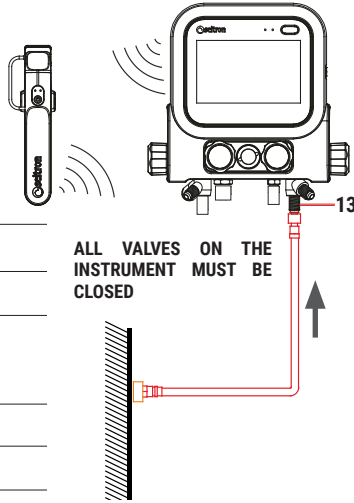


## TIGHTNESS TEST



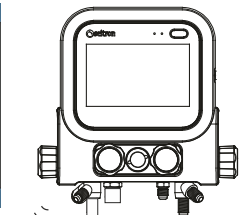
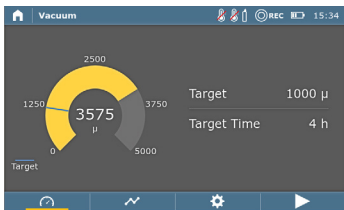
To perform a proper **tightness test**, it is necessary to enable the temperature compensation in the Settings menu, and then **connect the Be Cool Evo T1S temperature probe to the instrument**.

To ensure accurate measurement, it is essential that the probe remains suspended in the air and is not placed on any surface.



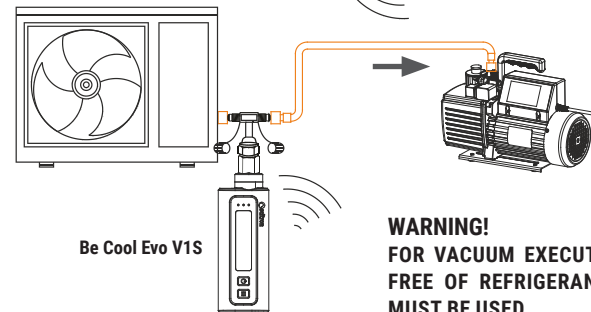
- Measurement Screen** – Gauge Display.
- Measurement graph.**
- Parameter settings:**
  - Acceptable leak** adjustable from 0% to 100%
  - Test duration** adjustable from 5 min to 48 h
  - Temperature Compensation** enable/disable
- Start the system tightness test.**
- Stop the system tightness test.**

## EVACUATION AND VACUUM DECAY TEST



- Measurement screen** - Gauge display.
- Measurement chart.**
- Parameter settings:**
  - Target value** adjustable from 50 mTorr to 1000 mTorr
  - Target time** adjustable from 1 minute to unlimited
  - Tightness Alarm\*** adj. from 100 mTorr to 2000 mTorr
  - Tightness Time\*** adjustable from 30 s to 24 h
- Start vacuum execution and/or vacuum holding.**
- Stop vacuum execution and/or vacuum holding.**

\* These two parameters are specific to the execution of the vacuum test.



**WARNING!**  
FOR VACUUM EXECUTION AND HOLDING, THE SYSTEM MUST BE FREE OF REFRIGERANT GAS AND A DEDICATED FLEXIBLE HOSE MUST BE USED.

- 1 Verify that the vacuum gauge is connected to the manifold.
- 2 From the main instrument page, access the Vacuum menu.
- 3 Press the key and set the parameters for vacuum execution and holding.
- 4 Turn on the vacuum pump and press the key to start the vacuum measurement.
- 5 When vacuum execution is completed, the display shows one of the following messages:  
**Target reached: Press Play to continue** or **Target not reached.**
- 6 If the target is reached, isolate the vacuum pump from the system.
- 7 Press the key to start the vacuum holding test.
- 8 When the vacuum holding test is completed, the display shows one of the following messages:  
**"Vacuum holding test successfully completed"** / **"Vacuum holding test failed"**.



### Quick guide

## Be Cool Evo Smart Kit



To download the complete manual, scan the QR code.

