



# ISO 18250-1 Subatmospheric Pressure Air Leakage Tester

A compact benchtop instrument for subatmospheric pressure air leakage testing of small bore connector assemblies under aspiration conditions.

ISO 18250-1

ISO 80369-20 Annex D

Subatmospheric Pressure

Small Bore Connectors

**PRESSURE RANGE**

0 to -80 kPa

**ACCURACY**

+/-0.25% FS

**CONTROL**  
PLC + 7-inch touch screen

**RESULT OUTPUT**  
Display + thermal printer

## Product Overview

The ISO 18250-1 Air Leakage Tester evaluates the sealing performance of small bore connector assemblies under sub-atmospheric pressure. It applies a controlled vacuum and monitors pressure decay to support compliance testing according to ISO 18250-1 and ISO 80369-20 Annex D.



### Core Functions

- Subatmospheric pressure air leakage testing for small bore connectors
- PLC control with 7-inch color touch screen for parameter setting
- Real-time pressure curve monitoring for visual test evaluation
- Automatic test result display with built-in thermal printer
- Compact benchtop structure suitable for medical laboratories

## Typical Applications

### ● Medical Connector QC

Routine air leakage testing of small bore connectors in production quality control.

### ● Compliance Verification

Testing according to ISO 18250-1 and ISO 80369-20 Annex D requirements.

### ● R&D Validation

Verification of new connector designs under negative pressure aspiration conditions.

### ● Testing Laboratories

Traceable test data output for third-party and internal laboratory workflows.

Key Information: MOQ: 1 set | Delivery Time: 25 working days | Category: Medical Test Equipment / ISO 80369 Testing Equipment

# Technical Parameters

The following specification summary is formatted for product catalog use. Final configuration can be confirmed according to the customer testing requirement and applicable standard edition.

Parameter	Specification	Remark or Notes
Applicable Standards	ISO 18250-1; ISO 80369-20 Annex D	Subatmospheric pressure air leakage test
Test Method	Pressure change monitoring / pressure decay	Simulates aspiration conditions
Test Object	Small bore connector assemblies	Medical fluid transfer connectors
Pressure Range	0 to -80 kPa	Negative pressure range
Pressure Accuracy	+/-0.25% FS	High-precision pressure sensor
Test Time	0-9999 seconds, adjustable	User-definable test duration
Control System	PLC + 7-inch color touch screen	Intuitive operation and parameter setting
Result Output	On-screen display + built-in thermal printer	Automatic test report printing supported
Connection Size	4 mm pneumatic input/output ports	Standard pneumatic connection
Dimensions	360 x 380 x 210 mm	Compact benchtop design
Weight	Approx. 11.5 kg	Easy to move within laboratory
Power Supply	AC 220V, 50Hz	Standard laboratory power supply



## Testing Principle

The tester evaluates sealing performance by applying a controlled sub-atmospheric pressure to the connector assembly and monitoring the rate of pressure change over a set duration. After a stable vacuum is established, the system continuously measures pressure rise. A significant pressure increase indicates air ingress and possible sealing failure. This method supports objective verification under aspiration-related use conditions.

1

### Connect Sample

Connect and seal the small bore connector assembly to the pneumatic port.

2

### Set Parameters

Set pressure, test duration and judgment criteria on the touch screen.

3

### Apply Vacuum

The PLC controls the pressure system to reach the specified negative pressure.

4

### Monitor Decay

Pressure change is monitored and displayed as real-time data or curve.

5

### Print Result

The result is displayed and can be printed by the built-in thermal printer.

## Operation Notes

- Ensure connector assemblies are properly connected and sealed before testing.
- Verify that the vacuum source and pressure sensor are functioning correctly.
- Set pressure and test time according to the applicable test method.
- Regularly calibrate the pressure sensor to maintain measurement accuracy.

## Key Advantages

### Standard-Oriented

Designed for ISO 18250-1 and ISO 80369-20 Annex D subatmospheric pressure air leakage tests.

### Precise Measurement

Pressure accuracy of  $\pm 0.25\%$  FS supports reliable and repeatable test evaluation.

### Efficient Operation

PLC control, touch-screen interface and built-in printer improve daily laboratory workflow.

### Compact Benchtop Design

Small footprint makes the equipment easy to place and operate in medical device test labs.

## Product Gallery



Front View



Front Angle View



Side Angle View

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