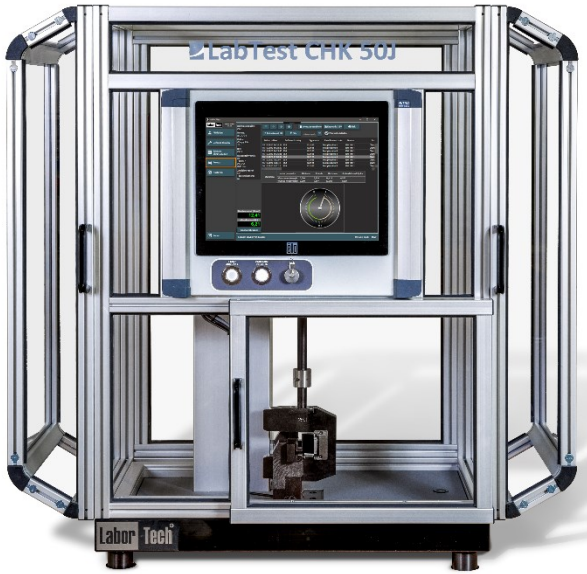
… from development to
Implementation

Labor Tech®

Czech manufacturer of materials testing equipment and automation

Pendulum impact testers

CHK.1series – LabTest CHK 50



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Production of materials testing equipment and automation

Pendulum impact testers LabTest CHK series

Reliable, accurate and with high rigidity…

The LabTest CHK pendulum impact testers series are designed to excel in their stiffness, repeatability and, above all, precision in impact determination, which is a measure of the strength of the material against impact stress, impact strength (notched toughness) of materials and the impact force of DIN, EN, ASTM, ISO , GOST standards.

n our production portfolio, you can find standard pendulum impact testers, instrumented pendulums, instrumented pendulums with adjustable initial angle, notch preparation devices, robotic workplaces, etc.

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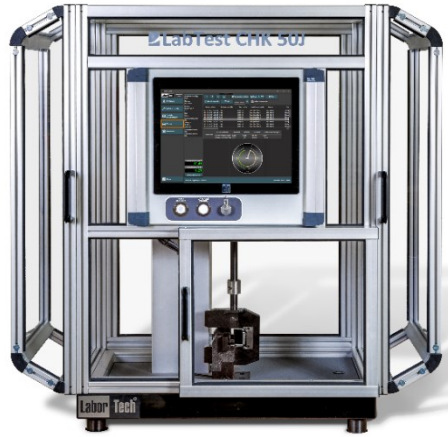
Key features of the CHK.1 series

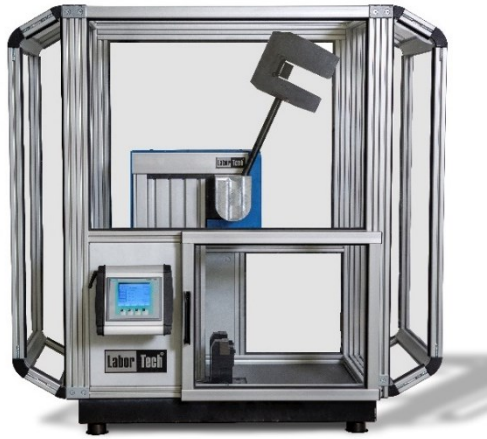
Accuracy and long life are the parameters as standard…

Pendulum impact testers LabTest CHK 50J in benchtop design are designed for impact tests. The device is used for short-term tests, which provide information on the amount of energy consumed and the behavior of materials with the possibility of setting different initial energy, speed, angle and changing temperature including instrumentation. It is possible to perform tests according to Charpy, Izod, Dynstat, Brugger, tensile impact tests according to all common EN, IS0 179, ISO 180, ISO 8256, ISO 9854, ISO 7628, ISO 148, ASTM D6110, ASTM D256, ASTM D4812, ASTM D1822, ASTM E23, DIN 53453, DIN 53753, DIN 50115 a GOST standards on Pendulum impact testers of CHK series.



Pendulum impact testers of the CHK series have a rigid base construction with 4 leveling holes. Centrally located controls for easy operation and testing. The automatic lifting of the hammer is ensured by a special magnetic gearbox with an integrated DC or AC servo motor with an electronic brake.

Pendulum impact testers are equipped with a safety cover with electronic monitoring of sudden door opening. The system is also equipped with a continuous safety check during the impact of the hammer. The test is started by a button or immediately after closing the door within 0.5 seconds. Quick exchanging of supports and pendulums ensures simple and comfortable operation for users even in demanding industrial conditions.



