

UNIWELED SMARTeCH™ Digital Vacuum Gauge



Part# UVG

Specifications

Range: 0 – 25,000 Microns, 3330 Pa, 33.3 mBar, 25 mmHg
Accuracy: 5% of Reading +/- 5 Microns
Resolution: 1 Micron (< 1000 Microns)
 .1 Pa, .001 mBar, .001 mmHg
Warm-up: Instant
Response: Instant
Power: 2 'AAA' Alkaline Batteries or Lithium Recommended for Low Temperature Operation.

Battery Life: Up to 100 Hours

Operating

Temperature: -10 °F to 122 °F
 (-12 °C to 50 °C)

Fitting: ¼" M.F. Anodized Aluminum

Weight: 2.7 oz. (77g) with Batteries
 Dimensions: 4.3" x 1.3" x 1"
 (11cm x 3.3cm x 2.5cm)

Safe Over-

Pressure: Up to 500 PSI

Battery Installation

1. Remove protective rubber boot and battery cover from the back of the instrument.
2. Install 2 'AAA' Alkaline batteries observing polarity.
3. Replace battery cover and protective rubber boot.

Battery Level Indicator

Four bars in the battery level indicator indicate full battery strength. As battery power is depleted, the number of bars displayed decreases, until no bars are left. The Uniweld Vacuum Gauge will turn itself off when the batteries are fully consumed.

Backlight

Press and release to toggle the backlight on and off. To conserve battery power, the backlight will automatically turn itself off after one minute.

Introduction

Thank you for your purchase of the Uniweld Vacuum Gauge. The Uniweld Vacuum Gauge provides unsurpassed vacuum accuracy and quickly measures vacuum in Microns, Pascals, Millibar, and mmHg with a resolution down to 1 micron. Two 'AAA' batteries supply up to 100 hours of use in a package small enough to fit in a shirt pocket.

Features

- Hi-Visibility Back-Lit Display
- Microns, Pascals, Millibar, and mmHg
- 0 – 25,000 Micron Range with 1 Micron Resolution
- Automatic Oil Sensor
- Wide Operating Temperature Range
- Long Battery Life
- Calibration Self-Test
- Calibratable – No Reference Needed
- Ideal for HVAC, Industrial and Scientific

Hi-Pressure Indication

If the vacuum pressure exceeds 25,000 Microns (3330 Pa, 33.3 mBar, 25 mmHg), the display will show:



Sleep Mode

After one minute in HI-P, the Uniweld Vacuum Gauge will reduce power to conserve battery life. This is indicated on the display:



Full power operation will resume when a button is pressed, or if the vacuum pressure is reduced below 25,000 microns.

Quick Start

1. Remove protective rubber boot and install 2 'AAA' batteries.
2. Press and hold for 1 second.
3. Press and hold to change the vacuum measurement units.
4. Using the supplied coupler, connect the Uniweld Vacuum Gauge to the EZ Access "T" Fitting Hose, core removal tool, or hose attached to the system.
5. Start the vacuum pump. Display will show vacuum level in selected units.
6. Press and hold for 1 second to turn the power off.

WARNING: To avoid damage, only hand tighten sensor connection. If greater torque is required, support the sensor housing with a ¾" wrench.



Auto Power-Off

After 1 hour in Sleep Mode the Uniweld Vacuum Gauge will automatically power off to further conserve battery life.

Range and Resolution

The Uniweld Vacuum Gauge has a broad vacuum measurement range and very high resolution:

Units	Range	Resolution
Pa	0 – 3,330	10 (@ >1,000)
		1 (@ > 100)
		0.1 (@ < 100)
mBar	0 – 33.3	0.1 (@ > 10)
		0.01 (@ > 100)
		0.001 (@ < 100)
mmHg	0 – 25	0.1 (@ > 10)
		0.01 (@ > 1)
		0.001 (@ < 1)
Microns	0 – 25,000	100 (@ > 10,000)
		10 (@ > 1,000)
		1 (@ < 1,000)

Display



CAL Indicates Calibration Self-Test and Field Calibration Mode

Pa Pascal Units Selected

mBar Millibar Units Selected

Microns Micron Units Selected

mmHg mmHg Units Selected



Battery Level Indicator



Oil Sensor & Cleaning

If oil or other contamination is inadvertently drawn into the sensor, the display will show:




To clean the sensor:

1. Turn the Uniweld Vacuum Gauge power on.
2. Shake out any excess oil.
3. Using an eye dropper or syringe, fill the sensor port hole with isopropyl alcohol. **Do not** insert any object into the port.
4. Shake out the alcohol.
5. Repeat steps (3) and (4) three times.
6. Thoroughly dry the sensor by pulling a vacuum for about 1 minute, or allow at least 1 hour to air dry.
7. If OIL still shows on the display, perform a freezer calibration

Calibration Self-Test

To ensure highest accuracy, periodically perform a calibration self-test:

1. Power off the Uniweld Vacuum Gauge
 2. Expose the Uniweld Vacuum Gauge to atmospheric pressure.
 3. Press and continue to hold  .
- After 5 seconds, the display will show:





if the unit is in calibration, or:



if calibration is required.

