

Helium Leak Detector

Vacuum components

M-212LD
M-212LD-D
M-222LD
M-222LD-D
M-222LD-H
M-222LD-D-H
M-222LD-D-H_500
M-232LD



CANON ANELVA CORPORATION

Industry leading sensitivity, stability, and response

HELEN series Helium Leak Detector

Summary

The HELEN series features a diverse lineup ranging from compact and lightweight general-purpose models to high sensitivity, high-volume exhaust models and sniffer-dedicated devices.

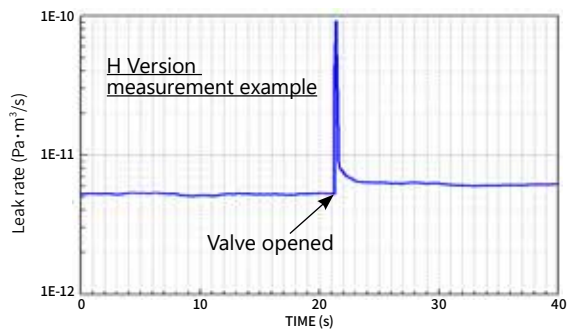
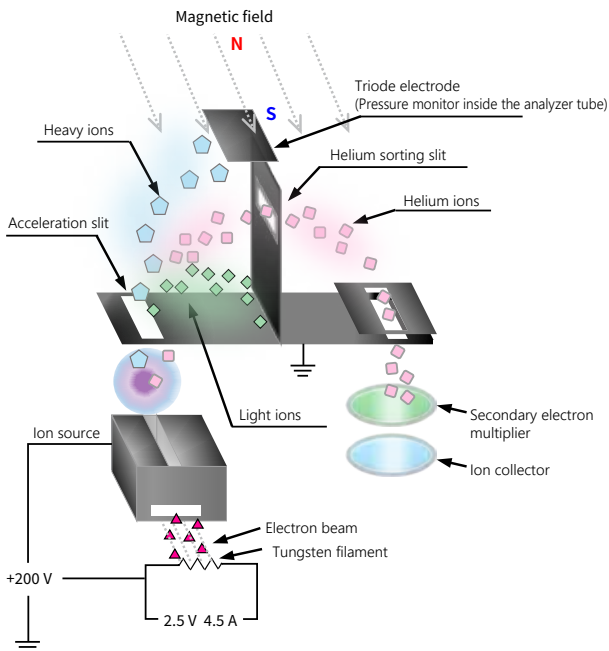
They are perfect for leak tests as well as for field service of vacuum devices or various thin-film deposition systems used in production.

Also, the use of a long-life tungsten filament allows for use in automated testing systems used in mass production of automobiles, food products, and medical supplies.

Features

1. Achieves the highest level of sensitivity and responsiveness in the industry

Equipped with a secondary electron multiplier, this device can not only stabilize the background but can also swiftly detect minute leaks on the order of 10^{-13} Pa·m³/s with good reproducibility.



1.0×10^{-12} Pa·m³/scalibrated leak measurement result

2. Simple operation

- Use the (wired) hand controller to check values away from the HELEN main unit.
- The leak quantity is displayed using large, easy-to-see values, and there are a variety of screen displays.
- Operation switches use hard switches with an easy-to-identify design and a click-like operation.
- Control using two types of communication software is available (optional).
- The mobile software can be used for wireless measurements.



HELEN MOBILE main screen





3. Support for various power supply voltages
AC100 ~ 240 V 1 ϕ

4. Easy maintenance
The customer can perform filament replacement to reduce maintenance costs.



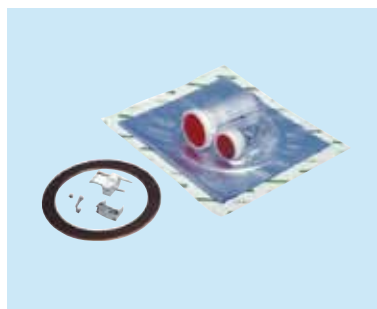
5. It has a handle and large casters to support operation within a factory.



