

**UTM-D Series Servo control Electro-hydraulic Universal Testing  
Machine**

**Technical Manual**

**(Specially for Exporting types)**

***Serve Real Instruments Co., Ltd***

# UTM-D Series Serve controlled Electro-hydraulic Universal Testing Machine

( Equipped with Maxtest professional test software, specially for exporting)



## Description

It is suitable for tension, compression, bending, shearing, peeling, tearing and other tests by adding different test fixture for metal and non-metal materials. It is widely used in inspection department, engineering area, laboratories, universities and institutes for material properties research and quality control.

## Standards compliance

ISO75001, ASTM A370, ASTM E4, ASTM E8 and BSEN standards, can be tailor-made

## Main specifications

Model	UTM-100D	UTM-300D	UTM-600D	UTM-1000D	UTM-2000D
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Structure	Four column Two ball screw				
Control mode	constant stress, deformation, displacement, three closed loop control				
Max. Load (kN)	100	300	600	1000	2000
Load range	2%~100%F.S				
Force resolution	1/300000				
Load accuracy	≤±1%				
Test force resolution value (kN)	0.01				
Deformation Measurement Range	2% ~ 100% of extensometer measurement range				
Deformation indication error	± 0.5% of indicating value				
Deformation resolution(mm)	0.001				
Displacement Indication Error	1% of indicating value				
Displacement Resolution(mm)	0.01				
Clamping Method(mm)	Hydraulic clamping				
Control range of stress rate	1MP/S-60MP/S				
Adjust range of test strain rate	0.00025/S-0.0025/S				
Control range of displacement rate (mm/min)	0.5-50				
Gantry adjust speed(mm/min)	150mm/min				
Max piston stroke (mm)	250				
Max. Tensile Test Space(mm)	650mm				
Max.Compression Test Space(mm)	500				
Round Sample Clamping Diameter (mm)	Φ6-Φ13	Φ6-Φ26	Φ13-Φ26	Φ13-Φ40	Φ20-Φ80
Flat Sample Clamping Diameter(mm)	0-15	0-15	0-15	0-30	0-60
Clamping width of flat sample(mm)	70	70	75	75	
Pressure Plate Size	Φ160/204x204(optional)				
Bending Test Branch Roller Width(mm)	140				
Roller distance of bending(mm)	600				
Voltage	380V/50Hz/3Phase (can be customized)				
Overall Dimension(LxWxH)(mm)	660×500×1800		740×580×2050	820×660×2250	

## Configuration

### 1. Universal testing machine main machine-1set

- Testing machine special tensile clamp--1set
- Testing machine special bending clamp--1 set
- Testing machine special compression platen--1 set

### 2. Oil source control cabinet--1 set

- Italy imported Marzocchi gear meshing pump--1set



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- Three-phase asynchronous motor--1 set
- Hydraulic clamping device with three-position four-way reversing solenoid valve--- two pcs
- Hydraulic clamping device with relief valve--1 pc
- One-way valve--1 pc
- Precision oil filter--1 pc
- Constant pressure difference send oil valve--1 pc
- Closed type oil return valve--1 pc
- Piano type oil source control cabinet shell ---1 set

### **3. Measurement and control system--1 set**

- High precision displacement testing device--1 set
- High precision pressure sensor --1 pc
- YSJ50/10 high precision electronic extensometer---1 pc
- Lenovo computer-- 1 set
- HPA4 color ink-jet printer--1 set
- Testing machine special measurement and control---1 set
- Under WINDOWS operation environment testing machine special control system--1set

**Note: The standard fixtures can only do normal compression, tensile, bending test, if need do other type tests, should order the fixtures separately, please communicate when confirm order.**