed the set threshold.

Specifications

Feature	Specification
Measuring Range	99999 Pa - 0.1 Pa (740000 - 0.75 Micron)
Measurement Units	Pa, mBar, mmHg, Microns
Accuracy	0.1 Pa - 1000 Pa; Reading $\pm 5\%$ (at 68°F)
Resolution	0.1 Pa (<10 Pa); 1 Pa (<100 Pa); 10 Pa (<1000 Pa)
Maximum Overload Pressure	0.5 MPa / 72 PSI
Working Temperature	-5 to 50°C (23 to 122°F)
Power Supply	3 x AA batteries (approx. 40 hours battery life)
Buzzer Prompter	90dB, shuts down after 35 seconds
Connection	7/16"-20UNF (1/4" SAE)
Item Dimensions L x W x H	5.43 x 2.36 x 1.1 inches
Item Weight	16 ounces
Material	Metal



Figure 6: Technical specifications of the ST-VG90.

Warranty and Support

Super Stars products are manufactured to high-quality standards. For warranty information, technical support, or service inquiries, please refer to the contact information provided with your purchase documentation or visit the official Super Stars website. Please retain your proof of purchase for warranty claims.

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

Answered questions about this manual

I purchased the Super Stars ST-VG90 vacuum gauge yesterday and it will not allow calibration; when I press 'SET CAL', an error appears. How can I fix this?

According to the Super Stars ST-VG90 manual, the calibration process must be performed under specific conditions to avoid errors. Please follow these steps to resolve the issue: Open-Air Environment: Ensure you are performing the calibration...

[Read full answer](#)