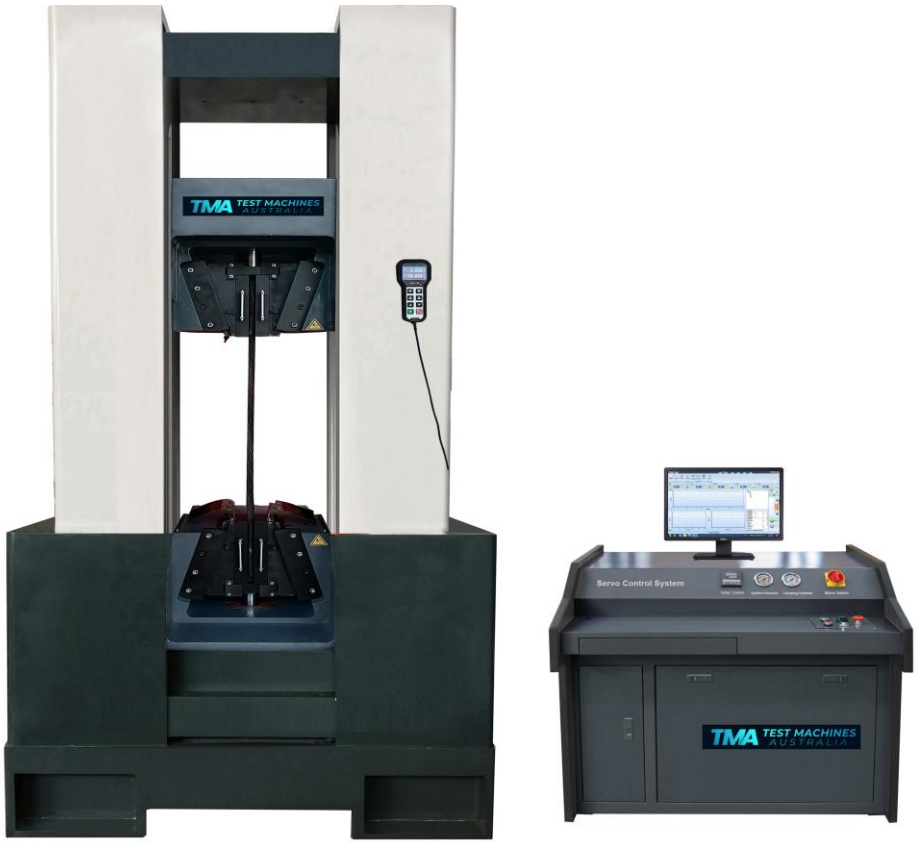
1. Brief Information

- It is widely for tension, compression, bending and shearing test of metal materials and also used for compression and bending test of nonmetal materials.
- They are perfect testing instrument project quality testing section, universities and colleges, research institution and industrial and mining enterprise.
- The machine is calibrated according to ASTM E4 and ISO75001.
- It can do many different kinds of test according to IS1608, ISO6892, ISO7438, ASTM A370, ASTM E8,etc.
- Using microcomputer controlled high precision electro-hydraulic servo valve to drive precise hydraulic cylinder and can realize constant speed control to test force, displacement, deformation, etc. and so that to make tensile, compression, bending tests. If equipped with accessories, it can comply with other test requirements for various materials.



