… from development to implementation

Labor Tech

Production of materials testing equipment and automation

IMPACTTest

Software for notch toughness measuring

Made in Czech Republic

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Description of testing software IMPACTTest

IMPACTTest is a complete notch toughness measurement software that supports CSN, DIN, EN, ISO, ASTM, GOST standards and other industry standard test methods by Charpy, Izod, Dynstat, Brugger. To make the impact strength software interactive, it should meet the following:

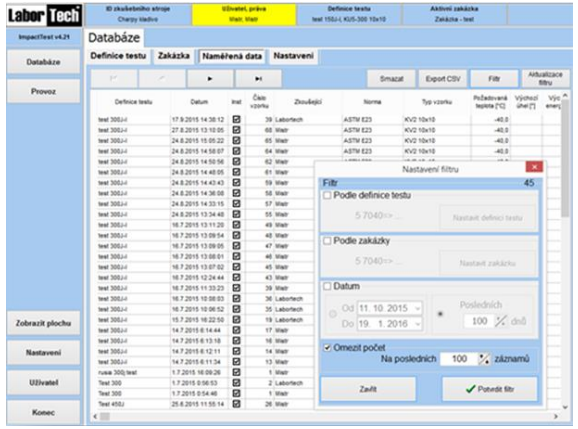
show everything **I want**
evaluate everything **I need**
to bring up everything **I wish**
save everything **I ask for**

Our testing software **IMPACTTest** has been developed in a modular way, so it meets all set criteria including safe machine control. **IMPACTTest - BASIS** contains the parameters that are necessary to determine the impact strength and impact strength, the results database with the possibility of filtering individual items, the definition of tests with the ability to write input data at your discretion, etc. Due to the modular design of the software, IMPACTTest can be applied to pendulum impact testers in four modifications:

STANDARD - BASIS
Instrumented - Module I
Instrumented - Module IA – adjustable angle
RUNNER – Module YR and BR
Automatic temperature monitoring – Module T

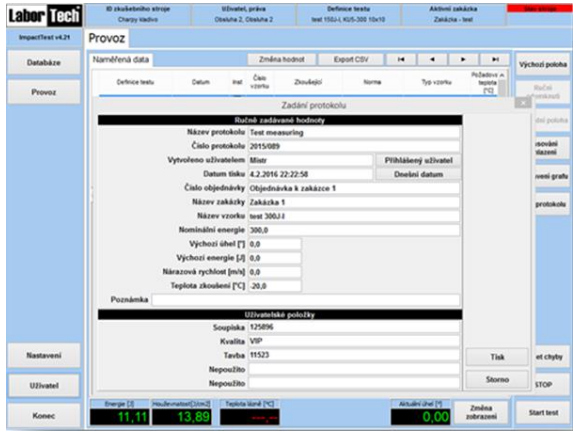
The program uses MS Windows 10 or higher. The application is designed not only for classic PC and LCD monitors, but for industrial systems that are controlled by touch LCD monitors.

In our software it is possible to set a list of users and their access rights (operator, service, metrologist etc.) who can log in via a touchscreen LCD or a reading card, it is possible to change and expand the item names, change and expand specimen types, etc.



Control of measuring and control electronics

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



Features of software IMPACTTest - BASIS

IMPACTTest is an integral part of all LabTest CHK pendulum impact testers supplied by LABORTECH. This software will help you increase productivity and quality testing in your testing rooms and testing laboratories. You can streamline, refine and accelerate the performance of your tests and customize your testing environment to make it easier for operators to measure mechanical properties of materials by the method of notch toughness, regardless of their skills. Below you will find the basic features at a few points:

- Intelligent, intuitive and powerful software designed for fast and rational impact testing
- Software for bending impact test according to the following standards: EN ISO 148-1, ISO 148-2, ASTM E23, GOST 9454-78, EN ISO 14556: 2015, CSN 420382, EN ISO 179, ISO 9854, ISO 8256, ASTM D1822, ASTM D256,
- Editable types of samples and test standards including item name modifications
- Digital display of all current values including analogue energy display
- Storing measurement data in a database with filtering by definition, contracts, data, etc.
- Extensive calibration mode already in the standard
- Automatic cooling timing before testing according to EN ISO 148-1 and ASTM E23.
- Data transfer from the temperature chamber, thermometer, etc.
- Multi-lingual version (CZ, EN, POL, RU, ESP, etc.)
- Print a PDF report
- Export data to CSV - BASIS, or MY SQL and MS SQL
- Unlimited license
- Installation on any computer without a license etc.

Safety and update requirements

- LABORTECH software, based on its design and structure, complies with all of the EC Machinery and Machinery Directives.
- High safety according to EN ISO 13849-1 / 2
- Continuous inspection of safety covers and doors in accordance with new safety features.
- Continuous SW update per customer requirements.

