



Automatic Helium Leak Test System

VTech's 2 station Automatic Helium Leak Test System, (AHLTS), detects leaks of 0.1 ounces of refrigerant per year or 1.8×10^{-5} cc/second, in refrigeration units or products.

VTech's 2 Station AHLTS Features:



- * **Automatic** - The leak test is fully automatic and hands free. A “Sniffer” procedure is no longer necessary
 - * **Quick** - Total process time to leak test two “A” coils is 90 seconds. One coil every 45 seconds
 - * **Economical** - Advances in Vacuum & Helium technologies have provided improved sensitivity and faster test cycles with only a 10% helium concentration.
 - * **Cost effective** - Using the AHLTS as a final leak test before refrigerant charging, will reduce “in house” and field repair costs.
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- * **Small space requirement** - machine foot print, as shown is 48" x 62". VTech will design systems to fit various product sizes.
 - * **Installation** - one piece designs means set in place, level, connect electrical power and test gases.
 - * **More efficient**- Touch screen operator interface provides for fast changeover times and increased production line throughput.
 - * **Dependable**- Repeatable results, not operator dependent. Controlled helium/air ratio. All components are field proven for durability and dependability
 - * **Single or multiple systems**- available to meet your production requirements.
 - * **Systems expandable** - Options include: Data acquisition, Network interfaces, Bar coding scanning, and Modem communications

Technical Specifications

Description: The VTech AHLTS is of the “Outside - In” type. The 2 Units are under vacuum within a containment chamber at a 10% helium to air ratio.

Evacuation: is performed on both the high and low sides of the refrigeration circuit. Re-enforced ½" ID Stainless Steel vacuum hoses are connected to the unit and to the machine’s vacuum manifolds. Precision pressure and vacuum transducers, and electrically operated valves, control the evacuation and pressure rise tests, The pressure rise tests are performed in the 50 - 100 Micron range. The rise tests determine if units have leaks or if they are contaminated. Nitrogen is used to help decontaminate the units and for a holding charge at the end of the test. The machine is equipped with 5 heavy duty, dual stage, 7 & 11 cfm vacuum pumps.

Leak Test: Test for helium in the units using a helium mass spectrometer, set at 1.8×10^{-5} cc/second or, 0.1 oz of refrigerant per year leak.

Controls: The operator controls consist of a color touch screen for messaging and data entry. Manual operators are used for the repetitive operations. A Programmable Logic Controller (PLC), controls the operations of the machine. A full diagnostic program locates problems fast.

VTech provides complete turn-key High Sensitivity Automatic Helium Leak Detection Systems, including repair stations and personnel training, for your specific production line requirements. In addition, we can provide conveyors, fixtures, leak test fittings.

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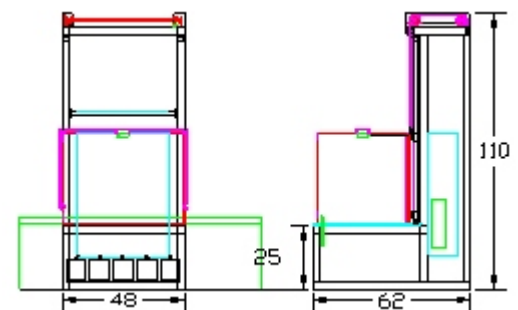
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Options: Bar code scanning.
Ethernet data exchange
Modem communications.

Test Hood: 48 x 36 x 36 inches, constructed of high impact LEXAN to completely cover the test units. Easily raised and lowered to move units into test area. A helium/air controller, with integral recirculating fan and mixing ducts, maintains concentration of helium to air. The hood is designed to go between conveyor sections and seal to the machine platen. This is to maintain the helium concentration during the test.

Construction: heavy duty steel frame, 110 x 48 x 62 inches. NEMA 12 electrical enclosure. Vacuum manifolds valving are located in a NEMA 12 enclosure. Vacuum pumps and enclosure are mounted to movable frame under machine platen. Operator interface and touch screen are mounted on movable support arm.

Power requirement: 230 VAC 1Phase 60Hz.



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