Cometech
Testing Machines

QC-505M2F (50kN) Universal Testing Machine

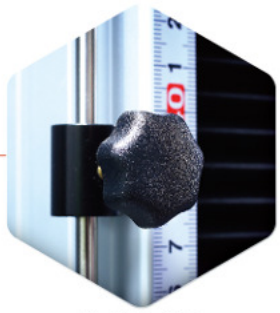
Standard

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

Industry

Plastic, Textile, Metal, Architecture

Up and down button


Limit Switch


Common Joint for Both Tensile and Compression Test

Jog controller

Description

QC-505M2F is a 50kN floor type machine with upper and lower test spaces. The rigid and standardized frame stabilize the test with high flexibility for accessory extension. The maintenance-free transmission system guarantees a good testing environment and leading to reliable test.

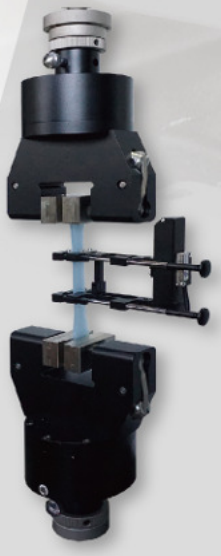
The self-identifying signals save user's time and effort to perform complicated adjustment when changing sensor elements. It is also possible to use external signals to control test start moment as well as other instructions. The jog can be used to move the crosshead at a small scale for an accuarate positioning and forc calibration in a more convenient and safer way against overload situations.

If only simple tests are required (such as tensile, compression, peeling tests), the touch-screen display can be installed optionally without the use of PC.

Specification

Model	QC-505M2F
Max. Capacity	50 kN
Units	Force : gf, kgf, lbf, N, kN, ozf, tonf(SI), ton(long), tonf(short) Stress : Kpa, Mpa, psi, bar, mm-Aq, mm-Hg
Force Resolution	31 bits
Force Precision	1/100,000
Test stroke (w/o grip)	1100mm
Stroke resolution	0.0001mm
Space between columns	420 mm
Speed range	0.0002 - 600 mm/min adjustable (Set up by PC)
Speed accuracy	High speed mode: 0.05 ~ 600 mm/min Low speed mode: 0.0002 ~ 2 mm/min
PC-Port	RJ45(TCP/IP)
Data sampling rate	1200Hz (Max.)
Hardware protection	Upper limit, lower limit, emergency stop button
Motor type	Servo Motor
Feature	※Force, displacement, time, stress, and strain display in real time ※The calibration parameter is recorded automatically in the loadcell. When it is replaced, no adjustment is required. ※The displacement sensor can be recognized by the controller automatically. When it is replaced, no complicated setting is required. ※User-friendly test settings: moving direction, force/displacement zeroed automatically, test speed, pause are adjustable. ※Automatic return after the test ※Machine protection by force, time, displacement, etc. ※The jog precisely controls displacement. ※Optional display is available for stand-alone mode. ※In user-defined mode, cyclic test and test in a long duration can be achieved.
Power Supply	Single phase 200 - 240 VAC, 8A
Dimension	105 x 60 x 195 cm
Weight	360 kg

Optional Accessories (Extensometer)



QC-557 Short Extensometer

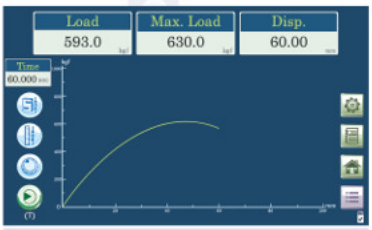
For elongation lower than 50%

QC-551 Long Extensometer

For elongation higher than 20%

Optional Accessories (Display)

- 7- inch of TFT colored touch screen
- Chinese, English, Japanese available
- Data display: Force, stress, torque, displacement, time
- Test setting can be adjusted: test speed, test direction, automatic return, stop at breaking point and so on
- Data analysis: Maximum force, interval force, force at breaking point and so on
- Settings to stop machine: Force, displacement, time, elongation
- Up to 50 data can be saved by USB
- Machine can be stopped at excessive displacement, capacity and time
- Machine can be rebooted
- Unit can be metric or imperial
- Multiple signals can be admitted
- Calibration on stand-alone mode



