

Standard

ISO 7500-1, ASTM E4 , ASTM D-76, DIN5122 , JIS B7721/B7733 , EN 1002-2, BS1610,GB T228

Industry

Plastic, Textile, Metal, Construction and others



Machine Description

This kind of floor type UTM with a max. capacity of 50kN has upper and lower two test spaces. The machine provides a stable test situation because of the high stiffness construction and the maintenance-free transmission mechanisms of the servo motor. The standardized machine design supports different kinds of tests with expandable accessories, meanwhile, it provides users a quiet testing environment and high precision test results.

The controller can identify different connected signals without complex setting processes automatically. The external signals are also acceptable for various machine control modes.

The machine is equipped with a jog to control precise positioning and up/down forward movement to prevent overload during the load cell calibration. For some simple tensile, compression and peeling test, the optional display can provide users a stand-alone operation without connecting to computer.

Machine Specification

Model	QC-505M2F
Max. Capacity	50 kN
Unit	Force : gf, kgf, lbf, N, kN, ozf, tonf(SI), ton(long), tonf(short) Pressure : Kpa, Mpa, psi, bar, mm-Aq, mm-Hg
Force Resolution	1/100,000 (31 bits)
Force Precision	±1% (within 2%-100% of load cell capacity; higher accuracy is optional)
Test Stroke (w/o grips)	1100 mm
Stroke Resolution	0.0001 mm
Cantilever Distance	420 mm
Speed Range	High Speed Mode : 0.05~600.0 mm/min Low Speed Mode : 0.0002 ~ 2.0 mm/min
Speed Precision	±1%
PC-Port	RJ45 (TCP/IP) [Software is optional]
Data Sampling Rate	Max. 1200 Hz
Motor	Servo Motor
Machine Stiffness	53.10 kN/mm
Hardware Safety Protection	Upper/Lower limit, Emergency Stop Button
Software Safety Protection	Force, Displacement, Time Protection
Power	Single Phase 200 ~ 240VAC · 8A
Dimension	90 x 60 x 195 cm
Weight	280 kg

Machine Feature

- Supports auto-identification load cell parameter.
- Supports auto-identification displacement accessories parameter.
- Provides screw holes for future multi-usage of other fixtures.
- The jog controller can adjust the displacement precisely and be more convenient for calibration.
- No specification limitation of PC for connecting software. It's easy for PC maintenance.
- Maximum 10-stage speed setting in one test.
- Provides defined test mode for multi-stage cyclic test, long period test, reciprocating test, and so on.

Optional Accessories - Extensometer



QC-557 Short Extensometer

Suitable for elongation below 50%

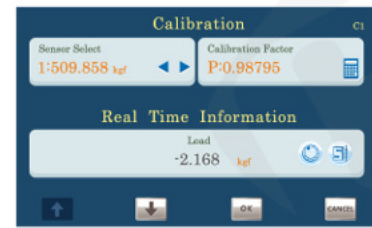


QC-551 Long Extensometer

Suitable for elongation over 20%.

Optional Accessories - Display Panel

- 7" color touch TFT display panel is used.
- Chinese, English, Japanese are supported.
- Displays force, pressure, displacement and time.
- Supports test speed, direction, auto-return, stop at the break point as test conditions.
- Can analyze max. force, interval force, force at break point, and so on.
- Provides multiple stop condition settings including force, displacement, time and elongation.
- Supports over travel, overload, overtime stop protection settings.
- Can save up to 50 test results; it also supports saving to USB.
- Restore the machine to factory setting is available.
- Can calibrate with stand-alone mode.
- Supports switching between Metric and Imperial units.

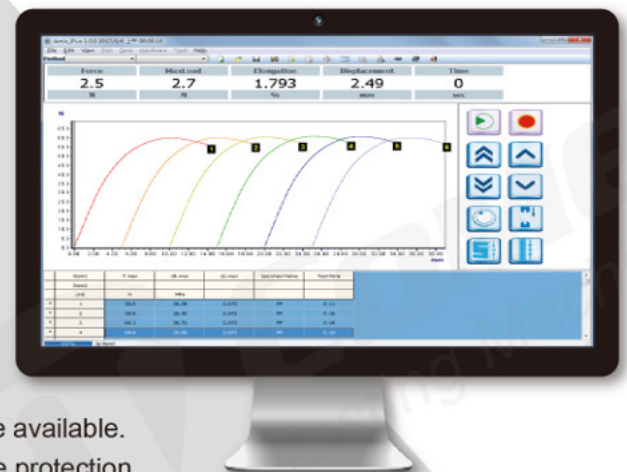


	Load	Max. Load	Disp.
	100.000	100.000	200.000
Time	Max. Load	Max. Displacement	Strength
60.000 sec	kgf	mm	kgf/mm
1	10.000	10.000	10.000
2	10.000	10.000	10.000
3	10.000	10.000	10.000
4	10.000	10.000	10.000
5	99.000	999.000	9999.000



