

# 8801 SERVOHYDRAULIC FATIGUE TESTING SYSTEM

Up to 100 kN

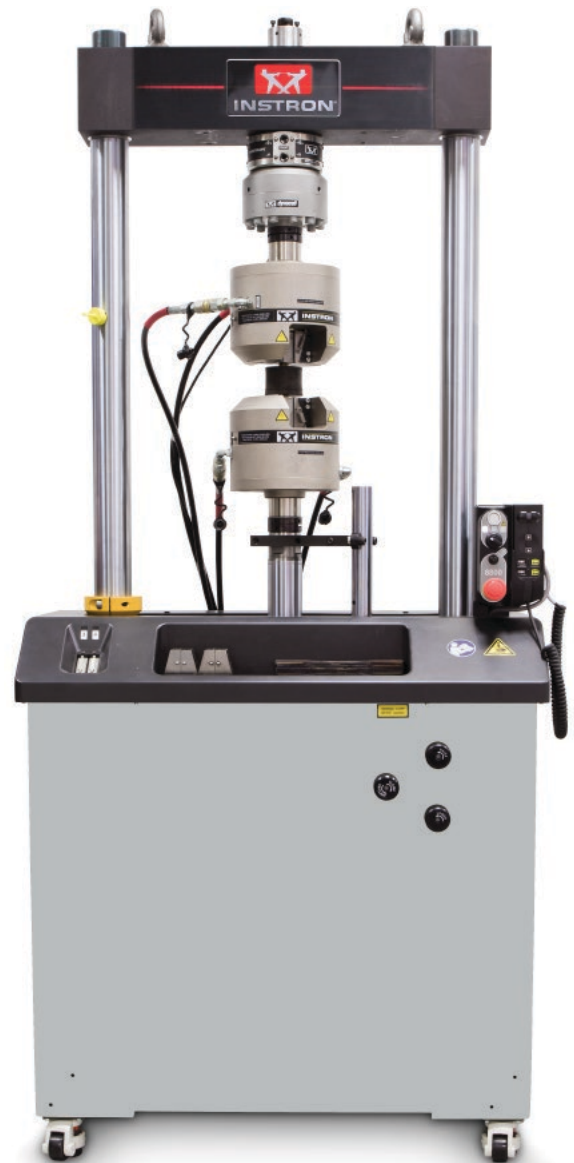
The Instron® 8801 is a compact servohydraulic fatigue testing system that meets the challenging demands of various static and dynamic testing requirements. 8801 systems provide complete testing solutions to satisfy the needs of advanced materials and component testing, and are ideally suited for fatigue 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

- Double-acting servohydraulic actuator with force capacity up to  $\pm 100$  kN ( $\pm 22$  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 frame option for testing longer load strings
- Adjustable upper crosshead with hydraulic lifts and locks fitted as standard for easy adjustment of daylight
- Patented<sub>1</sub> Dynacell™ advanced load cell technology for faster testing and reduction of inertial errors
- Compact servohydraulic fatigue test system – frame requires less than 0.5 m<sup>2</sup> (5.4 ft<sup>2</sup>) 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 3520 Series of Hydraulic Power Units
- Compatible with a large range of grips, fixtures, chambers, video 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, 19-bit resolution across the full range of transducers, and adaptive control technology. It also allows access to WaveMatrix 2 Dynamic Testing Software, Bluehill Universal® Software for axial static tests, and other application specific software, such as the Low Cycle Fatigue or Fracture Mechanics suite.



## FRAME SPECIFICATIONS

		Standard Height	Extra Height
<b>Daylight Opening</b> (Maximum Between Load Cell and Actuator at Mid-stroke)	mm	1023	1403
	in	40.3	55.2
<b>Dynamic Load Capacity</b>	kN	±50	±100
	Kip	±11	22
<b>Actuator Stroke</b> (Total)	mm	150	
	in	5.9	
<b>Configuration</b>		Twin-Column High-Stiffness Load Frame with Actuator in Lower Table	
<b>Lifts and Locks</b>		Hydraulically-Powered Lifts and Locks	
<b>Load Cell</b>		Patented, Dynacell™ Fatigue-Rated Load Cell Mounted to Upper Crosshead with Capacity to Suit Actuator	
<b>Load Weighing Accuracy</b>		±0.5% of Indicated Load or ±0.005% of Load Cell Capacity (1-100%), Whichever is greater	
<b>Hydraulic Pressure Supply</b> (Required)	bar	207	
	psi	3000	
<b>Electrical Supply</b>		Single-Phase Mains 90-132 or 180-264 VAC 45/65 Hz Power Consumption: 800 VA max	
<b>Operating Environment</b>		+10 to +38 °C (+50 to +100 °F) with 10 to 90% Humidity Non-Condensing	
<b>Frame Stiffness</b>	kN/mm	390	
	kg	625	
<b>Frame Weight</b>	kg	625	
	lb	1377	

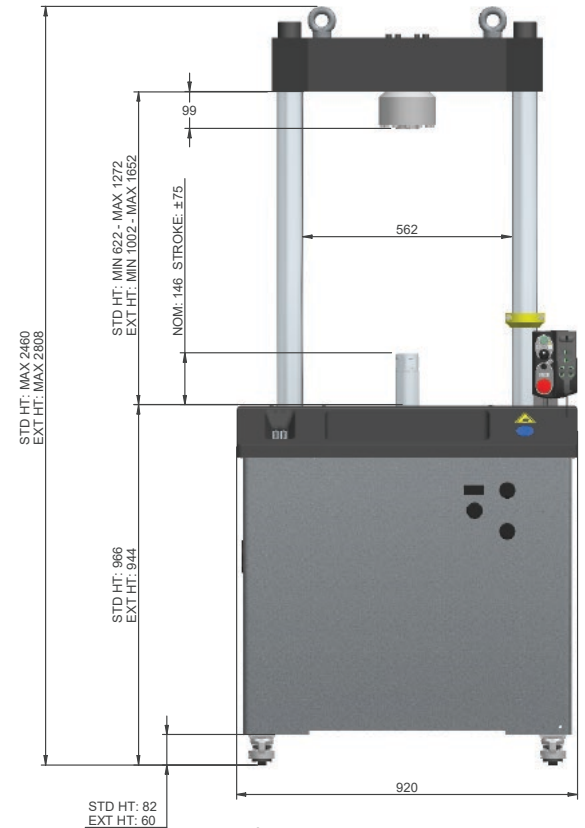
## MECHANICAL INTERFACES

<b>Load Cell</b>	M30 x 2 Right Hand Central Thread
<b>Actuator</b>	M30 x 2 Right Hand Central Thread
<b>Table and Crosshead</b>	4 x M10 Holes on a 280 mm x 90 mm for Accessory Mounting

## ACCESSORIES

<b>2743-401</b>	±100 kN Fatigued-Rated Hydraulic Wedge Grips
<b>2743-402</b>	±100 kN Fatigued-Rated Hydraulic Wedge Grips
<b>2780-119</b>	Fracture Mechanics Grips for 25 mm Wide Compact Tension Specimen
<b>2810-181</b>	100 kN Fatigue-Rated 3-Point Bend Fixture
<b>2810-184</b>	4-Point Conversion Kit for 2810-181
<b>2840-119</b>	50 mm (2 in) Diameter Compression Platens

1) US Patent Number 6508132


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