

UTM-66A/B Tensile Testing Machine



Uses

This machine also known as a materials testing machine , is applicable to testing tensile, compression,bending,peel, shearing force, peeling force, modulus of elasticity,and elongation of materials, components, and finished product for metal, plastic, rubber, textile, synthetic chemicals, wire and cable,leather,package,tape, film,solar cell,ect.

Character

1. The structure is made of the paint-coated aluminium blanking plate. The interior is used the high-accuracy,low-resistance and zero clearance of two ball screw and oriented pole which improve loading efficiency and structure rigidity.
2. Use Panasonic servo motor which ensure high efficiency,steady transmission and low noise. The accuracy of speed can be controled in 0.5%.
3. That using the business computer as the main control machine plus the special testing software of our company can conduct all of testing parameter, work state, collecting data&analysis, result display and printing output.

Accessories

- 1.Suitable Grips that meet customer sample need.
- 2.Software for test control,data acquisition and report.
- 3.English operation teach video.
- 4.Tabel,computer is selectable.
- 5.Extensometer as customer need.

Software functions

1. Use windows working platform, set all parameter with dialog forms and operate easy;
2. Using a single screen operation, do not need to change the screen;
3. Have simplified Chinese, traditional Chinese and English three languages,switch conveniently;
4. Plan test sheet mode freely;
5. Test data can be directly appeared in the screen;
6. Compare multiple curve data through translation or contrast ways;
- 7.With many units of measurement, the metric system and british system can switch;
- 8.Have automatic calibration function;
- 9.Have user-defined test method function
- 10.Have test data arithmetic analysis function
11. Have the function of automatic magnification, to achieve the most appropriate size of graphics;

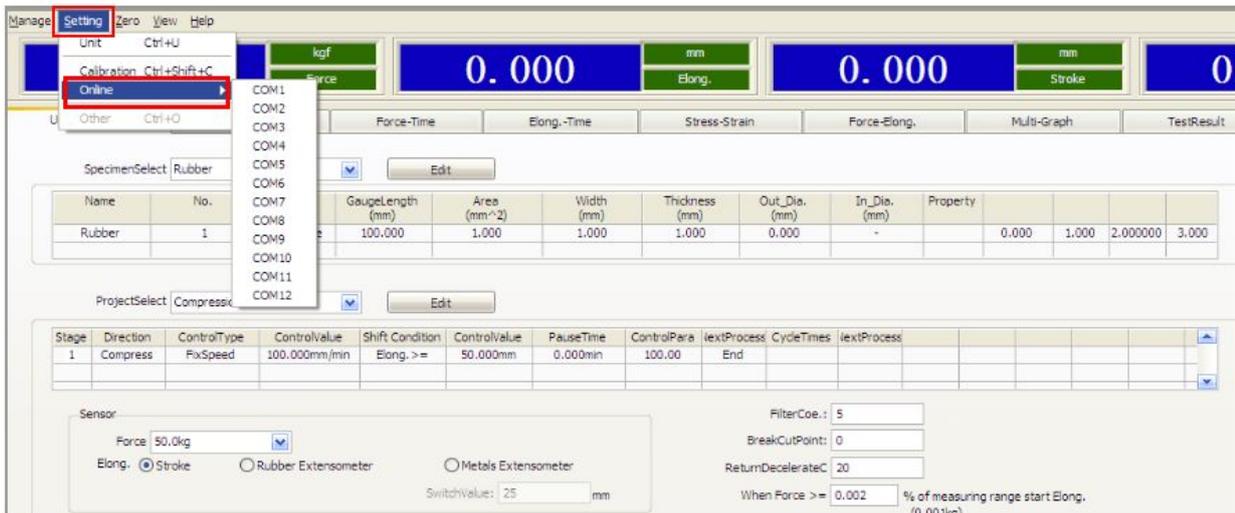
Specification

Design Standards	GB16491-2008,HGT 3844-2008 QBT 11130-1991,GB 13022-1991,HGT 3849-2008,GB 6349-1986 GB/T 1040.2-2006 2411,ISO 4587, ISO/TS 11405, ISO 527,ASTM E4,BS 1610,DIN 51221,ISO 7500,EN 10002,ASTM D628,ASTM D638,ASTM D412	
Model	UTM-66A	UTM-66B
Range of speed	0.1-1000mm/min	50-500mm/min
Motor	Japan Panasonic Servo Motor	Taiwan Chengbang AC motor
Capacity choice	5, 10, 50, 100, 200, 500, 1000, 2000, 5000 kG	5, 10, 50, 100, 200, 500, 1000, 2000 kG
Resolution	1/250, 000	1/150, 000
Effective testing space	400mm MAX	
Test Stroke	1200mm MAX	
Accuracy	±0.5%	
Operation method	Windows XP,Win7 operation,computer control	

