



Leak Test Workstations for the New Millennium

SMARTSTATION LEAK TEST SYSTEMS



“The *SMARTSTATION* family of Leak Detection Systems combines the latest in digital sensor technology, system networking and proven industry-tested design to provide leading edge solutions to the Production Leak Testing market.”

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Applications:

- ▶ Air-Conditioning Manufacturing
- ▶ Refrigeration Manufacturing
- ▶ Semiconductor Manufacturing
- ▶ Chemical Industry
- ▶ Automotive Industry
- ▶ Battery Manufacturing
- ▶ Research and Development
- ▶ Aeronautics / Aerospace

SMARTSTATION Philosophy:

SMARTSTATION Leak Detectors take the latest developments in sensor technology and data communications and integrate these in systems that are built on years of production line and stand-alone installation experience.

VTI understands that production requirements, irrespective of the industry of application, focus on meeting a specific test specification, repetitively, reliably, and with a high confidence factor while maximizing production through-put and ease of use.

With this in mind, VTI designs **SMART** simplifying operation and maintenance tasks.

Operation is a breeze with self-monitoring and calibration routines automatically insuring correct operation.

Maintenance is equally straight-forward with systems constructed from 'standard' (not proprietary) vacuum components and designed for easy access.

Designed to operate 'stand-alone', in sequence with other **SMARTSTATIONS** or automated **Custom Systems**, each unit provides a key function in a step by step component Leak Detection process.

Application:

The **SMARTSTATION** system line covers all aspects of component leak detection ranging from **Pressure Decay** techniques to cover relatively large leaks, through **Helium** or **Refrigerant "sniffing"** for locating small leaks to the **POLARIS** leak detector for the very lowest product leak testing specifications.

Production facilities usually require a combination of these techniques together, as volume increases, with automated **Custom Systems** to fulfill production needs.

In application, these systems are required to operate complementarily and integrate such that the test facility can operate as a whole unit.

VTI's experience insures that **SMARTSTATIONS** will work together and are capable of integration with any VTI Custom System whether purchased today or at a later date when production requirements change or increase.

The focus on system **operation, maintenance** and system **UP-TIME** combines with the practical application focus on **integration** and **future expansion** to make VTI **SMARTSTATIONS** a sound investment.

Ask for the **Custom System capability** brochure – **CUSTSYS-DATA** - for further information on this capability.

SMARTSTATION PD, PDC and PD Plus Pressure Decay and Charging Leak Detectors

The **SMARTSTATION PD, PDC and PD Plus** leak detection systems offer a combination of traditional Pressure Decay Leak Detection together with the capability of performing necessary product charging routines. Available in single or dual port formats and in Regular and High pressure variants, these **SMARTSTATIONS** are configurable to production pressure specifications, through-put requirements and test unit internal volume needs.

The Dual Port system increases through-put by charging one test piece while testing a second. Operational pressure ranges are available from 0-25, 0-100, 0-500 and 0-1000 psig. Leak rate is displayed in user selectable (equivalent) units.

Ask for the **SMARTSTATION PD Series** brochure – **SmartStationPDSeries-DATA** – for more detailed information or visit the VTI website.



Call Toll Free 1-800-704-4774 – www.vacuumtechnology.com

SMARTSTATION LEAK DETECTOR SYSTEMS ...

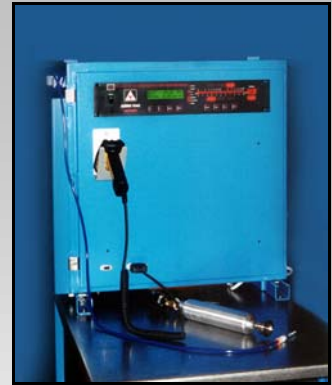
SMARTSTATION HS and HS Plus Helium "Sniffer" (HS – Shown right) and Charger (HS Plus)

The **SMARTSTATION HS** and **HS Plus** offers an unmatched level of high sensitivity, speed, construction and reliability performance for Helium Sniffing applications.

In the **SMARTSTATION HS Plus**, the capabilities of the system are expanded to include automatic product evacuation and charging in preparation for leak testing providing repeatable testing and product quality.

With 1×10^{-6} Std cc/sec sensitivity, a measurement range of 1×10^{-6} to 1×10^{-1} Std cc/sec and a response time at the inlet port of less than 0.5 sec the **SMARTSTATION HS Series** are capable packages. Optional Bar Code Scanners and Calibrated Leaks tailor the instrument to your specific needs.

Ask for the **SMARTSTATION HS/HS Plus** brochure – SMARTSTATIONHSSeries-DATA



SMARTSTATION RS and RS Plus Refrigerant "Sniffer" (RS) and Charger (Plus – Shown Left)

The **SMARTSTATION RS** and **RS Plus** offers an unmatched level of high sensitivity, speed, construction and reliability performance for Refrigerant Sniffing applications.

In the **SMARTSTATION RS Plus**, the capabilities of the system are expanded to include automatic product evacuation and charging in preparation for leak testing providing repeatable testing and product quality.

With 1×10^{-6} Std cc/sec sensitivity, a measurement range of 1×10^{-6} to 1×10^{-1} Std cc/sec and a response time at the inlet port of less than 0.5 sec the **SMARTSTATION RS Series** are capable packages. Monitor R22, R134a, R410a, R407, SF6 and leak tracer gases other than Helium. Optional Bar Code Scanners and Calibrated Leaks tailor the instrument to your specific needs.

