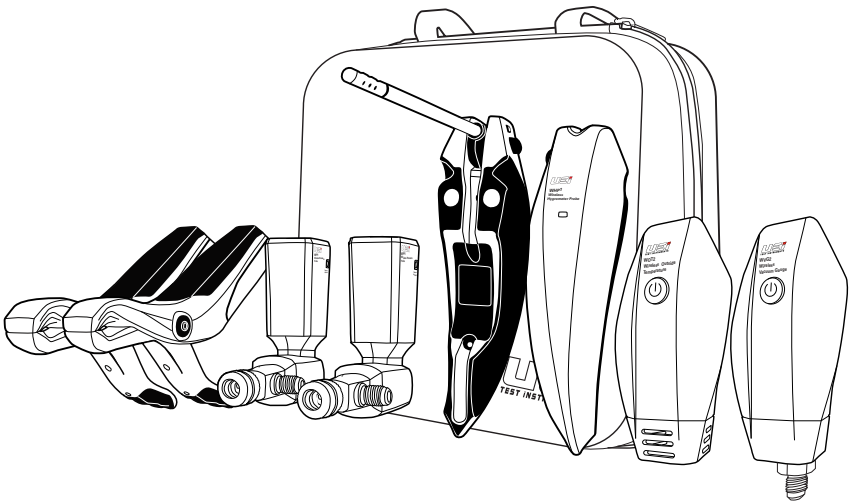
TEST iNSTRUMENTS™

HUB8

Smart Refrigerant Complete Kit

INSTRUCTION MANUAL

ENGLISH



2 Wireless Hygrometer Probe (WHP1)
2 Wireless Pressure Probe (WPP1)
2 Wireless Pipe Clamp Sensor (WPC2)
1 Wireless Outside Temperature Probe (WOT2)
1 Wirelees Vacuum Gauge (WVG2)
14 Batteries (10 AA, 4 AAA)
1 45˚ Coupler
1 Carrying Case

1-800-547-5740
www.ueitest.com • email: info@ueitest.com

TABLE OF CONTENTS

IMPORTANT SAFETY WARNINGS

⚠ **WARNING**

Read entire Safety Notes section regarding potential hazard and proper instructions before using these probes. In this manual the word "**WARNING**" is used to indicate conditions or actions that may pose physical hazards to the user. The word "**CAUTION**" is used to indicate conditions or actions that may damage the instruments.

⚠ **WARNING**

To ensure safe operation and service of these probes, follow these instructions. Failure to observe these warnings can result in severe injury or death.

⚠ **WARNING**

Not exceed the following maximum pressure limits.

WVG2 Vacuum Gauge maximum over pressure 700 psi.

WPP1 Pressure Gauge maximum over pressure 1000 psi.

⚠ **WARNING**

- Do not open these probes to replace batteries while the probes are connected.
- To avoid false readings, replace batteries if a low battery indicator appears.
- Do not use these probes if they appear damaged.
- Always adhere to national and local safety codes. Use proper personal protective equipment (PPE).

⚠ **WARNING**

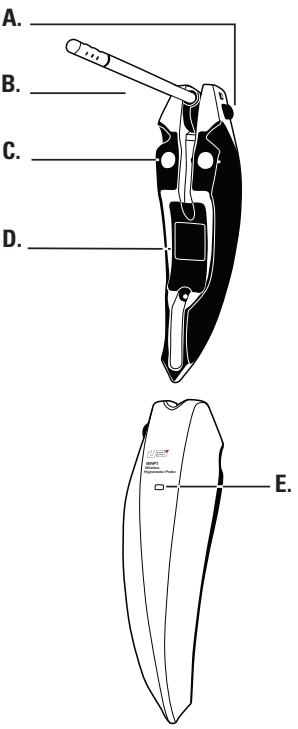
These probes are designed for trade professionals who are familiar with the hazards of their trade.

Observe all recommended safety procedures that include proper lockout utilization and use of personal protective equipment that includes safety glasses, gloves and flame resistant clothing.

