

# Automatic Universal Testing Equipment

**Ye Chance**

*Design & manufacture materials  
Testing Equipment.*

- *An instrument automatically operated by computer programs.*
- *Meet the ASTM and CNS testing standards.*
- *Operation procedures simplified by the adoption of group testing.*
- *Appropriate for testing the stretch, compression and blending of materials.*
- *A variety of models from 20 to 200 tons.*
- *Complete capability to process test report.*
- *Data figures can be saved in diskette for permanent archives.*



## *Specifications:*

Operation: the computer does all the works automatically provided that the master power switch should be turned on/off manually.

Display: Computer monitors.

Testing methods: Groups testing method with a maximum of 15 specimens (rods) for each group.

Range control: The range of stress and strain diagram is adjusted automatically by the program, which switch the steps in accordance with the actual force imposed on the specimens (rods), No range button is needed to be chosen manually.

Overload shutdown: The top threshold of load is 97%.

Load segments: There are 11 electronic segments for the instrument load switched automatically by the program, including 0 to 5%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90% and 100%.

Linear Variable Differential Transformers:

Compression Test LVDT: 0 – 50 mm (Standard device). Resolution: 0.003 mm/div.

Extensometer LVDT: 0 – 15 mm (Optional device). Resolution: 0.001 mm/div.

Calibration accuracy: Within the range of  $\pm 1\%$ .

Minimum reading:

Load value: 1.0 kgf/div.

Stress value: 0.1 kgf/sq.mm/div (for strain test).

Stress value: 1.0 kgf/sq.cm/div (for Compression test). Deformation: 0.01 mm/div.

Strain value: 0.01 %.

Gross weight of mechanism: Automatic deduction.

Full automation: The interactive software performs the operating procedures automatically. For example, all the tasks involved in the oil motor, such as start or stop, pressurization or pressure-relief, pressure velocity, start/end point of test, are detected and recognized automatically by the computer program.

Velocity control:

Stroke control: (look for specifications of different instrument types)

Stress control: 0 – The maximum load is finished in 1 second (for steel materials), and may be set to kgf/cm<sup>2</sup>/sec or ? kgf/mm<sup>2</sup>/sec when testing.

Velocity display: Stress pressurizing velocity (kgf/sq.cm/sec, kgf/sq.mm/sec) and strain pressurizing velocity (mm/min).

Hydraulic control: To lower the noise in the control compartment, the hydraulic has been under the control of computer program. During test, the computer program will start or stop the hydraulic automatically to keep quiet.

Control parameters: The control parameter files can be created as many as possible in accordance with the various tests standards (CNS, ASTM, etc.). before test, you may select on of the files for the computer program to performing test in accordance with the contents of parameters.

Test loops: When specimens (rods) have been placed on the test bench, the operator needs only to press the control button on screen, the computer program will automatically perform the testing procedures in accordance with the control parameters specified by the operator.

Test report: The formal testing report card is printed each time when a batch of specimens (rods) has completed test.

Stress and strain diagram: The dimensional fitting program for lines or curves self-determined is provided, that can accurately fit the tested values of various stress paths to make up continuous lines or curves.

Data access: The specified disk drives.

Test report: Access to a complete report (measured in group).

Stress and strain diagram: Access to Single specimen (rod).

Pressure power: Hydraulic system.

Pressurizing method: Stroke control and pressure loop automatically handled by computer program.

Pressure relief method: Speedy-positioning loop of pressure relief automatically handled by computer program.

Cooling system: Air-cooling liquid pressure heat sink with automatically electronic control.

Control range of computer program: Start and stop of the oil motor, start and stop of the cable rack motive motor, pressurization and pressure relief of the liquid pressure system, positioning and monitoring of the travel of piston, control and adjustment of pressure velocity, automatic switch system of high and low load detector, automatic step switch for the range of stress and strain diagram and display value, and automatic return to zero for the systems in the instrument.

Safety devices:

For program control: Automatically stop when overloaded (tested values reserved); Error operation directives are corrected automatically; automatically scan the piston to determine whether it is in the safety strokes; Automatically return the mechanism and probe system to zero before each test is performed.

For safety circuit: The fuses have been installed on separate power output systems; the piston moves with the stroke limit circuit installed.

Electric power: 220 VAC, 50/60 Hz., 3 Phases.

