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Electromechanical testing machines series

LabTest 6.10 - 6.30 E.2

The test frames of the LabTest E.2 series electromechanical testing machines with a capacity of up to 30 kN are ideal for static tests in tension, compression, bending and torsion with continuous, static and low-cycle loading up to 2 Hz.

Configurability and flexibility are the main advantages of this series. There are at least three basic lengths of test spaces for each type and at least three basic widths of working spaces. The machines are available in both benchtop and pedestal versions with integrated or external measuring and control electronics. For maximum flexibility, one or optionally two test/test areas with full load (not included as standard) can be used. For testing materials under various conditions, LabTest E.2 testing machines can be equipped with a temperature chamber, high-temperature furnace, extensometers, pneumatic or hydraulic jaws, etc., which allow tests to be performed under both standard and specific conditions. This fully digital test system with high precision includes automated computer control of test methods, which not only simplifies operation, but also greatly improves work efficiency.

Safety and reliability are ensured by the mechanical and electronic protection of the test frame against overload, run-over and impact, which contributes to the long service life of the device. The LabTest E.2 series testing machines are thus the ideal tool for reliable and precise material testing in various industrial applications.

Versatility, accuracy, repeatability and performance are our priorities...



Industry

engineering, plastics, construction, automotive, research institutions and schools, etc.

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Key features and benefits of the E.2 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 crossbeam guidance system guarantee absolute coaxiality and high static and dynamic load capacity, including resistance to off-axis loads. The frame uses a linear guide with a profile rail with a hardness of 300 HV and a carriage with high preloading. The vertical movement of the crossbar is controlled by ball screws, ensuring accurate and repeatable position during each test. The integrated lubrication system contributes to a long service life and reliable operation.



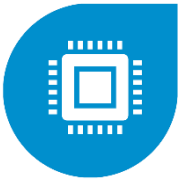
Force sensors

In our LabTest testing machines, we use LTx Force force sensors of our own production as well as 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 300% 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



Powerful and precise AC servo drive

LabTest testing machines are equipped with powerful, dynamic and maintenance-free AC servo drives, which provide exceptional accuracy and reliability during testing. These drives ensure consistent speed even at extremely low values, down to 0.0005 mm/min, which is essential for performing high-precision tests. With a feedback encoder resolution of up to 2,097,152 pulses per revolution, these servo drives provide exceptional positioning accuracy and motion stability even at very low speeds, ensuring a fast and accurate response to changes during testing. The servo drive is optimized so that the return rate exceeds the standard test speed by at least 50%, which significantly reduces the time required for repeated tests.



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. EDCi70x for static and dynamic applications with a maximum frequency of 300 Hz and a communication speed of 10 kHz. It offers 8 external slots (expandable to 16) and a standard resolution of ±250,000 pieces. Both variants support automatic sensor identification, linearization for tension/compression, and zero-force correction. The PC interface includes USB 3.0 and Ethernet 10/100 Mbit. The electronics meet CE standards and include ECO mode and E-Stop functions



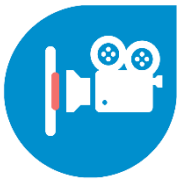
Remote control of the machine

The remote control of LabTest testing machines ensures high comfort and flexibility in the control of test processes. We offer a variety of controller options, including the RMCi6, RMCi7, RMCi10, and wireless LTWO 23. All controllers are designed with ergonomics in mind according to the ČSN EN 614-1+A1 standard, which ensures easy and comfortable use. The RMCi10, the top-of-the-line version of the controller, is equipped with a touchscreen LCD that allows full test control even without connecting to a PC. 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.



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. Thanks to the possibility of expansion with a second workspace and compatibility with measuring and control electronics, LabTest machines are easily adaptable to specific testing requirements

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Specification of LabTest 6.10.1.xx – D460 mm testing machines

