

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.

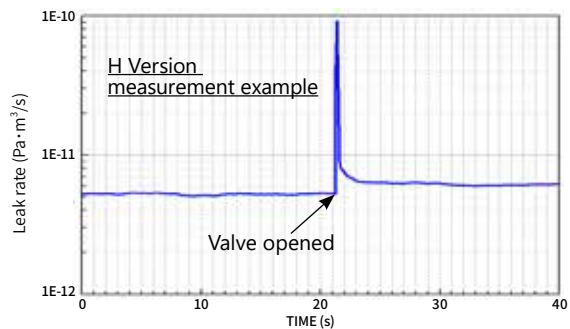
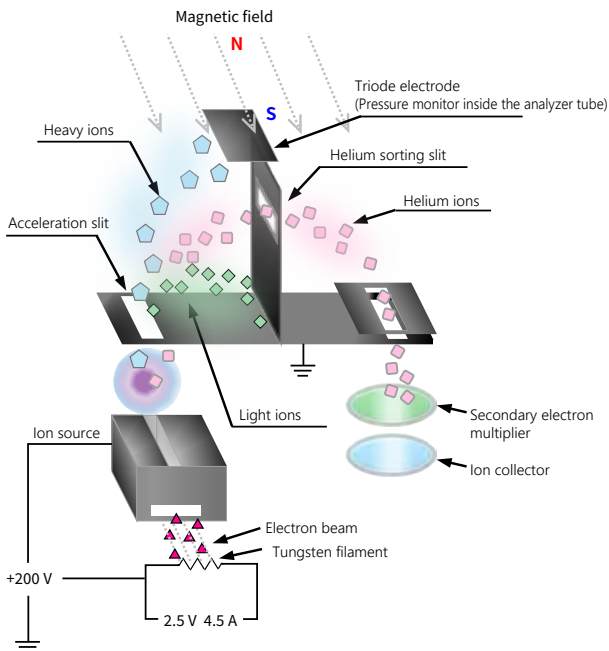
They are perfect for leak tests as well as for field service of vacuum devices or various thin-film deposition systems used in production.

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.



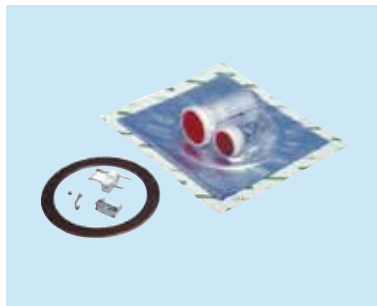
5. It has a handle and large casters to support operation within a factory.



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



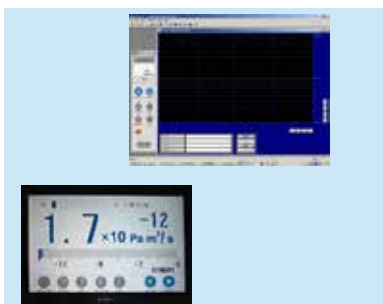
Sniffer probe /Sniffer unit



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

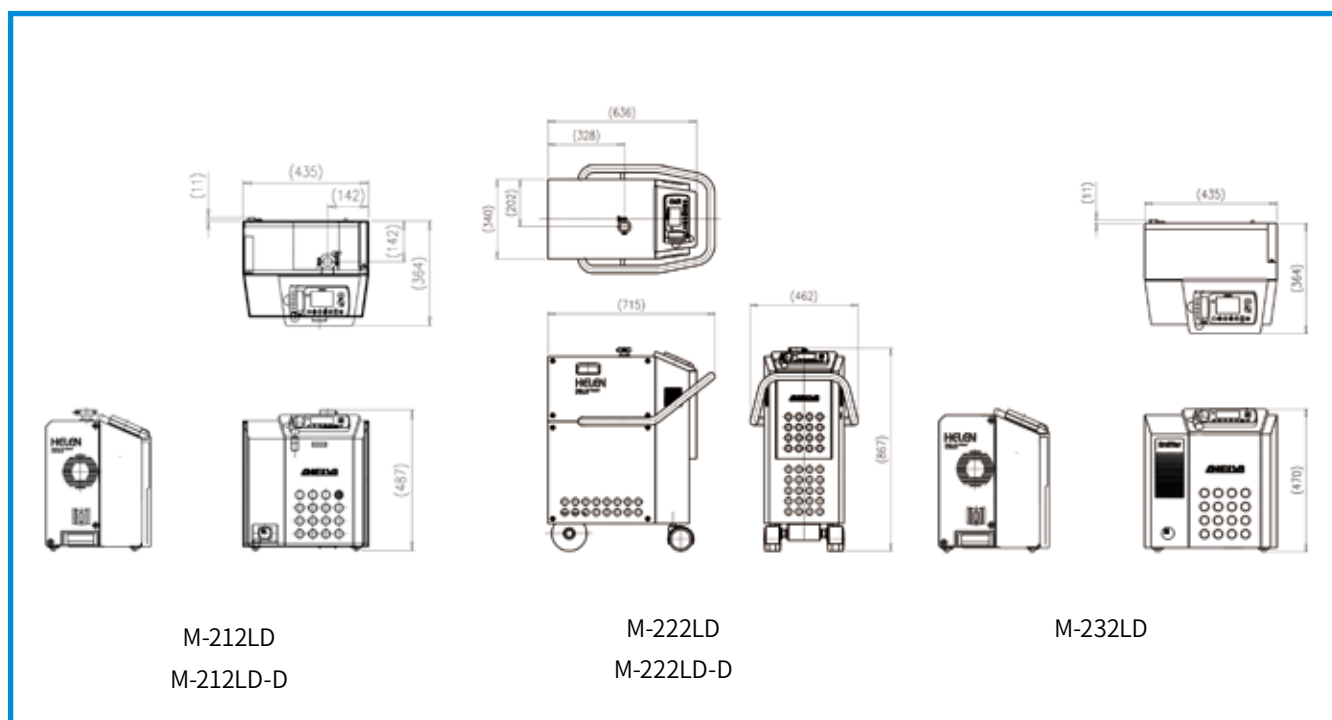
Type	M-212LD	M-212LD-D	M-222LD	M-222LD-D	M-232LD
Version	Compact	Compact & dry	High power	High power & dry	Sniffer
Quantitative measurement range (Pa · m ³ /s)	10 ⁻¹² ~ 10 ⁻³				10 ⁻⁸ ~ 10 ⁻¹ (10 ⁻² ~ 10 ⁵ ppm)
Inlet port exhaust speed(He) (L/s)	0.5 (Gross Mode) 2.0 (Middle Mode)	1.0 (Middle2 Mode) 4.0 (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

