

# COMPUTER CONTROL ELECTROMECHANICAL UNIVERSAL TESTING MACHINE



## MECHANICAL FEATURES

- 1. Loadframe:** The frames all incorporate human factor considerations in the design to ensure safety, reduce operator fatigue, and provide the highest level of flexibility. Extremely robust crosshead guidance is incorporated in all frame designs providing the highest level of lateral crosshead stiffness.
- 2. High accuracy:** The preloaded precision ball-screw with high speed & low noise ensures high speed and position measurement accuracy and less noise.
- 3. High stiffness frame:** The load frame is with 4 columns and heavy duty pre-loaded bearings. Preloaded ball screws, precision guidance columns, and a symmetrical drive system improve frame stiffness and alignment
- 4. Safety features:** The testing machine stops automatically when the change in the test force exceeds a specified value during operations.
- 5. Over-travel limits:** Dual over-travel limits, located on the front console, help prevent crosshead overshooting and sensor overloads. A graduated rule along the column can be used to preset these limits to specific distances.



## SPECIFICATION

MODEL	0702-11-20	702-11-50	702-11-100	702-11-200
Load capacity	20kN	50kN	100kN	200kN
Calibration standard	Class 0.5 according to ISO 7500-1 - Meets ASTM E-4			
Testing load accuracy	±0.5%			
Testing load range	0.4%~100%FS			
Load resolution	1/500000FS			
Deformation measuring range	0.2%~100%FS			
Deformation accuracy	≤±0.5%			
Deformation resolution	1/500000FS of the max deformation			
Test control mode	Three closed loop control, stress, strain and displacement			
Displacement accuracy	Within ±0.5% of the value			
Displacement resolution	0.04μm			

### CONTROLS PARAMETER

Constant force control range	0.001%~5%FS/s
Constant force control accuracy	When the rate is < 0.05%FS/s, it is within ±2% of the set value; when the rate is ≥0.05%FS/s, it is within ±0.5% of the set value;
Constant deformation control range	0.005~5%FS/s
Constant deformation control accuracy	When the rate is < 0.05%FS/s, it is within ±2% of the set value; when the rate is ≥0.05%FS/s, it is within ±0.5% of the set value;
Crosshead speed range	0.001~500mm/min
Crosshead speed accuracy	Within ±0.5% of the value

### MAINFRAME PARAMETERS

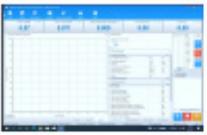
Testing space (Crosshead Travel)	1100mm			
Max. Tensile Testing Space	650mm			
Test width	550mm			
Overall dimensions	850x550x1824	850x550x1824	948x660x1978	1108x798x2450
Weight	420kg	420kg	680kg	1800kg
Power supply	AC220V±10%,50Hz/60Hz (1kW suitable within <100kN and 2.5kW suitable with >200kN)			

#### Note:

- Extra wide and/or extra height frames are available.
- Power supply system is completely customizable.
- Tensile space, test width, and speed is completely customizable.

## MACHINE STANDARD ACCESSORIES

NO.	PART NAME	PICTURE	PART NAME	QUANTITY
<b>1. Machine host</b>				
1.1	Electronic universal testing machine host		<ul style="list-style-type: none"> <li>• 4 column 2 ball screw frame structure</li> <li>• Double space (up tensile, down compression)</li> </ul>	1 set
1.2	AC servo control system		Taiwan DELTA	1 set
1.3	Reducer gear		Japan BEITTO	1 set
1.4	Rubber shockabsorbing pad		Effectively adjust the level of the equipment, reduce the vibration of the equipment during the test	4 set
1.5	Positioning ruler		Visual positioning ruler place along the frame.	1 set
<b>2. Testing machine control system</b>				
2.1	Load cell		Calibration within 0.5% accuracy can be carried out as per ASTM E4, ISO7500-1, EN 10002-2, BS1610, DIN 51221 standards.	1 set
2.2	EDCH 550 control unit		EDCH 550 control unit: three closed-loop control of load, displacement and deformation.	1 set

NO.	PART NAME	PICTURE	PART NAME	QUANTITY
2.3	HK English operation software		HKTest Software: Language supports: English (standard), Russia, Turkish, Spanish, etc.	1 set
2.4	Handheld unit controller		320 x 240 LED display: Can display load, displacement, speed. Can control test start, test stop, test zero clearing and so on	1 set
2.5	Computer and printer		HP, Win10 system	1 set

### 3. Testing grips (Selected according to customer's sample)

3.1	Manual wedge tensile grip		Used for metal and non metal material; Adopt inclined self-locking and rotating handle clamping	1 set
	Round jaw		Round specimen standard: <b>Φ4-Φ9mm</b> <b>Optional: Φ9-Φ14mm; Φ14-20mm</b>	Each 1 set
	Flat jaw		Flat specimen Thick: 0-7mm; <b>Optional: 7-14mm; 14-20mm</b>	Each 1 set
3.2	Compression test grip		<b>Φ100mm</b>	1 set
3.3	Safety shield		Fully enclosed aluminum alloy protective cover Organic glass and aluminum	1 set

NO.	PART NAME	PICTURE	PART NAME	QUANTITY
<b>4. Optional accessories</b>				
4.1	Three-point Bending Fixture		Used to materials three point bending test	1 set
4.2	Hydraulic automatic grip		Inserts for round specimen: Φ4-Φ9mm; Φ9-14, Φ14~20mm Inserts for flat specimen Thick: 0-7mm; 7-14mm; 14~21mm	1 set
4.3	Hydraulic Wedge action automatic grip		Inserts for round specimen: Φ4-Φ9mm; Φ9-14, Φ14~20mm Inserts for flat specimen Thick: 0-7mm; 7-14mm; 14~21mm	1 set
4.4	Electronic extensometer		Gauge length 50mm; Deformation: 10mm according to customer requirement	1 set
4.5	USA epsilon extensometer		High accuracy	1 set
4.6	EDC i20 controller		Optional Germany doli	1 set
4.7	RMC-7 handheld unit		Optional Germany doli	1 set