

Universal Tensile Test Machine

ASTM F88 - Peeling Test Equipment



Product Definition:

This Series of Universal Tensile Tester are applied to all kinds of material testing hardware like metal, rubber and plastic materials, shoes, leather, clothe, textiles, yarns, an insulator, wire and cable, for many kinds of materials. It could be test of various standard measurement method, for example, stretch, tear, strip, anti-pressure, bend an-shear, three point an-broken.

Working Principle:

- This machine is a kind of electric tensile tester which uses the motor to drive ball screw to move fixture.
- Place the sample between the upper and lower fixture, use a given speed to pull the upper fixture upward, and the upper load cell with sensor to check tensile strength and convert the strength into voltage sign and output to the display screen.
- And the strength value will be displayed automatically on the computer.

Standards:

ASTMD903, ASTM F88, GB/T16491, GB/T1040, GB/T8808, GB13022, GB/T 2790/2791/2792, CNS- 11888, JIS K6854, PSTC-7 etc.

Features:

- Adopting windows platform, and all the parameter settings can be processed in the dialog box, and it operates easily;
- Using a single-screen operation; do not need to switch the screen;
- With three languages in Simplified Chinese, Traditional Chinese and English, the software interface can be switched easily;
- The pattern of Test reports can be self-designated; test data can be displayed directly in the main screen;
- Choosing translational, comparative mode at the same time to make a number of curve data comparison;
- With a variety of measurement units, Measure in Imperial & Metric are switchable;
- With self-return & auto-correction function;
- With automatic magnification function, in order to achieve the most appropriate size of the graphics.

Technical Parameter:

ITEMS	TENSILE STRENGTH TESTING MACHINE
MODEL	RC-601
CAPACITY	2, 5, 10, 20, 50, 100, 200,300Kg
UNIT	G, KG, N, LB can be exchanged
ACCURATE GRADE	0.5grade
DISPLAY DEVICE	PC
RESOLUTION	1/250,000
EFFECTIVE ACCURACY	±0.2% (0.5grade)
MAX. STROKE	600mm
SPEED RANGE	0.01-500mm/min (adjustable)
MOTOR	Servo Motor + High Precise Ball Screw
ELONGATION ACCURACY	0.001mm
POWER	AC220V, 50/60Hz (customize)
STANDARD ACCESSORIES	Tensile clamp, Tool kit, Computer system, English software CD, User manual

ASTM F88- Standard Test Method for Determining Tensile Adhesion Properties of Structural Sealants

Scope:

The ASTM F88 method covers the measurement of the strength of seals in flexible barrier materials. It is conducted on seals between a flexible material and a rigid material. Seals tested may be from any source, laboratory or commercial. ASTM F88 measures the force required to separate a test strip of material containing the seal.

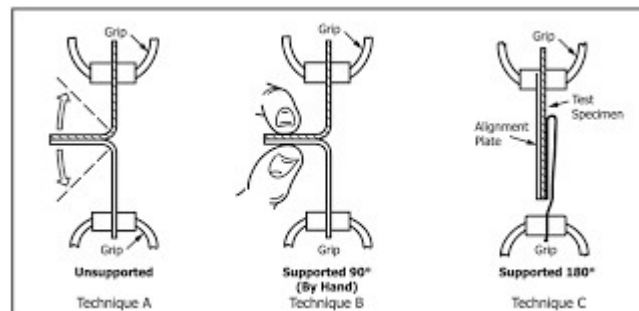


FIG. 1 Tail Holding Methods

Test Procedure:

ASTM F88 is conducted on a universal testing machine (also called a tensile testing machine) at a rate between 200 and 300 mm/min (8 to 12 in/min). The standard calls for the calculation of two measurements.

The maximum seal force and average force to open the seal are calculated in ASTM F88 and are reported. A portion of the force is measured while testing materials using a bending component.

A number of fixtures and techniques have been devised to hold samples at various angles to the pull direction to control this bending force. Because the effect of each of these on test results is varied, consistent use of one technique (unsupported, supported 90° by hand, or supported 180°) is recommended throughout the process.

Sample size:

ASTM F88 covers the measurement of the strength of seals in flexible barrier materials. It is conducted on seals between a flexible material and a rigid material.

Data:

The values in ASTM F88 are standardly stated in either SI units or inch-pound. These values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other.

