

From development to  
implementation



Czech manufacturer of materials testing equipment and automation



Static servo - hydraulic  
testing machines

**H.1 series – LabTest 6.200 – 500**

with adjustable crossbar

from development to  
implementation

**Labor Tech**<sup>®</sup>

Production of materials testing  
equipment and automation

## Static servo - hydraulic testing machines

**Safe, reliable and precise with high rigidity and repeatability...**

LABORTECH is a very strong player in the world in the production of static hydraulic testing machines designed for all areas of use. These are quality controls, research and development projects, AUTOMOTIVE industry and serial testing, etc .. We have a portfolio of universal testing machines for tensile, compressive, bending, shear and torsional tests of samples and whole products, precision test presses or tensile testing machines. modular design tests. 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. Intuitive and trouble-free use of Test & Motion + test software and DYNPACK guarantees you reliable and accurate testing.



*Every small detail matters...*

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implementation



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## Key features of H.1 series

A first-class product with a fixed working space, but great possibilities



The robust vertical stand design with adjustable crossbar has high rigidity, mechanical resistance and durability, **guaranteeing 100% repeatability of results**. The adjustment of the **crossbar** can be ensured **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.



The comfort of the machine operator is at a very high level thanks to the RMCi remote control with LCD display, which has independent control of the machine, machine movement control, jaws, extensometer, traverse feed, test start and especially the 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. Resolution level of analog signals  $\pm 250,000$  parts (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



Based on their 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 working in accordance with the new safety functions according to EN ISO 13850-SIL 1 / PL.



Each servo-hydraulic test series H.1 includes a compact hydraulic unit of the HAS series operating with a maximum constant pressure of 350 bar. Monitoring of all HA states is performed by the HALT 18 unit with PLC Simatic and LCD display. The noise protection cover in the HA base guarantees a noise level of less than 62 dB.



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.



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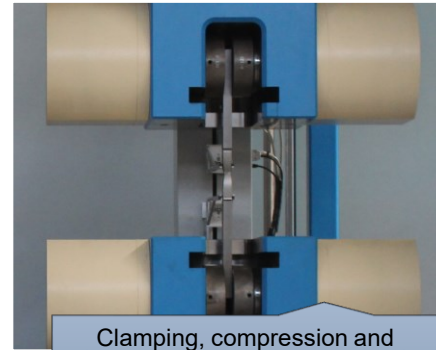
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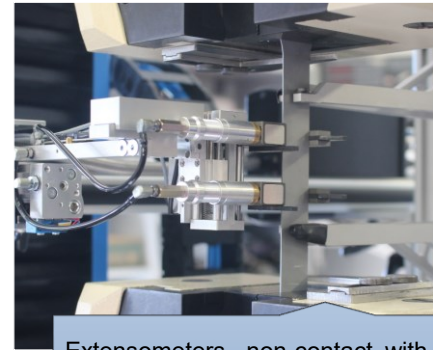
# Create your own machine configuration!

## Test everything with our wide range of accessories...

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



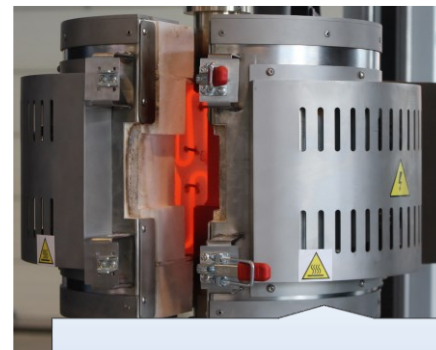
Clamping, compression and centering fixtures. Selection according to nominal load, surface, test frequency, standard, etc.



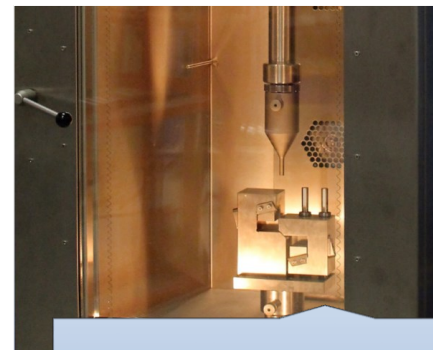
Extensometers - non-contact, with limited deformation, to complete deformation