Ratings	Units	LabTest 6.10.1.00	LabTest 6.10.1.10	LabTest 6.10.1.20	LabTest 6.10.1.30
Product code		1.05020017	1.05020117	1.05020217	1.05020317
Test force	Cn	10	10	10	10
Machine configuration		Two-column table or stand design with internal or external electronics			
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	460
Test area height – lower (E1)	mm	510	1100	1700	2300
Test Compartment Height - Upper (E2) [1]	mm	520	1110	1710	2310
Trial frame – tabletop version					
Machine height – benchtop version (A)	mm	940	1530	2130	2730
Machine width with integrated electronics (B) – MI version – desktop version	mm	877	877	877	877
Machine width with external electronics (B) – MO[2] version	mm	1006	1006	1006	1006
Machine depth - benchtop version (C)	mm	663	663	663	663
Trial frame – rack version					
Machine height – rack version (A)	mm	1170... 1520	1760... 2110	2160–2710	2960... 3310
Machine width with integrated electronics (B) – MI version – stand version	mm	900	900	900	900
Machine width with external electronics (B) – MO[2] version	mm	1029	1029	1029	1029
Machine depth - rack version (C)		900	900	900	900
Electric drive					
Crossbar speed – min	mm/min	0,0005	0,0005	0,0005	0,0005
Crossbar speed – max[3]	mm/min	3000	3000	3000	3000
Crossbar speed – return[3]	mm/min	3000	3000	3000	3000
Precision speed control	%	+/- 0,03	+/- 0,03	+/- 0,03	+/- 0,03
Position repeatability	µm	±1,5	±1,5	±1,5	±1,5
Machine drive differentiation	nm	0,047875	0,047875	0,047875	0,047875
Cycle time	Hz	2500	2500	2500	2500
Engine type		AC servo motor with high torque thanks to special winding			
Feedback Position Measurement		21-bit absolute magnetic encoder with a resolution of min 2,097,152 imp, HIPERFACE			
Controller		Fully digital, pulse frequency 4MHz, communication interface EtherCAT, CAN open...			
Electrical connection					
Supply voltage/frequency	V / Hz	115 or 230/50-60/1 phase			
Machine power consumption	Kva	1,5	1,5	1,5	1,5
Other parameters					
The basic weight without electronics.	kg	148	164	180	204
Machine noise at V max[4]	dB	67	67	67	67
Color combination	RAL	1015, 5015			
Interface to PC[5]		USB, Ethernet			
Environmental conditions					
Working Environment Temperature	°C	+10 ... +35			
Humidity of the working environment	%	<90			

[1] The upper working space is not in the foundation of the testing machine (as, accessory)
[2] Measuring and control electronics are located on a swivel joint
[3] If a protective cover is not included in the testing machine, the return test speed is limited in accordance with EN ISO 12100 and EN ISO 14120
[4] The measurement of machine noise is in accordance with the ČSN EN ISO 3745 standard - Acoustics - Determination of sound power levels ...
[5] More information on page 12

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Specification of LabTest 6.10.1.xx – D650 mm testing machines

Ratings	Units	LabTest 6.10.1.01	LabTest 6.10.1.11	LabTest 6.10.1.21	LabTest 6.10.1.31
Product code		1.05020417	1.05020517	1.05020617	1.05020724
Test force	Cn	10	10	10	10
Machine configuration		Two-column table or stand design with internal or external electronics			
Measurement accuracy		Better than +/- 0.5% read down to 1/1000th of load cell capacity			
Workspace					
Width of the working area (D)	mm	650	650	650	650
Test area height – lower (E1)	mm	510	1100	1700	2300
Test Compartment Height - Upper (E2) [1]	mm	520	1110	1710	2310
Trial frame – tabletop version					
Machine height – benchtop version (A)	mm	940	1530	2130	2730
Machine width with integrated electronics (B) – MI version – desktop version	mm	1327	1327	1327	1327
Machine width with external electronics (B) – MO[2] version	mm	1456	1456	1456	1456
Machine depth - benchtop version (C)	mm	663	663	663	663
Trial frame – rack version					
Machine height – rack version (A)	mm	1170... 1520	1760... 2110	2160-2710	2960... 3310
Machine width with integrated electronics (B) – MI version – stand version	mm	1350	1350	1350	1350
Machine width with external electronics (B) – MO[2] version	mm	1479	1479	1479	1479
Machine depth - rack version (C)		900	900	900	900
Electric drive					
Crossbar speed – min	mm/min	0,0005	0,0005	0,0005	0,0005
Crossbar speed – max[3]	mm/min	3000	3000	3000	3000
Crossbar speed – return[3]	mm/min	3000	3000	3000	3000
Precision speed control	%	+/- 0,03	+/- 0,03	+/- 0,03	+/- 0,03
Position repeatability	µm	±1,5	±1,5	±1,5	±1,5
Machine drive differentiation	nm	0,047875	0,047875	0,047875	0,047875
Cycle time	Hz	2500	2500	2500	2500
Engine type		AC servo motor with high torque thanks to special winding			
Feedback Position Measurement		21-bit absolute magnetic encoder with a resolution of min 2,097,152 imp, HIPERFACE			
Controller		Fully digital, pulse frequency 4MHz, communication interface EtherCAT, CAN open...			
Electrical connection					
Supply voltage/frequency	V / Hz	115 or 230/50-60/1 phase			
Machine power consumption	Kva	1,5	1,5	1,5	1,5
Other parameters					
The basic weight without electronics...	kg	177	208	233	269
Machine noise at V max[4]	dB	67	67	67	67
Color combination	RAL	1015, 5015			
PC interface		USB, Ethernet			
Environmental conditions					
Working Environment Temperature	°C	+10 ... +35			
Humidity of the working environment	%	<90			

