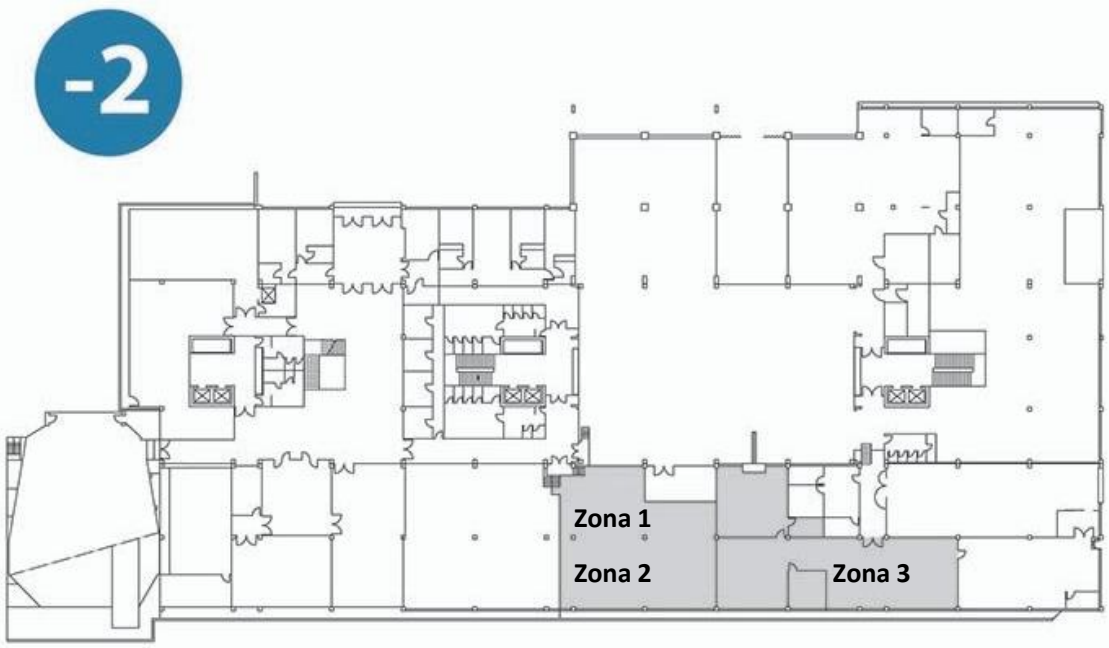
Inventário do Equipamento do Laboratório de Geotecnia

Laboratório de Geotecnia
Departamento de Engenharia Civil, Arquitectura e Georrecursos (DECivil)

ÍNDICE

1 Planta do Laboratório de Geotecnia



2 Equipamentos

2.1		Equipamento	2.1 Oedometeric cell / Célula edométrica
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2009	**Fornecedor**	Polytechnic University of Catalonya, Barcelona, Spain
Nº Série	-	**Marca**	-
Nº IST	-	**Modelo**	UPC
Id. Resp.	-	**Capacidade**	Max 1500kPa

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Trabalhando apenas como permeâmetro, não como célula odômetro. (Faltam 2 controladores de pressão de ar e 1 de água).
Oedometeric cell (samples with 5cm diameter and 2cm height) with a ceramic disk for suction application with axis translation technique (max 1500kPa) and with a metallic disk for permeability tests. / (Célula edométrica (amostras com 5cm de diâmetro e 2cm de altura) com disco cerâmico para aplicação de sucção com técnica de translação de eixo (max 1500 kPa) e com disco metálico para testes de permeabilidade.)

Purpose

The oedometer cell tests soil samples under saturated conditions, primarily assessing 1-D compressibility, consolidation properties, and hydraulic conductivity. These experiments elucidate the consolidation and compressibility characteristics of a soil specimen that is laterally constrained and subjected to numerous successive increments of vertical loading. In the context of load application, the oedometer cell is designed to withstand a maximum direct load of 1kN, corresponding to an equivalent maximum vertical total stress of 2.5 MPa. These parameters collectively contribute to the rigor and reliability of oedometer-based investigations, which are integral to characterizing soil behavior under saturated conditions.

2.2		Equipamento	2.2 2 Vaisala sensors for measuring relative humidity and temperature with indicator for data recording / (2 sensores Vaisala para medir umidade relativa e temperatura com indicador para registo de dados)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2005	**Fornecedor**	Vaisala
Nº Série	B2330038 e B2530012	**Marca**	Vaisala
Nº IST	B2330038 IST: 00090936 B2530012 IST: 00090938	**Modelo**	MI70 e HMP75
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Precisa de calibração.

2 Vaisala sensors for measuring relative humidity and temperature with indicator for data recording / (2 sensores Vaisala para medir umidade relativa e temperatura com indicador para registo de dados)

Purpose The Vaisala sensor is meticulously designed to provide accurate data under conditions characterized by elevated humidity levels approaching saturation, fluctuating temperature regimes, and challenging environmental settings susceptible to potential data corruption due to the presence of chemical agents, fog, mist, rainfall, and substantial dew formation.	

