Leak Sensor-Processor

Prime Controls, Inc. has a universal leak detection sensor that can be used in three types of container and closure testers.

The leak sensor can be configured to test using Pressure Decay and two methods using the Bell Test. The Bell Test method is where the leak is captured in a chamber and then vented to the Sensor. The Bell test employs both peak capture monitoring and dynamic or pulse measuring. Pulse detection is used on three piece can testers.

Prime's Leak Sensor combines the basic sensor and electronic processor in one package.
It has been used for testing Easy Open Ends in a Bell Test using continuous monitoring method. A Sensor is attached to each container station on the tester. It constantly monitors the non-pressurized side of the end condition throughout the test cycle. The same Sensor can be used on a plastic bottle tester using pressure decay method. It is also programmable to received peak pressure capture found on three-piece can pocket testers.

The container industry is demanding finer leak detection capability along with data measurement with recording capability. The new sensor-processor provides a variety of features to communicate data and assess the leak quality of cans, ends and bottles. The communication capability of this device enables controllers to monitor air pressure throughout the test cycle. Programmable units and custom software offer the flexibility to optimize the test system and data stream. Test valves can be controlled directly by the Sensor. This minimizes test inconsistencies due to machine speed and vibration.

Early tests with Sensor showed that significant improvements were possible for the various test methods. For example, stabilization or purge was no longer key factor for a good test. By programming a test module to sample the product after the turbulence of pressurized air calmed and use the quiet time cycle to measure, the sensitivity is much more consistent and reliable. Speed changes no longer affect test quality.

Prime designed the software for evaluating the transducer inputs, initiating the test cycle on-demand and completing it on-demand. The pressure input provides hard data to a microprocessor, programmed to compare data within each test station. Contact Prime Controls for more details.