Labor Tech

Every small detail matters...

Sheet metal testing machines

ECTest 6.60 to 6.1000 series

Electrohydraulic testing machines of the EC series in table or pedestal design, which are primarily designed for measuring and testing of thermoforming sheets using the ERICHSEN method. ECTest machines feature a fully automatic test sequence and shut-off feed in case of sample disruption with a pulling force from 60 to 1000 kN. These ECTest testing machines have been developed to ensure continuous control of the production of thermoforming ferrous and non-ferrous sheets in testing and laboratory laboratories, research and development, using standardized and other established standards. LABORTECH machines are characterized by very high rigidity of the test frame, reliability and accuracy of measurements in manual and automatic mode.

We have high precision, rigidity, durability and safety

Key features

- Robust vertical bench or rack design with mechanical or hydraulic adapter sleeve made of high-strength steel.
- All components are easily accessible from the outside of the machine, and thus the tools for individual standardized and non-standardized tests can also be quickly changed.
- The cylinder head with bayonet cap and spring mechanism allows direct access to the working area of the machine to dies, die-cutting, rings, semi-finished product holders, punching tools, etc.
- The EC series testing machines are equipped with a special crack detection algorithm. This high-resolution algorithm allows individual adjustment of this criterion for individual materials and test types.
- The EC series testing machines are electro-hydraulically driven. The test itself can be controlled automatically or manually as necessary. A programmable PLC is used to control the machine functions.
- The testing machines are equipped with a digital LCD touch screen with integrated SMTest-S software to indicate the type of standard, sheet holder strength, pulling force. as well as the pull of the perforator.
- Injection of the mandrel into the sample is carried out by a precise electromechanical drive (up to 200kN) with high sensitivity.
- For sample clamping, as well as for the ejector of cups (cups), a controlled hydraulic system with the possibility of precise regulation of pressure using a servo valve is used.
- The hydraulic system is diagnosed by HALT 18. The customer has an overview of system pressures, filtration, temperature, oil level etc.
- EC machines make it easy to replace the encoded power sensor, increasing the versatility of these machines. Force sensors are unmistakable thanks to coding.
- By connecting to a PC via Ethernet 10/100 Mbit, in conjunction with the SMTest-BASIC software, it is possible to graphically monitor the actual testing process with the possibility of connecting a VIDEO extensometer.

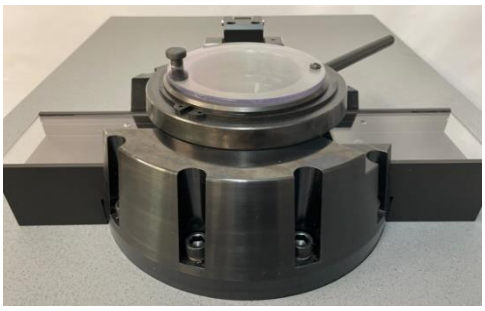
What can be tested...

Every small detail matters...

- Test of cup ČSN EN 1669
- Square cup test (40 x 40 mm)
- Hole Expansion Test - KWI Test
- Hole Expansion Test ISO 16630:2017
- Determination of limit shaping curves (FLC)
- Deep drawing test with quick-release semi-finished product holder (for ear cushions Test)
- Deep drawing test with preselected die stroke
- Deep drawing test at high temperatures up to 550 °C
- ERICHSEN excavation test in accordance with ČSN EN ISO 20482
- Test by excavation of ERICHSEN varnish and paint in accordance with ČSN EN ISO 1520
- Test of deep drawing bowl on coatings, etc.

Optional accessories

Mechanical or hydraulic closing

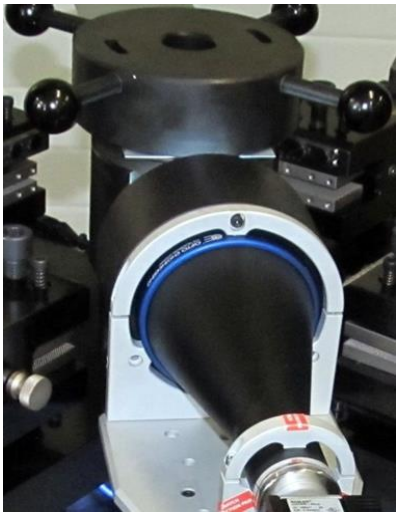


Hydraulic lifting function (opening and closing) of the test head with a high level of safety in accordance with ČSN EN ISO 12100.

High temperature tests

A special fixture with a high-temperature chamber installed on the head of the ECTest test equipment. Integrated internal temperature sensing on the sample with the possibility of setting a constant temperature up to 550 °C with an accuracy of ± 1 °C using the TC-22 controller with data output directly to the SMTest-BASIC software.

