

Leak and Flow Test Instrument

SERIES LTI-5000

- Mass Flow
- Pressure Decay/Change
- Pressure or Vacuum
- Flow Ranges from 0-10 sccm to 0-300 slpm
- Accuracy to $\pm 1\%$ Full Scale
- 16 Pneumatic Channels
- Separate NEMA 12 Control Enclosure
- Easy Setup and Operation
- 1200 Limit Tables
- Graphing
- Data Storage and Reporting
- Ethernet and RS-232 Data Output
- Remote Hosting Via the Internet



Single Channel LTI 5000 Leak Test

The LTI-5000 is a PC based unit that can be used for performing mass flow or pressure decay tests. This unit is recommended for applications that require the system to be placed on a plant network. This unit has the most flexible data collection means. The standard data collected is test start and completion time, test channel and limit table used, end-of-test pressure and flow reading, test result, and data export verification.

MASS FLOW

The LTI-5000 displays corrected airflow readings through the use of a mass flow transducer. This state-of-the-art technology provides test results, which are independent of daily changes in barometric pressure and ambient temperature. This leak test instrument measures the leakage or flow of air through the part being tested at a specific test pressure. When the leak test is initiated this instrument automatically pressurizes the part, allows the air pressure within the part to stabilize, and measures the actual leakage through the part. The leakage or flow is displayed in actual engineering units.

PRESSURE DECAY / CHANGE

Two pressure decay/change methods are available depending upon the specific application. Applications with a high leak rate specification or a small test volume utilize a gage-pressure-decay test method. Applications with a low leak rate specification or a large test volume will use a pressure-differential-decay test method. With either method this leak test instrument pressurizes the test part, allows the air pressure within the part to stabilize, and measures the decay/change in pressure.

SETUP & OPERATION

The LTI-5000 is easy to setup and operate with the menu driven touch-screen in response to inputs from the operator. There are 1200 limit tables available for each channel. Setup parameters for each table include fast fill pressure and tolerance, test pressure and tolerance, test times, accept/reject limits, and consecutive reject limits. Tester setups include communications port parameters, data input and output devices configuration, and security options. The LTI-5000 can be user programmed to run customized test sequences and control all tester input/output functions. Transducer calibration is also menu driven. Optional pendant boxes are available with local accept/reject pilot lights and a start/stop push button.

SYSTEM ENCLOSURES

One (1) NEMA 12 electrical enclosure and up to sixteen (16) pneumatic enclosures can be provided. The electrical enclosure contains the Pentium based PC with a color touch-screen display, power supplies, and indicators. Communication ports on the side of the enclosure allow the controller to output results to a data collection device or printer. Test results may also be output to a floppy drive or to the Ethernet port. The pneumatic enclosure(s) contain the pressure and leak transducers, regulators, and valves. Ports are provided for air and power connections. The standard color for the TI-5000 is white.

DIMENSIONS

Control Enclosure	24" high x 24" wide x 20" deep
Pneumatic Enclosure	Built to Specifications

WEIGHT

Control Enclosure	85 pounds
Pneumatic Enclosure	35-90 pounds

ENVIRONMENTAL CONDITIONS

Operating Temperature	35-130°F (2-55°C)
Storage Temperature	35-150°F (2-66°C)

POWER REQUIREMENTS

Input Power	100-250 VAC
Frequency	50 or 60 Hz
Current	3 amps maximum

SHOP AIR REQUIREMENTS (CLEAN, NON-LUBRICATED, DRY AIR)

Pressure Test	Input Pressure	125 PSIG maximum (STD)
	Test Pressure	100 PSIG maximum (STD)
Vacuum Test	Input Vacuum	25 in Hg maximum (STD)
	Test Vacuum	20 in Hg maximum (STD)

CONTROL INTERFACE

Inputs	(3) Remote Start/Stop bits per channel	24 VDC (STD) 115 VAC Optional
Outputs	(1) End of Test Signal per channel	24 VDC (STD) 115 VAC Optional
	(1) Accept Signals per Channel	24 VDC (STD) 115 VAC Optional
	(1) Reject Signals per Channel	24 VDC (STD) 115 VAC Optional
Printer	(1) Parallel Port Available	Data Output Only
Communications	(1) Serial Port Available	Data Output Only
Network	(1) Ethernet Port	Computer Networking

PERFORMANCE (FLOW RANGE AND SCALING)

Minimum Full Scale Range	2.00 SCCM
Standard Full Scale Range	10 SCCM to 30 SLPM
Maximum Full Scale Range	Up to 300 SLPM (Consult Factory)
Accuracy	± 1% of Full Scale
Linearity	0.5% of Full Scale Range
Repeatability	± 0.2% of Full Scale
System Warm Up Time (from Room Temperature)	Casual Operation: 5 seconds
	Precise Measurement: 10 minutes



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