SYMBOLS

	Phone		Web
	Manual		Pin
	Favorites		Connection Strength
	WHP1		WPP1
	WPC2		WOT2
	WVG2		Battery level
	Home		Units
	Tool Box		User
	Support		Refrigerant Tank

WHP1 (Hygrometer) Overview



GENERAL SPECIFICATIONS

- **Temperature Range:** 14° to 158°F (-10° to 70°C)
- **Temperature Accuracy:** ±0.5˚F (0.3˚C)
- **Relative Humidity Range:** 14° to 140°F (-10° to 60°C)
- **Relative Humidity Resolution:** 30% to 85% RH
- **Relative Humidity Accuracy:** ±3% 20% to 80% otherwise ±5%
- **Operating Temperature:** 14° to 158°F (-10° to 70°C)
- **Storage Temperature:** 13° to 185°F (-25° to 85°C)
- **Operating Humidity:** 20% RH to 80% RH
- **Dimensions:** 6.84 in x 1.93 in x 1.53 in (17.4 cm x 4.9 cm x 3.9 cm)
- **Item Weight:** 4.4 oz (125 g)
- **Certification:** CE Conformity, FCC/IC
- **Battery Type:** (AAA) 2
- **Battery Life:** 100+ hours

A. Lock Button: Press to open or close probe
Pressing the lock button and opening the probe powers it on

B. 1/4" diameter probe

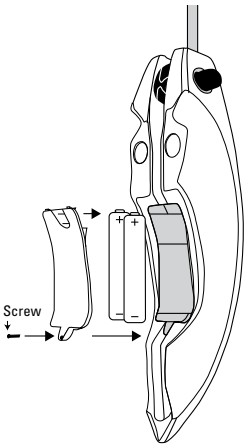
C. Magnetic Mount

D. Battery Cover

E. Light: Blinks **GREEN** when probe is powered on. Blinks **RED** when low battery*

⚠ **CAUTION:** Press down Lock Button to release probe. Failure to do so may break probe and is not covered under warranty.

*** NOTE:** Low battery indicator is also in the "Tool Connection" screen of the app.



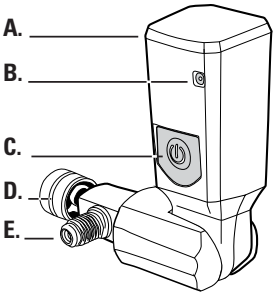
⚠ **Caution**: Take care not to lose the screws when opening battery compartments

- Remove battery cover.
- Replace the old batteries with 2 new (AAA) batteries.
- Replace the battery cover.

WPP1 (Pressure Probe) Overview

GENERAL SPECIFICATIONS

- **Range:** 0 to 725 PSIg
- **Resolution:** 0.1 PSI
- **Accuracy:** 0.5% F.S. (at 25˚C ±3˚C) Total 1% F.S. 32˚ to 158˚F (0˚ to 70˚C)
- **Operating Temperature:** 14° to 158°F (-10° to 70°C)
- **Storage Temperature:** 13° to 185°F (-25° to 85°C)
- **Operating Humidity:** 30% RH to 85% RH
- **Over-range:** 1000 PSI
- **Dimensions:** 6.70 in x 1.56 in x 1.44 in (17 cm x 4 cm x 3.7 cm)
- **Item Weight:** 7.4 oz (210 g)
- **Certification:** CE Conformity, FCC/IC
- **Battery Type:** (AA) 2
- **Battery Life:** 100+ hours

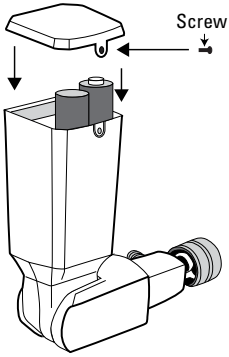


A. Battery cover
B. Light: Blinks **GREEN** when probe is powered on and blinks **RED** when low battery.*
C. Power Button: Hold for one second to power on
D. 1/4”pressure connector
E. 1/4” pass-through connector

⚠ **Caution**: Max over pressure is 1000 PSI

*** NOTE:** Low battery indicator is also in the “Tool Connection” screen of the app.

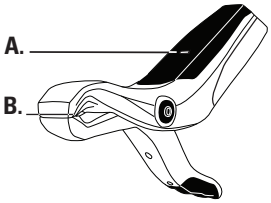
Battery level displayed in the tool connection screen to the right of each probe connected.



⚠ **Caution**: Take care not to lose the screws when opening battery compartments

- Remove battery cover.
- Replace the old batteries with 2 new (AA) batteries.
- Replace the battery cover.