[1] The upper working space is not in the foundation of the testing machine (as, accessory)
[2] Measuring and control electronics are located on a swivel joint
[3] If a protective cover is not included in the testing machine, the return test speed is limited in accordance with EN ISO 12100 and EN ISO 14120
[4] The measurement of machine noise is in accordance with the ČSN EN ISO 3745 standard - Acoustics - Determination of sound power levels ...
[5] More information on page 12

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Specification of LabTest 6.10.1.xx – D910 mm testing machines

Ratings	Units	LabTest 6.10.1.02	LabTest 6.10.1.12
Product code		1.05020817	1.05020917
Test force	kn	10	10
Machine configuration		Two-column table or stand design with internal or external electronics	
Measurement accuracy		Better than +/- 0.5% read down to 1/1000th of load cell capacity	
Workspace			
Width of the working area (D)	mm	910	910
Test area height – lower (E1)	mm	510	1100
Test Compartment Height - Upper (E2) [1]	mm	520	1110
Trial frame – tabletop version			
Machine height – benchtop version (A)	mm	940	1530
Machine width with integrated electronics (B) – MI version – desktop version	mm	1067	1067
Machine width with external electronics (B) – MO[2] version	mm	1196	1196
Machine depth - benchtop version (C)	mm	663	663
Trial frame – rack version			
Machine height – rack version (A)	mm	1170... 1520	1760... 2110
Machine width with integrated electronics (B) – MI version – stand version	mm	1090	1090
Machine width with external electronics (B) – MO[2] version	mm	1219	1219
Machine depth - rack version (C)		900	900
Electric drive			
Crossbar speed – min	mm/min	0,0005	0,0005
Crossbar speed – max[3]	mm/min	3000	3000
Crossbar speed – return[3]	mm/min	3000	3000
Precision speed control	%	+/- 0,03	+/- 0,03
Position repeatability	µm	±1,5	±1,5
Machine drive differentiation	nm	0,047875	0,047875
Cycle time	Hz	2500	2500
Engine type		AC servo motor with high torque thanks to special winding	
Feedback Position Measurement		21-bit absolute magnetic encoder with a resolution of min 2,097,152 imp, HIPERFACE	
Controller		Fully digital, pulse frequency 4MHz, communication interface EtherCAT, CAN open...	
Electrical connection			
Supply voltage/frequency	V / Hz	115 or 230/50-60/1 phase	
Machine power consumption	Kva	1,5	1,5
Other parameters			
The basic weight without electronics...	kg	197	222
Machine noise at V max[4]	dB	67	67
Color combination	RAL	1015, 5015	
Interface to PC[5]		USB, Ethernet	
Environmental conditions			
Working Environment Temperature	°C	+10 ... +35	
Humidity of the working environment	%	<90	

[1] The upper working space is not in the foundation of the testing machine (as, accessory)
[2] Measuring and control electronics are located on a swivel joint
[3] If a protective cover is not included in the testing machine, the return test speed is limited in accordance with EN ISO 12100 and EN ISO 14120
[4] The measurement of machine noise is in accordance with the ČSN EN ISO 3745 standard - Acoustics - Determination of sound power levels ...
[5] More information on page 12

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Specification of LabTest 6.20.1.xx – D460 mm testing machines