### *The specifications of different instrument types:*

Model	UTM20AS	UTM30AS	UTM50AS	UTM120AS	UTM200AS
Maximum Load (kg)	20,000	30,000	50,000	120,000	200,000
Pressure Transducer (kg)	20,000	30,000	50,000	120,000	200,000
Resolution of Pressure (kg/div)	1.22	1.83	3.05	7.30	12.2
Minimum Reading (kg)	1.0	1.0	1.0	1.0	1.0
LVDT (mm)	0 – 250 mm, 0.015 mm/div (For trisection bending resistance)				
Calibration Accuracy (%)	Within the range of +/- 1.0				
Computer System	Celeron 2.2GHz, 256MB DDRAM, 15" CRT color monitor, 40GB HDD, 52X CD-ROM				
System Software	Interactive software package specific to the universal testing machine.				
Operation Method	Full automatic operation with computer program. (Except that the master power switch should be turned on/off manually, all the procedures are handled by the computer, in addition, the stress or strain control can also be selected)				
Information Display	Color monitor.				
Stretch	Maximum Spacing mm	800	800	900	1000
	Tie bar Diameter mm	57	57	76	90
	Circle Clamp mm	6-30	8-40	10-55	10-70
	Parallel Clamp Wait mm	60, 0-20	60, 0-30	70, 0-30	80, 0-60
Comp	Maximum Spacing mm	800	800	900	1000
	Compression Plate dia mm	100	100	160	160
Bending	Maximum Spacing mm	600	600	600	700
	Height of Test Bench mm	130	130	150	190
Travel of Piston mm		250	250	250	250
Distance between Tie bars mm		500	500	600	630
Move Speed of Cable Rack mm/min		200	200	200	200
Pressurizing Velocity mm/min		0 – 150	0 – 150	0 - 150	0 - 72
Pressure Relief Velocity mm/min		Over 80	Over 80	Over 80	Over 80
Oil Motor HP		1.0	1.0	2.0	2.0
Lifting Motor HP		0.5	1.0	1.0	1.0
Power Supply		220VAC., 60HZ. 3PHASE			
Dimensions (about: W x D x H) cm		138 x 58 x 185	144 x 58 x 205	152 x 68 x 210	170 x 80 x 250
Weight (about: kgs)		1900	2000	2250	3500

Notes: No notification will be given while the specifications changed.



# Ye Chance

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# Automatic Multi-Function Tester

## The Instrument



MAKER: YE CHANCE 30N AMFT-04961111-49  
 MODEL: MFT1210F VERSION: 4.03.0001 (DL)  
 DATE: 20010603 POWER: 220 VAC, 60 Hz, 3 P

## Control Buttons

Compression Test(A)	Compression Data(E)	Correct Pressure(K)
Flexure Test(B)	Flexure Data(G)	Correct Flow(L)
Tensile Test(C)	Tensile Data(H)	Valves Report(M)
Poisson's Rate Test(I)	Test Report(J)	Our Products(N)
Correct Sensors(E)	Test Data Path(B)	Exit(O)

## Manufacturer



**YE CHANCE**

Address: Ring Ting Rdg. 2F-1, 4A St., 1 Hu-Ping East Road, Taipei, Taiwan  
 TEL: 886-2-2706-8835 FAX: 886-2-2706-7671  
<http://www.yechance.com.tw> E-mail: sales@yechance.com.tw

## Data Files Select Program for Tensile Test

### Specimens Information

ID	Diameter mm	Height mm	Width mm	Area sq mm	Gage L mm	Code #	Code D	Kind Code
Test-01		0.0	0.0	0.001	0.0	#0	D0	
Test-02		0.0	0.0	0.001	0.0	#0	D0	
Test-03		0.0	0.0	0.001	0.0	#0	D0	

### Stress Speed

2.00  
kg/514 mm/sec

### Amount of Sample

1

### Strain Speed

.20  
%

### File Name

Test

### Type of Display

☐ Show Old File  
☒ Build New File

### Material

☒ Node Metal Bar  
☐ Round Metal Bar  
☐ Rectangle Metal

### Test Standard

☒ CNS  
☐ ASTM

### Process

☒ Original  
☐ Polished

### Control Buttons

Yes(Y) Cancel(C)

### Title Information

Project  
 Contractor  
 Estimated By  
 Test Identity  
 Construction  
 Receive Date: 2106/04/21

