



**ASECSOLUTIONS PRIVATE LIMITED**  
TEST & MEASURE

### **MASS FLOW LEAK TESTERS** **MODEL: ASEC-MFLT**



ASEC SOLUTIONS have been pioneering design and supply of Electronic Mass Flow Leak Testers. The Mass Flow Leak Tester is housed in an ABS box with LCD display on the front. We use an imported Pressure Transducer and Flow Transducer in the Flow Leak testing Unit. Besides the Pressure Transducer and Flow Transducer, the complete design, development and manufacture of Electronics including software are carried out in house.

All types of mass flow leak testing applications can be addressed with this instrument. We use the best of pneumatic and sealing components available in the world for integration and control purposes. Complete Flow Leak Testing benches can be manufactured and supplied.

#### **Advantages of Electronic Mass Flow Leak Testing**

The primary advantage of air leak testing is the speed at which the test can be performed, so automatic air leak testing has become an important requirement in production manufacturing. When deciding whether a part is a candidate for air-leak testing, consider the type of liquid or gas used, as well as the intended operating pressure of this liquid or gas. Components that operate with liquid are particularly good candidates.

In automatic flow testing, electronic flow leak testing devices are typically used to directly determine leak rates. Mass Flow leak testing is the simplest most reliable flow leak testing method available. The tester pressurizes the test part automatically and measures the flow rate directly in terms of leakage rate in cc/min or lpm or l/h. The segregation of OK and NOT OK parts is done automatically, independent of the operator.

#### **Why Flow Leak Testing is required .**

In order to check the physical integrity of components it is essential that they are subjected to flow leak testing before use in further assembly. Exhaust Assemblies, Orifices, Delivery Valve Holders have a definite allowed flow rate at fixed pressure. By using our Mass Flow Leak Testers, it is very easy to measure the flow rate directly at a fixed pressure. The use of conventional U-tube manometers is eliminated.

Electronic Flow Leak testing offer a non destructive and operator independent tool for testing the various parts. It also offers an accurate and highly repeatable method which is also quantifiable. It has the advantages of storing data in computers and offer scope of SPC analysis.

#### **Principle of Operation**

The specimen is pressurized by first opening an electronically actuated solenoid valve. After the desired pressure is achieved, the flow rate is directly measured using the mass flow sensor during the testing time. The flow rate is measured by a micro controller based instrumentation. The flow rate is then compared with preset programmable Permissible flow rates and pass or fail lamp is switched on.



## **Application and Technical Support**

ASEC have over the years, gained valuable and extensive experience in Mass Flow Leak testing Methods of Automotive / Pneumatic / Hydraulic / Medical parts. We will be able to provide you advice on methods, selection of equipment, evaluation, leak rate specifications and on line production testing.

## **Applications**

We list below some of the components for which Electronic Mass Flow Testers can be used.

Exhaust Assemblies, Engine Assemblies, Delivery Valve Holders, Orifices, Catalytic Converters, Heat exchangers etc.

## **Technical details:-**

|                     |   |
|---------------------|---|
| Range (mbar)        | : 200, 500, 1000, 2000 & 3000   |
| Flow Range          | : 30, 200 & 1000 cc/min<br>5, 10, 15 & 20 lpm                         |
| Resolution          | : 0.1 cc/min<br>0.01 lpm  |
| Pressure Transducer | : Reliable semiconductor technology.                                  |
| Flow Sensor         | : Mass flow sensor.   |
| Pressure Regulation | : Manual SMC make pressure regulator.                                 |
| Processor           | : Micro-Controller Based.   |
| Display             | : LCD display,  |
| Channel             | : Single  |
| Number of programs  | : One   |
| Limits Settings     | : Programmable 3 Limit Settings.                                      |
| Outputs             | : Two outputs (Pass & Fail)   |
| Timers              | : Software Timers – 3 timers from 1 sec to 250 seconds.               |
| Annunciation LEDs   | : Coloured LEDs for Test in progress, Pass, Fail and Fault conditions |
| Operating Temp      | : 0 to 45 deg C   |
| Power Supply        | : 230 Volts AC, 50 Hz.  |
| Box                 | : ABS Box - Dimensions : 292 mm (L) X 260 mm (D) X 110 mm (H)         |

## **OPTIONS:**

|                             |  |
|-----------------------------|--|
| Counters                    | : To count the number of OK and NOT OK parts.                                  |
| RS 232 output with software | : Serial output along with software to store the test results in Excel format. |
| USB storage device          | : Facility to store the data in pen drive.                                     |
| Multiple programs           | : Maximum of 24 programs selectable externally.                                |