EOX camera system

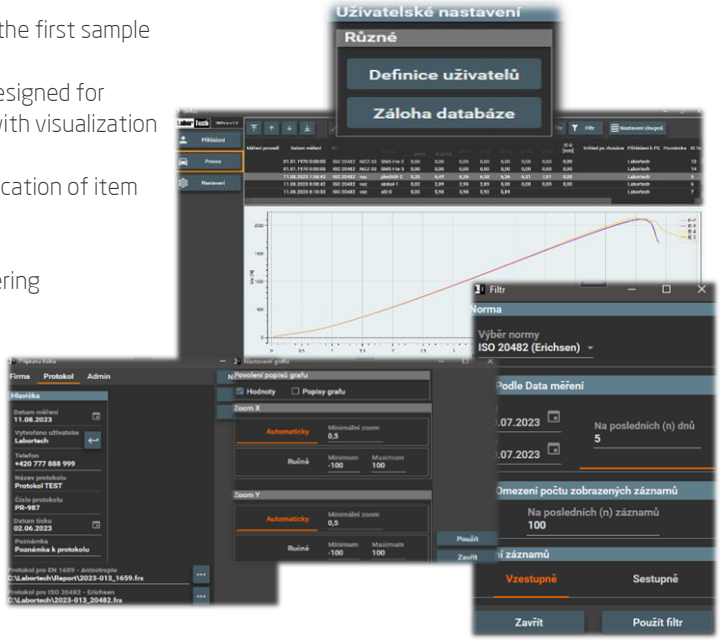


Professional advanced axial, transverse and video EOX extensometer using the latest digital image correlation technology thanks to telecentric lens. Automatic crack detection according to ISO 1663 or EN ISO 20482. The system includes

Software SMTest-BASIC

Intuitive software for formability of thermoforming sheets...

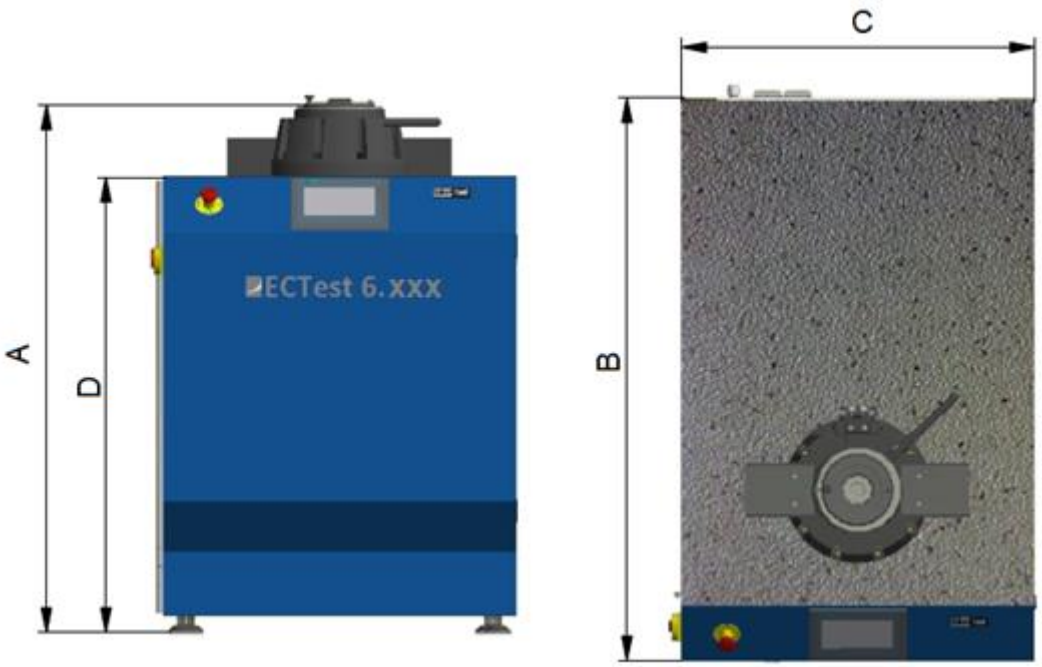
- Intelligent, intuitive and powerful software for thermoforming sheet metal measurement
- Synchronization with VIDEO Extensometer for determination of the first sample intrusion in real time
- Unlimited number of test methods, modular system of libraries designed for standardized tests, easy orientation in pre-selected definitions with visualization jigs – arbors, clamps, settling frames, etc.
- Editable types of samples and testing standards, including modification of item names
- Digital display of all current values
- Saving measured data into a database with the possibility of filtering
- Simple switching between traffic, database settings and user
- Statistical evaluation of data and graphs, extensive selection of statistical methods
- Easy definition setting according to the selected module
- Accurate information on machine status and error messages
- Torque correction according to reference samples
- Multilingual version (CZE, EN, POL, RU, ESP, etc.)
- Print the report in PDF format
- Export dat do CSV – BASIS, nebo do MY SQL a MS SQL
- Perpetual license
- Installation on any computer without using a license, etc.
- Set user rights, operator logins



Na každém detailu záleží...

Specification

Technical data	Units	ECTest 6.60/80	ECTest 6.200	ECTest 6.400	ECTest 6.1000
Product code		1.08130123	1.08130223	1.08130323	1.08130423
Compressive force	kN	60/80	200	400	1000
Holding force	kN	100	265	600	1200
Contact force	kN	0,5-30/10-100	0,5-30/10-100	2-100/20-220	5-250/50-550
Punch stroke	mm	40	80	120	150
Stroke holders	mm	39	39	39	39
Pandrel diameter – max	mm	20	50	75	100
Sample diameter	mm	110	120	170	200
Test speed	mm/min	5 až 500	5 až 500	5 až 500	5 až 250
Location Resolution	mm	0,01	0,01	0,01	0,01
Machine weight	kg	320	560	1080	1450
Size – A x B	mm	1155x1028	1155x1232	1155x1232	1155x1350
Size – C x D	mm	770x997	770x997	870x997	1270x997
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	220-240/50-60	3x400V/50-60		
Number of phases		1	3		
Machine power consumption	kVA	1,2	3,5	8,5	12,5
Other parameters					
Color combination	RAL	1015, 5015			



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