SYSTEMES ESSAIS UNIVERSELS

Machine essai universelle electromecanique servo (Tension/Compression)



Normes Associées

ASTM A370, A615, C39, C109, E4, E8, E9, E83, E290, F606, ISO 6892-1, 6892-2, 7438, 7500-1, 9513, 15630-1, BS4449, EN10002-1, 10002-2, JIS Z2241, Z2248

System:	Servo Electromechanical system with closed loop control. (Load, displacement, and strain controlled)
Capacity:	Available in 10kN – 600kN
Vertical Test Space:	750mm *contact us for other requirements
Adjustable Test Speed:	0.001 – 500 mm/min
Load Cell:	Class 0.5

Features and Benefits:

- Dual test space design makes changing between tension and compression testing safer and more efficient - no need to remove heavy fixtures
- Fully open-front grip design improves operator safety and throughput
- Long test area accommodates a variety of test fixtures and applications
- Powerful, yet user-friendly materials testing software provides repeatable and reproducible results for simple to sophisticated testing requirements

Testing Applications:

- Metals - Bar, Plate, Pipe & Tube, Rebar, Structural, Wire - Rod, Strand
- Fasteners, Concrete - Cubes, Cylinders, Beams, Wood

Load measurement:

Load measurement and control with high precision advanced load cell with class 0.5 accuracy between 0.1kN – 50kN/sec. Load measurement resolution is 20,000,000 steps

Displacement measurement:

Displacement measurement and control with position sensor of 0.001mm resolution. User can select any speed between 0.001mm to 500mm/min.

Measuring and control electronics:

Measuring and control electronics:

As universal digital measuring and control electronics for testing machines, a Doli EDCi20 controller is used. It is installed in the control cabinet and can be operated with a remote control.

The control electronics enables a fully automatic test execution with given load speeds for force, position and strain controlled tests. With sensitive and adjustable break detection, the failure of the sampleis detected early. Communication to the PC: Ethernet socket / USB 2.0

- Remote Machine Control RMCi for controlling the testing machine via function keys and DigiPoti
- OLED monochrome display with 128p x 64p and status LEDs
- Magnetic foil for flexible attachment to the testing machine
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Technical data EDCi20:

- Expansion option: 3 iSI modules (2 onboard)
- Data acquisition and control speed: 2.5kHz
- Automatic sensor recognition through intelligent sensor plug SGS
- Universal digital IO interface, connection for 8 digital inputs and 8 digital outputs, 24V DC
- Machine control, control output analog ± 10 V or various digital interfaces
- Connection for display / operating unit Remote Machine Control RMCi with emergency stop option
- Connection for incremental digital sensors, e.g. for position measurement
- iSYNC interface for multi-axis applications. Connection of several EDCi.
- Analog input amplifier (e.g. for load cell) with DC supply with a resolution of 20,000,000 steps
- ‘+/- 10V control output
- Ethernet RJ45, communication with PC. 10/100Mbit
- USB 2.0, communication with PC
- Serial interface for external electronics (optional)

Universal Testing Software:

Test&Motion Universal is the testing industry’s most powerful and advanced testing software. Its intuitive workflows are designed to simplify operator training, increase testing efficiency, and minimize safety hazards. User can Configure unlimited Live Displays to show force, displacement, time, and results to provide users with immediate feedback on current test status. Graphs, most typically displaying force vs. displacement data or stress vs. strain data, can easily be viewed in more detail by pinching to zoom. Multiple graphs can be displayed in the workspace, including control charts in a completely customizable layout. Create customized report templates that ensure a professional and consistent style for reporting test results. Reports can be generated, printed, and emailed with the press of a button. Report format options include CSV and PDF.

Wedge Type Mechanical Tensile Grips:

The manual wedge action grip is designed for easy specimen loading, alignment, and positioning. After initial specimen contact, gripping force increases as the testing load increases. Virtually no preload is seen during specimen clamping due to the design of the moving grip bodies, making them particularly suitable for testing high strength materials, such as metals and composites, ensuring that specimen slippage is eliminated.

Machine comes with 50kN capacity mechanical wedge type grips complete with jaw inserts for round (4-24mm) and flat(0-24mm) samples.

Video extensometer (for both; extension and area reduction): Optional

Optical extensometers demonstrate state-of-the-art digital correlation technology. All measuring systems deliver accurate and precise strain measurement readings.

Ease-of-use and numerous industry-leading software features make it an excellent choice for many applications, including tensile, compressive, bending, shear, torsional and fatigue testing. All this on a wide range of test frames, from the small-scale single-column machines to the largest, four-column UTMs.

Any set of two standard optical extensometers can be converted into a 3D system using the dual mode and the 3D DIC software module.

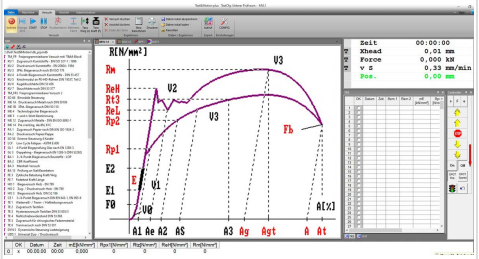
Technical Features:

- Compliance with ISO 9513 and ASTME E83
- Compliance with ISO 6892-1 and ASTM E8 in the strain rate control mode
- Usable with most ISO and ASTM for determination of tensile properties for metallic materials, plastics, elastomers, composites, concretes, and many more.
- Applicable to high-temperature and climate chamber measurements
- Simple to use with operator mode.
- Axial and radial neck detection and many more features
- Easily implementable into the automatic lines.
- Wide palette of measuring tools for advanced deformation analyses
- FOV: 200 mm feasible for both; extension and area reduction measurement

Galerie de Produits









Ces Produits Pourraient Vous Intéresser



Machine essai de flexion automatique & type C

PLMT-XD



Système d'actionneurs servo hydrauliques, 500kN

PLMT-500AXS

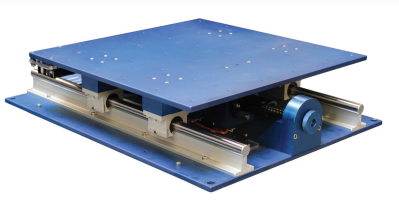


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PLMT-ST1

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