Machine Control Device Configuration Image:

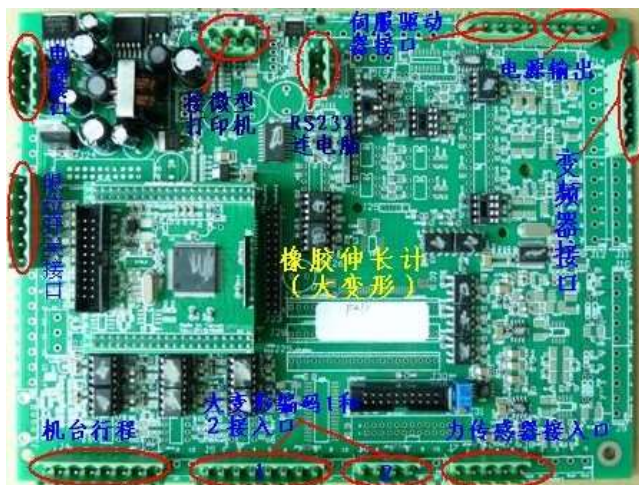


Machine Parts & Software Technical Configuration:

Main Unit

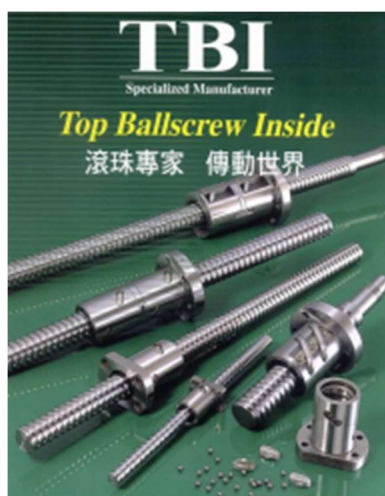
The drive system consists of servo control reduction motor, arc synchronous belt, ball screw, moving steadily, high working efficiency, low noise, no pollution.

Newest control board card, own better sampling rate

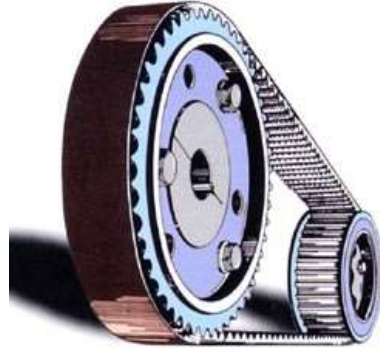


All input and output interfaces adopt high-speed optoelectronic isolation technology with strong anti-jamming capability.

Taiwan TBI ball screws, better monitor the accuracy



Servo-drive, ensure revolve smoothly and steadily



Professional CNC processing technical, ensure best product precision and quality.



Electrical measurement and control system

1. With protect function of overload, over current, over voltage, displacement limit, emergency stop etc.
2. The controller can control more load sensor, high integration, stable and reliable, easy to adjust.
3. When finished testing, automatic stop.
4. Control system with programmable amplifier A/D conversion, digital I/O, counting and pulse happen (PWM), and other functions in one.
5. Mechanical zero setting, automatic force measurement, zero setting, calibration and save, highly integrated control circuit.

Software and software interface

1. Based on Windows operation platform, the software adopting modulus design, with simple operation and powerful functions
2. The control panel has defined all the control parameters, data dealing method and report content also the form, different test can be set according to the control panel.
3. Program adopting open database structure, integrated the GB, ISO, ASTM, JIN, DIN testing methods and can customized according to special requirements
4. With internet interface, can transmit, save and print data. Can connect enterprise Internal LAN and Internet.
5. Can edit and set the report form freely, also can print out the testing data.

