

Air Leak Tester with more versatility and capability



AIR LEAK TESTER LS-R900

Loaded with advanced features evolved throughout our extensive knowledge and experiences



FULL-COLOR TOUCH-SCREEN DISPLAY

Easy-to-navigate and intuitive interface with simple menu configurations.



USER SELECTABLE MULTI-LANGUAGE CAPABILITY

English, Japanese, Chinese, Korean, (German, Spanish, Portugal)

* Languages in () will be available in near future.



WAVEFORM MEASUREMENT DISPLAY

Graphical display of the test pressure and measured differential pressure



EXTERNAL PNEUMATIC CIRCUIT

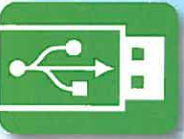
Detects blockage of select valves and exhaust valves connected to the LS-R900.

* The effect varies depending on the conditions.



AUTOMATIC SETUP FEATURE FOR EASY PROGRAMMING

Supports initial test parameter programming by determining stage timers.



USB PORT FOR EASY DATA STORAGE

Test results can be automatically copied to a USB Memory after every test, test parameters and System data backup can be stored as well.



MASTERING FEATURE PROVIDES HIGHLY ACCURATE TEST RESULTS

Provides faster and more accurate test results by compensating for environmental drifts. Using the Mastering feature, variety of parts can share a Master Chamber as a reference.

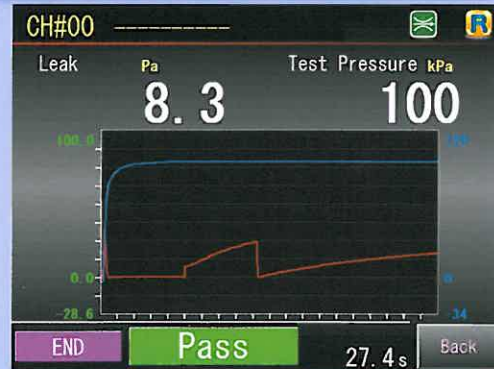
COSMO INSTRUMENTS CO., LTD.

Easy-to-navigate configuration with icons



Intuitive operation makes test parameter programming easy.

Selectable Measurement Screens



Measurement screens is selectable from 6 different screens. For four measurement screens, "Standard", "Simple", "Waveform" and "4-Channel", the items to be displayed can be customized.

Settings Menus



Large numeric keyboard pops up for easy test parameter settings.

Helpful User-Support Features

Common Peripherals

2 Leak Master: LM-1C

A leak standard for daily checks of leak tester readouts and leak limits.

It can be connected directly to the CAL port of Cosmo's air leak testers.



Back

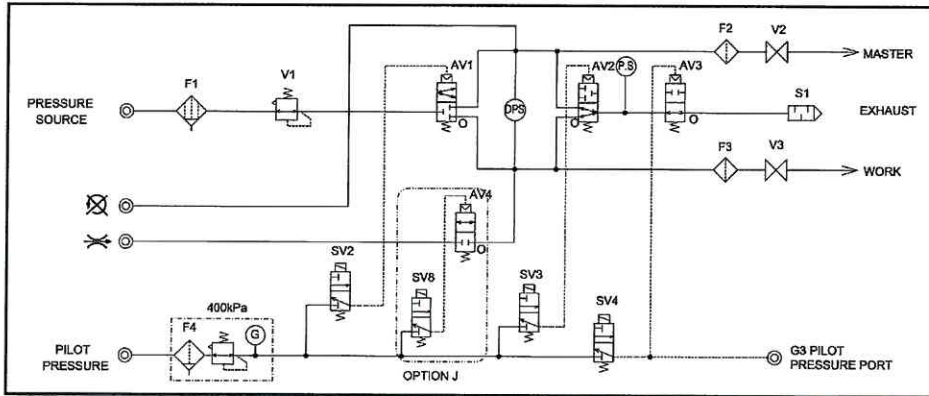
In addition to the sophisticated testing capability, LS-R900 comes with wide variety of user-support features such as Information, Troubleshooting, Calculation tools and List of common peripherals.