Ratings	Units	LabTest 6.20.1.00	LabTest 6.20.1.10	LabTest 6.20.1.20	LabTest 6.20.1.30
Product code		1.05030017	1.05030117	1.05030217	1.05030317
Test force	Cn	20	20	20	20
Machine configuration		Two-column table or stand design with internal or external electronics			
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	460
Test area height – lower (E1)	mm	510	1100	1700	2300
Test Compartment Height - Upper (E2) [1]	mm	520	1110	1710	2310
Trial frame – tabletop version					
Machine height – benchtop version (A)	mm	940	1530	2130	2730
Machine width with integrated electronics (B) – MI version – desktop version	mm	877	877	877	877
Machine width with external electronics (B) – MO[2] version	mm	1006	1006	1006	1006
Machine depth - benchtop version (C)	mm	663	663	663	663
Trial frame – rack version					
Machine height – rack version (A)	mm	1170... 1520	1760... 2110	2160–2710	2960... 3310
Machine width with integrated electronics (B) – MI version – stand version	mm	900	900	900	900
Machine width with external electronics (B) – MO[2] version	mm	1029	1029	1029	1029
Machine depth - rack version (C)		900	900	900	900
Electric drive					
Crossbar speed – min	mm/min	0,0005	0,0005	0,0005	0,0005
Crossbar speed – max[3]	mm/min	2000	2000	2000	2000
Crossbar speed – return[3]	mm/min	2000	2000	2000	2000
Precision speed control	%	+/- 0,03	+/- 0,03	+/- 0,03	+/- 0,03
Position repeatability	µm	±1,5	±1,5	±1,5	±1,5
Machine drive differentiation	nm	0,047875	0,047875	0,047875	0,047875
Cycle time	Hz	2500	2500	2500	2500
Engine type		AC servo motor with high torque thanks to special winding			
Feedback Position Measurement		21-bit absolute magnetic encoder with a resolution of min 2,097,152 imp, HIPERFACE			
Controller		Fully digital, pulse frequency 4MHz, communication interface EtherCAT, CAN open...			
Electrical connection					
Supply voltage/frequency	V / Hz	115 or 230/50-60/1 phase			
Machine power consumption	Kva	1,5	1,5	1,5	1,5
Other parameters					
The basic weight without electronics...	kg	155	171	188	212
Machine noise at V max[4]	dB	67	67	67	67
Color combination	RAL	1015, 5015			
Interface to PC[5]		USB, Ethernet			
Environmental conditions					
Working Environment Temperature	°C	+10 ... +35			
Humidity of the working environment	%	<90			

[1] The upper working space is not in the foundation of the testing machine (as, accessory)
[2] Measuring and control electronics are located on a swivel joint
[3] If a protective cover is not included in the testing machine, the return test speed is limited in accordance with EN ISO 12100 and EN ISO 14120
[4] The measurement of machine noise is in accordance with the ČSN EN ISO 3745 standard - Acoustics - Determination of sound power levels ...
[5] More information on page 12

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Specification of LabTest 6.20.1.xx – D650 mm testing machines

Ratings	Units	LabTest 6.20.1.11	LabTest 6.20.1.21	LabTest 6.20.1.31
Product code		1.05030417	1.05030517	1.05030617
Test force	Cn	20	20	20
Machine configuration		Two-column table or stand design with internal or external electronics		
Measurement accuracy		Better than +/- 0.5% read down to 1/1000th of load cell capacity		
Workspace				
Width of the working area (D)	mm	650	650	650
Test area height – lower (E1)	mm	1100	1700	2300
Test Compartment Height - Upper (E2) [1]	mm	1110	1710	2310
Trial frame – tabletop version				
Machine height – benchtop version (A)	mm	1530	2130	2730
Machine width with integrated electronics (B) – MI version – desktop version	mm	1327	1327	1327
Machine width with external electronics (B) – MO[2] version	mm	1456	1456	1456
Machine depth - benchtop version (C)	mm	663	663	663
Trial frame – rack version				
Machine height – rack version (A)	mm	1760... 2110	2160–2710	2960... 3310
Machine width with integrated electronics (B) – MI version – stand version	mm	1350	1350	1350
Machine width with external electronics (B) – MO[2] version	mm	1479	1479	1479
Machine depth - rack version (C)		900	900	900
Electric drive				
Crossbar speed – min	mm/min	0,0005	0,0005	0,0005
Crossbar speed – max[3]	mm/min	2000	2000	2000
Crossbar speed – return[3]	mm/min	2000	2000	2000
Precision speed control	%	+/- 0,03	+/- 0,03	+/- 0,03
Position repeatability	µm	±1,5	±1,5	±1,5
Machine drive differentiation	nm	0,047875	0,047875	0,047875
Cycle time	Hz	2500	2500	2500
Engine type		AC servo motor with high torque thanks to special winding		
Feedback Position Measurement		21-bit absolute magnetic encoder with a resolution of min 2,097,152 imp, HIPERFACE		
Controller		Fully digital, pulse frequency 4MHz, communication interface EtherCAT, CAN open...		
Electrical connection				
Supply voltage/frequency	V / Hz	115 or 230/50 CZK		
Machine power consumption	Kva	1,5	1,5	1,5
Other parameters				
The basic weight without electronics...	kg	208	233	269
Machine noise at V max[4]	dB	67	67	67
Color combination	RAL	1015, 5015		
PC interface		USB, Ethernet		
Environmental conditions				
Working Environment Temperature	°C	+10 ... +35		
Humidity of the working environment	%	<90		