WPC2 (Pipe Clamp Sensor) Overview

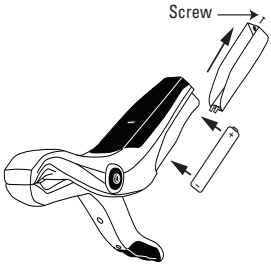


GENERAL SPECIFICATIONS

- **Range:** 32˚ to 176˚F (0˚ to 80˚C)
- **Resolution:** 0.1˚F
- **Accuracy:** ±(0.6˚F (0.3˚C))
- **Response Time:** <30 sec.
- **Operating Temperature:** 14° to 158°F (-10° to 70°C)
- **Storage Temperature:** 13° to 185°F (-25° to 85°C)
- **Dimensions:** 5.66 in x 3.81 in x 1.10 in (14.4 cm x 9.7 cm x 2.8 cm)
- **Item Weight:** 2.1 oz (60 g)
- **Jaw Opening:** Maximum pipe diameter is 1.5 in. (3.8cm)
- **Certification:** CE Conformity, FCC/IC
- **Battery Type:** (AA) 1
- **Battery Life:** 100+ hours

A. Light: Blinks **GREEN** when probe is powered on and blinks **RED** when low battery. *
Opening the clamp powers it on

B. Temperature sensor

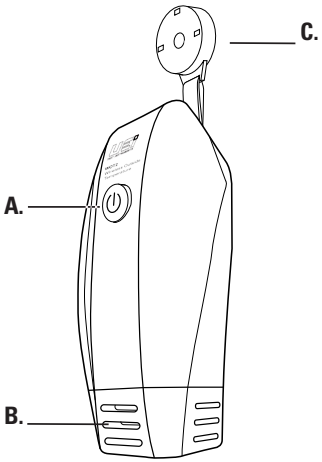


*** NOTE:** Low battery indicator is also in the "Tool Connection" screen of the app.

- Remove battery cover.
- Replace the old batteries with 1 new (AA) battery.
- Replace the battery cover.

⚠ **Caution**: Take care not to lose the screws when opening battery compartments

WOT2 (Outside Teperature Sensor) Overview



GENERAL SPECIFICATIONS

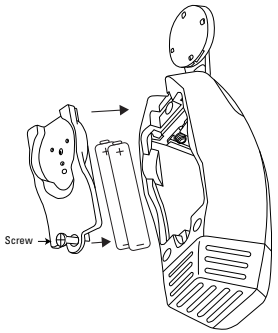
- **Range:** 32° to 180°F (0° to 82°C)
- **Resolution:** 0.1”
- **Accuracy:** ± 2°F (1°C)
- **Operating Temperature:** 14° to 158°F (-10° to 70°C)
- **Storage Temperature:** 13° to 185°F (-25° to 85°C)
- **Operating Humidity:** 30% to 85% RH
- **Dimensions:** 4.75 in x 2.37 in x 1.5 in
- **Item Weight:** 5.4 oz (153 g)
- **Certification:** FCC/IC, CE Comformity
- **Battery Type:** (AA) 2
- **Battery Life:** 100+ hours

A. Light: Blinks **GREEN** when probe is powered on and blinks **RED** when low battery.*

B. Temperature Sensor

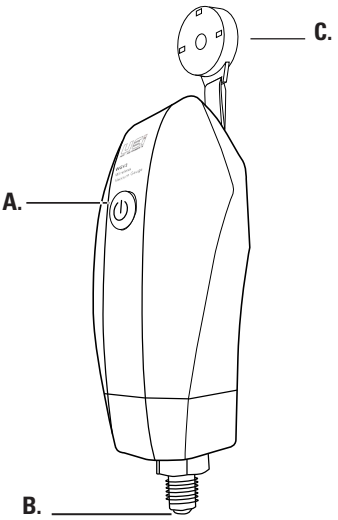
C. Magnetic Hanger Strap

*** NOTE:** Low battery indicator is also in the “Tool Connection” screen of the app.



- Remove battery cover.
- Replace the old batteries with 2 new (AA) battery.
- Replace the battery cover.

