TruForce | Hydraulic Compression Testing Machine | TF-HCT-A
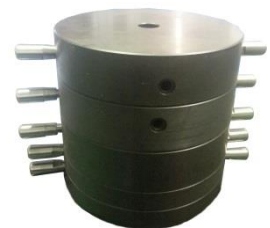
Capacity
600kN, 1000kN, 2000kN, 3000kN

Functions
This series of compression testing machine is widely used for compression strength determination of cement, concrete and rock. Equipped with optional fixtures and measurement devices, it can be used for concrete splitting tensile test and flexure test.

Standards
CS1, ASTM C39, AS1012, AASHTO T22, GB/T 50081(Part 6) and other international standards

Spacing block

Load frame

1. **Compression space is adjusted by spacing block**
2. Ergonomically designed load frames ensure safety, reduce operator fatigue, and provide the highest level of flexibility.
3. "Quick Return" hydraulic valve for higher throughput
4. Automatic limit checking for overload, over temperature, over voltage, etc.
5. The system can return automatically, the oil cylinder can return the original position via manual or automatically after finishing testing
6. Imported encoder mounted on the seat is for position measurement of piston with high accuracy
7. Imported servo valve provides high stability and reliability

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Hydraulic power unit

- Equipped with SUN Cartridge logic valve in the hydraulic system of the equipment, it can be smart regulation of system pressure. The pressure servo technology can guarantee that the system pressure is always only higher than the cylinder pressure 2MPa, when the test force is low, the pump output pressure is lower, when the test force increases, pump output pressure increases the proportion too.

- The differential pressure is adjustable to ensure no shaking during test, thus saving energy and reducing heating

- Low noise: NACHI Japan gear pump, combined with our technology of HPU production, its noise is not more than 70dB, improving the working conditions of workers.

- Easy installation and maintenance: The hydraulic unit is designed with semi-open structure. Rear cover opens two doors, easy maintenance and parts replacement.

- Stable, fast response and high control precision: The MOOG servo valve is directly driven by a high-impedance permanent magnet linear motor. Dynamic performance is not affected by pressure. Low power consumption when hydraulic zero and close to hydraulic zero. Standardized spool position detection signal, which can be used to obtain system operation and is very beneficial to valve maintenance.

- Low heating and good cooling: The unique pressure differential servo control technique makes the system heat significantly reduced. The hydraulic unit is designed with semi-open structure and air-cooling device. Cooling devices can start automatically or manually. The air-cooling motor automatically starts when the temperature reaches the preset value of oil temperature gauge, making the system in high temperature environment continue to work normally.

- High filtration precision: triple filter, the particle size is less than 5 microns before entering the servo valve, improving the service life of the servo valve and control accuracy, easier to maintain.

- Pressure overload protection: when the pressure exceeds the system rated pressure, relief valve will begin to overflow, to ensure the security of the entire system.

- Seal method: The hydraulic pipeline is made of imported products from the oil pipe to the joint. The pipeline adopts high-pressure hose ferrule-type cone sealing joint, the sealing effect is very good, and it can be disassembled many times
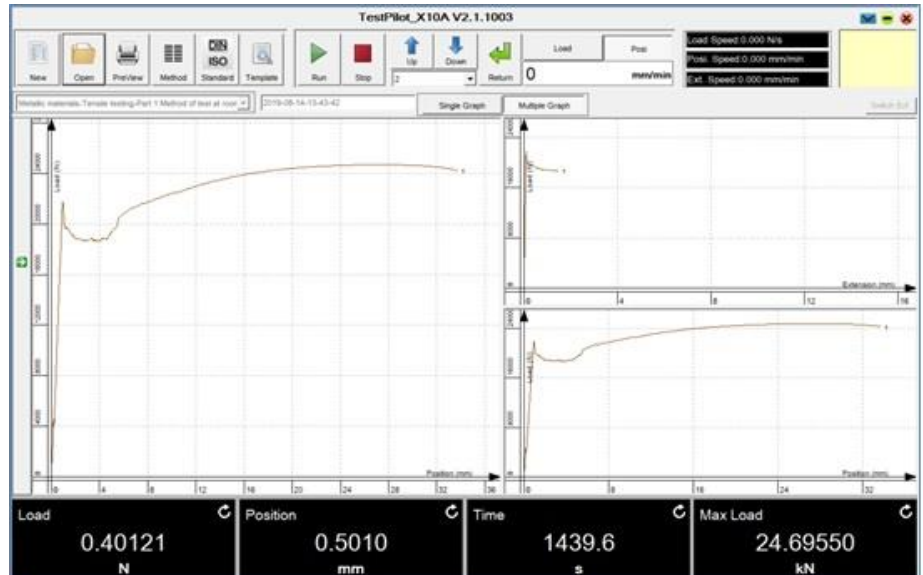
Load cell

- Built-in load cell is assembled inside the piston for direct measurement with high accuracy
- High precise load cell measures and captures sensitively tension and compression force, high accuracy load measurement resolution reaches 1/500000 with no steps.
- High performance load cell ensures high precision and repeatability.

Specifications

Model	TF-HCT605	TF-HCT106	TF-HCT206	TF-HCT306
Type	A			
Capacity (kN)	600	1000	2000	3000
Calibration accuracy	Class 1			
Force accuracy	±0.5%			
Force range	1% ~ 100%FS			
Force resolution	1/500000FS			
Frame structure	One-body casting			
Column spacing (mm)	460	460	460	540
Maximum compression space (mm)	320	320	320	320
Platen adjustment	Spacing block			
Compression platens (mm)	Φ300	Φ300	Φ300	Φ300
Actuator (piston) stroke (mm)	140	140	140	140
Actuator (piston) maximum up speed (mm/min)	100	100	90	60
Actuator (piston) maximum down speed (mm/min))	280	280	230	160
Force loading speed (kN/s)	0.02%~2%FS/s			
Frame dimension (LxWxH) (mm)	600×410×1350	600×410×1350		700×530×1505
Power supply	3-phase 415VAC±10%			
Power consumption (kw)	4	4		5
Hydraulic Power Unit dimension (LxWxH) (mm)	1150x600x920			
0il tank volume (L)	50	50	70	80
Total weight (kg)	2000	2000	2000	2500

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Two steps to start testing: select a project, press start

This software features a large, growing host of pre-packaged test methods to help you quickly and efficiently meet the requirements of global test standards such as ASTM, ISO, DIN, EN, BS, and more. Selected by an operator at runtime, these methods are crafted to meet the specific test flow, analysis and reporting requirements of industry standards across a range of specimen and test types. Pre-packaged test methods are available in a wide selection of bundled sets, including: Polymers & Plastics, Metals, Construction Materials, Biomedical Products, Paper Products, Adhesives, foam, textiles and more.

- Versatile, easy-to-use TruTest software with a large and growing library of standards-compliant test methods (ASTM, ISO, DIN, EN, BS, and more)
- Modular design permits easy upgrading
- Plenty of test standards are built in the library of the software for routine tests.
- User configured report: user can preset report template and include necessary information, like company information, statistics, and etc. Test report can export to Excel or Word.
- Powerful graphic function: real time display curves, like displacement-load, stress-strain, displacement-time, load-times, and others
- Powerful analysis function can calculate typical value and display on the curve, like Fm, ReL, ReH, Rp.
- Measurement unit: Users can select SI, or others, like N, kN, kgf, lbf, MPa, and so on, user can define the unit by themselves using formula.

Modular design is simple for operation and upgrading