

RESPIRATOR MASK PERFORMANCE TESTER



Respirator Mask Performance Tester | ISO 17510:2015

Respirator Mask Performance Tester – Model ToronMed™ RMPT01 is designed in accordance with ISO 17510:2015 and other applicable international standards. This advanced testing system is used to evaluate the safety, airflow performance, and reliability of respirator masks by simulating real-world breathing conditions.

With precision measurement systems and intelligent data processing, the Respirator Mask Performance Tester – Model ToronMed™ RMPT01 provides a complete solution for medical device manufacturers, laboratories, and regulatory testing facilities to ensure respirator masks meet international performance and safety requirements.

Torontech is a trusted global provider of advanced medical device testing solutions. With the Respirator Mask Performance Tester – Model ToronMed™ RMPT01, laboratories and manufacturers gain a reliable, precise, and standards-compliant solution that guarantees the highest level of respirator safety and performance.

APPLICATIONS

The Respirator Mask Performance Tester – Model ToronMed™ RMPT01 is ideal for:

- Respirator mask manufacturers conducting R&D and production quality control.
- Independent laboratories providing third-party verification and certification testing.
- Regulatory bodies ensuring compliance with ISO 17510 and international safety standards.
- Healthcare institutions validating mask performance for patient and staff safety.



FEATURES

- 7-inch color touch screen with intelligent data processing.
- High-sensitivity flow rate sensors with excellent repeatability, accuracy, and fast response.
- Micromanometer sensor with high accuracy and stability.
- Explosion-proof design ensuring safe and reliable operation.
- Breathing simulator and headform for real-world mask testing scenarios.
- Built-in micro printer for immediate test reporting.

THEORY & METHOD

The Respirator Mask Performance Tester – Model ToronMed™ RMPT01 supports a full range of critical performance evaluations, including:

- Resistance to Flow (Pressure Drop) Test – Measures inspiratory and expiratory resistance to ensure mask breathability.
- Exhaust Flow Test – Verifies airflow adequacy to maintain safe oxygen levels.
- Anti-Asphyxia Valve Pressure Test – Ensures safety mechanisms function properly under single fault conditions.
- Inspiratory & Expiratory Resistance Test – Determines resistance levels during breathing cycles.
- CO₂ Rebreathing Test – Assesses CO₂ concentration changes to confirm safety during prolonged use.

TECHNICAL SPECIFICATIONS

Specification	Respirator Mask Performance Tester - Model ToronMed™ RMPT01
Flow Rate Range	10-200 L/min
Accuracy	±2%

Specification	Respirator Mask Performance Tester - Model ToronMed™ RMPT01
Pressure Range	0-2000 Pa
Pressure Resolution	0.1 Pa
Breathing Simulator Frequency	10-40 c/min (adjustable)
Simulated Tidal Volume Range	0.1-1 L/min (settable)
CO ₂ Volume Fraction	5.0 ± 0.1%
Capnograph Range	0-200,000 ppm
Fan Speed	0.5 m/s
Respiratory Frequency	15 breaths/min (settable)
Respiratory Tidal Volume	0.5 L
Voltage	220V, 50Hz (110V is also available)
Net Weight	55 kg
Standard Configuration	Instrument, 7-inch touch screen, Headform (1 set), Breathing Simulator, Micro Printer.
Note	Customers must prepare their own CO ₂ gas supply for testing.



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