INSTRON®

The difference is measurable®

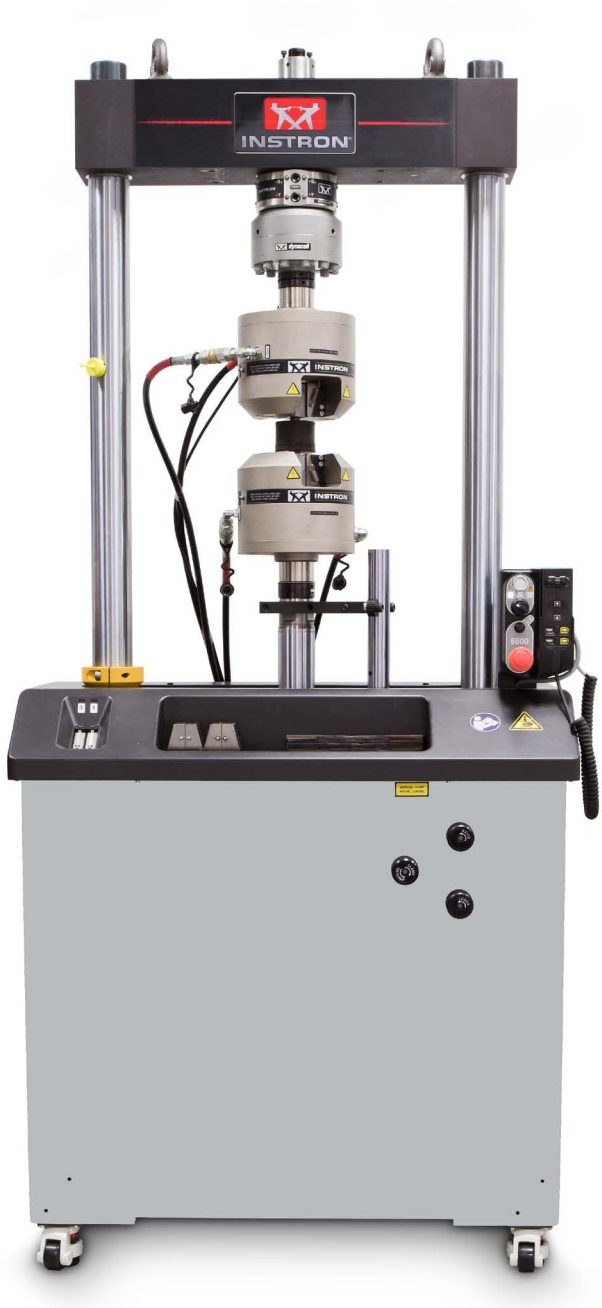
8801 SERVOHYDRAULIC FATIGUE TESTING SYSTEM

25 kN/100 Nm

The Instron® 8801 is a compact servohydraulic fatigue testing system that meets the challenging demands of various static and dynamic testing requirements. 8801 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. The compact design of the 8801 frame makes it ideal for installation within any laboratory environment, generally without the need for strengthened floors or raised ceiling heights.

FEATURES AND BENEFITS

- Double-acting servohydraulic actuator with force capacity up to ±100 kN (±22 kip)
- High-stiffness, precision-aligned load frame with twin columns and actuator in lower base
- 150 mm (6 in) of usable stroke
- 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 for testing with longer load strings
- Adjustable upper crosshead with hydraulic lifts and locks fitted as standard for easy adjustment of daylight
- Patented$_1$ Dynacell™ advanced load cell technology for faster testing and reduction of inertial errors
- Compact servohydraulic fatigue test system – frame requires less than 0.5 m² (5.4 ft²) of floor space
- Hydrostatic bearing actuators for higher side-load resistance or material critical applications, such as low cycle fatigue (LCF)
- 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