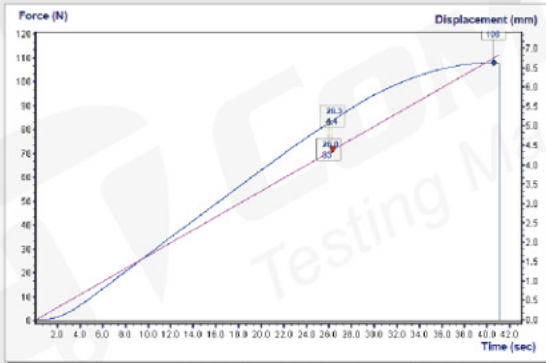
Optional Accessories - Software

- The data sampling rate is up to 1200 Hz..
- Controlled by mouse, keyboard and the up/down button on the machine to quick-adjust the position of grip.
- Windows system required.
- Chinese, English, Japanese, Korean, Portuguese, Polish, Spanish and Russian are available.
- Operation Mode: TCP/IP two-way transmission to connect with PC.
- Can import multiple test data and display at the same time.
- Supports Metric and Imperial units switching.
- Provides a flexible table for data analysis.
- Can name the data results and create a user-defined formula.
- Data can be shown through the table, graph, or both.
- Data processing: save, import, list, statistical comparison, and so on.
- The X-Y axis of the graph is adjustable including marks on the curve, interval marks, slope, and so on.
- Tensile, compression, bending, peeling, spring, creep and others are available.
- Supports over travel, overload, over time stop conditions as machine protection.
- Supports various test patterns such as reciprocation, creep, constant tensile (compression), test pause, slippage, 10-stage settings, and so on.
- Specimen modular design is for easy and quick specimen information setting.
- Test condition modular design can reduce human setting error.
- Supports upper and lower limits for data selection to get the key information.
- Supports multiple I/O ports for the additional test functions.



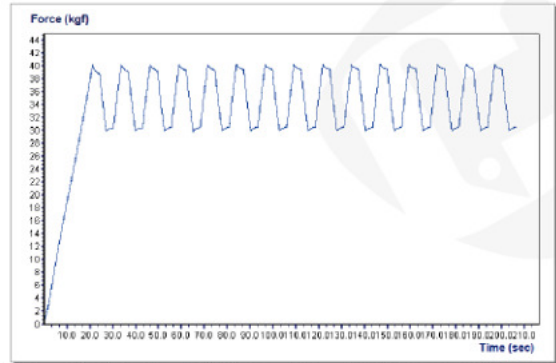
M2F - Control Capabilities

Double Curve



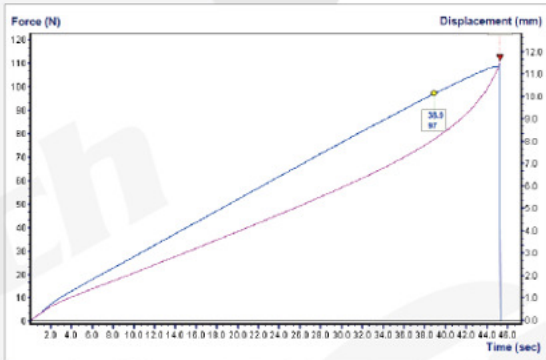
Relative parameters are referable on the shown double curves graph in real time.

Defined Test Mode



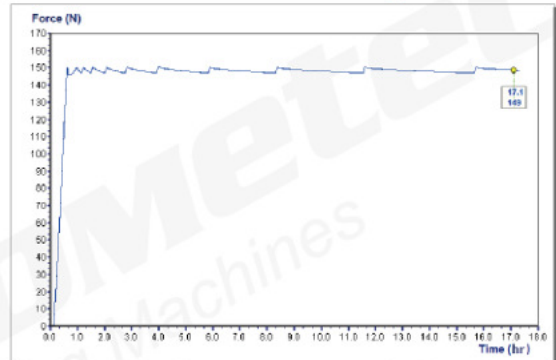
Through simple settings, it supports complex and multi-stage movements, such as displacement, force, elongation, reciprocation control, etc.

