

112 Helpsheet



*World Leaders in Computer Controlled Testing
Systems for Geotechnical Engineers and Geologists*

Hardware

Triaxial Testing Systems

Maintenance of Triaxial Cells

1. Bishop & Wesley (B & W) Cell

The B & W Cell is virtually maintenance free.

It is necessary to keep the cell clean and dry when not in use. It is also necessary to prevent soil particles from falling into the gap around the base pedestal (ram) as this gap leads to the Bellofram rolling diaphragm which can be punctured or worn by a build up of soil particles.

The cell friction should be checked (using the procedures defined in the user manual) on a regular basis (monthly). If it is excessive the Bellofram should be washed out with a water jet while the cell is inverted. If this does not cure the friction problem then the cell must be dismantled and the Bellofram changed. While the cell is dismantled it is a convenient time to grease the linear bearing guiding the ram.

The lower chamber needs to be checked on a regular basis (monthly) to ensure that it efficiently de-aired. However, it is unlikely that air will enter the lower chamber because the lower chamber and the lower chamber pressure controller form a closed system.

2 GDS 40 kN 38/50/70/100 Static Triaxial System

The System is virtually maintenance free.

It is necessary to keep the cell clean and dry when not in use. It is also necessary to keep soil particles from collecting in the area around the ram as this can lead to wear on the lip seal protecting the 'O' ring on the ram.

On an annual basis the front panel should be removed and the ballscrew cleaned with a clean dry cloth and re-greased.

3 Maintenance for GDS 7 kN 38/50 Motorised Cell

The System is virtually maintenance free.

It is necessary to keep the cell clean and dry when not in use. It is also necessary to keep soil particles from collecting in the area around the ram as this can lead to wear on the lip seal protecting the 'O' ring on the ram.

Inspect the cables suspending the cell top for wear (monthly). Replace any suspension cables with obvious wear (fraying or cuts).

If the pulleys supporting the cell raising and lowering mechanism should start to squeak then an application of light machine oil to the pulley hubs will be helpful. 8 channels of 16 bit data acquisition. Each channel can be user defined with gain and range (span) settings. +/- 5 Volts supply voltage is available individually for each transducer.