Picture for reference

2. Features

- Vibrationless servo universal material testing machine, free of foundation, directly placed on the ground for use, material specimen tensile break without vibration impact.
- High rigidity and high stability streamlined load frame, high precision loadcell, wide linearity, good stability, accurate measurement and control.
- Double control two-way hydraulic cylinder, large stroke, high speed running, fast test, high frequency response, fast return.
- Quiet servo oil pump station, filter oil, differential pressure, with cooling system, suitable for long-term continuous work.
- Hydraulic clamp for tension test, easily controlling of install and release sample.
- Hydraulic cylinder and piston adopt clearance seal technology to keep loading accuracy and easily maintains.
- Fully computer controlling, load, displacement, extension 3 channels close loop servo control.
- Tension, Compression and Bending test accessories as standard parts.
- Select high quality hydraulic servo valve, control signals photoelectric isolation, 24V DC safe and reliable.
- Data acquisition system consists of two high precision A/D conversion channel. The maximum resolution of 1/500000. There is no subsection of all process; meanwhile, it can have 4 subsections according to customers` requirement.
- Integrated dual routes precision instrument programmable amplifier, digital zero.
- Max Test software runs on Windows10.
- Real-time record and dynamic display test curve.
- Provide programmable automatic testing procedures and users can edit their own test steps according to the requirements of test.
- Adopts human-computer interaction to analyze and count performance indicators of materials.
- Software can automatically finger out routine data, such as tensile strength, yield strength.
- Modulus of elasticity, extend rate after rupture, non-proportional extend strength RP0.2,

etc.

- Adopts standard database to manage test data and support batch test.
- Customer can add test methods and rules as requirement.

1. Structure Introduction

3.1 Loading frame

Adopts vertical structure, the lower space is for tensile test, the upper space is for compression test.The three major parts of the machine are processed by casting steel technology to ensure the rigidity of the whole machine.The fixture adopts high quality alloy structural steel quenching (HRC50 ~ 55) treatment to ensure its service life. Fully open clamping structure, easy to hold samples, stable and reliable clamping.The work table of the loading frame is provided with various operation buttons to facilitate the user's operation.

3.2 Drive system

Double control double lift hydraulic cylinder, large stroke, high speed running, fast test, high frequency response, fast return.The speed adjustment range is wide, the loading is uniform, stable and control is accurate.

3.3 Quick adjustment of test space

Space can be adjusted quickly by lifting and falling of oil cylinder.

4. Technical Specification

Item	TMA-SUT-D1000
Load capacity	1000KN
Relative error of indicating value of load	≤±1% of indicating value
Measuring range of load	2%-100%F.S
Deformation resolution	1/300000
Measuring range of deformation	1%-100%F.S
Stress rate error	≤±1%
Relative error of indicating value of deformation	≤±1%
Column No.	4 columns

Piston stroke of main oil cylinder	430mm
Loading rate	Display in the real time
Max. tensile speed piston	190mm/min
Max.falling speed of piston	290mm/min
Max. tensile space	850mm
Max. compression space	530mm
Span between columns	460×270mm
Clamping diameter for round specimen	Φ14-Φ32mm，Φ32-Φ45mm
Clamping thickness of flat specimen	0-40mm
Size of upper platen	200×200mm
Size of lower platen	200×200mm
Clamping mode	Hydraulic clamping
Dimension of loading frame (LxWxH)	1020x610x2000mm
Dimension of control cabinet (LxWxH)	1130x720x940mm
Power supply	415V±10%, 50/60Hz

5. Standard Configuration

No.	Name	Spec. & Model	Qty.
1	Main machine	Robust loading frame, double test space	1set
2	Servo control cabinet	Precise digital valve, precise oil pump,motor, solenoid direction valve, relief valve	1set
3	Loadcell	1000kN	1pc.
4	Displacement sensor	Wire-type encoder	1pc.
5	Tensile accessories	Round jaws: Φ14-Φ32mm, Φ32-Φ45mm Flat jaw: 0-40mm	2sets 1set
6	Compression platens	200×200mm	1set
7	Computer	Lenovo brand	1set
8	Electronic extensometer	Gauge length: 50mm Deformation: 25mm	1pc.
9	Operation system CD	Original latest English Win10 operation CD	1pc.
10	Software Installation CD	special for universal testing machine	1pc.
11	Technical documents	User manual, packing list, calibration certificate, student experiment sheet	1set
12	Tool kits		1set

13	Protective cover	For operator safety	1set

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