

CEMENT PRESS



The Vector Automatic Cement Compression and Flexure Testing Machines are engineered for reliable and consistent testing of cement, mortar, and other construction materials. Available in single-chamber and dual-chamber versions, these machines conform to international standards including EN 196-1, EN 459-2, EN 1015-11, EN 13454-2, EN 13892-2; ASTM C109, C348, C349; and BS 4550-3.4.



VTR 1026D



Compression / Bending Testing Machine

High-Quality Testing for Cement and Mortar

Overview

Developed through continuous research and innovation, Vector testing machines incorporate the latest technologies to meet current industry standards. They are designed to accommodate client requirements with suitable accessories, ensuring versatility in various testing applications. Compliant with CE norms for operator safety and health, these machines provide a secure testing environment.

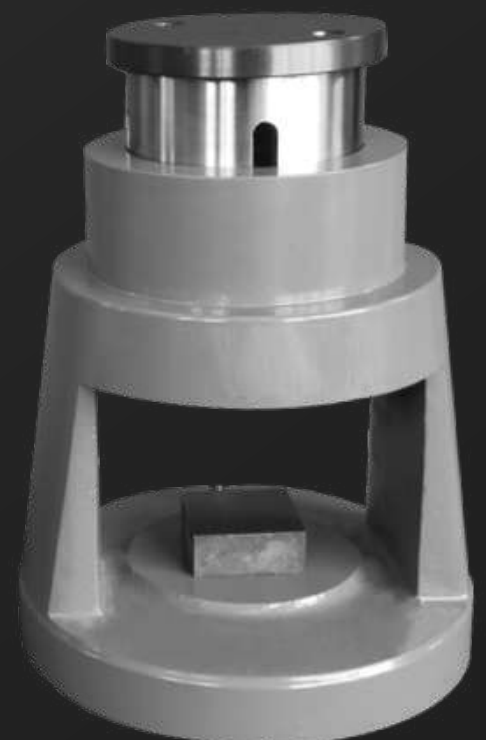
Operate the machines using the intuitive HMI touch screen or a computer with the included Vector Press Software. The software offers advantages such as detailed reporting, graphical outputs, and extensive data management, enhancing the testing experience. The user-friendly interface allows operators of all experience levels to perform tests efficiently.

Featuring an extremely stiff, four-column load frame tensioned without play, the machines provide a stable and accurate testing platform. Hydraulic cylinders made from solid material ensure durability. The compression side is enclosed by four columns, while the bending side features an easy insertion of various test fixtures and devices.

Achieving measurement accuracy Class 1 according to DIN EN 7500-1, the machines ensure precise results within the specified measuring range. Control electronics enable fully automatic test execution with precise load speeds for force-controlled tests. An optional position measuring system enhances accuracy, and adjustable break detection identifies sample failure early.

Operator safety is paramount in the design of Vector testing machines. They are equipped with a large test chamber protected by transparent polycarbonate, allowing visibility while ensuring safety. An inductive sensor monitors the protective door position, depressurizing the hydraulic unit when the door is open. Additional safety features include:

- Maximum pressure valves to prevent overloading
- Piston travel limit switch
- Emergency stop button
- Software controlled maximum load value



Compression / Bending Testing Machine

Versatile Testing Capabilities

Suitable for compressive strength tests of gypsum, mortar, cement samples, and light or aerated concrete, the machines accommodate various sample sizes:

- Flexure and compression of 40×40×160mm mortar prisms
- Compression of 50mm mortar cubes
- Cubes: 150×150×150mm, 200×200×200mm
- Cylinders: 100×200mm, 150×300mm, 160×320mm
- Beams: 100×100×400/500mm, 150×150×600/750mm

Main Features

- Pace Rate Control: From 50N/sec (flexure) to 2.4kN/sec (compression) for precise testing
- High Accuracy: Load measurement accuracy Class 1 per ENISO7500-1 and Class A per ASTM E74
- Factory Calibration: Supplied with a calibration certificate for load measurement
- Closed-Loop Control: Automatic test procedures with consistent results
- Flexible Control Options: Stand-alone touch screen or computer control with Vector Press Software
- Hydraulic Efficiency: Dual-stage hydraulic pump for rapid piston approach and automatic return

Advanced Software and Touch Screen Interface

The Vector touch screen software automates compression, flexure, and splitting tensile strength tests. Control all operations from the front panel touch screen display, featuring an easy-to-use menu that allows seamless access to test parameters. The digital display renders real-time "Load vs. Time" or "Stress vs. Time" graphs for immediate analysis.

Accessories for Comprehensive Testing

Compression Jig: For cement compression tests on 40mm or 50mm cubes (specify at order). Platens have a hardness of 60HRC; the upper platen is seat-ball assembled. Rust-protected by cadmium plating.

Flexural Jig: Designed for flexure tests of 40×40×160mm specimens with a 100mm distance between lower bearers, one with a spherical seat. Rust-protected by cadmium plating.

Investing in Vector's cement compression and flexure testing machines ensures precision engineering, ease of operation, and advanced technology. Enhance laboratory efficiency, reduce operator error, and obtain accurate, reliable test results. With comprehensive support and compliance with international standards, Vector machines are an excellent choice for material testing and quality control.

Compression / Bending Testing Machine



TECHNICAL SPECIFICATION

Test Chamber Height	Maximum 210 mm
Column Spacing (Front)	280 mm
Frame Type	Four-column load frame
Software Features	Real-time monitoring; reporting; graphical output; unlimited result database storage
Communication Interface	USB
Dimensions (W × D × H)	??????
Weight	????
Standard Accessories	Compression jig for 40 mm or 50 mm cubes (specify upon order)
Optional Accessories	Additional test fixtures and inserts
Maintenance Features	Low-friction single-acting piston; easy access for maintenance and calibration
Hydraulic Pressure Range	Up to 250 bar
Piston Diameter	160 mm (compression side); 60 mm (flexure side)
Maximum Ram Travel	60 mm (compression side); 120 mm (flexure side)
Display Resolution	0.1 kN (compression); 0.01 kN (flexure)
Break Detection	Automatic, with adjustable sensitivity
Emergency Stop Response Time	Immediate (<0.1 sec)
Electrical Protection	Overload protection; short-circuit protection; emergency stop circuit
Certification	CE marked; supplied with EC declaration of conformity
Operating Languages	English, Turkish, Spanish, Russian
Compression Platen Markings	Centering marks for cubes and cylinders
Software Compatibility	Windows 10 or later
Data Export Formats	PDF reports; CSV data files
Input Power Connection	220 V AC
Control Panel Display	7-inch color touch screen
Operating Modes	Load control; stress control; strain control (optional)
Maximum Load Setting	User-defined via software
Piston Return Speed	Adjustable via software
Overload Protection	Automatic shutdown upon exceeding maximum load
External Communication Ports	USB
User Accounts and Security	Password-protected access; multiple user levels
Test Standards Library	Preloaded with standard test procedures; customizable