



HT-LVZV75

Zero-Volume Reference Leak

- **Quadrupole Mass Spec. Calibrations**
- **Eliminates filament tripping**
- **75cc High Pressure Reservoir**
- **Patented Manufacturing Process**

High Precision, Full Mass Range Calibrations, Stable Pressure on Activation.

Included in the range of Calibrated Reference Leaks applicable to high vacuum systems is the 'Zero Volume' Reference Leak.

Designed for calibrating quadrupole mass spectrometer gas analysers and vacuum inlet systems, the leak consists of the following:

75cc Stainless Steel Reservoir - In which is contained the calibration gas, typically 1000 p.p.m of Helium, Krypton and Xenon in Argon at 20 Bar.

Purpose Built High-Vacuum Valve - An air operated valve to isolate the gas supply. The valve is attached to the vacuum system via a DN16-CF-R coupling.

Vacuum Sintered Leak - The Leak forms part of the valve seating which minimises the gas held in the aperture behind the valve. Therefore when the valve is opened under vacuum the change in the system's total pressure is barely perceptible.

The valve is air-actuated as standard but a manually actuated valve is also available. Other gases and mixtures can be supplied as required

KEY FEATURES

- Air actuated, high purity bellows valve.
- Rotatable mini Con-Flat output fitting.
- Sintered leak built into valve sealing face.
- Zero-volume trapped behind valve
- 1000ppm Helium, Xenon and Krypton on Argon for multiple peak calibrations.
- Certification traceable to National Standards

APPLICATION

- Calibration of Quadrupole mass spectrometer systems.
- Use the partial pressures of the mixed gases to calibrate the mass range.

ZERO VOLUME LEAK - TECHNICAL NOTES

During Use the pneumatic valve's inlet must be connected to the Mass Spectrometer's control gas line. To calibrate the Mass Spectrometer switch the machine to calibration mode as directed in the operating instructions. The valve will open when the correct pressure is achieved at the valve's inlet. During calibration use the partial pressures of each gas in the calibration mixture (information supplied in product documentation).

The output leak rate is approximately 2×10^{-5} mbarl/sec for Argon when under vacuum. The partial pressures of each of the mixed gases can then be used to calibrate the mass range of the analyser e.g. 4, 40, 83 (+ isotopes) and 131 (+ isotopes) A.M.U.



Specially Machined Valve Body



High Purity Bellows Valve



Certification Traceable to National Standards

SPECIFICATIONS

Reservoir Capacity	75cc
Reservoir Gas	1000 PPM Helium, Xenon + Krypton in Argon
Reservoir Pressure	220 psi
Actuator	Air Triggered, 10/32" UNF thread
Outlet Fitting	Rotatable CF16 Vacuum Coupling (ConFlat)
Recharge Fitting	1/4" SAE Flare w / Schaefer Valve

PRODUCT OPTIONS

HT9-LVZV75-CF16	Standard Zero-Volume Leak, CF16 Outlet (substitute for different outlet fitting, KF16 etc.)
HT9-LVZV75-CF16-M	Manually Actuated Zero-Volume Leak, CF16 Outlet.
HT9-LVZV-CF16	Zero-Volume Leak Valve Only, CF16 Outlet.
Different Gases	Different Gases and Bespoke Variations Available, Please Enquire

ACCESSORIES

Connection Hoses	CF16 Fixed / Rotatable St/St Hoses available - Please Enquire
HT9-CF16CU	Pack 10 - CF16 Copper Gasket
HT9-CF16NBW	Pack 25 - CF16 Nut, Bolt + Washer Kit (M4 x 35mm)
Fill Lines	Various high pressure fill lines available - Please Enquire
Gas	Special Gas mix or alternative calibration gases available - Please Enquire



Head Office
Unit 3B, Hackhurst Industrial Estate, Lower Dicker, East Sussex, BN27 4BW, United Kingdom

tel : +44 (0)1323 442 035
fax : +44 (0)1323 840 003

info@htproducts.co.uk
www.htproducts.co.uk

Due to our continuing program of product improvements, all details are subject to change without notice.
©2010 HT PRODUCTS