2.3		**Equipamento** **Registo**	2.3 4 Resistive sensors for soil moisture content ECH2O / (4 sensores resistivos para teor de umidade do solo ECH2O) Alban Kuriqi 09 / 06 / 2023		
Ano	2005	**Fornecedor**	Decagon		
Nº Série	-	**Marca**	Decagon		
Nº IST	-	**Modelo**	ECH2O		
Id. Resp.	-	**Capacidade**	-		
Localização		**Operacional**	**Utilização**	**Ficha**	
Zona 2		Sim X Não	I&D X Ensino -	Técnica - Utilização -	

Obs. -

Falta datalogger e software para leitura dos dados.

Não encontrado no laboratório.

Purpose

ECH2O sensors are known for their accuracy and reliability in measuring soil moisture content over a wide range of soil types and conditions. They are commonly used in agriculture, horticulture, ecological research, and environmental monitoring to help make informed decisions related to irrigation and water management. Keep in mind that while ECH2O sensors are effective, proper installation, calibration, and maintenance are essential for obtaining accurate and consistent measurements.

2.4		**Equipamento** **Registo**	2.4 3 Air Micropumps (cream plastic outer body) / (3 Air Micropumps (corpo exterior plastico creme)) Alban Kuriqi 09 / 06 / 2023		
Ano	2006	**Fornecedor**	IST		
Nº Série	-	**Marca**	IST		
Nº IST	-	**Modelo**	-		
Id. Resp.	-	**Capacidade**	-		
Localização		**Operacional**	**Utilização**	**Ficha**	
Zona 3		Sim X Não	I&D X Ensino X	Técnica - Utilização X	

Obs.

Bomba 2 e 3 OK. Bomba 1 funciona, mas corpo interno exta solto devido apoios plasticos partidos.

Purpose

Air micropumps with a cream plastic outer body can have several applications in geotechnical engineering and soil mechanics. These micropumps can facilitate various soil testing, data acquisition, and monitoring tasks. Here are some potential applications: soil permeability testing; soil compaction testing; pore pressure monitoring; soil gas sampling; in-situ testing; slope stability assessment; monitoring groundwater levels.	

2.5		Equipamento	2.5 #1 GDS 200cc/3MPa standard pressure volume controller / (#1 controlador de volume de pressão padrão GDS 200cc/3 MPa)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1990	**Fornecedor**	GDS
Nº Série	14146	**Marca**	GDS
Nº IST	00118634	**Modelo**	STDDPC
Id. Resp.	-	**Capacidade**	200cc/3MPa

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X	I&D X	Técnica -
	Não	Ensino X	Utilização X

Obs.

OK. Calibrado a 15/09/2008. Falta. Calibrar.

Purpose

The GDS 200cc/3MPa standard pressure volume controller is likely a specialized instrument used in geotechnical laboratories for experiments and research related to soil and rock mechanics. It allows researchers and engineers to precisely control pressure and volume, making it valuable for various geotechnical testing applications, including triaxial and consolidation testing. This equipment's specific features and capabilities may vary depending on the manufacturer and model, so it's essential to refer to the manufacturer's documentation for detailed specifications and usage instructions.

2.6		Equipamento	2.6 #2 GDS 200cc/3MPa standard pressure volume controller / (#2 GDS 200cc/3 MPa Controlador de volume de pressão PADRÃO)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	GDS
Nº Série	14007	**Marca**	GDS
Nº IST	-	**Modelo**	STDDPC
Id. Resp.	-	**Capacidade**	200cc/3MPa

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X	I&D X	Técnica -
	Não	Ensino -	Utilização -

Obs. -

OK. Calibrado a 03/2005. Falta. Calibrar.

Purpose

The GDS 200cc/3MPa standard pressure volume controller is likely a specialized instrument used in geotechnical laboratories for experiments and research related to soil and rock mechanics. It allows researchers and engineers to precisely control pressure and volume, making it valuable for various geotechnical testing applications, including triaxial and consolidation testing. This equipment's specific features and capabilities may vary depending on the manufacturer and model, so it's essential to refer to the manufacturer's documentation for detailed specifications and usage instructions.

2.7		Equipamento	2.7 #3 GDS 200cc/3MPa standard pressure volume controller / (#3 GDS 200cc/3 MPa controlador de volume de pressão padrão)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2009	**Fornecedor**	GDS
Nº Série	14147	**Marca**	GDS
Nº IST	00118635	**Modelo**	STDDPC
Id. Resp.	-	**Capacidade**	200cc/3MPa

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

OK. Calibrado a 25/09/2008. Falta. Calibrar.

Purpose

The GDS 200cc/3MPa standard pressure volume controller is likely a specialized instrument used in geotechnical laboratories for experiments and research related to soil and rock mechanics. It allows researchers and engineers to precisely control pressure and volume, making it valuable for various geotechnical testing applications, including triaxial and consolidation testing. This equipment's specific features and capabilities may vary depending on the manufacturer and model, so it's essential to refer to the manufacturer's documentation for detailed specifications and usage instructions.