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Module - IMPACTTest – I designed for instrumented notch toughness tests acc. to EN ISO 14556:2015

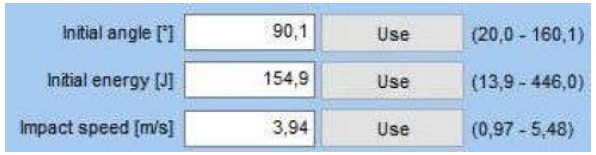
The IMPACTTest - I module is a software module that has been developed for instrumented notch toughness tests. This software module, coupled with a high-speed card, is able to handle input data at up to 4 MHz. For instrumented testing, the tests can be graphically recorded with the possibility of automatically calculating the parameters and modification options. At the end of the testing, the possibility of individual processing is also offered. The following items are part of this module above BASIS:

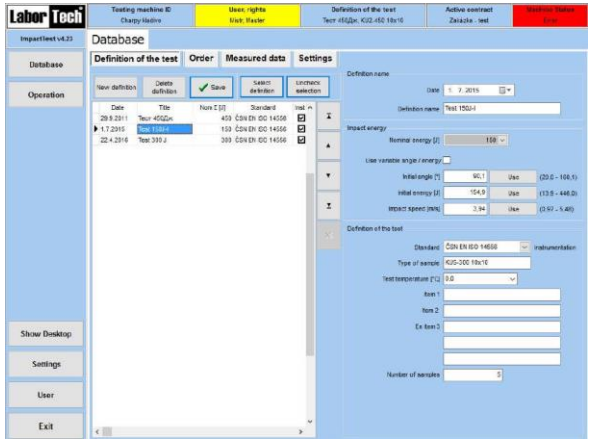
- Changing views between charts and measured results
- Recording multiple curves, zooming with ZOOM detection of x, y coordinates for individual samples, etc.
- Select a change in graph display between power, path, and time
- Dynamic linearization for ASTM testing
- Linearization of the course of the tool blades
- Calibration of individual instrument blades according to EN, ASTM and GOST
- Modification of measured instrumentation values
- Export data graphs to CSV - individual samples
- Evaluation of tensile instrumental test

Module - IMPACTTest – IA designed for instrumented notch toughness tests acc. to EN ISO 14556:2015 with angle change

The IMPACTTest - IA module is a software module that has been developed for instrumental toughness tests to adjust the starting position of the hammer according to the required energy, speed or angle. The initial angle control with an AC servomotor with a precision of 0.05 ° and a special magnetic coupling gives the LabTest CHK IA impact hammers unprecedented possibilities to perform a toughness test coupled with the development of new materials. This module, above to the BASIS + IMPACTTest - I module, includes the following items:

- Setting the initial angle in the range of 15 to 100% NEPH
- Setting the default energy in the range of 7 to 100% NEPH
- Adjustment of impact speed in the range of 3 to 100% NEPH
- Calibration of adjustable angle
- Optimize AC control settings
- *NEPH – nominal energy of pendulum hammmer

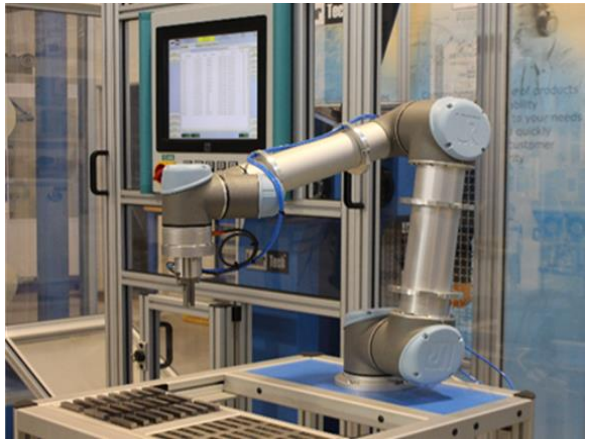




Module - IMPACTTest – IA designed for system BLUE RUNNER and YELOW RUNNER

The IMPACTTest - BR module is a software module designed for LABORTECH's BLUE RUNNER robotic system and YELOW RUNNER. These systems were primarily designed to minimize the effect of the operator on the reproducibility of the test results by basing and breaking the specimens within 5 seconds, which is an important aspect of the impact tests. Robotic systems BLUE RUNNER and YELOW RUNNER are suitable for testing specimens measuring 55x10x10 or 55x10x5 mm using EN ISO and ASTM standards at room temperatures and temperatures down to -90 ° C. This system can be used for both BASIS and I modules. The RUNNER system can be incorporated into:

- Communication and control with temperature chamber for temperatures to -90 ° including the storage system
- Communication with optic check of specimens OPTOLab 55 II including database exchange of measured data
- Automatic specimen extraction from a specified tray
- Automatic test run between the LabTest CHK pendulum and the BR or YR robotic arm.
- Automatic monitoring of the pendulum work area
- Automatic temperature monitoring - Module - T



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