6. Accessories
Accessories are available to support various kinds of measurements, including a sniffer and bombing.



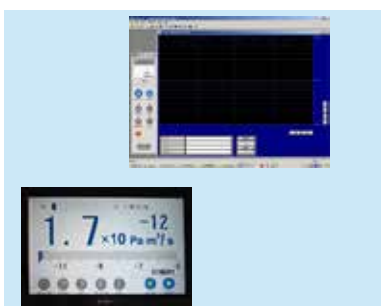
Sniffer probe /Sniffer unit



Filament maintenance kit



Calibration leak



Dedicated PC software (two types)



Various carts



Transport case

■ Selection

M-212LD

Compact !

Highly mobile compact type.



M-212LD-D

Compact & Dry !

Low-particle, compact, and dry type equipped with a diaphragm pump.

Applications

- Vacuum parts
- Welded piping
- Welding bellows
- Airtight terminals



M-222LD

High power !

High power type with increased power over the Model 212's roughing pump.



M-222LD-D

High power and dry !

Portable type equipped with a dry pump.
For a clean environment !

Applications

- Vacuum parts
- Welded piping
- Welding bellows
- Airtight terminals



M-222LD-H

M-222LD-D-H

M-222LD-D-H_500

High response & High power

High sensitivity, high response type equipped with the FINE mode as a standard that uses a platform with even higher performance than the high power type (TMP/valve block).

Provides wet, dry, and 500 L/min multi-stage roots dry pumps in the same package.

Applications

- Vacuum equipment
- Large panel devices
- Accelerators



M-232LD

Sniffer

Sniffer dedicated type
Equipped with many functions fit for sniffer measurement, including an atmospheric concentration tracking function and flow rate direct monitoring (optional).

Applications

- Food products
- Medical applications
- Refrigeration and air conditioning
- Aerospace applications
- Automobiles



System-embedded type

System

This model is for automated testing systems used in mass production.

With an auxiliary pump that can be placed separately, the device can be installed closer to the item being tested, allowing for more compact line construction.

Please inquire regarding specifications.

Applications

- Food products
- Medical applications
- Refrigeration and air conditioning
- Aerospace applications
- Automobiles



