

## 8862 | Servo-Electric Low Cycle Fatigue Testing Systems

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.

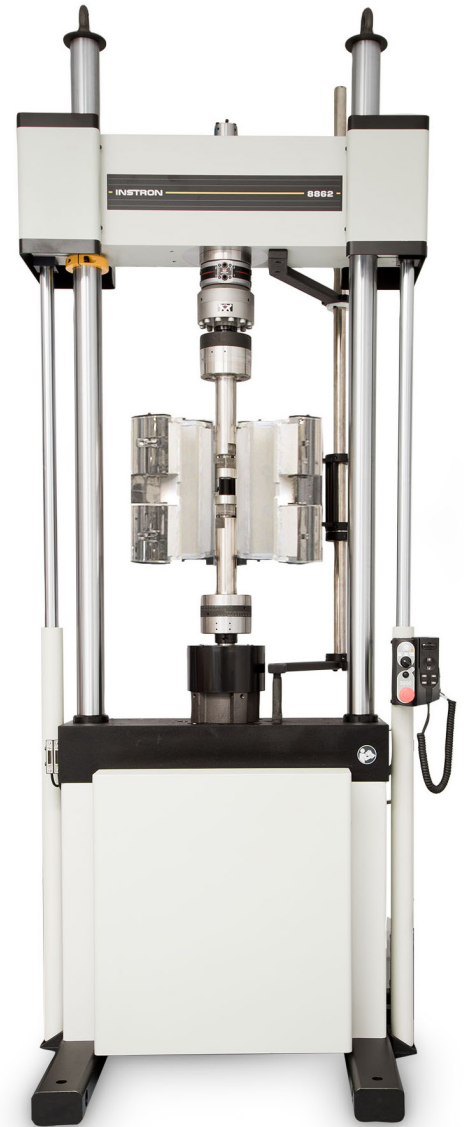
### An ideal platform for Low Cycle Fatigue

By choosing this premium ultra-slow strain rate testing system you will benefit from an application specific solution which is tailored to meet your testing needs.

- 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  $\mu\text{m}/\text{hour}$ .
- 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.

### 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 UKAS 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.



No Oil



Low Energy



Low Noise



Small Footprint

## Application Packages

This machine is ideal for use in high temperature testing where materials are tested in strain control in both tension and compression. Low Cycle Fatigue testing is typically isothermal and carried out at a fixed temperature set point. We can also provide a package for supporting Thermomechanical Fatigue where the specimen is subjected to temperature cycling as well as a mechanical loading regime. Instron® acknowledge that the demands of LCF and TMF testing are very different to that of a 'general purpose' test machine and we design our software tools and application packages accordingly.

### Low Cycle Fatigue Package

- High Temperature Furnace
- Reverse-Stress Pullrods
- High Temperature Extensometer
- Dedicated LCF3 Software Suite
- AlignPRO Alignment Fixture
- Strain Gauged Alignment Cell
- Align-Pro Software

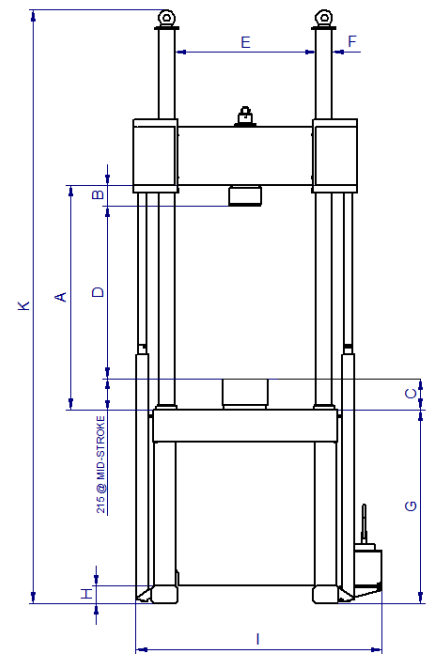
### Thermomechanical Fatigue Package

- 10kW Induction Coil System
- Pneumatic Cooling Collar
- Water-Cooled Collet Grips
- High Temperature Extensometer
- Dedicated TMF Software Suite
- AlignPRO Alignment Fixture
- Strain Gauged Alignment Cell
- AlignPRO Software

## Dimensions

Actuator in Base

A	Minimum	mm	316
	Maximum Std Height	mm	1515
	Maximum Extra Height	mm	1975
B		mm	100
C	Actuator Fully Retracted	mm	155
D	At Mid Stroke	mm	1200
E		mm	664
F		mm	76
G		mm	910
H		mm	80
I	Overall Width	mm	1168
J	Overall Depth	mm	1132
K	Standard Height	mm	2790
	Extra Height	mm	3250
Maximum Ramp Rate		mm/min	300
Weight	Standard Height	kg	1100
	Extra Height	kg	1140



8862 Actuator in Base dimensions: front view



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