



### Permeability System (GDS-PERM)

**Overview:** The GDS Permeability system allows the user to independently control the cell, back and base pressure/ volume, allowing for automation of the constant rate of flow and constant head permeability tests, using the GDSLAB software. There are two cells types available, a purpose built 100mm cell that allows for isotropic testing, or a standard triaxial cell, which can be upgraded for anisotropic testing and to run full triaxial tests.

GDS' systems are available with either a standard triaxial cell (as shown in the picture), which can also be used for triaxial testing or a purpose built permeability cell.

**Key Features:**

**Benefits to the User:**

Easily Upgradeable:	The system can be easily upgraded to a fully automated triaxial system.
Each system can be configured to the customer's specification and budget:	The user can choose the pressure controllers, triaxial cell or just parts to integrate into existing equipment to build their ideal set-up.
Automated software control:	The software directly controls the cell & back pressure, testing rate, in addition to managing all data acquisition.
Compatible with other manufacturer's products:	If a user has existing components they can incorporate them with GDS equipment to create a system, saving expense.
Varying pressure ranges:	Standard pressure ranges of 1MPa - 4MPa.
Range of Triaxial Cells:	GDS have a range of different sized cells available for permeability testing. Specimen sizes range from 38mm up to 150mm in diameter.
Interchangeable Pedestal & Topcap:	This reduces the costs when changing specimen sizes that are still supported by the chosen cell.
Configurable set-up:	The system can be configured for commercial testing with several systems running from a single controlling computer, or for higher range research testing allowing for increased pressures and accuracy.

**Tests that can be Performed:**

Constant head permeability, constant rate of flow permeability, B-check., saturation and consolidation (triaxial).

**Upgrade Options:**

Bender elements (Vertical/horizontal/ S & P waves), local strain measurement, differential pressure transducer (for small stress constant head permeability testing), toxic interface system The system can additionally be easily upgraded to a fully automated triaxial system.

**Technical Specification:**

<b>Cell Pressure Range (MPa):</b>	2 MPa
<b>Sample Size (Diameter):</b>	38, 50, 70, 100mm

## Why Buy GDS?

### GDS have supplied equipment to over 86% of the world's top 50 Universities:

GDS have supplied equipment to over 86% of the world's top 50 Universities who specialise in Civil & Structural Engineering, according to the "QS World University Ranking 2020" report.

GDS also work with many commercial laboratories including BGC Canada, Fugro, GEO, Geolabs, Geoteko, Golder Associates, Inpijn Blokpoel, Klohn Crippen, MEG Consulting, Multiconsult, Statens Vegvesen, NGI, Ramboll, Russell Geotechnical Innovations Ltd, SA Geolabs, SGS, Wiertsema and Partners to name a few.

**TOP  
50**

### Would you recommend GDS equipment to your colleague, friend or associate?

**100% of our customers answered "YES"**

Results from our post-delivery survey asked customers for feedback on their delivery, installation (if applicable), supporting documentation, apparatus and overall satisfaction with GDS. The survey ran for two years.



### Made in the UK:

All GDS products are designed, manufactured and assembled in the UK at our offices in Hook. All products are quality assured before they are dispatched.

GDS are an ISO9001:2015 accredited company. The scope of this certificate applies to the approved quality administration systems relating to the "Manufacture of Laboratory and Field Testing Equipment".

**40 YEARS OF  
BRITISH  
INNOVATION**



### Extended Warranties:

All GDS apparatus are covered by a 12 month manufacturers warranty. In addition to the standard warranty, GDS offer comprehensive extended warranties for 12, 24 and 36 months, for peace of mind against any repairs in the future. The extended warranties can be purchased at any time during the first 12 months of ownership.



### GDS Training & Installation:

All installations & training are carried out by qualified engineers. A GDS engineer is assigned to each order throughout the sales process. They will quality assure the apparatus prior to shipping, if installation has been purchased, install the apparatus on the customers site & provide the training.



### Technical Support:

GDS understand the need for ongoing after sales support, so much so that they have their own dedicated customer support centre. Alongside their support centre GDS use a variety of additional support methods including remote PC support, product helpsheets, video tutorials, email and telephone support.