### Title Code

1  
2  
2  
4  
5  
4

### Manufacturer



**Data Curve**

500  
400  
300  
200  
100  
0

0.0 1.0 2.0 3.0 4.0 5.0

**Unit of Measurement**

☐ 公制單位 ☐ 英制單位 ☐ 國際(SI)單位

**Test Data**

**Tensile Test for Original Node Metal**

Specimen ID: **AAA-11**

Sample Kind: Original Node

Gage Length: 88.00 mm

Section Area: 95.00 sq.mm

Now Load: kgf

Peak of Load: kgf

Tensile Strength: N/mm<sup>2</sup>

Yield Strength: N/mm<sup>2</sup>

Elongation: mm

% of Elongation: %

Load Speed: N/mm<sup>2</sup>/sec

Stress Speed: 19.61 N/mm<sup>2</sup>/sec

Strain Speed: 20.00 %

**Samples**

File Name: AAA

Amount: 1

Serial No: 1

**Elongation**

Yes(Y)

**Guide**

Wait for output.

**Control Buttons**

Run(A)

Emergency(E)

Edit(C)

Exit(D)

Beam Up(U)

Beam Down(D)

**Report Titles**

Project:

Contractor:

Submitted By:

Test Jocky:

Construction:

Base Path: g:\Data\ClinData\

Apparatus: 120 Tons Automatic Universal Test Machine

**Current Conditions**

Pump: OFF

Patron: Normal

Now Load: Over Load

Test Table: Static

Speed Ctrl: Not Ready

Zero Point: Too Low

C. Debit: Static

**Yield Correct**

☐ Go Up

☐ Go Down

☐ End

**Special Control**

Remove Sample(R)

**Files Information**

g:\Data

ClinData

AS1.TSA  
AI1.TSA  
AJE.TSA  
AAA.TSA  
Test02HC.TSA  
Test1.TSA  
Test14.TSA  
Test15.TSA  
Test17.TSA  
Test2.TSA

**File will be analyze**

Report No: ASE

Amount: 1

AS-E1.WSCA  
AS-E2.WSCA  
AS-E3.WSCA

**Method of Sampling**

☐ Lot Specimens

☐ Single Specimen

**Material**

☐ Original Node Metal Bar

☐ Original Round Metal Bar

☐ Processed Round Metal Bar

☐ Original Rectangle Metal

☐ Processed Rectangle Metal

**Method of Report**

☐ Don't save as a report

☐ Save as a report

**Control Buttons**

Yes(Y)

Exit(E)

**Report Title**

Project:

Contractor:

Submitted By:

Test Jocky:

Construction:

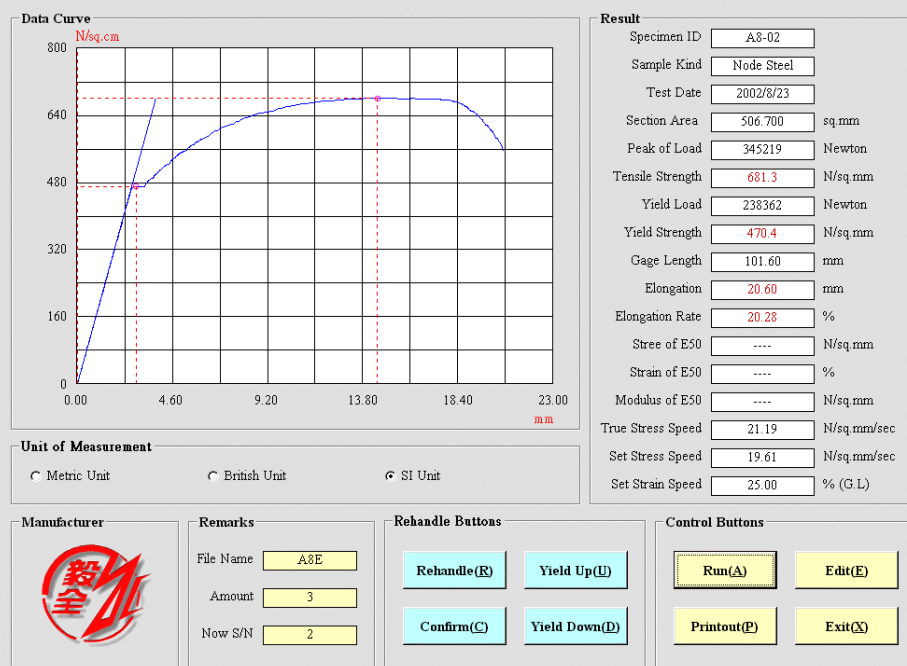
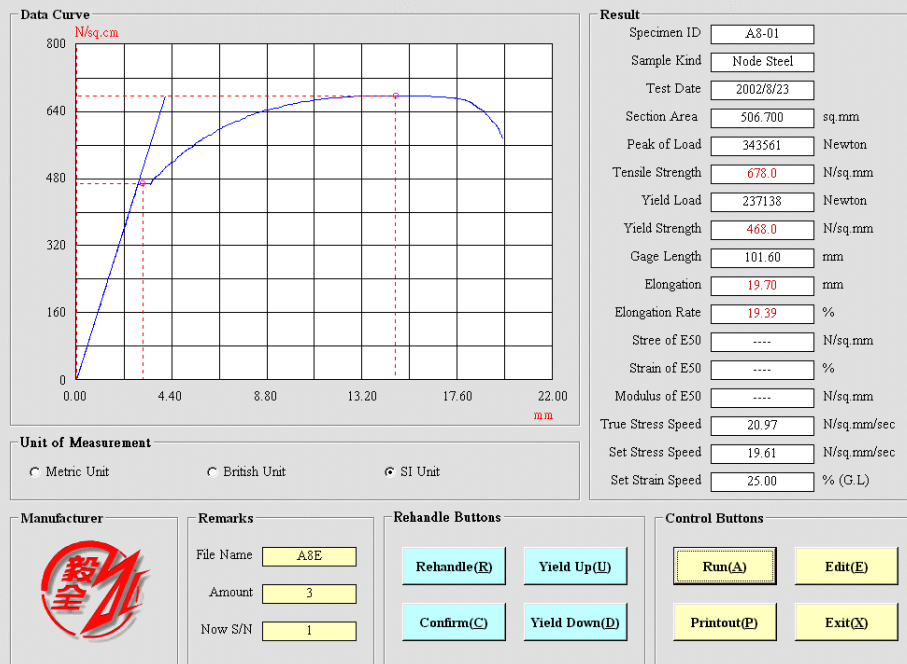
**Manufacturer**

**YE CHANCE**

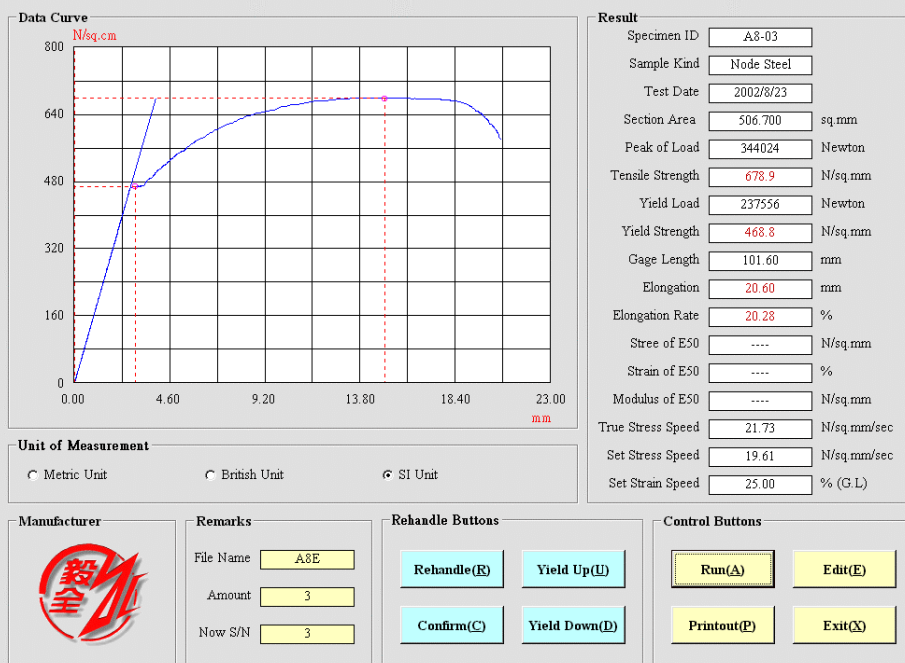
TEL:886-2-2708-8835  
FAX:886-2-2708-7671

**Code of Title**

1  
2  
3  
4  
5  
6







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