inomatec
LEAK TEST SOLUTIONS

# MHLS-2000

## Highlights

- **Fully integrated, mobile** helium filling and leak detection system
- **PLC-controlled workflow** reduces user error and ensures repeatable leak testing
- **Flexible system** accommodates setup variability and improves process consistency
- **Compact industrial design** ideal for direct production deployment

## Improve the Accuracy, Reliability of Your Leak Detection

### All with One Flexible, Mobile Solution

**The MHLS-2000 is a mobile helium fill and leak detection station developed for controlled rework, maintenance and production support in serial manufacturing environments. By combining tracer gas filling, evacuation, sniffer leak detection and PLC-guided workflow in one compact industrial unit, it enables stable and repeatable mobile leak testing wherever you need it.**

### Faster, Controlled Leak Location on the Shop Floor

Conventional mobile sniffers typically provide detection only, requiring separate filling equipment and manual process coordination. The MHLS-2000 integrates filling, evacuation and leak detection within one coordinated system, accommodating setup variability and improving process consistency.

The PLC logic (Siemens TIA Portal) manages defined filling duration, stabilization time and sniffing phase, ensuring reproducible process execution. The result is faster leak localization and reduced production downtime.

### Process Control Where Consistency Matters

Manual helium sniff testing is often influenced by operator handling, gas concentration variability and undefined timing. The MHLS-2000 monitors and controls all relevant process parameters required for reproducible leak detection.

Defined filling times, controlled stabilization phases for homogeneous tracer gas distribution, minimum sniffing durations and programmable test parameter sets ensure consistent and application-specific test execution. Operator-related errors—such as incorrect gas concentration, insufficient stabilization or premature test termination—are minimized through software-controlled workflow management.

### Integrated Filling and Detection in One Convenient System

By combining gas filling and sniffer-based detection within a single station, the MHLS-2000 removes the need for separate equipment in rework scenarios. The integrated system architecture simplifies troubleshooting and enables reliable fault localization without permanent infrastructure.

### Reliable Measurement Performance

The MHLS-2000 supports helium and forming gas (5% $H_2$/95% $N_2$) sniffer leak detection with automatically regulated pressure ranges. Detection limits down to $10^{-5}$ mbar·l/s (depending on application and test configuration) allow use in demanding industrial environments. The integrated detector system ensures stable performance under varying flow conditions and supports reliable leak detection in production and maintenance applications.

### Designed for a Broad Range of Production Environments

The robust mobile frame includes integrated gas bottle mounting and storage compartments. Compact dimensions allow positioning directly at the production line and transport through standard industrial doors.

The MHLS-2000 is suitable for a wide range of industrial applications, including HVAC and heat pump production, white goods manufacturing, semiconductor systems, automotive HVAC assemblies and data center cooling systems. It is equally suited for maintenance and production support environments requiring flexible and reliable mobile leak detection.

# Test Performance Data

### Test Method

Tracer Gas Leak Detection

### Test Medium

- Helium (4.6)
- Air/Helium mixture (90/10%)
- Forming Gas (5% $H_2$/95% $N_2$)

All other concentrations of helium and hydrogen

### Utilization

1–3 shift operation

### Technical Availability

95%

### Test Pressure Ranges

- A: 5–200 mbar (rel.) automatically regulated
- B: 0.2–5 bar (rel.) automatically regulated
- C: 2–16 bar (rel.) automatically regulated

**Standard Configuration:**
1 test pressure range (A, B or C)

**Optional:**
2 test pressure ranges (any combination of A, B, C)

The MHLS-2000 provides one test pressure output with up to two selectable pressure ranges.

### Detectable Leak Rate

$1 \times 10^{-1}$ to $1 \times 10^{-5}$ mbar·l/s
(Depending on gas concentration and test task)

Note: Realistically achievable measurement range under normal production conditions with guided operator workflow.

### Measurement Review

Manual verification on optional test leak

### Options

- Test leak*
- Test pressure present query*
- Pressure increase module*
- Mixing station*
- Helium recovery*

*Items marked with * are customer-selected features and options. Subject to technical changes. Illustrations may show optional equipment.*

## System Specifications

### System Frame

Mobile industrial steel frame with integrated gas bottle mount

### Dimensions (W × H × D)

Approx. 1520x1150x820 mm
(Max. dimensions incl. handles)

### Weight

Approx. 240 kg
(depending on configuration)

### Control System

Siemens PLC (TIA Portal)

### User Interface

7" industrial touch panel

### Leak Detector

Integrated helium detector
(e.g. Inficon LDS 3000)

### Power Supply

230 V/50 Hz
Rated short-circuit current at feed-in point ≤ 5 kA

### Compressed Air Supply

Minimum 6 bar
(For air quality requirements, see General Conditions)

### Operating Conditions

**15–35°C**
Max. 50% humidity (non-condensing)

**Above 35 °C**
Optional air conditioning for switch cabinet and detector

### Exhaust Air

According to layout specification

## Contact innomatec for your ideal test bench solution

Fast, cost-efficient, and production-ready—we help you configure the right FlexStation for your component, cycle time, and production environment.
Contact our team today!

innomatec
LEAK TEST SOLUTIONS

**innomatec Mess-und Schnellanschluss-Systeme GmbH**
Am Wörtzgarten 12-14 | D-65510 Idstein | Deutschland
Phone: +49 6126 94200 | kontakt@innomatec.de
www.innomatec.de