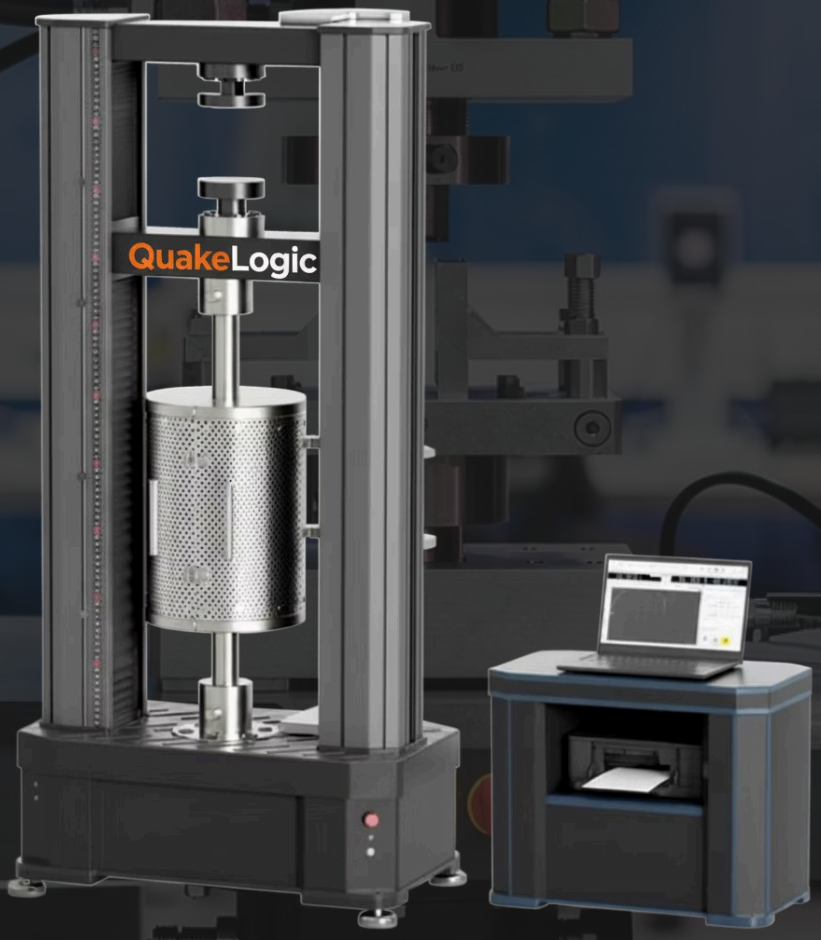
QUAKELOGIC

QL-Fortis 300HT

High-Temperature Electromechanical Universal Testing System

A high-performance **300 kN electromechanical universal testing system** designed for **tensile and mechanical testing at room and elevated temperatures**. The QL-Fortis 300HT delivers **precision, stability, and repeatability** for demanding laboratory and institutional testing environments.



Tensile Testing
Room temperature applications

High-Temperature Testing
Up to 1000 °C capability

Three-Point Bending
Flexural strength evaluation

Flattening Tests
Material deformation analysis

Mechanical Structure & Performance

Precision-engineered four-column electromechanical load frame delivers exceptional rigidity and alignment. Advanced servo-driven system ensures smooth, controlled movement with minimal backlash. Built for long-term accuracy in high-throughput laboratory environments.

Four-Column Frame

Optimized geometry for minimal deflection

Servo Drive System

Precision ball screw with closed-loop control

High Rigidity

Maintains alignment under maximum load

Long-Term Stability

Stress-relieved components for years of accuracy

Designed for Accuracy

- Closed-loop control of force and displacement
- High positional accuracy and repeatability
- Consistent performance across full operating range
- Suitable for continuous laboratory operations

300kN

Rated Load Capacity

Maximum force capacity for demanding applications

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Column Design

Precision load frame configuration

100%

Operating Range

Consistent accuracy throughout

High-Temperature Testing System

Integrated Furnace for Elevated-Temperature Testing

Purpose-designed three-zone furnace achieves temperatures up to 1000 °C with exceptional thermal uniformity. Its innovative book-type opening design enables rapid specimen access while maintaining precise alignment. Integrated safety interlocks and advanced PID control ensure reliable, repeatable testing performance.

