FIE GROUP

Over 60 years of consistent excellence

Touch Screen Computerized Chain & Rope Testing Machine

Model : CRE-TS

Micro Controller Based Panel,
Front Panel Touch Screen Display

Loading accuracy as high as ± 1%

Best in Class Analysis Software

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Features :

Machine Features:

The Horizontal Chain and Rope Tensile testing Machine incorporates design features to enable high accuracy testing with economy, speed and versatility.

- Loading accuracy as high ±1% IS:1828-1975.
- Available with digital and touch screen panel.
- Double acting hydraulic cylinder and testing for test specimen.
- High reading accuracy due to large size display.
- Wide range of standard and special accessories.
- Large effective bed clearance enables testing of a wide range of specimens.
- Simple control for ease of operation.
- Robust straining frame of an extremely rigid construction.
- Safe operation ensured by means of safety devices.
- Fully enclosed and protected bed.

Description :

FIE Horizontal Chain and Rope Tensile Testing is designed to test chains and ropes under tension.

Operation of the machine is by hydraulic transmission of load from the test specimen to a separately housed load indicator. The hydraulic system is ideal since it replaces transmission of load through levers and knife edges, which are prone to wear and damage due to shock on rupture of test pieces.

Load applied by a hydrostatically lubricated piston. Main cylinder pressure is transmitted to the pressure transducer housed in control panel. The load transmitted to the cylinder of the pressure transducer is transferred through a digital or touch screen(optional) panel. Displacement of the pendulum actuates the rack and pinion/mechanism which operates the encoder.

Construction :

1) Straining Unit :

It consists of a hydraulic cylinder and a crossed coupled to the piston rod of the hydraulic cylinder, mounted on to a robust base. The cylinder and the piston are individually lapped to eliminate friction.

The stationary crosshead is pinned to the main loading frame. It can be pinned along the bed length in steps of 500mm. All these crossheads are on wheels to reduce the friction while in motion.

An encoder of 0.01mm resolution is provided to measure the elongation of the specimen.

2) Control Panel :

The control panel consists of a power pack complete with drive motor and an oil tank, control, valve pressure cell transducer.

A) Power Pack :

The unit generates a maximum pressure of 200kgf/cm^2. the hydraulic pump provides continuously non-pulsating oil flow. Hence the load application is very smooth.

B) Hydraulic Controls :

Hand operated wheels are used to control the flow to and from the hydraulic cylinder. The regulation of the oil is infinitely variable. Incorporated in the hydraulic system is a regulating valve. Which maintains a practically constant rate of crosshead movement.

C) Principal of Operation :

Operation of machine is by hydraulic transmission of load from the test specimen through pressure transducer to a separately housed load indicator.

The system is ideal since it replaces transmission of load through levers and knife edges, which are prone to wear and damage due to shock on rupture of test pieces.

Load is applied by a hydrostatically lubricated ram.

Main cylinder pressure is transmitted to the pressure transducer housed in the control panel.

The transducer gives the signal to the electronic display unit, corresponding to the load exerted by the main ram.

Simultaneously the digital encoder fitted on the straining unit gives the mechanical displacement to the electronic display unit. Both the signals are processed by the microprocessor and load displacement is displayed on the digital readouts simultaneously.

Accuracy and calibration

All FIE Horizontal Chain and Rope Tensile Machines are closely controlled for sensitivity, accuracy and calibrating during every stage of manufacture.

Every Machine is then calibrated over of its chart ranges in accordance with the procedure laid down in British Standards 1601-1964 and IS:1828-1975.

FIE Horizontal Chain and Rope Tensile Testing Machine comply with Grade “A” of BS:1610-1964 and Grade 1.0 of IS:1828-1975. An accuracy of ±1% is guaranteed from 20% of the load range selected to full load.

Touch Screen Control Panel UT 2018-TS

Due to constant Research & Development, Specifications and Features are subject to change without notice.

