INSTRON®

The difference is measurable®

Automated Testing System | For Tensile and Flexure Testing of Plastics

Instron® Automated Testing Systems for the testing of Plastics are configured to perform unattended tensile and flexural testing of rigid, plastic specimens of varying lengths and thicknesses (from 0.1 to 12 mm). These systems have been designed to meet ASTM D638 and ISO 527 for tensile, and ASTM D790 and ISO 178 for flex testing standards. However, these systems can be easily configured to meet other standard requirements. Barcodes, placed on batch separators, are utilized to pass specimen geometry, handling, and testing information for a batch of specimens to the TestMaster™ 2 Automation Control Software. Additionally, contacting and non-contracting extensometers are available for testing.

The testing system consists of: a standard Instron Universal Test frame, extra height options are available for longer crosshead travel; a contacting extensometer (typical) or Advanced Video Extensometer; pneumatic wedge action grips with air supply kit and/or 3 point bend flexure fixture. Grips and Flexure fixture are easily changed via our standard clevis pin mounting.

Robotic System Components

- Mitsubishi industrial-grade articulated arm
- Specimen storage racks designed to fit customer's specifications*
- Barcode reader, compatible with 1D or 2D barcodes
- Dual-Axis specimen measurement device
- Automatic ink transfer marking station to apply video targets, if applicable
- Bluehill® Materials Testing Software
- Premium PC
- Testmaster 2 Automation Control Software

*The system storage racks typically hold up to 275 specimens; however, this may vary depending on sample size and geometry.

Options

- Bi-directional communications with a Laboratory Information Management System (LIMS)
- Use of both dual and single axis measurement devices to obtain combined average thickness measurement (for concave specimens)
- Automatic queue mode
- Pass/Fail tested specimen sorting

Improve Efficiency and Increase Throughput of Your Facility

- Storage racks can be easily loaded prior to the end of the day and left for unattended, overnight testing
- Consistent specimen loading and testing improves repeatability and reproducibility of results by eliminating human variability
- Operators available to work on more value-added activities
- Overall costs are lower due to reduction in training and injury-related expenses

Specifications

		System with Top Feed Rack	System with Discrete Position Rack
System/Load Capacity	kg lbs	1 to 30 available 225 to 6,750	1 to 30 available 225 to 6,750
Robot Capacity		2 kg	3 kg
Maximim Specimen Weight	kg lbs	<0.75 1.75	<0.75 1.75
Electrical Requirements		Single phase, 50/60Hz, 120 VAC	Single phase, 50/60Hz. At least one line must be 220VAC. Remaining equipment can be either 120 or 220 VAC
Measurement Device		Dual-Axis Vertical	Dual-Axis Vertical
Gauge Type		Mitutoyo/Heidenhain	Mitutoyo/Heidenhain
Overall System Dimensions with Enclosure Doors Open	mm in	3810 x 2970 x 2785 150 x 117 x 110	4430 x 3110 x 2370 175 x 122 x 101

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