

YAW-2000DH 3000DH Computer control Compression testing machine



Operation video: <https://youtu.be/GxJKZfhZVEg>

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 compressometer 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-2000DH	YAW-3000DH
Measurement parameters		
Max. Load	2000kN	3000kN
Control method	Computer auto control loading process	
Test class	1 class	
Load measuring range	2-100% of F.S	
Resolution of test power	1/500000 F.S	
Load accuracy	±1.0%	
Displacement measurement	0.01mm	
Displacement measurement accuracy	≤±0.5%	
Host parameters		
Distance between columns (mm)	380	550
Upper compression platen (mm)	φ 300	φ 300
Lower compression platen (mm)	φ 300	φ 320
Distance between columns(mm)	430	430
Piston stroke(mm)	150	120
Piston diameter (mm)	Φ270	Φ370
Maximum compression space(mm)	230	320
System pressure (Mpa)	35	35
Control parameters		
Force control speed range	0.001%～5%FS/s	
Force control retention accuracy	±0.002% F.S	
Deformation control speed range	0.001%～5%FS/s	
Deformation control retention accuracy	≤±0.002%F.S	

Maximum speed of piston when unloaded	40mm/min	
Displacement control speed control accuracy	≤±0.2%	
Displacement control retention accuracy	≤±0.02mm	
Control mode	Force closed-loop control, deformation closed-loop control,	
Servo oil source parameters		
Main system system pressure (Mpa)	35	
Maximum flow of oil pump (L/min)	4	
Oil filter precision (μm)	10	
Servo motor power (kW)	2.2	
Fuel tank capacity (L):	60	
Machine parameters		
Mainframe dimensions (mm)	560×420×1465	650×500×1550
Oil source dimensions (mm)	1200×680×750	1200×680×750
Weight (kg)	1200	1800
The total power of the power supply	3kW/220V	3kW/220V

6. Feature:

Independent controller---adding an independent external manual control unit provides a new solution for the measurement, control and operation of the testing machine. USB data transmission lly supports notebook computers, tablet computers, and desktop computers; it is the leading testing machine An important part of technological development;



Multifunctional handheld controller---can control the rising and falling of the loading cylinder, and also has a one-key test function, which makes the test process more convenient;



Back-shaped fuselage---the fuselage is made of QT500-7 material and casted at one time, which makes the frame structure more rigid, stronger and more stable;

Energy saving and noise reduction---Adopt servo pump control technology to reduce noise and heat generation, and reduce the speed of servo pump in the actual loading process to achieve energy saving effect;

Equipment operation monitoring system

The equipment operation monitoring system is a subversive improvement



of the original strong current circuit by our company. It adds phase sequence, phase loss self-check indication functions, electrical overcurrent, overload and other protection functions to make the equipment operation safe and reliable.

Pressure monitoring instrument

Real-time display of the start-up pressure, system pressure, and clamping pressure of the servo oil source, ensuring the normal operation of the equipment.



7. Configuration:

Item	QTY	Material
Main frame	1SET	QT500-7, metal mold precision casting
Cylinder	1SET	45# steel, quenching and tempering treatment, high frequency treatment of inner hole
piston	1SET	QT500-7, metal mold precision casting
Self-aligning lower platen	1SET	No. 55 steel, quenched, hardness 55-60HRC
Upper pressure plate	1SET	No. 55 steel, quenched, hardness 55-60HRC
Cushion	3SET	100mm height 1 piece, 50mm height 2 pieces
Cylinder protective cover	1SET	Steel, sprayed
Security door	1SUITS	Steel, sprayed

Servo oil source part

Item	QTY	BRAND
35Mpa plunger pump	1SET	Texas Shenghui
2.2kW AC servo motor	1SET	Wuxi Xinje
Solenoid reversing valve	1SET	Huade Hydraulic, 24V
Cartridge flow control valve	1SET	US "SUN"
Cartridge relief valve	1SET	US "SUN"
Pressure monitoring instrument	1SET	Shanghai Instrument
Precision oil filter	1SET	ZU-H10×20, Heideke Hydraulics
High-pressure pipeline	5PCS	Aditya Brand
Servo oil source cabinet	1SET	Fully plastic-sprayed, the console is a black solid board
Hydraulic oil tank	1SET	Capacity: 80 liters

Measurement and control electrical part

Item	QTY	BRAND
External independent controller	1SET	HST
Pressure testing machine measurement	1SET	HST
Equipment operation monitoring system	1SET	HST
External handheld control box	1SET	HST
Spoke load sensor	1SET	China

