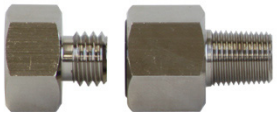
cosmo

PRODUCT INFOMATION

Leak Master



Plug Adapter

- ✓ **Accurate**
- ✓ **Stable**
- ✓ **Compact and handy**

Model LM-1C

Provides Fast and Easy leak tester sensitivity checks.

Ideal for the daily maintenance of your Air leak testers!

Production accuracy is 5% of required flow

For 2mL/min or less, accuracy is within 10 - 20%

- Comes in 2 models: LM-1C: customized to the specified test pressure and flow and LM-1C-J1 series: Standardized model.
- Enables fast and easy leak tester sensitivity checks
- LM-1C will maintain the same flow for long period of time.
- Can be used for the External pressure testers.
- Can be connected to the CAL port of Cosmo's Air Leak Testers.
  The dedicated adapter is available for putting it in the circuit between the tested part and the tester.
- Use of the dedicated plug enables to restore the seal-tight circuit in seconds.
- A traceability certificate is available upon request.

LM-1C

Customized to the specified test pressure and flow.

Model: LM-1C (**A**)(**B**,**C**)

A Adapter Diameter: R1: R1/8 or R2: R1/4

B Required Flow: xx mL/min
Please specify the flow as the follows:
Flow ≥ 20mL/min: 1mL/min
Flow < 20mL/min: 0.1mL/min

C Test Pressure: xxx kPa

ig. Adapter Diameter:R1/4,
Flow: 2.5mL/min and Test pressure: 150kPa
LM-1C(R2)(2.5mL/min,150kPa)

Enclosed Items

- LM-C with a filter joint fitting and an acrylic cover attached
- 1 adapter
- 1 plug
- 1 filter element
- 1 o-ring

Flow	Test Pressure Range	
0.1 - 20 mL/min	Pressure	1 - 9.9 kPa
0.1 - 300mL/min		10 - 99 kPa
0.1 - 500mL/min		100 - 999 kPa
0.1 - 20 mL/min	Vacuum	-1 - -9.9 kPa
0.1 - 100 mL/min		-10 - -49 kPa
0.1 - 200 mL/min		-50 - -89 kPa

Production Accuracy

- Required flow is 2mL/min or larger: within ±5%
- Required flow is 0.8mL/min or larger: within ±10%
- Required flow is smaller than 0.8mL/min: within ±20%

* For test pressure 1MPa or higher, please order LM-1AH.
* Special order for the ranges above is available upon request.
* Annual check of Leak Master is recommended.
  Please contact your local Cosmo representative.

About Flow

LM-1C is manufactured to the required flow in the equivalent flow however, the conversion flow is mentioned as well.

Equivalent Flow: Flow measured at 20°C and 1atm.
The flow is not affected by the environmental condition.

Conversion Flow: Flow measured at the ambient temperature and pressure that is converted to the flow at 20°C and 1atm.
Flow varies depending on the environmental condition

LM-1C-J1 Series

LM-1C-J1 Series are standardized Leak Masters as shown on the table below. A data sheet showing actually measured or calculated flows at the test pressure points in the table below will be enclosed. This series is an ideal standard for the calibration of the air leak tester sensitivity.

Model: LM-1C-J1-(✱) **✱:** A standard flow in mL/min at the test pressure of 100kPa. (1, 2, 5, 10, 20, 50, 100 and 200)

