

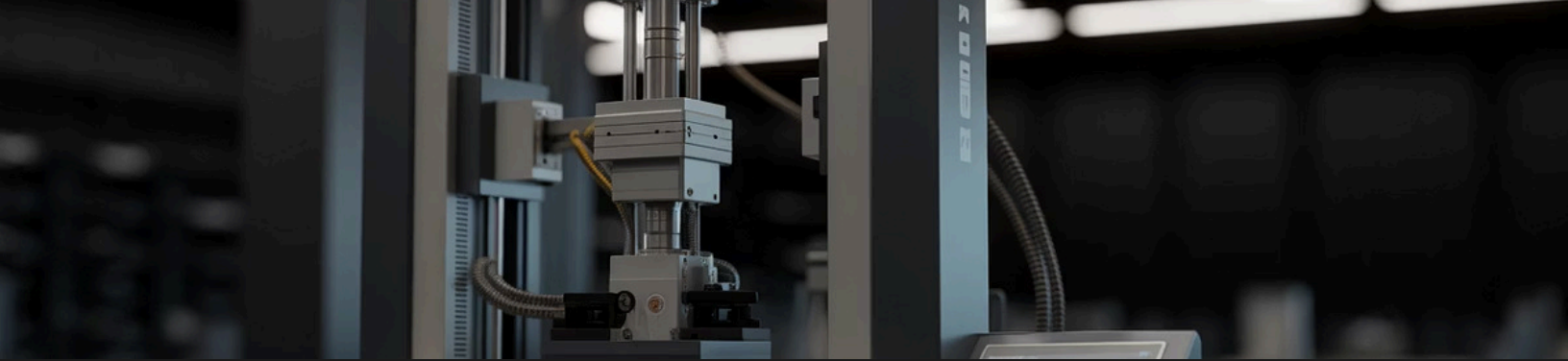
QL-Fortis 50

Universal Testing Machine

Precision • Reliability • Research-Grade Performance



The **QL-Fortis 50** is a microcomputer-controlled electromechanical universal testing machine engineered for **tensile, compression, and flexure testing** of metals, composites, polymers, and other materials. Designed for **university laboratories, research centers, and industrial QA**, it combines **servo-drive precision, digital closed-loop control, and intuitive Windows-based software** to ensure accuracy, repeatability, and operational safety. The system fully complies with **ASTM E4, E83, ISO 7500-1, and DIN** standards.



Key Features



Force Range

100 N – 50 kN (interchangeable TEDS-enabled load cells)



Accuracy

$\pm 1\%$ of indicated value (ASTM E4 compliant)



Drive System

Maintenance-free AC servo motor + pre-loaded ball screws for smooth low-vibration motion



Control

Digital closed-loop controller with auto-zero, gain calibration, and adaptive feedback

- **Test Modes:** Tension | Compression | Flexure under constant rate of load, displacement or strain
- **Software:** *QuakeLogic TestControl* for real-time graphing, automated reporting & ASTM/ISO compliance
- **Safety:** Dual mechanical + software limit protection with auto shutdown on overload or specimen failure
- **Accessories:** Tension grips, Ø100 mm compression platens, flexure fixture & quick-change adapters
- **Power:** 220 V AC | 60 Hz | 1 kW (single-phase)

Technical Specifications

Parameter	Specification
Model	QL-Fortis 50
Force Capacity	100 N – 50 kN
Accuracy Class	± 1 % (ASTM E4)
Crosshead Travel	1150 mm
Test Space Width	400 mm
Speed Range	0.01 – 500 mm/min
Displacement Accuracy	≤ ± 0.5 %
Noise Level	< 65 dB
Power Supply	1 kW 220 V AC 60 Hz
Machine Weight	≈ 550 kg
Dimensions (L×W×H)	785 × 580 × 1950 mm

System Configuration



Load Frame & Drive

- Two-column table-top steel frame with high stiffness and minimal deflection
- Precision double-nut pre-loaded ball screws with servo motor (3 kW)
- Integrated encoder feedback for position and velocity control



Controller & Electronics

- Digital servo controller with auto-zero, auto-range recognition, and closed-loop control
- Dual emergency-stop circuits meeting OSHA and IEC standards

Software & Data Processing

- Windows 11-based *QuakeLogic TestControl* environment
- Real-time display of force, displacement, stress-strain, and time curves
- Automatic report generation (ASTM/ISO/DIN formats)
- Batch testing and LAN/internet data sharing

Computer System

- Industrial PC (Windows 11, 64-bit, 32 GB RAM, dual 512 GB SSD)
- 27" LCD monitor pre-configured with software and drivers

Applications

University and
research
laboratories

Aerospace &
automotive
component testing

Material science and
composite research

Civil and structural engineering
studies

Quality assurance and production
testing

Installation & Training

1

FOB Destination delivery and on-site installation by QuakeLogic technicians

2

System setup, alignment, and calibration verification

3

4-hour operator training covering test configuration, software, and maintenance

4

Manuals and certificates included

Warranty & Support

- **One-Year Warranty**

One-year comprehensive warranty (parts & labor)

- **Free Updates**

Free software updates and firmware upgrades during warranty

- **Lifetime Support**

Lifetime remote technical support for hardware and software

- **Parts Availability**

Long-term availability of replacement parts and accessories

Compliance Standards



ASTM E4 — Force Verification of Testing Machines



ASTM E83 — Extensometer Verification




ISO 7500-1 / GB/T 16491 — Verification of Testing Machines



CE and OSHA/IEC Safety Conformance

QuakeLogic Inc.

 +1 (916) 899-0391

 sales@quakelogic.net

 www.quakelogic.net

4010 Foothills Blvd., Suite 103/194,
Roseville, CA 95747 USA

LIVE DATASHEET



CONTACT US

