

BiSS Servo-electric test system feature high-stiffness, precision-aligned, floor standing single footprint annular load frame. The basic system consists of a vertical loading, single axis load frame, servo-electric actuator, force and displacement transducers, and wide range of grips, high temperature furnace, temperature control unit, safety interlocks and servo controller. The 2370MS controller will provide the required control on stroke, load and strain. These single foot print units are designed to suit testing of creep, stress relaxation and quasi-static test of metals, plastics, wood, composites, rubbers and automotive components.

### Standard features

- Fully self-reacting load frame from 10 to 200kN force rating systems
- Actuator stroke up to 150mm
- Low friction and wear resistance actuators
- Working temperature up to 1200°C
- Encoder based displacement measurements
- Virtually noiseless
- Servo controlled force and displacement
- Green and energy efficient system with in-built UPS for continuous operation
- Zero backlash and quiet performance
- Speed 5 $\mu$ m/min to 500 mm/min
- Runs on single phase power supply
- Resistance Heating furnace
- Temperature control unit
- Water cooled grips (hydraulic – option)
- 3648 MIPS DSP, 2746M FLOPS DSP 24-bit analog data conversion, 32-bit data acquisition and 40 bit servo-loop calculations
- Data acquisition rates up to 40 kHz
- User friendly application software
- Just Plug and Play
- Environment Chamber – option available



## Applications

- Creep and stress relaxation
- Tensile, compression, shear, flexure, peel and bend tests
- Strength and characterization of metals
- Room temperature & high temperature tests
- Tests subjected to environmental conditions
- Thermo-mechanical fatigue studies
- Low cycle fatigue testing
- Testing of metals, plastics, wood, composites, rubbers, automotive components and many more

## Specifications

Model	UT-20-0010	UT-20-0025	UT-20-0050	UT-20-0100	UT-20-0150	UT-20-0200
Capacity, kN	10	25	50	100	150	200
No. of columns	2					
Column clearance, mm	600					
Maximum vertical daylight, mm	1500					
Column Diameter (mm)	50		65		125	
Total weight, Kg	450		700		1000	
Load accuracy	±0.5% of readout down to 1/500 <sup>th</sup> of capacity					
Stroke, mm	Up to 150					
Stroke accuracy	0.1 micron					
Speed	5µm/min to 500mm/min.			5µm/min to 250mm/min.		
HPS flow, LPM (Option – Hydraulic grips)	4					
Power Supply	Single Phase 220V 15Amps.					
Vacuum chamber (Option)	5 x 10 <sup>-2</sup> mBar.					
Furnace (temperature, °C)	Split tube furnace - 1200 °C					
Grip Cooling Unit (LPM)	2					
Environment Chamber	-190 °C to +100 °C -70 °C to +150 °C					