



# AGILENT VS SERIES LEAK DETECTORS

Wide range, high performance systems



**Agilent Technologies**

# Features and Benefits



## Easy-to-Use - Two Button Operation

VS Series Leak Detectors combine the simplicity of two-button operation with advanced system intelligence.

- Fully automated start-up and calibration maximizes productivity
- Intuitive menu structure is easy to navigate
- Programmable test sequences improves testing efficiency
- Color touch screen provides excellent clarity, even at wide angles



## Powerful - Broad Range of Test Methods

The state-of-the-art spectrometer and vacuum system design provides powerful capability, enabling a broad range of test methods for specific applications.

- High test port pressure allows detection of large leaks
- $5 \times 10^{-12}$  MDL (sensitivity) meets the most stringent leak test requirements
- High helium pumping speed ensures fast system response and clean-up times
- New high efficiency ion source and beam optics optimize sensitivity and mass separation



## Versatile - Multiple System Configurations

A wide range of options allows for broad configuration flexibility, meeting all application requirements and test environments.

- Primary pump and system mounting options may be selected to best suit your needs
- Multiple language and units capability permits easy implementation worldwide
- Compact lightweight design enables easy transport from one test location to another



## Dependable - Robust Design

Robust design innovations allow the VS series to conform to the most rigorous industrial standards and operate dependably in the most challenging environments.

- Fast clean-up time enhances system up-time
- Robust Faraday cup technology delivers proven reliability with low cost of ownership
- Conforms to CE, UL and CSA standards, assuring global acceptance



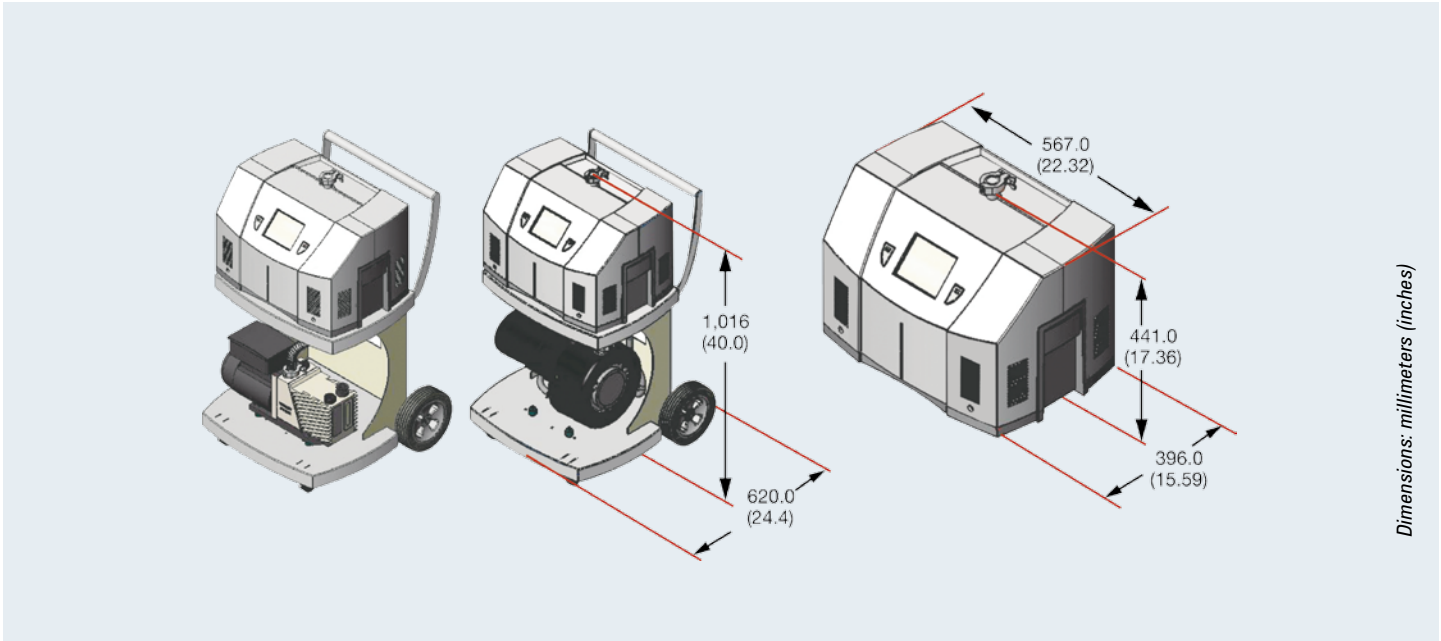
## Truly Portable - Wireless Remote Control/Display

Hand-held remote performs essential functions up to 100 meters (328 feet) indoors, facilitating access to all leak sites.

