



**Uson by PAC**  
8824 Fallbrook Dr,  
Houston, TX 77064  
USA  
Phone: +1-281-671-2000  
Fax: +1-281-671-2001  
www.uson.com

**Uson by PAC - China**  
Room 355, 3RD Floor,  
Building 5, No. 526 East Fute  
3rd Road, Pudong, Shanghai  
200131, China  
Main: 021-583 65859  
021-583 59187  
www.uson.com



Contact Us

www.uson.com

**Differential Pressure Decay Leak Testers**



**628 Differential Pressure Decay Leak Tester**  
Uson's Model 628 differential pressure decay leak tester is compact, reliable, and accurate, offering users the ability to choose from five pressure ranges – from vacuum up to 15 bar to cover a wide range of applications. Users can create and save up to 30 test programs for fast recall.

**Qualitek<sup>mR</sup> (QmR) (+ Flow + Force)**  
Qualitek<sup>mR</sup> combines the latest advances in multi-range (mR) testing technology with the expertise and reliability of one of the premier names in testing. Head and shoulders above any other tester of its type on the market, this versatile and affordable product offers high-quality and accurate results for light- to medium-duty applications.



**Pressure Decay Leak Testers (Flow)**

**Sprint<sup>md</sup> / Sprint<sup>iq</sup> / Sprint<sup>lc</sup> (Flow)**  
Designed to seamlessly integrate into the process network, the Sprint series of testers communicates and assimilates process data to and from connected equipment, providing the intelligence required to optimize manufacturing quality processes. Enhanced security features ensure compliance with industry regulations, and its modular design makes it easy to service and upgrade.



**Differential Pressure Decay & Pressure Decay Leak Tester (+ Flow + Force)**



**Optima<sup>vT</sup>**  
With a choice of one or two test channels, optional enclosures, a wide range of test types and custom pneumatics, the Optima<sup>vT</sup> is versatile enough for a wide range of applications. For demanding applications, choose high flow valves for fast filling larger volumes, or specify Uson's proprietary differential pressure transducer for utmost sensitivity and repeatability.



**Capabilities Overview**





Fast, reliable, and accurate information when and where you need it, so you can stay in control of your process

Uson Leak Testers | When Failure is Not An Option

Every Uson customer has one thing in common, no matter the industry: Safe, zero-failure products are imperative. We are acutely aware that our leak testers are used to test products including medical catheters, car engines, and factory valves to ensure they are safe for the humans who interact with them.

If our leak testers don't catch a faulty product, a person could be hurt, which is not acceptable to us or our customers. Our goal is to help customers bring the safest and highest quality products to market. To achieve this goal, we use our 50+ years of experience and market leadership to manufacture the most versatile, reliable line of leak and flow testers in the industry.



AUTOMOTIVE

The proven standard for fast, reliable leak testing, Uson offers high-quality and accurate leak testers for light- to medium-duty applications in the automotive industry. Our applications include:

- Transmissions
- Engine Assemblies
- Engine Blocks
- Engine Subassemblies
- Cylinder Heads
- Power Steering
- Lamps and Lenses
- Axles
- Cooling Systems
- Brakes
- Emission Controls
- Cylinder Blocks
- Miscellaneous
- Total Engines
- Exhaust Systems
- Fuel Systems
- Electrical
- Intake Manifolds



INDUSTRIAL/PACKAGING

Uson's leak testers are preferred in industrial processes due to their user-friendly interface that offers easy setup and monitoring for reliable quality assurance. Our leak testers can help spot problems—even tiny leaks—to avoid production impact. Our applications include:

- AC and Refrigeration
- Beverage dispensers
- Burners
- Camping equipment
- Coffee makers
- Coils
- Compressors
- Dishwasher components
- Disk drives
- Diving equipment
- Expansion valves
- Faucets
- Film canisters and pouches
- Filters
- Garbage disposals



MEDICAL

With a highly sophisticated testing capabilities in a user-friendly design, Uson's leak testers are ideal for use in medical device manufacturing. Our leak testers include features to support compliance with standards such as 21 CFR Part 11 (U.S.), MHRA/ EU Annex 11, and others. Our applications include:

- Aspirators
- Bags and Bags/filters
- Balloon deflation tests and Leak Tests
- Blood bags
- Blood devices
- Blood dialyzers
- Bonded and welded seams
- Bottles and flasks
- Bubble points
- Cassettes
- Catch bags
- Catheters
- Centrifuges
- Chemotherapy pumps



No one has more combined leak testing experience than the professionals at Uson.

Pressure Decay Leak Testing

Pressure decay leak detection testing instruments are extremely useful for checking components that have relatively small volumes. The component is pressurized with air, and the pressure transducer monitors the pressure for negative changes. Any pressure drop indicates a leak. The test is very fast, and is completed in a matter of seconds, making it popular in high-volume industries, such as automotive components, castings, medical devices, and consumer goods.

Force Decay Test

The force decay test is used to test the seal integrity of a flexible or semi-rigid package that contains a headspace. It is well suited to test non-porous package material such as films, foils, or laminates. The test package is placed in a vacuum chamber between two plates, one of which is connected to a force sensor. The chamber is evacuated at the start of the test and the flexible package will expand until the package reaches an equilibrium state with the internally applied pressure. Over a measured time, the force applied to the sensor will remain constant, indicating a good seal, or the force will decrease, indicating a leak in the package seal.

Differential Pressure Decay Leak Testing

As one of the fastest methods of leak testing, differential pressure decay is ideal for a wide range of applications. Like pressure decay, this method also involves measuring the drop in pressure inside the part over time as a result of escaping material. However, in a differential pressure test, the change in pressure is measured inside the part compared to the pressure inside a control volume charged to the same pressure as the part.

The differential pressure leak test is easy to set up, but can prove much more sensitive in certain leak detection applications. The sensitivity of the transducer is not related to the actual pressure in absolute or gauge pressure terms, but to the sensitivity of the differential pressure transducer at the test pressure.

Mass Flow Test

The mass flow test measures the amount of air passing through an object using units of measurement of sccm or liters/time period. The major advantage of the mass flow technique is that it eliminates the need to know the volume of the product. There are two mass flow sensing techniques typically used in leak testing: thermal mass flow and differential sensing mass flow.

for good measure

At Uson by PAC, we work closely with our customers to understand their unique and changing needs. We combine this insight with the knowledge of cutting-edge technologies to predict the future needs of our customers and their industries.

Uson's experienced and knowledgeable engineers ensure each customer receives increased testing speed, sensitivity, and repeatability. As a pioneer of automated leak testing equipment for medical devices, the automotive, pharmaceutical and

medical packaging industries, and others, Uson by PAC has more experience in these specialized fields than any other company in the world.

With the largest installed base of leak testers in the medical device industry, Uson by PAC builds leak testers and accessories to exacting standards demanded by the world's leading manufacturers. This unrivaled experience and expertise is complemented by global sales and support. Count on us for quality products and after-sales care.