



Rowe Cell System Setup

Rowe Cell Testing System

Related Standards

British BS1377-06

The VJ Tech Rowe Cell Testing System uses one Channel of a Pro Dual Hydraulic APC to apply vertical load to the sample contained in the Rowe-type consolidation cell.

The advantage of this type of cell is that drainage can be precisely controlled. In addition, the hydraulic loading system gives accurate control of applied loads over a wide range, of pressures on different diameter samples.

The Back Pressure is supplied by the 2nd Channel of the Pro Dual Hydraulic APC .

Both the LCST and Pore Water Pressure transducers can be plugged into the rear panel of the Pro Dual Hydraulic APC, with the data logged being passed onto the csROWE Clisp Studio software module.

The Pro Dual Hydraulic APC can be connected to the PC via Ethernet or USB and has a touchscreen for standalone control if required.

The Clisp Studio csRowe software module enables you to perform a Rowe Cell consolidation test with full automation, in order to determine the magnitude and rate of consolidation of a sample.

Permeability testing can be performed with the addition of a Single APC & the Clisp Studio Permeability software.

Ordering Information

Controlling Instrument

- VJT2267D-P** Pro Dual Hydraulic APC (3500 kPa)
- VJT2266A-P3.5** Large capacity APC 3500kPa/1250cc (x2) only for 252.3 mm Rowe Cell

Rowe Cells

Rowe Cells listed on next page

Transducers and Accessories

- VJT0271** 25 mm LSCT Displacement Transducer
- VJT0250-G** 10 bar Pressure Transducer
- VJT0280** De-Airing block with valve for pressure transducer
- VJT0284** Bracket for 25 mm Displacement Transducer

Software

- VJT-csROWE** Clisp Studio ROWE Software

Optional Items for Permeability Testing

Automatic Pressure Controller

- VJT2260-P** Pro Single APC (3500 KPa)

Software for Permeability Testing

- VJT-csPERM** Clisp Studio Permeability Software

Rowe Cell Features

- Rowe Cells are available for sample diameters of 50, 63.5, 70, 75.7, 100, 151 & 252 mm
- Hydraulic actuation of load
- Load ram with Dial gauge/LSCT Bracket
- Five inlet/outlet ports with zero volume change valves
- Hard anodised Aluminium top and base plates
- Supplied with upper and lower porous discs and perforated loading caps

Pro Dual APC Features

- USB or Ethernet Interface for PC control
- Integrated 7" Touchscreen Colour Display for Standalone Control if required
- On-board data logging with large data storage (up to 14 million records) using SD card (8GB standard)
- High Speed ARM Processor
- Two independent channels, each with Pressure and Volume control and feedback
- Two additional External channels and Automatic Solenoid Valve Socket
- High Speed sensor conversion (24 bit, up to 4000 samples/sec)
- Auto reverse from limit switch activation
- Built-in auto protection for sensor limits
- Non-volatile memory for sensitive data



Specifications of Rowe Cells

VJT Number	Sample Diameter	Maximum Pressure	Diameter & Height	Weight
VJT0640-50	50 mm	1750 kPa	160 x 206 mm	12.90 kg
VJT0640-63	63.5 mm	1750 kPa	183 x 213 mm	13.75 kg
VJT0640-70	70 mm	1750 kPa	200 x 230 mm	14.25 kg
VJT0640	75.7 mm	1750 kPa	210 x 213 mm	14.75 kg
VJT0640-100	100 mm	1750 kPa	235 x 233 mm	16.2 kg
VJT0640-151	151.4 mm	1000 kPa	290 x 270 mm	18.3 kg
VJT0640-252	252.3 mm	1000 kPa	600 x 540 mm	35.3 kg

Clisp Studio csRowe Software Features:

- Optional Swelling Stage
- User defined Saturation cycles (ramp and check)
- User defined Consolidation cycles (Loading, Holding and Unloading phases)
- Easy instrument and equipment setup and calibration
- Tests set up and run on an individual client, job, borehole and sample basis
- Easy test setup using wizard style Assistant
- Automated Test Control
- On screen calculation of t50 and t90 values

- Live view of sensor readings and status
- Live views of Instrument readings and status
- Live Data Views of all Stages
- Live graphical displays of all Stages
- Live tabular display of all Stages
- Customisable views, graphs and tables
- Customised presentation reports on request
- Data export to external packages
- Entire Test export & import facility