

## **Leak Testing: How Your Solutions Provider Can Ensure Speed and Accuracy**

June 19, 2008 -- There are many factors that must be considered before implementing a successful leak testing solution, like test pressure, temperature production rate, volume, and part dimensions (including interior dimensions). Then there's the leak rate detection to consider. Can the part's quality be determined with a pass/fail result, or does a leak rate need to be determined, and to what accuracy? The simple answer is that the acceptable leak rate narrows the choices to the two most prevalent methods of leak testing: vacuum, or pressure decay. Budget and whether or not leak rate data results are required determine whether an alternative method need be employed.

Fortunately, it's your solution provider's job to delve into the details. How deeply your solution provider delves can determine the overall success of the project. Consistently improper methods of measurement can lead to unnecessarily rejected parts, and process errors can pass parts that will compromise quality of the end product.

The first step in poka-yoking the leak test process and ensuring a tight gage R&R is clear communication between the solution provider and the customer in order to clearly discover the end objective. Once customer needs are understood, the solution provider's team of engineers will analyze the part in-house and gather data on leak limit, ambient temperature, hidden interior volumes, surface finish of sealing surface, rigidity of the material, and the dryness of the part.

The last step is bringing it all together into a machine that combines error-proof testing with a user-friendly interface that delivers fast, accurate, and easily interpreted data. To this end, your solution provider should incorporate the highest quality components into its leak testing equipment. High resolution converters record measurements as low as 0.1 Pa, making it possible to quickly and accurately detect very small leaks. The part can be tested from a full vacuum to 5 MPa or more, and noise elimination features prevent false rejects.

The tests can easily be set up for multiple part styles, or multiple tests may be performed on a single part, making the leak tester suitable for both high and low volume production. If the process of development is respected, the leak testing equipment will deliver speed and accuracy, resulting in decreased production time for the customer.