WVG2 (Vacuum Gauge) Overview



GENERAL SPECIFICATIONS

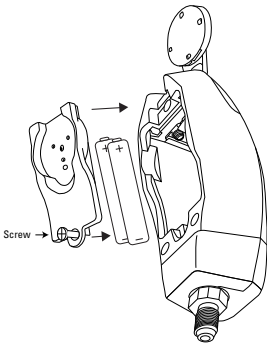
- **Range:** 0 - 20,000 Microns
- **Resolution:** 1 micron
- **Accuracy:** ±5% rdg ±5 microns
- **Operating Temperature:** 14° to 158°F (-10° to 70°C)
- **Storage Temperature:** 13° to 185°F (-25° to 85°C)
- **Operating Humidity:** 30% to 85% RH
- **Dimensions:** 5.6 in x 2.37 in x 1.5 in
- **Item Weight:** 4.2 oz (119 g)
- **Certification:** FCC/IC, CE Comformity
- **Battery Type:** (AA) 2
- **Battery Life:** 100+ hours

A. Light: Blinks **GREEN** when probe is powered on and blinks **RED** when low battery. *

B. Vacuum Gauge Sensor

C. Magnetic Hanger Strap

⚠ Maximum over pressure is **700 PSI**



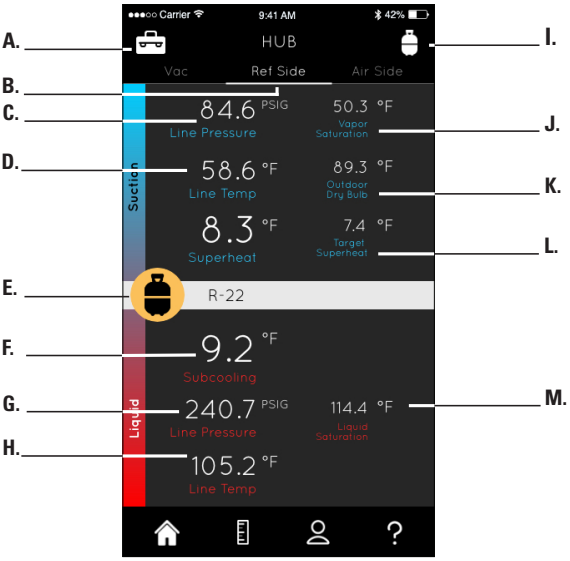
*** NOTE:** Low battery indicator is also in the "Tool Connection" screen of the app.

- Remove battery cover.
- Replace the old batteries with 2 new (AA) battery.
- Replace the battery cover.

***NOTE:** For sensor cleaning maintenance see page 19.

APP Overview

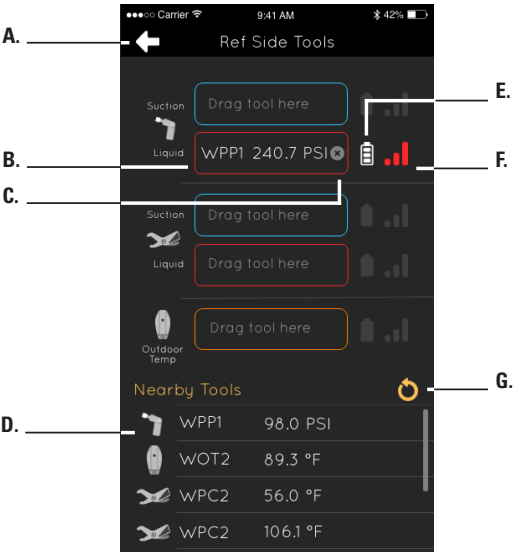
Refrigerant Home Screen:



- **A.** Tool Connection
- **B.** Active Home Screen (tap or swipe left/right to view)
- **C.** Suction Line Pressure
- **D.** Suction Line Temperature
- **E.** Refrigerant Favorites (tap to view, See pg 11)
- **F.** Subcooling
- **G.** Liquid Line Pressure
- **H.** Liquid Line Temperature
- **I.** Refrigerant List (tap to view, See pg 11)
- **J.** Vapor Saturation Temperature
- **K.** Outside Dry Blub
- **L.** Vacuum Pressure
- **M.** Liquid Saturation Temperature

NOTE: UEi HUB App compatible with Android™ 5.0+, iOS® 10+, iPadOS™

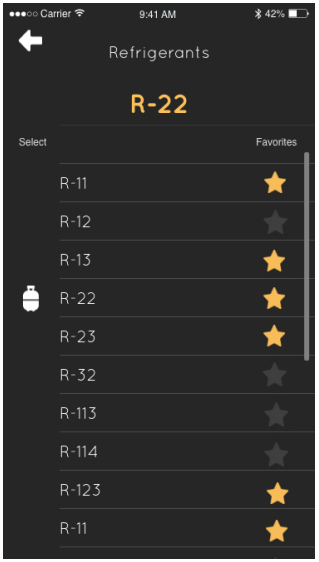
Tool Connection Icon: clicking this will open to the Tools in this section



