

... from development to
implementation



Czech manufacturer of testing machines and automation



Electromechanical testing machines
E.3 series up to 600kN

... from development to implementation



Production of materials testing equipment and automation



Every small detail matters

Key features and parts of E.3 series up to 600kN

Stiffness, accuracy, durability and variability are the parameters in the standard...

Electromechanical testing machines LabTest series E.3 series up to 600kN in two or four columns design are specially created for tensile, compressive and bending tests, as well as for shear and torsion tests, and are therefore ideal for complex tasks in the field of mechanical testing of materials. The test system consists of the following components, which are interconnected both physically and software and are an integral part of the entire test system.



The robust vertical stand design consisting of steel columns with duralumin ITEM coating has high rigidity, mechanical resistance and durability, guaranteeing 100% repeatability of results. Thanks to this construction, the machine has a high resistance to off-axis loading and demanding torsional tests.



The beltless drive of the machine is secured in vertical feed by precision ball screws with preload, which are driven by APEX maintenance-free helical bevel gearboxes with an accuracy of more than ≤ 8 arcmin (0.13°) and an efficiency of more than 95%. This system allows precise control of the machine and excels in low noise even at the highest loads.



The machine is controlled by new measuring and control electronics of the EDCi series with a sampling frequency of 2.5 or 10 kHz. Resolution level of analog signals $\pm 250,000$ points (20 ms). Internal frequency 64 bit, data acquisition 32 bit, AD 24 bit, arithmetic. Integrated RS232 for VIDEO extensometers. PC connection - Ethernet 10/100 Mbit, USB 2.0.



The RF series Load cells used in these machines are extremely resistant to interfering forces and bending moments during the pressure and bending test. These sensors are particularly tolerant of overload (up to 300%) with an unlimited fatigue limit of up to 80% of the rated load. Thanks to its robustness, it is excellent for critical applications while maintaining high measurement accuracy.



Intuitive test software Test & Motion + - BASIC produced by LABORTECH guarantees you reliable testing. It will help you increase the productivity and quality of testing in your test rooms and testing laboratories by using different modules for each test standard.



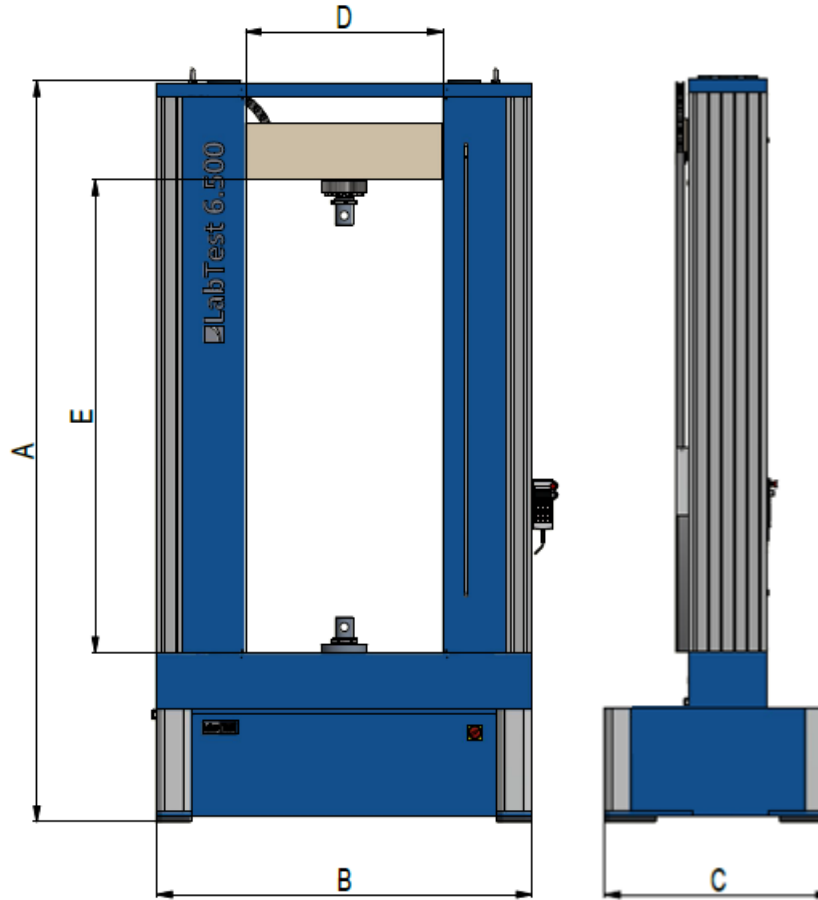
Based on the concept and construction, LABORTECH machines comply with all the above-mentioned EC directives on machinery and equipment. Only state-of-the-art safety techniques and proven industrial components are used that work in accordance with the new safety functions according to ENB ISO 13850-SIL 1 / PL.



