The 959 Power-Sniff Leak Detector is the ideal tool for helium sniffing applications that demand trouble-free operation, fast cycle times, and high sensitivity. Based on the industrially-proven 959 Leak Detector and the maintenance-free MacroTorr high vacuum pump, the 959 Power-Sniff offers outstanding performance compared to standard turbo, diffusion, or drag pump designs. It eliminates the need for special connecting ports and mass separating membranes. As a result, the 959 Power-Sniff is more reliable and requires less maintenance than competitive sniffing leak detectors.

The 959 Power-Sniff features quick and fully automatic startups, a large leak rate display, and full audio control. The highly sensitive spectrometer tube is easily serviceable with burn-out resistant dual iridium filaments that are easily changed in minutes. The power probe sniff hose is a simple design with a disposable tip filter that can be changed in seconds. Designed especially for harsh industrial environments, the 959 Power-Sniff can operate in ambient temperatures up to 120° F (49° C). Its operating controls are pushbutton type and the service controls are behind a lockable door panel. The 959 Power-Sniff includes the 959 MacroTorr leak detector, a sniffing power probe with a 10 foot connecting line, and a package of spare tip filters. Mounting carts and your choice of roughing pumps can be found in the ordering information.

### Features
- Sensitivity to $< 1 \times 10^{-7}$ atm cc/sec for helium
- Fast signal response and cleanup
- No special sampling pump or membranes required
- Totally self controlled and protected
- Convertible to evacuation testing
- MacroTorr high vacuum pump

### Benefits
- Can test for equivalent Freon 134 leaks to less than 0.001 ounce per year
- Enhanced production testing throughput
- High reliability, less maintenance
- Automatic startups, insensitive to operator errors
- Enhanced leak testing flexibility
- Maintenance-free spectrometer pumping
- Can evacuation test up to 2 Torr without throttling
- High helium pumping speed for quick signal cleanups
Technical Specifications

- Minimum detectable signal/sensitivity (with 3.2-cfm pump) in accordance with AVS standard 2.1:
  - $2 \times 10^{-8}$ atm cc/sec (helium) – Sniffing Mode
  - $1 \times 10^{-9}$ atm cc/sec (helium) – Evacuation Mode
- Response time
  - Sniffing response time is less than 1 second
- Amplifier drift
- Less than 2% of most sensitive scale in accordance with AVS standard 2.1
- Noise level
  - Less than 2% of full scale, peak-to-peak, in accordance with AVS standard 2.1
- Leak indicator
- 50-segment bar graph with exponent display. Standard ranges are $10^{-8}$ to $10^{-4}$ atm cc/sec.
- Recorder jack
  - 0-5 VDC
- Audio alarm
  - Volume control and output jack for remote speaker
- Sensing tube
  - Automatically protected, temperature-stabilized, solid-state device. The entire tube can be quickly removed for maintenance. Dual-filament, disposable, all-welded ion source. Removable magnet structure for easy cleaning.
- Spectrometer pump
  - V70D maintenance-free MacroTorr pump
- High-reliability, fast-acting solenoid valves
- Field-replaceable actuators and seats
- Test port
  - 1-½” (28.5 mm) 1D quick coupling for evacuation testing, calibration, and for adapting to the sniffer probe.
- Power requirements
  - 115 V or 220 V, 50-60 Hz (15/7.5 amps)
- Weight (base unit)
  - 50 lb (23 kg) approx.
  - 60 lb (27 kg) approx. shipping

Sniffer Probe Speed vs Distance

Minimum signal response when passing a probe near a $7 \times 10^{-6}$ atm cc/sec calibrated leak

<table>
<thead>
<tr>
<th>Horizontal distance from calibrated leak, mm</th>
<th>Test Port = 600 mTorr</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
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<td>3</td>
<td>0</td>
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</tbody>
</table>

Horizontal probe speed, inches per second

Dimensions inches (mm)

Ordering Information

All configurations include the basic leak detector and sniffing probe with spare tip filters. Customize the ordering number according to the desired backing pump, mounting configuration, and operating voltage:

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- Roughing Pump
  - 09 = 90 l/m (3.2 cfm)
  - 20 = 200 l/m (7 cfm)
- Mounting Configuration
  - B = Bench (includes manifold)
  - U = Universal Cart
- Voltage
  - 120 = 120 V
  - 220 = 220 V

- Accessories and spare parts
  - Varian Part No.
  - Description
  - 0981-F8473-320
    - Refillable calibrated leak-He for sniffing with adapter for evacuation mode. (10⁻⁹/10⁻⁶ std cc/sec range)
  - 0981-L6749-301
    - O-ring kit
  - 0981-82850-301
    - Thoriated iridium ion source
  - 0981-L9030-301
    - Preamplifier unit
  - 0991-K9565-303
    - Package of 10 spare sniffer probe filters
  - 0991-K9565-302
    - Spare complete Power Probe sniffer attachment with inlet filters
  - 0981-6999-09-750
    - Additional instruction manual