Based on their concept and construction, LABORTECH machines comply with all the above-mentioned EC directives on machines and equipment. Only state-of-the-art safety techniques and proven industrial components are used that work in accordance with the new safety functions according to EN ISO 13849-1/2, EN ISO 12100 and 2006/42/EC. Spare parts are still available 10 years after the end of production of the given type of machine.

IMPACTTest software controls the new fast, accurate and reliable measuring and control electronics of the SPEED series with a variable sampling system up to 4MHz, 64 bit internal accuracy, 32 bit measurement and 24 bit resolution ADCs. Modular system with the possibility of extending the measurement to up to 8 sensors, communication channels with temperature chambers, optical inspection of samples, etc.

IMPACTTest is a complete software for measuring notched toughness, which supports, DIN, EN, ISO, ASTM, GOST standards and other industry standard testing methods according to Charpy, Izoda, Dynstat, Brugger.

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CHK.1 series module configurations

LabTest CHK 50J – Pendulum impact tester

- Execution of tests according to Charpy, Izod, Dynstat, Brugger and measuring of impact toughness in tension.
- Very rigid foundation with 4 leveling holes.
- Integrated touch 15 "LCD touchscreen with PC in machine frame.
- TÜV certified safety circuit system.
- Automatic hammer lift by DC motor and magnetic brake.
- Fixed adjustable impact speed.
- Protective safety cover with electronic door opening surveillance.

LabTest CHK 50J-I – Instrumented Pendulum Impact Tester

- Execution of tests according to Charpy, Izod, Dynstat, Brugger and measuring of impact toughness in tension.
- Evaluation of instrumentation acc.to EN ISO 14556 and EN ISO 179-2.
- Very rigid foundation with 4 leveling holes.
- Measuring electronics with high sampling frequency 4 MHz.
- TÜV certified safety circuit system.
- Automatic hammer lift by DC motor and magnetic brake.
- Protective safety cover with electronic door opening surveillance.

LabTest CHK 50J-IA – Instrumented Pendulum Impact Tester with adjustable angle

- Execution of tests according to Charpy, Izod, Dynstat, Brugger and measuring of impact toughness in tension.
- Evaluation of instrumentation acc.to EN ISO 14556 and EN ISO 179-2 .
- Very rigid foundation with 4 leveling holes.
- Integrated touch 15 "LCD touchscreen with PC in machine frame.
- Automatic hammer lift by DC motor and magnetic brake.
- Freely electronically adjustable initial angle (speed) and protective safety cover with electronic door opening surveillance.
- Pendulum impact speed up to max. 3,8m/s.

LabTest CHK 50J-D – Pendulum Impact Test - Digital

- Execution of tests according to Charpy, Izod, Dynstat, Brugger and measuring of impact toughness in tension.
- High operator comfort and ideal machine ergonomics.
- Very rigid foundation with 4 leveling holes.
- Integrated Digital monochrome 4 "display.
- Automatic hammer lift by DC motor and magnetic brake.
- Fixed adjustable impact speed.
- Protective safety cover with electronic door opening surveillance.

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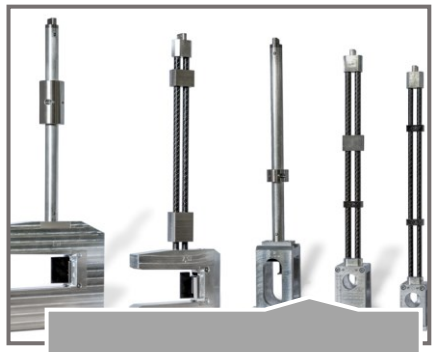
Create your own machine configuration!

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.



Impact hammers and supports

Optical check of the specimens

Notch machine

Testing machines TCR – comprehensive solution for impact testing

Testing software **IMPACTTest** produced by LABORTECH with various testing modules

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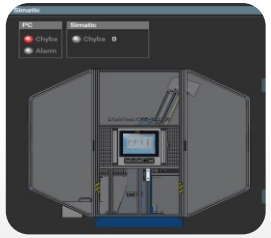
Software IMPACTTest

Intuitive impact test software you'll love…

Basic features and description of IMPACTTest software

IMPACTTest is an integral part of all modularly equipped Pendulum impact testers of the LabTest CHK.1 series, supplied by LABORTECH. This software will help you increase the productivity and quality of testing in your test rooms and testing labs. You can streamline, refine, and speed up the performance of your tests and adapt your testing to environment, to make it easy for operators to measure the mechanical properties of materials using the notched toughness method, regardless of their skills.



Our IMPACTTest test software has been developed in a modular way, so it meets all the set criteria, including safe machine control. IMPACTTest contains parameters that are necessary to determine the impact force and notched toughness, a database of results with the possibility of filtering individual items, test definitions with the possibility of writing input data at your discretion, etc. Thanks to the modular design of the software: **1. BASIC** - basic standard module **2. Module I** - Instrumented, **3. Module IA** - instrumented with adjustable angle, **4. Module YR** and **BR** - robotic manipulator, **5. Module T** - Automatic temperature monitoring, **6. Module Db** - digital database.

