

# 8862 LOW CYCLE FATIGUE TESTING SYSTEM

100 kN Servo-Electric Actuator

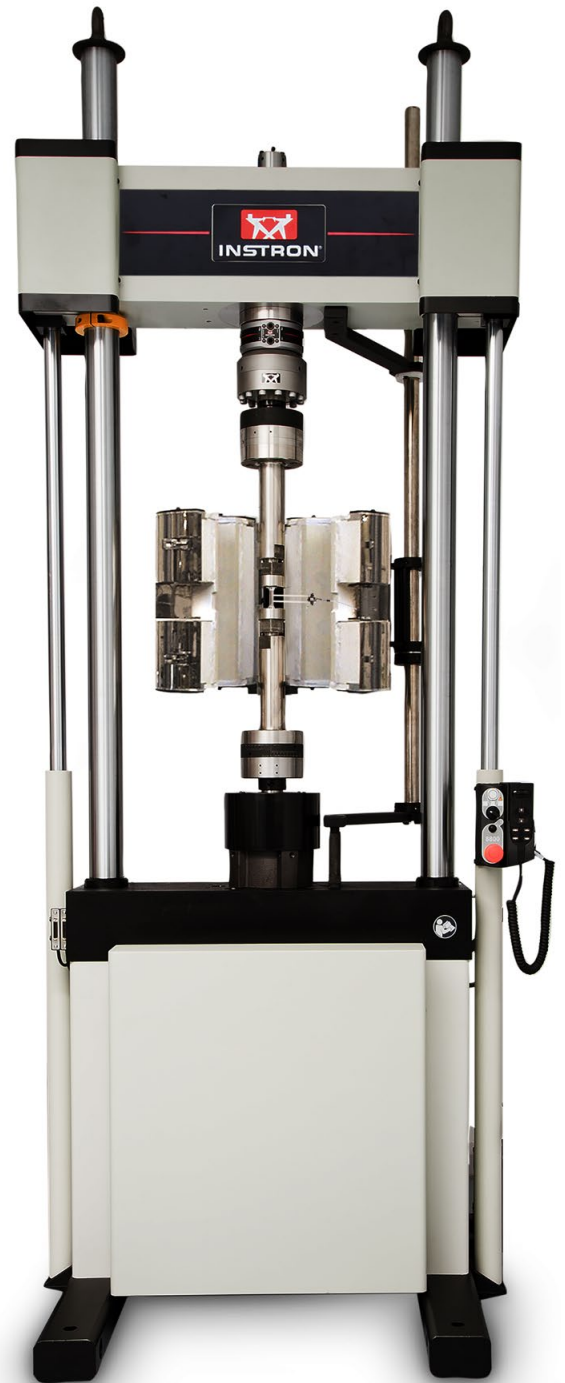
8862 systems have been the industry choice for Low Cycle Fatigue (LCF) testing for decades and are now fully integrated with our latest controller platform. Instron® has developed this system specifically to address the challenges of reverse-stress Low Cycle Fatigue and Thermomechanical Fatigue (TMF) testing. The unique actuator technology utilizes an all-electric, backlash free, ball-screw drive eliminating the need for hydraulic infrastructure to support the machine.

## AN IDEAL PLATFORM FOR LOW CYCLE FATIGUE

- High capacity loading frame that maximizes lateral and axial stiffness during reverse stress testing
- Precision control achieved by our unique backlash free actuator design delivering actuator velocities down to just 1 µm/hour
- Easy installation into any lab space with minimal infrastructure requirements
- Virtually silent operation creating an ideal working environment for your operators
- Low power consumption reducing your annual cost of running tests
- Minimal maintenance required compared with a fully hydraulic system
- Integration with Uninterruptable Power Supply to protect your specimen from overloading in the event of power loss
- Patented stiffness based tuning algorithm that enables users to tune a variety of specimens in seconds

## INSTRON EXPERTISE ACROSS YOUR ENTIRE APPLICATION

- Dedicated LCF and TMF software packages make it easy to carry out complex tests and get the results you need first time, every time
- Complete alignment solutions are included on all high temperature systems. This means that you can measure and adjust loadstring alignment with the AlignPro package. The guided software will tell you exactly which adjustments are required to achieve perfect alignment
- Instron's core transducer technology is designed and manufactured by Instron in our UK centre of excellence and verified in our own on-site accredited facility
- Years of experience and expertise in the changing demands of international high temperature standards and the technical challenges of testing up to and beyond 1000 °C
- World-class control delivered by the 8800MT which is the latest in the prestigious 8800 family of dynamic digital controllers



