Automax Pro-M, Automatic Elastic Modulus Determination Machine -3000KN

Description:

AUTOMAX PRO-M Power Control System fitted with superior hydraulics can also perform, in addition to standard failure tests, the Modulus of Elasticity Determination tests, Characterizations of Fiber Reinforced Concrete (FRC) under displacement-control and tensile tests on steel specimens

AUTOMAX PRO-M introduces new features and capabilities that will revolutionize the operations of any progressive construction quality testing laboratories.

Link-LAB is CONTROLS' new proprietary Laboratory Connectivity Package. It allows your AUTOMAX PRO-M to be a connected part of your laboratory infrastructure by taking inputs from any number of ancillary measuring systems and devices increasing efficiency and eliminating transposing errors.

The machines consist of:

Frame

Four column high stiffness welded frame tested for stability. Heavy duty spherical seat in lubricating oil bath, allowing initial free alignment at the initial contact with the specimen and automatic jamming up to the end of test.

Automax PRO-M, Automatic power and control system

See technical specifications.

Safety features Includes:

Max. Pressure valve to avoid machine overloading; piston travel limit switch; emergency stop button; front door and rear transparent fragment guard.

Standards:

- AASHTO T22
- ASTM C39

- ASTM C469
- IS: 14858 (2000)

Specifications:

Hydraulics

- Dual stage HPU: centrifugal low pressure for fast approach automatically switches to radial multi-piston high pressure for loading
- DC motor: 720 W, 50-60 Hz
- Maximum working pressure: 700 bar
- Load / unload electro valve for test execution via display / PC and automatic stop at specimen failure
- Third and fourth frame option**,** control of up to 4 frames by selection via display / PC
- ES Energy Saving technology to reduce power consumption and promote silent operation
- Flow-sharing technology to perform loading and unloading cycles

Hardware

- 524,000 points high-resolution / stability analogue channels
- 6 channels to be factory configured:
- 2 channels for load sensors (pressure transducers and load cells)
- 2 channels for load sensors (pressure transducers and load cells) or displacement / strain sensors (AUTOMAX PRO-M only)
- 2 channels for displacement/strain sensors
- Control frequency: 250 Hz
- Sampling frequency: 250 Hz
- 7”, 800 x 480 px, 16m colors, icon-driven touchscreen graphic display (like tablet or phone)
- Unlimited storage capacity for test data on internal 8 GB SD card
- USB port for test data storage on external USB memory stick
- Ethernet port for PC / Internet / network communication
- Optional integrated graphic printer including Load-Time plot
- RS 232 port for data downloading in ASCII format

Firmware

- Execution of compression, flexure, indirect tensile, ACV tests in automatic mode with load rate controlled by a closed-loop PID system
- Execution of loading ramps allowing the manual increase or decrease the test speed during the test
- Pause command to maintain steady load can be enabled at a pre-set value before the test or as required while testing
- Simultaneous display of load, specific load, actual load rate, load / time graph and load / displacement or load / strain graphs (AUTOMAX PRO-M only)
- Zoom option on the test graph
- Saving of the specimen failure type (EN or ASTM) in test results
- Download data to internal printer (optional) or to PC via RS 232 port or to USB memory stick
- Ethernet port for PC / network communication
- Multi-coefficient linearization of the calibration curve for better accuracy at low loads avoiding the use of a second pressure transducer.
- Recording facility for up to 10 test profiles for each channel including: type of test (e.g. compression, flexural, indirect tensile), specimen size and shape, load rate, test standard and other general information. Each one of the recorded test profiles can be recalled automatically to save time.
- Improved PID algorithm and multi PID selection. Up to 3 different PID settings can be tuned for a variety of materials (ACV, flexure, compression with neoprene pads, etc.)
- Compatible with the newly released Datamanager software, tailored for construction material testing laboratories, for real-time data acquisition, display and management
- Peripheral devices integration with Link-LAB
- Automatic load measurement verification procedure, by connecting suitable load cells and our digital readout unit to PC
- Language selection (including Cyrillic and Chinese)
- Unit selection (kN, ton, lbf)
- USB port for firmware upgrade and safe backup of the original configuration data (PID, calibration, etc.), in case of loss and / or data corruption. The restore to factory settings function is easy to use and reduces the need of any technical support.

Frame:

- Compression Testing Frame 3000 KN confirms to IS: 14858 (2000) and calibrated with an accuracy of +/- 1%.

Vertical daylight (mm)	350
Horizontal daylight (mm)	380
Depth (mm)	400
Platen (mm)	300 dia X 50
Ram Travel (mm)	50
Pressure transducer bar	700
Weight (kg)	1050 approx

Products:

C10F02M/CT300/EM

Automax pro-m Automatic Elastic Modulus determination machine with 3000KN Capacity High Stiffness Compression Testing Frame and Strain gauge measurement module. Having 7” color touch screen display, PC control SW/EM E-MODULE software package for Elastic modulus and Poisson ratio determination Software to print report and data saving. Compression Testing Frame 3000 KN

Main Features: Fully Automatic PID Close loop System, 8GB Internal memory, 52500 Point resolution per channel, 2 channels for load sensors, 2 channels for load or displacement/strain Sensors, 2 channels for displacement/strain.

230V/50-60Hz/1Ph.