- **A.** Back
- **B.** Tool Assigned
- **C.** Forget Tool
- **D.** Tools found but not assigned
- **E.** Battery Level
- **F.** Signal Strength
- **G.** Refresh nearby tools

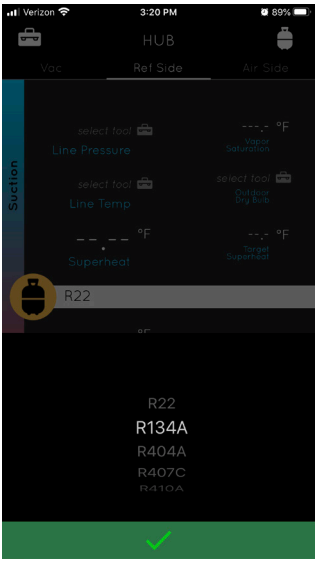
Refrigerant Home Screen:

Refrigerant List: Tap icon on Refrigerant Home Screen to activate.
Tap stars to add/remove favorites.

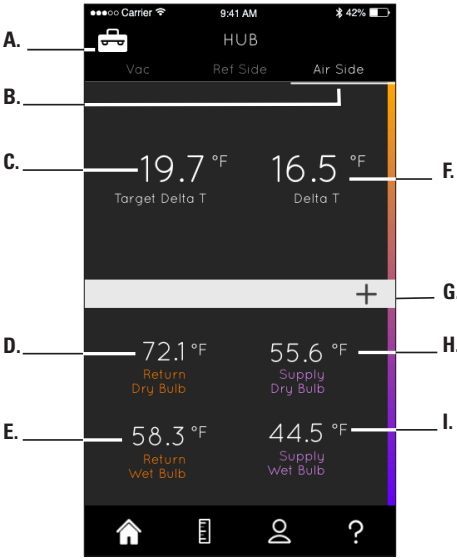


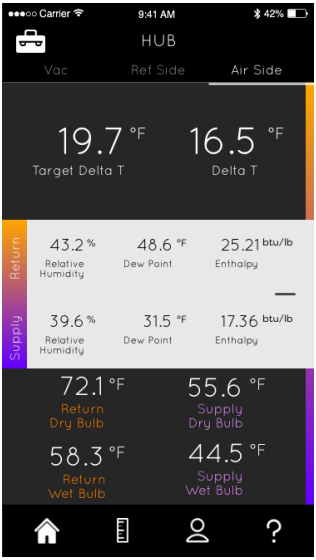
R11	R245FA	R409B	R422B	R436B	R507A
R113	R290	R410A	(NU22B)	R438A	R508A
R114	R32	R410B	R422C	(MU99)	R508B
R115	R401A	R411A	(One	R444A	(Suva95)
R116	R401B	R411B	shot)	R444B	R509A
R12	R401C	R412A	R422D	R448A	R510A
R123	R402A	R413A	R423A	R449A	R512A
R133ZD	R402B	R414A	R424A	R450A	R513A
R1234YF	R403A	R414B	R425A	R452A	R600
R1324ZE	R403B	(Hotshot)	R426A	R452B	(Butane)
R124	R404A	R416A	R427A	R453A	R600A
R125	R405A	R417A	R428A	R454A	(Isobu-
R13	R406A	R417C	R429A	R454B	tane)
R134A	R407A	(Hotshot	R430A	R454C	R601
R142B	R407B	2)	R431A	R455A	(Pen-
R143A	R407C	R418A	R432A	R458A	tane)
R152A	R407E	R419A	R433A	R500	R601A
R22	R407F	R420A	R434A	R501	(Isobu-
R227EA	R407H	R421A	(RS-45)	R502	tane)
R23	R408A	R421B	R435A	R503	
R236FA	R409A	R422A	R436A	R504	

Refrigerant Favorites Button: displays selected favorite refrigerants for quick changes.



