Pendulum Impact Tester

Pendule d´Essais au Choc

Pendelschlagwerk

IT 4..15 J

Quality Assurance and Process Control

The IT 4-15 J offers a unique solution for generating, filing and displaying quality data. It is built around an instrumented pendulum impact tester and offers a fast and effective way of generating and presenting data for quality reports for products such as **plastics and composites**. It comes with a version of TRAM-QA, Windows-based QA-software, which offers a data filing and retrieving system providing instant access to reports on previously tested samples. It is ideally suited to quality assurance and process control as well as research and development. It can easily be set-up for relevant standards. It is a must for companies seeking ISO 9000 certification.

The compact, table mounted Impact tester operates with a pendulum-hammer principle. Testing is controlled from the computer. During testing, the angular-velocity/angular-movement curve is generated and displayed on the monitor. The computer converts the velocity of the hammer-head, just before and after hitting the sample, to kinetic energy. By using this unique principle, the actual kinetic energy absorbed by the sample is measured, enabling very precise recording of impact-energy. At the same time it also records the impact energy from the potential energy of the hammer - in-line with national and international standards.

The machine can be supplied with several set of supports, and with several sizes of hammer-head for different impact energies, and for bending or tensile impact testing. The pendulum is then manually moved to the vertical position. When released, the hammer swings down on the sample.

Like others in the range of Tram Testers, the IT4-15 offers an easy-to-use environment, and the possibility to create instant product-quality reports.

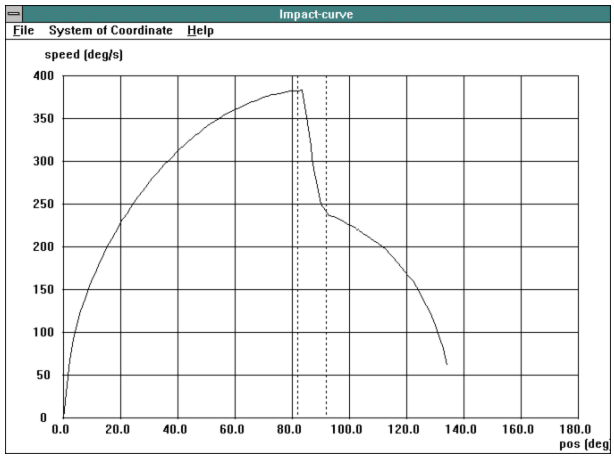
Specification

MODEL	**IT 4-15** J Version for “bending impact test” and for “tensile impact test” according to national standards
Impact energy	Standard 4 -15 Joule
Velocity of hammer-head at contact with sample	2.8-4 m/sec. According to national standards
Impact energy resolution	>1/500 of full scale
Sample size	According to national standards
Supply voltage	Via computer control system.
Approx. weight (excluding computer and printer)	80 kg.
Computer control system	PC with additional hard- and software, and printer.
Data generation	• Real-time generation of angular-velocity/angular-movement curve. Instant calculation of kinetic energy absorbed during impact, as well as the potential energy. • Up to 230 samples can be filed in each set, and additional data (example: weight/m², board-width, etc.) can be added to the set. A log-book is maintained on all data-sets, giving easy access to a specific set. • It is easy to combine data from several types of quality tests., i.e. impact test, flexural test, crushing test a.o. in one report.
Data presentation	• The test results can be shown on the computer monitor or printed out in a table for each set of samples, together with e.g. average- and standard deviation values. • Various statistic analyses can be performed automatically, and results can be printed out in a layout according to your specification. • Data can be exported to a standard spreadsheet format (Lotus 1-2-3).
Network version	Data can be shared by several computers in a special version for Local Area Network

Specifications are subject to change without notice.

The test machine is based on stiff frame construction, with an anglular/velocity sensor connected to the impact-hammer.The addition of TRAM-QA Quality Assurance software for Windows makes the system a powerful "automatic machine" for generating, filing and displaying quality data from impact testing. The software is simple to use and the operator will grow familiar with the test machine after a very short time, even if he has no experience in operating a computer. The software can be supplied in national languages if required.

The unique principle of recording the kinetic energy of the hammer during the testing gives a “picture” of the energy absorbed during the different stages of the fracture. This feature is ideal for research and development of composite materials. At the same time the impact energy is calculated according to standards. The software even include a calibration procedure.



The equipment offers a great opportunity to improve **quality management** through instantaneous data generation. In spite of the highly advanced automatic testing procedure, operation is easy.

Due to the modular design of the software, a customized system can also be supplied.

Please contact TRAM or your local distributor for additional information.

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