

From development to implementation



Czech manufacturer of testing equipment and automation



Static servo-hydraulic
testing machines of the
H.1 – LabTest 6.200 – 500 series

with adjustable crossbar



Production of testing technology and automation

Static servo-hydraulic test machines

Safe, reliable and accurate with high rigidity and repeatability

LABORTECH is a very strong player in the world in the field of production of static hydraulic testing machines designed for all areas of use. These are quality control, research and development projects, automotive industry and serial testing etc... We have a portfolio of universal testing machines for tensile, compression, bending, shear and torsion tests under stress of samples and entire products, precision testing presses or machines for tensile tests of modular design. All modifications of hydraulic testing machines manufactured by us are designed so that the customer can fully rely on its function even when performing more demanding tasks in the field of mechanical testing of materials.



Our goal is to provide our customers with modern technical and technological solutions supported by the necessary services in the field of testing. We will be happy to advise you on how to choose a suitable testing machine that would meet your requirements and needs. The intuitive and hassle-free use of the Test&Motion+ and DYNPACK test software guarantees you reliable and accurate testing.



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Key features of the H.1 series

First-class product with one-button machine changeability



The robust vertical stand design **with adjustable crossbar** has high rigidity, mechanical resistance and durability guaranteeing 100% repeatability of results. **The crossbar can be adjusted mechanically or fully automatically by hydraulics.** The machine is ergonomically designed so that the handling of samples and jigs is simple and, above all, safe.



High comfort of machine operation at a very high level thanks to the RMCi remote control with LCD display, having independent machine control of the machine, control of the machine's movement, jaws, extensometer, movement and **clamping of the crossbar**, test start and, above all, an integrated CENTRAL STOP button.



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



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



A part of each H.1 servo-hydraulic test series is a compact hydraulic unit of the HAS series operating with a maximum constant pressure of 350 bar. Monitoring of all HA states is carried out by the HALT 16 unit with a Simatic PLC and an LCD display. The HA noise enclosure guarantees a noise level of less than 62 dB.



The intuitive testing software Test&Motion+ - BASIC produced by LABORTECH guarantees reliable testing. It helps you to increase the productivity and quality of testing in your test rooms and test laboratories by using different modules for individual test standards.



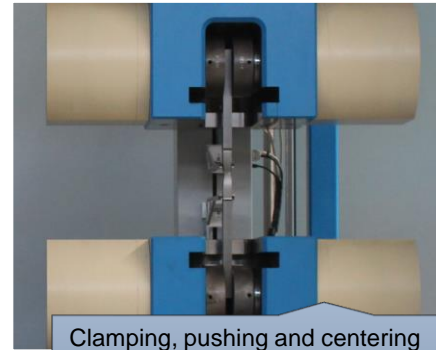
Create your own machine configuration!

With our range of accessories, you can try everything...

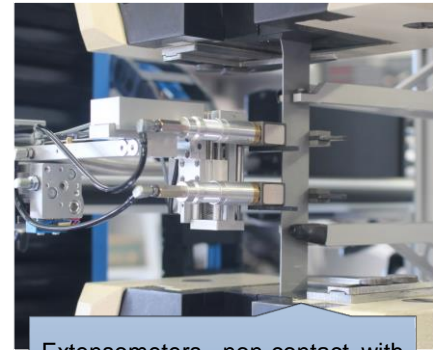
A large assortment of various options and accessories, including software, allows you to configure the machine exactly according to your ideas, technical requirements and standards. All you have to do is fill in [HERE](#) a simple form and we will send you a quote immediately. We offer both standard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



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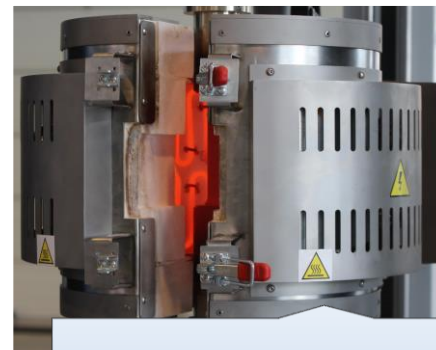
Clamping, pushing and centering jigs. Selection according to nominal strength, surface, frequency of testing, standard etc.



