

FULL-RANGE VACUUM GAUGE

User Manual



VGW-760Pro

SAFETY INSTRUCTIONS

- Please use this instrument in the specified environment to avoid causing errors or even damaging the sensor.
- Do not use chemical solvents or corrosive liquids to wipe the meter body.
- Do not disassemble the meter structure and internal devices.
- If the product is not used for a long time, please take out the battery to avoid corrosion of the product by leaking liquid from the battery. The battery supplied with the instrument is a non-rechargeable battery, please do not charge it.
- Please use special tools to install or disassemble the product, avoid rotating the case with excessive force and damaging the product.

CAVEAT

- ❗ Before using the vacuum gauge, please check the connector for oil contamination.
- ❗ Whenever possible, connect the product to the system with the fittings in a vertical position downwards to avoid contamination of the sensor by oil in the pipeline that may enter the fittings.
- ❗ To ensure the accuracy of the measurement, please install the product as far away from the vacuum pump as possible.
- ❗ Close the valve before shutting down the vacuum pump to isolate the vacuum pump from the measurement point.
- ❗ This product can only measure the vacuum value, please do not apply positive pressure to the product or there is a risk of damaging the sensor.
- ❗ This product adopts special oil-proof treatment, the response time is relatively slow, pay special attention to the measurement of vacuum degree below 10Pa need to wait until the data is stable to read the actual vacuum value or according to the instructions of oil-proof film replacement steps to remove the oil-proof film and then carry out vacuum measurement. (The vacuum meter is considered to be stable if the value remains unchanged within 2 minutes.)

**See appendix for details of oil-proof film*

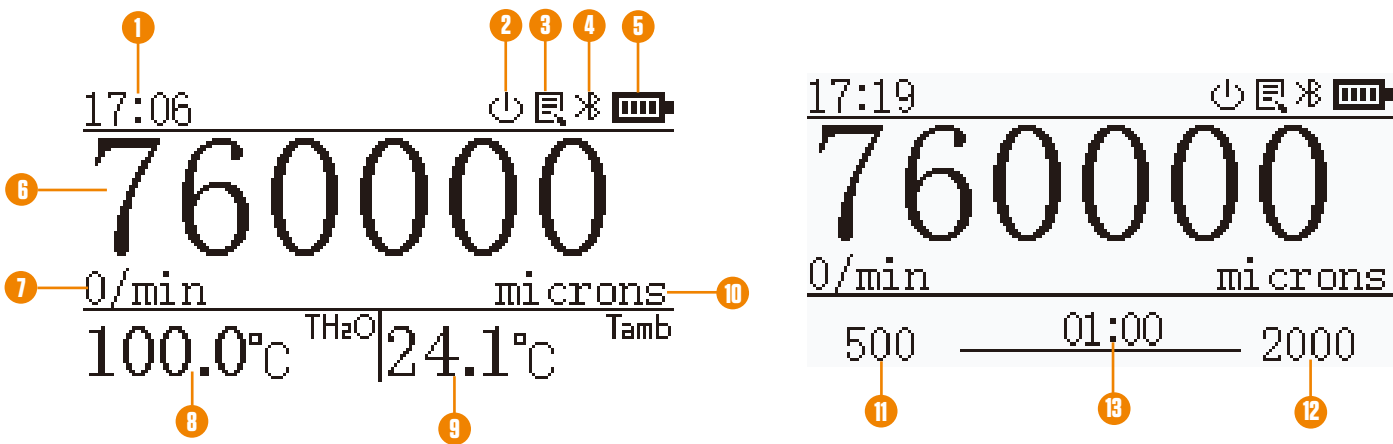
OVERVIEW

VGW-760Pro Full-Range Vacuum Gauge is a professional instrument for vacuum measurement, the interface adopts standard 1/4SAE which can be conveniently applied to vacuum measurement in HVAC&R field. It supports offline data recording, leakage test data analysis, and you can use APP to connect the gauge to view the data remotely and set alarm reminders.

