# SERVOTEST

### TEST AND MOTION SIMULATION

### Servotest TMTS systems deliver:

- 500 kN loading
- 3,000 mm/s displacement rate
- Induction heating
  - Rapid controlled heating to 1,300 °C
  - Uniform temperature distribution
  - Minimal thermal gradient
- Controlled cooling via integrated:
  - Forced air
  - Combined forced air & water mist
  - Full guench <0.5 s post-deformation
- Fully-programmable operator-interface
- Large inexpensive specimens suitable for test coupon extraction
  - Plane strain to 50 mm wide
  - Axisymmetric to Ø16 mm
- Tests include:
  - Uniaxial, plane strain, stress relaxation, creep, multi-stage

## Advanced high-performance tools for industrial & academic research into process simulation





Axisymmetric compression - long product & forgings



Plane strain compression – rolled & flat product











🔶 Constellium 🛛 🏹 TATA STEEL











A UK-based specialist supplier of innovative custom servo-hydraulic mechanical testing solutions, Servotest developed the original TMTS in conjunction with the University of Sheffield in the 1980s. Multiple systems have since been delivered to leading academic and industrial customers worldwide.

The design is based around a stiff load frame, high-rate actuator and mechanical wedge arrester in combination with furnace, induction heating and air/water quench facilities. This combination offers precise control of high force and high strain rates, allowing testing of specimens large enough for post-test extraction of mechanical test coupons.

A servo-controlled manipulator moves test specimens rapidly between furnace, induction heater, mechanical deformation and quench stations. The unique Fast Thermal Treatment Unit delivers both test configuration flexibility and extremely precise thermal treatments. Operations can be performed before, between and after deformation as required.

Induction heating offers best in class specimen temperature uniformity with low thermal gradients, delivering greater consistency in material properties.

A fully-programmable operator interface combines automation of complex test processes with the ability to tailor tests around specific customer requirements. We welcome the opportunity to discuss your specific application.

For more information please visit www.servotestsystems.com

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## SERVOTEST

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ESTABLISHED = 1958

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