- Eliminates cumbersome cables while extending range
- Allows testing of large systems by a single operator
- Leak detector can be located outside cleanroom to prevent contamination
- Multiple channels for use of one remote with up to twenty leak detectors

# Technical Specifications

Model Number	PR02	PD03	BD/MD15	BR/MR15	BD/MD30+
Configuration options	Portable	Portable	Bench/Mobile	Bench/Mobile	Bench/Mobile
Primary pump type	Rotary vane pump	Dry scroll pump	Dry scroll pump	Rotary vane pump	Rotary vane pump
	DS-42	Dry pump combo	IDP-15	DS-302	TS-620
	2 m³/hr (34 l/m)	3 m³/hr (50 l/m)	15 m³/hr (256 l/m)	14 m³/hr (232 l/m)	30 m³/hr (500 l/m)
Minimum detectable leak at 1000 ppm ambient helium	5 x 10 <sup>-12</sup> atm cc/sec: 5 x 10 <sup>-12</sup> mbar l/s: 5 x 10 <sup>-13</sup> Pa m³/sec helium				
Maximum test port pressure	13 mbar, 10 Torr, 1330 Pa				
Helium pumping speed @ test port (fine test)	1.8 l/s				
Calibration routine	Automated or manual (internal or external)				
Background suppression	Push button initiated auto zero, and auto zero<zero function				
User interface	High clarity, color display, TFT touch screen				
Selectable languages	English, French, German, Japanese, Korean, Mandarin, Spanish, Russian				
Automated cycling	Programmable rough time, test time, reject set points				
Response time	< 0.5 seconds				
Set points	Standard, 5 set points, N/O or N/C; 3 leak rate, 1 pressure, 1 audio				
Communications interface	RS232 and analog (standard), Discrete IO (optional)				
Conformance standards	UL/CSA, CE				



# Ordering Information

## VS Models

Description	Ordering Instructions
VS PR02 Portable Leak Detector, 2 m³/hr rotary vane pump	Choose Product Number G8600A
VS PD03 Portable Leak Detector, 3 m³/hr dry scroll pump combo	Choose Product Number G8600B
VS MR15 Mobile Leak Detector, 15 m³/hr rotary vane pump	Choose Product Number G8601A
VS MD15 Mobile Leak Detector, 15 m³/hr dry scroll pump	Choose Product Number G8601C
VS MD30+ Mobile Leak Detector, 30 m³/hr dry scroll pump	Choose Product Number G8601B
VS BR15 Bench Mount Leak Detector, 15 m³/hr rotary vane pump	Choose Product Number G8602A
VS BD15 Bench Mount Leak Detector, 15 m³/hr dry scroll pump	Choose Product Number G8602C
VS BD30 Bench Mount Leak Detector, 30 m³/hr dry scroll pump	Choose Product Number G8602B

## Additional Options (Add Option Number to Product Number as desired)

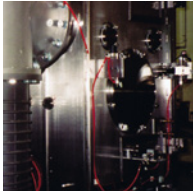
Description	Ordering Instructions	Benefit
Oil Mist Eliminator for DS42 RVP	Add Option #100	Reduces oil vapor in pump exhaust.
Discrete IO Interface	Add Option #101*	Allows control and monitoring via PC or PLC. 12 outputs allow recording of key test data and 8 inputs permit total control of the instrument.
Wireless remote, base unit	Add Option #102	Allows communication with wireless hand-held remote control, ordered separately (p/n G8600-60002).
Nitrogen vent	Add Option #103	Allows the VS leak detector to be vented with nitrogen or other gas of the users preference. Maximum supply pressure 2 PSI (0.14 bar). Requires user supplied overpressure protection.
1 ½ inch compression testport	Add Option #104	For customers who prefer the old-style 1 ½ in compression fitting on the leak detector inlet.
Test fixture cable	Add Option #105*	For customers who wish to add a test fixture and test initiation switch. Requires Discrete IO Interface. Order Option #101.
Harsh Environment (HE) Probe	Add Option #106	Designed to withstand the wet environment and high temperatures inside condenser piping without the need for dryers, chillers, a secondary vacuum pump, or throttling valves.

\* Option #101 is required when Option #105 is ordered. Example: G860xx#101#105.

## Accessories (Ordered Separately)

Description	Part Number	Benefit
Power Probe, NW25	K9565306	Rugged sniffer probe for testing of sealed containers pressurized with helium; adjusts for varying sensitivity and response time.
Helium spray probe	K0167301	Allows spraying of helium to find the exact location of a leak. Includes three nozzle types for different application requirements.
Wireless remote (hand held unit)	G8600-60002	Brings all major functions of the leak detector to the user's fingertips, enabling a truly portable solution at up to 100 meters.
External calibrated leaks	F8473xxx	Leak traceable to NIST standards for precise calibration of your instrument
Tuning leaks	K1608301 R1947301	Ten segment calibrated needle valve to aid gross leak testing.
Universal test fixture (Flapper box)	L6241xxx	This accessory makes testing of small parts very fast and almost totally automatic.
Leak Test Data Wizard	VSLTDW	Comprehensive, user-friendly data management software enables automation of basic leak test processes, tracks data history, and provides graphical display of leak test data.