2.8		Equipamento	2.8 #4 GDS 200cc/3MPa standard pressure volume controller / (#4 GDS 200cc/3 MPa Controlador de Volume de Pressão PADRÃO)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2006	**Fornecedor**	GDS
Nº Série	14033	**Marca**	GDS
Nº IST	00095876	**Modelo**	STDDPC
Id. Resp.	-	**Capacidade**	200cc/3MPa

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Off. Calibrado a 25/07/2006. Falta. Calibrar.

Purpose

The GDS 200cc/3MPa standard pressure volume controller is likely a specialized instrument used in geotechnical laboratories for experiments and research related to soil and rock mechanics. It allows researchers and engineers to precisely control pressure and volume, making it valuable for various geotechnical testing applications, including triaxial and consolidation testing. This equipment's specific features and capabilities may vary depending on the manufacturer and model, so it's essential to refer to the manufacturer's documentation for detailed specifications and usage instructions.

2.9		Equipamento	2.9 Several Oedometric equipments / (Vários equipamentos Oedométricos)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1970	**Fornecedor**	Tecnilab
Nº Série	-	**Marca**	Tecnilab
Nº IST	-	**Modelo**	Several
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 2	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

Todos ok.

Purpose

Oedometer equipment, often referred to as oedometer or consolidation test apparatus, is used in geotechnical engineering to perform oedometer tests. These tests are crucial for studying the consolidation properties of soil under controlled loads and measuring how grounds settle over time. Oedometer tests provide valuable information for design foundations and settlement assessment in civil engineering projects.

Oedometer tests provide valuable data for determining soils' compression and settlement characteristics under different loads and drainage conditions. This information is essential for assessing the time-dependent settlement behavior of soils and designing foundations that can accommodate anticipated settlements.

2.10		Equipamento	2.10 1 Electronic scale – 0,01g precision, máx 600g (SOTEL) / (1 Balança eletrônica – precisão 0,01g, máx 600g (SOTEL))
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1976	**Fornecedor**	OHAUS
Nº Série	1980	**Marca**	OHAUS
Nº IST	000007922	**Modelo**	TP600S
Id. Resp.	-	**Capacidade**	Máx 600g

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

Ok. Calibrado 26/05/2021.

Purpose

This scale has a precision or readability of 0.01 grams. This means it can accurately measure weight differences down to one one-hundredth of a gram. Such precision is essential in various applications, including laboratory work, chemical analysis, and quality control.

The scale has a maximum capacity of 600 grams. This is the maximum weight that the scale can handle while still providing accurate measurements. It's important not to exceed this weight limit to maintain the scale's accuracy.

It's worth noting that the accuracy of electronic scales can be affected by factors such as temperature, air currents, and the condition of the scale itself. Regular calibration and proper handling are essential to maintain accurate measurements.

2.11		Equipamento	2.11 1 Electronic scale – 0,01g precision, máx 1500g / (1 Balança eletrônica – precisão 0,01g, máx 1500g)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2008	**Fornecedor**	KERN
Nº Série	77620506	**Marca**	KERN
Nº IST	00114314	**Modelo**	EW 1500 2M
Id. Resp.	-	**Capacidade**	Máx 1500g

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Leitura oscilante. Calibrado 1992. Falta. Calibrar.

Purpose

An electronic scale with a precision of 0.01 grams and a maximum capacity of 1500 grams is a high-precision weighing scale suitable for a wide range of applications that require accurate measurements with a capacity of up to 1500 grams. The accuracy of electronic scales can be affected by factors such as temperature, air currents, and the condition of the scale itself. Regular calibration and proper handling are essential to maintain accurate measurements.

2.12		Equipamento	2.12 1 Electronic scale – 0,1g precision, max 6000g / (1 Balança eletrônica – precisão de 0,1g, máx 6000g)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1990	**Fornecedor**	METTLER
Nº Série	106590	**Marca**	METTLER
Nº IST	000007923	**Modelo**	PJ6000
Id. Resp.	-	**Capacidade**	Max 6000g

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

Ok. Calibrado 26/05/2021.

Purpose

An electronic scale with a precision of 0.1 grams and a maximum capacity of 6000 grams is a versatile weighing scale suitable for various applications that require accurate measurements within a broad weight range.
It's essential to calibrate and handle electronic scales carefully to maintain their accuracy over time. Calibration ensures that the scale provides reliable measurements, and proper handling helps prevent damage or inaccuracies.

2.13		Equipamento	2.13 1 Electronic scale – 0,1g precision, máx 16100g / (1 Balança eletrônica – precisão de 0,1g, máx 16100g)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2008	**Fornecedor**	KERN
Nº Série	W082046	**Marca**	KERN
Nº IST	00114244	**Modelo**	572-49
Id. Resp.	-	**Capacidade**	Máx 16100g

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

Ok. Calibrado 26/05/2021.

