

BREATHING TUBE RESISTANCE TO FLOW TESTER



Breathing Tube Resistance to Flow Tester | ISO 5367

Breathing Tube Resistance to Flow Tester – Model ToronMed™ BTRFT03 is designed according to ISO 5367:2023 and other applicable international standards. This advanced instrument is used to evaluate the resistance-to-flow performance of breathing tubes intended for use with anesthetic apparatus and ventilators.

Engineered for medical device manufacturers, laboratories, and quality control facilities, the Breathing Tube Resistance to Flow Tester – Model ToronMed™ BTRFT03 ensures that breathing tubes provide consistent airflow under both straight and bent conditions, helping to meet the highest safety and performance requirements in respiratory care.

APPLICATIONS

The Breathing Tube Resistance to Flow Tester – Model ToronMed™ BTRFT03 is ideal for:

- Manufacturers of anesthetic and respiratory breathing tubes conducting R&D, production QC, and compliance testing.
- Independent laboratories performing third-party verification of breathing tube performance.
- Hospitals and healthcare facilities ensuring patient safety and equipment reliability.
- Compliance with ISO 5367 and other international standards for breathing system components.

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Torontech is a trusted global provider of advanced medical device testing solutions. With the Breathing Tube Resistance to Flow Tester – Model ToronMed™ BTRFT03, laboratories and manufacturers gain a precise, reliable, and standards-compliant solution that guarantees the highest level of respiratory equipment safety and performance.

FEATURES

- 7-inch color touch screen for easy operation and monitoring.
- High-precision pressure sensors with stable, adjustable control.
- 15 mm and 22 mm double cone connectors to accommodate standard breathing tube interfaces.
- Surge Flask designed in strict accordance with ISO test requirements.
- Real-time data output with onboard micro printer and USB interface.
- Large data storage capacity (over 100,000 test records).
- Safety protection features including pressure over-range shutdown, overload protection, and power-down memory.

THEORY & METHOD

The Breathing Tube Resistance to Flow Tester – Model ToronMed™ BTRFT03 supports two primary test methods:

- Resistance to Flow – Measures the pressure change before and after the breathing tube is inserted at a controlled flow rate ($\Delta P = P_2 - P_1$).
- Flow Resistance with Bending – Simulates real-world use by bending the breathing tube around a test fixture with applied weight, then measuring the increase in resistance at rated flow.

In addition, the system can be extended to evaluate five critical performance parameters: airflow resistance, flatness resistance, leakage test, pressure resistance, and patency.

TECHNICAL SPECIFICATIONS

Specification	Breathing Tube Resistance to Flow Tester - Model ToronMed™ BTRFT03
Test Range	0-600 kPa; 0-87 psi
Flow Rate Range	0-20 L/min
Inflatable Head Diameter	Ø 5.5-8.5 mm (standard, customizable)
Gas Supply Pressure	0.25-0.7 MPa (external source required)
Port Size	Ø 8 mm PU tubing
Mainframe Dimensions	325 × 430 × 205 mm
Voltage	AC 220V, 50Hz (110V is also available)
Net Weight	8.8 kg
Standard Configuration	Mainframe, 7-inch touch screen, Surge Flask, Hanging Stand, Weights (2 sets), and Micro Printer.



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