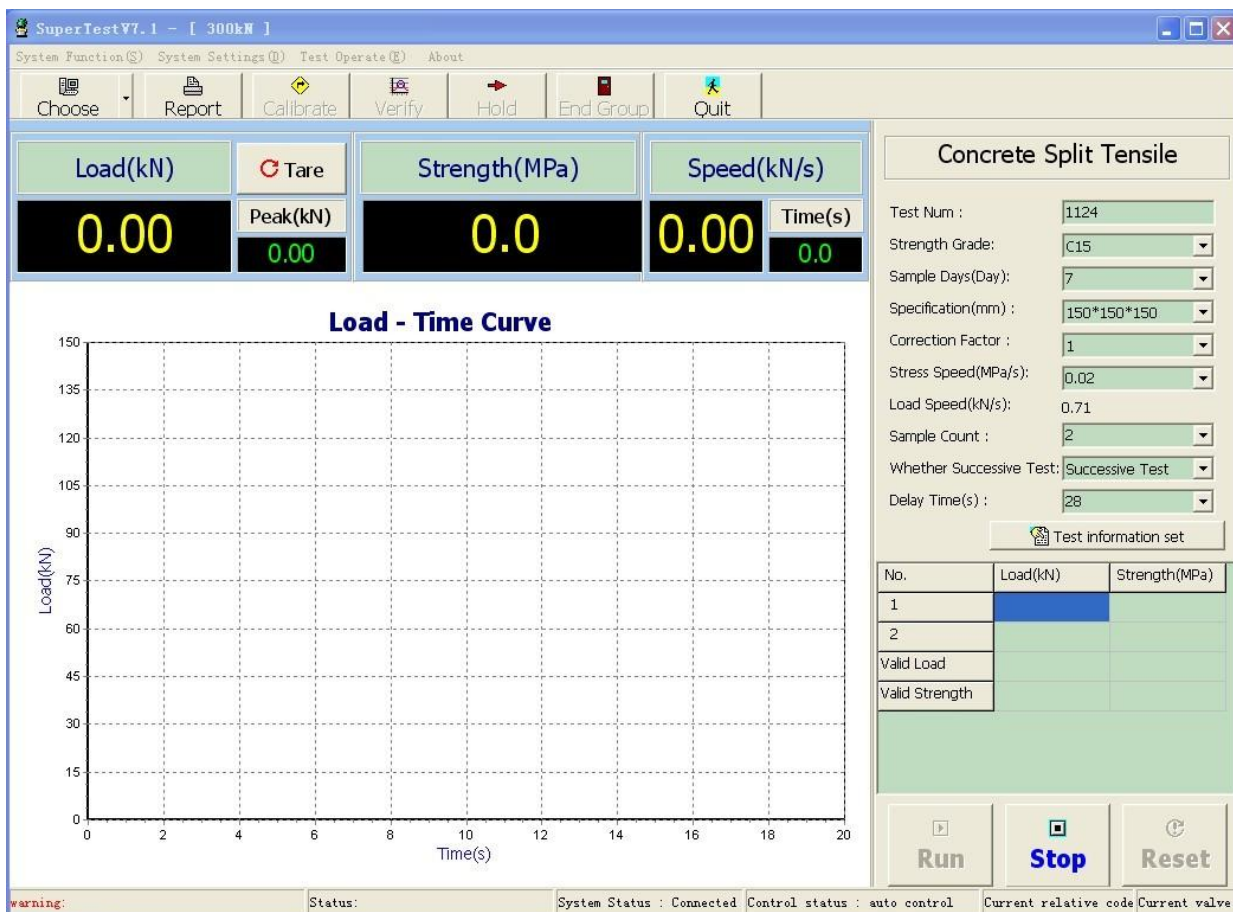
Motion detector	1SET	China
Computer/printer	Each 1SET	HP (LAPTOP OPTIONAL)

Random accessories part

Item	QTY	Remarks
L-shaped anchor bolt	4 SUITS	With nut
Special tools	1SUIT	Allen wrench, open-end wrench, screwdriver, brush
Spare seal	1SUIT	Combination pad, O-ring

8. Software:

1. The software integrate compression resistant test procedure , such as bricks, cement, concrete and mortar.
2. There is no subsection in all process. (Or classify according to the requirements of customers.)
4. Complete test in batch automatically and adjust breaking of specimen.
5. PC will display test force, peak, time and test curves, etc.
6. Full control process is fully controlled by PC. It is easy to manage and control, collect and calculate.
7. Record and save testing data automatically.
8. Customer design testing reports.



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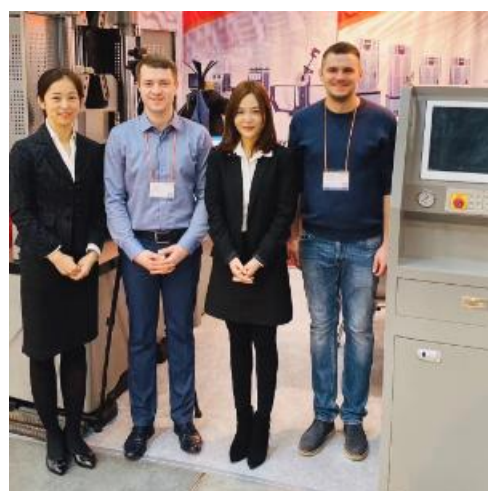
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