

The Problem

Test and Production Engineers are often faced with the task of measuring flow rate in products quickly, accurately and inexpensively.

Mechanical flow measuring devices such as rotameters or flow meters can be insensitive, slow, and subject to operator errors. More accurate flow meters may still require an operator to record the reading and make the pass or fail decision.

On the other hand, overly complicated flow testing equipment can be too elaborate for the task. Custom designed PLC based test equipment is frequently expensive and difficult to program. Furthermore long-term engineering support becomes more difficult.

The Zaxis Solution



The off the shelf solution of Isaac flow testers work with a high precision flow sensor and pressure sensor. The Isaac has the advantage

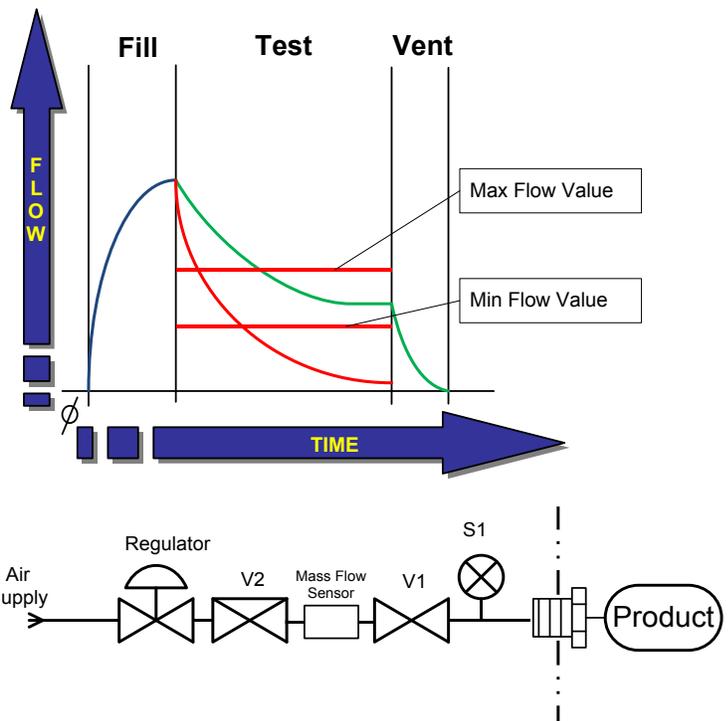
of a high resolution (24bit) digital readout with timers and limit settings so the pass or fail decision is determined by the programmed limits and not the operator. Every part can be tested using the same high resolution flow sensor circuit.

All of the flow test capability is within the small package size of the Isaac multi tester.

How the Isaac Works

The Isaac Mass Flow tester works like this:

1. The product is attached to the test port and the test sequence is initiated.
2. The **Fill** step, pressurizes the part with regulated air through [V2] and [V1]. The test pressure is compared to the programmed tolerances using the pressure sensor [S1]
3. During the **Test** step the measurement of flow is taken by the Mass Flow Sensor.
4. The Isaac compares the flow reading to the max and min flow values to determine a pass or fail. The flow reading and test result are displayed on the test screen.



Applications

Isaac mass flow testers are used frequently to test parts that were tested using simple rotameters or analog flow meters.

The Isaac can be used to test both small and large volume parts. For small parts the extremely small internal volume will allow for very low test times allowing a high throughput of production. If a large part is to be tested, the pneumatics can be adjusted to maximize the potential of the tester.

Both rigid and flexible parts can be tested, making the Isaac the most flexible platform available.

Both flow rate and leak testing can be performed using the Isaac Mass Flow Tester.

Features

- High Sensitivity
- Extremely low internal volume (0.8cm³)
- Small footprint.
- Available in a wide range of test pressures.
- Off the shelf delivery.
- Custom testing capabilities..
- Easily adapted to automation.
- Intuitive user interface.
- Simple calibration procedures.

