



CLO "Test-Part" Capillary Leaks

The "SPECIAL" CLO Model "TEST-PART" CAPILLARY CALIBRATED LEAKS FOR ALL GASES

Leak testing is an integral and essential part of so many manufacturing processes today. The necessity to maximize product quality, reliability and process yield drives manufacturers to implement ever more stringent standards.

Companies offering leak detection instrumentation to those who have such a requirement, tend to provide 'standardized' packages without helping the user to understand the dynamics of the measurement problem.

VTI is unique in being able to offer the customer custom calibrated leaks that can be built into an actual product component to allow a true understanding of the measurement to be made BEFORE costly instrumentation or systems are purchased. Our extensive knowledge of custom system building can then be employed to build the right solution for the task at hand.

Pressure decay, mass flow or Helium sniffing techniques are used widely today but in many installations assumptions have been made about the measurement cycle. Calibrating the leak test system can become a formality that is instrument and not system focused. That is to say that while this may prove the sensitivity of the detection instrument, it does not evaluate system capability. Issues such as response times, dilution factors that may come into play, how well a system may handle different 'dynamic leak effects' are not evaluated. Most importantly, this does not allow for clear determination of a product pass / fail point.

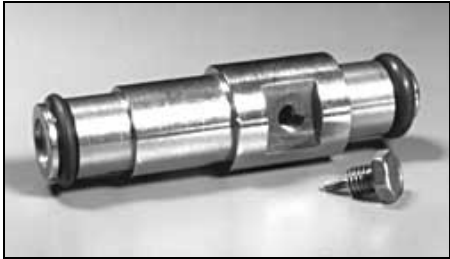


Choosing the CLO Calibrator

- CAN BE CALIBRATED WITH ANY GAS: or mix.
■ UNBREAKABLE: all stainless steel, all welded.
■ WIDE LEAK-RATE CHOICE: can be used for large leak rate applications.
■ SINGLE OR ADJUSTABLE LEAK RATES: can be calibrated or one or multiple pressures/rates.
■ STABLE: low temperature coefficient of 0.2% per °C.
■ MEETS ISO REQUIREMENTS: NIST-traceable, A2LA-accredited Calibration Certification.

VTI's Calibration Laboratory is Accredited by the American Association for Calibration Laboratory Accreditation. Certificate No. 1707.01

As the major manufacturer of Calibrated Leaks for all gases, all leak rates, and all makes of leak detectors, VTI supplies them worldwide to users, distributors, and other manufacturers. These Accu-Flow™ Leak Standards are recognized internationally for their superior quality construction and calibration.



Example leak Test Piece showing a Calibrator used to simulate passing an AirBag inflator with a known leak through a test system.



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ORDERING INFORMATION

There is no set format for ordering these leaks as is the case with other Leak models. Each is uniquely individual and will require detailed discussion. Please contact VTI with details of your specific application.

As a guide, the information / materials we may require will include Component Drawings, a sample or samples of the Test Part confirmation on any Fittings required and the Outlet Pressure (usually vacuum), all as used in your test and to be used for the calibration. Any special or key Dimensional Requirements and Pressure Limitations should also be noted along with the specific Leak Rate requested (at the specified Outlet Pressure) and your preferred leak-rate units.

Also, the Manufacturing Variance ("Tolerance") that you can allow on that Leak Rate should be specified. In all cases, the leak rate provided will be as close as we can make it to your specified rate, and the actual rate, as calibrated, will be recorded on the Calibration Tag and the Certifications.

Finally, it is worth remembering that using the CLO leak element allows us to supply these leaks using other gases or gas mixtures which may be a requirement depending upon where the test piece is used in the manufacturing process.

EXAMPLE PARTS

Build a Calibrated Capillary Leak into your Production Test Part

VTI can build a NIST-traceable Calibrated Leak directly into one of your parts to make a "test part" for a product that you are leak testing by helium, pressure decay or other methods. This test part is then periodically put through your regular production test cycle to calibrate the actual leak rate being detected...and to verify that the test system totally, from the inlet gas pressure to the final pass/fail signal, is performing valid tests.

As the builder of high-reliability Leak Testing Systems for manufacturing plants, VTI knows the importance of the 100% assurance of testing validity that can only be achieved by using these "Calibrated Test Parts". We have built these A2LA-accredited, custom leak standards into test parts of many different products such as those listed.



NIST-Traceable Calibrated Leak built into a well in a production test part for a Torque Converter. The threaded leak is removable / replaceable.

- Heat Exchangers
Torque Converters
Check Valves
Fuel Injectors
Batteries
Airbag Inflators
Fuel Manifolds



Stainless Steel Capillary Calibrated Leak built into a #10/32 bolt that is threaded into a drilled and tapped component of a Valve Module test part.

When faced with the challenge of system evaluation VTI can help with:

- Calibrated Test Pieces
Process/Measurement Consultancy
Custom Solution Design and Manufacture
Maintenance Programs
Staff Training Programs

Contact VTI to discuss your Leak Test needs and find the solution!