SPECIFICATIONS

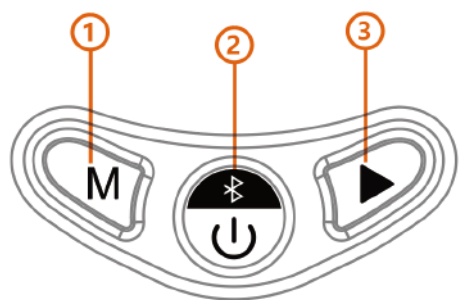
Measuring range	1-760000 microns	
Resolution	1-500microns	1 microns
	500-2000microns	5 microns
	2000-5000microns	50 microns
	5000-25000microns	250 microns
	25000-760000microns	500 microns
Accuracy	±10% of reading ±10microns (at 25 ℃)	
Power supply	3 AA batteries	
Time in use	120H	
Units	inHg,Torr,psia,mbar,mTorr,Pa,micron,kPa	
Operating temperature	0°F ~ 140°F (-17.8℃ ~ 60℃)	
Wireless transmission distance	100m	
Offline Records	10000 readings	
Fitting	1/4" SAE male flare	
Product size	127*74*37mm	
Max overpressure	27.5 bar	

DISPLAY



Number	Function
①	Display the current time
②	Icon - Auto power off function on
③	Icon - Offline record function is on
④	Icon - Bluetooth on
⑤	Icon - Current battery level
⑥	Display current vacuum value
⑦	Leak rate
⑧	Water saturation temperature at current vacuum value
⑨	Current ambient temperature
⑩	Current vacuum units
⑪	Leak test target value
⑫	Leak test decay value
⑬	Leak test time remaining

BUTTONS



Press and release	① Switch interface / switch setting items
	② Bluetooth switch
	③ Start/Stop Leak Test / Switch Options
Press and hold	① Enter/Exit Setup Menu
	② Power switch
	③ Start/Stop Recording

OPERATION

1. Long press the power button to turn on the product.
2. Long press the M button to enter the setting, by pressing the M button to select the item that needs to be modified, press the right button to select the setting content of the item.
3. Long press M key to exit or wait for the product to exit automatically.
4. Interface down to install the vacuum gauge, measure the vacuum can be.

FEATURES

Setting menu

Long press the M key product into the setting interface, at this time short press the mode key to switch the menu items, short press the right key to switch the setting options. The product menu items include: vacuum unit, temperature unit, recording interval, automatic shutdown time, backlight time, display language, about.

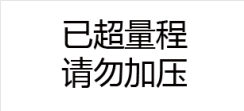
leak test

Short press the M key to enter the leakage test interface, the temperature display area shows the target value, decay value and test duration of the leakage test. When the current vacuum value is lower than the target value, you can choose to turn on or cancel the leakage test according to the prompts in the interface, and you can also manually turn on or stop the

leakage test by short pressing the right key. After the leakage test ends automatically, the product displays the test report, and press the right button to return to the test interface. If the right button is pressed during the leakage test, the test will be exited manually and the test report will no longer appear.

Note: The test report will only appear once in the product, after exiting the product, it needs to be exported through the app to view.

Description of the interface

Number	Interfaces	Explanation	Cure
1		The current time is not accurate, please connect your phone's Bluetooth to automatically synchronize and update the time.	Connected to the App, the product automatically synchronizes the time
2		Currently low battery	Replacement of AA batteries
3		Currently low battery, about to shut down automatically	Replacement of AA batteries
4		Overpressure alarm: Measurement of the current vacuum value is far beyond the atmospheric pressure, the product is in a positive pressure state.	Automatically cancel the alarm when atmospheric pressure is restored
5		Product OTA upgrade in progress	Automatically canceled at the end of the upgrade
6	Vacuum area shows "-----"	Sensor not detected	Aftermarket Repair Replacement Sensors

