

Computarised Universal Testing Machine



Model : F-5 to 200

Mastering the fine art of testing

FMI make the 'F' series machines are electronic screw driven machine with precision screw and column construction and variable speed drive. These are high precision high performance universal testing machines, maximum capacity up to 200 kN. With the help of computer and micro-computer from control of load to processing of data are carried out with excellent performance, reliability, flexibility and easy operation.

The machines are suitable for studying mechanical behavior of various materials like iron & metals, rubber, plastics, ceramics, fabrics, composites, cables and wires. As a matter of fact, it is an indispensable instrument for the modern industries. Two options are available mainly acme threaded screw AC motor drive and ball screw with servo drive. The machines confirms to IS, BS & ASTM standards.

Technical Specification :

Model	F-5	F-10	F-20	F-50	F-100	F-200
Maximum Test Load	5 kN	10 kN	20 kN	50 kN	100 kN	200 kN
Load Measurement	By means of exchangeable strain gauge based load cell					
Load measuring range & accuracy	±1% of indicated load from 2% to 100% of load capacity					
load resolution in N	0.25 N	0.5 N	1 N	2.5 N	5 N	10 N
Displacement resolution	0.01 mm	0.01 mm	0.01 mm	0.01 mm	0.01 mm	0.01 mm
Distance between columns	400 mm	400 mm	400 mm	400 mm	450 mm	450 mm
Drive	Precision AC Servo motor and digital drive of Panasonic, Japan make or equivalent					
Cross head speed	Variable from 0.5 to 500 mm / min					
Cross head travel	Approx 700 mm					
Averall dimensions (L X W X H in mm)	Approx 2100 mm (7 feet).					

Standard accessories

- Pair of Compression plates of 150 mm dia.

Software features :

- Menu driven form system with colour graphs to compare sample test results.
- Test details and reports are stored in database
- User programmable master test templates
- User can select test from master test Templates and can start similar test
- Load and Elongation is continuously displayed on screen
- Overload protection for machine by electronic control
- Tare Load and Reset Elongation facility available
- User selectable sample break detect condition
- Load rate and strain rate are also displayed while testing
- Unlimited Load rate and strain rate control steps *
- With Load rate controller, user can hold the load on specimen for unlimited time *
- With Load rate control, user can specify positive or negative Rate of Loading *
- User selectable units for load and displacement (kg, kN,N, lbf, mm, cm, inch etc.)
results and graphs are automatically displayed accordingly.
- On line display of Load and Displacement (Stress, Extension, Strain) etc. while test is conducted
- Provision of auto zeroing of Elongation at preload set by user
- User Programmable Reports. User can select Header, Footer, Specimen information, Dimensions, Testinformation, Test results, Stastical analysis as per his need.
- Generated reports can be exported to PDF file and can be e-mailed
- If electronic extensometer is used then proof stress values from 0.1% to1%can be determined
- Software will give alert to user to remove extensometer when load crosses .2% of Gauge length selected then proof load value is calculated. (With extensometer)
- Separate graph of extensometer and encoder is displayed
- Provision of calculation of Load and Elongation at yield, Peak load and Load at break, Yield stress, Ultimate stress etc.
- Special software for tensile, compression, bend, TOR steel and other test software as per customer requirements.

FMI Reserves the rights of change in the above specification due to constant improvements in design.



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