Specifications

Standard Type

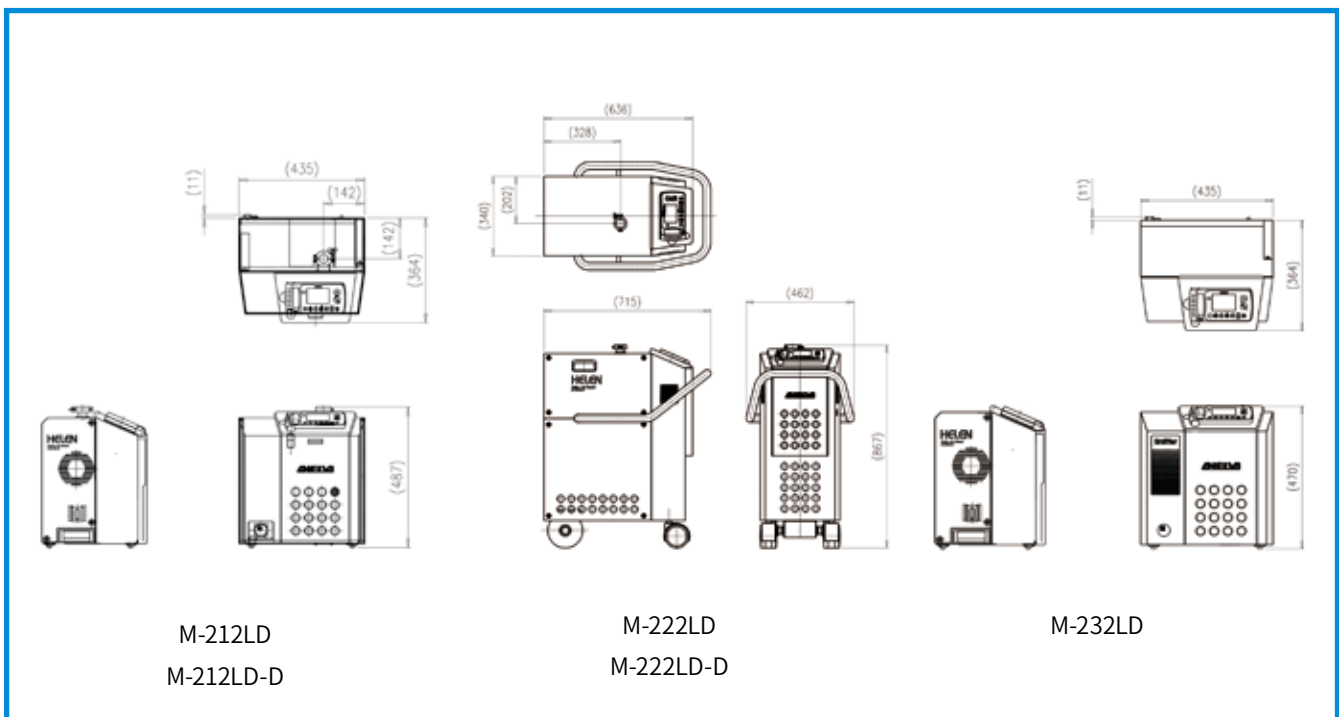
| Type | M-212LD | M-212LD-D | M-222LD | M-222LD-D | M-232LD |
|---------------------------------------------------------|------------------------------------------------|-------------------------------------------------------------|---------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------|
| Version | Compact | Compact & dry | High power | High power & dry | Sniffer |
| Quantitative measurement range (Pa · m ³ /s) | 10 ⁻¹² ~ 10 ⁻³ | | | | 10 ⁻⁸ ~ 10 ⁻¹ (10 ⁻² ~ 10 ⁵ ppm) |
| Inlet port exhaust speed(He) (L/s) | 0.5 (Gross Mode) 2.0 (Middle Mode) | 1.0 (Middle2 Mode) 4.0 (Middle1 Mode) 7.0 (Fine Mode) | 1.8 (Gross Mode) 2.0 (Middle Mode) | 2.0 (Gross Mode) 2.0 (Middle Mode) | Probe suction speed 0.3 Pa · m ³ /s |
| Inlet port shape | NW25 | | | | — |
| Main pump | Turbo molecular pump 50 L/s | | | | |
| | 50 L/s | 70 L/s | 50 L/s | | |
| Roughing pump | Rotary pump 30 L/min | Diaphragm pump 15 L/min | Rotary pump 236 L/min | Scroll type drypump 250 L/min | Rotary pump 30 L/min + Diaphragm pump |
| External interface | RS232C Analog output (2 points) - Standard I/O | | | | |
| Display | 4.1 inch Color LCD | | | | |
| Sniffer probe | 981-9370 (Option) | ※ 1 | 981-9371 (Option) | | Standard |
| Power requirements ⁻² | AC100 ~ 120 V, 8 A | AC100 ~ 120 V, 6.3 A | AC100 V, 15 A | AC100~120 V, 15 A ^{※3} AC200 ~ 240 V, 10 A | AC100 ~ 120 V, 8 A |
| Dimensions (WxHxD) (mm) | 435 × 487 × 364 | | 462 × 867 × 715 | | 435 × 470 × 363 |
| Weight (kg) | 42 | 39 | 85 | | 42 |

※ 1 : Please consult with us.

※ 2 : Supports 115V, 200V, and 230V according to your order specification.

※ 3 : The provided fuses and input cables must be replaced.

