



ISO 9001 Certified  
JQA-QM3681



ISO 14001 Certified  
JQA-EM5044

## Compact model Incorporates Latest Powerful Features



### COSMO Air Leak Tester model **LS-1822A**

#### High-performance Differential Pressure Sensor

The high-performance sensor and AD converter can resolve measurement to as fine as 0.1 Pa.

#### Mastering Compensation Feature

This feature compensates for environmental changes, facilitating fast and highly accurate testing.

#### Highly Durable Air-operated Valve

Cosmo's dedicated air-operated valve ensures consistent measurement and a high degree of test durability.

#### Intelligent Pneumatic Circuit

Automatic self-cleaning and self-checking features incorporated into each measurement cycle assure high reliability of leak testing.

#### Noise Reduction Feature

This feature reduces the false rejection of good parts.

#### Direct Leak Rate Readouts

The measured pressure can be displayed in a desired volumetric flow rate unit such as mL/min or mL/s.

#### Multi-Channel Feature

Ideal for multi-item low-volume production, as 16 different sets of test parameters can be programmed independently for each channel.

#### Test Data Graphing

Use of the test data graph saves the time required to search for the most appropriate settings.

**COSMO Instruments Co., Ltd.**

AIR LEAK TESTER

## MAJOR FEATURE SUMMARY

Calibration port	Easily accessible on the front panel for daily and periodic inspections.
RS-232C a standard feature	Allows test data to be uploaded to a PC for data management.
I/O signal monitor	The status of I/O signals can be monitored on the LCD.
Quick mounting bracket	Allows the tester to be easily mounted or removed from the front side of the tester.

## MODEL CLASSIFICATIONS

### LS-1822A-①

Test pressure selection	Regulator	Symbol ①	Pressure range/ Test pressure sensor
	Precision regulator		L
		M	50 to 700 kPa/PS : 1 MPa
		H15	0.1 to 1.5 MPa/PS : 2 MPa
		H20	0.1 to 2.0 MPa/PS : 2 MPa
		V	-5 to -100 kPa/PS : -100 kPa
Electropneumatic regulator		LR	10 to 95 kPa/PS : 100 kPa
		MR	50 to 700 kPa/PS : 1 MPa
		VR	-5 to -75 kPa/PS : -100 kPa

## OPTIONAL SPECIFICATIONS

Regulator	Symbol	Description
Automatic Leak Master calibration	J	The built-in control valve for the Leak Master enables the tester to automatically measure leak coefficient, K(Ve) and perform K(Ve) checks.
Intelligent II pneumatic circuit	A2	A pneumatic circuit incorporating an isobaric circuit which reduces the measurement time for large-volume parts.
Small-volume pneumatic circuit	A01	For volumes of 50 mL or less and low leak rates.
External pressure detection method (secondary pressure system)	C	A method for detecting leaks on the leaking side.
Wide-range display	D4	DP range : $\pm 10$ kPa Minimum reading : 1 Pa
Stop valve check switch	W	Prevents the stop valves on the WORK and MASTER ports from being left open.
PNP open-collector output	S	The control I/O port has a PNP output.
CE-compliant model (to be released soon)	Q	This model will be CE marked. An EC declaration of conformity is available upon request.

## OPTIONAL EQUIPMENT

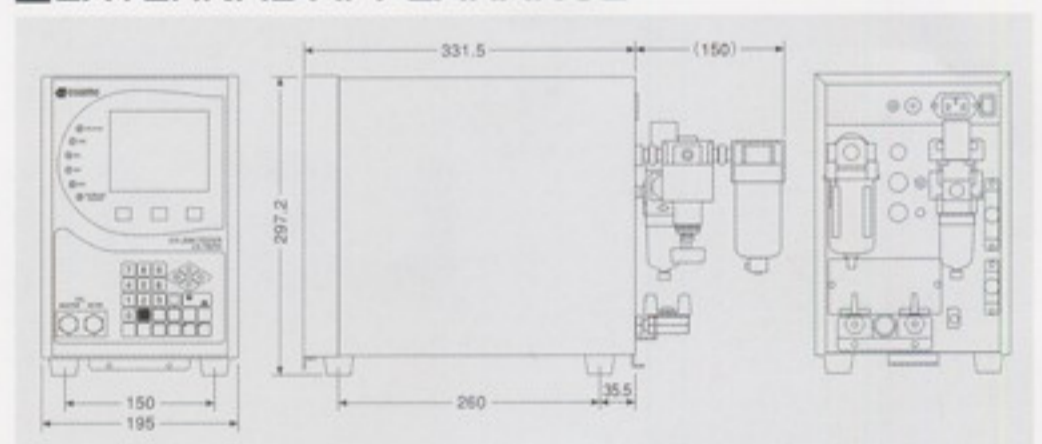
The following optional equipment is available upon request.

External exhaust valve	G series
Leak Master	LM-1B series
Leak Calibrator	LC and QLC series
Master Chamber	MC series
Remote Controller	RC series

## SPECIFICATIONS

DPS	Reading range	0.0 to $\pm 999$ Pa
	Reading accuracy	$\pm 5\%$ of R.D. $\pm 1$ Pa
	Minimum reading	0.1 Pa
	Sensor proof pressure	5 MPa
Display digit		3 digits (floating-point)
Display sampling time		100 ms
Display unit	Test pressure	kPa, MPa, mmHg, PSI, kg/cm <sup>2</sup> , bar, mbar, mmHg, cmHg, inHg
	Leak rate	Pa, kPa, mmHg, inHg, mL/s, mL/min, in <sup>3</sup> /min, in <sup>3</sup> /d, L/min
Leak rate limit		$\pm 999.999$ Pa or lower
Number of channels		16 (CH# 0 to 15)
Timer setting		0.0 to 999.9 s
Hardware		16-bit CPU
Power supply		100 to 240 V AC $\pm 10\%$ at 50/60 Hz, 100 VA max
Test pressure source		Clean air whose pressure is sufficiently higher than the test pressure
Pilot pressure source		Clean air regulated from 400 to 700 kPa
Tubing port inner diameter		Rc1/4 (test pressure source and WORK and MASTER ports) Rc1/8 (pilot pressure source)
Ambient temperature		Operating temp : 5 to 40 °C Storage temp : -20 to 60 °C
Ambient humidity		80% RH or less, no condensation
Weight		Approx. 12 kg
Serial communication port (RS-232C) Output format is selectable	ID format (default)	Leak rate data and test parameters (fixed length) are output.
	I format	
	T format	Leak rate data (fixed length) is output.
	Printer format	Leak rate data and a list of test parameters are output.
Control I/O port		DB-37P male connector NPN open-collector output, photocoupler input
Standard accessories and components		Filter regulator for pilot pressure, connectors for interface ports, power cord (125 V, 3 m), Quick mounting brackets, Inspection record, and operation manual
Optional accessories		5 m power cord, high-voltage power cord (withstand voltage: 250 V AC max, 2 m), fitting for CAL port and traceability certificate

## EXTERNAL APPEARANCE



NOTE: This catalog reflects information available as of April 2006. Specifications are subject to change without notice.



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