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(215) 660-9777



## TECHNICAL FEATURES

Connectivity	Bluetooth®	Bluetooth® comm. range	30 m (98 ft) (max)
Operating temperature	-10 °C - +50 °C (+14 °F - +122 °F)	Operating humidity	+20% - +80% RH non-condensing
Storage temperature	-20 °C - +60 °C (-4 °F - +140 °F)	Storage humidity	+10% - +90% RH non-condensing
<b>Be Cool Evo M4S – 4-Way Digital Manifold Gauge</b>			
Power supply	Rechargeable Li-Ion battery 3.7 Vdc 5200 mAh	Resolution	0,01 bar (0.1 psi)
Charging parameters	5 V 2 A	Accuracy	0,5% Full Scale
Measuring range	-1,00 - +55,00 bar (-14.5 - +800.0 psi)	Protection rating	IP54
<b>Be Cool Evo V1S – Digital Vacuum Gauge</b>			
Power supply	2 x 1,5 V AA batteries	Measuring range	+1 - +20000 micron
Accuracy	+1 - +10000 micron ±10% rdg ±10 micron +10001 - 20000 micron: ±20% rdg	Resolution	1 micron [0 - +9999 micron] 10 micron [+10000 - +20000 micron]
Protection rating	IP54		
<b>Be Cool Evo T1S – Smart Temperature Probe</b>			
Power supply	2 x 1,5 V AAA batteries	Resolution	0,1 °C (0.2 °F)
Sensor type	NTC 10 k ±1% B25/85=3977K ±1%	Accuracy	±1 °C (±2 °F)
Measuring range	-50 °C - 150 °C (-58 °F - +302 °F)	Protection rating	IP54

## PAIRING – CONNECTING THE TEMP. PROBE AND/OR VACUUM GAUGE TO THE INSTRUMENT

1. Turn on the devices to be paired: press and hold the key until all LEDs briefly light up, then release the key.
2. Access the Pairing menu on the Be Cool Evo M4S: Settings => Pairing.
3. Click on the icon corresponding to the device you want to pair to start scanning (**Be Cool Evo T1S, Be Cool Evo T1S, Be Cool Evo V1S**).
4. Wait 10 seconds and select the row corresponding to the serial number of the Bluetooth® device to pair; the serial number can be found on the device's nameplate, preceded by "S/N:".
5. The instrument will automatically pair with the selected Bluetooth® device. The icon for the paired device will appear in the top bar: .

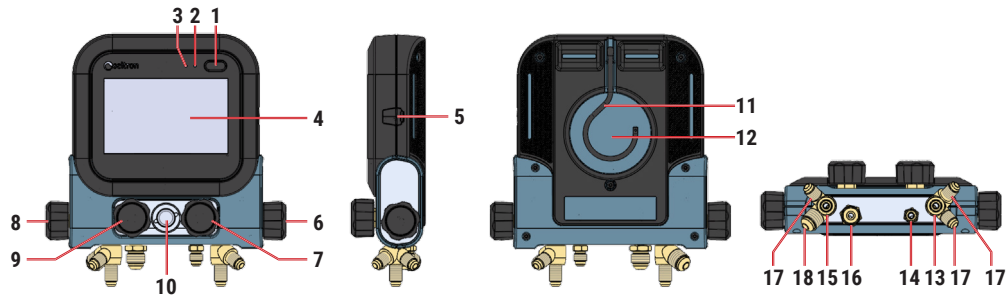
Once paired, the devices will automatically connect when powered on.

### LEGEND

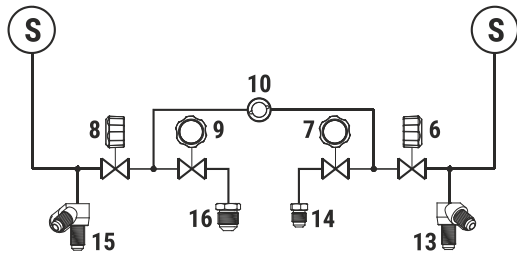
- Search for devices (no devices paired): Starts scanning to pair a new device.
- Unpair device: Removes the device from the list of saved devices.
- Connected device: Paired and connected.  
The icons for paired devices appear in the top bar.
- Device not connected: Paired but not connected.  
The icons for paired but not connected devices appear in the top bar.



## MECHANICAL DESCRIPTION



## SIMPLIFIED DIAGRAM OF THE MANIFOLD



### User Interface Description

- |   |   |
|---|---|
| 1 | Multifunction button: Press and hold for 3 seconds to power the instrument on/off<br>Press and hold for more than 10 seconds to perform a device Reset  |
| 2 | Flashing Red LED: Low battery<br>Solid Red LED: Charging in progress<br>Solid Green LED: Battery fully charged (visible only if charging while the instrument is off)   |
| 3 | White LED: 2 flashes every 5 s: Bluetooth waiting for connection (searching)<br>2 flashes + 3 rapid flashes every 5 s: Bluetooth waiting for connection (searching) and logging<br>1 flash every 5 s: Bluetooth connected<br>1 flash + 3 rapid flashes every 5 s: Bluetooth connected and logging |
| 4 | TFT color touch screen display  |
| 5 | USB Type-C interface (with protective cover)  |