Purpose

An electronic scale with a precision of 0.1 grams and a maximum capacity of 16,100 grams (or 16.1 kilograms) can be a valuable tool in geotechnical engineering and soil mechanics for various testing and fieldwork applications. In geotechnical applications, precise measurements are critical for assessing soil properties, conducting laboratory tests, and ensuring the structural integrity of civil engineering projects. An electronic scale with a precision of 0.1 grams and a maximum capacity of 16,100 grams provides the accuracy and capacity needed for a wide range of geotechnical tasks in the field and the laboratory. Proper calibration and handling are essential to maintain the scale's accuracy and reliability.

2.14		Equipamento	2.14 1 Electronic scale – 0,0001g precision, max 210g / (1 balança eletrônica – precisão de 0,0001g, máx. 210g)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2010	**Fornecedor**	OHAUS
Nº Série	8731445519	**Marca**	OHAUS
Nº IST	00203161	**Modelo**	PA214
Id. Resp.	-	**Capacidade**	Max 210g

Localização	Operacional		Utilização		Ficha	
Zona 2	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

Ok. Calibrado 26/05/2021.

Purpose

An electronic scale with a precision of 0.0001 grams (0.1 milligrams) and a maximum capacity of 210 grams is a highly high-precision instrument that can be valuable in geotechnical engineering and soil mechanics for specific applications that require precise measurements.

It's important to note that while the high precision of this scale can be beneficial in specific geotechnical applications, it is not typically used for routine fieldwork or standard geotechnical tests. In most geotechnical practices, scales with a precision of 0.1 grams or even 0.01 grams are sufficient for common laboratory and field measurements. Extremely high-precision scales like this one are reserved for specialized research and analysis, requiring the utmost accuracy. Calibration and adherence to rigorous testing standards are essential when working with such precise instruments in geotechnical engineering.

2.15		Equipamento	2.15 1 Mechanical scale with arm, 1g precision, max 20kg / (1 Balança mecânica com braço, precisão de 1g, max 20kg)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1970	**Fornecedor**	OHAUS
Nº Série	-	**Marca**	OHAUS
Nº IST	-	**Modelo**	Heavy Duty Solution Balance
Id. Resp.	-	**Capacidade**	Max 20kg

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

-

Purpose

A mechanical scale with an arm, 1-gram precision, and a maximum capacity of 20 kilograms can be a valuable tool in geotechnics for specific applications where precise weight measurements are necessary. Mechanical scales are known for their durability and reliability in various field conditions.
While this mechanical scale may not offer the same level of precision as digital scales, it is suitable for many field and construction applications in geotechnics. The 1-gram accuracy is generally adequate for most practical field measurements. Mechanical scales are known for their robustness and suitability for outdoor use in challenging environments. Regular maintenance and calibration are essential to ensure the accuracy of measurements with mechanical scales.

2.16		Equipamento	2.16 Simple compression equipment for CBR test with dynamometer ring / (Simple compression equipment for CBR tests with dynanometer ring)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1980	**Fornecedor**	SOIL TEST
Nº Série	-	**Marca**	SOIL TEST
Nº IST	-	**Modelo**	MOD M5T III
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

Ok. Calibrado 1992.

Purpose

In geotechnical engineering, the California Bearing Ratio (CBR) test is commonly performed to evaluate soil's mechanical strength and load-bearing capacity. Simple compression equipment with a dynamometer ring is used in the CBR test. The simple compression equipment with a dynamometer ring is a fundamental tool for evaluating the engineering properties of soils, especially for pavement design and construction in geotechnical engineering.

2.17		Equipamento	2.17 Dynanometer ring of the simple compression equipment for CBR tests, max 3000kg / (Anel do dinamômetro do equipamento de compressão simples para testes CBR, max 3000 kg)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1980	**Fornecedor**	Wykehan Farrance
Nº Série	-	**Marca**	Wykehan Farrance
Nº IST	-	**Modelo**	WK13699
Id. Resp.	-	**Capacidade**	Max 3000kg

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino X	Técnica - Utilização X

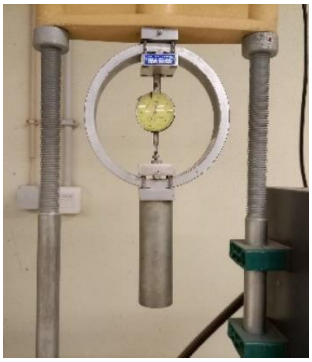
Obs.

Ok. Calibrado 1992.

Purpose

A dynamometer ring with a maximum load capacity of 3000 kilograms (kg) is crucial to the simple compression equipment used for California Bearing Ratio (CBR) tests in geotechnical engineering. The dynamometer ring, also known as the CBR mold or penetration piston, plays a vital role in applying the load to the soil specimen during the test.