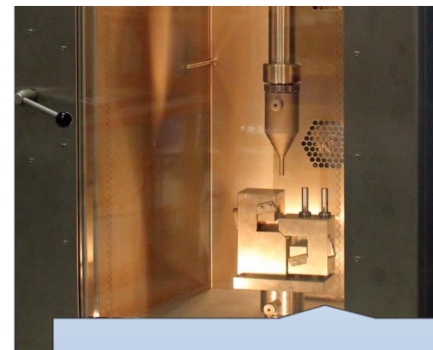
Extensometers - non-contact, with limited deformation, up to complete deformation.



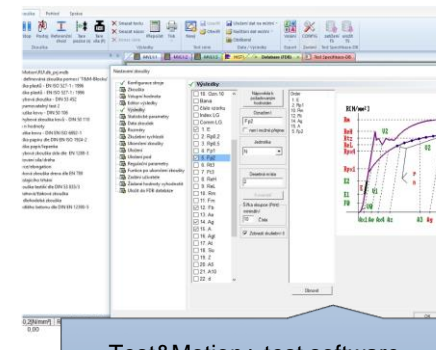
HAS - hydraulic aggregates designed for static tests with integrated diagnostics HALT 16 - Simatic.



High-temperature furnaces up to temperatures of 1600°C.



Temperature chambers ranging from -196°C to +350°C.



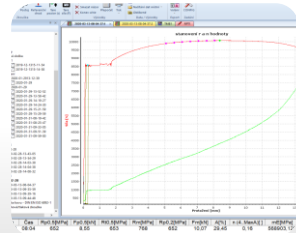
Test&Motion+ test software supplied by LABORTECH with various test modules.



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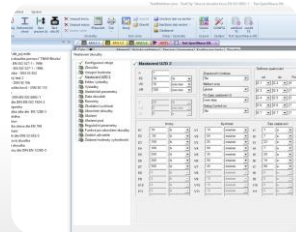
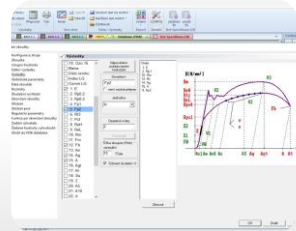
Software Test&Motion+

Intuitive tensile and compression testing software you'll love...



Features of the software Test&Motion+ – BASIC

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



- Unlimited number of test methods.
- Modular system of libraries designed for standardized tests - to be selected for activation.
- Evaluation of optional parameters: maximum force, strength, elongation, elongation, tension, 5 different reference points, etc.
- Real-time graph, possibility of individual processing after the exam
- Mass Charts, Zoom, Serial Testing
- Export data to ASCII, EXCEL, WORD, Eclipse, Diadem, Q-DAS,
- Clamping length adjustment for each method
- Display of multiple variables on the x-axes
- Online display of up to 6 graphs with any values in the x, y axis
- Control feed rate depending on stretch, force, tension, elongation, etc.
- Software control of hydraulic and pneumatic jaws, temperature, automatic extensometer
- Receiving sample dimensions from peripherals
- Data collection from analog and digital external gauges
- Setting user rights, operator login
- Customizing test results
- Automatic saving of results according to the selected tree, data

