LeakMaster

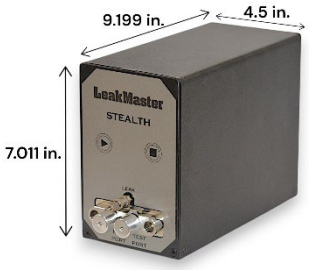
STEALTH

Technical Specifications

The LeakMaster Stealth is a cost effective, compact leak tester that is extremely accurate and user friendly. At only 4.5" wide the Stealth is well suited for a wide range of installations from lab environments and medical clean room applications to high-speed automation applications. The Stealth is configurable for pressure decay, vacuum decay, differential pressure or occlusion testing. Manufactured to operate as a standalone instrument with or without the use of the optional touch screen pendant. Stealth can also be totally controlled through slave mode over Ethernet IP® via customer PLC.

POWER. PERFORMANCE. *SPEED*

LeakMaster, Inc.
1992 S 100 W, Suite A, Princeton, IN 47670
(812) 437-8378 www.leakmasterusa.com



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Features and Benefits

- High Resolution Pressure Detection
- -14.7 to 150 PSIG pressure ranges
- Automatic Calibration of Programs
- Quick Test Feature
- Occlusion Testing to check for obstructions
- Configurable to perform pressure decay, vacuum decay, or differential pressure decay leak testing
- Optional 7” User Interface
- LED logo indicates Pass/Fail/Testing to easily inform the operator of test status
- Standard Ethernet IP® and USB/RS232 communications
- Slave Mode over Ethernet IP® for complete PLC control of the instrument
- Network Communications of JSON data export every cycle
- Discrete I/O for external communications
- Self-Test Feature for easy diagnostics of internal manifold
- Exportable Graphing of each test cycle
- Ability to import/export all test parameters via USB

Enclosure
Dimensions (4.5"w x 7"h x 9.2"d)
Weight 12.2 lbs.
Din Rail Mount or bolt down through the bottom.
Electrical Connections on rear of unit
Pneumatic Inputs on the rear of the unit
Pneumatic Outputs on the front of the unit
Designed and built to last in extreme industrial environments

Electrical Requirements
24VDC @ 1A
M12 Euro input connection

Pneumatic Requirements
Clean Dry Air or Nitrogen (.5 Micron Filtration)
Supply pressure must exceed test pressure
Pilot Pressure must be approximately 80 PSI

Test Port
Single Channel Only – 1 Port for testing (2 Ports for differential pressure testing)
¼” NPT female CPC quick connect or 1/8 ”NPT female port

Discrete I/O
16 inputs (5-32 VDC sourcing)
16 outputs (24 VDC sourcing)

Communications
Optional Ethernet IP® (EDS file supplied)
USB/RS232 Ascii results output, JSON file output over Ethernet

Optional Color Touch Screen
7” HDMI color touch screen with 6’ or 20’ cable set
Touch inputs for programming and setup
Screen turns Green or Red for Pass/Fail status
Pass/Fail status stands out to operator for easy indication

Processor and Resolution
64-bit CPU and 24-bit pressure transducer enables you to read up to 1000 scans per second.
Data points are averaged and interpolated to minimize noise and increase resolution and repeatability.

Graphing
Live Graphing can be viewed during test
Each test is graphed and stored in the results menu
Graphs can be exported to USB as CSV files

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Test Programs
999 user selectable programs
Program 11 designed for Self-Test Mode
Each program can operate in different modes
Pressure or Vacuum Decay Mode
Mass Flow Optional (.01 sccm resolution)
Differential Pressure Optional (.000001 PSI resolution)
Occlusion Testing Mode (Blockage Test)
Touch screen programmable
Timers, Pressure Limits, and Reject Limits
Calibration Parameters
Units of Measurement
Selectable via user, Ethernet IP®, or Discrete I/O
Import/Export to USB flash drive
Multi-Level Users with Password Protection

Self-Test Program
Allows user to plug the unit to verify the instrument is leak free.
Useful tool for troubleshooting tooling and locating leak sources.

Program Calibration
Automatic routine teaches the instrument pressure curves of non-leaking part vs. a reject leak condition.
Automatically calculates test volume of the circuit.

Units of Measure
Pressure – PSIG, PSIA, kPa, Pa, Bar, mbar, in. H2O, in. Hg., Kgf/cm2
Flow – sccm, sccs, slpm, slps
Time – seconds (0.001 increments)
All units can be programmed independently per program.

Password Protection
3 Level - Admin, Supervisor, Operator levels
User is logged with each result

Data Logging
2,500 tests stored in memory
Exportable to USB flash drive
Each result consists of leak rate, test pressure, units of measure, programmed times, limits and calibration data.

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Optional Manual Precision Air Regulator

- Sensitivity to ¼" of water column.

