



VACUUM SENTRY  
DUAL PORT

VG640D

**SEALED UNIT PARTS CO., INC.**  
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## VG640D Vacuum Sentry Instructions

### FEATURES

- Unmatched Resolution (as low as 0.5 micron)
- ½ Second Response Time (update rate)
- Backlit LCD
- Local Audible and Visual Alarm
- Radio Frequency (RF) Transmission Signal
- Auto Shut Off
- Built-in Hanger
- User Addressable Remote Alarm (R100) available
- Two Year Warranty

### OPERATING CONTROLS

To turn the unit ON, press and release the Power Button.

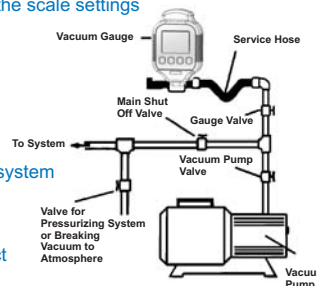
To turn the unit OFF, press and hold the Power button, until the unit turns OFF.

Pressing and releasing the Power button turns on the backlight.

Changing the scale: Press the UNITS button while in normal operation to change the display to the next scale. The scale order is: Micron, mTorr, Torr, Pascal, mBar. The VG640D will keep the scale settings even if the power is turned OFF

### CONNECTING THE VG640D TO THE VACUUM SYSTEM

The VG640D should be connected to the vacuum system at the vacuum port. The "Auxiliary Port" is primarily for cleaning. And should normally be closed with the supplied cap. It is possible to connect the VG640D in-line, however it may restrict flow and increase the evacuation time



### CLEANING THE VG640D VACUUM SENSOR

It is recommended that the VG640D sensor be cleaned periodically to maintain unit accuracy. Oil and other contaminants reduce the accuracy of the VG640D unit. Follow the instructions below for cleaning.

- Use an eyedropper to pour a few drops of ordinary rubbing alcohol into either port. Keep the other port closed.
- Close the port with the supplied cap.
- Shake the VG640D unit for approximately 10 seconds. A slight movement of the vacuum sensor in the case is normal and does not affect the internal connection in any way.
- Open the vacuum port. Empty the alcohol and air dry the sensor.

Close the vacuum port with the supplied cap when the VG640D is not used. This prevents contamination of the sensor.

90% of the vacuum gauge warranty returns that SUPCO receives are due to contaminated sensors. For vacuum gauges that are heavily contaminated, leave the alcohol in the gauge overnight to clean the sensor more effectively.

### CHECKING HVAC SYSTEMS FOR LEAKS

When checking a system for leaks use only copper tubing and a vacuum proof valve. Generally standard hoses will not hold a vacuum. If using the blank-off valve on the vacuum pump check it for leaks periodically. At the beginning of the test the VG640D reading may increase due to system equalization. The vacuum reading should hold after a minimum of 5 minutes. If the reading continues to increase it may indicate a leak in the system.

### SETTING THE ALARMS

Press the SET button. The unit will display "Set Alarm Low" and show the current value of the low alarm. Use the up (UNITS) and down (MUTE) buttons to set the alarm from 0 to 19000 Microns. To turn the low alarms OFF, press the down button while the set low alarm is at 0 Microns, or press the up button while the set low alarm is at 19000 Microns.

Press the SET button when you are done setting the low alarm. The unit will now display "Set Alarm High" and show the current value of the high alarm. Use the up (UNITS) and down (MUTE) buttons to set the high alarm from the value of the low alarm to 19000 Microns. Note that the VG640D unit will not allow you to set the high alarm below the low alarm. To turn the high alarms OFF, press the down button while the set high alarm is at the low alarm value, or press the up button while the set high alarm is at 19000 Microns.

Press the SET button when you are done setting the high alarm. The unit will return to normal operation. To see the current value of the low and high alarms, press the SET button. The unit will show the current value of the low alarm. Press the SET button again to display the current value of the high alarm. Press the SET button again to return the unit to normal operation. When the VG640D unit is turned OFF, the value of the low alarm is retained, but the value of the high alarm is always set to OFF. This prevents the VG640D from going into alarm mode when the unit is powered up while vacuum is not applied.