Dimensions diagram



■ Specifications

High sensitivity Type

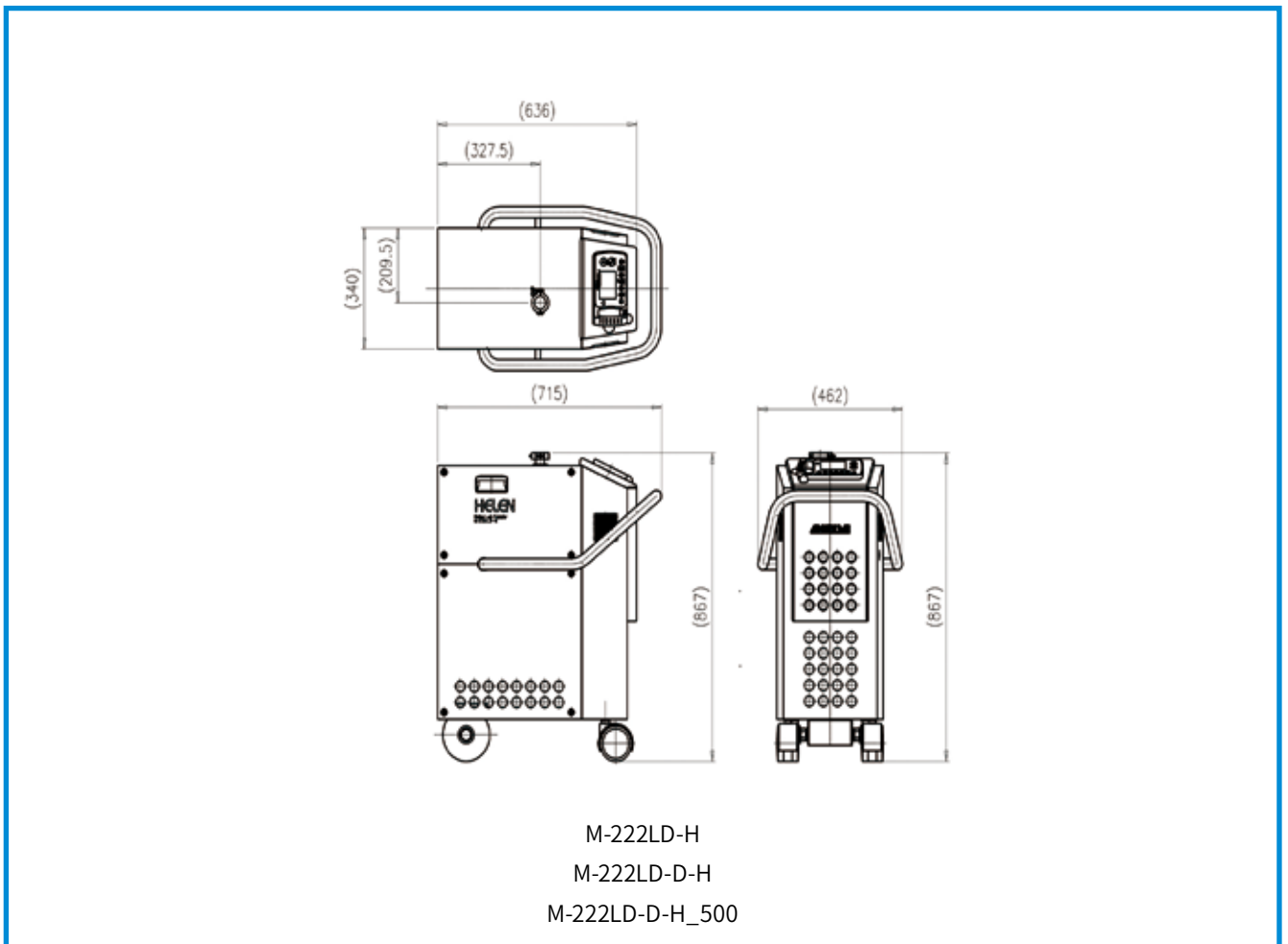
| Type | M-222LD-H | M-222LD-D-H | M-222LD-D-H_500 |
|---------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------|
| Version | High power | High power & dry | High power & dry pump_500 L |
| Quantitative measurement range (Pa · m ³ /s) | 10 ⁻¹³ ~ 10 ⁻³ | | 10 ⁻¹² ~ 10 ⁻³ |
| Inlet port exhaust speed(He) (L/s) | 1.8 (Gross Mode) 4.0 (Middle Mode) 7.0 (Fine Mode) | 2.0 (Gross Mode) 4.0 (Middle Mode) 7.0 (Fine Mode) | 3.5 (Gross Mode) 4.0 (Middle Mode) 7.0 (Fine Mode) |
| Inlet port shape | NW25 | | |
| Main pump | Turbo molecular pump 70 L/s | | |
| Roughing pump | Rotary pump 236 L/min | Scroll type drypump 250 L/min | Multi stage roots type dry pump 500 L/min Bypass exhaust |
| External interface | RS232C | Analog output (2 points) - Standard I/O | |
| Display | 4.1 inch Color LCD | | |
| Power requirements ^{※1} | AC100 V, 15 A | AC100 ~ 120 V, 15 A ^{※2} AC200 ~ 240 V, 10 A | AC100 ~ 120 V, 15 A ^{※3} AC200 ~ 240 V, 10 A |
| Dimensions (WxHxD) (mm) | 462 × 867 × 715 | | |
| Weight (kg) | 85 | | |