[1] The upper working space is not in the foundation of the testing machine (as, accessory)
[2] Measuring and control electronics are located on a swivel joint
[3] If a protective cover is not included in the testing machine, the return test speed is limited in accordance with EN ISO 12100 and EN ISO 14120
[4] The measurement of machine noise is in accordance with the ČSN EN ISO 3745 standard - Acoustics - Determination of sound power levels ...
[5] More information on page 12

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Specification of LabTest 6.30.1.xx – D460 mm testing machines

Ratings	Units	LabTest 6.30.1.10	LabTest 6.30.1.20	LabTest 6.30.1.30
Product code		1.05040117	1.05040217	1.05040317
Test force	kn	30	30	30
Machine configuration		Two-column table or stand design with internal or external electronics		
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 (E1)	mm	1100	1700	2300
Test Compartment Height - Upper (E2) [1]	mm	1110	1710	2310
Trial frame – tabletop version				
Machine height – benchtop version (A)	mm	1530	2130	2730
Machine width with integrated electronics (B) – MI version – desktop version	mm	877	877	877
Machine width with external electronics (B) – MO[2] version	mm	1006	1006	1006
Machine depth - benchtop version (C)	mm	663	663	663
Trial frame – rack version				
Machine height – rack version (A)	mm	1760... 2110	2160-2710	2960... 3310
Machine width with integrated electronics (B) – MI version – stand version	mm	900	900	900
Machine width with external electronics (B) – MO[2] version	mm	1029	1029	1029
Machine depth - rack version (C)		900	900	900
Electric drive				
Crossbar speed – min	mm/min	0,0005	0,0005	0,0005
Crossbar speed – max[3]	mm/min	2000	2000	2000
Crossbar speed – return[3]	mm/min	2000	2000	2000
Precision speed control	%	+/- 0,03	+/- 0,03	+/- 0,03
Position repeatability	µm	±1,5	±1,5	±1,5
Machine drive differentiation	nm	0,047875	0,047875	0,047875
Cycle time	Hz	2500	2500	2500
Engine type		AC servo motor with high torque thanks to special winding		
Feedback Position Measurement		21-bit absolute magnetic encoder with a resolution of min 2,097,152 imp, HIPERFACE		
Controller		Fully digital, pulse frequency 4MHz, communication interface EtherCAT, CAN open...		
Electrical connection				
Supply voltage/frequency	V / Hz	115 or 230/50-60/1 phase		
Machine power consumption	Kva	1,5	1,5	1,5
Other parameters				
The basic weight without electronics...	kg	195	212	228
Machine noise at V max[4]	dB	67	67	67
Color combination	RAL	1015, 5015		
Interface to PC[5]		USB, Ethernet		
Environmental conditions				
Working Environment Temperature	°C	+10 ... +35		
Humidity of the working environment	%	<90		

[1] The upper working space is not in the foundation of the testing machine (as, accessory)
[2] Measuring and control electronics are located on a swivel joint
[3] If a protective cover is not included in the testing machine, the return test speed is limited in accordance with EN ISO 12100 and EN ISO 14120
[4] The measurement of machine noise is in accordance with the ČSN EN ISO 3745 standard - Acoustics - Determination of sound power levels ...
[5] More information on page 12

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Specification of LabTest 6.30.1.xx – D650 mm testing machines

