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# CATHETER BURST PRESSURE TESTER

# Catheter Burst Pressure Tester | ISO 10555-1, ISO 10555-4

Catheter Burst Pressure Tester – ToronMed™ CBPT04 is designed to evaluate the burst pressure performance of catheters and balloon dilatation devices under controlled positive pressure conditions.

This instrument accurately determines static burst pressure, rated burst pressure (RBP), balloon fatigue resistance, leakage and damage during inflation, balloon deflation time, and the relationship between balloon diameter and inflation pressure. It provides precise, repeatable results to ensure medical devices meet strict international safety and performance standards.

## Why Choose Catheter Burst Pressure Tester – ToronMed™ CBPT04

The Catheter Burst Pressure Tester – ToronMed™ CBPT04 provides high-pressure accuracy, safety, and compliance for catheter and balloon device testing. Its servo booster system, physiological temperature simulation, and multiple test modes make it an indispensable instrument for manufacturers, R&D facilities, and regulatory laboratories.

With its robust design, automated operation, GMP-compliant software, and reliable data storage, the Catheter Burst Pressure Tester ensures that medical devices meet rigorous safety and performance standards.

## APPLICATIONS

- Catheters – Burst pressure and fatigue resistance
- Balloon Dilatation Catheters – Rated burst pressure and inflation/deflation testing
- Sterile Single-Use Catheters – Seal integrity and pressure compliance testing.


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### Standards Compliance

The ToronMed™ CBPT04 Catheter Burst Pressure Tester is designed in accordance with:

- ISO 10555-1 – Intravascular catheters, general requirements
- ISO 10555-4 – Balloon dilatation catheters

## FEATURES

- Advanced Microcomputer Control
  High-speed embedded processor ensures reliable test performance across multiple modes.
- Multiple Test Modes
  Supports burst pressure, rated burst pressure, balloon fatigue, balloon deflation time, and balloon diameter-to-pressure relationship tests.
- Stable Pressure Environment
  Fluid-filled chamber with constant temperature control at 37°C to simulate physiological conditions.
- Integrated Servo Booster System
  Self-developed servo booster eliminates the need for external air sources, providing stable high-pressure testing.
- Durable Construction
  High-pressure solenoid valves, stainless steel pipelines, and corrosion-resistant materials ensure long-term reliability.
- Flexible Compatibility
  Standard Luer connector supports a wide range of catheters and balloon devices.
- Safety-Oriented Design
  Includes overpressure protection, emergency stop function, and power-off memory for safe, stable testing.
- Data Storage & Connectivity
  Stores up to 100,000 test records with RS232 interface for PC data transfer and built-in printer for reporting.
- User-Friendly Interface
  7-inch HD touchscreen with real-time curve and data display, plus automated calibration for simple operation.

- GMP-Compliant Software
  Four-level password protection and full compliance with GMP “Computerized System” requirements, including user management, authority control, and audit trails.

## THEORY & METHOD

### Test Principle

The Catheter Burst Pressure Tester applies positive pressure to catheter or balloon samples until failure or specified conditions are reached. It can:

- Measure burst pressure under static conditions
- Determine rated burst pressure (RBP)
- Evaluate balloon fatigue resistance by repeated inflation cycles
- Measure balloon deflation time
- Analyze the relationship between balloon diameter and inflation pressure

## TECHNICAL SPECIFICATIONS

| Specification | Value |
| --- | --- |
| Test Range | 0–10 MPa |
| Accuracy | 0.5% FS |
| Connector | Luer taper |

| Specification | Value |
| --- | --- |
| Test Modes | Burst pressure, Rated burst pressure (RBP), Balloon fatigue, Balloon deflation, Diameter-to-pressure |
| Constant Temperature Tank | RT +5°C to 100°C |
| Temperature Accuracy | ±0.5°C |
| Dimensions (Main Instrument) | 540 × 400 × 425 mm |
| Dimensions (Water Tank) | 285 × 500 × 340 mm |
| Dimensions (Booster Pump) | 280 × 265 × 750 mm |
| Net Weight | Main engine: 31 kg; Booster pump: 33 kg |
| Voltage | AC 220V 50Hz / AC 110V 60Hz |

## Standard Configuration

- Main instrument unit
- 7-inch touchscreen interface
- Booster pump
- Constant temperature water tank
- Liquid reservoir
- Micro printer

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