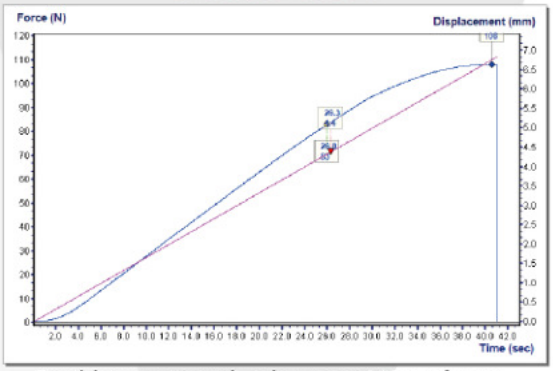
Software

- Controlled by mouse and keyboard. Grips can be moved by up/down buttons on the machine
- Chinese, English, Japanese, Korean, Spanish, Polish, Portuguese available
- Operation: TCP / IP two-way transmission. Machine controlled directly through PC
- Data' s name can be modified and formula can be created
- Data can be shown through table, graph or both
- Multiple test data can be shown at the same time
- Flexible test table for user' s preference
- Compatible with Window 7/8/10
- Data sampling rate up to 1200 Hz
- Modularization of specimen data
- Unit can be metric or imperial
- Multiple I/O signals can be admitted
- Data processing: Save, call, list, statistical comparison, etc.
- Graph' s parameter on X-Y axis can be adjusted: point marked on curve, interval marked, slope
- Tensile, compression, bending, peeling, spring, creep and other tests available

- Protection from excessive displacement, capacity and time by software setting
- Various test patterns ex. reciprocation, creep, hold tensile (compression), test pause, slip test, etc.
- Modularization of test conditions to reduce unwanted mistake and errors
- Upper and lower limits on data settings for useful data

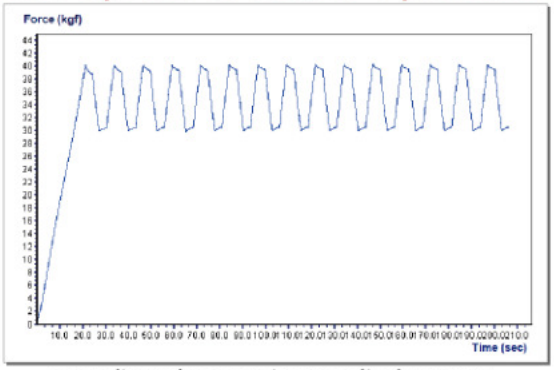
M2F feature

Double curve



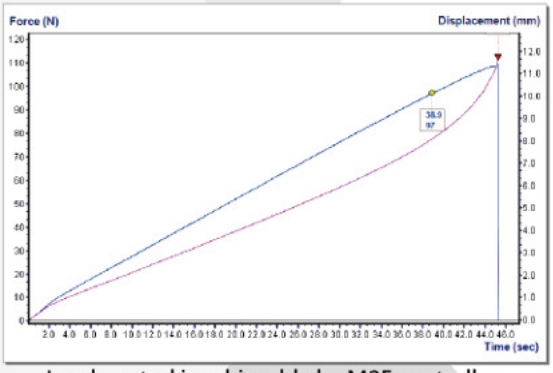
Double curves can be shown on M2F software.
Different parameters are visible on real-time graph.

Test steps based on user's preference



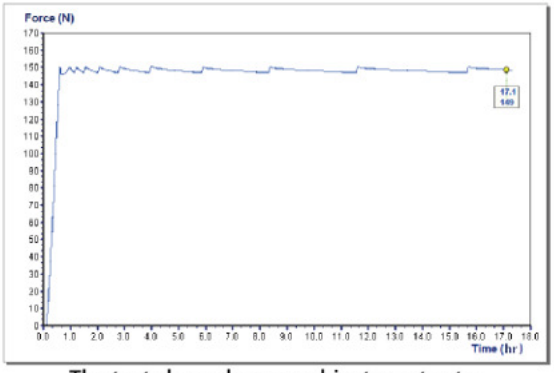
Complicated test settings on displacement,
force, elongation, reciprocation,
and so on are practicable by the sophisticated M2F controller.

Load control



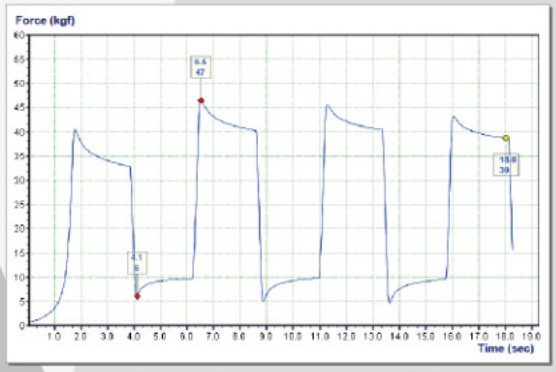
Load control is achievable by M2F controller.
The system controls force increase rate for an instant adjustment
on test speed by analyzing acceleration.