APP Function

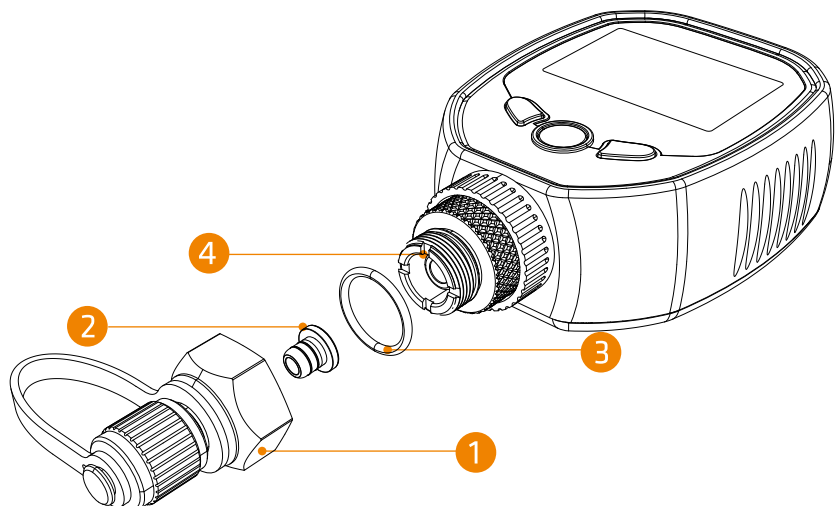
Short press the power button to turn on the Bluetooth, after turning on the Bluetooth icon blinking, cell phone scanning the QR code below to download and install the use of special APP, or through the application store search "Elitech Tools" to download and install.



Scan QR code to
download APP

Product Maintenance

- ① Sensor Nuts
- ② Oil-proof film
- ③ O-ring
- ④ Vacuum sensor



The vacuum chamber uses an oil-proof membrane to filter impurities and reduce sensor contamination. In order to maintain the best measurement accuracy, normal use should be checked every three months (according to the frequency of use to adjust the inspection cycle) anti-oil membrane situation, if the anti-oil membrane contamination is serious need to replace the anti-oil membrane.

Oil Resistant Film Replacement Instructions

If the product encounters oil pollution during normal use, it will lead to a decrease in the permeability of the anti-oil film, and it will be impossible to accurately detect the vacuum value, so it is necessary to check and replace the anti-oil film in time.

1. Turn off the product.
2. Use a wrench to unscrew the sensor nut, and use tweezers to remove the anti-oil film.
3. Check whether the O-ring is intact, if it is broken, please replace it in time, before replacement, please use vacuum oil to lubricate the O-ring.

Put the oil-proof film into the sensor nut and press it into the hole with a flat side, avoiding sharp objects to poke the oil-proof film

Sensor Cleaning Instructions

If the sensor encounters oil contamination, the following methods can be used for cleaning and processing:

1. the product is turned off.
2. Use a wrench to unscrew the sensor nut, use a syringe to extract 3mL of propanol or alcohol (>70%) into the chamber, gently shake the device for 10 seconds and then pour out the solution, repeat the cleaning 3-4 times.
3. by vacuuming or leave it for 3 hours until the sensor is dry.

List of annexes

VGW-760Pro *1

O-ring *2

Oil-proof film *3

Bend Adaptor *1

Tee Adaptor *1

Adaptor Rubber Plugs *6

Appendice

Increasing the oil-proof film reduces the probability of the sensor being contaminated by oil and reduces the risk of product failure.

However, the permeability of the oil-proof membrane is relatively poor, and the response will be slower in high vacuum, the specific gap is as follows:

The 1HP vacuum pump is connected to the vacuum gauge with oil-proof film and the vacuum gauge without oil-proof film at the same time, and the actual measurement is as follows.

The data are as follows:

Vacuum value	Without oil-proof film	With oil-proof film
2000Pa	1-2s	5-10s
500Pa	2-5s	8-20s
100Pa	8-12s	20-60s
50Pa	10-15s	1-2min
30Pa	12-20s	4-7min
10Pa	15-30s	40-60min

*The above data is for reference only, the time required for vacuuming under different test environments will fluctuate, which is normal.

Note: If you want to measure the high vacuum degree in a short time, we suggest you to remove the oil-proof film and then measure. If you need to vacuum the system for a long time, you do not need to remove the oil-proof film.