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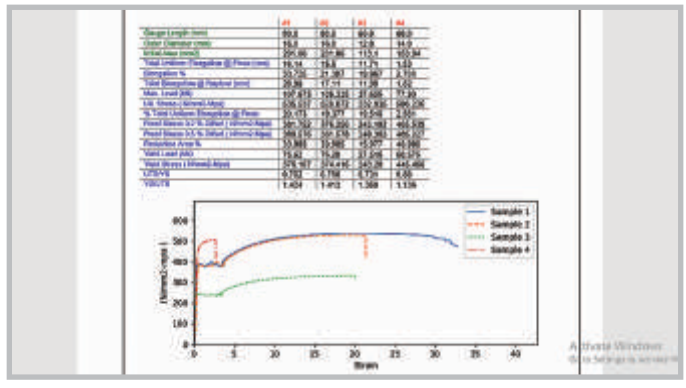
Technical Specifications :

MODELS	UNIT	CRE 10-TS	CRE 20-TS	CRE 50-TS	CRE 100-TS	CRE 200-TS
Max. Capacity	kN	100	200	500	1000	2000
Measuring Range	kN	0-100	0-200	0-500	0-1000	0-2000
Load Resolution (40,000 Counts full Scale).	N	2.5	5	12.5	25	50
Load Range with Accuracy of Measurement ±1%	kN	2-100	4-200	10-500	20-1000	40-2000
Resolution of Piston Movement (Displacement).	mm	0.01	0.01	0.01	0.01	0.01
Clearance for Tensile test	mm	3000	3000	3000	3000	3000
Clearance Between Column	mm	500	500	500	500	500
Ram Stroke	mm	1000	1000	1000	500	500

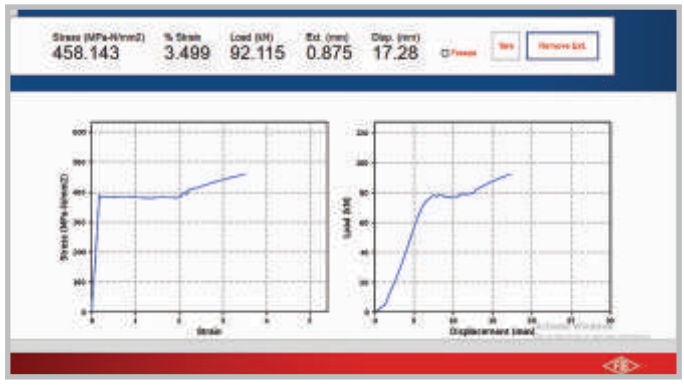
Touch Screen Software Package :