Three-Zone Heating

Independent control for uniform temperature profiles

Book-Type Opening

Quick access without furnace removal

Multi-Thermocouple Control

Real-time monitoring and feedback

High-Temperature Grips

Heat-resistant alloys with thermal barriers

Temperature Range

Operating range of 50 °C to 1000 °C with stable thermal regulation. Advanced PID algorithms maintain setpoint within tight tolerances. Accommodates various heating rates and custom temperature profiles.

50 °C – 1000 °C

Stable, accurate thermal control

1. **Temperature Stabilization** — Furnace reaches setpoint, uniform thermal distribution
2. **Specimen Loading** — Book-type opening, safe, convenient access
3. **Thermal Soak** — Specimen equilibrates at test temperature
4. **Mechanical Testing** — Tensile/bending test, thermal control

Control, Software & Electrical Configuration

Advanced Control & Measurement

State-of-the-art integrated touchscreen control unit provides intuitive operation and real-time test monitoring. High-speed digital signal processing executes closed-loop control at rates exceeding 1 kHz. High-accuracy load cell meets ASTM E4 and ISO 7500-1 standards. Precision linear encoders enable strain-controlled testing and elastic modulus determination.

Real-Time Control

High-speed closed-loop regulation

Precision Measurement

Calibrated systems meeting international standards

Data Acquisition

High-rate sampling captures complete response

Test Automation

Programmable sequences improve repeatability

Dedicated Testing Software

Comprehensive English-language software supports standard test methods including ASTM E8/E21, E290, and custom procedures. Pre-configured templates reduce setup time while maintaining flexibility. Automated execution controls positioning, thermal cycling, and data collection.

Test Execution

Multi-step sequences with automatic control

Data Logging

Real-time capture of force, displacement, temperature

Report Generation

Customizable reports with stress-strain curves and statistics

Power Requirements

380V...

Main Testing System

Three-phase power for servo and control

220V...

High-Temperature Furnace

Single-phase with circuit protection

Independent power configuration allows flexible operation and maintenance

Delivery, Support & Compliance

Turnkey Supply

Complete system with all required components, accessories, and documentation

Professional Installation

Expert commissioning and on-site calibration verification by trained engineers

Operator Training

Comprehensive instruction covering system operation, maintenance, and safety procedures

Complete Documentation Package

Each system includes comprehensive documentation for long-term operation and maintenance. Operations and maintenance manuals cover startup, operation, troubleshooting, and preventive maintenance schedules.

Calibration certificates provide traceability to national standards for load cell and displacement systems. Electrical schematics, mechanical drawings, and software guides support in-house maintenance and future upgrades.

All documentation provided in printed and digital formats for convenient reference.

Warranty & Compliance

12-Month Warranty

Comprehensive coverage including parts, labor, and travel

System meets international procurement requirements and ASTM/ISO testing standards. Includes appropriate safety features, measurement accuracy, and regulatory documentation.

Electrical components meet safety and EMC directives. Design incorporates machine guarding, emergency stops, and interlocks for safe laboratory operation.

International Delivery

Worldwide availability with export packaging designed for air freight shipment

System Commissioning

Professional installation, calibration, and performance validation

Knowledge Transfer

Comprehensive operator training ensures effective system utilization

Ongoing Support

Warranty coverage and technical assistance throughout system lifecycle

Global Support Infrastructure

QuakeLogic maintains a global network of service centers providing technical support, calibration services, and spare parts. Remote diagnostics enable factory engineers to assist with troubleshooting efficiently. Annual maintenance contracts available for predictable costs and minimized downtime.

Advancing Material Testing Precision with QuakeLogic Excellence

Corporate Headquarters

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Available Monday - Friday, 9 AM - 5 PM PST

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For strategic collaborations, enterprise-level instrumentation solutions, and comprehensive technical inquiries.

Our Unwavering Commitment to Operational Excellence

Certified Quality Assurance

Complying with international standards for product reliability, performance, and safety.

Pioneering Industry Leadership

Delivering advanced spectroscopy and sensing technologies that ensure precision, repeatability, and ease of use.

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