

# PRODUCT INFORMATION



## Air Leak Tester LS-R700

Air Leak Tester that is Sophisticated  
yet Easy-to-Use



### ■ Features



Easy-to navigate and intuitive interface with simple menu configuration



User selectable multi-language capability (English, Japanese, Chinese)



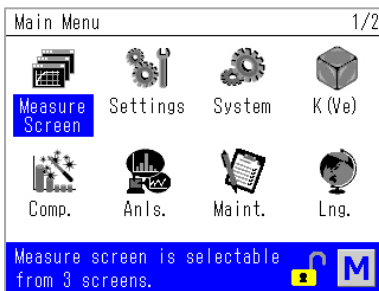
Waveform Display of Test pressure and Differential pressure



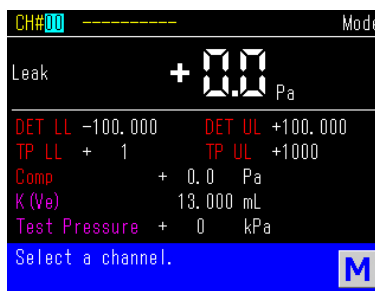
USB Port for easy test data management



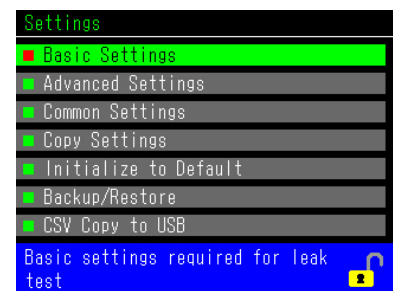
Mastering feature provides highly accurate test results



Intuitive operation makes test parameter programming easy.



Measurement screens are selectable among 3 depending on the situation.



Settings Menu is easy-to-follow. The Guidance Bar at the bottom gives you a simple explanation what the item is.

### ■ Features

Display	Color 3.5-inch LCD
	Selectable from 3 different measurement screens
Intelligent Pneumatic Circuit	Comes with self-check features: Sensor sensitivity, Air-valve performance
K(Ve) Automatic Setup	K(Ve) can be setup using Leak Master to measure leak coefficient to convert measured pressure to a flow rate.
Leak Limits	Two sets of leak limits: Large/Small leaks on Work-side (UL/UL2) and Master-side (LL/LL2)
Electro-pneumatic Control of Test Pressure	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 reading falls between DET UL and DET UL2. (For canceling Cycle over settings)
Maint (Inspection)	Offset and span check of Differential Pressure Sensor (DPS), Offset and span check of Pressure Sensor (PS)
Compensation	Mastering, Auto-Drift Compensation, Fixed Compensation
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.
	External Exhaust Valve Ready	Valve is sold separately.
Exhaust Interference Prevention	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.	
Serial Communication	RS-232C: 1 port (Rear panel) USB: 1 port (Front panel)	
Display/Messages	Error Message, I/O Monitor, Channel Title, Counter etc.	
Mastering Settings	Day of Week, Interval, Iteration, Max Idle Time, Consecutive Triggers, Mastering Comp Value, Mastering Limits	
Quick Mounting Brackets	Tester can be mounted/removed with only two screws. Good for mounting the tester in a limited space.	
Control I/O Port	NPN-PNP common Phoenix Contact connector. Wire connection can be done with a flat-bladed screwdriver.	

## Specifications

DPS	Resolution	0.1 Pa
	Display Range	±999.9 Pa (Accuracy Guaranteed: ±1000 Pa)
	Accuracy *1	±2.5% of rdg ±1 Pa, 50 Pa or less: ±2 Pa
	Sensor Proof Pressure	5 MPa
Display Unit*2	Test Pressure	kPa, MPa (kg/cm <sup>2</sup> , PSI, bar, mbar, mmHg, cmHg, inHg)
	Leak	Pa, kPa, mL/s, mL/min, L/min, Pa·m <sup>3</sup> /s, E-3 Pa·m <sup>3</sup> /s, Pa/s, Pa/min, *Pa/s, *Pa/min (mmH <sub>2</sub> O, inH <sub>2</sub> O, mmHg, in <sup>3</sup> /min, in <sup>3</sup> /d, ft <sup>3</sup> /h)
	Equivalent Internal Volume	mL, L (in <sup>3</sup> , ft <sup>3</sup> )
	Leak Display	4 digits, Sampling Rate: 10 times/s
	Leak Limit	Up to ±999.9 Pa
	Number of Channels	32 channels (#0 to #31)
	Timers	Up to 999.9 s (Resolution: 0.1 s)
	Power Source	100 to 240 VAC ±10% at 50/60 Hz, 70 VA max
	Ambient Temperature	5 to 45 °C
	Humidity	80 % RH or less / No dew condensation
	Weight	Approx. 10 kg
	Pressure Source	Clean air. The source pressure must be sufficiently higher than the test pressure and the pilot pressure.