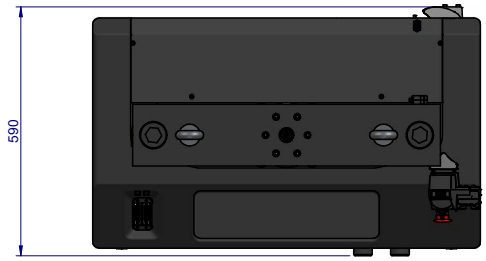


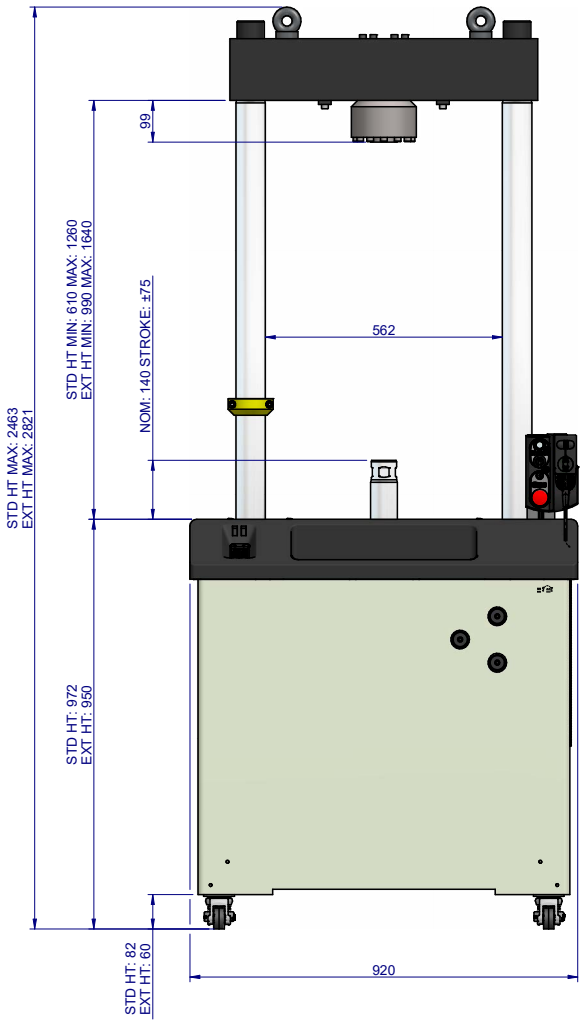
CONTROLLER AND SOFTWARE

The Instron 8801 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	Extra Height
Daylight Opening (Maximum Between Load Cell and Actuator at Mid-stroke)	mm	1021	1401
	in	40.2	55.2
Dynamic Load Capacity	kN	±50	±100
	Kip	±11	±22
Actuator Stroke (Total)	mm	150	
	in	5.9	
Configuration		Twin-Column High-Stiffness Load Frame with Actuator in Lower Table	
Lifts and Locks		Hydraulically-Powered Lifts and Locks	
Load Cell		Patented[1] Dynacell™ Fatigue-Rated Load Cell Mounted to Upper Crosshead 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	
Hydraulic Pressure Supply (Required)	bar	207	
	psi	3000	
Electrical Supply		Single-Phase Mains 90-132 or 180-264 VAC 45/65 Hz Power Consumption: 800 VA max	
Operating Environment		+10 to +38 °C (+50 to +100 °F) with 30 to 95% Humidity Non-Condensing	
Frame Stiffness	kN/mm	390 (at 1000 mm crosshead height)	
Frame Weight	kg	680	
	lb	1500	





MECHANICAL INTERFACES

Load Cell	M30 × 2 Right Hand Central Thread
Actuator	M30 × 2 Right Hand Central Thread
Table and Crosshead	4 × M10 Holes on a 280 mm × 90 mm for Accessory Mounting

ACCESSORIES

2743-401	±100 kN Fatigued-Rated Hydraulic Wedge Grips
2743-402	±100 kN Fatigued-Rated Mechanical Wedge Grips
2780-119	Fracture Mechanics Grips for 25 mm Wide Compact Tension Specimen (±50kN dynamic)
2810-181	100 kN Fatigue-Rated 3-Point Bend Fixture
2810-184	4-Point Conversion Kit for 2810-181
2840-119	150 mm (6 in) Diameter (±500kN dynamic)

1) US Patent Number 6508132

Instron® 8801 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