The MATHESON LEAKHUNTER Plus™ is a truly universal leak detector. Extensive R&D has produced a multi-functional leak detector engineered to perform superbly in both portable and benchtop applications. It has been designed to locate and measure a wide variety of gas leaks quickly, precisely and cleanly.

The LEAKHUNTER Plus™ is highly sensitive and will locate leaks too small to bubble with a soap solution. And, with the detector cell in the probe itself, the Model 8066 exhibits excellent response and recovery times. Great attention has been paid to ergonomics and durability. And, the Model 8066’s controls have been kept simple so that it can be operated with little or no training.
In the Laboratory: Instruments, such as chromatographs and GC/MS, reaction vessels, sampling cylinders, research apparatus, manifolds, regulators and valves.

In the Plant: Pressurized containers and storage vessels, piping, process and gas transfer lines, pilot plant reactions, tracer studies and refrigeration systems.

On Production Lines: Quality assurance procedures in manufacturing, welds, seals and connectors, valves, waterproof enclosures, refrigeration and air conditioning units and military equipment.

In the Hospital: Medical gas systems and piping, fittings and apparatus.

In the Field: Tracer studies, helium and CO₂ pipelines and refrigeration lines.

Environmental Compliance: Fugitive Emissions

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CAUTION: The LeakHunter Plus™ is not designed as intrinsically safe and should not be used to detect leaks of combustible gases which may exceed their lower explosive limit (LEL).

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The LeakHunter Plus™ will detect any gas which has a thermal conductivity different from that of the ambient air on which it was zeroed. The larger the difference, the greater the sensitivity. As the instrument will normally be zeroed in ambient air comprised mostly of nitrogen and oxygen, the LeakHunter Plus™ will not be highly sensitive to leaks of these gases. A gas may have a higher or lower thermal conductivity than air and therefore will produce a positive or negative reading on the display.

The LeakHunter Plus™ groups gases with similar thermal conductivities into one of four Gas Groups. Each of the Groups has a calibration curve stored in memory. While the LeakHunter Plus™ will detect any gas with a thermal conductivity different from air, the twelve gases below have been tested for sensitivity and assigned to a particular Gas Group.

<table>
<thead>
<tr>
<th>Group</th>
<th>Gas</th>
<th>Pos/Neg</th>
<th>Minimum cc/sec</th>
<th>Detectable cc/min</th>
<th>Leak Concentration ft/min</th>
<th>ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hydrogen</td>
<td>+</td>
<td>8.10E-06</td>
<td>4.9E-04</td>
<td>1.7E-08</td>
<td>1.3E+02</td>
</tr>
<tr>
<td></td>
<td>Helium</td>
<td>+</td>
<td>1.00E-05</td>
<td>6.0E-04</td>
<td>2.1E-08</td>
<td>1.6E+02</td>
</tr>
<tr>
<td>2</td>
<td>Neon</td>
<td>+</td>
<td>5.80E-05</td>
<td>3.5E-03</td>
<td>1.2E-07</td>
<td>9.3E+02</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>5.81E-05</td>
<td>3.5E-03</td>
<td>1.2E-07</td>
<td>9.3E+02</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>R11</td>
<td>-</td>
<td>6.84E-05</td>
<td>4.1E-03</td>
<td>1.5E-07</td>
<td>1.0E+03</td>
</tr>
<tr>
<td></td>
<td>R12</td>
<td>-</td>
<td>7.90E-05</td>
<td>4.7E-03</td>
<td>1.7E-07</td>
<td>1.3E+03</td>
</tr>
<tr>
<td></td>
<td>R21</td>
<td>-</td>
<td>7.98E-05</td>
<td>4.8E-03</td>
<td>1.7E-07</td>
<td>1.3E+03</td>
</tr>
<tr>
<td></td>
<td>R22</td>
<td>-</td>
<td>9.46E-05</td>
<td>5.7E-03</td>
<td>2.0E-07</td>
<td>1.5E+03</td>
</tr>
<tr>
<td>4</td>
<td>Methane</td>
<td>+</td>
<td>1.06E-04</td>
<td>6.4E-03</td>
<td>2.2E-07</td>
<td>1.8E+03</td>
</tr>
<tr>
<td></td>
<td>Argon</td>
<td>-</td>
<td>1.37E-04</td>
<td>8.2E-03</td>
<td>2.9E-07</td>
<td>2.2E+03</td>
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<tr>
<td></td>
<td>CO₂</td>
<td>-</td>
<td>1.53E-04</td>
<td>9.2E-03</td>
<td>3.2E-07</td>
<td>2.4E+03</td>
</tr>
<tr>
<td></td>
<td>Water Vapor</td>
<td>-</td>
<td>1.75E-04</td>
<td>1.1E-02</td>
<td>3.7E-07</td>
<td>2.8E+03</td>
</tr>
</tbody>
</table>