Pilot Pressure	Filter regulator for pilot pressure: Setting range: 400 to 700 kPa	
Port Size	Rc1/4 (Test pressure, WORK and MASTER ports) 6 mm quick disconnect fitting (Pilot pressure)	
CPU	SH-2A 144 MHz, DRAM 8 MB	
RS-232C (D-sub 9 pins)	I/F fixed length	Test parameters as well as test results are transmitted.
	ID/F fixed length	Only test results are transmitted.
	T/F fixed length	Others
USB Port	Transmitted Data	Judgment, Leak, Test pressure, Channel#, Timers, etc.
	Test Parameters	Copy all the test parameters in a csv file
Accessories	Oil mist separator and regulator for Test pressure, Filter regulator for Pilot pressure, Quick mounting brackets, Control I/O connector, Power cable, Inspection Record of the product, Calibration Certificate of the standard, Operation manual CD	

\*1 Option D4 (Differential Pressure Sensor Range: 10 kPa) ±5% of rdg ±0.01 kPa, 0.2 kPa or less: ±0.02 kPa

\*2 The units in ( ) are not available for SI unit restriction models.

## Model Classification

Model LS-R700(A B C D E) A, B, D and E in the model notation are mandatory.

A	Pneumatic Circuit	A1: Intelligent 1 Pneumatic Circuit, A2: Intelligent 2 Pneumatic Circuit, AS01: Micro Volume Circuit, AS1: Small Volume A1 Circuit, C: Secondary Pressure Circuit *1	
B	Test Pressure Range	Precision Regulator	M: 50 to 800 kPa, L: 10 to 100 kPa, L02: 5 to 20 kPa, V: -5 to -100 kPa, H20: 2.0 MPa or less *2
		E/P Regulator	MR: 50 to 800 kPa, LR: 10 to 95 kPa, VR: -0 to -75 kPa
C	Options	G: External Exhaust Valve Ready *3, J: With CAL Driving Valve For Leak Master, B: Bypass Circuit Ready (without Precision Regulator and filter), B1: Bypass Circuit Ready (with Precision Regulator), W: Come with Stop Valve Open/Close Check Switch, PV1: Pressure/Vacuum Pressure Sensor *4, E1: Without Precision Regulator (L, M, V press), F1: Blow Orifice Φ1.2 *5, R1: E/P Regulator Ready (With EP Connector), RX02: Nylon Filter Housing (Filter for pilot pressure), RX03: Nylon Filter Housing (Filter for pilot pressure and test pressure), RX06: Pilot Pressure Port Comes with Filter Only, D4: DPS Range: ±10 kPa, PX1: NPT Fittings, PX2: Rechargeable Battery *6	
		D	Display Units
E	Power Cable	VA: 125 VAC 3 m, VE: 250 VAC 2 m, VK: 250 VAC 2 m (Only for Chinese customers)	

\*1 [External Exhaust Valve Ready (G)] and [Come with Cal driving valve for Leak Master (J)] are not available.

\*2 Not available for [High (H20)] models.

\*3 Standard specification. Not selectable for [Vacuum (V, VR)].

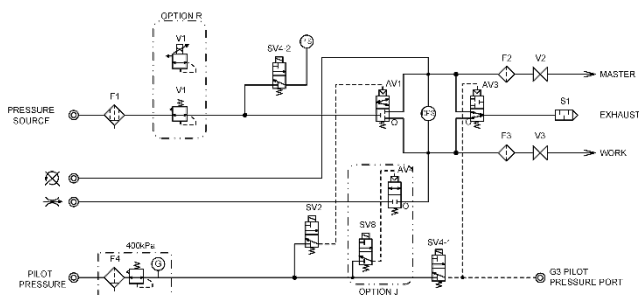
\*4 Low pressure: ±100 kPa Medium pressure: -100 to 1000 kPa

\*5 Standard specification for [Micro Volume Circuit (AS01)]. Also, select when the test pressure is -10 to -4 kPa.

\*6 [Rechargeable Battery (PX2)] is mandatory for Chinese customers. Testers come with this option are not CE compliant.

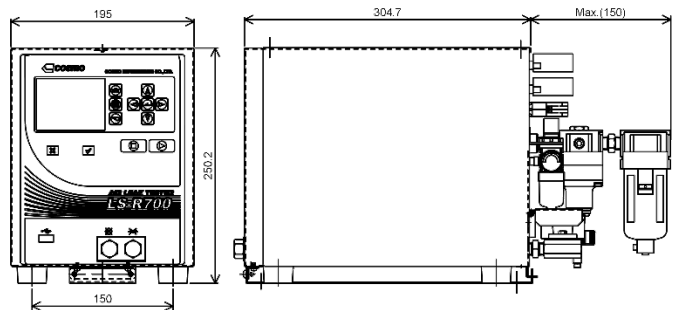
## Pneumatic Circuit

Standard Circuit: Intelligent 1 Pneumatic Circuit



## External Appearance

Dimensions (W195 x H205.2 x D304.7 mm)



\* The contents of this catalog are as of November 2023. The specifications are subject to change without prior notice.

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