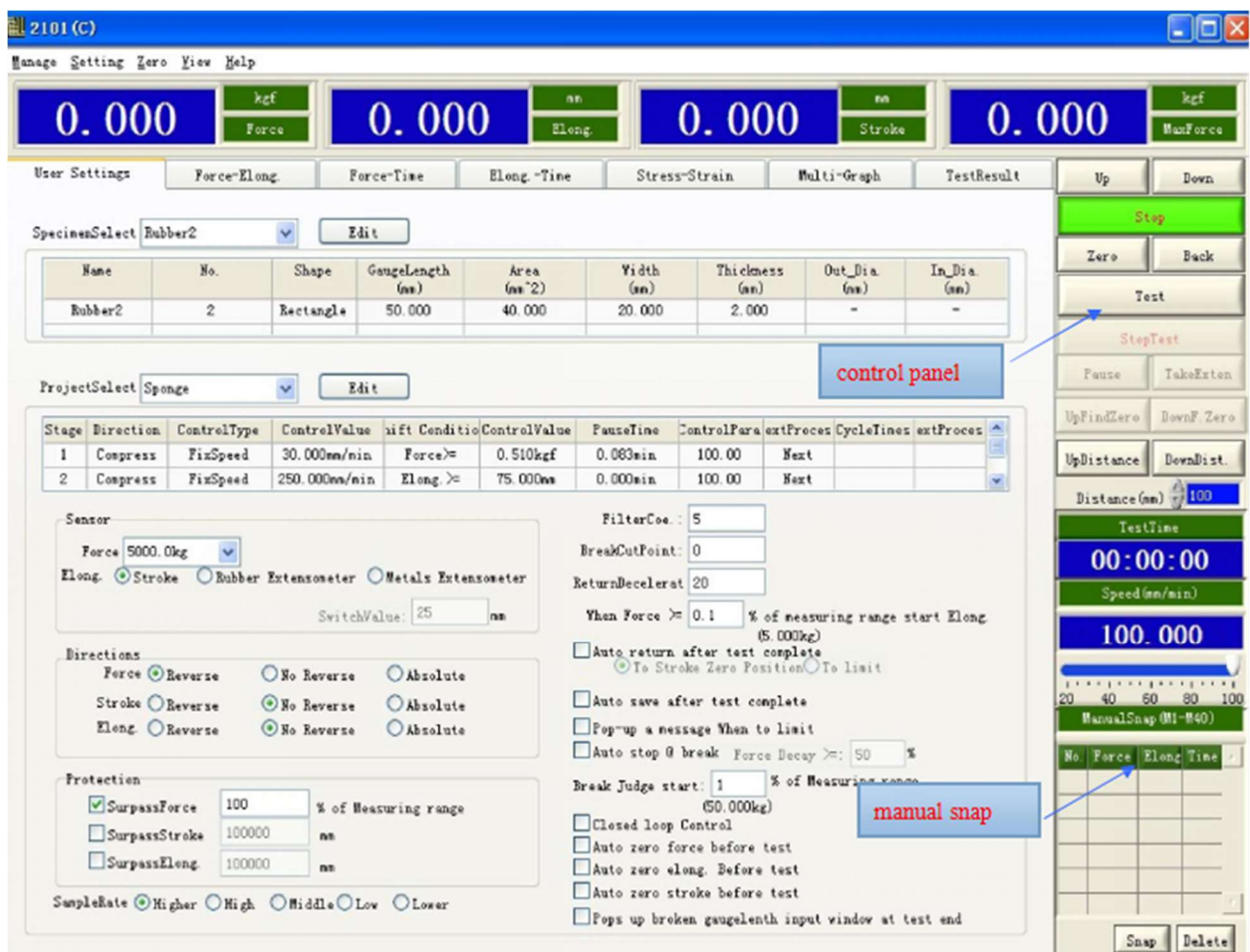


Figure 1.1 – Software Interface

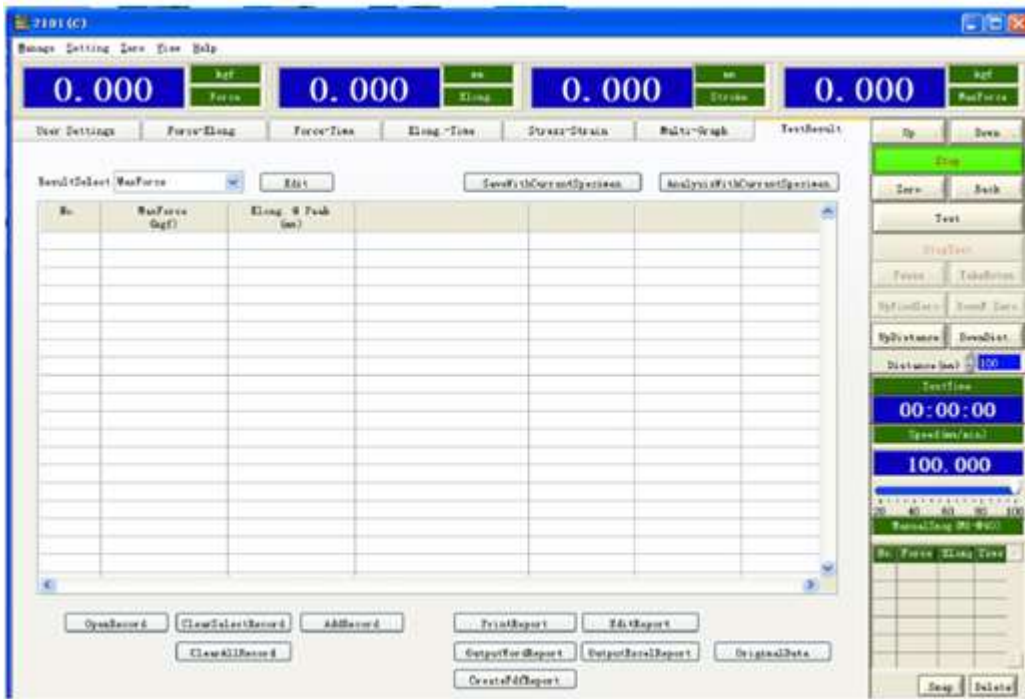