Air Side Screen:

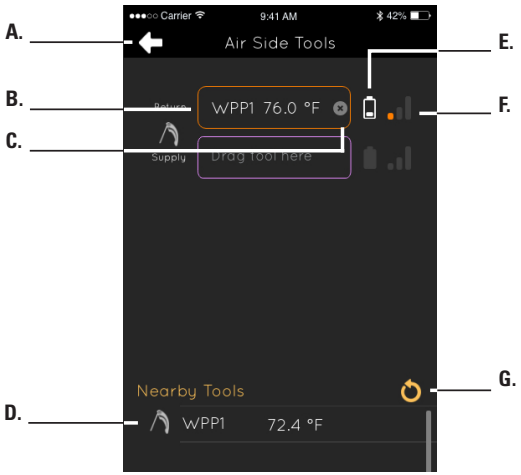




A. Tool Connection
B. Active Home Screen (tap or swipe right to view)
C. Target Delta Temperature
D. Return Dry Bulb Temperature
E. Return Wet Bulb Temperature
F. Delta Temperature (assumes 400 cfm/ton)

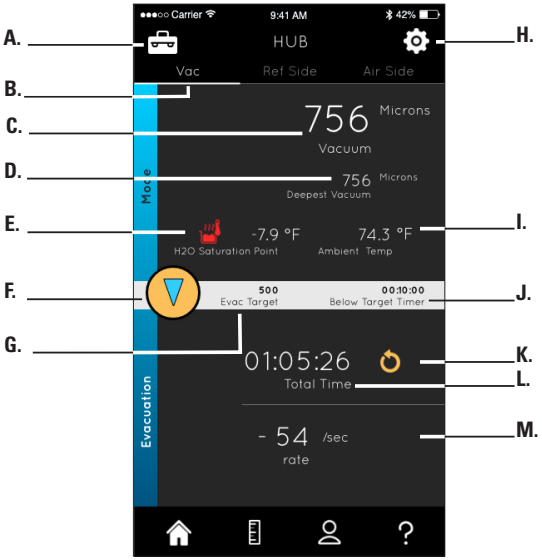
G. Return and Supply Calculations (tap to view)
Return -Relative Humidity
Return - Dew Point
Return - Enthalpy
Supply - Relative Humidity
Supply - Dew Point
Supply - Enthalpy
H. Supply Dry Bulb Temperature
I. Supply Wet Bulb Temperature

Tool Connection Icon: clicking this will open to the Tools in this section



A. Back
B. Tool Assigned
C. Forget Tool
D. Tools found but not assigned
E. Battery Level
F. Signal Strength
G. Refresh nearby tools

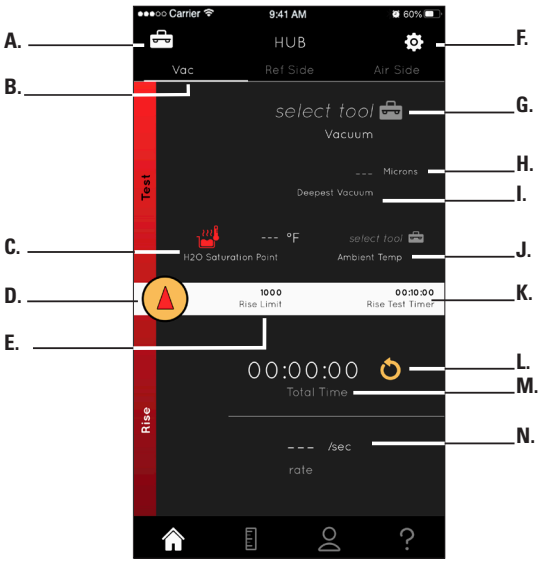
Vacuum Side Screen:



Evacuation Mode

A. Tool Connection
B. Active Home Screen (tap or swipe left to view)
C. Vacuum Reading
D. Deepest Vacuum
E. H2O Saturation;
The Red icon shows when the saturation point is below the Ambient Temperature indicating moisture will be removed from the system at this level of vacuum under the current temperature conditions.
F. Toggle Button
G. Evacuation Target
H. Vacuum Settings
(tap to enter, see pg. 14)
I. Ambient Temperature
J. Below Target Timer
K. Restart Timer
L. Timer
M. Evacuation Rate

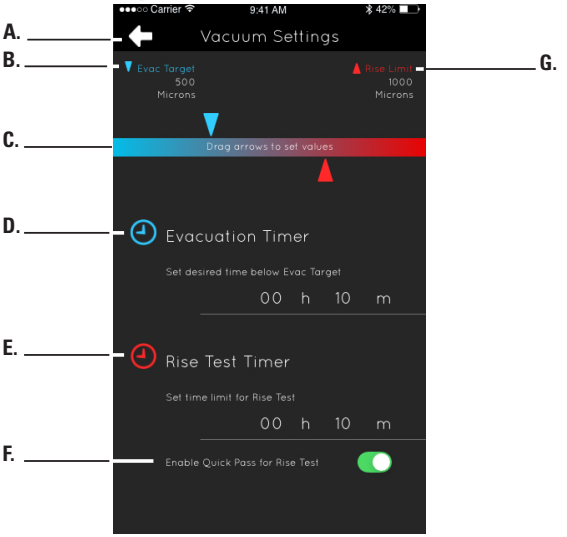
Toggle Button: tapping this will toggle between Evacuation mode and Rise Test mode.



