

# FFT

## Open Frame Flexural Tester



Originally designed for the fibre-cement industry, the FFT range 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 newly produced flator corrugated sheets. Additionally it offers a data filing and retrieving system giving the user instant access to reports on any previously tested sheets. 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. ISO 9933, ISO 9383, EN 12467

The floor mounted machine is compact, and it is built with a free-arm principle, making the positioning and removal of sheets very easy - no studs or frames to avoid. The special machine design provides optimum stiffness resulting in accurate deflection measurements. 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 or with different sets of fixed supports. Automatic positioning of the loading beam virtually eliminates the waiting time between tests. As an option the machine can be supplied with a facility to weigh the sheets while testing.



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### Specification

Model	FFT 50kN	FFT 20kN	FFT 10kN
Loadcell Capacity	50000 N	20000 N	10000 N
Weight	450 kg	350 kg	250 kg
Free arm (frame dist)	625 mm		
Resolution	0.50 N	0.10 N	0.05 N
Supply Voltage	230 V or 115 V, 50-60 Hz		
Speed Range	300		
Force measuring error	Less than 1% of actual value from max. force down to 1/1000 of max. force		
Loading speed control	Selectable load- or deflection speed. Programmable loading sequence for semiautomatic testing as well as automatic fast return.		
Deformation resolution	0.0100 mm		
Control system	USB-connection to PC. The TRAM QA software makes the testing, filing and analysing of data extremely versatile - refer to the separate brochure for the software		

### Standards

EN 310	Wood-based panels. Determination of modulus of elasticity in bending and of bending strength
EN 520	Gypsum plasterboards - Definitions, requirements and test methods
ISO 9933	Products in fibre-reinforced cement - Long corrugated or asymmetrical section sheets and fittings for roofing and cladding
ISO 9383	Products in fibre-reinforced cement - Short corrugated or asymmetrical section sheets and fittings for roofing
ISO 8336	Fibre-cement flat sheets -- Product specification and test methods
ISO 9125	Fibre-cement slates and fittings -- Product specification and test methods

An extraordinarily stiff open frame construction, loading via a sealed ball-screw system and an accurate measure of the loading beam travel are the basis of the FFT-system. An IBM compatible computer with TRAM QA Windows software makes the machine a powerful "automatic" system for generating, filing and displaying quality data for fibre-cement and other board production. 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. Systems for other board, sheet and slab manufacturing industries can also be supplied.

Please contact Bent Tram A/S or your local distributor for additional information.



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