Steady force for a long period (creep)

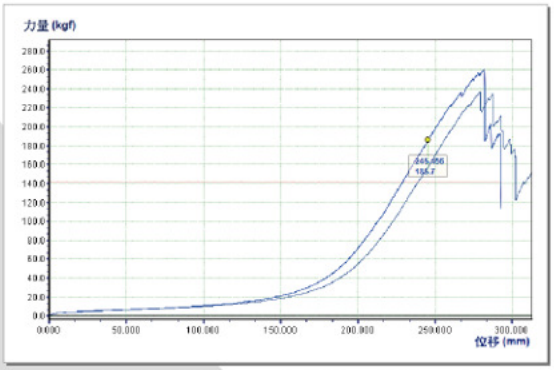


The test shows how an object reacts at a
external steady force for a long period.
When the force drops the system detects it and exerts extra force.
The system reduces sampling rate to avoid unnecessary data storage in PC.

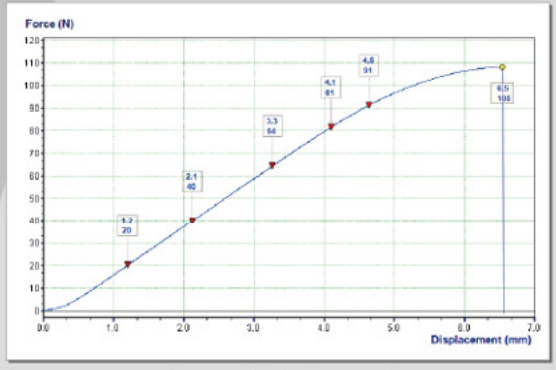
M2F specialties



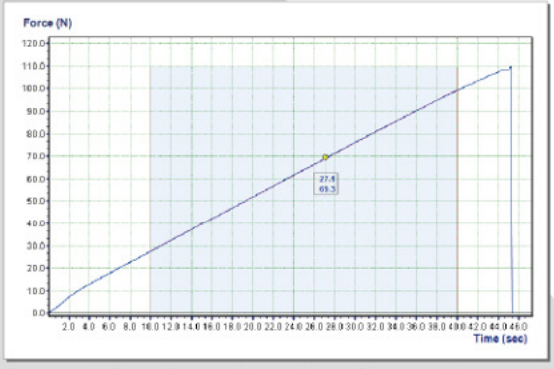
Data analysis in special test steps



Slip test for fabric material to obtain data
under specified force and displacement



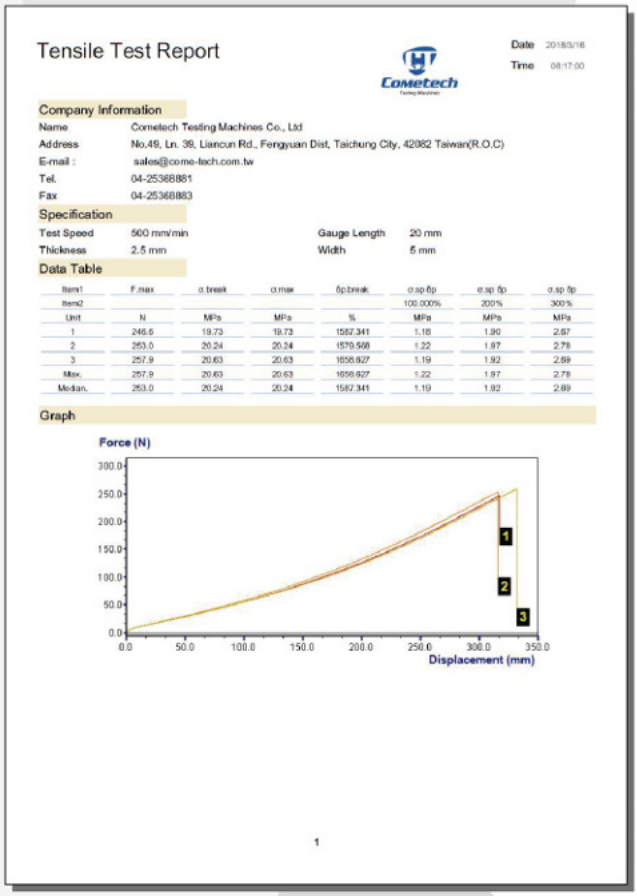
User marks specified data on the curve



The software shows how change of
force is relevant to change of length

Report

Built-in format



Tensile Test Report

Cometech

Date 2018/3/16
Time 08:17:00

Company Information

Name	Cometech Testing Machines Co., Ltd
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E-mail :	sales@come-tech.com.tw
Tel.	04-25368881
Fax	04-25368883