※ 1 : Supports 115V, 200V, and 230V according to your order specification.

※ 2 : The provided fuses and input cables must be replaced.

※ 3 : This varies depending on the specifications in your order.

■ Dimensions diagram



Ordering information

| Part Number | Model | Discription | Remarks | Code |
|--------------|-----------------|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------|
| 8B1-20K7-000 | M-212LD | Helium Leak Detector | AC100 ~ 120 V, Compact type 2014VERSION | 26640 |
| 8B1-20K8-000 | M-212LD | Helium Leak Detector | AC200 ~ 230 V, Compact type 2014VERSION | 26616 |
| 8B1-0038-063 | M212LD-D | Helium Leak Detector | AC100 ~ 120 V, Compact type 2014VERSION | 26619 |
| 8B1-20L1-000 | M-222LD | Helium Leak Detector | AC100 V, High power type 2014VERSION | 26650 |
| 8B1-20L2-000 | M-222LD | Helium Leak Detector | AC200 V, High power type 2014VERSION | 26654 |
| 8B1-20LH-000 | M-222LD | Helium Leak Detector | AC110 ~ 120 V, High power type 2014VERSION | 26625 |
| 8B1-20LJ-000 | M-222LD | Helium Leak Detector | AC220 ~ 240 V, High power type 2014VERSION | 26626 |
| 8B1-20KF-000 | M-222LD-D | Helium Leak Detector | AC100 ~ 240 V, Dry pump type 2014VERSION | 26651 |
| 8B1-0037-524 | M-222LD-H | Helium Leak Detector | AC100 V, High power, High sencitivity type 2014VERSION | 26655 |
| 8B1-0038-062 | M-222LD-H | Helium Leak Detector | AC220 ~ 240 V, High power, High sencitivity type 2014VERSION | 26656 |
| 8B1-0037-118 | M-222LD-D-H | Helium Leak Detector | AC100 ~ 240 V, Dry pump,High sencitivity type 2014VERSION | 26662 |
| 8B1-0038-089 | M-222LD-D-H_500 | Helium Leak Detector | AC100 ~ 120 V, High power, Dry pump type 2014VERSION | 26658 |
| 8B1-0038-090 | M-222LD-D-H_500 | Helium Leak Detector | AC200 ~ 240 V, , High power, Dry pump type 2014VERSION | 26558 |
| 8B1-20LN-000 | M-232LD | Helium Leak Detector | AC100 ~ 120 V, suniffer dedicated type 2014VERSION | 26660 |
| 8B1-20LZ-000 | M-232LD | Helium Leak Detector | AC200 ~ 230 V, suniffer dedicated type 2014VERSION | 26661 |
| 8B1-0017-323 | | Tool Case (HELEN2 Transport Case) | HELEN2 Transport Case | 26680 |
| 8B1-0016-590 | | HELEN212 Transport Case | With casters | 26681 |
| 8B1-0016-802 | | HELEN222 Transport Case | With casters | 26682 |
