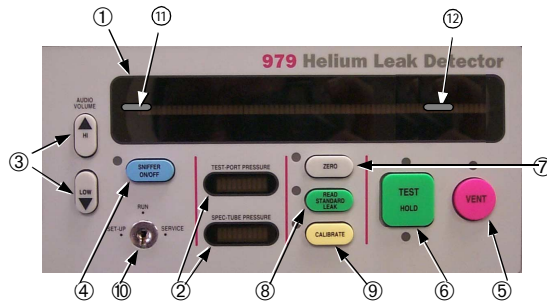


Front Panel Displays and Controls



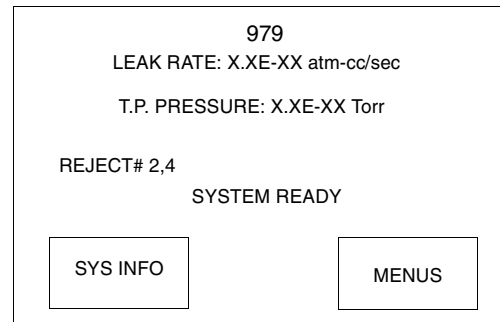
- ① Leak Rate Display – Displays the leak rate in one of two forms:
 - Linear
 - Logarithmic
- ② Pressure Displays – Display the pressures in the spectrometer tube and the test port.
- ③ Audio Volume Control
- ④ Sniffer On/Off – Toggles the 979 into and out of SNIFFER mode.
- ⑤ Vent – Advances the 979 to the vented state.
- ⑥ Test/Hold:
 - Pressed once, the TEST button advances the 979 through roughing and various test states.
 - Pressed twice, the TEST button automatically advances the 979 to the HOLD state. The yellow LED below the button illuminates when the 979 is in the HOLD state and the test port is isolated.

- ⑦ Zero – Zeros the leak rate in the current valve test state.
- ⑧ Read Standard Leak – This test state function reads the internal calibration leak.
- ⑨ Calibrate – Initiates the calibrate function.
- ⑩ Key Switch – Allows to access and control of operational parameters and service related functions (see manual).
- ⑪ Under – Indicates that the measured helium leak rate is less than the minimum displayable value.
- ⑫ Over – Indicates that the measured helium leak rate is higher than the maximum displayable value.

Startup and Performing a Test

To perform a test:

1. Connect the 979 to a power outlet and place the rear power control panel power switch to **I**.
Wait until SYSTEM READY appears on the Home screen. If the 979 is off for several hours, high sense operations take longer to stabilize.



2. Verify that the test port is connected or that the blank-off cap is in place.
3. Set the 979 Key Switch: RUN or SET-UP using the T008 key.
4. On the blue display Touch screen/Home screen, follow/verify the start-up process:
 - SYSTEM PRESSURE WAIT appears for a short period.
 - FILAMENT WAIT appears indicating that the system is lighting the filament.
 - HOLD appears.
 - STABILIZATION WAIT appears for up to five minutes as the electronics stabilize before completing the start-up routine.
 - OFFSET WAIT appears and the system sets an OFFSET value.
 - HOLD and SYSTEM READY appear.

Calibration and verification

5. Verify system setup and perform the sensitivity check:
 - a. Press the **TEST** button.
 - b. Press the **READ STANDARD LEAK** button.
 - c. Compare the value displayed on the HOME screen to the value of the known calibrated leak displayed on the CALIBRATED LEAK Set-Up screen.

Note: Verify the preferred calibration mode (Full or Fast).



If the values do not match, press the **CALIBRATE** button and perform calibration and verification:

Internal Leak Calibration and Verification:

- a. Press the **TEST** button to place the system in test mode.
- b. Press the **CALIBRATE** button to perform an automated calibration of the system.
- c. After calibration is complete, press the **READ STANDARD LEAK** button while in TEST mode. Verify that the leak rate reading matches the programmed value.
- d. Press the **READ STANDARD LEAK** button again to return to TEST mode.

External Leak Calibration and Verification:

- a. Press the **VENT** button to vent the leak detector.
- b. Install a calibrated leak into the test port.
- c. Press the **TEST** button to place the leak detector in Fine Test mode.
- d. Go to the Calibrated Leak Set-Up screen.
- e. Press the **USE EXT LEAK** button and verify that the external leak value matches the leak rate value on the calibrated leak in the test port.
- f. Once in Fine Test, press the **CALIBRATE** button to perform an automated calibration.

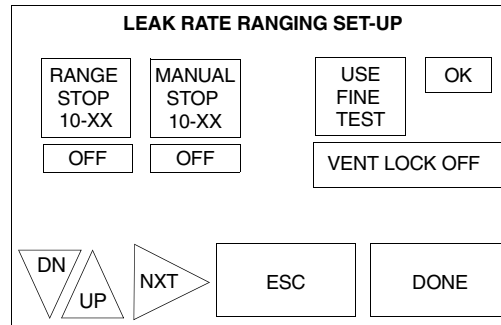
When calibration is complete, the leak detector reverts to a Fine Test mode of operation for calibration verification.

- If calibration is **Successful**, wait until the 979 transfers into test mode.
- If calibration is **Unsuccessful**, see the manual.

VENT LOCK Function

Turning the VENT LOCK function ON disables the VENT button. The VENT LOCK function is inactive when the AUTO SEQUENCER feature is enabled.

- Touch the **VENT LOCK** box to toggle the status to ON or OFF.
 - Touch **DONE** to return to the previous menu screen.
6. Set the Leak Ranging Setup:
- Enable the RANGE STOP and MANUAL RANGE functions.
 - Select either USE FINE TEST or GROSS TEST ONLY.



Range Stop and Manual Range Set-Up and Control:

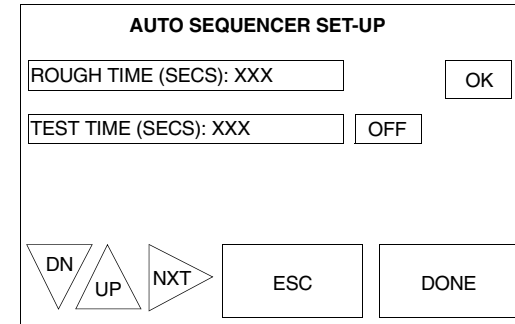
- **RANGE STOP** – The unit auto-ranges down to the pre-selected decade entered in the Range Stop variable field.
- **MANUAL RANGE** – The unit displays the pre-selected decade entered in the manual range variable field.

Selecting Fine Test or Gross Test Only Mode:

- **FINE TEST MODE** – Automatically ranges for gross leaks and then transfers into fine test if no gross leaks are detected.
- **GROSS TEST ONLY** – The leak detector does not transfer into FINE TEST mode (dual mechanical pump configurations only).

Production Setting/Floor Testing

Perform Auto Sequencer set-up, if production floor testing is required. Set the test object rough time, test time, and auto sequencer on/off.



The auto sequencer pass or fail leak rate value is selected through the Reject Set Point that is enabled (ON):

- A **Pass** condition is indicated by the system reverting to the VENT mode upon completion of the test cycle.
- A **Fail** condition, either a rough time failure or a leak rate rejection, is indicated by:
 - The system reverting to the HOLD mode.
 - All operating buttons being disabled except VENT, and REJECTED appearing on the Home screen.
 - A reject set point activation upon test cycle completion.

ROUGH TIME – The time that the leak detector is allowed to evacuate the test object to the tolerable test transfer pressure.

TEST TIME – The time that the leak detector remains in test before it compares the measured leak rate with the selected reject set point.