Ratings	Units	LabTest 6.30.1.11	LabTest 6.30.1.21	LabTest 6.30.1.31
Product code		1.05040417	1.05040517	1.05040617
Test force	Cn	30	30	30
Machine configuration		Two-column table or stand design with internal or external electronics		
Measurement accuracy		Better than +/- 0.5% read down to 1/1000th of load cell capacity		
Workspace				
Width of the working area (D)	mm	650	650	650
Test area height – lower (E1)	mm	1100	1700	2300
Test Compartment Height - Upper (E2) [1]	mm	1110	1710	2310
Trial frame – tabletop version				
Machine height – benchtop version (A)	mm	1530	2130	2730
Machine width with integrated electronics (B) – MI version – desktop version	mm	1327	1327	1327
Machine width with external electronics (B) – MO[2] version	mm	1456	1456	1456
Machine depth - benchtop version (C)	mm	663	663	663
Trial frame – rack version				
Machine height – rack version (A)	mm	1760... 2110	2160-2710	2960... 3310
Machine width with integrated electronics (B) – MI version – stand version	mm	1350	1350	1350
Machine width with external electronics (B) – MO[2] version	mm	1479	1479	1479
Machine depth - rack version (C)		900	900	900
Electric drive				
Crossbar speed – min	mm/min	0,0005	0,0005	0,0005
Crossbar speed – max[3]	mm/min	2000	2000	2000
Crossbar speed – return[3]	mm/min	2000	2000	2000
Precision speed control	%	+/- 0,03	+/- 0,03	+/- 0,03
Position repeatability	µm	±1,5	±1,5	±1,5
Machine drive differentiation	nm	0,047875	0,047875	0,047875
Cycle time	Hz	2500	2500	2500
Engine type		AC servo motor with high torque thanks to special winding		
Feedback Position Measurement		21-bit absolute magnetic encoder with a resolution of min 2,097,152 imp, HIPERFACE		
Controller		Fully digital, pulse frequency 4MHz, communication interface EtherCAT, CAN open...		
Electrical connection				
Supply voltage/frequency	V / Hz	115 or 230/50-60/1 phase		
Machine power consumption	Kva	1,5	1,5	1,5
Other parameters				
The basic weight without electronics...	kg	212	237	253
Machine noise at V max[4]	dB	67	67	67
Color combination	RAL	1015, 5015		
PC interface		USB, Ethernet		
Environmental conditions				
Working Environment Temperature	°C	+10 ... +35		
Humidity of the working environment	%	<90		

[1] The upper working space is not in the foundation of the testing machine (as, accessory)
[2] Measuring and control electronics are located on a swivel joint
[3] If a protective cover is not included in the testing machine, the return test speed is limited in accordance with EN ISO 12100 and EN ISO 14120
[4] The measurement of machine noise is in accordance with the ČSN EN ISO 3745 standard - Acoustics - Determination of sound power levels ...
[5] More information on page 12

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Specification of testing machines LabTest 6.30.1.xx – D1350 mm

Ratings	Units	LabTest 6.30.1.12
Product code		1.05040824
Test force	Cn	30
Machine configuration		Two-column table or stand design with internal or external electronics
Measurement accuracy		Better than +/- 0.5% read down to 1/1000th of load cell capacity
Workspace		
Width of the working area (D)	mm	1350
Test area height – lower (E1)	mm	1100
Test Compartment Height - Upper (E2) [1]	mm	1110
Trial frame – rack version		
Machine height – rack version (A)	mm	1170... 1520
Machine width with integrated electronics (B) – MI version – stand version	mm	1919
Machine width with external electronics (B) – MO[2] version	mm	2045
Machine depth - rack version (C)		900
Electric drive		
Crossbar speed – min	mm/min	0,0005
Crossbar speed – max[3]	mm/min	2000
Crossbar speed – return[3]	mm/min	2000
Precision speed control	%	+/- 0,03
Position repeatability	µm	±1.5
Machine drive differentiation	Nm	0,047875
Cycle time	Hz	2500
Engine type		AC servo motor with high torque thanks to special winding
Feedback Position Measurement		21-bit absolute magnetic encoder with a resolution of min 2,097,152 imp, HIPERFACE
Controller		Fully digital, pulse frequency 4MHz, communication interface EtherCAT, CAN open...
Electrical connection		
Supply voltage/frequency	V/Hz	115 or 230/50-60/1 phase
Machine power consumption	Kva	1,5
Other parameters		
The basic weight without electronics...	kg	426
Machine noise at V max[4]	dB	67
Color combination	RAL	1015, 5015
Interface to PC[5]		USB, Ethernet
Environmental conditions		
Working Environment Temperature	°C	+10 ... +35
Humidity of the working environment	%	<90

