



The RX750 is designed to measure and record radial stiffness and strength of self expanding and balloon expandable devices within a temperature controlled water bath. Many new devices are comprised of materials with mechanical properties that are fluid and temperature dependent. This off-the-shelf solution measures force decay over time and radial strength and stiffness in an aqueous environment. The RX750 utilizes the same integrated high speed data acquisition system and proprietary software as the RX550/650, generating repeatable and reproducible data to facilitate knowledgeable and rapid device design changes.

At the core of the RX equipment is the MSI proprietary segmental compression mechanism which collects data from twelve product contact points providing uniform radial measurement. The RX750 system has an optional dual tank base for testing consecutively in cold and then warm water to simulate loading and body temperature deployment. The RX equipment utilizes an encoder for diameter accuracy, a linear actuator for activation and a precision roller bearing system that is specifically designed to provide a low friction testing environment. Test results can be used for regulatory submissions, competitive product testing, R&D device evaluation and inline manufacturing quality assurance.

The RX equipment is designed with international testing recommendations in mind. These include: FDA guidance document titled "Non-Clinical Tests and Recommended Labeling for Intravascular Stents and Associated Delivery Systems", ISO Standards 25539-1:2003(e), 25539-2: 2008 and 15539:2000(E).

Radial Expansion Features

- High speed data acquisition system.
- Quick set-up.
- Repeatable and reproducible data.
- 40mm segment length is fully submersible in temperature controlled water bath.
- Software capable of replaying multiple data sets for fast and easy comparisons.
- Software has force control capability for measuring diameter creep over time.
- Data output setup for spreadsheet analysis.
- Interchangeable load cells for optimal force resolution.
- Data output includes: lab notes, maximum, minimum and average force.
- Quick and easy software controlled calibration.

RX750

Submersible Radial Expansion Force Equipment



Summary of Spec Data

<i>Temp Range</i>	Ambient to 50°C (Using Water Bath)
<i>Head Lengths</i>	120 with 40mm submersible and Custom Sizes
<i>Head Diameters</i>	0.7-11.5, 1-14, & Custom Sizes
<i>Diameter Accuracy</i>	0.2% of Full Scale
<i>Diameter Resolution</i>	0.01mm
<i>Force Repeatability</i>	1.0% of Full Scale
<i>Force Resolution</i>	0.06% of Full Scale
<i>Open/Close Rate</i>	0.01mm/sec - 5.0mm/sec
<i>Power Requirements</i>	110 or 220 VAC
<i>Load Cell Options</i>	10, 25, 50, 75 or 100lbs (50lbs Standard)
<i>General Warranty</i>	1 Year - Routine Maintenance Required

RX750 Equipment Specifications

Expansion Force Measurement Head

- Stainless Steel twelve segment design.
- Friction levels <0.3N of Hoop Force.
- Custom head diameter ranges and lengths available.
- Imbedded temperature sensor (accuracy +/- 1.2°C).
- Standard integrated load cell 50lbs (maximum hoop force 33N, 7.5lbs).

Control Module Specifications

- High speed motion control system.
- Custom cable connection between module and expansion head.
- Integrated control system with monitor, keyboard and mouse.
- High speed data acquisition (100 samples/second).
- Data retrievable via external drive.

Software Specifications

- Embedded PC.
- Diameter control command utilizing manual setting, prescribed ramp, cycle or from file.
- Force control command utilizing prescribed ramp.
- Diameter and hoop force are measured, displayed, graphed and written to a CSV file.
- Analyze function replays multiple graphs and saves image as PDF.
- Data interpolation at any specified data point, diameter, force or time.

RX750 Machine Dimensions

- Shipping Weight: 160lbs (73kg)
- Machine Weight: 70lbs (32kg)
- Height: 23" (584mm)
- Width: 32" (813mm)
- Depth: 17" (432mm)

RX750 Control Module

- Machine Weight: 15lbs (7kg)
- Height: 17" (432mm)
- Width: 9" (229mm)
- Depth: 15" (381mm)