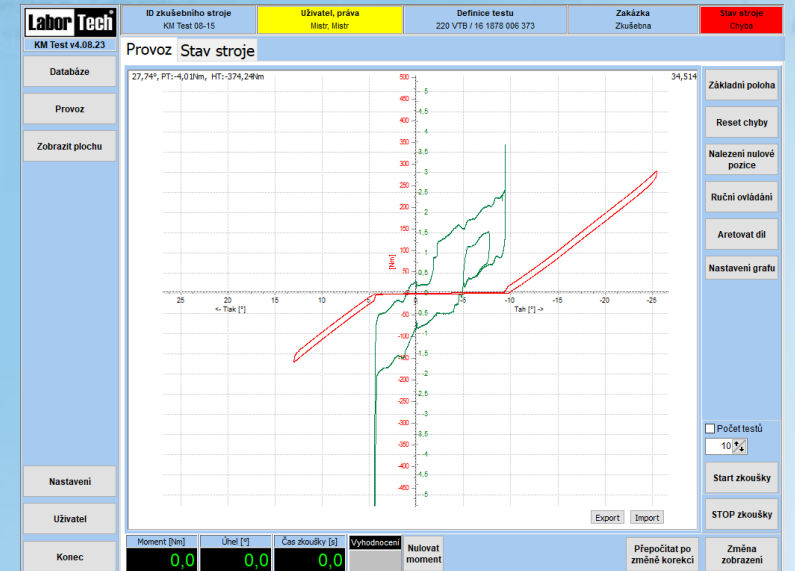...from development to implementation

Production of materials testing equipment and automation

KMTest

Torque, angular and fatigue torque measurement software
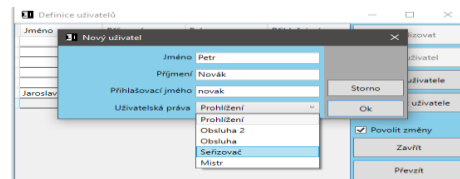
Made in Czech Republic

Description of testing software KMTest

The KMTest - BASIS software is used to measure torque and angles in the I and II quadrants, or to perform torsional fatigue tests, depending on the number of revolutions during specimen and whole product loading.

Our test software KMTest was developed in a modular way on already tested LABORTECH software platform and therefore meets all set criteria including safe machine control in accordance with EN ISO 13849-1 / 2. KMTest - BASIS contains both standard parameters for the evaluation of torque, angle, speed, friction, etc., but also purely individual parameters (modules), where it can be measured according to machine type, ie KM.1 to KM.4, for example friction torque, stiffness , stop point, stop angle, start point in stroke or pressure, etc. All these results including graphical recordings are archived in the results database with the possibility of filtering individual items, the definition of tests with the possibility of writing input data at your discretion, etc. Thanks to the modular design of the software, KMTest can be applied on the already mentioned types of KM machines in several modifications, namely:

Module KMTest A and KMTest R
Modul Automation

The program uses MS Windows 10 or higher. The application is also designed for industrial systems that are controlled by touch LCD monitors. In our software, a list of users and their access rights (operator, service, metrologist, etc.) who can log in via a touchscreen LCD or a reading card, can change and expand the item names, change and expand specimen types etc.

Control of measuring and control electronics

The KMTest software controls EDC and EDCi measuring and control electronics with a maximum sampling frequency of 5 or 10 kHz and is also capable of communicating with SIEMENS electronics to ensure safety and machine connection to test lines. The modular system can be expanded to measure up to 8 communication channels with extensometers, external angle and torque sensors, etc.