The dynamometer ring with a maximum load capacity of 3000 kg ensures that the CBR test can be conducted with adequate loads to evaluate the strength and bearing capacity of the soil, which is essential for designing and constructing stable road and pavement structures.



2.18		Equipamento	2.18 Automatic triaxial loading system / (Sistema de Carregamento triaxial automático)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1990	**Fornecedor**	VJ Technology
Nº Série	2890830	**Marca**	VJ Technology
Nº IST	-	**Modelo**	TRI-SCAN50
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Ok, ligada sistema GDS.

Purpose

An automatic triaxial loading system is an advanced piece of geotechnical testing equipment used in soil mechanics and geotechnical engineering for conducting triaxial tests on soil specimens. Triaxial tests are fundamental in determining soil's mechanical properties, stress-strain behavior, and shear strength parameters. The automatic triaxial loading system automates and enhances the testing process, making it more efficient and precise.

Automatic triaxial loading systems are used in geotechnical engineering for a wide range of applications, including:

Determination of shear strength parameters of soils.

Assessment of soil compressibility and consolidation behavior.

Evaluation of the effects of different stress conditions on soil behavior.

Research and development in soil mechanics and geotechnical engineering.

These systems are valuable tools in geotechnical laboratories and research institutions, providing precise and reliable data for engineering analysis and design.

2.19		Equipamento	2.19 Manual triaxial loading system / (Sistema de carregamento triaxial manual)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1970	**Fornecedor**	ELE
Nº Série	-	**Marca**	ELE
Nº IST	-	**Modelo**	Tritest 50
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

Ok, mas não se usa.

Purpose

A manual triaxial loading system is a geotechnical testing apparatus used for conducting triaxial tests on soil specimens in soil mechanics and geotechnical engineering. Unlike automatic triaxial loading systems, which automate the testing process, manual triaxial systems require more hands-on operation and control by the user.
Manual triaxial loading systems are used for various geotechnical testing applications, including:
Determining the shear strength parameters of soils.
Studying the compressibility and consolidation behavior of soils.
Investigating the effects of different stress conditions on soil behavior.
Educational and training purposes in geotechnical engineering programs.
While manual triaxial systems require more user intervention and may have limitations in terms of automation, they are still valuable tools in geotechnical laboratories, especially for smaller-scale testing projects and educational purposes. Proper training and adherence to testing standards are essential when using manual triaxial loading systems to ensure accurate and reliable results.

2.20		Equipamento	2.20 GDS Data acquisition system 8 channels RS232 / (Sistema de aquisição de dados GDS 8 canais RS232)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1980	**Fornecedor**	GDS
Nº Série	10038	**Marca**	GDS
Nº IST	-	**Modelo**	10038
Id. Resp.	-	**Capacidade**	-

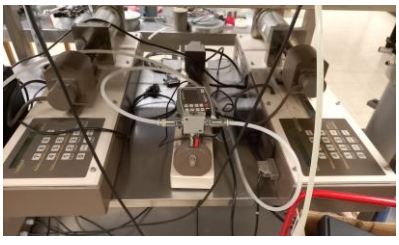
Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

-

Purpose

The GDS (Geotechnical Data Systems) Data Acquisition System with 8 channels and RS232 connectivity is a data acquisition and monitoring system commonly used in geotechnical engineering and soil mechanics for collecting, storing, and analyzing data from various geotechnical sensors and instruments.
The ability to collect and analyze data from geotechnical sensors and instruments is essential for assessing soil behavior, ensuring the safety and stability of structures, and making informed engineering decisions. GDS data acquisition systems with RS232 connectivity are valuable tools for achieving these objectives.



2.21	Equipamento	2.21 GDS Data acquisition system 3 channels for local transducers inside triaxial chambers / (Sistema de aquisição de dados GDS 3 canais para transdutores locais dentro de câmaras triaxiais)
	Registo	Alban Kuriqi 09 / 06 / 2023

Ano	1980	**Fornecedor**	GDS
Nº Série	10265	**Marca**	GDS
Nº IST	-	**Modelo**	10025
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

-

Purpose

A GDS (Geotechnical Data Systems) Data Acquisition System with three channels for local transducers inside triaxial chambers is specialized equipment designed for geotechnical testing and research, particularly in triaxial testing scenarios. Triaxial testing is a standard method used in geotechnical engineering to study the mechanical properties of soils under controlled conditions.

GDS Data Acquisition Systems tailored for triaxial chambers are essential tools in geotechnical laboratories and research institutions, providing precise and comprehensive data for soil mechanics analysis and geotechnical engineering studies. They help engineers and researchers gain insights into soil behavior and provide valuable data for designing foundations, slopes, retaining walls, and other geotechnical structures.

2.22	Equipamento	2.22 Triaxial chamber for 7cm diameter samples / (Câmara triaxial para amostras de 7 cm de diâmetro)
	Registo	Alban Kuriqi 09 / 06 / 2023

Ano	1990	**Fornecedor**	Wykehan Farrance
Nº Série	-	**Marca**	Wykehan Farrance
Nº IST	-	**Modelo**	10751
Id. Resp.	-	**Capacidade**	7 cm

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

Em uso; câmara verde, 16KN.

