



The RS-Series (*RS and RSPLUS*) REFRIGERANT SNIFFING LEAK DETECTION SYSTEMS

The **SMARTSTATION RS** and **RSPlus** feature VTI's AERO VAC *Odyssey* mass spectrometer as the measurement heart of the system with high sensitivity, speed and rugged construction.

Both units provide front panel display of signal levels during the measurement cycle. This is augmented by an audible signal to allow leak seeking without visual reference.

The Digital electronics in the **SMARTSTATION RS** and **RSPlus** allow the instrument to be tuned to the different peaks necessary for monitoring different refrigerants. The system can also be switched from 'direct' sampling to 'counter-flow' sampling allowing Helium to be monitored as a test gas. The electronics also provide precise control over test sequence parameters, operator prompts as necessary, and include diagnostic functionality to allow rapid fault remedy and maximize system up-time critical to the production environment. The unit can also be integrated into the test procedure with 'Test Inter-locking' and connected to the Plant Information Management System for product tracking and test result logging purposes. A field replaceable sniffer probe with filter assembly and the utilization of a dry sample pump make system maintenance simple and efficient.

The **SMARTSTATION RSPLUS** additionally offers Pressure Decay, Evacuate, Charge, and Exhaust line valves and an additional front panel LCD display. This allows automatic preparation of the test piece with a pressure decay test, evacuation and charge with Refrigerant prior to sniffer leak testing. This minimizes test inconsistencies and ensures uniform test and product quality and identifies units with gross leaks saving valuable time (and Refrigerant) on the production line. Optionally, a recovery valve can be added to permit recovery of the Refrigerant charge after each test with a separate recovery system.



Features of the RS-Series Models:

- **INDUSTRIAL CONSTRUCTION:** for continuous operation in the production/manufacturing environment.
- **INTEGRATION WITH THE PLANT:** SMARTSTATIONS can be interlocked into the test sequence and/or integrated into the Plant Information Management System to enhance quality assurance on the production line.
- **WIDE CHOICE OF OPTIONS:** Allowing customization to the task(s) required – RSPLUS can be configured to various pressure ranges and flow regimes.
- **SIMPLE TO OPERATE:** minimal user training, single button operation with operator prompts.
- **ACCESSIBLE DESIGN:** Allows easy servicing/scheduled maintenance for maximum 'up-time'.

Specifications (*All RS Series*):

- **SENSITIVITY:** 1×10^{-6} Std-cc/sec Refrigerant.
- **MEASUREMENT RANGE:** 1×10^{-6} to 1×10^{-1} Std-cc/sec.
- **RESPONSE TIME:** To leak at Inlet Port - <0.5s.
- **PROBE LENGTH:** Standard – 10ft.
- **CALIBRATION:** With Standard Calibrated leak.
- **START-UP TIME:** <5 minutes.
- **SIGNAL INDICATION:** Audible and Visual (Bar Graph).

(*RSPLUS Models only*):

- **VALVES:** Pressure Decay/Fill Gas (air or N₂), Evacuation, Charge Gas (He), Exhaust Line.
- **MAXIMUM CHARGE PRESSURE:** Standard 100psi, optionally up to 1000psi.
- **AUTOMATIC CYCLE CONTROL:** Simple two button operation and/or Bar Code Scan cycle initiation.

Dimensions: RS - 30"W x 12"D x 30"H Overall.

RSPLUS - 30"W x 21"D x 30"H Overall.



SMARTSTATION LEAK TEST SYSTEMS

RS -Series Leak Detectors

Options:

(All RS Series):

- **BAR CODE SCANNER:** Provides system control and the ability to log product serial numbers. (Std on *RSPLUS*).
- **RUGGEDIZED SNIFFER PROBE:** Protective steel sleeve for the industrial environment.
- **DATA-LOGGING SOFTWARE:** With an external PC, allows product serial numbers and test results to be logged along with operator information and date/time stamp. (*Talk to VTI about integration of this product with your Plant Wide Information Management System.*)

(RSPLUS Models):

- **HIGH PRESSURE / FLOW CONFIGURATIONS:** See below.
- **RECOVERY VALVE:** Allows connection of the *RSPLUS* to a separate Refrigerant Recovery System.

System Access:



System maintenance is straightforward with accessibility being a key design criteria. VTI recognizes up-time as being a definitive factor in performance and customer satisfaction.

Utilities:

Gas Services: Customer supplies filtered and regulated gas supplies (Air/Nitrogen for Pressure Decay Test and Tracer Gas/Charge), Gas Dump line and Pump Exhaust Line.

Electrical: 115VAC, 60Hz, 15 Amp service.

ORDERING INFORMATION

When ordering or requesting a quotation, please provide the Part Number, confirm the Flow Regime needed, and state the specific Pressure Range requested.

PART NUMBER BUILD-UP

The RS-Series Part Numbers are constructed as follows:

SMST-RS(R)-YYY-ZZZ-01

where **RS** = the model, (*RS* or *RSPLUS*) required
 where **R** = indicates the recovery valve option,
 where **YYY** = the code for the valves required,
 and **ZZZ** = the code for the pressure range.

ORDER CODES APPLICABLE:

YYY Code: Valve Type:

41C	Regular Flow / Low Pressure
42C	Regular Flow / High Pressure
81C	High Flow / Low Pressure
82C	High Flow / High Pressure

ZZZ Code: Pressure Range:

025	25psi operation (41C and 81C)
100	100psi operation (41C and 81C)
500	500psi operation (42C and 82C)
01K	1000psi operation (42C only)

MODEL OPTIONS AVAILABLE and EXAMPLE PART NUMBERS

<i>Model</i> (RS – Sniffer only) (RSPlus – Evac, Charge, Sniff)	<i>Rec'y Valve</i> (R)	<i>Flow Regime</i> (Plus only)	<i>Code for Valves</i> (YYY)	<i>Pressure Range</i>	<i>Code for P' Range</i> (ZZZ)	<i>Example Part Number</i>
SMST-RS	N/A	N/A	N/A	N/A	N/A	SMST-RS-01
SMST-RSPlus	No	Regular	41C	025 psi	025	SMST-RSPlus-41C-025-01
SMST-RSPlus	No	Regular	41C	100 psi	100	SMST-RSPlus-41C-100-01
SMST-RSPlus	Yes	Regular	42C	500 psi	500	SMST-RSPlusR-42C-500-01
SMST-RSPlus	No	Regular	42C	1000 psi	01K	SMST-RSPlus-42C-01K-01
SMST-RSPlus	No	High	81C	25 psi	025	SMST-RSPlus-81C-025-01
SMST-RSPlus	Yes	High	81C	100 psi	100	SMST-RSPlusR-81C-100-01
SMST-RSPlus	Yes	High	82C	500 psi	500	SMST-RSPlusR-82C-500-01

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SMST-RS-DATA-10/2004-Rev4