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Hydraulic Testing Machines Series

LabTest 6.1000–1500 H.2-S

Our H.2 series testing machines up to 1500 kN are ideal for performing mechanical tensile, compressive and bending tests of steel samples, wooden beams or whole products. Depending on the needs, these machines can be used not only for the given tests, but also for other specific tests. Our devices have a wide range of control options, from simple to sophisticated software-controlled interfaces, depending on the application and degree of automation. The basic equipment of the testing machine includes a central quiet and economical hydraulic unit of the HAS-SLOW series.

With our range of H.2 series testing machines, you can test everything...

Key features

- Robust vertical four-column pedestal design with integrated double-acting hydraulic cylinder, integrated length sensor and proportional valve.
- Measurement accuracy: accuracy class 1 in accordance with 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.
- The precise and reliable measuring and control electronics of the EDCi series have 2.5 kHz sampling. The safety functions are in accordance with the new EN ISO 13850-SIL 1/PL standards, providing a high level of security.
- By connecting the machine to a PC via Ethernet 10/100 Mbit with integrated Test and Motion software , it enables precise setup, execution and evaluation of the test.
- Quiet and precise hydraulic unit of the HAS-SLOW series with low noise, hybrid drive and condition monitoring system HALT 25L – PLC SIEMENS.
- Compliance with standards and European directives for the H.2 series is documented by the EC and EU declaration of conformity.

Informational image

Industry

engineering, metallurgical and automotive industries, research institutions, universities and schools, etc.

Type of tests

- Universal tensile, compression, and bending tests

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Key features and benefits of the H.2-S series

We use new technologies and emphasize safety...

Trial frames

The LabTest test frame is designed for maximum robustness and accuracy, ensuring reliable performance in a wide range of test applications. Its high rigidity and precise piston rod guide system guarantee absolute coaxiality and high static and dynamic load capacity. A hydraulic cylinder on the upper crossbar with an integrated length sensor and a proportional valve is able to control the test in both the power and position loops. The force sensor is located at the bottom of the test frame. The frame uses 4 high-strength guide rods.

Force sensors

In our H.2 series testing machines, we use force sensors from renowned manufacturers, which can be calibrated in accordance with ČSN EN ISO 7500-1 and ASTM E4-21 standards. All force transducers have several key features in common: tensile and compressive measurement, high accuracy – accuracy class 0.02 to 0.05, extreme overload capacity of up to 150% of the nominal force without breaking, mechanical resistance, fatigue strength and resistance to transverse tensile and compressive forces. Each force transducer is equipped with an EEPROM that allows automatic identification of the load cell, storage of calibration constants and linearization at multiple points for tension and compression.

Small and powerful hydraulic unit

Every hydraulic testing machine of the H.2 series includes a compact hydraulic unit of the HAS-SLOW series with hybrid hydraulic pump control. Monitoring of the condition of the hydraulic unit is performed by the HALT-25 DIAGNOSTIC unit with a SIMATIC PLC and an LCD display. The hydraulic unit is located on spring-loaded legs, which does not transmit vibrations to the floor. Each hydraulic unit of the HAS-LOW series can be expanded with various modules such as cooling for long-term tests, a hydraulic jaw control module depending on the force, etc.

Measuring and control electronics

LabTest testing machines are equipped with powerful measuring and control electronics that ensure precise control of the tests. Two variants are available: EDCi20x for static applications with a maximum test frequency of 5 Hz and a data communication rate of 2.5 kHz. It has 3 external slots (expandable to 16) and an effective tensile/compression resolution of ±1,000,000 pieces. The electronics support automatic sensor identification, tension/compression linearization, and zero force correction. The PC interface includes USB 3.0 and Ethernet 10/100 Mbit. The electronics meet CE standards and include ECO

Remote control of the machine

The remote control of LabTest testing machines ensures high comfort and flexibility in the control of test processes. We offer a variety of actuator variants, including RMCi6, RMCi7, RMCi10 models. All controllers are designed with ergonomics in mind according to the ČSN EN 614-1+A1 standard, which ensures easy and comfortable use. Users can set any speed and perform test crossbar stepping directly on the controller. This approach increases the flexibility and efficiency of testing, while at the same time paying attention to ergonomics and operator comfort.

Touch monitor as part of the machine

LabTest L-series testing machines are equipped with integrated touch monitors that are part of the machine. The monitors are placed on a special hinge or on the HA, allowing for easy adjustment in both horizontal and vertical positions. The monitors run Test&Motion+ software with a virtual machine controller, which replaces the need for external RMCi controllers. This innovation ensures more comfortable operation and increases user comfort.

Test&Motion+ Testing Software

It is included with every LabTest testing machine and is designed to increase productivity and quality testing. This intuitive software allows tests to be performed efficiently and accurately with a customizable environment for measuring the mechanical properties of materials. The user-friendly interface on the LCD touchscreens makes operation easy. It supports international standards (EN, ISO, DIN, ASTM, GOST) and allows the creation and management of test methods for different types of tests. It provides instant and accurate results, facilitates integration with automation systems, and offers easy export

Testing accessories

LabTest testing machines are designed with flexibility and adaptability in mind, allowing for easy integration of different types of accessories. The most commonly used include VIDEO extensometers for non-contact measurement of deformations, temperature chambers and high-temperature furnaces for metal testing according to the ČSN EN ISO 6892-2 standard. These components allow tests to be carried out at various temperatures, including extremely high. Protective safety covers, designed in accordance with the EN ISO 14120 standard, ensure a safe working environment and operator protection.

