… From development to implementation

Labor Tech®

Production of materials testing equipment and automation

Electromechanical testing machines series **LabTest E.1 up to 5 kN**

Made in Czech Republic

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Electromechanical testing machines **LabTest 6.0051 - 6.051**

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Basic description

Electromechanical testing machines of series E. 1 in one-column stand design up to 5 kN are universal static testing systems suitable for both research and development as well as common quality control in laboratories and factories. Combined with an extensive range of accessories, it is safe and efficient to test the materials and entire products on the machine in tension, pressure, bending, shear and torsion, be it for plastics, metals, composites, paper, polyurethanes, etc.

Main advantages and functions

- Ball screws with preload, massive crossbar, accurate drive and especially the side linear guide contribute to better utilization of power, almost no deformation of the frame, ideal energy absorption and implementation of optional off-axial loading of the specimen.
- The key strength of the E.1 series is the robustness, rigidity, durability and mechanical resistance of the test frame to vibration and mechanical damage. These properties make it possible to test high strength materials such as aerospace composites, metal alloys, advanced composites, automotive structures and crystalline polymers.
- Easy access to the test area is very important for the operator. Our machines are at a very high ergonomic level with easy handling of metal specimens, fasteners or composite materials.
- High machine operator comfort. The device can be tailored to the customer's specific requirements, for example by extending the test frame, creating the upper and lower working space, multiple workspaces side by side, using one load cell for 2 workspaces, higher speeds etc.
- Low-noise, high-resolution AC servo drive, quiet and precise, provides precise machine control in power and positioning loops. These drives excel at high return speeds that are significantly above the nominal testing speeds.
- Option of the electromechanical machine control including control of clamping grips and extensometers via the remote control RMCi.
- By using peripheral ITEM profiles, we fulfil the idea of a modular machine arrangement with the possibility of adding any LABORTECH accessories, including extensometers, temperature chambers, probes, fixtures, protective safety covers, hydraulic power units etc.

Measuring and control machine electronics

New fast, accurate and reliable EDCi measuring and control electronics with variable sampling system up to 10kHz, 64 bit internal accuracy, 32 bit measurement and 24 bit resolution ADCs. Modular system with the possibility of extending the measurement up to 16 sensors. SAFETY with new safety features according to ENB ISO 13850-SIL 1 / PL.

Force measuring system

- The E-series load cells are ideal for tensile, compression, bending and cyclic tests. They are characterized by high resistance to lateral forces, bending moments and high overload resistance. Accuracy class according to EN ISO 7500-1, ASTM E4 is commonplace. Each sensor is equipped with an SGS connector with an integrated EEPROM to which the calibration constant and linearization can be configured.
- The accuracy class of the load cells supplied by us is 0,5 or 1.
- The load cell type is always chosen according to the type of the testing and test fixtures used.

… From development to implementation

Basic features of Test & Motion ® software

- Intelligent software designed for tensile and compression testing
- Unlimited number of test methods depending on EN, ISO, ASTM, GOST standard or customer method
- A modular system of libraries designed for standardized tests – selection for activation
- Evaluation of optional parameters: maximum force, strength, elongation, elongation, tension of 5 different reference points.
- Real-time graph, individual processing after test
- Bulk Charts, zoom, serial testing

- Statistical evaluation
- Graphical editor of protocol design
- Any setting of windows and appearance of the environment, anchoring
- Data export to ASCII, EXCEL, WORD, Eclipse, Diadem, Q-DAS,
- 9 language mutations (Cz, En, Ge, Fr, Pol, It, Sp, Ru, Du)
- Unlimited license
- Installation on any computer without a license, FREE DEMO
- Compatibility with every EDC or EDCi system from LABORTECH

Safety and service life requirements

- LABORTECH machines, based on their design and construction, comply with all of the above EC Machinery and Equipment Directives.
- The customer always receives an EC declaration of conformity.
- Only state-of-the-art safety technology and proven industrial components operating in accordance with the new ENB ISO 13850-SIL 1 / PL safety features are used.
- Spare parts are available 10 years after the end of the machine type production.

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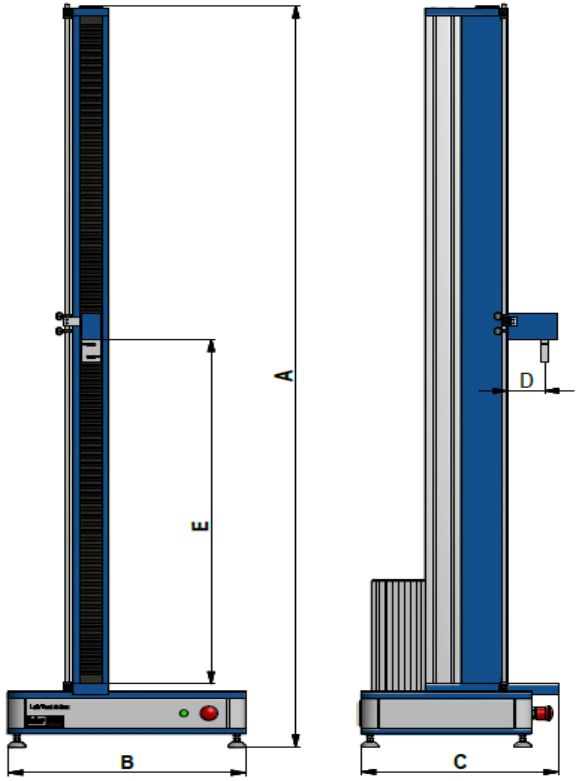
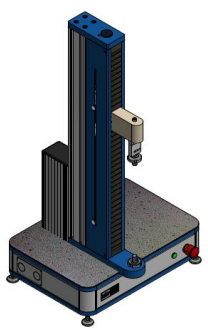
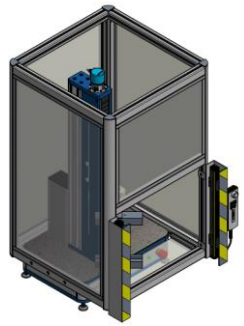
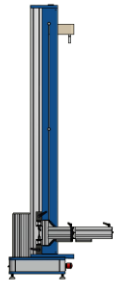


Technical data	Units	6.0051.1.1	6.0051.1.2	6.0051.1.3	6.031.1.1	6.031.1.2	6.031.1.3	6.051.1.1
Nominal load tension/pressure	kN	0,5			3			5
Number of columns		1						
Number of ball screws		1						
Number of linear guides		1+2						
Minimal testing speed[1]	mm/min	0,0005 – 0,00001						
Maximal testing speed	mm/min	3000			2000			600
Machine drive resolution	µm	0.001			0.001			0.001
Repeatability of the crossbar position	µm	±2			±1			±1
Weight[2]	kg	60	65	70	62	68	74	68
Dimensions								
Machine height (A)	mm	1024	1484	1874	1024	1484	1874	1024
Machine width (B)	mm	531	531	531	531	531	531	531
Machine depth (C)	mm	442	442	442	442	442	442	442
Width of workspace (D)	mm	83			83			83
Height of workspace(E)	mm	650	1110	1500	650	1110	1500	650
Environmental conditions								
Work environment temperature	°C	od 10 do 35						
Storage temperature	°C	od -35 do 55						
Humidity range	%	< 90						
Noise level[3]	dB	< 58						
Electrical connection								
Supply voltage	V	100 … 240 / 50-60Hz						
Fuse	A	16						
Power rating (without accessories)	kVA	0,370						

[1] According used gearbox. [2]The machine weight is without of testing fixtures and load cell. [3]Machine noise is measured 1 m from the test machine.







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