Controller x DISP3

s F e

↑

↑

STOP

↓

↓

On Off

DPOT Pos. DPOT Speed

Čas 0,0 s

Síla 0,00 N

Napětí 0,0 MPa

Tažnost 0,00 %

Protažení 0,000 mm

Pos. 0,00 mm

1. Požadovaná hodnota max

2. Požadovaná hodnota min

3. Střední hodnota

4. Standardní odchyłka

5. Variance

6. Variační koeficient

7. Medián

8. Rel.rozsah 95%

9. Rel.rozsah 99%

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

Sprache/Language

první jazyk	druhý
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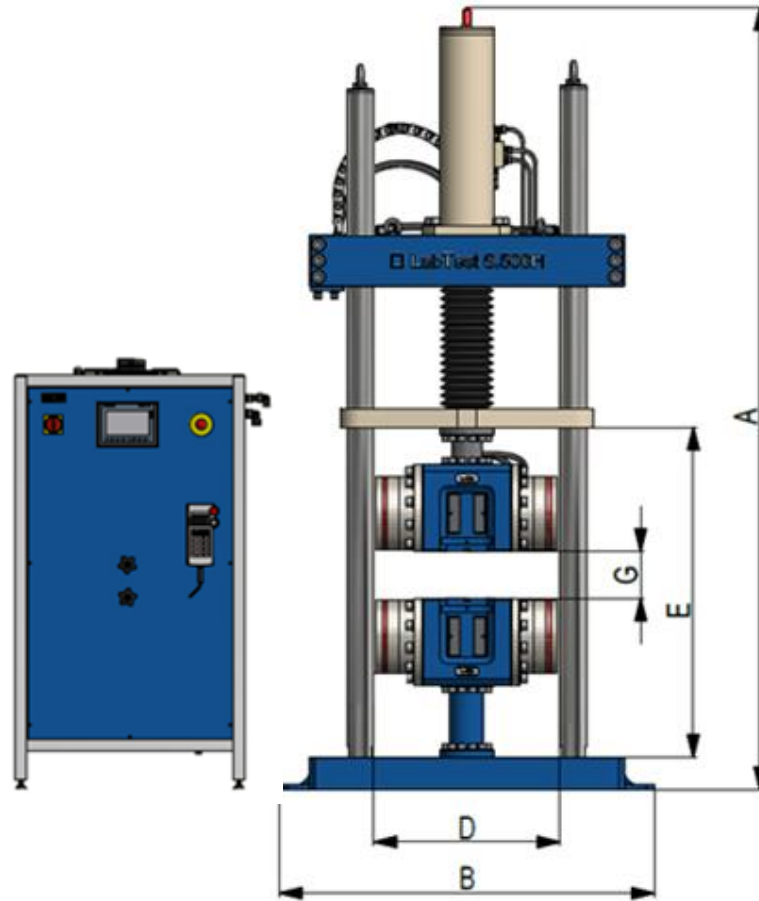
7 x <ALT> -> Úpravy

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Expandable accessories

- Extension of the ER machine - +500 or +1000 mm (according to the customer's wishes)
- Hydraulic movement of the HCD crossbar, hydraulic clamping of the HC crossbar
- Modules for hydraulic jaws – wedge-shaped, with side pressure - see [Catalogue sheet](#)
- Different types of hydraulic aggregates HAS or HAS-G – see [Catalogue sheet](#)

H.1 series – with adjustable crossbar

Ratings	Units	6.200H.1	6.300H.1	6.500H.1
Product code		1.08010117	1.08010317	1.08010517
Maximum load	kN	200	300	500
Rigidity of the machine at maximum force*	kN/mm	640	620	640
Max. test speed**	mm/min	620	410	520
Speed control precision	%	±0,05	±0,05	±0,05
Measurement accuracy				
Accuracy class 1 – measurement from..	kN	0,6	0,9	1,5
Accuracy class 0.5 – measurement from..	kN	2	3	5
Displacement sensor resolution	µm	0,1	0,1	0,1
Positioning accuracy	mm	± 0,01	± 0,01	± 0,01
Dimensions and weight of the machine				
Machine height - A	mm	2271	2300	2742
Machine height - B	mm	920	920	1390
Depth of the machine - C	mm	623	623	623
Height of the workspace - E	mm	0 to 1120	0 to 1250	0 to 1464
Width of the workspace - D	mm	620	620	670
Piston stroke - G	mm	500	500	500
Machine weight*	kg	1380	1590	1840
Environmental conditions				
Temperature of the working environment	°C	+10 ... +35	+10 ... +35	+10 ... +35
Storage temperature	°C	-25 ... +55	-25 ... +55	-25 ... +55
Humidity of the working environment	%	<90	<90	<90
Electrical connection				
Supply voltage/frequency	V/Hz	400 / 50-60	400 / 50-60	400 / 50-60
Number of phases		3Ph/N/E	3Ph/N/E	3Ph/N/E
Wattage*	kVA	4	4	8,5
Color kombination	RAL	1015, 5015	1015, 5015	1015, 5015

Technical changes reserved during development, machine parameters at room temperature
* without jaws and sensor **standard HA