

ELD500 PRECISION LEAK DETECTOR

The logo for Edwards, featuring a stylized red 'E' with a black swoosh above it, followed by the word 'EDWARDS' in a bold, red, sans-serif font.



EDWARDS THE PARTNER OF CHOICE

Edwards is a world leader in the design, technology and manufacture of vacuum pumps with over 95 years of history and more than 75 years of manufacturing experience.

We believe in delivering results that bring value to our customers by using our breadth of industry experience to identify and apply solutions to your problems. Using the most innovative and up-to-date modeling techniques, we can optimise the pumping configuration for customers to provide a system design giving the maximum performance in the most reliable and cost-effective way.

ELD500 PRECISION LEAK DETECTOR

Efficient and reliable performance

Edwards new ELD500 fully automated leak detector has arrived. It's designed for fast, accurate leak detection in a wide range of applications and is fully mobile with an easy to use control interface. Edwards ELD500 is your perfect partner in leak detection.

- Low cost of ownership
- Ready to go mobile solution
- Customisable for any application
- High stability and accuracy

Applications

Analytical Instruments

- Electron microscopy
- Leak detection
- Mass spectrometry
- Surface analysis

Research and development

- Space simulation
- Cryogenic research
- Nanotechnology
- Coating systems

Semiconductor

- Load lock
- Transfer
- Metrology
- Lithography
- PVD (physical vapour deposition)
- Plasma etching
- Implant source
- CVD (chemical vapour deposition)
- Flat panel display
- LED

Industrial

- Industrial leak detection
- Electron beam welding
- Lamp and tube manufacturing
- Glass coating
- Brake line and air conditioning
- Refrigeration system manufacturers
- Heat treatment
- Power
- Vacuum furnaces

High energy physics

- Beam lines
- Accelerators
- Fusion
- Laser evacuation



Low cost of ownership

The proven design of the Edwards ELD500 leak detector, combined with low energy consumption, extended warranty and even longer life ion source, ensures exceptional low cost of ownership with no compromise on performance.

- High efficiency and low operating power consumption
- Highly reliable product with long maintenance intervals and low part replacement requirements
- Long life ion source with a 30 month warranty



Ready to go mobile solution

Edwards ELD500 is truly ready to go in under two minutes from power on. Users can benefit from simple pass/fail readings through to detailed analysis via the easy to read control interface, and due to the low weight and integrated carry handles, it is mobile enough to be bench top or trolley mounted.

- Large clear graphical display with direct access to key functions for incredible ease of use
- Truly portable with weight from only 30 kg and accessories including a trolley with space for an additional pump and a helium gas bottle
- The leak detector can be transported in any orientation and can be ordered with an optional transport case on wheels for true portability
- Rapid start up, from power on to first measurements in only 107 seconds



Customisable for any application

With three variants in the range, FLEX, WET and DRY, plus an extensive catalogue of accessories, the versatile Edwards ELD500 leak detector is ideal across all applications. At the push of a button the ELD500 can easily be set to work in either vacuum mode for precise measurement of leak rate or sniffer mode for identifying leak location.

- All models feature a rugged turbomolecular pump optimised for the rigours of portable leak detection
Variants include

- WET version with an integrated oil sealed rotary vane pump
- DRY version with an integrated helium optimised diaphragm pump
- FLEX version without a primary pump, ideal for trolley mounting along with a larger primary pump such as an Edwards nXDS scroll pump

- Flexible remote control options, features include

- Colour touch screen control with local graphical display
- Audible leak indication via loudspeaker or headphones
- Data logging to local memory or USB stick
- Wired or wireless models available
- Wireless model allows simultaneous control of up to 10 leak detectors

- The partial flow kit allows effective pump down of large or contaminated volumes

- Compatible with WET and FLEX variants
- Allows automatic calculation and display of actual leak rate
- Enables leak detection from atmospheric pressure

- Extensive range of sniffer lines available for accurate pin-pointing of leaks on pressurised systems

- Standard sniffer line enables operation up to 4m from the ELD500
- Longer sniffer lines of up to 50m can be used with the sniffer extender interface



High stability and accuracy

Excellent repeatable accuracy is achieved by the Edwards ELD500 through calibration with the integrated test leak source and high quality mass spectrometer. Whether being used on a production line, where consistent measurement repeatability is critical, or in a laboratory environment, typically requiring the measurement of extremely low leak rates, the ELD500 is your perfect partner.