External Manual Pressure Regulator Ranges

Range:
0-2 PSIG
.5-30 PSIG
1-60 PSIG
2-100PSIG
0-150 PSIG

Standard Pressure Transducer Options

Range	Measurement	Accuracy	Resolution
0-15 PSIA	-14.7 to 3 PSIG	.01% FS	.00001 PSIG
0-15 PSIG	0-15 PSIG	.01%FS	.00001 PSIG
0-60 PSIG	0-60 PSIG	.01%FS	.00001 PSIG
0-150 PSIG	0-150 PSIG	.01%FS	.0001 PSIG

Differential Pressure Transducer Options

Range	Measurement	Accuracy	Resolution
+/- 1.45 PSID	+/- 1.45 PSID	.01% FS	.000001 PSIG

Stealth Available Test Types

Pressure Decay – volumetric leak rate (sccm)
Pressure Decay – pressure loss/time
Vacuum Decay – volumetric leak rate (sccm)
Vacuum Decay – vacuum loss/time
Occlusion Testing
Mass Flow Testing

Differential Pressure Decay – volumetric leak rate (sccm)
Differential Pressure Decay – pressure loss/time

Mass Flow Sensor Options

Range	Measurement	Accuracy	Resolution	Max Pressure
0-1000 sccm	-100 to 1000 sccm	+/- 1% of reading	.01 sccm	100 PSI
0-6000 sccm	-100 to 6000 sccm	+/- 1% of reading	.06 sccm	25 PSI
0-200 sccm	+/- 200 sccm	+/- 1% of reading	.066 sccm	25 PSI

Optional Calibrated Leak Standards

- Calibrated Leak Standards to simulate the reject leaking condition
- ISO17025 A2LA accredited calibration laboratory
- Flow Rate ranges from .5 to 100,000 sccm
- Pressure ranges from -14 to 150 PSIG
- Uncertainty +/-1.4% of stated flow rate
- Manufacturing tolerance of +1%/-0% of specified flow rate or .1 sccm (whichever is greater)

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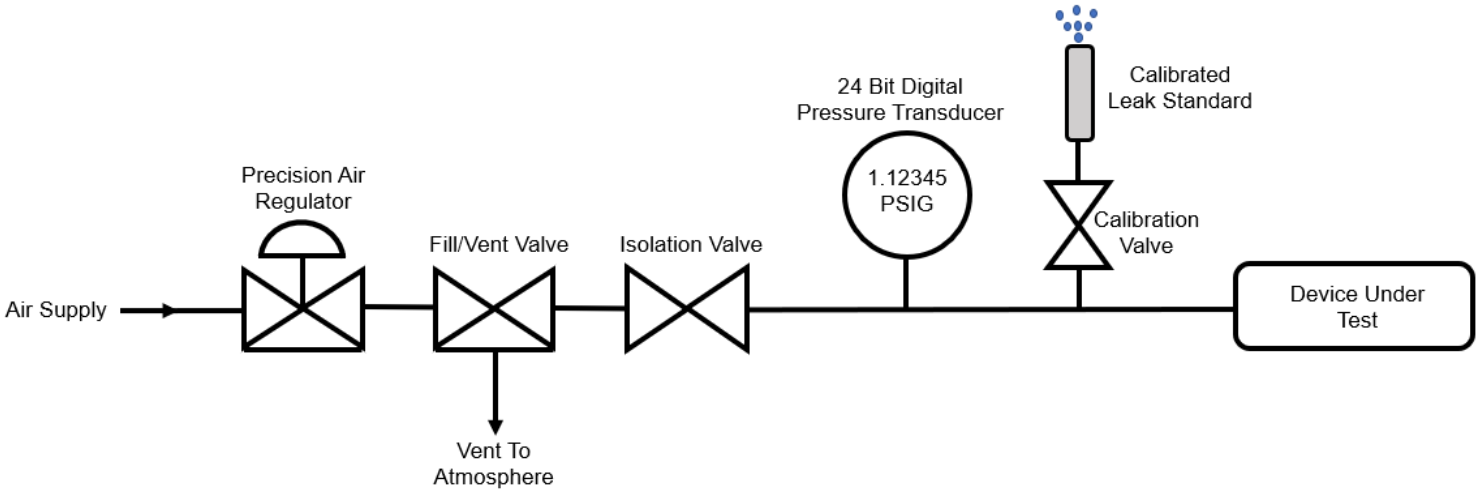
Stealth Pressure Decay Leak Test Manifold Pneumatic Setup



All internal valves are air-operated (pilot pressure required to operate) to minimize solenoid heat transfer into the tester manifold to maximize repeatability.