Other Features

Display	Full-color 5.7-inch LCD touch-screen Selectable from 6 different measurement screens
Intelligent Pneumatic Circuit	Comes with self-check features: Sensor sensitivity, Air-valve performance
K(Ve) Setup	K(Ve) can be setup using a calibrator, Leak Master or Auto-Leak Calibrator (ALC) to convert measured pressure to a flow rate.
Leak Limits	Two sets of leak limits: Medium/Small leaks on Work-side (UL/UL2) and Master-side (LL/LL2)
Electro-pneumatic Regulator	For the models come with Electro-pneumatic regulator, different test pressure can be set independently for each channel.
Noise Reduction (NR)	Eliminates noise by repeating the DET stage when readings falls between DET UL and DET UL2.
Inspection and Calibration	Offset and span check of Differential Pressure Sensor (DPS) Offset and span check of Pressure Sensor (PS)
Drift Compensation	Mastering, Auto-Drift Compensation, Compensation Limits, Number of Samples
Self-Check	Air-operated valve performance, DPS/PS Offset, CPU performance and others

Sensor Protection	Air-Blow (Intelligent Pneumatic Circuit): The pneumatic circuit is cleaned at the end of every leak test.
Exhaust Interference Prevention	External Exhaust Valve Ready: Valve is sold separately. Exhaust timing will be controlled for the cases where multiple cavities are tested simultaneously.
Charge Hold	Tester pressurizes the tested part continuously. Used to locate leaks.
Control I/O	Both for NPN-PNP For Phoenix Contact connector, wire connection can be done with a flat-bladed screwdriver.
Serial Communication	RS-232C: 2 ports one each on the front and rear panels. USB : 1 port
Display/Messages	Error Message, Troubleshooting, I/O Monitor, Channel Title, Counter
Mastering Settings	Maximum Idle Time, Day of Week, Interval, Iteration, Consecutive Triggers, Mastering Limits
Quick Mounting Brackets	Tester can be mounted/removed with only two screws. Good for mounting the tester in the limited space.

Pneumatic Circuit



Intelligent 2 Pneumatic Circuit

General Specifications

Differential Pressure Sensor (Standard)	Resolution	0.1 Pa	Test Pressure source	Clean air regulated to the test pressure. The source pressure must be sufficiently higher than the test pressure.		
	Accuracy Guaranteed Range	±1000Pa		Pilot Pressure	Clean air regulated from 400 to 700 kPa	
	Reading Accuracy	±2.5% of rdg ±1Pa 50Pa or lower: ±2Pa		Tube Diameter	Rc(PT) 1/4 (Test pressure, Pilot pressure, Work and Master ports)	
	Sensor Proof Pressure	5 MPa		CPU	ARM9 400MHz, DRAM 128MB	
Display Unit	Test Pressure Unit	kPa, MPa (PSI, kg/cm ² , bar, mbar, mmHg, cmHg, inHg)	RS-232C 2 ports (DB 9 pins)	I/F fixed length	Test parameters are transmitted as well as test results.	
	Leak Unit	Pa, kPa, mL/s, mL/min, L/min, Pa·m ³ /s, E-3 Pa·m ³ /s, Pa/s, Pa/min, *Pa/s, *Pa/min (mmH ₂ O, inH ₂ O, mmHg, in ³ /min, in ³ /d, ft ³ /h)		ID/F fixed length		Only test results are transmitted
	K(Ve) Unit(Leak Coefficient)	mL, L (in ³ , ft ³)		T/F fixed length	Other formats	
Leak Display	3 to 5 digits (Floating point) Sampling Rate: 10 times/s		USB Port	Test Data	Judgment, Leak, Compensation value, Test pressure, Channel#, Timers, etc	
Leak Limit Range	±999.9 Pa			Exporting test parameters	csv file	
Number of Channels	32 channels (#0 to #31)		Test Parameter Backup/Restore System Backup/Restore, Upgrade			
Timers	Up to 999.9 s (Resolution: 0.1 s)		Accessories	Quick mounting brackets, Control I/O connector, Operation manual, Inspection record, Traceability related documents		
Power Source	100 to 240 VAC ±10% at 50/60 Hz, 80 VA max			NOTE: Regulator and power cords are not included in scope of the CE declaration.		
Ambient Temperature	Operation Temp: 5 to 45°C Storage Temp: -20 to 60°C					
Humidity	80 %RH or less / no dew condensation					
Mass	Approx. 10 kg (Standard model)					

