

# 8874 BIAXIAL SERVOHYDRAULIC FATIGUE TESTING SYSTEM

25 kN/100 Nm

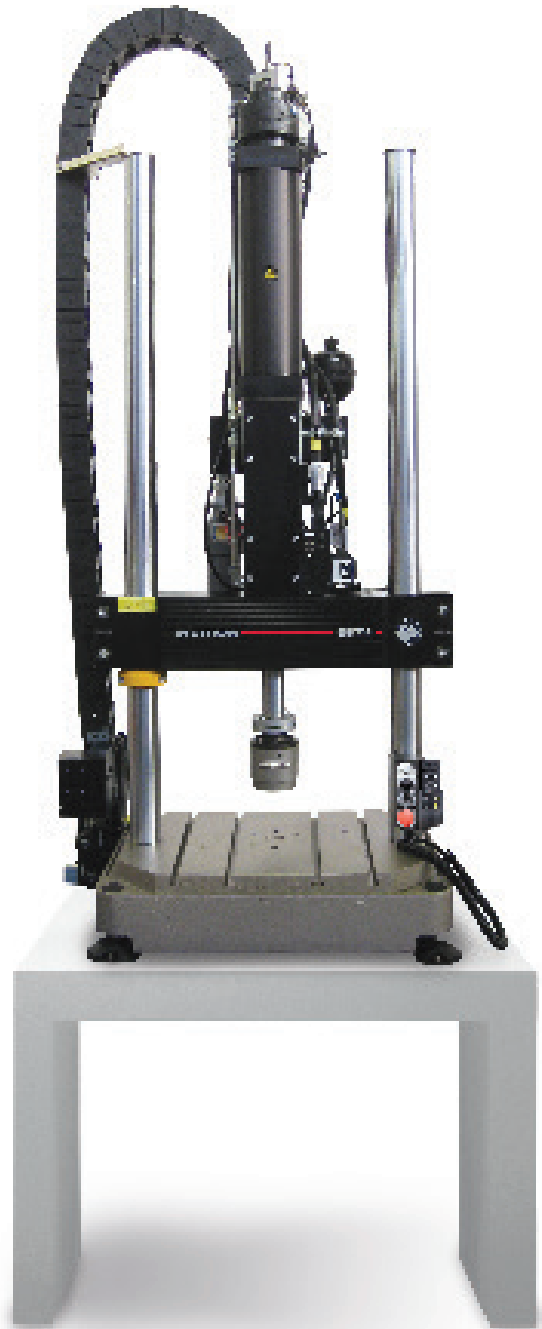
The Instron® 8874 is a compact tabletop biaxial servohydraulic testing system that meets the challenging demands of various static and dynamic tests. The system carries out axial, torsion, or combined axial-torsion tests. With the actuator in the upper crosshead and a lower t-slot table, the 8874 makes an ideal platform for testing a variety of medical devices, biomaterials, advanced materials, and other components testing.

## FEATURES

- Double-acting servohydraulic actuator with force capacity up to  $\pm 25$  kN ( $\pm 5620$  lbf) and torque capacity of  $\pm 100$  Nm (880 in-lb)
- High-stiffness, precision-aligned load frame with twin columns and actuator in upper crosshead
- 100 mm (4 in) of usable axial stroke and  $\pm 130^\circ$  of rotation
- Designed for both dynamic and static testing on a variety of materials and components
- Adjustable upper crosshead with hydraulic lifts and manual locks fitted as standard for easy adjustment of daylight
- Patented<sup>1</sup> Dynacell™ load cell technology for faster testing and reduction of inertial errors
- Compact tabletop servohydraulic fatigue testing system – frame requires less than 0.4 m<sup>2</sup> (4.3 ft<sup>2</sup>) of space
- Designed to be used with the 3621 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 8874 is supplied with a two-axis 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™3 Dynamic Testing Software, Bluehill® Software for axial static tests, and other application specific software, such as the Fracture Mechanics suite.