Ask for the **SMARTSTATION RS/RS Plus** brochure – SMARTSTATIONRSSeries-DATA

SMARTSTATION ES and ES Plus Evacuation Station (ES) with Gas Analysis (ES Plus)

Product evacuation needs are comprehensively addressed by the **SMARTSTATION ES** and **ES Plus** workstations. Uniquely engineered to operate 'satellite style' from a central computer workstation, these instruments offer an unmatched level of flexibility to align with production demands, integration with other **SMARTSTATION** units on the line and are mechanically engineered to install without interfering with the existing production line.

The **SMARTSTATION ES Plus** expands the system to include the ability to carry out 'Gas Analysis' of the product under evacuation. This unique ability allows the operator to determine whether a slow pump down rate is due to moisture, contamination with production lubricants or some other reason. This allows an informed decision to be made on whether the pump down is complete or should continue. Valuable time and cost savings can be made in this way.

Ask for the **SMARTSTATION ES/ES Plus** brochure – SMARTSTATIONESSeries-DATA



SMARTSTATION Repair Full capability Repair Station

The **REPAIR STATION** provides all functions needed for an off-line repair loop set-up. Failed units can be extracted from a working production line, fault identified and repaired for verification via a Go-No-Go tester before being appropriately re-inserted on the main production line without halting the main line.

Providing full **Pressure Decay**, **Evacuation**, **Charging** and **Sniffing** capabilities supported by a PC for system control, data display, and data-logging, the **REPAIR STATION** is capable of handling the broadest range of test piece failures. When integrated with VTI systems, the user is "guided" on how to locate a leak based upon the actual leak rate. The package is complete with purge gas filtration and regulation, Bar Code Scanner, Data-logging and the ability to integrate to plant data system.

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AERO VAC ODYSSEY – SMARTTECHNOLOGY ...

The Heart of our SMARTSTATION Leak Test Systems ... (except SmartStation PD)

The **AERO VAC** Magnetic Mass Spectrometer has a long and established pedigree. The first **AERO VAC** was launched in 1965, with the newest, digital version being launched in 2001 – aptly named, the **ODYSSEY**.

Technologically, the **ODYSSEY** is a far cry from the original model employing the very latest in digital, computing and network technologies.

Fundamentally, the **ODYSSEY** uses the magnetic sector principle for mass separation – the original technique – which today remains the choice of the serious scientist and is universally employed in any dedicated Mass Spec based **Leak Detection system**.

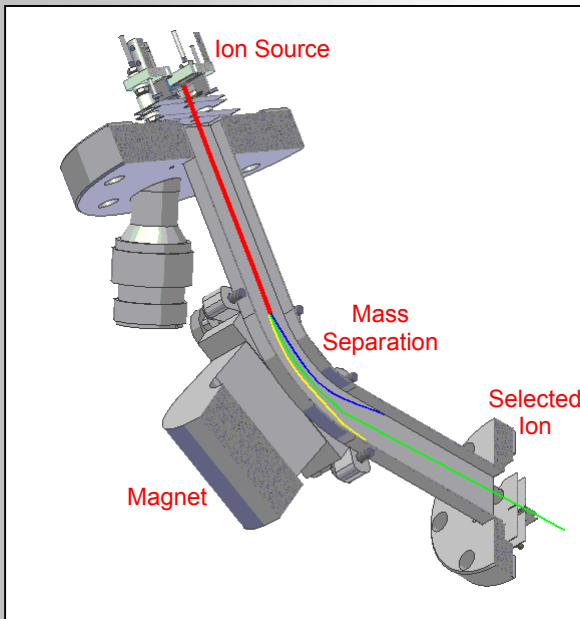
This is as a result of the system's fundamental simplicity, ruggedness and serviceability which cannot be matched by any other analyzer.

The **ODYSSEY** is a “smart” instrument that can be run stand-alone or connected to a PC. Front panel controls and displays make operation a breeze and optional Windows based control and data handling software provides for a complete range of analysis capabilities with a PC.

Next generation electronics allow a vast **increase in scan speed** over other instruments allowing for true fast **Leak Signal** trend and transient monitoring.

Encounter software is optionally available with **SMARTSTATIONS**. With an intuitive user interface that includes linearized mass scale and multi decade display of peak intensity, the package is immediately “familiar” to the seasoned user and new operator alike.

ASK FOR the **ODYSSEY** brochure – **ODY-DATA** – for more detailed information or visit the VTI website.



MASS SPECTROMETER FEATURES

- 1) **High Sensitivity Ion Source** – New design provides greatly improved efficiency/sensitivity.
- 2) **Pre-focused Ion Source** – Factory aligned and never needs adjusting.
- 3) **Dual Filaments** – Ensure continuous operation.
- 4) **“Soft-Start” Power Up** – Prolongs filament life.
- 5) **Over-pressure protection** – Guards against filament burnout during operation.
- 6) **High Pressure Sensing** – Prevents start-up at atmospheric pressure.
- 7) **Rugged construction** – Contamination resistant and robust construction for harsh applications and environments.

MORE INFORMATION ...

A wealth of further information is available on the VTI website. You can visit the **Leak Test Systems** and **Mass Spectrometry** web pages or browse through the library to get specification sheets, technical support sheets and papers on related topics together with information on other VTI products and services.



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