Rise Test Mode

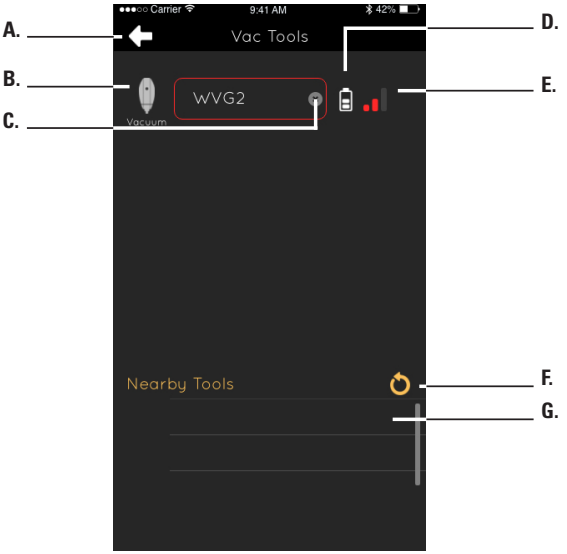
A. Tool Connection
B. Active Home Screen (tap or swipe left to view)
C. H2O Saturation Point
D. Toggle Button
E. Rise Limit
F. Vacuum Settings
(tap to enter, see pg. 14)
G. Vacuum Reading
H. Units
I. Deepest Vacuum; actieved during this app session
J. Ambient Temperature
K. Rise Test Timer
L. Restart Timer
M. Total Time
N. Rate

Vacuum Side Screen: tap settings icon to enter



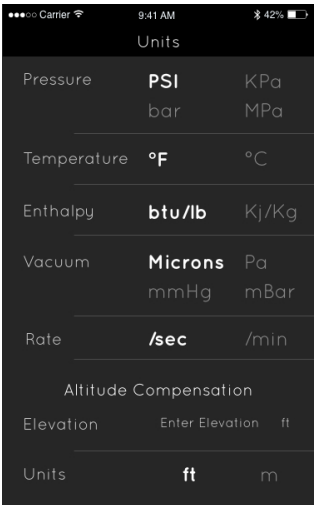
A. Back
B. Evac Target
C. Set Target Valves Bar
D. Evacuation Timer: (Hrs/Mins) set desired time below Evac Target
E. Rise Test Timer: (Hrs/Mins) set time limit Rise Test
F. Enable quick Pass for Rise Test
G. Rise Limit

Tool Connection Icon: clicking this will open to the Tools in this section



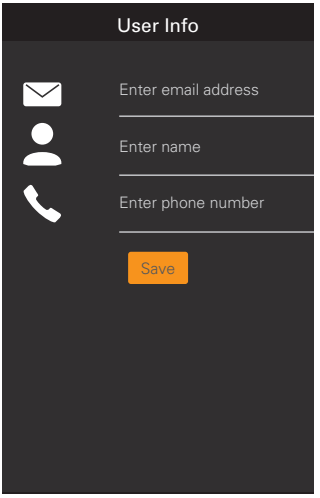
A. Back
B. Tool Assigned
C. Forget Tool
D. Battery Level
E. Signal Strength
F. Refresh nearby tools
G. Tools not connected

Units Screen:



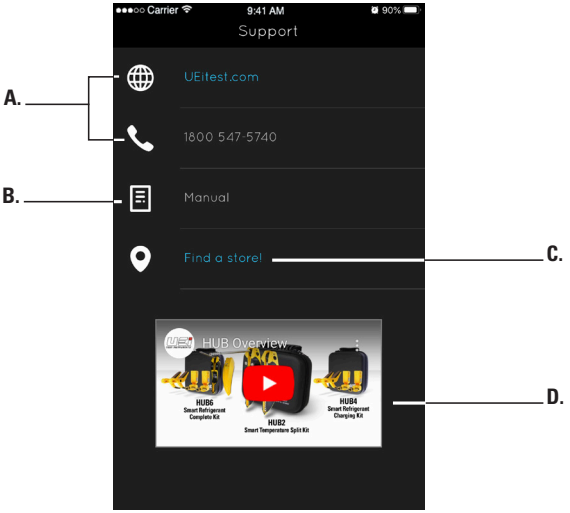
Tap the desired unit label to select preferred units for each measurement.