## FRAME SPECIFICATIONS

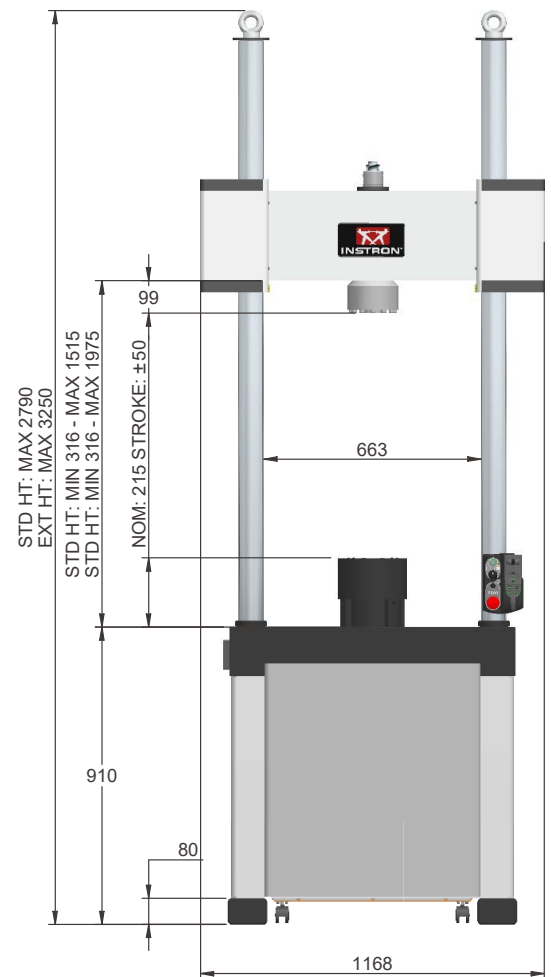
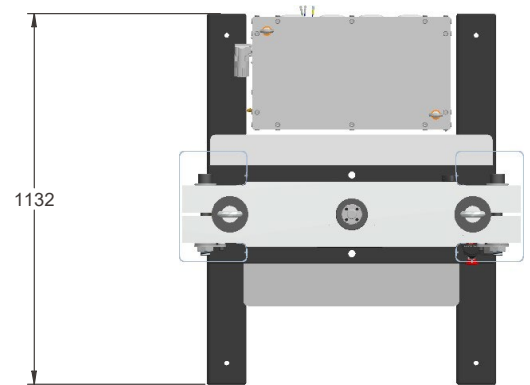
		Standard Height Frame	Extra Height Frame	Extra-Extra Height Frame
<b>Daylight Opening</b> (Maximum Between Load Cell and Actuator at Mid-stroke, with Largest Capacity Actuator)	mm	1200	1660	2060
	in	47.2	65.3	81.1
<b>Dynamic Load Capacity</b>	kN	Up to 100		
	kip	Up to 22		
<b>Actuator Stroke (Total)</b>	mm	100		
	in	4		
<b>Actuator Force Rating</b>	kN	100		
<b>Configuration</b>		Twin-Column High-Stiffness Load Frame with Actuator in Lower Table		
<b>Lift and Locks</b>		Manual and Hydraulically-Powered Lifts and Locks		
<b>Load Cell</b>		Patented <sub>1</sub> 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>Max Actuator Speed</b>	mm/min	300		
<b>Minimum Speed</b>	μ/hr	1		
<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	595		
<b>Maximum Frame Weight</b> (Dependant on Final Configuration)	kg	1458		
	lb	3208		

## MECHANICAL INTERFACES

<b>Load Cell</b>	M30 × 2 Right Hand Female Central Thread
<b>Actuator</b>	M30 × 2 Right Hand Female Central Thread

## ACCESSORIES

<b>Heating</b>	1000 °C Furnace or Induction Coil
<b>Gripping</b>	Reverse stress pull-rods or water cooled collets
<b>Software</b>	Low cycle fatigue or Thermomechanical fatigue
<b>Alignment</b>	Mechanical alignment fixture and Alignment software
<b>Extensometry</b>	High temperature extensometers (12.5 mm and 25 mm GL)



Instron® 8862 Dimensions (All Dimensions are in mm)

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