Features of software KMTest - BASIS

KMTest is an integral part of all LabTest KM torsion testing systems supplied by LABORTECH. This software will help you increase productivity and quality testing in your testing and testing laboratories. You can streamline, refine and speed up your testing, and customize your testing environment to make it easier for operators to measure mechanical properties of materials by torsional method, regardless of their skills. Below you will find basic features at a few points:

- Intelligent, intuitive and powerful software designed to measure torque and angle in I and II quadrants or to perform torsional fatigue tests depending on the number of revolutions
- Editable types of samples and test standards including item name modifications.
- Digital display of all current values.
- Storage of measured data into a database with the possibility of filtering by definition, orders, data,
- Extensive calibration mode as standard
- Easy switching between operations, databases, and user settings.
- Easily set the definition according to the selected module.
- Precise machine status information and error messages.
- Torque correction by reference samples
- 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 directives mentioned.
- Continuous inspection of safety covers and doors in accordance with new safety features according to EN ISO 13849-1 / 2.
- Continuous SW update per customer requirements.

Structure of basic software KMTest – BASIS

User login
- User login via keyboard or reader card
- Delegating rights to individual users

Test definition
- Selection of the test definition in the database
- Create a new definition
- Exam Date, Name of Definition, Drawing Number,
- Selecting the product, entering the test temperature, entering auxiliary values and information.
- Specifying the number of specimens tested within the definition ...
- Create a new definition by copying, including parameters

Order definition
- Create or select a new order
- Date of engagement, order title: enter the contract identification label, i.e. order name
- Order: enter the order name
- Creating a new job by copying, including parameters

OPERATION - displayed parameters
- ID, inventory, melt number, order number, location, temperature, specimen type, date, impact work, notched toughness, status, worker, standard, etc.
- ID My SQL

Measured data
- Database of measured values
- Database filter
- Export data to CSV
- Deleting database data
- Database backup

Test start and test course record
- Start the exam
- Record of test progress (IF and IFS modules)
- Switch between individual windows

Machine status report
- Error message - report database
- Machine status report history

Options of settings
- Operational settings, item names, additional settings
- Ways to control the program

Setting user rights
- Set up a list of users and their rights

The KMTest - A module for torque and friction measurement including angle of rotation

The KMTest-A module is a software module developed for measuring torque and friction torque including the angle of rotation. Depending on the type of test piece you can create definitions that accurately match the customer's requirements for testing. The basic version includes rotating a part into a moment or angle in the I or III quadrant. Higher versions of content already have a smooth transition between I and III quadrant including calculations of different parameters such as:

- Recycling before measuring at a defined angle, defined velocity and a defined number of tensile or pressure cycles (I and II quadrants)
- Parameters for terminating the measurement at the torque or main torque to stop or stop torque
- Friction torque measurement at several points on the curve
- Measure stiffness at several points on the curve
- Measurement of expanded tension or pressure at points A1 to A3 and B1 to B3 etc.

At the end of the exam is also offered the possibility of individual processing of results and subsequent work with the graph.
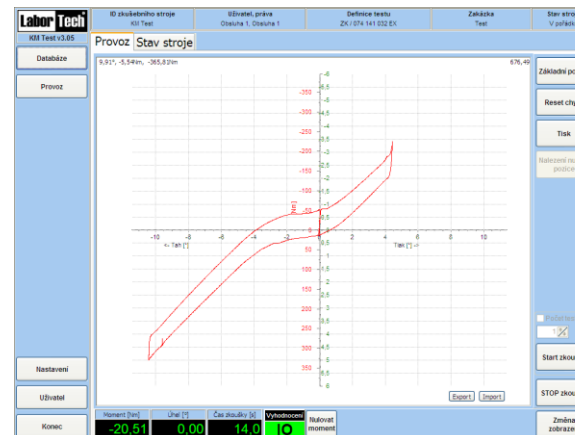
The KMTest - R module is designed to measure torque at different or constant speeds

The KMTest - R module is a new software module that has been developed to measure torque at different or constant speeds. Depending on the type of test piece you can create definitions that accurately match the customer's requirements for testing. The basic version includes rotation of the specimen or part at the required speed with the set number of cycles or length of the test. The higher version already contains a smooth transition between I and III quadrant (AC servomotor). The basic parameters for module R are:

- Free rotation before the test
- Test speed or turning speed
- Length of the measuring run
- Minimum and maximum number of defined speeds
- Boundary values - Defined guarded minimum and maximum moment of the test

Labor Tech®

Production of materials testing equipment and automation

LABORTECH in the world

...from development to implementation

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