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Specification of testing machines LabTest 6.1000 – 1500H.2-S

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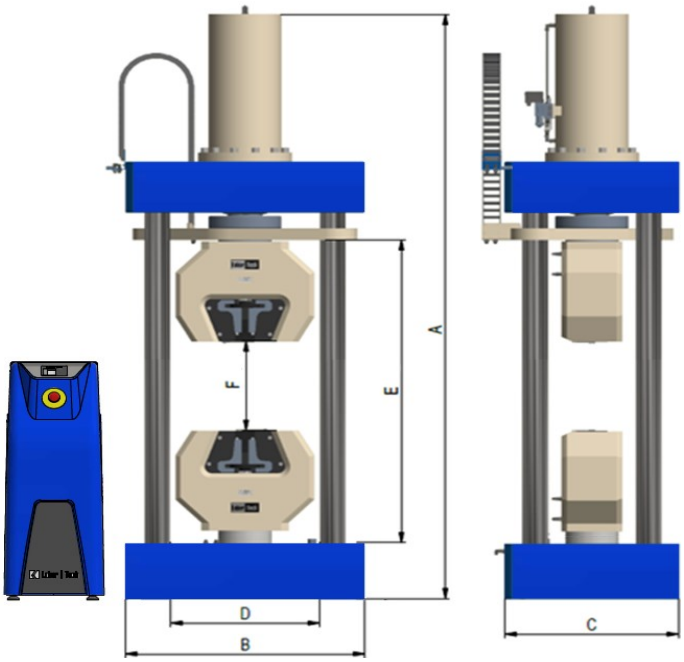
Ratings	Units	LabTest 6.1000H.2-S	LabTest 6.1200H.2-S	LabTest 6.1500H.2-S
Product code		1.08020225	1.08020425	1.08020625
Test force	kN	1000	1200	1500
Machine configuration		Four-column design		
Measurement accuracy		Better than +/- 0.5% read down to 1/1000th of load cell capacity		
Workspace				
Width of the working area (D)	mm	460	460	460
Test area height - lower (F)	mm	600	600	600
Test frame				
Machine rigidity	kN/mm	3140	3135	3030
Machine height (A)	mm	3267	3267	3587
Machine width (B)	mm	1460	1460	1460
Machine depth (C)	mm	900	900	900
Hydraulic drive				
Crossbar speed	mm/min	125	125	125
Precision speed control	%	+/- 0,1	+/- 0,1	+/- 0,1
Position repeatability	µm	±1.5	±1.5	±1.5
Supply voltage/frequency	V/Hz	400/50-60/3 phase		
Machine power consumption	Kva	3	3	3
Other parameters				
Base machine weight without HA...	Kg	5680	5680	5930
Color combination	RAL	1015, 5015, 9005		
Interface to PC[5]		USB, Ethernet		
Environmental conditions				
Working Environment Temperature	°C	+10 ... +35		
Humidity of the working environment	%	<90		

Machine dimensions and specifications are for information purposes only.



Informative image

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The elements that characterize us...

We offer everything from development to implementation and listen to your needs...

Warranty and post-warranty service

From the moment our machines are delivered, our commitment does not end. We pride ourselves on standing behind our products and customers even after they leave our company. In order to ensure maximum satisfaction and peace of mind with our devices, we provide a complete online warranty and post-warranty service. Thanks to our dedicated team of experts, we are here to provide you with the best possible support throughout the entire lifecycle of our products. With our online warranty and post-warranty service, you are safe, aware of our support whenever you need it.

Ecological approach

We are proud to be a company that not only develops and manufactures quality testing machines and equipment, but also takes the environment seriously. For us, ecology is not just a phrase, but an essential aspect of our business. We are committed to minimal environmental impact and sustainable working practices. Our commitment to the environment does not end with the possession of the ISO 14001:2016 certificate. We believe that every step towards sustainability is crucial for the future of our planet.

Simple operation

In the company, our company emphasizes quality training and training for the operation of our machines. We believe that expertise and ease of use are key factors in achieving optimal results and customer satisfaction. When developing our devices, we focus not only on performance and innovation, but also on ease of use. This allows for quick adaptation and efficient work even for less experienced users. We are here to ensure that our technologies are not only powerful, but also easy to use for all users.

Reliability, accuracy and repeatability of measurements

With LabTest test machines, accuracy and repeatability of force and displacement measurements are our top priority. We have combined these key aspects with high dynamics of electronics to guarantee a more affordable and efficient way to set up our devices. Thanks to the innovative approach to electronics in our testing machines, we have achieved excellent accuracy and repeatability in the testing process. The reliability of our equipment is important not only for research and development, but also for industrial and testing applications.

Versatility and versatility

Our LabTest testing machines have a double advantage: versatility and intuitive operation, which brings efficiency during the tests themselves. By combining our high-quality testing machines with highly functional accessories, we offer versatility for a wide range of testing needs. This flexibility allows our customers to perform different types of tests and measurements with one device, which is an economic and practical benefit. Thanks to these features, you can rely on precise results and trouble-free operation in everyday practice.

Safety at the highest level

We strongly promote safety at the highest level in accordance with the latest directives 2006/42/EC and 2023/1230 and industry standards such as IEC 60947. Every product we create is the result of many years of experience, research and experimentation in the field of mechanical testing of materials. Our compliance with standards is documented by the EC and EU Declaration of Conformity, which is why we leave nothing to chance.

Mechanical resistance and maintenance-free operation

When developing products, we emphasize that LabTest machines have robustness, rigidity, long service life, mechanical resistance and maintenance-free operation – these are our key priorities. Our offer includes professional engineering and consulting services, which harmoniously blend in the design of systems and the implementation of the tests themselves.

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