Dynamic Triaxial Testing System

Related Standards: ASTM D3999-11, ASTM D5311-11

The VJ Tech Dynamic Triaxial System is capable of providing fully automatic static and dynamic Triaxial testing. The system incorporates a loading frame of your choice together with a high speed servo controller, automatic pressure controllers for cell and back pressure control and user friendly software providing the necessary test configuration, control and data acquisition.

The loading frame can either be our Triscan50, Triscan100 or a 50 kN basic frame with a beam mounted electro-mechanical actuator capable of providing a loading capacity of 50 or 100 kN, a frequency of up to 10.00 kHz and a stroke of up to 100 mm.

The high speed servo controller (DSC2000) comes with 8 analogue input channels, high speed data acquisition, servo motor drive output and a fast Ethernet interface for PC connection.

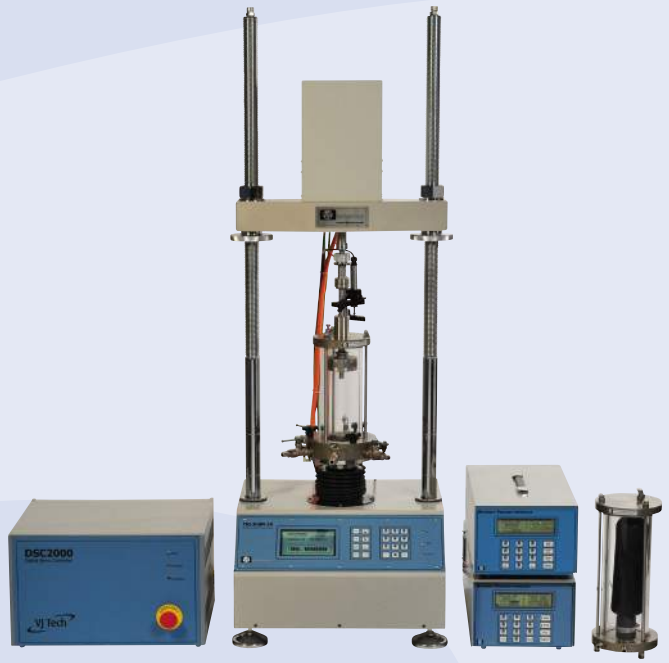
Specifications

Maximum Frequency	0.01 - 10.00 Hz
Maximum Dynamic Load	+/-5 kN (upgradeable to 10 kN)
Maximum Static Load	50kN (TS50 Frame), 100Kn (TS100 Frame)
Actuator	Electro-Mechanical
Dynamic Displacement	-25.000 to 25.000
Load Frame Capacity	50 kN
Input Channels	8
Resolution	24 Bit
PC Interface	Ethernet
Waveforms	Sine, Triangular, Square Haversine, Saw Tooth, User Defined
Data Logging Rate	1000 points per cycle
Sample Size	38 - 150 mm (depends on cell size)
Maximum Pressure	2 MPa

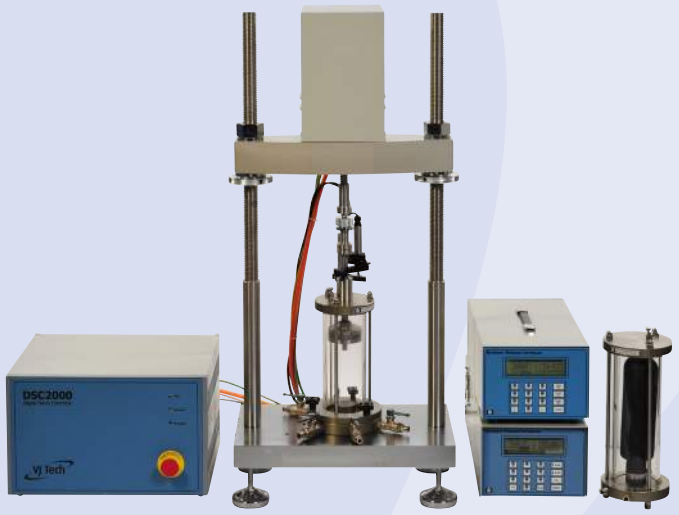
Ordering Information

VJT5010-EM	Dynamic (Cyclic) 50 kN Triscan Load Frame
VJT5010-EM-B	Dynamic (Cyclic) 50 kN Basic Load Frame
VJT5100-EM	Dynamic (Cyclic) 100 kN Triscan Load Frame
VJT-DSC1	Dynamic Servo Controller (Single Axis)
VJT2260	Hydraulic Automatic Pressure Controller
VJT2250	Pneumatic Automatic Pressure Controller
VJT0500	Air/Water Cylinder
VJT0549-DYN	Dynamic (Cyclic) Triaxial Cell (50 mm)
VJT0475-DYN	Dynamic (Cyclic) Triaxial Cell (75 mm)
VJT0400-DYN	Dynamic (Cyclic) Triaxial Cell (100 mm)
VJT0359B	Internal Submersible Load Cell (50 kN)
VJT0271	LSCT Displacement Transducer (25 mm)
VJT0250	PWP Pressure Transducer (10 bar)

Sample size dependent accessory numbers available on request



VJT9400 - Dynamic triaxial system with a TriSCAN 50 Load frame



VJT9401 - Dynamic triaxial system with a Standard frame

System Ordering Information

VJT9400	Dynamic (Cyclic) Triaxial System (TS50 50 kN frame)
VJT9401	Dynamic (Cyclic) Triaxial System (Standard frame)
VJT9402	Dynamic (Cyclic) Triaxial System (TS100 100 kN frame)

Additional items available on request including:

- Hydraulic actuator based system (VJT9405)
- High load and high frequency systems
- Optional Dynamic cell pressure control
- Enhancements to allow Unsaturated triaxial testing
- On-sample transducers
- Bender elements
- Bespoke systems to customer requirement

VJ Tech

Clisp Studio – csDYNA Software

The csDYNA Clisp Studio module is user friendly software designed specifically for dynamic Triaxial testing, providing test functionality and automation,easily viewed results data which can be exported to Excel and test script import and export.

Related Standards: ASTM D3999-11, ASTM D5311-11

Ordering Information

VJT-csDYN	Clisp Studio Dynamic (Cyclic) Triaxial Testing Software

Features

- Test configuration is made easy using the built-in wizard
- Transducer configuration and calibration
- Live view of sensor readings and calculated parameters
- Live Graphs & Tabulated Data
- Live Test status
- Data export to Excel
- Entire Test Export and Import using Scripts
- On screen measurement of T100, cohesion and angle of friction
- Data storage in SQL data base
- User configurable Views, Tables and graphs
- Configurable test automation
- Email test status
- Optional customised reports available on request
- Saturation (both Step & Ramp Methods)
- Consolidation (Isotropic, An-Isotropic & K0)
- Stress Path
- Shear
- Dynamic Loading