### Manifold Description

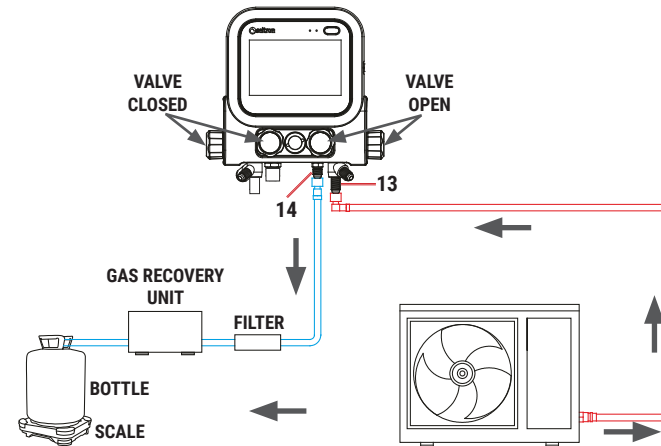
- |    |  |
|----|--|
| 6  | Right branch High/Low pressure valve control knob                |
| 7  | Right branch refrigerant charging connection valve control knob  |
| 8  | Left branch High/Low pressure valve control knob                 |
| 9  | Left branch valve control knob (3/8 SAE connection fitting)      |
| 10 | Refrigerant flow sight glass                                     |
| 13 | 1/4 SAE port for right branch High/Low pressure refrigerant hose |
| 14 | 1/4 SAE port for refrigerant charging hose                       |
| 15 | 1/4 SAE port for left branch High/Low pressure refrigerant hose  |
| 16 | 3/8 SAE port for vacuum pump connection                          |
| 17 | 1/4 SAE dummy port for hose support                              |
| 18 | 3/8 SAE dummy port for hose support                              |
| S  | Pressure sensor  |

### Other

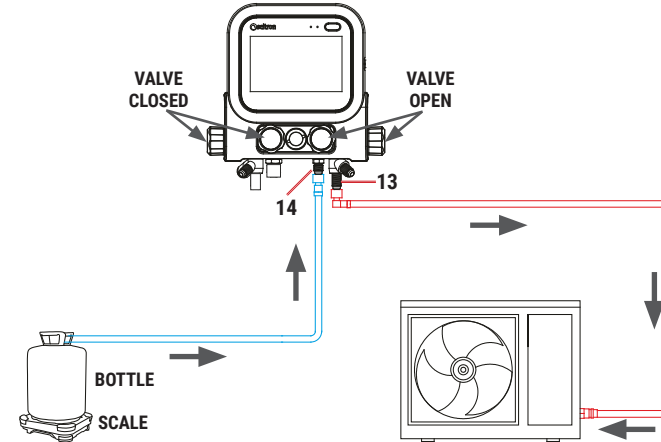
- |    |                                      |
|----|--------------------------------------|
| 11 | Instrument hanging hook              |
| 12 | Magnetic section for hook attachment |

THE HOSE CONNECTIONS ARE KNURLED AND MUST BE TIGHTENED BY HAND ONLY, WITHOUT THE USE OF TOOLS.

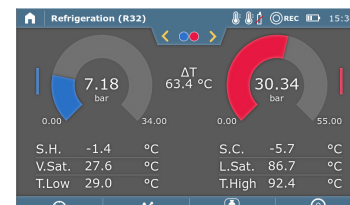
## SYSTEM REFRIGERANT EVACUATION



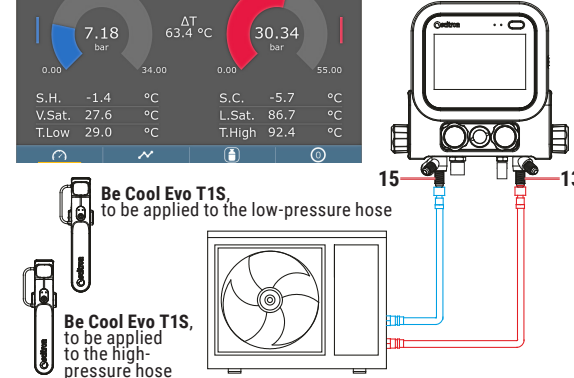
## SYSTEM REFRIGERANT CHARGING



## SYSTEM PRESSURE MEASUREMENT



ALL INSTRUMENT VALVES MUST BE CLOSED



### Gauges View

Use the arrows to vary the view of the low and high pressure branches:

**Low Pressure on Left Mode**  
Sets the blue gauge to the left side of the display.

**High Pressure on Left Mode**  
Sets the red gauge to the left side of the display.

**Automatic Detection Mode**  
Automatically detects the high and low pressure branches and organizes the on-screen readings correctly (low on left, high on right), regardless of how the hoses are connected.

**Measurement graph.**

**Set the type of refrigerant in use.**

**Pressure zeroing.**