Purpose

A triaxial chamber designed for 7cm diameter samples is a specialized piece of equipment used in geotechnical engineering and soil mechanics for conducting triaxial tests on soil specimens of a specific size. Triaxial testing is a fundamental method for studying soil's mechanical properties and behavior under various stress conditions.

Triaxial chambers designed for specific sample sizes, such as 7cm diameter samples, provide a controlled environment for studying soil behavior under different stress conditions, aiding in the characterization of soil properties for engineering applications. Proper calibration and adherence to testing standards are essential when using these chambers to ensure accurate and reliable test results.

2.23		Equipamento	2.23 2 Triaxial chambers for 7cm diameter samples / (2 câmaras triaxiais para amostras de 7 cm de diâmetro)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1980	**Fornecedor**	ELE
Nº Série	-	**Marca**	ELE
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	7 cm

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

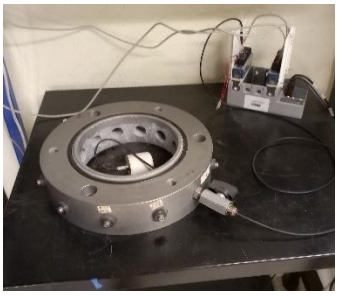
Obs.

Em uso; 5kN e 8kN.

Purpose

Triaxial chambers designed for 7cm diameter samples are specialized geotechnical testing equipment used for conducting triaxial tests on soil specimens with a specific size. Triaxial testing is a fundamental method in geotechnical engineering and soil mechanics to evaluate soils' mechanical properties and behavior under controlled stress conditions.

Triaxial chambers designed for specific sample sizes, such as 7cm diameter samples, provide a controlled environment for studying soil behavior under different stress conditions. They are essential tools for characterizing soil properties, conducting research, and ensuring the stability and safety of geotechnical structures. Proper calibration and adherence to testing standards are crucial when using these chambers to provide accurate and reliable test results.



2.24		Equipamento	2.24 2 Triaxial chambers for 10cm diameter samples / (2 câmaras triaxiais para amostras de 10 cm de diâmetro)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1980	**Fornecedor**	ELE
Nº Série	-	**Marca**	ELE
Nº IST	-	**Modelo**	4157
Id. Resp.	-	**Capacidade**	10 cm

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Off!

Purpose

Triaxial chambers designed for 10cm diameter samples are specialized geotechnical testing equipment used for conducting triaxial tests on soil specimens with a specific size. Triaxial testing is a fundamental method in geotechnical engineering and soil mechanics to evaluate soils' mechanical properties and behavior under controlled stress conditions. Chambers designed for larger-diameter samples, such as 10cm, are typically used for testing larger and more representative soil specimens.

Triaxial chambers designed for larger-diameter samples provide a controlled environment for studying soil behavior under different stress conditions, making them valuable tools for characterizing soil properties, conducting research, and ensuring the stability and safety of geotechnical structures. Proper calibration and adherence to testing standards are crucial when using these chambers to provide accurate and reliable test results.

2.25		Equipamento	2.25 Large triaxial chamber for 7cm diameter samples compatible with transducer access ring / (Grande câmara triaxial para amostras de 7 cm de diâmetro compatível com o anel de acesso do transdutor)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2005	**Fornecedor**	Wykehan Farrance
Nº Série	-	**Marca**	Wykehan Farrance
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	7 cm

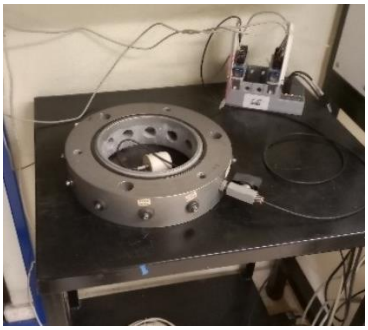
Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

Ok, câmara azul.

Purpose

A large triaxial chamber designed for 7cm diameter samples and compatible with a transducer access ring is a specialized geotechnical testing equipment for conducting triaxial tests on soil specimens with specific size requirements. The compatibility with a transducer access ring allows for the installation of sensors and transducers for accurate data collection during the test.
Triaxial chambers designed for 7cm diameter samples with compatibility for transducer access rings provide a controlled environment for studying soil behavior under different stress conditions and ensure accurate data collection for research and engineering analysis. Proper calibration and adherence to testing standards are essential when using these chambers to provide accurate and reliable test results.



2.26		Equipamento	2.26 Triaxial chamber for 7cm diameter samples having one radial deformation sensor incorporated in the base / (Câmara triaxial para amostras de 7 cm de diâmetro com um sensor de deformação radial incorporado na base)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Martronica
Nº Série	-	**Marca**	Martronica
Nº IST	-	**Modelo**	840
Id. Resp.	-	**Capacidade**	7 cm

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Off, falta load cell.