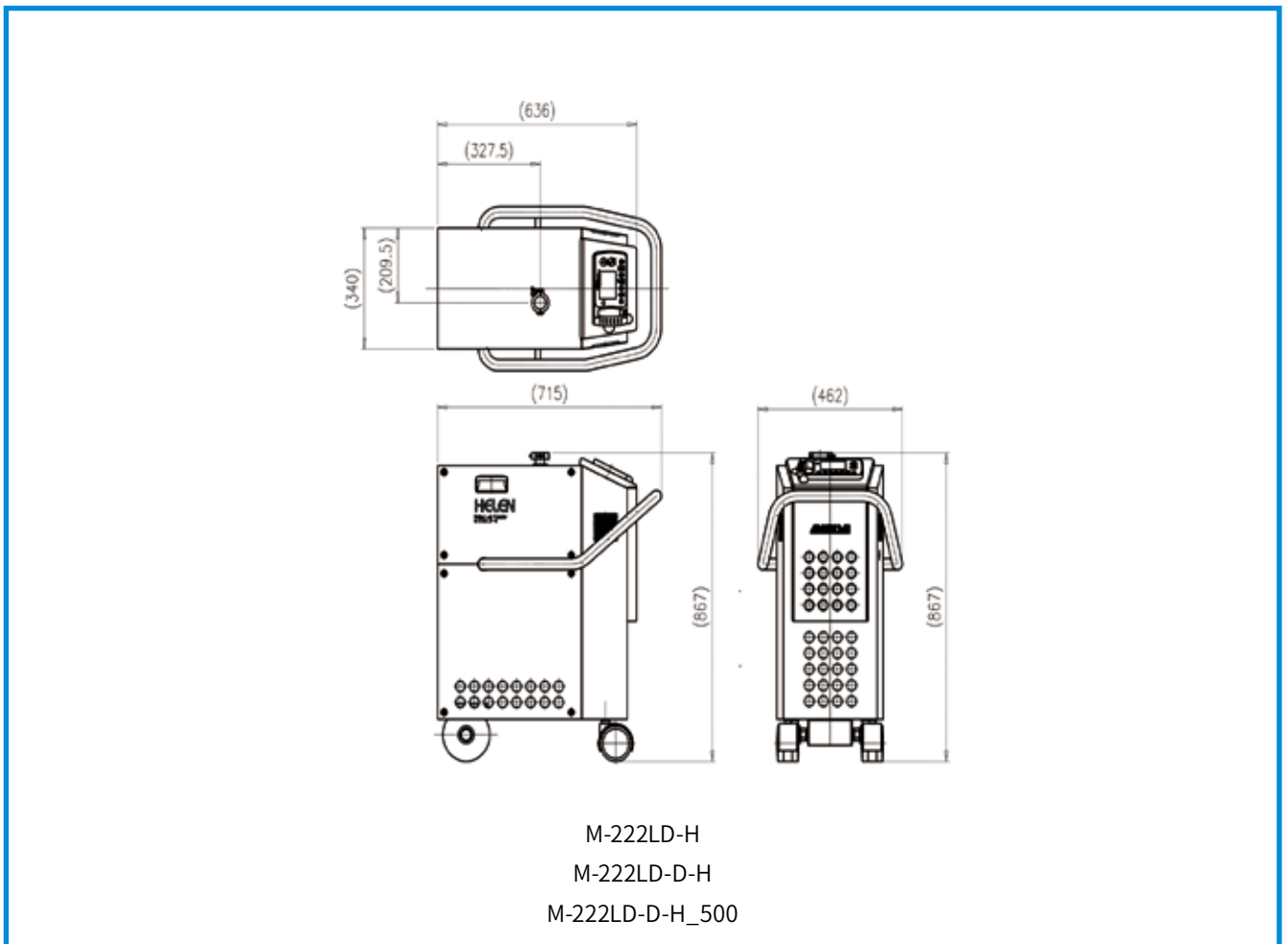
Type	M-222LD-H	M-222LD-D-H	M-222LD-D-H_500
Version	High power	High power & dry	High power & dry pump_500 L
Quantitative measurement range (Pa · m ³ /s)	10 ⁻¹³ ~ 10 ⁻³		10 ⁻¹² ~ 10 ⁻³
Inlet port exhaust speed(He) (L/s)	1.8 (Gross Mode) 4.0 (Middle Mode) 7.0 (Fine Mode)	2.0 (Gross Mode) 4.0 (Middle Mode) 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 ANELVA Corporation is constantly improving its products, hence specifications are subject to change without notice.

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