Data sheet example of flows at different test pressure points

Test Press (kPa)	LM-1C -J1-1	LM-1C -J1-2	LM-1C -J1-5	LM-1C -J1-10	LM-1C -J1-20	LM-1C -J1-50	LM-1C -J1-100	LM-1C -J1-200
10	0.08	0.16	0.39	0.78	1.60	4.66	10.33	23.0
20	0.16	0.32	0.78	1.56	3.19	9.32	20.7	45.9
30	0.25	0.50	1.24	2.48	5.03	14.46	31.0	65.3
40	0.34	0.68	1.70	3.39	6.87	19.60	41.4	84.7
50	0.43	0.87	2.16	4.31	8.71	24.7	51.8	105.8
60	0.54	1.09	2.70	5.40	10.84	29.8	61.7	126.8
70	0.65	1.31	3.25	6.49	12.96	34.9	71.6	145.3
80	0.77	1.52	3.79	7.57	15.09	40.0	81.2	163.8
90	0.88	1.74	4.34	8.66	17.21	45.1	90.8	182.0
100	0.99	1.96	4.88	9.75	19.34	50.2	100.4	200.1
150	1.74	3.31	8.18	16.42	31.7	61.1	147.1	
200	2.49	4.65	11.47	23.1	44.0	102.0	193.7	
250	3.49	6.54	15.52	31.0	58.0	128.6		
300	4.50	8.44	19.57	39.0	71.9	155.3		
350	5.50	10.33	23.6	46.9	85.9			
400	6.50	12.22	27.7	54.9	99.9			
450	7.75	14.45	32.2	63.9	115.2			
500	9.01	16.68	36.7	72.9	130.5			
550	10.26	18.90	41.2	81.9	145.8			
600	11.51	21.1	45.7	90.9	161.2			

Actually measured value Calculated value

Leak Masters for different purposes:

For Daily check-up of a particular case

Select a Leak Master whose flow is close to the actual leak limit.

For sensitivity calibration

Select a Leak Master with a large flow. If the flow is too small, the ratio of the noises in flow will be large causing an error in calibration.

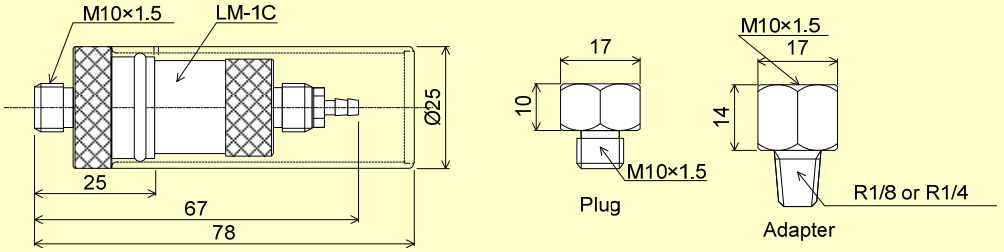
Production Accuracy

- Within ±5% of each standard flow at test pressure of 100kPa except for 1mL/min (LM-1C-J1-1), which is ±10%.
- For the vacuum range, please contact a Cosmo representative.

Enclosed Item

- LM-C with a filter joint fitting and an acrylic cover attached
- 1 filter element
- 1 o-ring

External Appearance



For LM-1C-J1 series, the adapter and plug are options.

Adapters

The follows are available upon a request.

Part Code	Male	Female	Usage
7201ALAL	R1/8	M10 x 1.5	Connecting LM-1C in the circuit between the part and the WORK port (Rc1/8). *1
7201ALAZ	R1/4	M10 x 1.5	Connecting LM-1C in the circuit between the part and the WORK port (Rc1/4). *2
7201ALAQ	NPT1/8	M10 x 1.5	Connecting LM-1C in the circuit between the part and the WORK port (US standard NPT 1/8).
7201ALAX	M10 x 1.5	Rc1/4	Connecting R1/4 tube to the Calibration (CAL) port of Cosmo's Leak tester.
7201ALAV	M10 x 1.5	Rc1/8	Connecting R1/8 tube to the Calibration (CAL) port of Cosmo's Leak tester.
7201ALAW	M10 x 1.5	NPT1/8	Connecting US standard NPT1/8 tube to the Calibration (CAL) port of Cosmo's Leak tester.

***1.** Enclosed with LM-1C(R1) but won't be enclosed with LM-1C-J1

***2.** Enclosed with LM-1C(R2) but won't be enclosed with LM-1C-J1