| 8B1-0038-094 | 981-9361 | ASL25V Helium Standard Leak | NW25, calibrated leak rate with valve: $5 \times 10^{-9} \sim 2 \times 10^{-8} \text{ Pa} \cdot \text{m}^3/\text{s}$ | 26801 |
| 8B1-0036-815 | | ASL25N2 Helium Standard Leak | NW25, calibrated leak rate without valve: $5 \times 10^{-9} \sim 2 \times 10^{-8} \text{ Pa} \cdot \text{m}^3/\text{s}$ | 26802 |
| 8G1-0456-019 | 981-9370 | Sniffer Probe for 212/210 | Suction rate: : $0.1 \text{ Pa} \cdot \text{m}^3/\text{s}$ (for HELEN/ALD) | 26810 |
| 8G1-0455-497 | 981-9371 | Sniffer Probe for 222/220 | Suction rate: : $0.3 \text{ Pa} \cdot \text{m}^3/\text{s}$ (for HELEN/ALD) | 26811 |
| 8D1-0006-657 | 981-9790 | He Spray Gun | | 26830 |
| 8G1-0456-323 | 981-9351 | Filament Maintenance Kit | Filament, gasket, ion chamber: 1 each (for HELEN/ALD) | 26850 |
| 8G1-0454-305 | 981-9350 | Filament Assembly | Filament only (for HELEN/ALD) | 26851 |
| 8B1-0017-767 | | Filament Maintenance Kit O-ring type for HELEN | Filament, O-ring, ion chamber: 1 each (for M-232LD/2014VERSION) | 26856 |

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Canon CANON ANELVA CORPORATION



Component Sales Dept. of Head Office

5-1 Kurigi 2-chome, Asao-ku, Kawasaki-shi, Kanagawa 215-8550, Japan

TEL : +81-44-980-3503 FAX : +81-44-986-4038

Canon U.S.A., Inc

3300 North First Street San Jose, CA 95134, U.S.A.

TEL : +1-408-468-2000 FAX : +1-408-468-2343

Canon Europa N.V.

Bovenkerkerweg 59, 1185 XB Amstelveen, The Netherlands

TEL : +31-20-545-8545 FAX : +31-20-545-8222

Canon Semiconductor Engineering Korea Inc.

49,Dosijiwon 1-gil, Godeok-myeon, Pyeongtaek-si, Gyeonggi-do, Republic of Korea

TEL : +82-31-616-2020 FAX : +82-31-616-2023

Canon Semiconductor Equipment Taiwan, Inc.

9F-2, No.25, Pu-Ding Road, Hsinchu, 300, Taiwan

TEL : +886-3-668-6600 FAX : +886-3-668-6969

Canon Singapore Pte. Ltd.

1 Fusionopolis Place #14-10, Galaxis Singapore 138522

TEL : +65-6799-8888 FAX : +65-6271-4226

Canon Optical Industrial Equipment (Shanghai) Inc.

3-4F, South Wing, Building 5, Innovation Galaxy, No.210 Wenshui Rd,
Jing'an District, Shanghai 200072, China

TEL : +86-21-2316-3200 FAX : +86-21-2316-3222

Canon ANELVA Corporation is constantly improving its products, hence specifications are subject to change without notice.

<https://anelva.canon/en/>

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