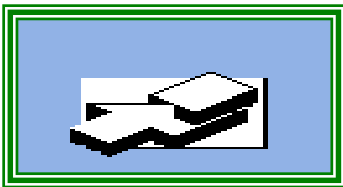


## Electromechanical Universal Testing Machine

### CMT7000 Series (20kN-50kN)

#### Introduction:

CMT7000 Series (Fig1.) dual column high force models are mainly used for tension, compression, bending, peeling, tearing, shearing and other tests of metal and nonmetal materials. It equipped with much wider and more extensive accessories and fixtures to accommodate multi purpose testing projects on one set testing machine. CMT7000 Series universal testing machines carry out various tests relying on their particular requirements with respect to the complexity of the test to be carried out and the desired maximum load force in 20kN, 30kN, and 50kN.



**Fig1.** CMT7000 Series with lower testing space and PC & printer configuration

#### Common Features:

CMT 7000Series thoroughly considered of saving your investment cost to launch both single testing space models and dual testing space models, and these models are utilized furthest in various heights, width, equipped with varied accessories and further test equipments such as environmental chamber and furnace are also available in wide range to meet your particular needs (The maximum temperature of furnace up to 1200°C and the minimum temperature of chamber up

to -70°C).

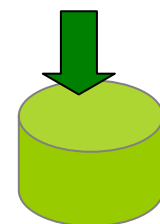
Apply extremely rigid guide profile with concentric guide axis. The play-free guide and the ball lead screw ensure low wear and operating comfort in tensile, compression and some special tests modes. Additionally the profile of these CE-conformity machines enables accessories to be mounted for greater ease of use.

The high precise digital technology servo motor drive system features a high

control range. Super robust, industrial drives are used with a negligible thermal development (thus increasing the lifespan of the system), making them highly dynamic through position, velocity, and acceleration control. These drives are extremely low noise even at nominal speed at rapid crosshead return.

## Key Features:

- DCS-300 full digital closed loop control system based on the advanced DSP platform
- Advanced servomotor drive system assure high precision and low noise.
- Multi-communication technology via USB
- Operation with standard PC and professional testing software PowerTest for the highest operator conform, analysis and statistical data processing
- Operation without PC via WS3000 controller with direct parameter input and management, testing data and curves real time displaying.
- Automatic transducer detection and intelligent help for all dangerous and error situations
- High investment security through individual configuration possibilities
- Compatibility concept for continuous component expansion
- Continuous further development of system test machine
- The effective load measurement range from 0.4% to 100% of the load cell capacity in grade 0.5 and 0.2% to 100% of the load cell capacity in grade 1.
- High accuracy: Measurement accuracy of testing speed, load, crosshead displacement can meet or surpass  $\pm 0.5\%$  of reading
- High sampling rate: The sampling rate 50Hz, reaching advanced international level
- High load resolution: Better than  $1/300000$ , no steps, and unchanged in full range loading
- High displacement resolution reaches 0.000025mm
- Multi-cycle control modes: Control system is capable in load cycle, displacement cycle, extensometer cycle or their combination.
- High security: The system can inspect and protect automatically once overload, over currency; Position limiter; Emergency stop
- Comply with different standards, such as ASTM, BS, EN, JIS, ISO, IEC...



## Technical Specifications

Series	Unit	CMT7000
Model	----	7204、 7304、 7504
Capacity	kN	20、 30、 50
Accuracy	----	Grade 1/0.5
Position Resolution	μm	0.025
Clearance Between Columns	mm	410
Vertical test space	mm	560
Testing Speed Range	mm/min	0.001-500
Jog Speed	mm/min	50-500
Return Speed	mm/min	500
Dimension LxWxH	mm	20kN-50kN: 750x530x2250 10kN-30kN: 620x490x2160
Load frame Stiffness	kN/mm	60
Power	W	400 / 1000
Weight	kg	400

**Remarks:** Vertical test space means the space between standard tensile grips, which varied according to different grips. Vertical test space and the clearance between columns can be extended according to customer's requirement. "/" means the optional items

### Specifications:

**Load measurement accuracy:** +/- 1% of indicated load from 0.2% to 100% capacity(Grade 1); +/- 0.5% of indicated load from 0.4% to 100% capacity(Grade0.5)

**Load measurement resolution:** 1/300000 of capacity, no steps in full loading range and keeping unchanged

**Position measurement accuracy:** +/- 0.5% of reading

**Strain measurement accuracy:** +/- 0.5% of indicated load from 0.2% to 100% capacity FS

**Displacement speed accuracy:** +/-1% of setting when speed less than 0.01mm/min, +/-0.2% of setting when speed (equip to)/more than 0.01mm/min

**Operating temperature range:** 0 to 38 degrees C

**Storage temperature range:** -10 to 45 degrees C

**Humidity range:** 10% to 90% non-condensing, web bulb method

**Power:** standard optional voltages 220/240VAC, 50-60 Hz, ; power must be free of spikes and surges exceeding 10% of the nominal voltage(CMT5000 needs voltage in 380V+/-10%)

*Notes: 1. Load weighing system meets or exceeds the requirements of the following standards: ASTM E4, EN10002-2, BS 1610, DIN 51221, ISO 7500-1. SANS recommends that systems are verified at installation in accordance with ASTM E4 and ISO 75001. 2. Strain measurement system meets or exceeds the requirements of the following standards: ASTM E83, EN 10002-4, BS 3846 and ISO 9513*