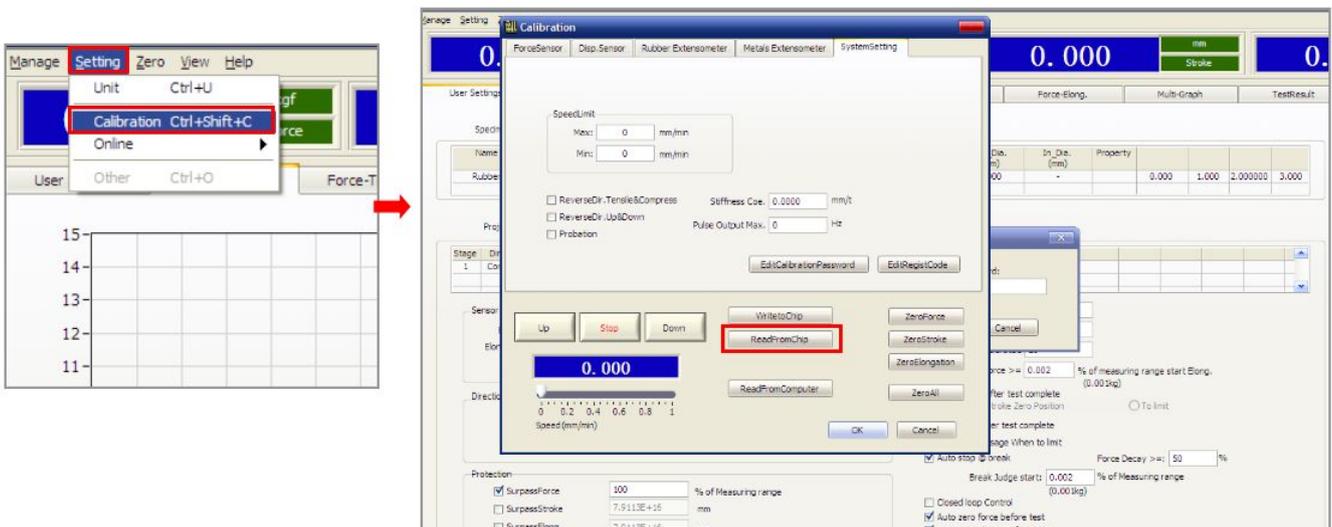
Optional accessories	customized clamps by appointed, force sensors, , printer, and operation manual
Weight	250KG
Dimention	(W×D×H)80×50×150 cm
Power	1PH, AC220V, 50/60Hz
Stroke protection	Upper and lower protection, prevent over preset
Force protection	system setting
Emergency stop	Handling emergencies

Software Introduction:

1. Connect tensile tester with computer well, open software, Press Setting-Online-COM1.....



2. Calibration, Press Setting-Calibration, input password, and enter calibration menu, Press ReadFromChip, Press OK, the software will read from tensile tester chip



3. Input the Specimen shape, size.....

Material Table:

Name	No.	Shape	Gauge Length (mm)	Area (mm ²)	Width (mm)	Thickness (mm)	Out_Dia. (mm)	In_Dia. (mm)	Property
Rubber	1	Rectangle	100.000	1.000	1.000	1.000	0.000	-	
Rubber2	2	Rectangle	200.000	20.000	10.000	2.000	0.000	-	
Metal	1	Round	100.000	0.785	-	-	1.000	-	

SpecimenSelect Table:

Name	No.	Shape	Gauge Length (mm)	Area (mm ²)
Rubber	1	Rectangle	100.000	1.000

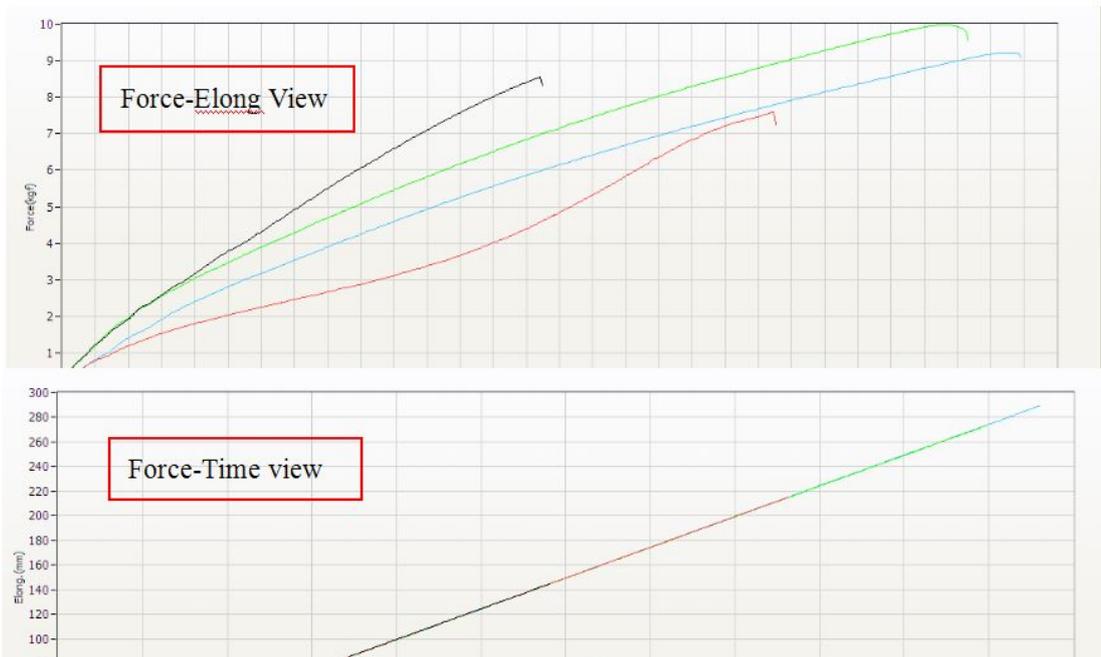
ProjectSelect Table:

Stage	Direction	ControlType	ControlValue	Shift Condition	ControlValue
1	Compress	FixSpeed	100.000mm/min	Elong. >=	50.000mm

Material Dialog Box:

Name: Rubber Shape: Rectangle
 No.: 1
 Gauge Length: 100 mm BrokenGaugeLent: 150 mm
 Area: 1 mm² RoundRadius: 0 mm
 Width: 1 mm Thickness: 1 mm
 Out_Dia.: 0 mm In_Dia.: 0 mm
 Para1: 1 Para3: 3
 Para2: 2 Para4: 4

6. In software, you can see different testing views, like Force-Elong(Displacement), Force-time, Multi-graph...



5. Set Unit

The 'Unit' dialog box is shown with the following settings:

Parameter	Unit	Precision
Force	kgf	3
Length	mm	3
Time	s	3
Stress	MPa	3
Force/Length	N/mm	3
Speed	mm/s	3
Area	mm ²	3
Energy	J	3
Energy/Area	J/mm ²	3
Force Rates	N/min	3
Stress Rates	MPa/s	3
Strain Rates	%/min	3
Strain	%	3
Percentage	%	3
Other		3

8.If you need to add test items of testing,or need to add formula,please choose Edit.Choose the test items you need,Press Insert-OK,save it.Or Press Edit to add formulas.

The 'User Settings' dialog box shows the following data table:

No.	Max Force (kgf)	Tensile Strength (kPa)	Elongation percenta (%)
1	8.550	352297.721	577.057
2	7.585	312535.463	859.065
3	9.985	411426.051	1062.848
4	9.220	379904.676	1140.539
Maximum	9.985	411426.051	1140.539
Minimum	7.585	312535.463	577.057

The 'Result' dialog box shows the following table:

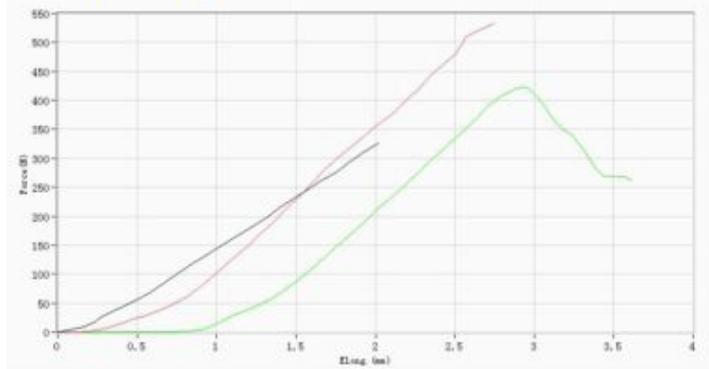
Name	Max Force	Tensile Strength	Elongation percentage @ peak
Unit	kgf	kPa	%
Results Options	force @ Peak	Tensile Strength	Elongation percentage @ peak

The 'NameList' on the left includes:

- Tensile Strength
- Peel Test
- Bending Test
- RMS @ Peel interval
- SDEV @ Peel interval
- MaxForce @ 1st interval
- MinForce @ 1st interval
- AvgForce @ 1st interval
- MaxForce @ 2nd interval
- MinForce @ 2nd interval
- AvgForce @ 2nd interval
- MaxForce @ 3rd interval
- MinForce @ 3rd interval

9. Test Report Form (For Example)

1. Customer: Yang
2. Test Date: 2013-3-8, 10:18:10
3. Lot No.: 00000001
4. Material Name: Compression
5. Operator: Mingo
6. Material: Rubber
7. Test Speed: 50.000mm/min



No.	Force @ Peak (N)	Elong @ Peak (mm)
1	325.97	2.019
2	532.78	2.744
3	423.12	2.937
Maximum	532.78	2.94
Minimum	325.97	2.02
Mean	427.29	2.57







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