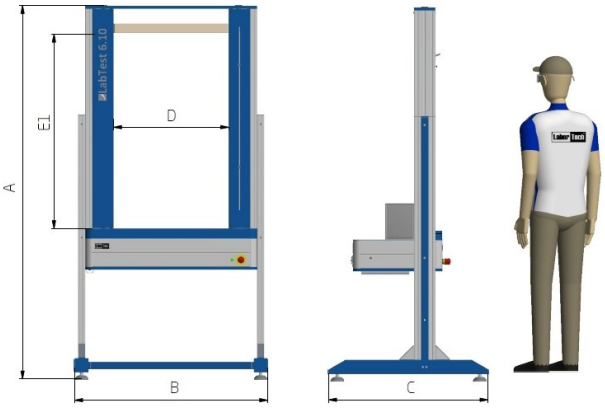
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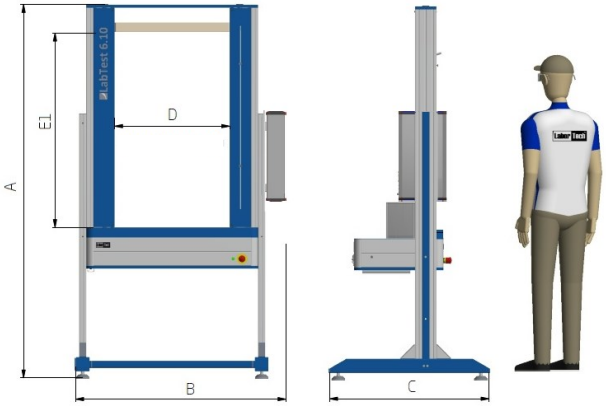
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Version types of LabTest testing machines 6.10 to 6.30.1.xx

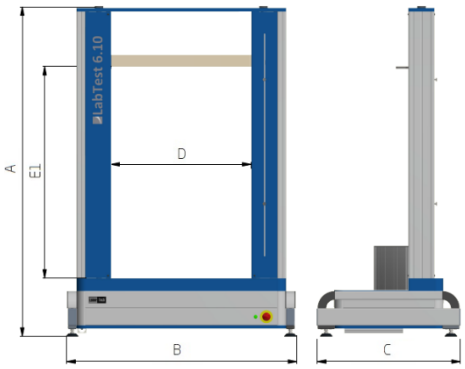
Type 6.10 to 6.30.1.xx – SV stand version
MI version – electronics in the machine
4 standard heights of test spaces



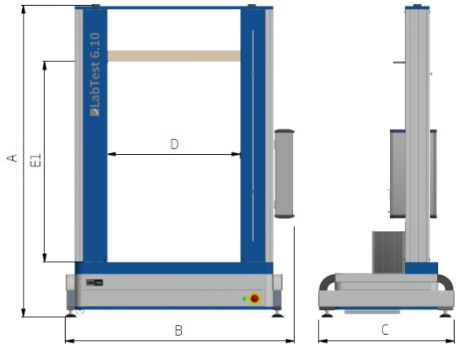
Type 6.10 to 6.30.1.xx – SV stand version
MO version – electronics separately on the machine
4 standard heights of test spaces



Type 6.10 to 6.30.1.xx – desktop version DV
MI version – electronics in the machine
4 standard heights of test spaces

