

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. specific software, such as Bluehill Fracture.

FEATURES AND BENEFITS

- Double-acting servohydraulic actuator with force capacity up to ± 500 kN (± 112 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
- Patented₁ 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
- Designed to be used with the 3621 Series of Hydraulic Power Units
- Compatible with a large range of grips, fixtures, chambers, extensometers, protective shields, and other accessories
- Patented stiffness based tuning algorithm that enables users to tune a variety of specimens in seconds

CONTROLLER AND SOFTWARE

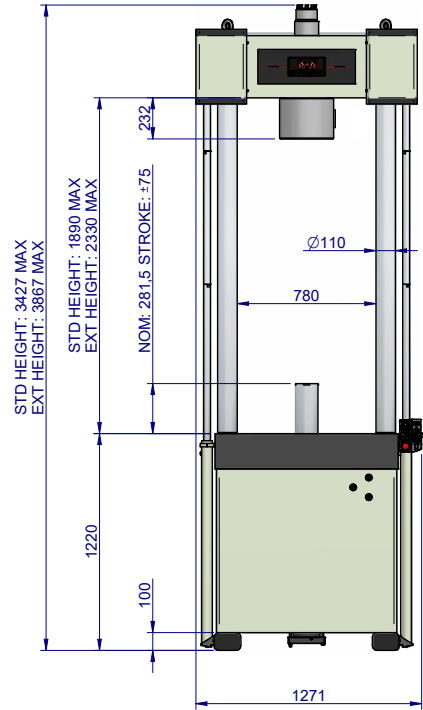
The Instron 8803 is supplied with a digital 8800MT controller that provides full system control, including features such as stiffness based tuning, amplitude control, specimen protect, up to 24-bit resolution across the full range of transducers, and adaptive control technology. It also allows access to WaveMatrix™3 Dynamic Testing Software, Bluehill Universal® Software for axial static tests, and other application specific software, such as Bluehill Fracture.application specific software, such as Bluehill Fracture.



FRAME SPECIFICATIONS

Standard Height Frame

Daylight Opening (Maximum Between Load Cell and Actuator at Mid-stroke)	mm	1816.5
	in	71.5
Dynamic Load Capacity	kN	500
	kip	112
Actuator Stroke (Total)	mm	up to 250
	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-Rated Load Cell with Capacity to Suit Actuator	
Load Weighing Accuracy	±0.5% of Indicated Load or ±0.005% of Load Cell Capacity (1-100%), Whichever is Greater	
Manifold Options	Single Valve, Dual Valve,	
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 (Dependent on Final Configuration)	kg	2580
	lb	5688



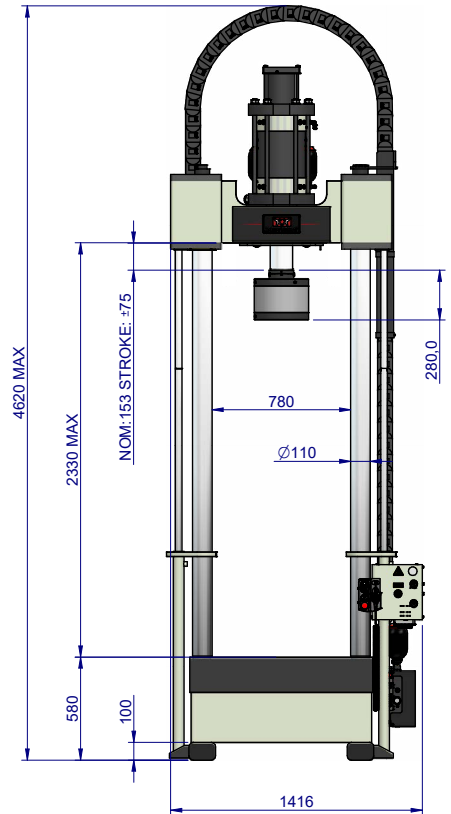
MECHANICAL INTERFACES

Load Cell	M72 × 3 Right Hand Female Central Thread
Actuator	M72 × 3 Right Hand Female Central Thread
Table and Crosshead	4 × M10 Holes on a 280 mm x 90 mm for Accessory Mounting

ACCESSORIES

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

*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. 1) US Patent Number 6508132



Instron® 8803 Dimensions (All Dimensions in mm)
Drawings not to scale, for reference use only

www.instron.com



Worldwide Headquarters 825 University Ave,
Norwood, MA 02062-2643, USA Tel: +1 800 564
8378 or +1 781 575 5000

European Headquarters
Coronation Road, High Wycombe, Bucks HP12 3SY, UK
Tel: +44 1494 464646