INSTRON®

The difference is measurable®

8803 SERVOHYDRAULIC FATIGUE TESTING SYSTEM

Up to 500 kN

The Instron® 8803 is a versatile servohydraulic fatigue testing system that performs static and dynamic tests on materials and components up to 500 kN. 8803 systems provide complete testing solutions to satisfy the needs of advanced materials and component testing, and are ideally suited for fatigue testing and fracture mechanics. This features a large number of configurations and options, including lower t-slot tables, the 8803 makes an ideal platform for any laboratory.

FEATURES

- Double-acting servohydraulic actuator with force capacity up to ±500 kN (±110 kip)
- High-stiffness, precision-aligned load frame with twin columns and actuator in lower base or upper crosshead
- Designed for both dynamic and static testing on a variety of materials and components
- Choice of hydraulic configuration and dynamic performance to suit application
- Extra-height and Extra-extra height frame options for testing longer load strings
- Adjustable upper crosshead with hydraulic lifts and lock fitted as standard for easy adjustment of daylight
- Up to 250 mm (9.8 in) of usable stroke
- Patented$_1$ Dynacell™ advanced load cell technology for faster testing and reduction of inertial errors
- Floor-standing servohydraulic fatigue testing system–frame requires less than 1.6 m² (16.6 ft²) of floor space
- Hydrostatic bearing actuators for high side-load resistance and better alignment during testing
- Compatible with a large range of grips, fixtures, chambers, video extensometers, protective shields, and other accessories

CONTROLLER AND SOFTWARE

The Instron 8803 is supplied with a digital 8800MT controller that provides full system control including features such as automatic loop tuning, amplitude control, specimen protect, 19-bit resolution across the full range of transducers, and adaptive control technology. It also allows access to WaveMatrix™ dynamic and fatigue, Bluehill® Fracture and other software such as Bluehill Universal for static tests.

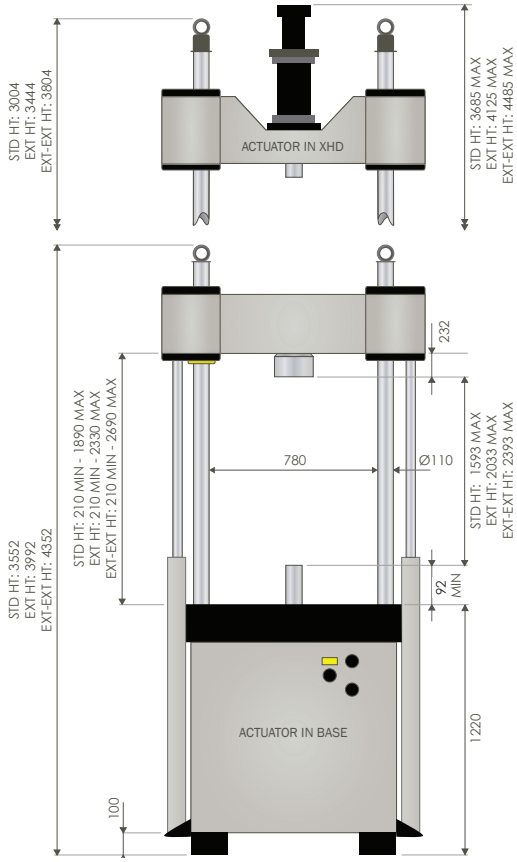
FRAME SPECIFICATIONS

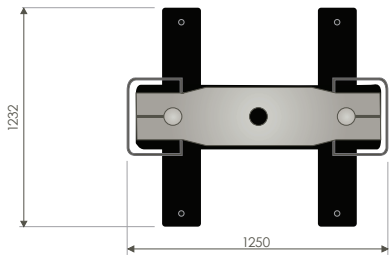
		Standard Height Frame	Extra Height Frame	Extra-Extra Height Frame
Daylight Opening (Maximum Between Load Cell and Actuator at Mid-stroke, with Largest Capacity Actuator)	mm	1890	2330	2690
	in	57.7	75.0	89.2
Dynamic Load Capacity	kN	Up to 500		
	kip	Up to 110		
Actuator Stroke (Total)	mm	150*		
	in	5.9		
Actuator Force Rating	kN	500*		
Configuration		Twin-Column High-Stiffness Load Frame with Actuator in Lower Table or Upper Crosshead		
Lift and Locks		Hydraulically-Powered Lifts and Locks		
Load Cell		Patented$_1$ Dynacell Fatigue-RatedLoad Cell with Capacity to Suit Actuator		
Load Weighing Accuracy		±0.002% of Load Cell Capacity or 0.5% of Indicated Load, Whichever is Greater - Down to 1/250th of Full Scale		
Standard Manifold		Max. 130 LPM (Dual Servo-Valve)		
Servo-Valve Options (Select up to 2)	LPM	5, 10, 20, 40, 65		
	GPM*	1.3, 2.6, 5, 10, 17		
Hydraulic Pressure Supply (Required)	bar	207		
	psi	3000		
Electrical Supply		Single-Phase Mains 90-132 or 180-264 V 45/65 Hz with Power Consumption 400 VA Max		
Operating Environment		+10 to +38 °C (+50 to +100 °F) with 10 to 90% Humidity Non-Condensing		
Frame Stiffness	kN/mm	1066		
Maximum Frame Weight (Dependant on Final Configuration)	kg	2450		
	lb	5396		

ACCESSORIES

2742-601	±500 kN Fatigue-Rated Hydraulic Wedge Grips
2750-120	Fracture Mechanics Grips for 50 mm Wide Compact Tension Specimen
2810-250	500 kN Fatigue-Rated 3-Point Bend Fixture
2840-119	150 mm (6 in) Diameter Compression Platens

*Note: Dimensions and specifications relate to a 500kN system with a ±75mm (±2.95in) stroke actuator. Other capacity actuators may change certain specifications. Overall heights for actuator in crosshead configurations are stated with a ±125mm (±4.9in) stroke actuators. Check with your local Instron office for further details.





Instron 8803 Dimensions (All Dimensions are in mm)

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