

INNOVATIVE TECHNOLOGIES

Computer-Controlled Cement Compression-Flexural Testing Machine

TTCF-300/10kN



TORONTECH



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Introducing the **TTCF-300/10kN Computer-Controlled Cement Compression-Flexural Testing Machine**, your ultimate partner for precise measurement and control.

Compliant with **ASTM C109**, **ASTM C349**, and **EN 196-1 standards**, this machine utilizes a high-precision digital servo valve with force closed-loop control. It supports both equal-loading rate and constant-rate loading, ensuring exceptional control precision and reliability.

Enhance your quality control with the TTCF-300/10kN from Torontech.

PERFORMANCE CHARACTERISTICS

Hydraulic System:

- The machine utilizes a double-cylinder system for high control and measurement precision.
- Hydraulic oil is driven through a high-pressure pump, passing through one-way valves, high-pressure oil filters, and pressure valves before entering the cylinder.
- A computer sends control signals to the servo valve to regulate flow, achieving constant velocity test force control.

Control and Measurement Systems:

- Integrates advanced pressure testing machine control technology with a high-precision full-digital servo closed-loop control and measurement system.
- Capable of constant load rate loading, constant stress loading, and maintaining test force.
- Features high control precision and reliability, with multi-layer protection against overload, overcurrent, overvoltage, undervoltage, overspeed, and limit scenarios.
- Includes specialized monitoring and control software for statistical and processing of test data.
- Displays real-time force and time parameters dynamically, with test curve output and reporting capabilities.

Force Measurement System:

- Equipped with a high-precision amplifier and A/D converter for real-time load, peak, loading speed, and intensity display.
- Utilizes PID closed-loop control for constant speed loading with real-time loading curve display.
- Features an automatic interval timer and continuous testing capability.
- Allows for flexible and convenient test result querying and printing.



TECHNICAL PARAMETERS

ITEM	COMPRESSION		FLEXURAL	
Max. Test Force	300 kN	67,000 lb.f	10 kN	2,250 lb.f
Test Measurement Range	20 kN – 300 kN		1 – 10 kN	
Test Force and Relative Error Value	≤ ±1%		≤ ±1%	
Upper and Lower Compression Plate Space	250 mm		190 mm	
Max. Piston Stroke	80 mm		60 mm	
Two Column Space	220 mm		180 mm	
Compression Plate Size	φ160 mm		φ160 mm	
Motor Power	Three phase four wires, 380V, 50Hz, 0.75KW			
Overall Dimension (mm)	1420 × 475 × 1350			
Weight	450 kg			

MAIN CONFIGURATIONS

ITEM	QTY	REMARKS
Host	1 set	Includes double cylinder, motor, pump, servo valve
Computers	1 set	Lenovo
Printers	1 set	Inkjet
Control and Measurement Systems	1 set	-
Force Sensor	1 pc	-
Electric Control System	1 set	-
Cement Bending Fixture	1 set	For cement standard sample 40 × 40 × 160
Upper and Lower Compression Plate	1 set	-
User Manual / Certificate / Packing List	1 set	-



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