

86 GDS Helpsheet



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

Hardware

Triaxial Testing Systems

Why Choose a GDS System

1. Introduction

GDS Instruments Ltd. is a company that is dedicated to the manufacture and development of high quality geotechnical testing equipment both for the laboratory and the field. In particular for the past 20 years we have been developing our laboratory based triaxial testing systems. We have sold over 200 automated triaxial testing to more than 35 countries worldwide. Our triaxial testing systems cover the whole range from the most advanced high frequency, high load systems to the simplest production triaxial testing systems. We understand the requirements of automated triaxial testing systems. When GDS was first created we concentrated on the very difficult task of developing a commercial automated stress path triaxial testing system (GDSTTS). The system was so successful that it was adopted by many researchers worldwide as the only commercially available system capable of performing this type of testing. From that time we have gone on to extend the range of our triaxial testing systems - we have 10Hz dynamic stress path systems (DYNTTS), 2Hz dynamic systems (MINIDYN) which incorporate advanced static systems featuring tests like; cyclic loading, stress paths, continuous K-zero. We have advanced static systems with the advanced static tests described above plus the ability for testing unsaturated soils using our special air-pressure controller which allows you to measure accurately air volume change (ADVTTTS). We have high pressure triaxial testing systems (HPTTS) which allow you to tests hard soils and soft rocks at radial stresses up to 64 MPa (10000 psi) and axial loads up to 250 kN and which also give you the capability of performing all of the advanced static tests described above. Over the past five years we have taken our very advanced technology and simplified it, reduced the cost and made it available as a range of equipment (STDTTTS) that is suitable for undergraduate teaching and project work in technical colleges and universities. In the last two years we have streamlined the equipment and software still further to produce a range of triaxial testing systems (GDSTAS) that are specifically designed for high volume simple commercial testing - these systems are so flexible that they are also being adopted by some technical colleges for teaching and project work.

The company was formed by Dr Bruce Menzies an expert in geotechnical research and author of many papers and books that are in use around the world. Dr Menzies has been intimately involved with all aspects of the development of our systems. In particular he spends much of his time talking to Users at conferences, exhibitions, seminars and while installing systems - he therefore has a unique perspective on these systems - it is this degree of knowledge that goes into our systems. In addition we have two further PhDs involved in the software and electronic hardware development as well as a number of masters graduates who are involved with system development, installation and training. For a company which manufactures geotechnical testing equipment we have an extremely well qualified set of staff who can support all of our systems.

In terms of support our service is second to none. If you need to contact GDS you can always talk to a knowledgeable engineer who can understand your problems from all viewpoints; mechanical, electrical, electronic, computing and geotechnical. If you contact us by fax or e-mail we will always try to reply to you within one or two days - normally the same day.

Our equipment has been designed with a knowledge of the requirements of the research market, it has then been refined and simplified for the commercial testing market but always with the possibility of carrying out more advanced work than simple Unconsolidated-Undrained (UU) testing. The requirements of geotechnical engineers are becoming ever more sophisticated, more advanced tests are required (pore pressure measurement, accurate volume change measurement, local strain measurement, cyclic tests, stress path tests) - with GDS systems you know that your system will not only perform the standard tests but it also has the capability to be enhanced to perform the most demanding of tests in the future.