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Additional accessories

- 1.0891xx17 - Extension of the machine up to a maximum of 8,000 mm
- 2.00105xx17 - Various types of EDCi electronics, including control system by RMCi series
- 2.04xxxx17 - Different types of clamping fixtures, grips
- 2.05xxxx17 – Protective covers
- 2.021xxxx17 - HAG hydraulic units for hydraulic grips

E.3 series up to 600 kN

Technical data	Units	6.500.1.00	6.500.1.10	6.500.1.20	6.600.1.00	6.600.1.10	6.600.1.20
Product code		1.05110017	1.05110117	1.0511027	1.05120017	1.05120117	1.05120217
Nominal load tensile / pressure	kN	500			600		
Number of columns					2		
Number of screw balls					2		
Number of linear guides					4		
Minimal test speed	mm/min	0.00005			0.00005		
Maximal test speed	mm/min	445			425		
Machine drive resolution	µm	0.00012			0.00012		
Repeatability of crosshead position	µm	±2			±2		
Weight ¹	kg	2850	3260	3670	2870	3280	3690
Color combination	RAL	1015,5015					
Dimensions							
Machine height(A)	mm	2690	3290	3890	2690	3290	3890
Machine width (B)	mm	1713			1713		
Machine depth (C)	mm	1050			1050		
Width of the workspace (D)	mm	900					
Machine of the workspace(E)	mm	1500	2100	2660	1500	2100	2660
Environmental condition							
Environment working temperature	°C	from 10 to 35					
Storage temperature	°C	from -35 to 55					
Humidity	%	< 90					
Noise ²	dB	< 65					
Electrical connection							
Power voltage	V	3Ph/N/PE/400/50-60Hz					
Fuse	A	32					
Machine power consumption (without accessories)	kVA	5,9			6,1		

¹ The Weight of the machine is without test fixtures and load cells. ² The noise level of the machine is measured 1 m from the testing machine . Technical changes reserved during development, machine parameters at room temperature.



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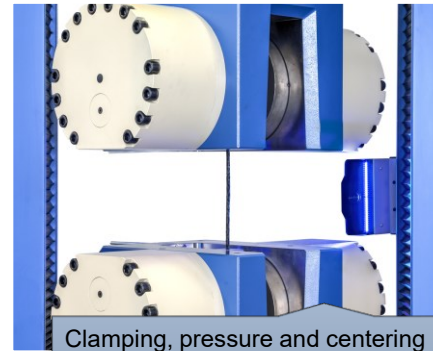
Choose your own machine accessories!

You can test everything with our wide range of accessories...

A wide range of various accessories, including software, will allow you to configure the machine exactly according to your ideas, technical requirements and standards. All you have to do is fill in the simple form [HERE](#) and we will send you a price offer immediately. We offer both standard accessories and "tailor-made" accessories.



Production of materials testing equipment and automation



Clamping, pressure and centering fixtures. Selection according to nominal load, surface, test frequency, standard, etc.



Extensometers - contactless, with limited information, to full deformation.



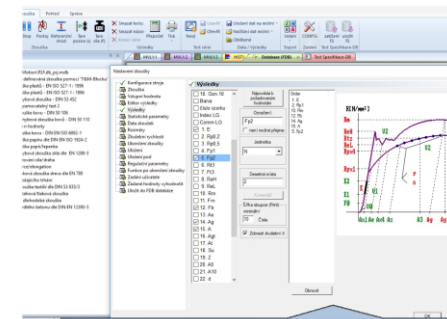
HAG - hydraulic aggregates designed for grips control with integrated diagnostics HALT 18 - Simatic.



High temperature furnaces up to temperatures of 1600 ° C.



Temperature chambers with a range from - 196 ° C to + 350 ° C.



Test & Motion+ test software supplied by LABORTECH with various test modules.