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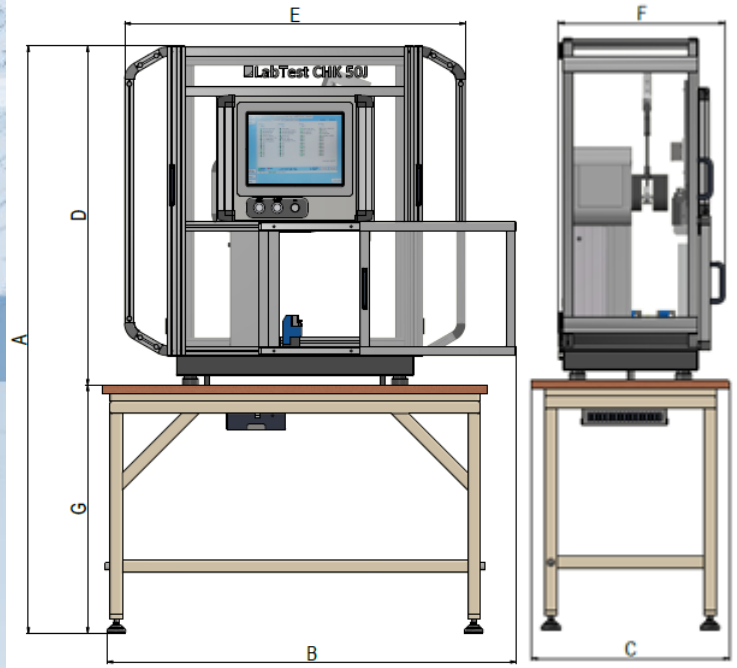
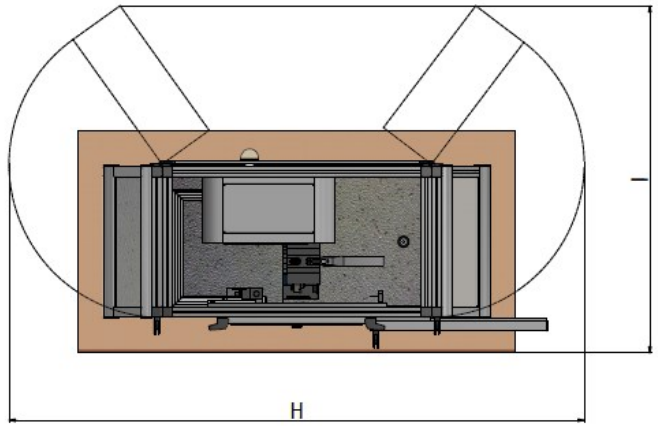
Pendulum impact testers LabTest CHK.1 series





Technical data	Units	LabTest CHK 50J	LabTest CHK 50J-I	LabTest CHK 50J-IA	LabTest CHK 50J-D
Maximum operating range	J	0.5 – 50	4 – 50	4 – 50	0.5 - 50
Resolution scale division in the PC	J	0,01			
Error resolution	J	± 0,005			
Impact hammer speed	m/s	2.9 – 3.8	2.9 – 3.8	2.9 – 3.8	2.9 – 3.8
Adjustable initial angle in the range:	%	/	/	15 – 100*	/
Adjustable initial energy in the range:	%	/	/	7 – 100*	/
Pendulum impact speed:	%	/	/	3 – 100*	/
Sampling frequency	MHz	/	4	4	/
Temperature of environment	°C	10 – 35			
Humidity of environment	%	20 – 70			
Weight of the machine	kg	325	325	325	320
Machine dimensions					
Machine height (D)	mm	1099	1099	1099	1099
Machine width (E)	mm	1106	1106	1106	1106
Machine depth (F)	mm	534	534	534	534
Machine dimensions inc. work desk					
Machine height inc. work desk (A)	mm	1903	1903	1903	1903
Machine width inc. work desk (B)	mm	1328	1328	1328	1328
Machine depth inc. work desk (C)	mm	635	635	635	635
Machine width during cover opening (H)	mm	1644	1644	1644	1644
Machine depth during cover opening (I)	mm	990	990	990	990
Dimensions of work the desk H x W x D	mm	804 x 1250 x 635			
Voltage	V	230V 50/60 Hz			
Power input	VA	200			

* The range is calculated from nominal initial energy of the pendulum

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Technical specifications of CHK.1 series

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.

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 ± 10%, frequency ± 1%, ie 230V - 1f).

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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LABORTECH in the world

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