

LeakMaster

DEFENDER

CUTTING EDGE LEAK TESTING TECHNOLOGY



COMPACT. COST EFFECTIVE. RELIABLE LEAK TESTING



Light Mode



Dark Mode

The Defender is a compact cost-effective pressure decay or vacuum decay leak test instrument. The 64-bit processor and 24-bit pressure transducer enable the unit to perform fast and accurate leak testing processes. Integration and setup are simple and straight forward, building confidence and eliminating confusion during day-to-day operations. Standard **EtherNet/IP** communications make startup and integration quick and efficient.

Key Benefits

- Compact Design for Simple Integration
- High Resolution Pressure Detection
- -14.7 to 116 PSIG pressure ranges
- Automatic Calibration of Programs
- Occlusion Testing to check for obstructions
- Standard **EtherNet/IP** and USB/RS232 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

Compact design (10"w x 7"h x 7.5"d)
 Mounting holes on the back (4, 10-32 threaded holes)
 Vesa Mounting Pattern
 Electrical Connections on Left side of unit
 Pneumatic Connections on the bottom of the unit
 Designed and built to last in heavy industrial environments

Electrical Requirements

24VDC @ .75A
 M12 Euro input connection

Pneumatic Requirements

Clean Dry Air or Nitrogen (.5 Micron Filtration)
 Supply pressure must exceed test pressure

Test Port

Single Channel Only – 1 Port for testing
 1/4" NPT female CPC quick connect

Discrete I/O

16 inputs (5-32 VDC sourcing)
 16 outputs (24 VDC sourcing)

Communications

Ethernet IP® Standard (EDS file supplied)
 USB/RS232 Ascii results output

Color Touch Screen

7" HDMI color touch screen
 Touch inputs for programming and setup
 Screen turns Green or Red for Pass/Fail status
 Light/Dark Mode for user selectable viewing preferences

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
 User can zoom in on the graphs to view each step of the leak test cycle to optimize cycle times.
 Graphs can be exported to USB as CSV files



Test Programs

10 user selectable programs
 Program 11 designed for Self-Test Mode
 Each program can operate in different modes
 Pressure or Vacuum Decay Mode (not both)
 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.

Defender 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

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., Kg/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
 Logged-In 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.
 Barcode reader integration capable of storing individual part numbers with leak test data.

Manual Precision Air Regulator

- Sensitivity to ¼" of water column.
- One regulator supplied with each instrument.

Pressure Regulator Ranges

Range: 0-2 PSIG
 .73-29 PSIG
 1.5-58 PSIG
 1.5-116 PSIG

Pressure Transducer Options

Range	Measurement	Accuracy	Resolution
0-29 PSIA	-14.7 to 14.7 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	.0002 PSIG



Custom Automated turnkey leak test system with multiple Defender leak test instruments.

The Defender is a modern pressure or vacuum decay leak test instrument — engineered for speed, accuracy, and seamless integration. Its compact size, cost-effective design, and powerful features make it the best value leak tester on the market.

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Why Choose Defender?

Compact size, cost effective price point, and simple **EtherNet/IP** integration make the Defender leak test instrument the go to choice for integrators and machine builders across the globe.



Custom Manual turnkey leak test system with Defender leak test instrument.

LeakMaster Leak Testing Instrumentation Product Line Up



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