Home Screen

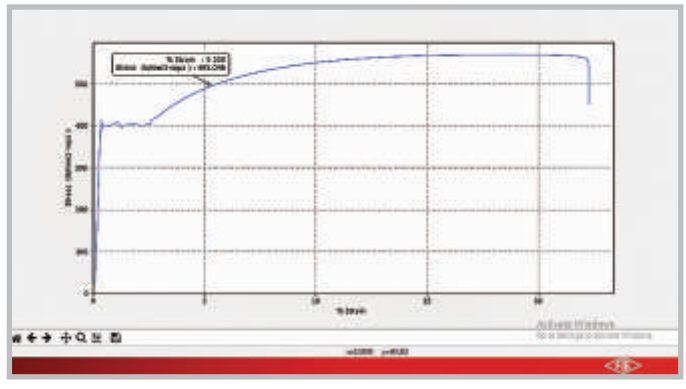
Graph of superimpose & Comparison



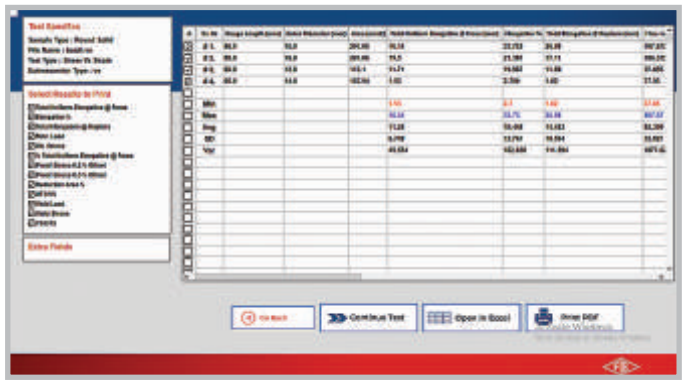
Real Time Graph



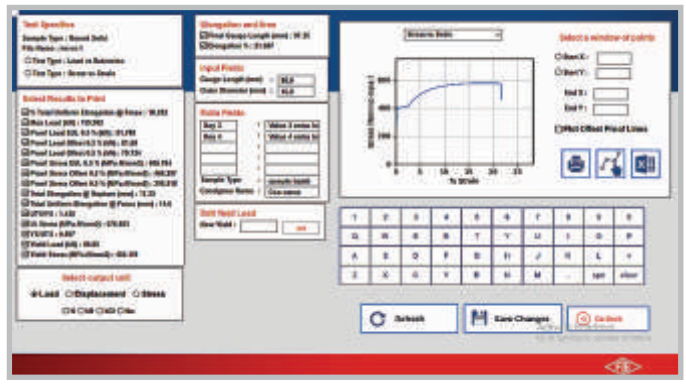
Point Tracing Zoom

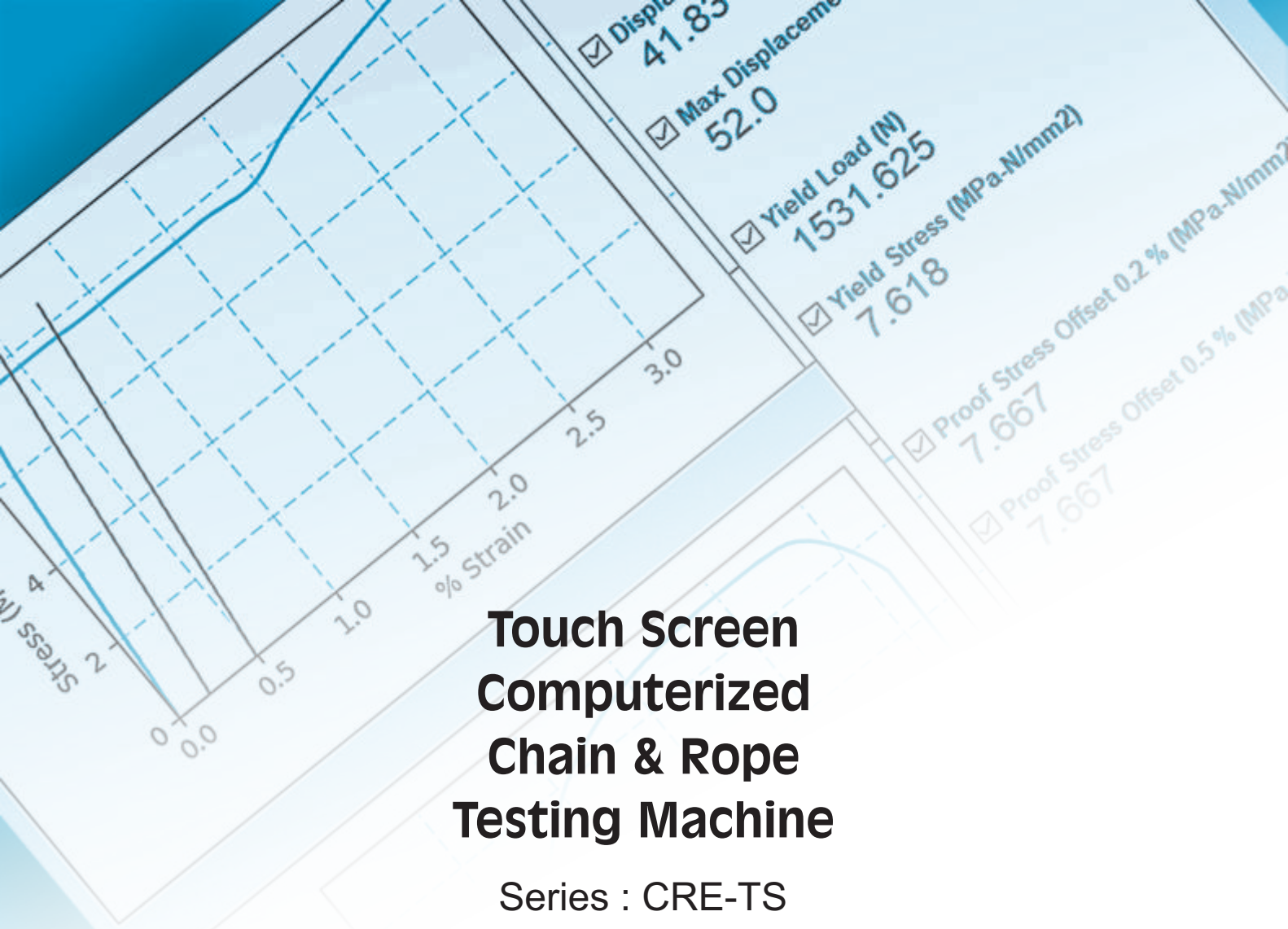


Batch Results



Results





Touch Screen Computerized Chain & Rope Testing Machine

Series : CRE-TS

*Over **60** years of consistent excellence*

Manufactured By :

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