User Info Screen:



Enter user information

Support Screen



A. UEi Contacts
B. Manual (English, Spanish and French)
C. Find a distributor @UEitest.com
D. Tap to view Features + Benefits Video

FCC/IC INFORMATION

FCC and IC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC/IC RSS102 radiation exposure limits set forth for an uncontrolled environment.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autoris é e aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC AND IC NOTICE

This device complies with Part 15 of the FCC rules and Industry Canada license-exempt RSS 247. Operation is subject to the following two conditions: (1) This device may not cause harmful interference; and (2) this device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la partie 15 des règles de la FCC, ainsi qu'à la norme RSS 247 exempte de licence d'Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes : (1) Cet appareil ne doit pas provoquer d'interférences nuisibles; et (2) cet appareil doit accepter toutes les interférences reçues, y compris celles susceptibles d'entraîner un dysfonctionnement de l'appareil.

FCC CAUTION

The device must not be co-located or operated in conjunction with any other antenna or transmitter.

Caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

L'appareil ne doit pas être placé ou utilisé conjointement avec une autre antenne ou un autre émetteur.

Attention à l'utilisateur que des changements ou des modifications non expressément approuvés par la partie responsable pour la conformité pourrait annuler l'autorité de l'utilisateur pour faire fonctionner l'équipement.

a.The device should be installed and operated with a minimum distance of 20cm between the radiator and your body.

L'appareil doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateu et votre corps.

b.This device complies with RSS247 of Industry Canada. Cet appareil se conforme à RSS247 de Canada d'Industrie. This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage prejudiciable, et (2) ce dispositif doit accepter tout brouillage recu, y compris un brouillage susceptible de provoquer un fonctionnement indesirable.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme a la norme NMB-003 du Canada.

Disposal

⚠ **Caution:** This symbol indicates that equipment and its accessories shall be subject to separate collection and correct disposal.

Cleaning

Periodically clean your probes case using a damp cloth. **DO NOT** use abrasive, flammable liquids, cleaning solvents, or strong detergents as they may damage the finish, impair safety, or affect the reliability of the structural components.

Cleaning the WVG2 Vacuum Sensor

If the vacuum sensor becomes contaminated with oil, follow this procedure:

1. Power off the WVG2
2. Carefully shake the gauge to remove any large quantities of oil from the sensor
3. Apply a few drops of rubbing alcohol inside the vacuum port **(DO NOT INSERT ANY OBJECT INTO PORT, AS THIS WILL PERMATENTLTLY DAMAGE THE SENSOR)**
4. Place your finger over the port and shake for 30 seconds
5. Remove your finger and allow alcohol to flow out the sensor part
6. Repeat steps 3 to 5 at least three times
7. Allow the sensor to air dry over at least an hour, or pull a vacuum on the sensor to to. Dry it more quickly
8. Power on the WVG2, which should be ready for use.

NOTE: It is important to remove all the vapors from the sensor, either through air-drying or via vacuum. Any remaining vapors will cause an incorrect reading

Storage

Remove the batteries when instrument is not in use for a prolonged period of time. Do not expose to high temperatures or humidity. After a period of storage in extreme conditions exceeding the limits mentioned in the General Specifications section, allow the instrument to return to normal operating conditions before using it.

Warranty

The HUB8 is warranted to be free from defects in materials and workmanship for a period of 1 year from the date of purchase. If within the warranty period your instrument should become inoperative from such defects, the unit will be repaired or replaced at UEi's option. This warranty covers normal use and does not cover damage which occurs in shipment or failure which results from alteration, tampering, accident, misuse, abuse, neglect or improper maintenance. Batteries and consequential damage resulting from failed batteries are not covered by warranty.

Any implied warranties, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the express warranty. UEi shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expenses or economic loss.

A purchase receipt or other proof of original purchase date will be required before warranty repairs will be rendered. Instruments out of warranty will be repaired (when repairable) for a service charge

For more information on warranty and service, contact:

www.ueitest.com Email: info@ueitest.com
1-800-547-5740

This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.