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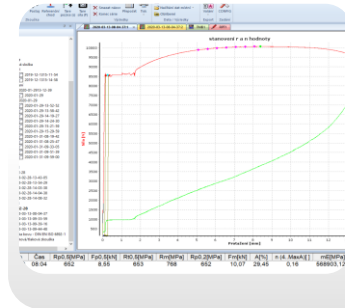
Software Test&Motion+

Intuitive long-term exam software you'll love...

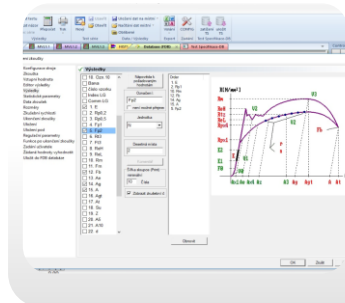
Test&Motion+ – BASIC - intelligent, intuitive and powerful software to help you increase productivity and testing quality in your testing laboratories. You can streamline, refine and speed up the execution of your tests and adapt your testing environment to it was easy for the operator to measure the mechanical properties of the materials in tension, bending pressure and torsion with the support of EN, ISO, DIN, ASTM and GOST standards.

Vlastnosti software Test&Motion+ – BASIC

- Unlimited number of test methods.
- Modular system of libraries designed for standardized tests - to select for activation.
- Evaluation of optional parameters: maximum strength, strength, elongation, elongation, stress, 5 different reference points, etc .
- Graph in real time, possibility of individual processing after the test
- Mass graphs, Zoom, serial testing
- Data export to ASCII, EXCEL, WORD, Eclipse, Diadem, Q-DAS,
- Clamping length setting for each method
- Display of multiple quantities on the x, y axes

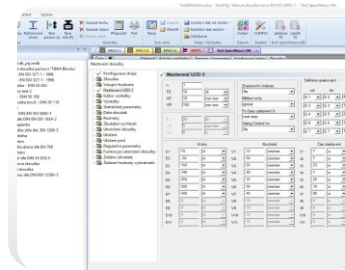


- Online display of up to 6 graphs with arbitrary quantities in the x, y axis
- Control of feed rate depending on elongation, force, stress, elongation, etc ..
- Software control of hydraulic and pneumatic jaws, temperature, automatic extensometer
- Receiving sample dimensions from peripheral devices
- Data collection from analog and digital external meters
- Setting user rights, operator login
- Custom setting of test results
- Automatic saving of results according to the selected tree, database
- Statistical evaluation
- 12 language mutations (Cs, En, De, Fr, Pl, It, Es, Ru, Ni, Tr, Zh, Pt)



Modules to individual test standards

- METALS – EN ISO 6892-1, DIN 50106, DIN 989, DIN 50 110 atd.
- PLASTICS – EN ISO 527-1:1996, EN 20604:1994, EN 20604, EN ISO 178, EN 455-2 atd.
- TEXTILE – Peel test, DIN 53 835/3, DIN 53 868, DIN 53507, EN ISO 10319 atd.
- CONSTRUCTION – 3-/4- bending points, DIN 1996, EN 1344, EN 12390-5, 6, DIN 1339 atd.
- PAPER, CERAMICS, GLASS, – EN ISO 1294, EN 843-1, EN 993-6, EN 1279-4
- WOOD – EN 789, DIN 52 186, EN 310, EN 408 atd.



The screenshot shows the software's control interface. On the left is a vertical control panel with buttons for 's', 'F', 'e', and a 'STOP' button, along with 'On/Off' and 'DPOT Pos./Speed' controls. The main area displays test parameters in Czech: Čas (0,0 s), Sila (0,00 N), Napětí (0,0 MPa), Tažnost (0,00 %), and Protážení (0,000 mm). Below these are checkboxes for various evaluation criteria like 'Požadovaná hodnota max/min', 'Střední hodnota', 'Standardní odchylka', 'Variance', 'Variační koeficient', 'Medián', and 'Rel.rozsah 95%/99%'. At the bottom right is a table with columns: OK, Datum, Čas, Rm [MPa], Rp0.2 [MPa], Fm [N].

