CONCRETE

Servo Electromechanical Compression and Flexural Testing Machine, Column type Frame



The PCO-F.CE Series comprises fully automatic servo electromechanical testing systems designed for performing compression, flexural, and related mechanical tests on a wide range of materials and specimen sizes. These machines deliver high precision, repeatability, and operational efficiency for laboratory and industrial applications.

Frame Construction

- Robust 4-column load frame ensuring high rigidity and stability
- Columns securely fastened to upper and lower crossheads, eliminating mechanical play
- Load capacity available between 10 – 300 kN
- Top-mounted servo electromechanical actuator for optimal force transmission
- Ergonomic design with front and rear specimen loading capability

Load Measurement

- Measurement range: 1% to 100% of full scale
- Accuracy: Class 0.5 or better
- Fully compliant with EN ISO 7500-1 standard
- High-precision load cell ensures reliable and repeatable results

Displacement Measurement

- High-resolution position sensor: 0.001 mm resolution
- Adjustable test speed range: 0.001 mm/min to 200 mm/min
- Closed-loop control for precise displacement regulation

Measuring & Control Electronics

The system is equipped with the Doli EDCi20 digital controller, providing advanced control and automation capabilities:

- Installed in a dedicated control cabinet
- Operated via remote control unit (optional)
- Supports fully automatic test execution
- Control modes:
  - Force-controlled
  - Position-controlled
  - Strain-controlled
- Features:
  - Adjustable and sensitive break detection
  - Early failure recognition of test specimens
  - Seamless PC communication via Ethernet or USB 2.0

Technical Specifications – EDCi20 Controller

Expansion capability: Up to 3 iSI modules (2 onboard)

Data acquisition rate: 2.5 kHz

Intelligent sensor recognition via SGS (Smart Sensor Plug)

Digital I/O:

- 8 digital inputs / 8 digital outputs (24V DC)

Control interfaces:

- Analog output: ±10 V
- Multiple digital interface options

Connectivity:

- Ethernet (RJ45, 10/100 Mbit)
- USB 2.0
- Optional serial interface

Additional features:

- Interface for RMCi remote control unit (with emergency stop)
- Support for incremental encoders (position measurement)
- iSYNC interface for multi-axis synchronization
- High-resolution analog input amplifier:
- 20,000,000 steps resolution

Universal Testing Software

The system is powered by **Innovotest Universal Testing Software**, delivering advanced data acquisition, analysis, and reporting capabilities:

Intuitive user interface for rapid operator training

Real-time monitoring with customizable live displays:

- Force
- Displacement
- Time
- Test results

Advanced graphing capabilities:

- Force vs. displacement
- Stress vs. strain
- Zoom and detailed data inspection

Flexible workspace:

- Multiple graphs and control charts
- Fully customizable layouts

Reporting:

- Custom report templates

- One-click generation, printing, and emailing

Export formats: CSV and PDF

Related Standards

ASTM C1550, EN 14488-5, ASTM C1018, ASTM C1609, ASTM C1609, ASTM C293, ASTM C78, EN 12390-5, EN 1339, EN 1340, EN 14488-5, EN 14651, EN 12467+A2

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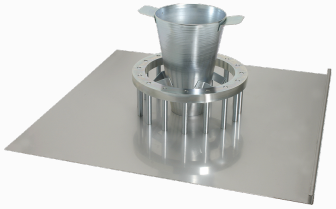


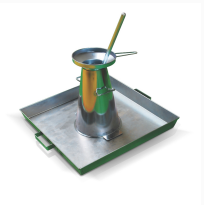
SCC - J-Ring, Narrow Gap

PCO-207



Water Impermeability Apparatus

PCO-225



Slump Test Set

PCO-201.E

Review Product on Our Website

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