Purpose

A triaxial chamber for 7cm diameter samples with one radial deformation sensor incorporated into the base is a specialized piece of geotechnical testing equipment designed for conducting triaxial tests on soil specimens. This type of chamber is tailored for specific testing requirements that include the measurement of radial deformation during the trial.

Triaxial chambers with incorporated radial deformation sensors are essential for characterizing soil properties, conducting research, and ensuring the stability and safety of geotechnical structures. Proper calibration and adherence to testing standards are crucial when using these chambers to provide accurate and reliable test results.	

2.27		Equipamento	2.27 12-port transducer access ring for triaxial cells with 7 cm diameter / (Anel de acesso do transdutor de 12 portas para células triaxiais com 7 cm de diâmetro)	
		Registo	Alban Kuriqi	09 / 06 / 2023
Ano	2005	**Fornecedor**	Wykehan Farrance	
Nº Série	-	**Marca**	Wykehan Farrance	
Nº IST	-	**Modelo**	31-WF11001	
Id. Resp.	-	**Capacidade**	7 cm	

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

-

Purpose

A 12-port transducer access ring designed for triaxial cells with a 7 cm diameter is a specialized accessory used in geotechnical testing and soil mechanics research. This access ring is designed to fit onto a triaxial cell with a specific diameter and provides multiple ports for installing transducers and sensors.
The 12-port transducer access ring enhances the versatility and functionality of triaxial cells by providing multiple access points for sensors and transducers. This allows for more comprehensive data collection and analysis during geotechnical testing, aiding in the soil properties and behavior characterization. Proper installation and sealing are essential to ensure accurate and reliable test results.

2.28		Equipamento	2.28 12-port transducer access ring for triaxial cells with 7cm diameter / (Anel de acesso do transdutor de 12 portas para células triaxiais com 7 cm de diâmetro)	
		Registo	Alban Kuriqi	09 / 06 / 2023
Ano	1980	**Fornecedor**	ELE	
Nº Série	-	**Marca**	ELE	
Nº IST	-	**Modelo**	1557-2-1036	
Id. Resp.	-	**Capacidade**	7 cm	

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

-

Purpose

A 12-port transducer access ring designed for triaxial cells with a 7cm diameter is a specialized accessory used in geotechnical testing and soil mechanics research. This access ring is specifically tailored to fit onto a triaxial cell with a 7cm diameter and provides twelve ports or openings for installing various transducers and sensors.
A 12-port transducer access ring enhances the versatility of triaxial cells by providing multiple access points for sensors and transducers. This allows for comprehensive data collection and analysis during geotechnical testing, contributing to a better understanding of soil properties and behavior. Proper installation, sealing, and calibration are essential to ensure the accuracy and reliability of test results.

2.29		Equipamento	2.29 3 Load cells for axial stress measurement in a triaxial test, compatible with WK chambers / (3 Células de carga para medição de tensão axial em um teste triaxial, compatível com câmaras WK)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1990-2005	**Fornecedor**	Wykehan Farrance
Nº Série	-	**Marca**	Wykehan Farrance
Nº IST	-	**Modelo**	STAL C9
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 2	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

2 de 16kN (1 a funcionar e outra OFF). 1 de 32 kN avariada.

Purpose

Using three load cells for axial stress measurement in a triaxial test is a common practice to provide redundancy and ensure accurate measurement of axial stresses applied to a soil specimen. These load cells should be compatible with WK (Watanabe and Katsuki) chambers, commonly used in geotechnical and soil mechanics testing.
It's essential to consult with the manufacturer of the WK chambers or a specialized geotechnical testing equipment supplier to ensure that the selected load cells are compatible with your specific WK chamber model and testing requirements. Proper setup, calibration, and maintenance of load cells are critical for obtaining accurate and reliable axial stress measurements during triaxial tests.

2.30		Equipamento	2.30 3 Load cells for axial stress measurement in a triaxial test, compatible with ELE chambers / (3 Células de carga para medição de tensão axial em um teste triaxial, compatível com câmaras ELE)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1980	**Fornecedor**	ELE
Nº Série	-	**Marca**	ELE
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

2 de 5kN (1 a funciona e outra OFF). 1 de 8 kN.

Purpose

Using three load cells for axial stress measurement in a triaxial test is a common practice to provide redundancy and ensure accurate measurement of axial stresses applied to a soil specimen. These load cells should be compatible with ELE (Ele International) chambers, commonly used in geotechnical and soil mechanics testing.
It's essential to consult with the manufacturer of the ELE chambers or a specialized geotechnical testing equipment supplier to ensure that the selected load cells are compatible with your specific ELE chamber model and testing requirements. Proper setup, calibration, and maintenance of load cells are critical for obtaining accurate and reliable axial stress measurements during triaxial tests.

