

Triaxial load frame TRITECH



TRITECH

- ◆ Designed for soil testing laboratories conducting UU, CU, CD and stress path (compression/extension) tests;
- ◆ Suitable for automatic PC-controlled triaxial testing (see AUTORIAX system);
- ◆ Allows dynamic tests to be performed when fitted with an actuator (see Dynatriax system);
- ◆ Maximum compression capacity: 50 kN or 100 kN
- ◆ Speed range from 0.00001 to 99.99999 mm/min;
- ◆ Maximum sample diameter (for triaxial testing): 150 mm;
- ◆ The quality of the design avoids vibrations that may affect the specimen;
- ◆ Ideal solution for advanced and research laboratories that require high productivity levels and high quality tests;
- ◆ Large high-contrast 4 x 20-character display with 6-key membrane keyboard;
- ◆ Due to the variable speed range, unconfined, CBR and Marshall tests can also be performed.



YouTube

Standards BS 1377:7 | ASTM D2850 | ASTM D4767 | BS 1377:8 | NF P94 070 | NF P94 074 | CEN- ISO/TS 17892-9 | CEN- ISO/TS 17892-8 | ASTM D7181

WYKEHAM FARRANCE's electro-mechanical TRITECH machines are the original high-performance load frames for triaxial tests. Introduced by the company over 50 years ago, they have undergone continuous development and are the ideal solution for advanced and research laboratories that want to perform high quality tests at high levels of productivity.

Based on heavy duty triaxial load frames, with advanced electronics and high quality components, these frames are the top of the range currently available for triaxial testing on soil. They can be used either as part of a computer-controlled automatic testing system or as high-performance stand-alone units under manual (or PC remote) control.

The load frames are built around a robust twin chromed-column structure, ensuring extremely high rigidity. The loading platen is made from stainless steel.

When the frame is used in PC control mode, all the main functions (speed fast/slow, direction up/down, stop) are managed by the PC software. In manual stand-alone mode, the user-friendly keyboard on the front panel is used to control all the frame's functions, including a rapid approach facility that reduces test set-up time. For efficient use the last settings are automatically recalled after switch on and micro switches prevent over-travel problems. The panel and display are protected from water and dust by a waterproof membrane.

These frames are versatile, compact and easy to use and allow a variety of test procedures to be performed on samples with diameters from 38 up to 150 mm. They've been specifically designed for soil testing labs conducting UU (unconsolidated unconfined), CU (consolidated Undrained), CD (consolidated drained) and stress path triaxial tests but they can also be used, due to their variable speed range, to perform unconfined, CBR and Marshall tests. They can also be equipped with a pneumatic actuator for performing dynamic triaxial testing.

Two capacities are available: 28-WF4005 - 50 kN and 28-WF4010 - 100 kN.

A complete range of parts and accessories is available to configure these machines for any typical triaxial soil testing application.

Technical specification

Models	28-WF4005	28-WF4010
Maximum sample diameter, mm	150	150
Minimum testing speed, mm/min	0.00001	0.00001
Maximum testing speed, mm/min	99.99999	99.99999
Maximum compression force, kN	50	100
Maximum tensile force, kN	5	5
Minimum vertical clearance, mm	335	390
Maximum vertical clearance, mm	1100	1140
Horizontal clearance, mm	364	498
Platen diameter, mm	158	158
Platen travel, mm	100	100
Dimensions, mm (h x w x d) (approx.)	1460 x 503 x 380	1813 x 586 x 515
Power, W	600	680
Weight, kg (approx.)	98	120

Ordering information

28-WF4005

Tritech50, Triaxial load frame 50 kN cap.
110-240 V, 50-60 Hz, 1 ph

28-WF4010

Tritech100, Triaxial load frame 100 kN cap.
110-240 V, 50-60 Hz, 1 ph

Accessories

Triaxial cells

Standard triaxial cells and accessories
Triaxial cells for advanced applications

Measurement instruments

Manual

Axial strain dial indicators
Load measuring rings for triaxial test
Pore water pressure measurement
Double burette volume change apparatus

Digital

Axial strain displacement transducers
Submersible load cells - External load cells

Pressure transducers for triaxial test
Automatic volume change apparatus
Mini On-sample transducers for local strain measurement in triaxial testing
Bender elements

Pressure systems for triaxial testing

Oil and water constant pressure system
Air/Water pressure system and controls panels
Hydraulic pressure controller

Water de-airing systems

De-airing tanks
De-airing water apparatus

Data acquisition and processing

Data acquisition and processing system for soil mechanics
Geo-Analysis templates

Widening

To perform these kind of tests the crossbeam has to be tipped over. Fit each accessory to the crossbeam using the M10 grub screw supplied with the machine. The following table shows the accessories required to perform the different tests allowed by the TRIAX machine.

		Accessories	Quantity		
UNCONFINED	Analogical	28-WF1048	1		
		28-WF6453	1		
		70-T0104/9	1		
		70-T0104/7	1		
		82-D1255	1		
		70-T0104/4	1		
		82-P0375/C	1		
	Digital	82-P0370	1		
		70-T0104/81	1		
		82-P0322	1		
		70-T0108/5	1		
		70-T0104/4	1		
		CBR	Analogical	28-WF1048	1
				34-T0103/3C	1
82-T1009	1				
Digital	82-P0375/C		2		
	82-P0375		1		
	70-T0104/81		1		
MARSHALL	Analogical	82-P0322	1		
		70-T0103/1	1		
		28-WF1048	1		
		82-T1009/F or T1007/F	1		
		70-T0104/10	1		
	Digital	33-B0034	1		
		33-B0033	1		
		82-P0375/C	2		
		82-P0375	1		
		70-T0104/81	1		
		82-P0322	1		
70-T0104/10	1				
70-T0104/13	1				
33-B0033	1				



28-WF4010, 100 kN model with triaxial cell, external load cell and displacement transducer.



28-WF4005, 50 kN model, fit in the mechanical measurement mode: load ring and dial gauge for axial measurement. With triaxial cell.



28-WF0370/T External strain gauge load cell



28-WF6451 Load ring with 28-WF1049 connector



30-WF6209 Axial displacement transducer



30-WF6221 Mounting bracket for displacement transducer



30-WF6402 Dial indicator for axial strain measurement



30-WF6016 Geodatalog, Data acquisition and processing system