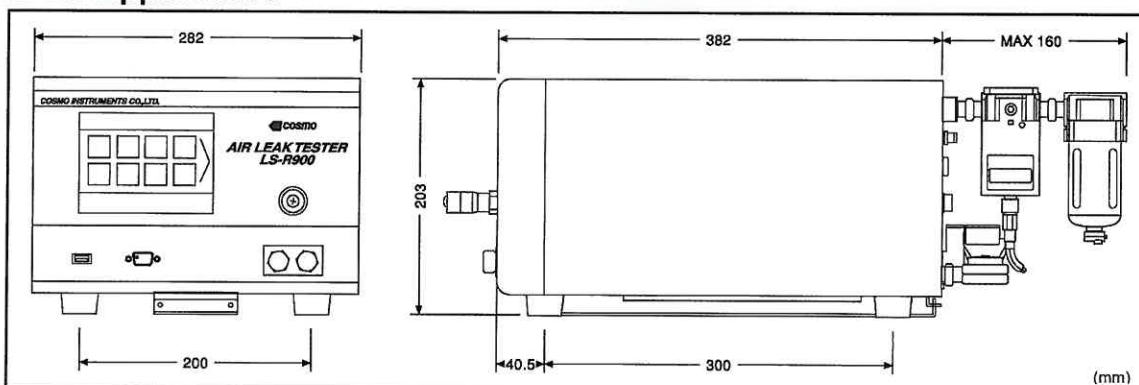
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Model LS-R900 – 1 Pneumatic Circuit 2 Pressure Range 3 Options – 4 Power Cord

① Pneumatic Circuit	A1: Intelligent 1 Pneumatic Circuit, A2: Intelligent 1 Pneumatic Circuit AS1: Small Volume A1 Circuit, AS01: Micro Volume Circuit, C: Secondary Pressure Circuit	
② Pressure Range	Precision Regulator	L02: 5 to 20kPa, L: 10 to 100kPa, M: 50 to 800kPa, V: -5 to -100kPa, H20: 2.0MPa or lower *1, H49: 4.9MPa or lower *1
	EP Regulator	LR: 10 to 95kPa, MR: 50 to 800kPa, VR: -5 to -75kPa
③ Options	J: Leak Master Ready, K05: Comes with ALC-05 0.5mL, K1: Comes with ALC-1 1mL, K4: Comes with ALC-4 4mL, K10: Comes with ALC-10 10mL, B: Bypass Circuit Ready,	
④ Power Cord	VA: 125VAC/7A Length: 3m, VE: 250VAC/10A Length: 2m (CE conformed)	

* 1 H20 and H49 models come with no regulator.

External Appearance



Air Leak Tester Common Peripherals

MC Master Chamber

A standard master replacing a known good part that is robust and has excellent repeatability. A model dedicated for Mastering feature is also available.



G3-ME External Exhaust Valve

Installing it between Air Leak Tester and tested part prevents the tester from contamination with oil and water. This can be driven by Air Leak Testers.



LM-1C Leak Master

A leak standard for daily checks of Leak Tester readouts. This is also used for K(Ve) setup.



QLC Quick Leak Calibrator

A leak calibrator for Air Leak Testers that precisely generates the specified volume displacement through a single operation.



NL NL Select Valve

A dedicated switching valve for Air Leak Testers



BU Bypass Unit

Using Bypass Unit for leak testing parts with a large volume can reduce the test time.



* The contents of this catalog is as of July 2013. The specs are subject to change.

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