Fixed Force Rate Control



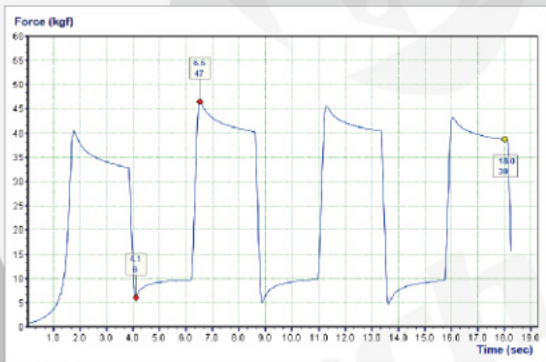
M2F has the ability to control the rate of constant force. The system calculates the force growth rate in real time, quickly changes the tensile speed, and actively analyzes the appropriate acceleration

Constant Load for Long Period

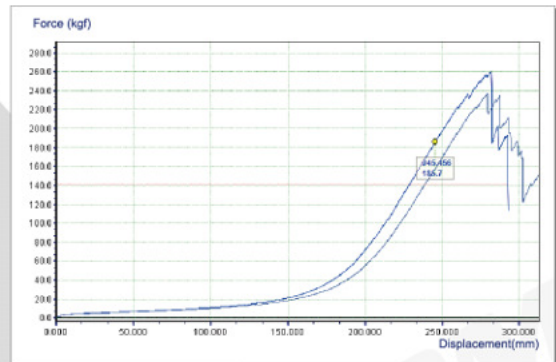


It automatically compensates the force loss during a long period constant load test. The system reduces the sampling rate to avoid overload caused by mass data.

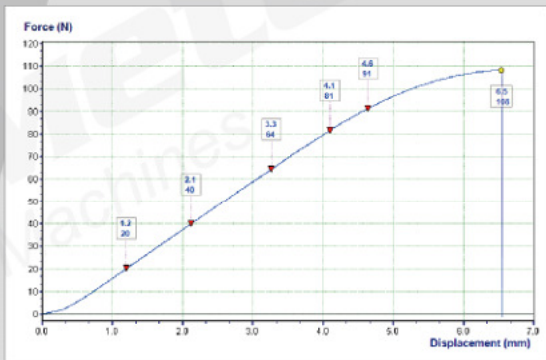
M2F - Special Analytical Capabilities



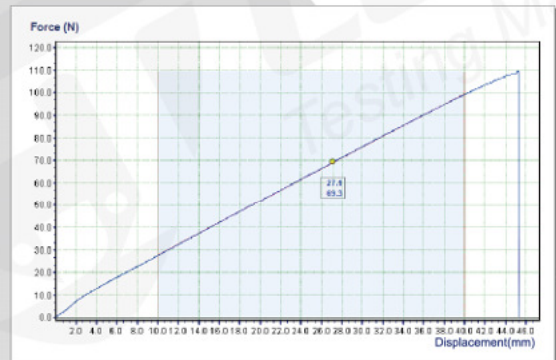
In special action modes, it can analyze the data of specific steps.



It can obtain data under specified force and displacement while doing slip test of fabric material.

