



## ELECTRO-HYDRAULIC SERVO CONTROL UNIVERSAL TESTING MACHINE 2000kN (SINGLE PULL VERSION)

Standard: BS EN 10002-1, ISO 7500-1, ASTM A370

### Tensile & Compression

This CL 6000 Series UTM used for the mechanics property test such as the tensile, bending, compression and etc to various metallic and non-metallic materials. The testers have been developed according to BS EN 10002-1, ISO 7500-1 & ASTM A370 "Metal Tensile Test Method" with the adoption of the electro-hydraulic servo control and electronic measurement. It can automatically process the test result for statistical purpose and print default or user-defined test report.

CL 6000 Series UTM use the micro-computer automatic data collection and processing, real time display of the test data and curves. It has the functions such as unlimited storage of test result in the computer, printing the test results and curves, processing the batch test result report, managing the database and so on. It also has the network interface. It can automatically seek the multiple technical parameters such as elastic module E upper yield strength ReH, lower yield strength REL, stipulated non-proportional elongation intensity Rr, tensile strength Rm, stipulated total elongation intensity Rt, yield point percentage elongation and etc.

CL 6000 Series UTM have the features such as the high precision, advantage performance, high reliability, convenient operation and etc.

#### OPERATION DISPLAY

Computer Screen Display unit with the following functions

- \*Test force display
- \*Break detection
- \*Full auto test range switching function
- \*Auto return function
- \*Peak / Break value display function
- \*Test conditions

### SAFETY FEATURES

The system include with the followings safety features

- \*Emergency stop switch
- \*Overload limit
- \*Hydraulic pump motor over-current & over heating protection
- \*Leak / over current protection
- \*Automatic stop control
- \*Safety Guard

### CONTROL & DATA PROCESSING SOFTWARE

- \*User friendly & easily due to clear and brief operation – operation interface
- \*Automatically save the test conditions & results
- \*User define test curves including : Stress / Strain, Force / Elongation, Strength / Time to suit various requirement
- \*Individual or combine display test curves on the same screen to compare with other several data at the same time
- \*Compatible with Microsoft Excel by import or export function
- \*Base of testing with digital sample break detection, auto ranging, auto calibration, quick tare & auto return facilities
- \*Exceeds all International Standards for accuracy, ASTM, DIN, ISO, JIS, EN, GB...etc
- \*Tension, Compression, Shear, Cycling & Creep Test facilities
- \*User define Real Time Display Including Load, Stress, Elongation, Strain, Speed or Time
- \*Advanced protection features with software setting or / & hardware switch upper & lower limit setting
- \*Operation fully control by computer
- \*USB communication system & ethernet
- \*Grips & fixtures for tension, compression, flexural, shear & products testing available
- \*Fully user define report including Report Sheet, Label, Chart & Bitmap or JPG
- \*Report sheet consist of Load, Elongation, Yield, Break, Stress Modulus, Strain, Tear Strength, Peel Strength etc
- \*Force display unit : kN,N,tons, & mN
- \*Stress display unit : GPa,Mpa,Pa,psi,N/sq.mm,Kg/sq.mm & Tons/sq.inch
- \*User define Yield Strength, Young Modulus, Offset Setting, Graph Offset, Export & Import test data, ...etc

### Unique Feature :

- \*Over size prestressed 4 column with twin screw
- \*High toughness fragment safety guard with transparence sliding door
- \*High precision load cell ram
- \*Console Control Unit

## 2000kN Specification

### Technical Specifications :

Model Number	CL 6000 X / 016SP
Max. Test Capacity	2000 kN
Machine Class	Class 0.5
Relative Error of Indicated Value	±1%
Effective Measurement Range	1% - 100 % F S (Full Range without binning)
Deformation Measurement Range	1% - 100 % F S
Relative Error of Deformation Indication	±1%
Relative Error of Displacement Indication	±1%
Displacement Resolution	0.001 mm
Relative Error of Stress Rate Control	±2%
Relative Error of Displacement Rate Control	±1%
Strain Rate Control Adjustment Range	0.00025/s / 0.0025/s
Relative Error of Strain Rate Control	±2%

