

8874 Axial-Torsion Servohydraulic Fatigue Testing System | 25 kN/100 Nm

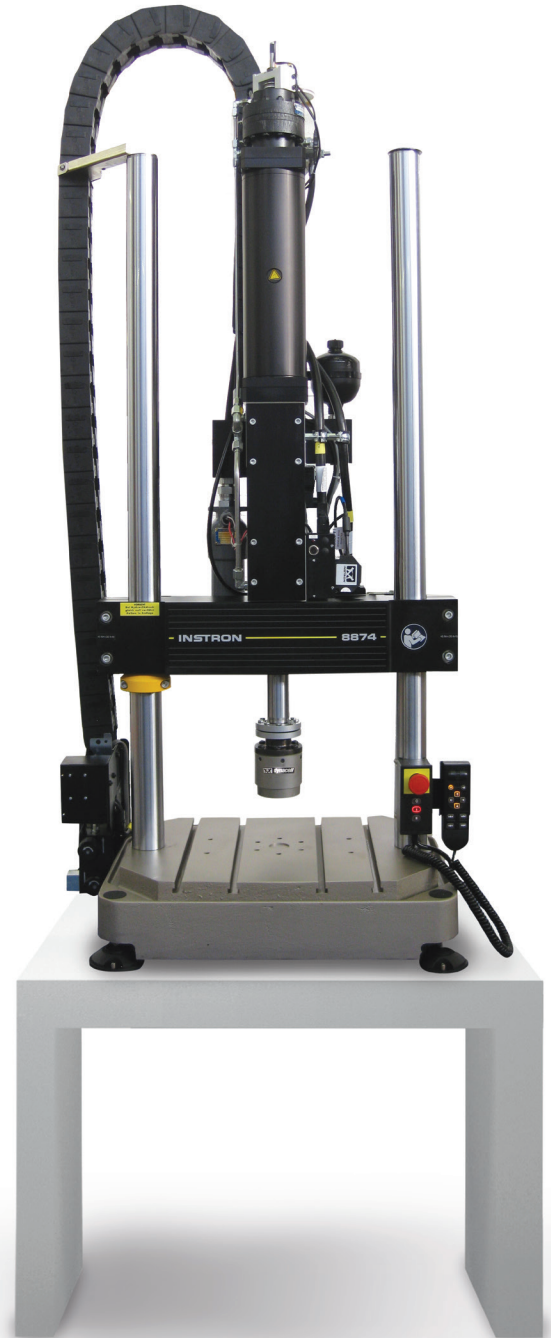
The Instron® 8874 is a compact tabletop axial-torsion servohydraulic testing system that meets the challenging demands of various static and dynamic tests. The system carries out axial, torsion, or combined axial-torsion tests. With the actuator in the upper crosshead and a lower t-slot table, the 8874 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 ± 25 kN (± 5620 lbf) and torque capacity of ± 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
- 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
- Patented₁ Dynacell™ load cell technology for faster testing and reduction of inertial errors
- Compact tabletop servohydraulic fatigue testing system – frame requires less than 0.4 m² (4.3 ft²) of space
- 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 & Software

The 8874 is supplied with a two-axis 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 testing software, Bluehill® software for axial static tests, and other application specific software, such as the Low Cycle Fatigue or Fracture Mechanics suite.



Specifications

Frame Height

Daylight Opening (Maximum Between Load Cell and base with Actuator at Mid-stroke)	mm	1001
	in	39.41
Dynamic Load Capacity	kN	±25
	lbf	±5620
Torque Capacity	Nm	100
	inlb	880
Actuator Stroke (Total)	mm	100
	in	4
Actuator Rotation	°	±130
Configuration	-	Twin-Column High-Stiffness Load Frame with Actuator in Upper Crosshead and T-Slot Base
Lifts and Locks	-	Hydraulically-Powered Lifts and Manual Locks
Load Cell	-	Patented, Biaxial Dynacell™: Fatigue-Rated Load Cell with Capacity to Suit Actuators
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	°C	+10 to +38°C (+50 to +100°F) with 10 to 90% Humidity Non-Condensing
Frame Stiffness	kN/mm	260
Frame Weight	kg	287
	lb	634

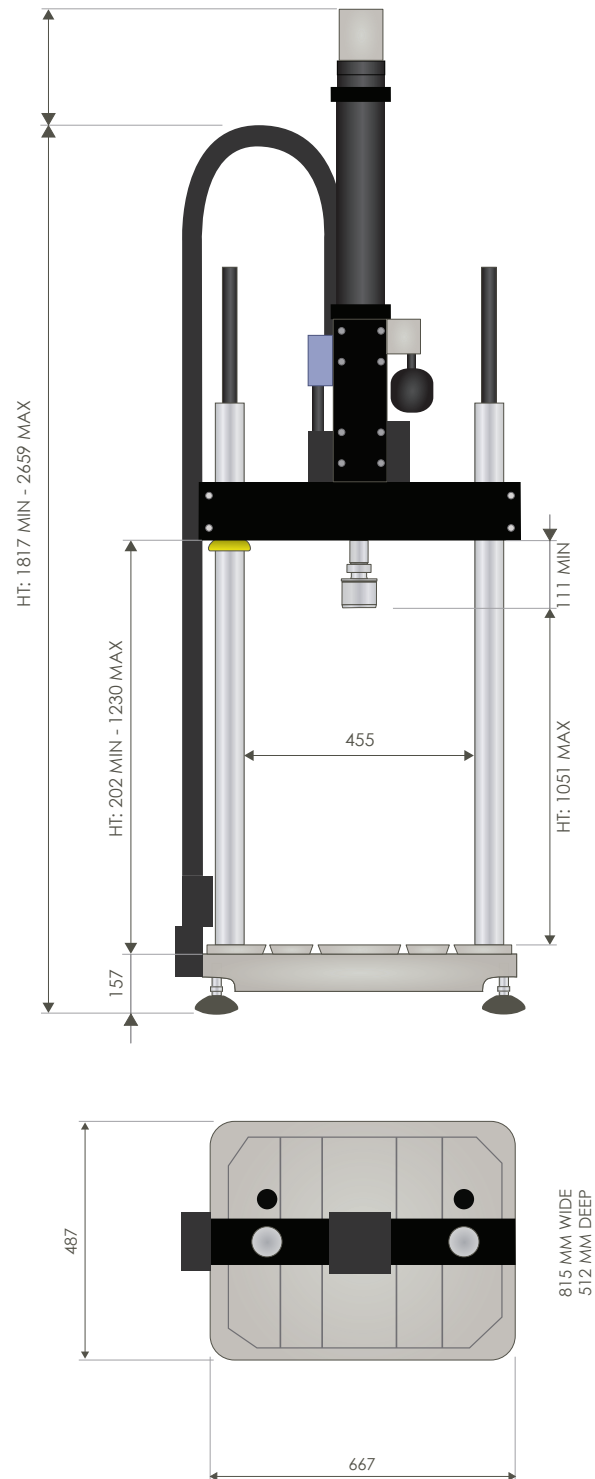
Mechanical Interfaces

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

1) US Patent Number 6508132

Accessories

8260C	±25 kN / ±100 Nm Fatigue Rated Hydraulic Wedge Grips
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Instron® 8874 Dimensions (All Dimensions in mm)

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