INSTRON®

The difference is measurable®

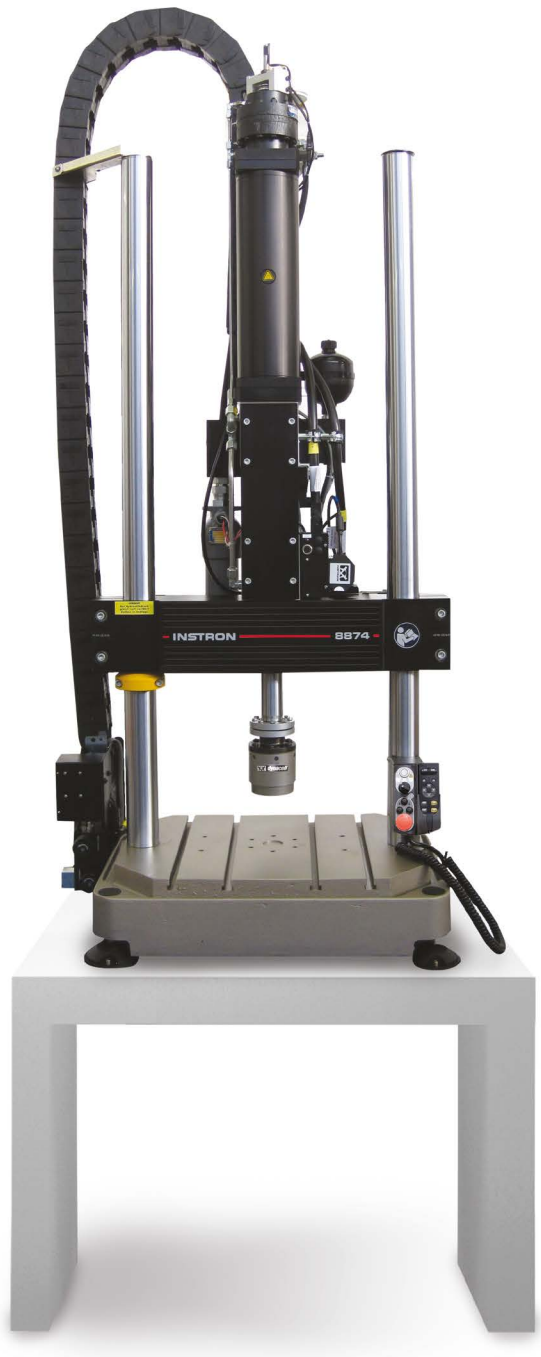
8874 BIAXIAL SERVOHYDRAULIC FATIGUE TESTING SYSTEM

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 AND BENEFITS

- 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 ±130° 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$_1$ 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 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

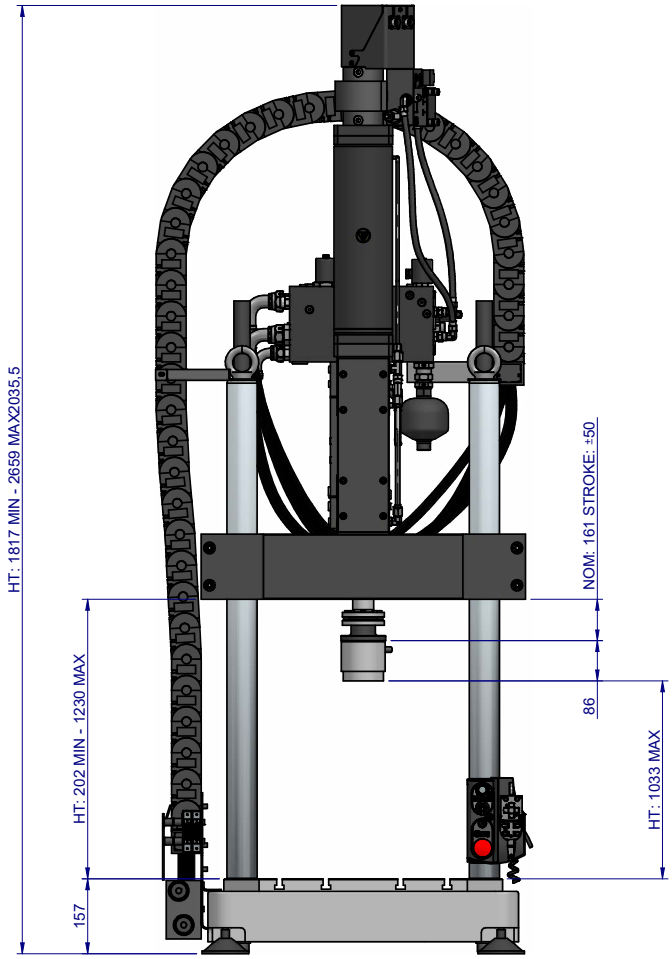


CONTROLLER AND SOFTWARE

The 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, 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® Software for axial static tests, and other application specific software, such as Bluehill Fracture.

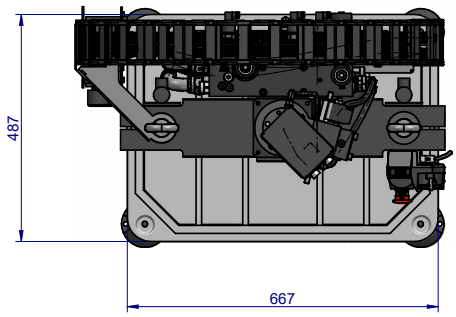
FRAME SPECIFICATIONS

Daylight Opening (Maximum Between Load Cell and base with Actuator at Mid-stroke)	mm	1033
	in	40.1
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[1] 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		+10 to +38°C (+50 to +100°F) with 10 to 90% Humidity Non-Condensing
Frame Stiffness	kN/mm	260 (at 600 mm crosshead height)
Torsional Stiffness	kNm/deg	870
Frame Weight	kg	327
	lb	721



MECHANICAL INTERFACES

Load Cell	6 × M8 on 75 PCD
Actuator	6 × M8 on 75 mm PCD 6 × 9 mm Diameter Through Holes on 75 mm PCD
Table	4 × M10 Holes on a 280 mm × 90 mm for Accessory Mounting 6 × M10 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
Crosshead	4 × M10 Holes on a 280 mm × 90 mm for Accessory Mounting 6 × M10 on 100 mm PCD (Table) with 40 mm Location Diameter



ACCESSORIES

8260C	**±25 kN / ±100 Nm Fatigue Rated Hydraulic Wedge Grips**

1) US Patent Number 6508132
Instron® 8874 Dimensions (All Dimensions in mm)
Drawings not to scale, for reference use only

www.instron.com

INSTRON

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