



Shanghai EVP Vacuum Technology Co., Ltd.

- www.evpvacuum.com
- +86 21 5087 8057
- contact@evpvacuum.com



## HLD Series Helium Leak Detector



### Introduction: HLD-400

The HLD 400 series leak detector is a fully automatic mobile helium mass spectrometer leak detector with a silent wheel design, suitable for many demanding industries.

Utilizing helium mass spectrometry and reverse diffusion principles, using a 180° non-uniform magnetic field and fully automatic control technology, achieves automatic helium peak scanning, automatic calibration and automatic range switching.

It has the characteristics of short startup time, fast calculation speed, high detection sensitivity, and strong anti-interference ability.

### HLD-600

HLD 600 series leak detector is a fully automatic portable helium mass spectrum leak detector, small volume, suitable for precision, fast and portable vacuum industry and research institutes.

Utilizing helium mass spectrometry and reverse diffusion principles, using a 180° non-uniform magnetic field and fully automatic control technology, achieves automatic helium peak scanning, automatic calibration and automatic range switching.

It has the characteristics of portable, fast start, fast operation, high sensitivity, accurate and rapid.

### HLD-800

HLD 800 series leak detector uses dry scroll vacuum pump as backing pump, is a silent mobile environmental friendly helium mass spectrometer with complete air compression and no oil mist pollution.

Using helium mass spectrometry and inverse diffusion principle, using 180° inhomogeneous magnetic field and automatic control technology.

It has the characteristics of short startup time, fast calculation speed, high detection sensitivity, reliable performance, no pollutant removal, etc.

### Advantages:

1. Using metal button, one-click automatic emptying.
2. Hand-held remote control unit, up to 150 meters remote detection ( optional with additional cost ).
3. Unique gas path design, can avoid dust into the instrument interior.
4. Multi-mode function input, output, easy to connect a variety of automation equipment.
5. Double iridium ion source, strong antioxidant capacity and long service life.
6. The machine is effectively separated from the circuit, avoiding the interference of temperature, electromagnetic field and so on, which makes the leak detector run more stable and reliable.
7. Automatic zero-adjusting, automatic range switching.
8. The custom software of the leak detector can be compiled according to the customer's request.
9. Large leak detection function: The pressure can be preset. When the pressure is evacuated, if the preset value cannot be reached, the leak detector will automatically alarm.
10. Multiple measurement unit selections, real-time updates of detection data, and direct output to generate Excel tables.
11. Rotatable, 7-inch color touch screen, the operator can adjust the direction according to comfort.
12. Large leakage protection mode fully protects the ion source from oxidation and the molecular pump from being impacted when exposed to the atmosphere.

## Technical data:

Item	HLD-400	HLD-600	HLD-800/15	HLD-800/30
Vacuum minimum leak detection rate	$3 \times 10^{-13} \text{ Pa} \cdot \text{m}^3/\text{s}$			
Vacuum leakage rate display range	$1 \times 10^{-1} \sim 1 \times 10^{-13} \text{ Pa} \cdot \text{m}^3/\text{s}$			
Minimum leak detection rate for sniffer gun	$5 \times 10^{-9} \text{ Pa} \cdot \text{m}^3/\text{s}$			
Range of leakage rate of sniffer gun	$1 \times 10^{-1} \sim 1 \times 10^{-9} \text{ Pa} \cdot \text{m}^3/\text{s}$ (zero)			
Detectable masses	He4, He3, H2			
Start time	$\leq 90 \text{ S}$			
Response time	$\leq 0.3 \text{ S}$			
Leak Pressure	$\leq 2000 \text{ Pa}$			
Voltage / Frequency	100-120V 60Hz 200-240V 50Hz			
Working environment	Temperature: 5-45°C Humidity: $\leq 80\%$			
Language	Chinese / English / Russian			
Display units	$\text{Pa} \cdot \text{m}^3/\text{s}$ $\text{mbar} \cdot \text{l}/\text{s}$ $\text{atm} \cdot \text{cc}/\text{s}$ Torr·L/s ppm			
Product size (for reference)	620*370*1027 mm	620*370*480 mm	620*370*1027 mm	620*370*1127 mm
Packing size (for reference)	810*560*1200 mm (1 wooden box)	738*478*667 mm (1 wooden box)	810*560*1200 mm (1 wooden box)	738*478*667 mm 788*733*771 mm (2 wooden boxes)
Net / Gross Weight (for reference)	110 / 140 Kg	55 / 70 Kg	105 / 135 Kg	50 / 85 Kg 60 / 100 kg

## Configuration table:

Item	HLD-400	HLD-600	HLD-800/15	HLD-800/30
Mechanical pump	Leybold D16C	Ulvac GHD-031B	Anest Iwata ISP250E	Anest Iwata ISP500C
Molecular pump	Pfeiffer splitflow 80	Pfeiffer splitflow 80	Pfeiffer splitflow 80	Pfeiffer splitflow 80
Display screen	●	●	●	●
WIFI	○	○	○	○
Cart	●	○	●	●
Remote controller	○	○	○	○
Suction gun	○	○	○	○
Big leak detection	●	●	●	●
Large leakage protection	●	●	●	●
Molecular pump Temperature alarm	○	○	○	○
Vacuum pump Temperature alarm	○	○	○	○
External leak	●	●	●	●
Built-in leak	○	○	○	○
Data saving	●	●	●	●
Auto-zero	●	●	●	●
Display interface	Graph, histogram, numerical display			
I/O interfaces	RS232 RS485 USB External control input/output, analog output interface			
● standard configuration ○ Optional configuration				

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Türkiye: www.rateknik.com.tr / info@rateknik.com.tr / Gsm: 0533 6072166

