

# testo 557 Digital Manifold Quick Start Guide



Pic. 14

## Leak Test

The temperature compensated leak test is used to confirm the pressure integrity of the AC/R or heat pump system.

1. Plug in the temperature probe into the high side of the instrument.
2. With the instrument OFF simultaneously press the Set and Mode buttons, then press the On/Off [ ] button to turn on the 557. FAct OFF will momentarily be displayed. This will turn off the surface compensation to provide an accurate ambient air temperature. Temperature surface compensation is turned back on the next time that the 557 is turned on.
3. Zero the pressure sensors.
4. Connect testo 557 to the system.
5. Press the [Mode] button once to get to the leak test mode (Pic. 14).
6. Now press the [R, Start/Stop] button to start the test.
7. Press arrow keys [▲, ▼] to see the measured temperature (Pic. 15).
8. The test duration depends on the system size.
9. Press [R, Start/Stop] again to stop the test.
10. The results will be displayed.
11. Press the [Mode] button twice to return to the normal measurement mode.

**NOTE:**  $\Delta P$  could be different from starting and final test pressure  $\Delta P$  as the true  $\Delta p$  is calculated from the gas laws.



Pic. 15



Pic. 16

## Vacuum / Evacuation

1. Press the [Mode] button twice to get to the vacuum / evacuation mode (Pic. 16).
2. Start the evacuation.

In VAC mode the displayed refrigerant will change to R718 (water). The displayed temperature is the evaporation temperature for water. A 30 °F (or more) temperature differential between the ambient temperature and the evaporation temperature of water (R718) will assure that all moisture has been removed (boiled-off) in the system.

**NOTE:** The resolution of the 557's very resilient, maintenance-free vacuum sensor is 500 microns, therefore it is not uncharacteristic for the vacuum reading to change by that amount.

## Warranty

The testo 557 has a two year warranty





Pic. 1



Pic. 2

### Changing the batteries

Testo 557 uses 4x 1.5 V, AA batteries. To replace the batteries please follow these few steps below:

1. Fold out the hook (Pic. 1).
2. Grab the clip and squeeze it together and remove the cap (Pic. 2).
3. Insert/Change the batteries. Observe the polarity.

### Power ON / OFF

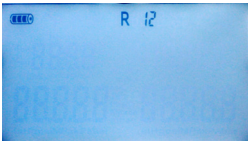
1. Connect probes to the testo 557 prior to powering it up.
2. Press the power button [⏻] to turn testo 557 on.
3. All display segments are lit (2 s.)
4. Measurement view is displayed
5. Press the power button to turn the testo 557 off.

### Set the refrigerant

1. Press the [R, Start/Stop] button so you can choose the required refrigerant (Pic. 3).
2. Use the arrow keys [▲▼] to scroll through the choices.
3. Press the [R, Start/Stop] button to set the chosen refrigerant.

### Set the Units / Mode

1. Press the [Set] button once to get to temperature units menu (Pic. 4).
2. Choose the required units with the arrow keys [▲▼].
3. Press the [Set] button for the second time to be able to choose the pressure units (Pic. 5).
4. Choose the desired units with the arrow keys.
5. Press the [Set] button for the third time so you select absolute or relative pressure (Pic. 6).
6. Press the [Set] button four times, so you can set the vacuum unit (Pic. 7).



Pic. 3



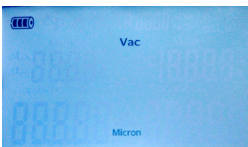
Pic. 4



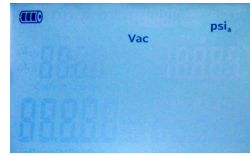
Pic. 5



Pic. 6



Pic. 7



Pic. 8



Pic. 9

### Backlight

Testo 557 has a backlight to improve viewing. Press the backlight [\*] button to turn the backlight on. Press it once again to turn the backlight off.



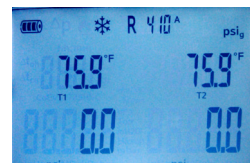
Pic. 10



Pic. 11



Pic. 12



Pic. 13

8. Press the [Set] button five times to select the absolute (psia) or relative (psig) pressure in the vacuum mode (pic 8)

9. Press the [Set] button six times to select the AC/R [\*], heat pump [🔥], or Auto [🔥\*] (pic 9). Auto mode senses if the low pressure side is 15 psi higher than the high pressure side, and will automatically reserve the display of the high / low side pressures.

### Pressure zeroing

Please zero the pressure sensors every time before you use the testo 557.

1. Loosen the hose connections
2. Open the valve knobs to confirm no pressure in the manifold
3. Press the [p=0] button

The sensors are now zeroed and ready for measurement.

### Superheat / Subcooling

The testo 557 calculates superheat and subcooling in real time.

1. Connect the temperature probes to testo 557.
2. Connect testo 557 and the probes to the air conditioning, refrigeration or heat pump system
3. Switch on testo 557.
4. You will now see the calculated evaporation and condensation and temperature (Ev and Co) and the system pressures at the bottom of the display (Pic. 11).
5. Press the UP-arrow [▲] once to see the temperature difference (Δ) (Pic. 9).
6. Press the UP-arrow [▲] twice to see the real time superheating and subcooling (SH and SC) (Pic. 12).
7. Press the UP-arrow [▲] for the third time to see the real time measured line temperature (T1 and T2) (Pic. 13).
8. Press the UP-arrow again to get to back to the calculated evaporation and condensation temperature. You can also use the DOWN-arrow to switch between the displays but the order will be reversed.