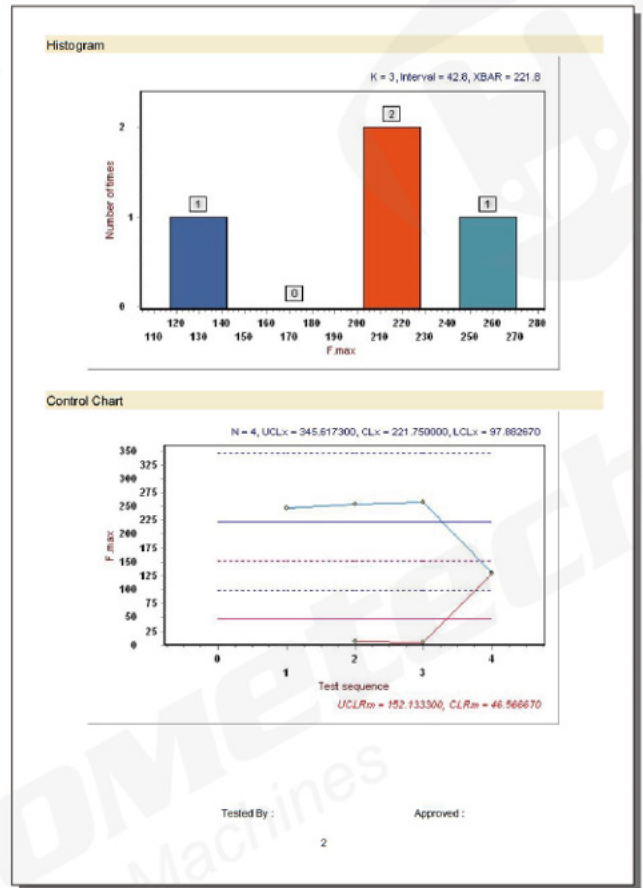
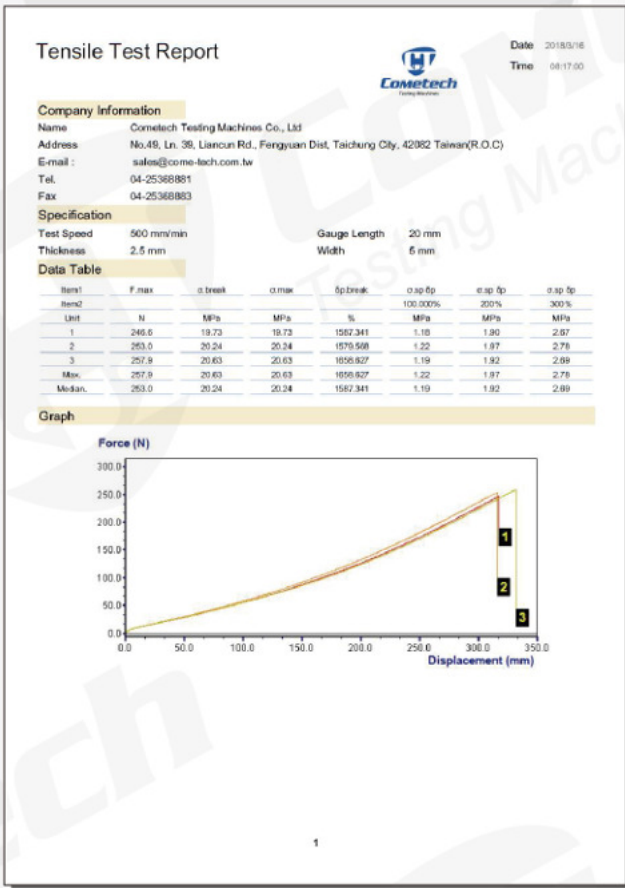


It supports manual markup of test data on curves.

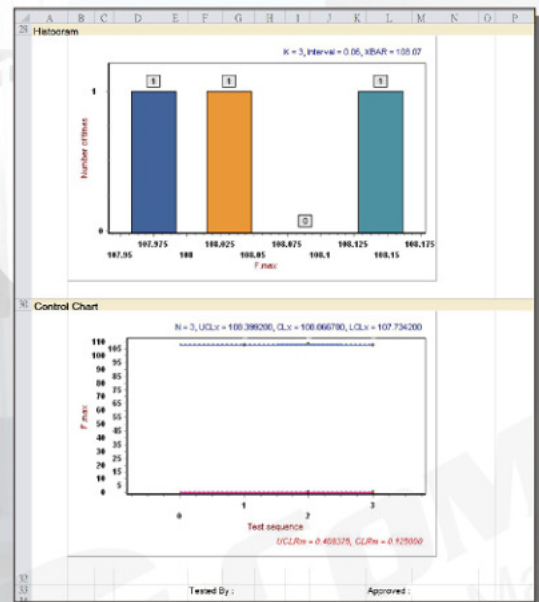
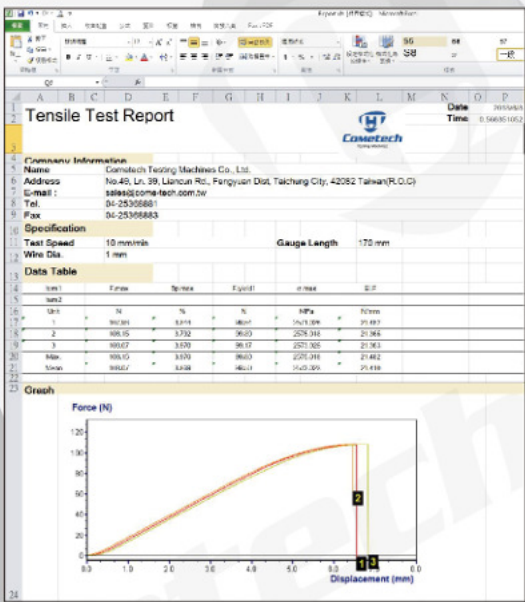


It can show the relation between force and displacement.

Software Standard Report



Excel Report



*Cometech reserves the right to modify product specification.

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