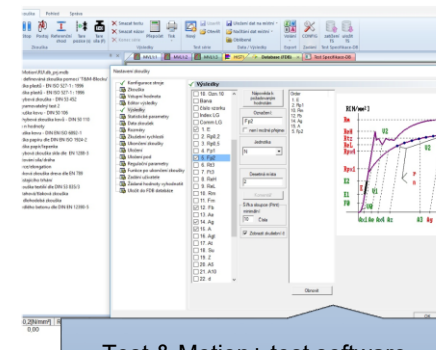
HAS - hydraulic aggregates designed for static tests with integrated diagnostics HALT 18 - Simatic



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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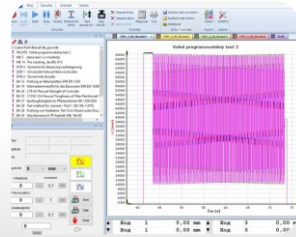
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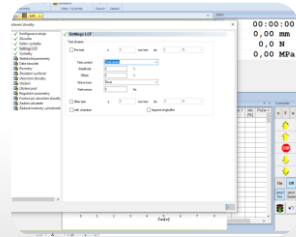
## Software Test&Motion+

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

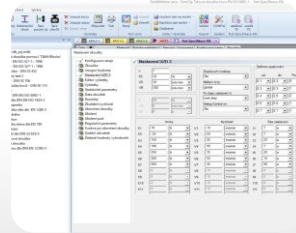


### Test&Motion+ – BASIC software features

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.



- 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)

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

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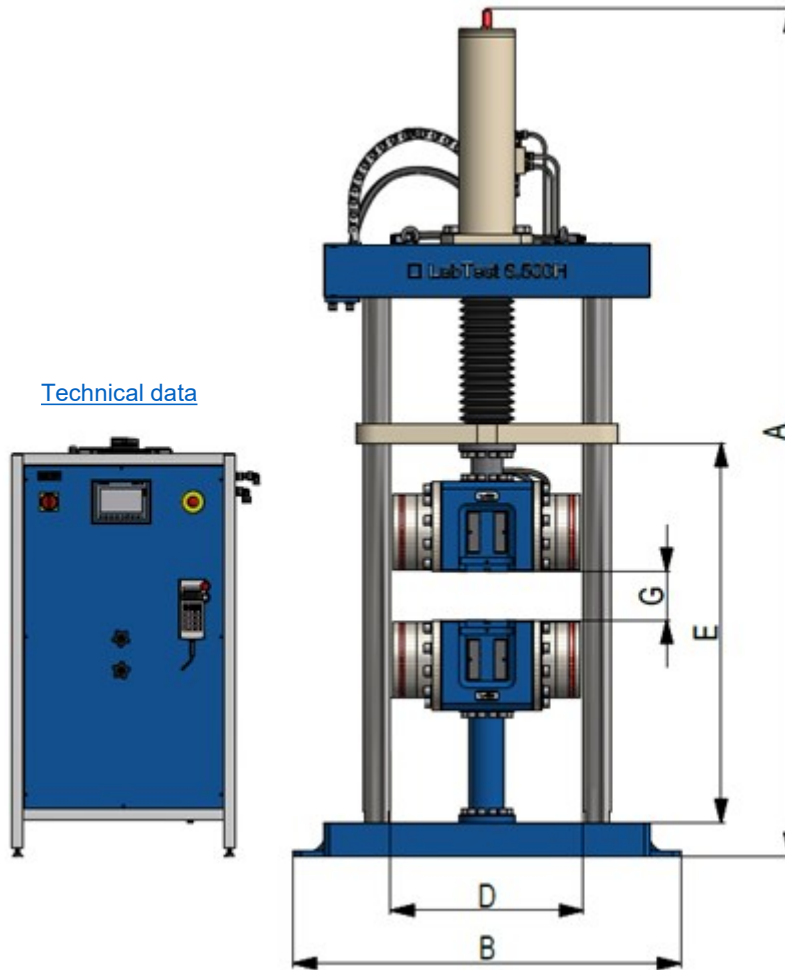
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[Technical data](#)



**Extended accessories:**

ER machine extension - +500 mm or +1000 mm (according to customer's wishes)

Hydraulic movement of the HCD crossbar, hydraulic clamping of the HC cross crossbar

Modules for hydraulic grips – wedge grips, grips with side pressure – [catalog list](#)

Different types of hydraulic aggregates HAS or HAS-G – [catalog list](#)