Figure 1.2 – Software Interface

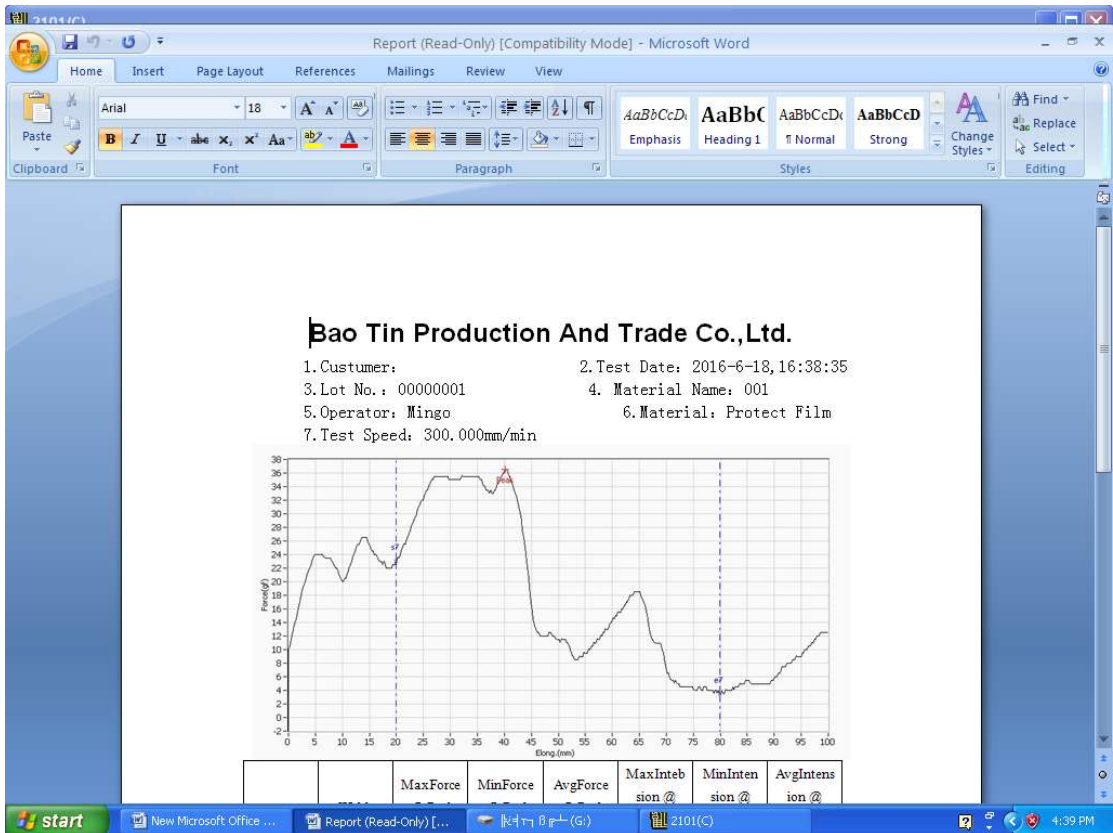


Figure 1.2 – Report Format (Editable in words version)