- Automated, simple, high accuracy calibration possible via the integrated long life calibrated test leak
- Optional external calibrated test leaks available for applications requiring precision accuracy traceable to international and customer/company standards
- Excellent long term stability ensured by class leading 180 degree mass spectrometer
- Fastest recovery following helium contamination thanks to highest helium pumping speed in fine mode
- High sensitivity leak detection with measurement of leak rates for Helium of $<5 \times 10^{-12} \text{mbar ls}^{-1}$ in vacuum mode and $<7 \times 10^{-9} \text{mbar ls}^{-1}$ in sniffer mode



Technical data

| ELD500 Leak Detector | Units | WET | DRY | FLEX |
|--|--------------------------------|--------------------------|--------------------------|----------------------------|
| Lowest detectable helium leak rate | | | | |
| Vacuum operation | mbar ls ⁻¹ | $\leq 5 \times 10^{-12}$ | $\leq 3 \times 10^{-11}$ | $\leq 5 \times 10^{-12}$ * |
| Sniffer operation | mbar ls ⁻¹ | $\leq 7 \times 10^{-9}$ | $\leq 7 \times 10^{-9}$ | $\leq 7 \times 10^{-9}$ |
| Maximum measurable helium leak rate | | | | |
| Vacuum operation | mbar ls ⁻¹ | > 0.1 | > 0.1 | > 0.1 |
| Measurement ranges | decades | 12 | 12 | 12 |
| Maximum permissible inlet pressure | mbar | 15 | 15 | 15 |
| Pumping speed during pumpdown, 50 Hz/60 Hz | m ³ h ⁻¹ | 2.5/3 | 1.6/1.8 | N/A |
| Helium pumping speed in the fine mode | ls ⁻¹ | 3.1 | 3.1 | 3.1 |
| Time constant for leak rate signal | s | < 1 | < 1 | < 1 |
| Time until ready for operation | min | ≤ 2 | ≤ 2 | ≤ 2 |
| Power consumption | VA | 420 | 350 | 200 |
| Inlet flange | | NW25 | NW25 | NW25 |
| Dimensions (WxHxD) | mm | 495x456x314 | 495x456x314 | 495x456x314 |
| Weight | kg | 40 | 35.5 | 30 |

* backing pump dependent

Ordering information

| Product Description | Order Number |
|--|--------------|
| ELD500 WET, 200-240V,50/60Hz | D13510903 |
| ELD500 WET, 100-120V, 50/60Hz | D13510904 |
| ELD500 WET, 100-120V, 60Hz | D13510906 |
| ELD500 DRY, 200-240V,50/60Hz | D13520903 |
| ELD500 DRY, 100-120V, 50/60Hz | D13520904 |
| ELD500 DRY, 100-120V, 60Hz | D13520906 |
| ELD500 FLEX, 100-240V,50/60Hz | D13530000 |
| ELD500 RC - Wired - Remote control | D13550100 |
| ELD500 RC - Wireless - Remote control | D13550110 |
| ELD500 RC - Wired - 8m extension cable | 14022 |
| ELD500 RC - Wireless - Extra transmitter | D13550130 |
| ELD500 SL - Standard sniffer line 4m | D13550300 |
| ELD500 SL - Extended SL Interface | D13550200 |
| ELD500 SL - Extended sniffer line 5m | 14008 |
| ELD500 SL - Extended sniffer line 20m | 14009 |
| ELD500 SL - Extended sniffer line 50m | 12183 |
| ELD500 Partial flow adaptor | D13550400 |
| ELD500 Transport Case | D13550500 |
| ELD500 Cart without Ebox | D13550600 |
| ELD500 SG - Helium spray gun | 16555 |
| CL-Internal calibrated leak | D13550910 |
| CL-Cal Leak bspk. 0.5 - 1E-7. Screw Skt | D13550930 |
| CL-calibrated leak HE 4 to 6 | D13550950 |

Extended warranty

| Product Description | Order Number |
|---|--------------|
| Extended warranty from 18 months to 3 yrs | EW3AA5100 |
| Extended warranty from 18 months to 5 yrs | EW5AA5100 |





Global contacts

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