Force, Deformation, & Displacement	0.3% - 100% F S
Retention Control	
Relative Error of Force, Deformation & Displacement Retention Control	≤1%
Piston Movement Speed	190 ~ 240 mm/min
Max. Compression Space	500 mm
Max. Tensile Space	800 mm
Effective Distance Between 2 Column	580 mm
Piston Stroke	800 mm
Test Speed	Max. 190 mm/min
Round Specimen Size	Ø20- Ø70 mm
Flat Specimen Size	Max. 50 mm Thick
Size of Compression Platen	180 mm x 350 mm
Dimension (Frame)	1100(L) x 800(W) x 3600(H) mm
Dimension (Control Console)	790(L) x 730(W) x 1600(H) mm
Power	380~415V, 3ph,4kW,8.1A, 50/60 Hz
Weight (Control Console)	300 kg
Weight ( Frame)	5600 kg

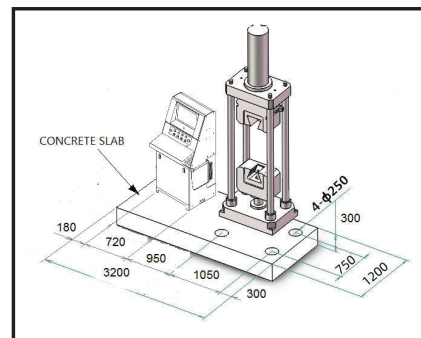
**Unit Standard Accessories :**

CL 6000 X / 016 - SP001	Flat Specimen Jaw Set (0~50mm Thick)	1set
CL 6000 X / 016 - SP002	Round Specimen Jaw Set A (Ø20~Ø40 mm)	1set
CL 6000 X / 016 - SP003	Round Specimen Jaw Set B (Ø40~Ø70 mm)	1set
CL 6000 X / 016 - SP004	Compression Platen Set	1set
CL 6000 X / 016 - SP006	Foundation Mounting Tools Set	1set
CL CP-200	Computer Printer	1unit
CL SVP-4.0	<b>Servopack</b> Console Control Unit with Built-in Computer and Pre-Installed with TestMaster Software	1unit
CL YYU-25/100	Electronic Extensometer 100mm Gauge Length with 25 mm Deformation	1unit

\*1 Copy of Manual Instruction



**Front Grip**

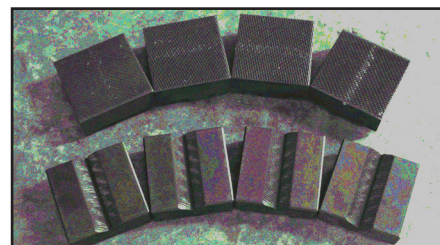


**Foundation Mounting Plan**

**STANDARD ACCESSORIES**

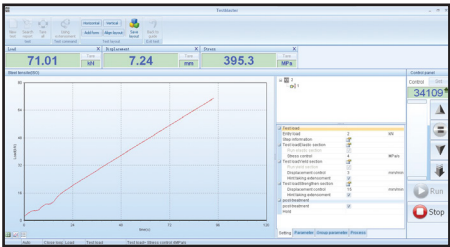


**Compression Plated Set**

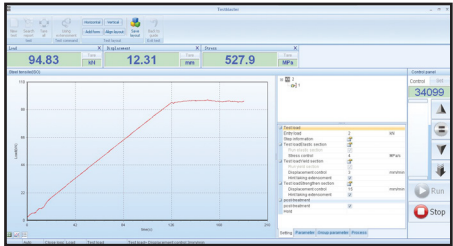


**V-Shaped & Flat Jaws**

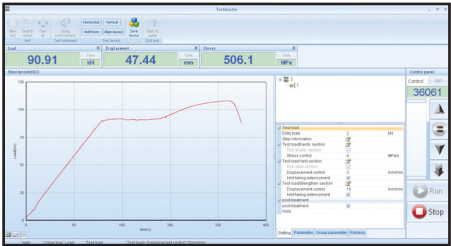
TEST REPORT SOFTWARE



Elastic Graph



Yield Graph



Strengthen Graph



CL YYU - 25/100



CL CP - 200