## H.1 series – with adjustable crossbar

Technical data	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 max. load*	kN/mm	640	620	640
Max. test speed**	mm/min	620	410	520
Speed control accuracy	%	±0,05	±0,05	±0,05
<b>Measurement accuracy</b>				
Accuracy class 1 - measurement from...	kN	0,6	0,9	1,5
Accuracy class 0,5 - measurement from...	kN	2	3	5
Traction sensor resolution	µm	0,1	0,1	0,1
Positioning accuracy	mm	± 0,01	± 0,01	± 0,01
<b>Dimensions and weight of the machine</b>				
Machine height - A	mm	2271	2300	2742
Machine width - B	mm	920	920	1390
Machine depth - C	mm	623	623	623
Workspace height - E	mm	0 to 1120	0 to 1250	0 to 1464
Workspace width - D	mm	620	620	670
Piston stroke - G	mm	500	500	500
Machine weight*	kg	1380	1590	1840
<b>Environmental conditions</b>				
Working environment temperature	°C	+10 ... +35	+10 ... +35	+10 ... +35
Storage temperature	°C	-25 ... +55	-25 ... +55	-25 ... +55
Humidity of the working environment	%	<90	<90	<90
<b>Electrical connection</b>				
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
Power consumption*	kVA	4	4	8,5
Color combination	RAL	1015, 5015	1015, 5015	1015, 5015

Technical changes reserved during development; machine parameters at room temperature; \* without grips and sensors \*\* standard Hydraulic unit



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# Technical specifications H.1series

## What else you have to know...



### Security

The safety corresponds to the European safety of machines CE directives (89/392 / EEC and 91/368 / EEC - safety of machinery EN60204-1: 1992). The emergency stop function electrically interrupts the drive of the hydraulic power unit and the entire machine. All safety systems are dual-circuit and fail-safe.



### Minimum PC configuration requirements for CREEPTest software.

**PC-Standard** - Processor: min. two cores, min. 2.5 GHz, RAM: min. 4GB, Hard drive: HDD min. 500GB or SSD min. 120GB, Graphics card: integrated in the processor, network connector: min. 2x, Drive: DVD RW, keyboard, mouse, min. 2x USB 3.0, operating system: MS Windows 10 Pro

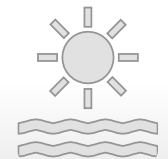
**Monitor-Standard** - LCD monitor, 1920x1080 resolution and higher



### Servis

**STANDARD servis** - Our testing machines can work 24 hours a day, 7 days a week, 365 days a year. We provide you with On-line service at all times with our qualified application and service technicians on the telephone line +420 602 527 577.

**LABWEBServis** - Telephone service using remote access provided by LABORTECH employees. Up to 10 minutes FREE, further according to the LABORTECH price list



### Environmental and operating conditions

**Power voltage** - Guaranteed reliable operation of our machines is possible with the usual deviations (supply voltage  $\pm 10\%$ , frequency  $\pm 1\%$ , ie 230V - 1f or 400V - 3f).

**Electromagnetic compatibility - (EMC)** - Our test systems are designed in accordance with the applicable EMC directives.

**Environment** - It is necessary to observe the range of working temperatures and humidity according to the manufacturer's recommendations to secure the machine against corrosion, shocks, vibrations, oscillations, etc.



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### CERTIFIKÁT

Certifikační orgán systémů managementu č. 3003  
TUV SÚD Czech s.r.o.  
pobočka, Brno, Společnost



**LABORTECH, s.r.o.**  
Rohovská 1543/138a  
CZ - 782 01 Olomouc, Katedra  
IČ: 62299020

Seznam pracovišť / Listy certifikací certifikátu je uveden v příloze tohoto certifikátu, které je jeho neoddělitelnou součástí a obsahuje 1 stranu.  
zavazlá a použitá  
systém managementu kvality v oblasti  
vývoj, výroba, prodej, servis a modernizace  
školení a laboratorní techniky

Na základě vypracování auditu, číslo č. 12.029.103  
bylo prodáváno opatření  
podle těchto norem

ČSN EN ISO 9001:2016

Tento certifikát je platný od 15.10.2019 do 15.10.2022  
Registrační číslo certifikátu: 12.029.103



**UNITED STATES DEPARTMENT OF COMMERCE**  
National Institute of Standards and Technology  
325 Broadway  
Boulder, CO 80305-3337

from development to  
implementation

all base corners  
radius 1.125"



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customer help is provided by  
the company and its subsidiaries  
with the aim of providing the best  
service. For more information, please contact us.



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## LABORTECH in the world

Where to find LABORTECH representations...



### Contact:

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