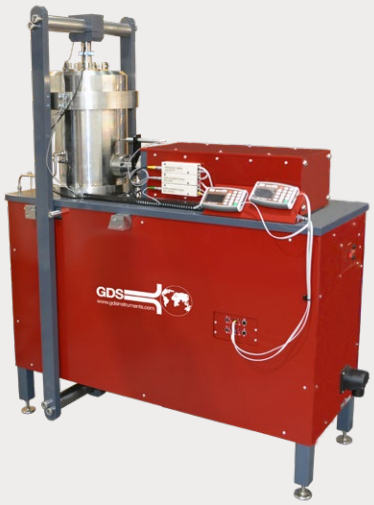


High Pressure Back Pressure Shearbox
(HPBPS)

Overview: The High Pressure Back Pressure Shearbox (HPBPS) is a high pressure, high load version of our standard back pressure shearbox. The apparatus is able to perform direct shear tests with precise back pressure control, for the direct control and measurement of realistic slope failure. The HPBPS can load the sample to 100kN axially and 75kN shear whilst also being capable of applying up to 10MPa back pressure.

Key Features:	Benefits to the User:
Realistic slope stability conditions:	Conditions can be applied by accurately controlling the normal force, shear force and back pressure.
Accurate displacement measurement:	For very small yet long term creep movements to be measured.
Direct shear testing:	Allows direct shear tests to be performed under closely controlled conditions in terms of axial load and back pressure.
10MPa stainless steel cell:	For back pressure control and pore pressure measurement.
Provides accurate results whilst working at high loads:	Up to 100kN Axial and 75kN shear load.

Tests that can be Performed: General tests that can be performed but not limited to; Direct Shear and Back Pressure controlled Direct Shear. Test modules include Advanced Shear. Independent setup to suit the customers testing requirements.

1) Axial Stress/strain control. Control Type; Constant (Fixed), Ramp, Slow Cyclic. Control Parameters; Axial Displacement (mm), Axial Force (kN), Axial Stress (kPa), Constant stiffness (kN/mm) Constant stiffness (kPa/mm).

2) Horizontal Stress/Strain. Control Type; Control Type; Constant (Fixed), Ramp (Displacement value mm or constant rate mm/min), Slow Cyclic. Control Parameters; Shear Displacement (mm), Shear Force (kN), Shear Stress (kPa).

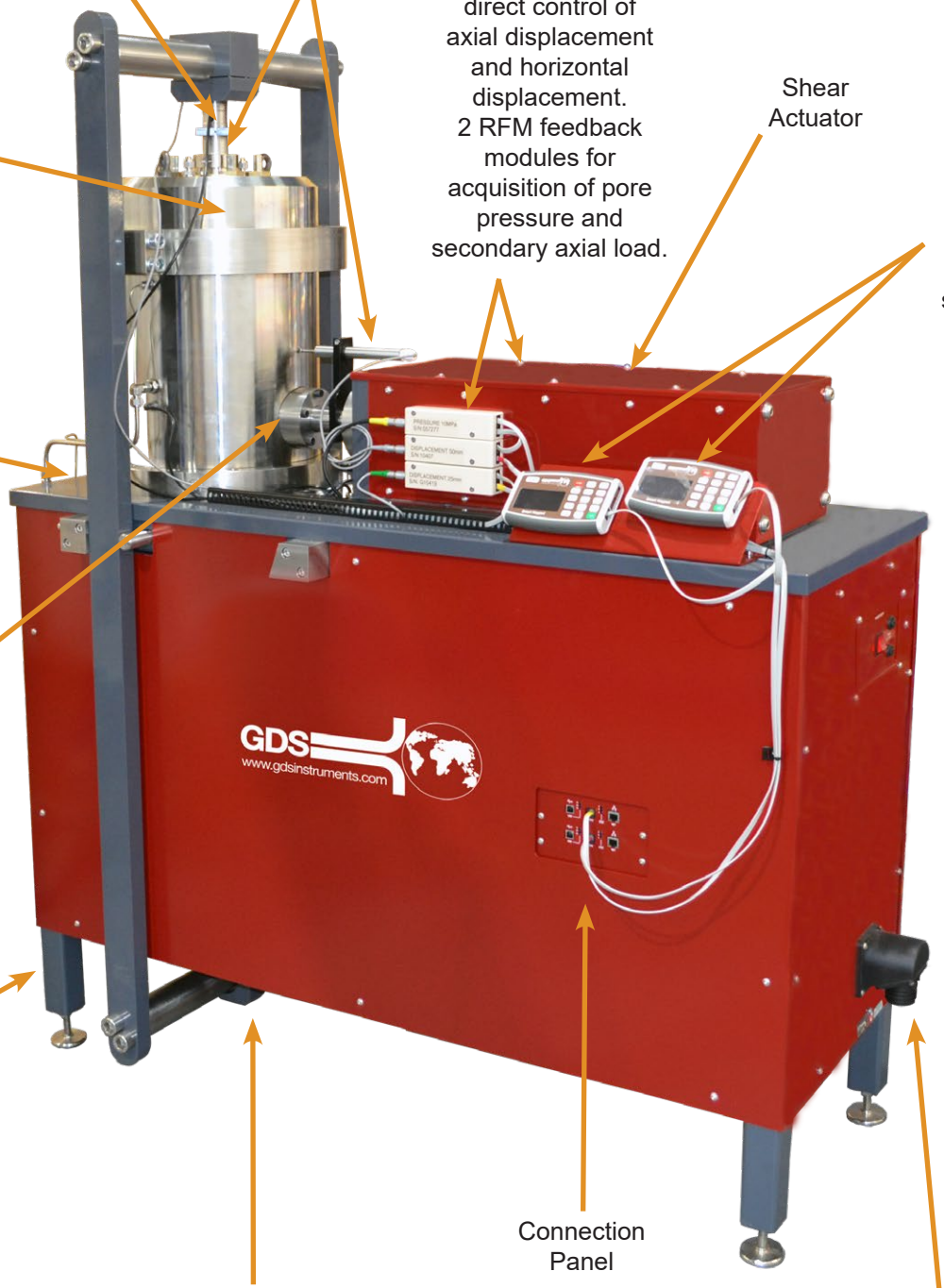
3) Back Pressure Control; Constant (Fixed), Ramp, Slow Cyclic, Control Parameter; Back Pressure (kPa).

Upgrade Options: Unsaturated testing with control of Pore Air Pressure.

Technical Specification:

Computer Interface:	USB.
Load Range:	100kN Axial, 75kN Shear.
Operating Frequency (Hz):	Quasi Static (capable of slow speed cyclic testing, periods around 5 minutes).
Pressure Range:	10MPa.
Vertical and Horizontal Displacement:	Horizontal: +/-20mm nominal Vertical: +25 / -15mm nominal from sample height of 50mm.
Sample Sizes:	50mm diameter or 100mm diameter cylindrical, 50mm high.
Shear gap ranges:	0.25mm (using 9.75mm shear spacer), 5mm (using 4.75mm shear spacer) 10mm (using no shear spacer).
Sample height and Vertical travel:	Apparatus is supplied with a 25mm transducer. The lower sample half is set at 25mm. The upper half can be up to 40mm tall allowing for high settlement material.
Dimensions:	H 1676cm, W-1305cm, D-484cm.
Weight:	Approximately: 900kg.

Key Components



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.

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".

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.