Example: 1.00E-05 = 1 x 10⁻⁵
Specifications

Detection Principle:
Dual cell micro volume thermal conductivity

Power:
1 x size 9V NiCad battery (alkaline battery, not included, may be substituted)

Charger/Adapter:
115V: Combination charger/AC adapter
220V: Charger only

Operating Time:
NiCad: 4 hours
Alkaline: 9 hours

Response Time:
Approximately 1 second

Recovery Time:
Approximately 1 second

Audio:
Fixed volume, variable frequency proportional to leak rate

Diagnostics:
Low battery indicator
Detector cell failure alarm

Temperature:
Operating: 0° to 45°C (32° to 113°F)
Storage: -10° to 50°C (14° to 122°F)

Humidity:
0-90% RH non-condensing

Size:
Console: 6.75”L x 3”W x 1”D
172mm x 77mm x 26mm
Probe: 8”L x 1.75” Diameter
204mm x 28mm

Weight:
15.5 ounces (440 gm)
(Including case:) 3.3 lb (1.5 kg)

Warranty:
One year

Model Numbers

Model  | Description
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8066 | **LEAKHUNTER Plus™**
complete with standard and flex-and-stay extension probes, combination 115VAC adapter/charger with NiCad battery, durable carrying case
8066-220 | Same as above except with 220VAC charger in lieu of charger/adapter
8066-02 | Calibrated leak hardware
8066-03 | Replacement standard probe
8066-04 | Replacement extension probe
8066-05 | Replacement 115VAC charger/adapter
8066-06 | Replacement 220VAC charger
The LeakHunter Plus™ is so universal that it replaces three previous MATHESON models by combining the best features of the Model 8065 Leak Hunter, the Model 8067 Quantitative Leak Detector and the Model 8017 Benchtop Leak Detector. Moreover, its advanced electronics improves upon these products by providing more sensitive, more stable and more accurate readings.

PORTABLE APPLICATIONS
The LeakHunter Plus™ offers the convenience and flexibility of either one or two-handed operation. The following features make it an excellent portable detector.

• Probe easily attaches to the body of the instrument giving you a free hand.

• Detachable probe permits access to even the most difficult to reach places. An extension flex-and-stay probe is also included to extend your reach.

• Precise probe tip can pinpoint leaks in areas where several connections are grouped together.

• Rechargeable NiCad batteries (included with charger) provide hours of portable operation.

QUANTITATIVE APPLICATIONS
The LeakHunter Plus™ can be used to simply locate leaks so they can be corrected, or it can be used to measure the size of a leak. Features which make it an excellent quantitative leak detector include:

• Calibration data for twelve gases is stored in memory. At the touch of a button, the appropriate calibration data is selected depending upon the target gas to be detected.

• Leak rates are displayed in a large LCD readout. The user easily switches between units of cc/sec, cc/min, ft³/min or ppm.

• A peak hold function freezes the display at the maximum leak rate encountered as the probe passes through the suspect leak area.

• Built-in autoranging automatically adjusts the instrument’s sensitivity to the size of the leak.

BENCHTOP APPLICATIONS
By removing the detachable probe, the LeakHunter Plus™ can be used as a benchtop detector. The following features make it an excellent benchtop detector.

• Console can sit on benchtop to perform leak detection procedures with just the probe in hand.

• Console’s no-slip feet and built-in incline stand make for a stable set-up with easy viewing.

• AC power adapter provides continuous operation with no need to recharge batteries.