**NOTE:** When high alarm is set to anything but OFF, the unit will alarm when vacuum is not showing.

#### **ALARM CONDITION**

During an alarm condition, the unit will beep and the display backlight will flash red. The unit will flash "Alarm Low" or "Alarm High" to indicate which alarm is active. To silence the alarm, press the MUTE button. The unit will still flash the red backlight and display the "Alarm Low" or "Alarm High" message.

#### **DISPLAY RESOLUTION**

The display resolution depends on the vacuum displayed and is as follows:

Vacuum Range (Microns)	Resolution (Microns)
0 to 140	0.5
140 to 400	1
400 to 800	2
800 to 2000	5
2000 to 6000	20
6000 to 9000	100
9000 to 16000	200
16000 to 19000	1000
Above 19000	----is displayed

Vacuum Range (Pascal)	Resolution (Pascal)
0 to 18	0.05
18 to 50	0.1
50 to 100	0.2
100 to 260	0.5
260 to 800	2
800 to 1200	10
1200 to 2100	20
2100 to 2600	100
Above 2600	----is displayed

#### **LOW POWER MODE AND AUTO SHUTOFF**

If no alarms are set and no buttons are pushed, the unit will automatically turn OFF to conserve power, as follows:

- No Vacuum is Showing: 10 Minutes
- Vacuum is Showing: 1 Hour

When alarms are set, the unit will turn OFF after 8 hours of operation.

In all modes after 10 minutes of operation, if no button is pressed, the unit will enter a low power mode. In this mode the unit updates the display every 7 seconds, instead of every 0.5 seconds. This extends the battery life about 3 times. To exit the low power mode at any time, press any button on the unit.

#### **VG640D WARRANTY LIMITED TO TWO YEARS FROM DATE OF PURCHASE**

Sealed Unit Parts Co., Inc. warrants its products to be free from defects in materials and workmanship under normal use and service. Sealed Unit Parts Co., Inc. will repair or replace without charge any such products it finds to be so defective on its return to Sealed Unit Parts Co., Inc. The foregoing is in lieu of all other expressed or implied warranties, including those of merchantability or fitness for a particular purpose. The foregoing is also the purchaser's sole remedy and is in lieu of all other guarantees, obligations or liabilities or any consequential or incidental damages attributable to negligence or strict liability.

# VG640D

## Digital Vacuum Gauge

### Features / Benefits

- Unmatched Resolution (as low as 0.5 micron)
- ½ Second Response Time (update rate)
- Backlit LCD
- Local Audible and Visual Alarm
- Radio Frequency (RF) Transmission Signal
- Auto Shut Off
- Built-in Hanger
- User Addressable Remote Alarm (R100) available
- Two Year Warranty

### VG640D Specifications

<b>Sensor Type</b>	Thermistor	
<b>Connector Type</b>	Standard ¼ inch male flare fitting.	
<b>Vacuum Range</b>	0 – 19,000 Micron (0 – 2,600 Pascal).	
<b>Resolution</b>	<b>Measurement Range</b>	<b>Resolution</b>
	0-140	0.5 Micron
	140-400	1 Micron
	400-800	2 Micron
	800-2000	5 Micron
	2000-6000	20 Micron
	6000-9000	100 Micron
	9000-16000	200 Micron
	16000-19000	1000 Micron
<b>Units</b>	Micron, milliBar, Pascal, Torr, milliTorr	
<b>Accuracy</b>	+/-10% or +/-10 Micron, whichever is larger (50 to 2000 Microns) at 75°F	
<b>Update Rate</b>	0.5 sec.	
<b>Alarms</b>	Audible and visual alarm for high and low vacuum	
<b>Remote Alarm R100 (Optional)</b>	Up to 400ft remote audible, visual and vibrating alarm for high and low vacuum	
<b>Alarm Volume</b>	87 dB for both unit and remote	
<b>Operating Temperature Range</b>	0°F to 150°F ( -17°C to 65°C)	
<b>Overpressure</b>	800 PSI max (55 Bar)	
<b>Power Source</b>	3 AA Batteries	
<b>Battery Life</b>	600 Hours continuous usage, with battery indicator.	
<b>Auto Shutoff</b>	8 hours when alarms are active. When alarms are disabled: 10 minutes when vacuum reading is above 19,000 Microns 1 hour when vacuum reading is below 19,000 Microns	
<b>Weight</b>	6 oz	
<b>Dimensions</b>	5.5" H X 2.75" W X 1.5" D	



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