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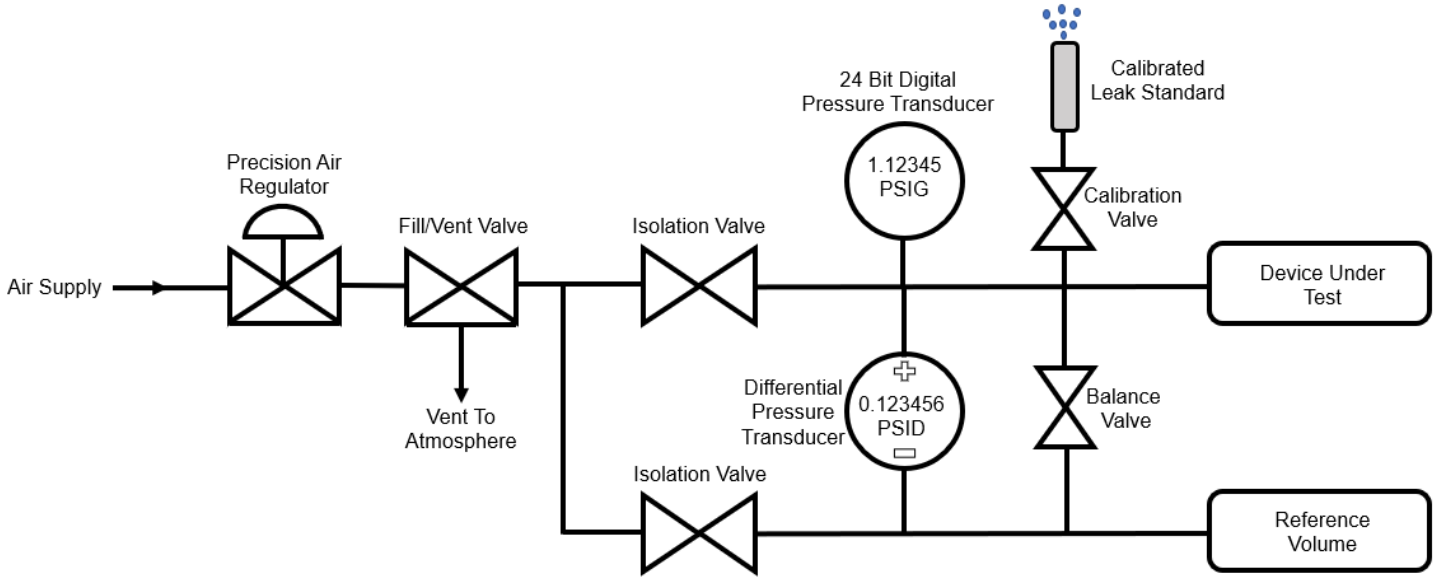
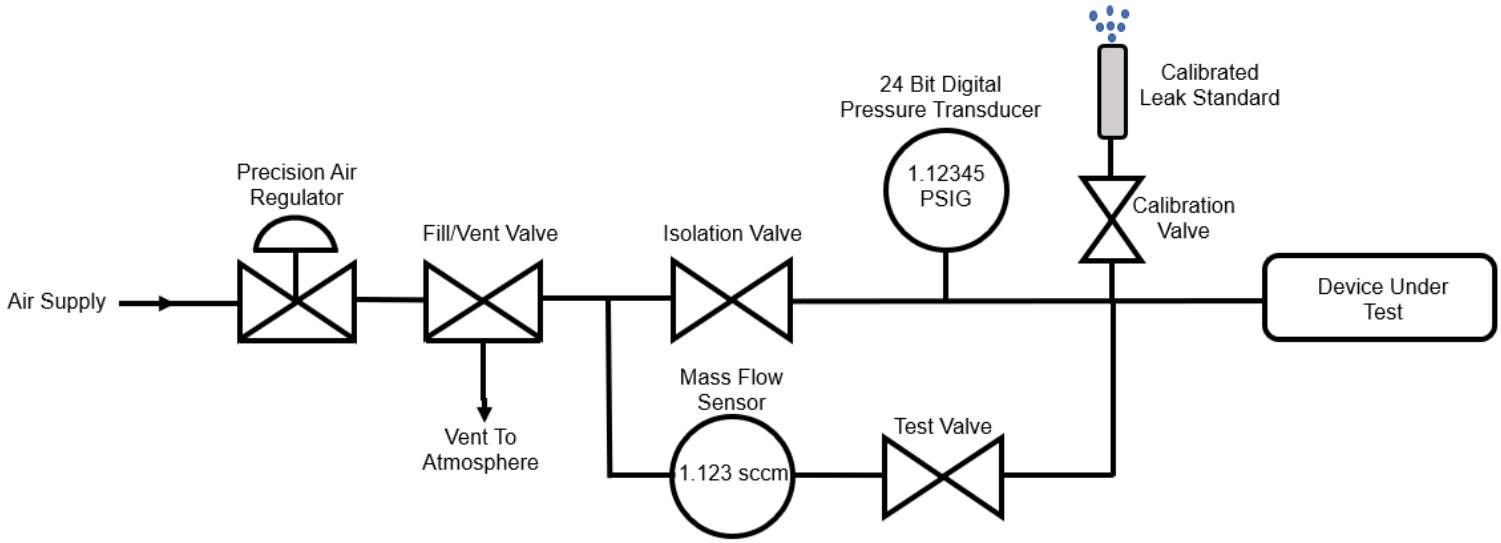
Stealth Differential Pressure Decay Leak Test Manifold Pneumatic Setup



Stealth Mass Flow Leak Test Manifold Pneumatic Setup



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