

Hydraulic consolidation cell

BS 1377:6

MAIN FEATURES

- Hydraulic loading
- Low friction design
- No weights required
- Compact design, occupies less space than conventional oedometers
- Incremental or constant rate of loading tests
- Suitable for compacted clay
- Two testing mode available: manual or with automatic data acquisition

GENERAL DESCRIPTION

The Hydrocon hydraulic consolidation cell is the basic part of the apparatus used for the determination of the magnitude and rates of consolidation of soil specimens of relatively low permeability using hydraulically loaded apparatus. This procedure overcomes the complexity usually associated with hydraulic oedometers and allows more information to be gathered from the soil sample. Pore water pressure is measured using a pressure transducer and vertical settlement using a linear strain transducer (or, as economical alternative, a dial gauge). As the Hydrocon is a confined consolidation system, it is possible to measure both pore and back pressure during testing. In addition it is also possible to make accurate permeability measurement generating a vertical flux of water through the sample. The complete test apparatus includes the Hydrocon cell, Water pressure system, Water de-airing system and measuring system (manual or electronic with Geodatalog data acquisition system as alternative. See widening , configuration of a complete system.

The Hydrocon is also available for testing unsaturated samples. See [Hydraulic consolidation cell for unsaturated samples](#).

TECHNICAL SPECIFICATIONS

- Manufactured from anodized light alloy, complete with three valves, one porous base disk and one top loading porous disk. Three support legs for stability.
- For 100 mm dia. soil samples.
- Maximum working pressure: 3500 kPa
- Overall dimensions (dxh): 260x450 mm
- Weight approx.: 10 kg

ORDERING INFO

26-WF0345

Hydrocon, hydraulic consolidation cell for 100 mm dia. samples

ACCESSORIES

See configuration of a complete system

DATA SHEET

ADDITIONAL INFORMATION

Configuration of a complete system in the manual or electronic mode

With pore and back pressure facilities

Code	Description	Q.ty
26-WF0345	Hydrocon, hydraulic consolidation cell	1
	Pressure system	
28-WF4330	Triaxial panel, two way	1
28-WF4330/2	Digital pressure gauge for 28-WF4330	1
28-WF4320	Bladder air/water interface	2
28-WF4320/1	Spare bladder for 28-WF4320	1
86-D2015	Laboratory air compressor	1
28-WF2016/2	Air filter for 86-D2015 air compressor	1
28-WF4191	Nylon tubing 8x6 mm dia., 10 m coil	1
	Water de-airing system	
28-WF4220/A	De-airing tank, 7 l cap.	1
86-D2005	Air drying unit	1
86-D0819	Silica gel dessicator, 1 kg bottle	1
86-D2001	Vacuum pump	1
86-D2064	Rubber tubes	2
28-WF4225	Valve panel for de-airing tank	1
	Measuring system. Manual mode	
30-WF6401	Dial gauge, 10mm travel, 0.002 mm subdivisions	1
28-WF6300	Pressure transducer 0-10 bar	1
28-WF6310	De-airing block	1
28-WF4450	Digital readout unit for pore press. Measurement	1
28-WF4400	Double burette volume change apparatus	1
28-WF4400/1	Red dye hydrocarbon soluble pack for 500 ml	1
	Measuring system. Electronic mode	
30-WF6207	Displacement linear transducer, 10 mm travel	1

DATA SHEET

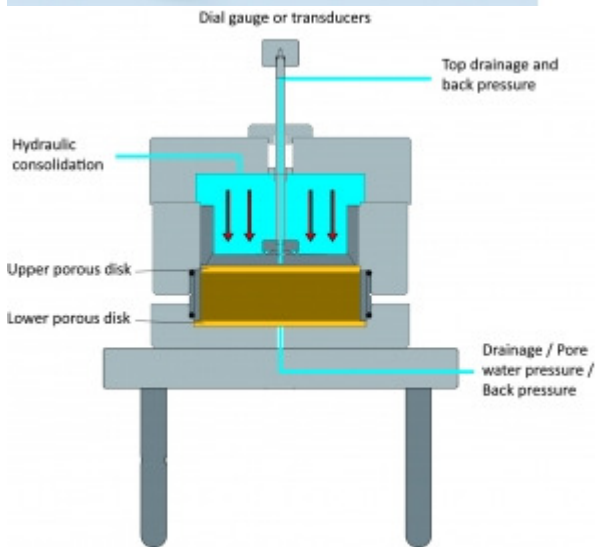
28-WF6300	Pressure transducer 0-10 bar	1
28-WF6310	De-airing block	1
28-WF4410	Automatic volume change apparatus	1
30-WF6044	Transducer extension cable, 12 m	3
30-WF6016	Geodatalog, 16 channels Data acquisition unit	1
30-WF6016/T12	Hydrocon consolidation Geo-Analysis template	

Note: For complete information of the above items, search with the code number.

DATA SHEET



26-W0345 with linear transducer



Layout of Hydrocon consolidation cell



28-WF4320 with 28-WF4320/2