Specification

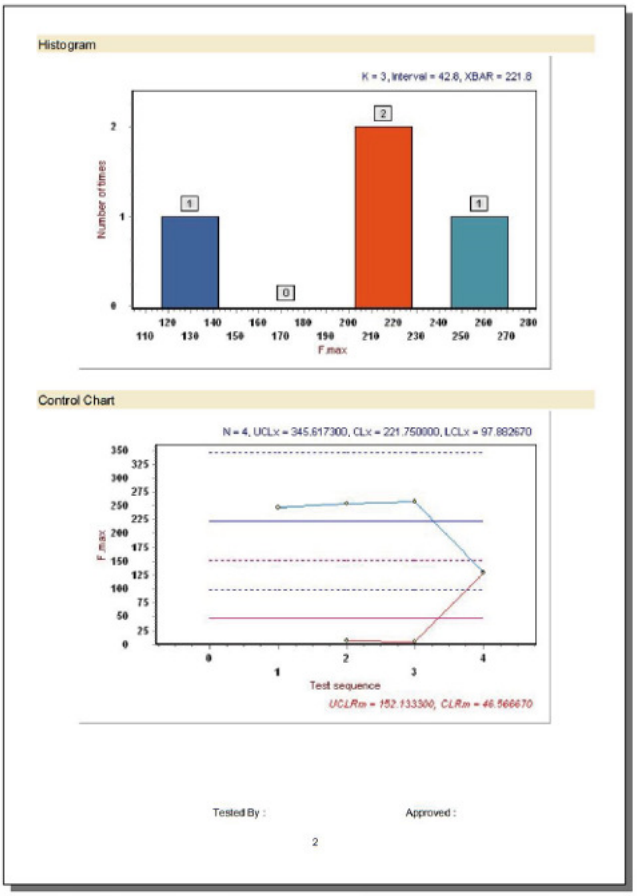
Test Speed	500 mm/min	Gauge Length	20 mm
Thickness	2.5 mm	Width	6 mm

Data Table

Item1	F.max	σ.break	σ.max	δp.break	σ.sp δp	ε.sp δp	σ.sp δp
Item2					100.000%	200%	300%
Unit	N	MPa	MPa	%	MPa	MPa	MPa
1	246.6	19.73	19.73	1587.341	1.18	1.90	2.67
2	253.0	20.24	20.24	1579.568	1.22	1.97	2.78
3	257.9	20.63	20.63	1656.927	1.19	1.92	2.69
Max.	257.9	20.63	20.63	1656.927	1.22	1.97	2.78
Median.	253.0	20.24	20.24	1587.341	1.19	1.92	2.69

Graph

1



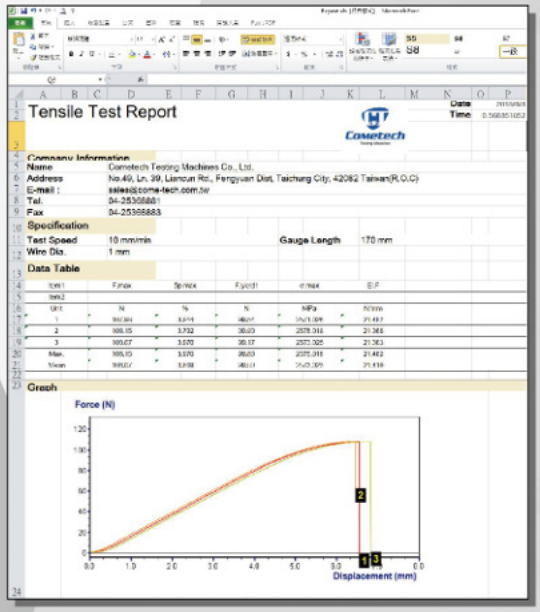
Histogram

Control Chart

Tested By : Approved :

2

Excel format



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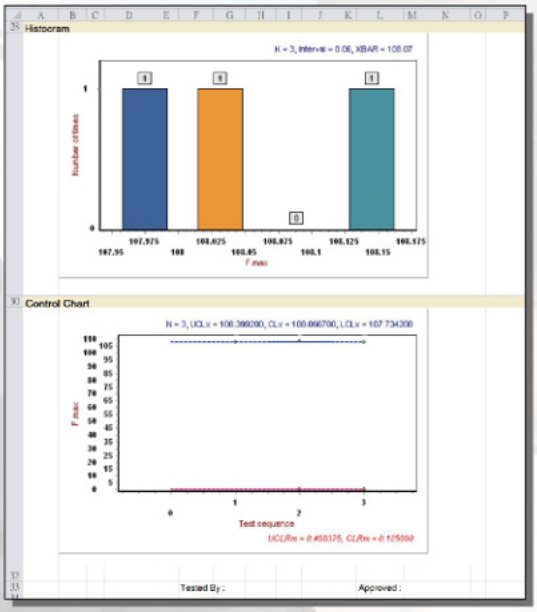
E-mail :	sales@come-tech.com.tw
Tel.	04-25368881
Fax	04-25368883

Specification

Test Speed	10 mm/min	Gauge Length	170 mm
Wire Dia.	1 mm		

Data Table

Graph



Histogram

Control Chart

Tested By : Approved :

*Cometech reserves ultimate modification right of product specification.

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