

**Computer Controlled Compression Testing Machine**

Machine Model: TMA-YAW-2000/3000 S/D



## **1. Application**

This series compression testing machine is mainly designed for compression test of building material items, such as concrete cube, concrete blocks, cement specimen, and bricks etc, also used for compression performance test of rubber pad and top forge test of metal. With new design idea and advanced technology, this series have more advantages in appearance, operation & applications. It is the ideal test equipment for quality control at industry & mineral enterprises, education in high schools, and technology researches at scientific institutes.

## **2. Standards:**

It is conformed to EN 12390-3, 12390-4; BS 1881, ASTM E4, ASTM C139, ISO7500-1, EN10002-2, BS 1610, DIN51220, C1231 –AASHTO T22 -NF P18-411 -UNE 83304, 7242 etc.

## **3. Applicable Specimen size:**

Extensive ranges for Cubic sample: 100mm, 150mm, 200mm and more;

Rectangular sample: 400x200x200mm, 400x200x400mm etc;

Cylindrical sample dia.150x300mm, dia.100x200mm, dia. 200x400mm or others as per customer required.

Remark: test space & compression platen can be customized according to specified specimen size.

## 4. Product description:

### Structure:

- 1) Welding structure provides the higher stiffness of load frame;
- 2) Safety covers is mounted around the columns to protect the operator, the front gate is with interlock switch to prevent machine operation when gate is open.
- 3) Modulus of Elasticity for concrete ( optional)
- 4) Dual-side average extensometers or compress-o-meter with LVDT measuring device can be applied with this machine for determination of Modulus of Elasticity of concrete specimen.( optional)



**LVDT**



**Extensometers**

## 5. Main Specifications

Model	YAW-2000S	YAW-2000D	YAW-3000D
Max. Load	2000kN	2000kN	3000kN
Control method	Computer auto control loading process		
Test space adjustment mode	YAW-2000S Manual screw adjust YAW-2000D /YAW-3000D Electric ball screw adjust		

Test class	1 class	
Load measuring range	4-100% of F.S	
Load accuracy	±1.0%	
Upper compression platen (mm)	220x250	220x250
Lower compression platen (mm)	220x250	220x250
Piston stroke(mm)	50	50
Distance between upper and lower plate	320mm	320mm
Power supply	240v AC, Single phase, 3 phase also available	
Overall dimension (mm)	1200x450x1150	1200*600*1200
Weight (kg)	650	1000

## 6. Configuration :

- 6.1 High strength main unit- 1 set
- 6.2 one-piece Oil source control cabinet-1 set
- 6.3 High precision pressure sensor-1pc
- 6.4 computer- 1 set
- 6.5 HPA4 printer- 1 pc;
- 6.6 Compression grip-- 1 set
- 6.7High performance low noise plunger pump- 1set
- 6.8Single-phase asynchronous motor- 1set
- 6.9 High precision electro-hydraulic proportional servo valve and valve block group- 1set
- 7.0 Precision oil filter- 1pc
- 7.1 Jean type oil source control cabinet shell- 1set
- 7.2 Test and control system- 1set;
- 7.3 Test special software under WINDOWS - 1set

### Control system :

The system include the digital servo valve, high precision sensor, controller and software. High control precision, good reliable, meet the test GB、ISO、ASTM and other test standard of cement, mortar, concrete test requirement.

# TEST MACHINES AUSTRALIA

SuperTestV7.1 - [ 300kN ]

System Function(S) System Settings(M) Test Operate(E) About

Choose Report Calibrate Verify Hold End Group Quit

Load(kN)

0.00

Tare

Peak(kN)

0.00

Strength(MPa)

0.0

Speed(kN/s)

0.00

Time(s)

0.0

**Load - Time Curve**

**Concrete Split Tensile**

Test Num : 1124

Strength Grade: C15

Sample Days(Day): 7

Specification(mm) : 150\*150\*150

Correction Factor : 1

Stress Speed(MPa/s): 0.02

Load Speed(kN/s): 0.71

Sample Count : 2

Whether Successive Test: Successive Test

Delay Time(s) : 28

Test information set

No.	Load(kN)	Strength(MPa)
1		
2		
Valid Load		
Valid Strength		

Run

Stop

Reset

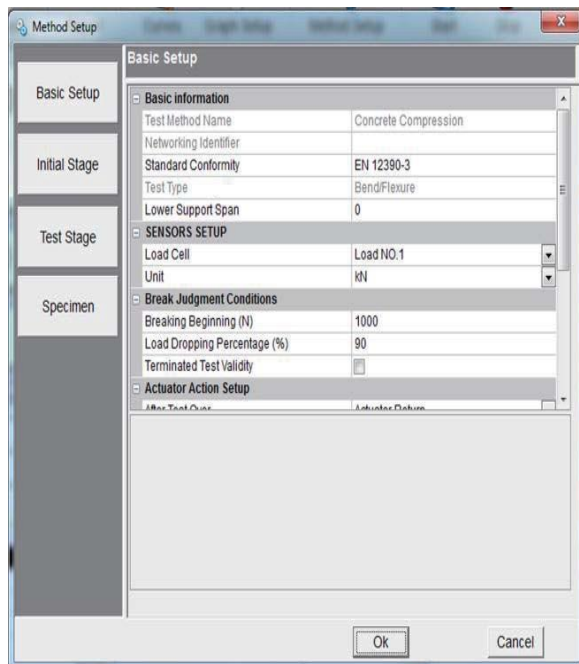
warning: Status: System Status : Connected Control status : auto control Current relative code Current valve:

**Hydraulic system :**

The hydraulic oil in the oil box through the motor to drive the high pressure pump entering into the oil channel, flowing through one way valve, high pressure oil filter, differential pressure valve group, servo valve into the oil cylinder. The computer send out signal to the servo valve to control the servo valve openings and direction, in order to control the flow quantity into the cylinder and realize the constant speed test force control.

## System function:

- \* Force closed loop control function; Can realize constant force rate and stress rate loading
- \* Adopting computer to realize the electronic test, automatic test; Computer result and print report;



	A	B	C	D
1	Compression Test Report			
2	Report No.:			
3	Test Lab		Sample Supplier	
4	Test Standard		Machine Name	
5	Sample Spec		Strength Grade	
6	Sample Age		Cutting direction	
7	Operator		Date	
8	Others			
9				
10	No.	Load	Strength Mpa	
11				
12	Conclusion			
13				
14	Curve			