Labor Tech

Every small detail matters...

Bending testing machine

LabTest 6.10–300 H.4.01 series

The H.4.01 series testing machines from LABORTECH are ideal for performing mechanical bending tests or flexural tensile tests, which are proven methods for destructive testing of various materials, such as concrete bars, beams, concrete curbs, paving stones made of concrete or natural stone and many others. Bending tests differ according to the arrangement of the test specimens, their dimensions and loads. Test results provide information about bending force, deflection and stress value – deformation of the tested materials.

To achieve reproducible results, it is crucial to comply with the relevant test standards. All our devices meet the requirements

With our range of bending machines, you can try everything...

Key features

- Robust vertical open design with integrated single-acting or double-acting hydraulic cylinder with lateral anti-rotation lock.
- Measurement accuracy: accuracy class 1 in accordance with ČSN EN ISO 7500-1, ASTM E4.
- Possibility of independent control and control of the test press from the integrated LCD display directly in the electronics.
- Accurate and reliable measurement and control electronics of the EDCi series feature 2.5 kHz sampling. The safety functions are in accordance with the new ČSN EN ISO 13850-SIL 1/PL standards, providing a high level
of security.
- Quiet and precise hydraulic unit integrated in the machine frame with low noise and condition monitoring by the HALT 18 system – PLC SIEMENS.
- By connecting the machine to a PC via 10/100 Mbit Ethernet with integrated Test and Motion software, it enables precise setup, execution and evaluation.
- Compliance with standards and European directives for the H.4 series is documented by the EC and EU declarations of conformity

Industry

- construction, woodworking, engineering, automotive and railway industries, research institutions and schools etc.

Type of exams

- universal bending and tensile bending tests

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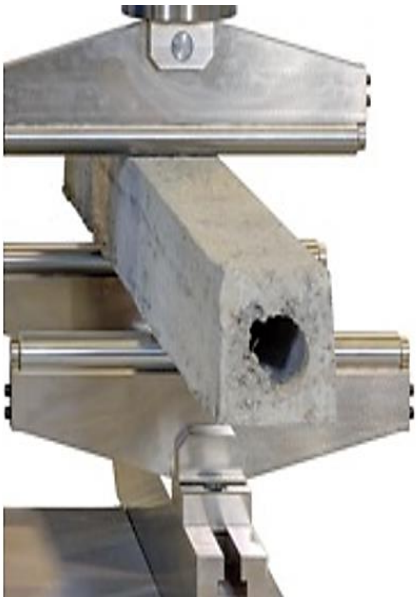
What can be tested...

- concrete bars/beams
- concrete slabs, concrete curbs and concrete paving stones
- testing of hardened concrete
- masonry mortars, grouts and adhesives, floor screeds
- natural stone paving stones
- gypsum and composite binders, gypsum mortars
- natural stone slabs, natural stone curbs
- Testing according to standards: ČSN EN 196, ČSN EN 1015-11, ASTM C348, ČSN EN 12808-3, ČSN EN 13813, ČSN EN 13892-3, ČSN EN 13279-2, ČSN EN 13454-2, ČSN EN 12390-5, ČSN EN 1339, ČSN EN 1343, EN 1344, ČSN EN 1338, EN 1340 etc.

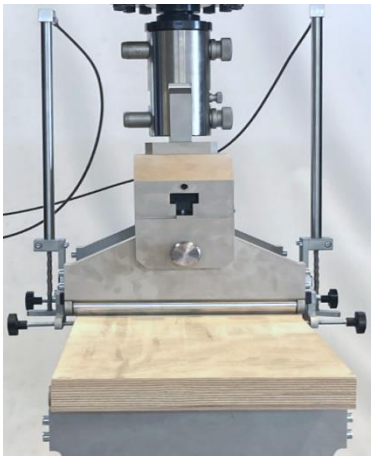
Related products

Standard test fixtures according to



- bending jigs for palisades testing according to ČSN EN 12390
- crimping dies for curbs according to EN 1340
- 3-point load fixture
- 4-point load fixture
- strength splitting device
- tensile according to EN 1338, etc.
- preparations for determining the tensile strength of hardened mortars according to ČSN EN 1015-11
- jigs for testing hardened concrete in tensile bending according to ČSN EN 12390-5 etc.

