

Concrete Paving, Flag & Kerbs Tester

Machine d'Essais pour Pavés, Briques et Bordures
Prüfmaschine für Pflastersteine, Fliesen und Bordsteine

Bending

Splitting

Compression

Concrete

CON 100..300 kN



Quality Assurance and Process Control

Designed for the Concrete industry, the CON 100-300 kN offers a unique solution for generating, filing and displaying quality data. It is built around a specially designed testing machine, and it offers the user a fast and effective way of generating and presenting a quality report for concrete flags, kerbs and pavings. Additionally it offers a data filing and retrieving system giving the user instant access to reports on any previously tested samples. Much more than just the bending test results can be included in the quality report. The TRAM QA software offers the user a simple way to incorporate all relevant quality parameters in a system of tables that can be set up for almost any application. It is ideally suited to quality assurance and process control as well as research and development. It is capable of performing a wide range of complex testing procedures and can be set up for relevant international or national standards - e.g. prEN 1338, 1339 and 1340.

The floor mounted machine is compact, and it is built with a free-arm principle, making the positioning and removal of samples very easy - no studs or frames to avoid. The special machine design provides optimum stiffness resulting in accurate deflection measurements, when the optional deflection sensor is used. Testing is controlled from the computer after keying in sample identification. During the testing the load-deflection curve is simultaneously generated on the monitor. The machine is supplied with adjustable supports. Automatic positioning of the loading beam virtually eliminates the waiting time between tests. Additionally the machine incorporates a facility to weigh the samples tested.



QUALITY ASSURANCE

Specification

MODEL	CON 100-300 kN
Max loading stroke length	300 mm as standard
Free-arm frame, extension length	300 mm as standard
Max Loading-cell-force	100-300 kN
Force measuring resolution	10 N
Error on force is less than 1% in the range	1-100% of max load
Loading speed control	Selectable load-speed (kN/min). Programmable loading sequence for semiautomatic testing as well as automatic fast return.
Optional Deflection measuring	Resolution 0.01 mm
Optional splitting strength device	For sample thickness in the range 30-130 mm
Sample supports	510mm long, r=20 mm; span of 200-800 mm as standard
Supply voltage	3*400 V 50 Hz or other 3-phase voltage.
Approx. weight (including control system)	1000 kg
Computer control system	PC with additional hard-and software, and printer. The TRAM QA software makes the testing, filing and analysing of data extremely versatile - refer to the separate brochure for the software.
Data generation	<ul style="list-style-type: none"> • Real-time generation of load/deflection curve. Options for weighing boards during the testing, and Instant calculation of Breaking Load, Ultimate Deflection, Modulus Of Rupture, Stress at Proportionality limit, Modulus of Elasticity, Strain at Ultimate Load, Fracture Energy etc. • Up to 230 samples can be filed in each set, and additional data (example: weight/m², board-width, density etc.) can be added to the set. A logbook is maintained on all data-sets, giving easy access to a specific set.
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. Additionally a load deflection curve with all the specifics of a single test can be printed out. Various statistical analyses can be performed automatically, and results can be presented on the monitor or printed out in a number of different layouts according to your specification.

Specifications are subject to change without notice.

An extraordinarily stiff open frame construction, loading via a hydraulic piston, and an optional accurate measure of the loading beam travel are the basis of the CON-system. A PC with TRAM QA Windows software makes the machine a powerful "automatic" system for generating, filing and displaying quality data for productions of concrete flags, blocks and kerbs. Simple to use software will enable the operator to grow familiar with the test machine after a very short time, even if he has no experience at all in operating a computer. The software is supplied in national languages as required.

Comprehensive electronic protection prevents the machine from overloading damage or driving out of limits. A simple calibration procedure is included in the software. For operation in dusty environments the system can be supplied with the computer and printer in a sealed tower arrangement.

The equipment offers a great opportunity to improve quality management through instantaneous data generation. In spite of the highly advanced and automatic testing procedure operation is easy. Due to the modular design of the equipment and the versatility of the software, tailored systems can be offered at a moderate price.

Please contact TRAM or your local distributor for additional information.



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