# Applications



## Industrial Process Tools

VS Series Leak Detectors can help rid your process tool of costly and inefficient leaks. Robust system features assure reliable operation in the most challenging industrial environments. Superior pumping characteristics such as high inlet pressure tolerance and split flow capability deliver fast response and clean-up times. Wireless remote control enables single-person leak testing of even the largest systems.

- Vacuum furnaces
- Coating systems
- Electronic beam welders



## Power Generation

Leaks within power plant condensers can cause a significant loss of efficiency. Simple, intuitive operation allows intermittent use without excessive training requirements. Wireless remote control with an operating range of 100 meters (328 feet) provides true hand-held portability, enabling leak testing by a single operator.

Power generation facilities, chemical plants and similar facilities require a leak detector to sample gas that is primarily water vapor (steam) and/or contains chemicals that would damage the detector.

To prevent this damage from happening, Agilent has developed a specialized probe and leak detector configuration tailored to the demanding requirements of these applications.

- Condensers
- Heat exchangers
- Steam circuits

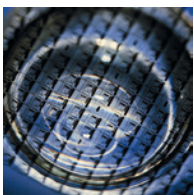


## High Energy Physics

High sensitivity, large roughing capacity and portability are essential for leak testing accelerators and beam lines. These instruments provide excellent mass separation that differentiates the smallest helium leaks from residual water vapor and hydrogen, and are available with large, dry roughing pumps to evacuate large volumes, or smaller internal

pumps when used with turbo pumping systems. Wireless remote control with an operating range of 100 meters (328 feet) enables a single operator to check potential leak sites without a cord of any kind.

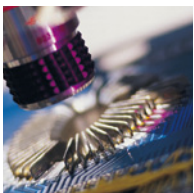
- Accelerators
- Beam lines
- Synchrotrons



## Semiconductor Production

VS Series Leak Detectors combine high sensitivity and large, dry rough pumping capacity to meet the testing needs of semiconductor processing equipment and gas handling systems. With the high inlet pressure tolerance and fast clean up and response times, these units excel at locating leaks in both evacuated and pressurized systems. A clean room technician can use the hand-held wireless remote control while the leak detector remains installed in a less critical area.

- Process tools
- Gas panels
- Gas transfer lines



## Small Parts Manufacturing

VS Series Leak Detectors employ high inlet pumping speed and high inlet pressure tolerance to minimize test cycle time, thereby maximizing production throughput. Programmable test sequences simplify daily operation, minimize operator error, and maximize your production efficiency. Optional "Leak Test Data Wizard" software can be used to collect data for quality control purposes and even automate test cycles.

- Automotive
- Electrical
- Refrigeration
- Hermetic packaging
- Medical & Implantable devices



## General R&D

Research and university labs often require a portable leak detector with the versatility to cover a wide range of applications. The ability to be easily moved from lab to lab, in conjunction with high performance specifications in both the evacuation and pressurized mode, make the VS Series an essential tool for this environment.

- Electron microscopes
- Experimental chambers
- Surface analytical systems
- Space chambers



# Advantage Services



Agilent Advantage Service not only protects your investment in Agilent leak detectors – it connects you with our global network of experienced service professionals dedicated to your success and productivity so you can rest assured that every day, you are:

- ✓ Maximizing your throughput
- ✓ Producing reliable results with the greatest accuracy and sensitivity
- ✓ Ensuring your equipment is fully compliant with industry regulations

## Skilled engineers keep your system operating at peak performance

With the most highly trained engineers in the industry, Agilent completes over 85% of service calls the first day, and enjoys a 98% satisfaction rate among customers.

With Agilent attending to your equipment, you can stay focused on the work at hand knowing your leak detector is operating at peak performance.

## CHOOSE THE PLAN THAT'S RIGHT FOR YOU

**Agilent Advantage GOLD:** *When you simply can't afford downtime.*

Priority response coverage for operations that need mission-critical systems up and running at all times. Comprehensive support ensures continuous high performance operation.

**Agilent Advantage SILVER:** *If optimizing productivity matters to you.*

Ideal if you do not require the priority response of Gold, but want complete annual coverage to keep your equipment operating at the highest levels.

**Agilent Advantage BRONZE:** *Protect your investment.*

Peace of mind that an extended warranty provides.

**All plans offer full warranty coverage!**

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