## FRAME SPECIFICATIONS

<b>Daylight Opening</b> (Maximum Between Load Cell and Actuator at Mid-stroke, with Largest Capacity Actuator)	mm	1001
	in	39.41
<b>Dynamic Load Capacity</b>	kN	±25
	lbf	±5620
<b>Torque Load Capacity</b>	Nm	100
	inlb	880
<b>Actuator Stroke (Total)</b>	mm	100
	in	4
<b>Actuator Rotation</b>		±130°
<b>Configuration</b>		Twin-Column High-Stiffness Load Frame with Actuator in Upper Crosshead and T-Slot Base
<b>Lift and Locks</b>		Hydraulically-Powered Lifts and Manual Locks
<b>Load Cell</b>		Patented; Dynacell™ Fatigue-Rated Load Cell with Capacity to Suit Actuator
<b>Load Weighing Accuracy</b>		±0.002% of Load Cell Capacity or 0.5% of Indicated Load, Whichever is Greater - Down to 1/250th of Full Scale
<b>Hydraulic Pressure Supply (Required)</b>	bar	207
	psi	3000
<b>Electrical Supply</b>		Single-Phase Mains 90-132 or 180-264 V 45/65 Hz with 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	260
	kg	327
<b>Frame Weight</b>	kg	327
	lb	721

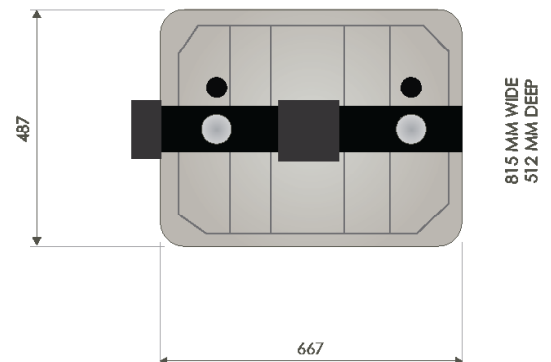
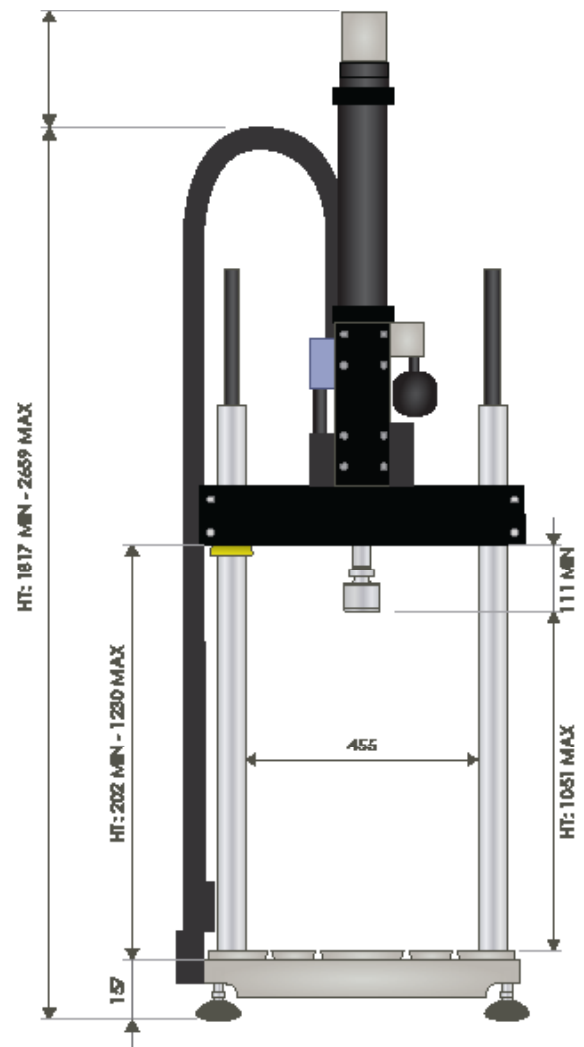
## MECHANICAL ACCESSORIES

<b>Load Cell</b>	6 × M8 on 75 PCD
<b>Actuator</b>	6 × M8 on 75 mm PCD 6 × 9 mm Diameter Through Holes on 75 mm PCD
	4 × M10 Holes on a 280 mm × 90 mm for Accessory Mounting
<b>Table and Crosshead</b>	6 × M10 × 20 Deep on 100 mm PCD (Table) with 40 mm Location Diameter 4 × M10 T-Slots Running Front to Back, Spaced 80 and 100 mm from Centerline
<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

## ACCESSORIES

<b>8260C</b>	±25 kN / ±100 Nm Fatigue Rated Hydraulic Wedge Grips
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1) US Patent Number 6508132



Instron® 8874 Dimensions (All Dimensions in mm)

[www.instron.com](http://www.instron.com)



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