Accessories on the machine

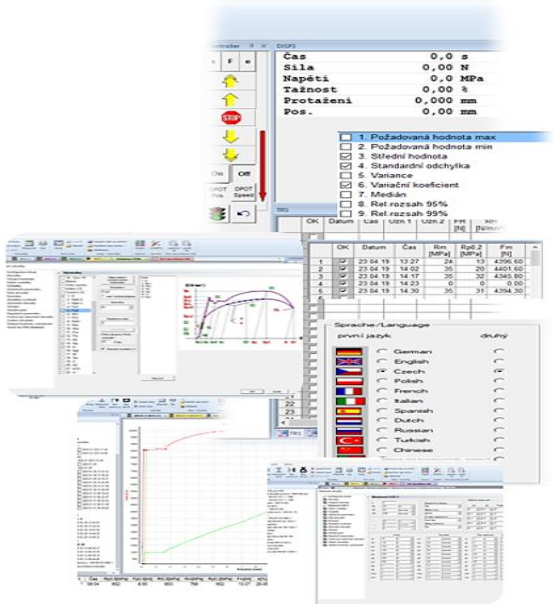


- single-acting or double-acting cylinders
- distance measurement including position loop control
- measuring probes for measuring the E module
- supplementation of HA with a system for long-term tests

Software Test&Motion+

Intuitivní a spolehlivý software

- Unlimited number of test methods, modular system of libraries designed for standardized tests, easy orientation in pre-selected definitions with visualization jigs – mandrels, clamps, settling frames, etc.
- Evaluation of optional parameters: maximum force, strength, elongation, elongation, tension, 5 different reference points depending on the selected test module etc.
- Real-time graph, possibility of individual processing after the test, mass graphs, zoom, serial testing...
- Receiving sample dimensions from peripheral devices – slider, micrometer
- Editable sample types and test standards including modification
- Digital display of all current values
- Storage of measured data in a database with the possibility of filtering
- Statistical evaluation of data and graphs, extensive selection of statistical methods
- Accurate information about machine status and error messages
- Multilingual version (CZ, EN, POL, RU, ESP etc.)
- Print the report in PDF format
- Export data to CSV – BASIS, or to MY SQL and MS SQL
- Setting user rights, operator login etc.



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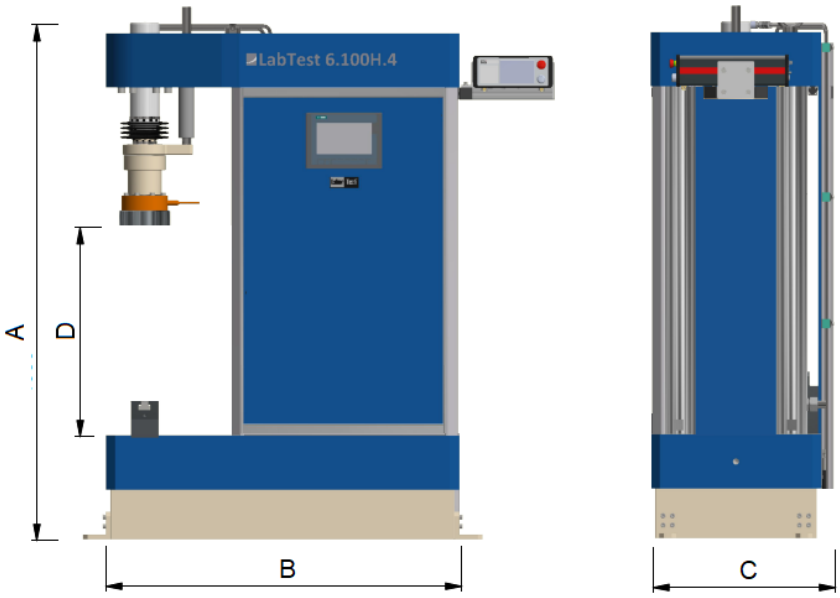
Specification

Ratings	Units	LabTest 6.10 H.4.01	LabTest 6.30 H.4.01	LabTest 6.100 H.4.01	LabTest 6.200 H.4.01	LabTest 6.300 H.4.01
Product code		1.08044720	1.08044820	1.08044920	1.08044502	1.08044512
Compressive bending force	kN	10	30	100	200	300
Number of columns		4	4	4	4	4
Cylinder stroke	mm	100 – standard (possibility of increasing the stroke up to 500 mm) – depending on the type of jig				
Measuring range	kN	0,030 to 10	0,09 to 30	0,3 to 100	0,6 to 200	0,9 to 300
Working hydraulic pressure	bar	350				
Min. rigidity of the machine	kN/mm	3820≥				
Hardness of abutments of bending fixtures	HRC	53 to 55				
Machine weight	kg	1050	1160	1490	1680	1920
Dimensions – A x B*	mm	1410x1140	11410x1140	1722x1140	1722x1140	1722x1140
Dimensions – C x D	mm	550x650	550x650	550x650	550x650	550x650
Environmental conditions						
Temperature of the working environment	°C	+10 ... +35				
Storage Temperature	°C	-25 ... +55				
Humidity of the working environment	%	<90				
Electrical connection						
Supply Voltage/Frequency	V/Hz	3x400V/50-60				
Number of phases		3				
Machine power consumption	kVA	1,5				
Other parameters						
Color combination	RAL	1015, 5015				
Interface to PC		USB, Ethernet				
Speed of data communication with PC	kHz	10				
Standard effective tensile/compressive resolution	segment	± 250000				
E-Stop by		EN ISO 13850 - SIL 1 / PL c with monitoring				

* With a piston stroke of 100 mm



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