

Product information

Pendulum Impact Tester LabTest® CHK 450J-I



Description and use

Pendulum impact testers type Lab Test CHK 450 J-IA for impact tests are among the devices where short time tests that give us important information are performed and, above all, they record the **graphic process** with automatic calculation of parameters depending on the behaviour of materials at the impact of the ram on the specimen **in changing temperatures**. On pendulum impact testers CHK series, it is possible to perform tests according to Charpy, Izod, Dynstat, Brugger and also perform impact tensile tests according to all standard EN, ASTM, ISO, DIN.

Base machine set

- Very rigid base construction with 4 levelling holes
- Automatic lift arm using a special magnetic bevel-helical gear unit with integrated AC motor controlled by inverter with electronic brake
- Documentation for a concrete stand construction
- Protective safety cover from the Item profiles and polycarbonate glass with electronic door monitoring
- Integrated touch LCD screen with PC in the machine frame
- Digital control unit with high-speed card – 12 MHz
- Intuitive and efficient software ImpactTest BASIS – I for measuring according to EN ISO 14556
- Incremental sensor with high resolution for accurate angle measuring
- Preparation for use of various testing supports and blades
- Tunnel for automatic removal of broken specimens with high efficiency up to 95%
- Preparation for a reclaiming box designed for collecting broken specimens for further use (chemical analysis etc.)

Features and operation

- Very rigid machine design ensures accurate test results
- High safety according to EN 954-1, Class 3
- Continuous monitoring of safety during hammer impact
- Detection of operation errors and their displaying in the program
- Allows to start the pendulum both by the button and immediately after closing the door within 0.5 seconds, which allows breaking the specimen within 5 seconds after removal from the cooling medium according to EN ISO 148-1 and ASTM E 23
- Easy to mount specimens, possibility for fast exchange of supports and the pendulum in the range from 150 to 450J, ensures simple and comfortable operation for the user even in harsh industrial environments
- Centrally located control units ensure easy control and testing
- Easy loading of specimens
- Automatic arm brake
- Automatic arm lift in 5 seconds
- Very quick speed of testing
- Fast and accurate centring of specimens
- Protective cover with security lock ensures entirely safe operation
- High toughness of the frame and resistance against shocks
- Possibility of data output via Ethernet or USB flash disk
- Ideal ergonomic design
- The device meets all necessary safety requirements such as EN356, DIN 51 333, EN ISO 13489 and other European norms

Features of Software ImpactTest® - FULL

Impact Test is an integral part of Charpy hammers LabTest CHK supplied by LABORTECH. This software will help increase productivity and quality testing at your test facilities and test laboratories. You can streamline, clarify and accelerate the implementation of your tests and to adapt their testing environment so as to make measurement of mechanical properties of materials by methods of impact toughness easy for the operators, regardless of their skills.

- Simple, inductive, efficient
- Intuitive control via touch screen LCD
- Quick and efficient testing
- Modification of item names
- Modification of measured instrumentation values
- Evaluation of instrumented tensile test
- Editable types of specimens and testing standards
- Digital display of all current values
- Change views between the graphs and measured results
- Choice of graph display change between force, trajectory and time
- Automatic evaluation of temperature
- Data export into CSV – BASIS, or MY SQL and MS SQL
- Data export of graphic courses into CSV – individual samples
- Data transfer from temperature chamber, thermometer...
- Automatic temperature evaluation before testing acc. EN ISO 148-1 and ASTM E23
- Stores measured data in a database with filtration
- Extensive calibration mode
- Calibration of individual instrumented blades EN a ASTM
- Dynamic linearization for testing according to ASTM
- Course of linearization of instrumented blades
- Multilanguage version (English, Russian, Polish etc.)
- Protocol printing in PDF
- Record of multiple curves, zooming using the ZOOM - detection of x, y coordinates of the individual samples, etc.

Module - ImpactTest – I

Impact Test - I is a software module that was developed for instrumented impact strength test according to EN ISO 14556. Instrumented tests are recorded graphically with option of automatic calculation of parameters and a possibility of retroactive modification. An option of individual processing of the measured parameters is also offered at the end of the test. This software module in conjunction with a high-speed card is capable of controlling the input data rate of up to 12 MHz. A part of this module, compared to the BASIS system, is the following:

- Swap between graph displaying and measured results
- Record of multiple curves, zooming using the ZOOM - detection of x, y coordinates of the individual samples etc.
- Selection of chart display between force, direction and time
- Dynamic linearization for testing according to ASTM
- Course of linearization of instrumented blades
- Calibration of individual instrumented blades EN a ASTM
- Modification of instrumented measured values
- Data export of graphic courses into CSV – individual samples
- Evaluation of tensile instrumented test

Accessories

- Central and lateral centring device
- Cooling chambers, thermometers, trays for specimens
- Robotic system **BLUE RUNNER**
- High speed cameras **BLUE EYE**
- Optical check of specimen dimension **OptoLab55**
- **VRE** – notching machine for V and U specimen notch making
- Calibration by reference specimens

Technical data	Units	LabTest CHK 450J-I
Maximal operation range	J	450
Resolution of scale division in PC	J	0,1
Resolution error	J	± 0,05
Hammer impact speed	m/s	5,5
Ambient temperature	°C	10-35
Humidity of the work area	%	20-70
Weight of the testing equipment	kg	1250
Dimensions of the machine HxWxD	mm	2096x2290x791
Power supply voltage	V	230V 50/60 Hz
Power input	VA	600

Technical changes reserved by the manufacturer

Manufacturer:

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