



ASECSOLUTIONS PRIVATE LIMITED

TEST & MEASURE

PRESSURE DECAY LEAK TESTERS MODEL: ASEC-PDLT



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

From simple Leak testing application to complicated Leak cum assembly Testing Units inclusive of pneumatics and fixtures can be supplied. We use the best of pneumatic and sealing components available in the world for integration and control purposes. In addition to testing of components for air leakages, we also manufacture systems to work under Vacuum and a combination of pressure and vacuum.

Advantages of Electronic Air 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 testing, electronic leak testing devices are typically used to determine leak rates. Pressure decay leak testing is the simplest most reliable leak testing method available. The tester pressurizes the test part automatically and measures pressure loss caused by leakage. The segregation of OK and NOT OK parts is done automatically, independent of the operator.

Why Leak Testing is required.

In order to check the physical integrity of components it is essential that they are subjected to leak testing before use in further assembly. Cast Components may have porosity or blow holes and it may not be always possible for conventional inspection procedure to pick up the defects.

Electronic 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 or after a preprogrammed fill time is over, the pressure source is cut off. After allowing time for stabilization, which is also programmable, the pressure drop during a programmable test time is measured by a micro controller based instrumentation. The Pressure drop or the computed leak rate is then compared with preset programmable Permissible leak values and pass or fail lamp is switched on.



Application and Technical Support

ASEC have over the years, gained valuable and extensive experience in 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 Air Leak testers can be used.

Engine Blocks, Engine Valves, Engine Assemblies, Manifolds, Oil Seals, Mechanical Seals, 'O' Rings, Hydraulic Pumps, Water Pumps, clutch and Clutch assemblies, Coolant Systems, Transmission Gear Boxes, Steering Gear Boxes, Mufflers, Exhausts Systems, Catalytic Converters, Fuel Filters, Air Filters, Shock Absorbers, Radiators, Power Train Components, Air Conditioner Components, Heat Exchangers, Hose Pipes, Carburetors, Fuel Pumps, Fuel Tanks, Fuel Cocks., Cylinder Heads., Distributor Motors, Actuators, Battery Cases, Multi Function Valves, Non return Valves, host of other components.

Technical details:-

Range (mbar)	: 200, 500, 1000, 2000, 3000, 5000, 6000, 8000 & 10,000
Resolution	: 200 to 1000 mbar (0.01 mbar / 1 Pascal) 2000 to 10,000 mbar (0.1 mbar / 10 Pascal)
Pressure Transducer	: Reliable semiconductor technology.
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

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 15 programs selectable externally.
Calibrated Leak Master	: Calibrated leak master with staubli on front panel.
Electronic Pressure Regulator	: Automatic pressure regulation