OK	Datum	Čas	Rm [MPa]	Rp0.2 [MPa]	Fm [N]
1	23.04.19	13.27	24	13	4396.60
2	23.04.19	14.02	35	20	4401.60
3	23.04.19	14.17	35	32	4345.80
4	23.04.19	14.23	0	0	0.00
5	23.04.19	14.30	35	31	4394.30

Below the table is a language selection menu titled 'Sprache / Language' with options for German, English, Czech, Polish, French, Italian, Spanish, Dutch, Russian, Turkish, Chinese, and Portuguese. The 'Czech' option is selected.



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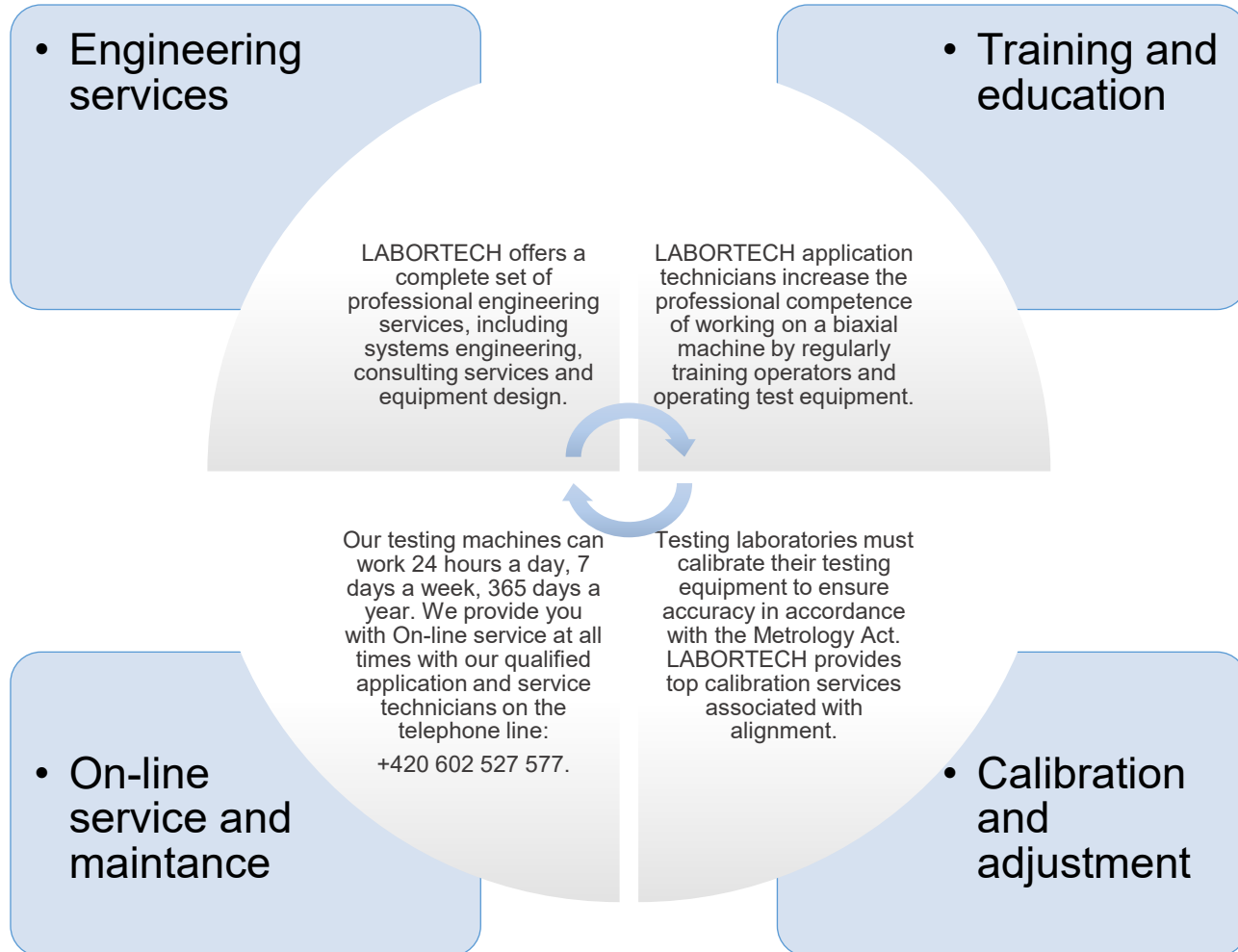
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Why buy the E.3 machines from LABORTECH?

Because we offer everything from A to Z, ie. from development to implementation...



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LABORTECH in the world

Where to find LABORTECH representations...



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