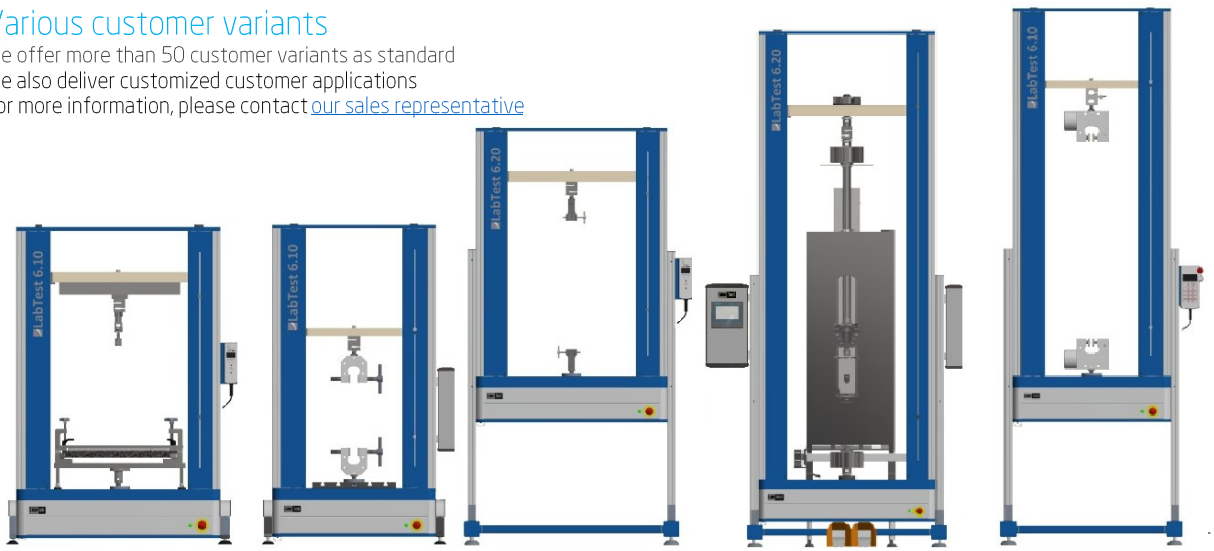


Type 6.10 to 6.30.1.xx – desktop version DV
MO version – electronics separately on the machine
4 standard heights of test spaces



Various customer variants

We offer more than 50 customer variants as standard
We also deliver customized customer applications
For more information, please contact our sales representative



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Electronics of LabTest series machines

Ratings	Units	Parameters
Electronics for static applications and low cycle fatigue		**EDCi20x (2.001030117)**
Number of external slots (expandable to 16)		3
Speed of data communication with a PC	kHz	2,5
Maximum test frequency of the machine	Hz	5
Electronics for static and dynamic applications		**EDCi70x (2.001050117)**
Number of external slots (expandable to 16)		8
Speed of data communication with a PC	kHz	10
Maximum test frequency of the machine	Hz	300
Other common parameters		
Real-time channel synchronization		YES
Bit accuracy of internal controller	bit	64
Control loop speed	kHz	2,5
Adjustable system time	µs	400/500/600... 1000
Internal processing of measured analog quantities	bit	32
Calculated Resolution – Tension/Compression	bit	21
Effective resolution in tension / compression at the	Tick marks	± 1,000,000 (100ms)
Standard resolution in tension / compression	Tick marks	± 250,000 (20ms)
Speed of reading of measured analog quantities	kHz	20
PC interface		USB 3.0, Ethernet 10/100 Mbit
Measurement accuracy class		0.5/1, depending on load cell, calibration of load cells in accordance with EN ISO 7500-1, ASTM E4-21
Linearization of tension/compression sensors		YES
Automatic sensor identification		YES
Detection and LOG of exceeding the max. force F of		YES
Zero Force Correction		YES – automatically
Possibility to connect these input channels and		iDCA – Strain Gauges Multi Analog ICs Digital ICs Analogue ± 10 V
		iCFA – LVDT and 10 V analogue ± strain gauges
		iINC – two incremental (A/B/R) or SSI interfaces
		iADA – four analog outputs and four analog inputs (+/- 10 V)
		iIO - 24 V DC IO (8 outputs, 8 inputs)
		iINCX – two incremental interfaces (A/B/R) with RS485 to MFX
Possibility to connect a remote control of the		YES
Types of remote control		RMCi6, RMCi7, RMCi10, Wireless Control LTW023
ECO mode		YES
E-Stop by		ČSN EN ISO 13850 with monitoring
CE conformity		pursuant to the Machinery Directive 2006/42/EC and 2023/1230
Electrical connection		
Supply voltage/frequency - external electronics -	V/Hz	115 or 230/50-60/1 phase
Supply voltage/frequency - internal electronics - MI	V/DC	24
Other parameters		
Basic dimensions of external electronics – MO	mm	99 x 463 x 244
Color combination of external electronics – MO	L	Alu, graphite grey
Environmental conditions		
Working Environment Temperature	°C	+10 ... +35
Humidity of the working environment	%	<90

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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.



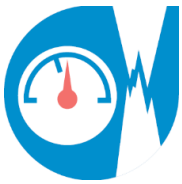
Ecological approach

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.



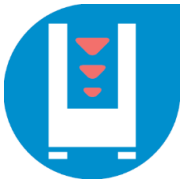
Versatility and versatility

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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