

# 8872 Servohydraulic Fatigue Testing System | 25 kN

The Instron® 8872 is a compact tabletop servohydraulic testing system that has been developed to meet the challenging demands of a varied range of static and dynamic testing requirements. With the actuator in the upper crosshead and a lower t-slot table, the Instron 8872 makes an ideal platform for a variety of medical devices, biomaterials, advanced materials and other component testing.

## Features

- Double-acting servohydraulic actuator with force capacity up to  $\pm 25$  kN ( $\pm 5620$  lbf)
- High-stiffness, precision-aligned load frame with twin columns and actuator in upper crosshead
- 100 mm (4 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
- Adjustable upper crosshead with hydraulic lifts and manual locks fitted as standard for easy adjustment of daylight
- Patented<sub>1</sub> Dynacell™ load cell technology for faster testing and reduction of inertial errors
- Compact tabletop servohydraulic fatigue test system – frame requires less than 0.4 m<sup>2</sup> (4.3 ft<sup>2</sup>) of space
- Optional hydrostatic bearing actuators for higher side load resistance or material critical applications such as low cycle fatigue
- 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

## Controller and Software

The Instron 8872 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 test software, Bluehill® software for static tests or other application specific software, such as Fracture Mechanics or Low Cycle Fatigue.



# Specifications

## Frame Specifications

<b>Daylight Opening</b> (Maximum Between Load Cell and Base at Mid-stroke)	mm	1017
	in	40
<b>Dynamic Load Capacity</b>	kN	±25
	lbf	±5620
<b>Actuator Stroke</b> (Total)	mm	100
	in	4
<b>Configuration</b>	Twin-Column High-Stiffness Load Frame with Actuator in Upper Crosshead and T-Slot Base	
<b>Lifts and Locks</b>	Hydraulically-Powered Lifts and Manual Locks	
<b>Load Cell</b>	Patented <sup>1)</sup> Dynacell™ Fatigue-Rated Load Cell 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>	°C +10 to +38°C (+50 to +100°F) with 10 to 90% Humidity Non-Condensing	
<b>Frame Stiffness</b>	kN/mm	260
<b>Frame Weight</b>	kg	287
	lb	634

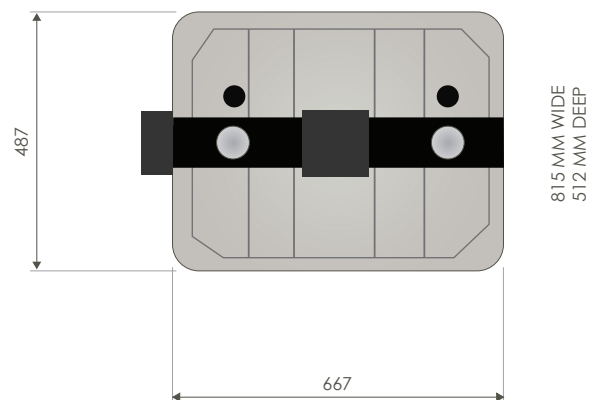
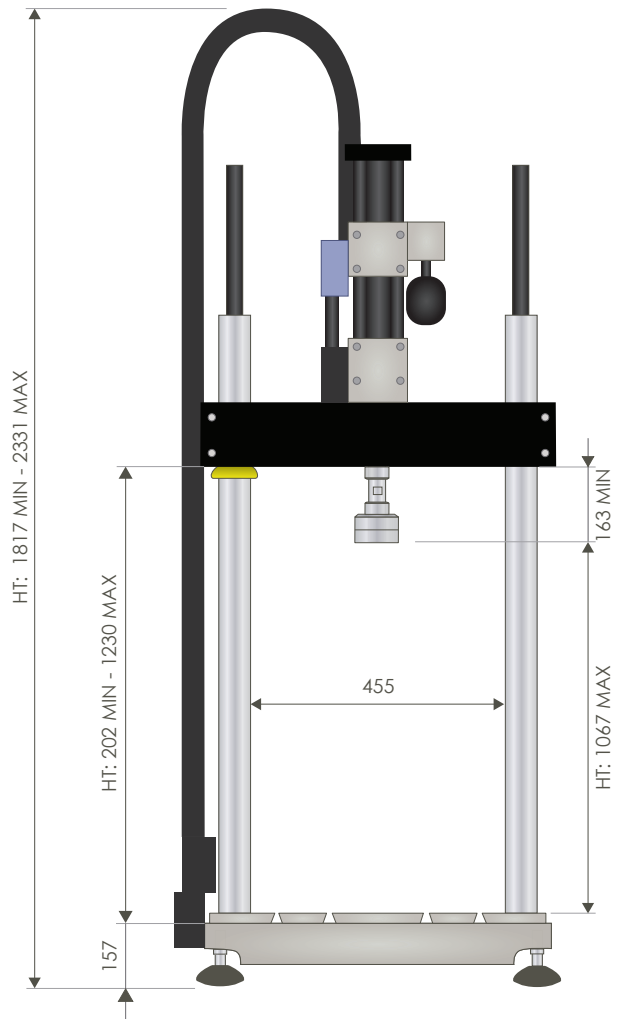
## Mechanical Interfaces

<b>Load Cell</b>	M20 × 1.5 Right Hand Central Thread
<b>Actuator</b>	M20 × 1.5 Right Hand Central Thread
<b>Table and Crosshead</b>	4 × M10 Holes on a 280 mm × 90 mm for Accessory Mounting
	6 × M10 × 20 Deep on 100 mm PCD (Table) with 40 mm Location Diameter
	4 × M10 T-Slots Running Front and Back, Spaced 80 and 100 mm From Center Line

## Accessories

<b>2742-301</b>	±30 kN Fatigue-Rated Hydraulic Wedge Grips
<b>2750-118</b>	Fracture Mechanics Grips for 6.5 mm and 13 mm Wide Compact Tension Specimen
<b>2810-181</b>	3-Point Fatigue-Rated Bend Fixture
<b>2810-184</b>	4-Point Conversion Kit for 2810-181
<b>2840-119</b>	50mm (2 in) Diameter Compression Platens

1) US Patent Number 6508132



Instron® 8872 Dimensions (All Dimensions in mm)

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