Calibration

To calibrate the Uniweld Vacuum Gauge:

1. Ensure the sensor is clean and dry.
2. Install fresh batteries, place dust cap over vacuum port, and turn the power off.
3. Insert the unit into a small Ziploc (resealable zipper bag) and seal.
4. Place the bagged unit into a freezer with a temperature of less than 23 °F (-5 °C).
5. After about 45 minutes, remove the unit from the freezer (do not remove unit from bag).
6. While holding , press and continue to hold  . After 5 seconds, the display will show 'H' and the sensor temperature:



7. Place the unit in an undisturbed location with a room temperature of at least 73 °F (23 °C)
8. Allow the unit to warm slowly to 68 °F (20 °C)
9. When complete, the display will show:



Note: The sensor temperature in step (6) must be less than 28 °F (-2 °C) for calibration to start. If ERROR appears on the display, perform the calibration procedure again, or contact Uniweld Products, Inc. for technical support.

Low Temperature Operation

The Uniweld Vacuum Gauge can operate accurately at temperatures below freezing, though battery life may not be optimum. Use Lithium 'AAA' batteries for best battery life at low temperatures.

Maintenance

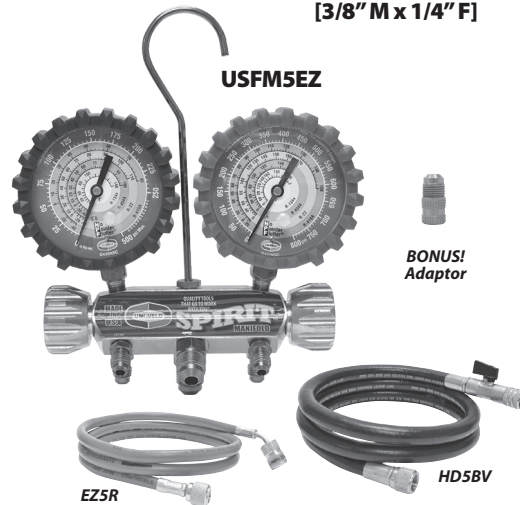
The Uniweld Vacuum Gauge should provide many years of service with no maintenance required. When not in use, the dust cap should remain in place over the sensor port. Clean the plastic enclosure with a damp (not wet) rag. Mild detergent is acceptable, but use no solvents.

For 3 Times Faster Vacuum than with standard 1/4" hoses.

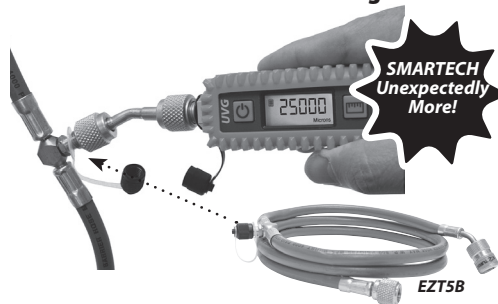
Ask your Local Uniweld Distributor for the **NEW Fast-Flow Hose Set! EZ Turn® Red Hose, EZ Turn Access "T" Fitting™ Blue Hose and 3/8" Charging & Vacuum Black Hose with unrestricted full flow ball valve.**

Upgrade any Manifold with **Fast-Flow Hose Set, Includes (2) Adaptors [3/8" M x 1/4" F] Tank & Manifold**

Spirit Manifold and Smartech™ Digital Manifold come standard with Fast-Flow Hose Set, includes (1) Tank Adaptor [3/8" M x 1/4" F]



EZ Access "T" Fitting™ Hose a convenient access port to attach the UVG Vacuum Gauge



ONE YEAR LIMITED WARRANTY

Uniweld Products, Inc., warrants the **UVG** Vacuum Gauge conforms to Uniweld Products, Inc., published specifications and will be free from defects in material and workmanship. The duration is for a period of one year from the date of purchase. Uniweld Products, Inc., at its option, will repair or replace this product or any component of the product found to be defective during the warranty period.

Replacement will be made with a new or remanufactured product or component. This is your exclusive warranty. This warranty is valid for the original retail purchaser from the date of initial retail purchase and is not transferable. Keep the original sales receipt. Proof of purchase is required to obtain warranty performance. Uniweld Authorized Distributors do not have the right to alter, modify, or in any way change the terms and conditions of this warranty.

This warranty does not cover batteries or any other normal wear of parts or damage resulting from any of the following: negligent use or misuse of the product, damage caused by use of the product for purposes other than those for which was designed, use contrary to the operating instructions, disassembly, repair or alteration by anyone other than Uniweld Products, Inc., or an authorized service center. Further, the warranty does not cover: Acts of God, such as such as fire, flood, lightning hurricanes and tornadoes.

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To obtain warranty or repair service, please call 1.800.323.2111 or 954.584.2000 to obtain a RMA number. For warranty service, a legible copy of the original receipt must be sent along with the RMA Form. Any package received without this RMA number will be refused. The returned product must be properly packaged and insured against shipping damage. Any shipping damage resulting from improper packaging shall be the responsibility of the Purchaser. The repaired or replaced product will be returned to Purchaser, freight prepaid. Repaired or replaced units carry an additional 90 days warranty.