2.31		Equipamento	2.31 One Electromechanical Triaxial Testing System (Stress Path Equipment) - combined triaxial cell and dynamic actuator, the axial force and axial deformation being applied through the base of the cell. / (Um Sistema de Teste Triaxial Eletromecânico (Equipamento de Trajeto de Tensão) - célula triaxial combinada e atuador dinâmico, a força axial e a deformação axial sendo aplicadas através da base da célula.)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2005	**Fornecedor**	GDS
Nº Série	-	**Marca**	GDS
Nº IST	-	**Modelo**	DYNTTS
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

Off. faltam controladores de pressão água.

Purpose

An Electromechanical Triaxial Testing System with Stress Path Equipment is a specialized geotechnical testing apparatus used to conduct dynamic triaxial tests on soil specimens. This system combines a triaxial cell with an active actuator, allowing for the application of axial force and axial deformation through the base of the cell.

This testing system is essential for understanding how soils behave under dynamic loading conditions and is particularly valuable in earthquake engineering and geotechnical research. It allows engineers and researchers to evaluate soil response and make informed decisions regarding the design and safety of structures in earthquake-prone areas.	

2.32		Equipamento	2.32 LVDT local strain transducers set (2 vertical and 1 radial) / (Conjunto de transdutores de deformação local LVDT (2 verticais e 1 radial))
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2005	**Fornecedor**	GDS
Nº Série	-	**Marca**	GDS
Nº IST	-	**Modelo**	D5/200WRA RDP 91455
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Ok, calibrados em 2013.

Purpose

An LVDT (Linear Variable Differential Transformer) local strain transducer set typically consists of multiple LVDT sensors designed to measure strains and displacements at specific locations within a structure or during a geotechnical test. The group you mentioned includes two vertical LVDT sensors and one radial LVDT sensor.
Each LVDT sensor operates on the principle of electromagnetic induction and provides precise measurements of displacements or strains. They are typically connected to data acquisition systems or recorders to collect and analyze the data.
These LVDT sensors play a crucial role in geotechnical testing and structural monitoring, providing valuable information about how materials and structures behave under load. Engineers and researchers use this data to assess structures' safety and performance and refine design and construction practices.

2.33		Equipamento	2.33 Hall effect local strain transducers set (2 vertical and 1 radial) / (Conjunto de transdutores de tensão local de efeito Hall (2 verticais e 1 radial))
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1990	**Fornecedor**	GDS
Nº Série	-	**Marca**	GDS
Nº IST	-	**Modelo**	SS94A2 Micro245
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

-

Purpose

A Hall effect local strain transducer set, consisting of two vertical and one radial sensor, is a specialized instrumentation used for measuring strains and deformations in various applications, including geotechnical and structural engineering. Hall effect sensors utilize the Hall effect, which generates a voltage across a conductor or semiconductor when subjected to a magnetic field.
The choice between Hall effect sensors and other strain measurement technologies depends on the specific requirements of the application and the environmental conditions. Hall effect sensors offer advantages such as non-contact measurement and high precision, making them suitable for various monitoring and testing applications.

2.34		Equipamento	2.34 5 Water pore pressure transducers for the triaxial tests / (Conjunto de transdutores de tensão local de efeito Hall (2 verticais e 1 radial))
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1980	**Fornecedor**	Druck
Nº Série	-	**Marca**	Druck
Nº IST	-	**Modelo**	463459
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X	I&D X	Técnica -
	Não	Ensino -	Utilização -

Obs. -

Ok, precisam calibração.

Purpose

Water pore pressure transducers, also known as pore pressure sensors or piezometers, are essential instruments used in geotechnical triaxial tests to measure and monitor pore water pressure changes within soil specimens during testing. These sensors are crucial in understanding soil behavior under different stress conditions.
Water pore pressure transducers are indispensable geotechnical engineering and soil mechanics research tools. During triaxial tests, they provide crucial data for understanding soil behavior, pore pressure generation, and consolidation characteristics. Proper selection, calibration, and care of these sensors are essential to obtain reliable and meaningful test results.

2.35		Equipamento	2.35 2 LVDT for measuring vertical displacements in oedometer tests 10 mm range / (2 LVDT para medir deslocamentos verticais em testes de odômetro faixa de 10 mm)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1990	**Fornecedor**	Wykehan Farrance
Nº Série	-	**Marca**	Wykehan Farrance
Nº IST	-	**Modelo**	WF HS25
Id. Resp.	-	**Capacidade**	10 mm

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X	I&D X	Técnica -

	Não		Ensino	X	Utilização X

Obs.

-

Purpose

An LVDT (Linear Variable Differential Transformer) designed for measuring vertical displacements in oedometer tests with a 10 mm measurement range is a specialized displacement sensor used in geotechnical and soil mechanics testing. Oedometer tests, also known as consolidation tests, are conducted to study soils' compression and settlement behavior under various loadings. LVDTs are valuable instruments in oedometer testing as they provide precise measurements of vertical displacements during consolidation. These measurements are critical for determining soil compressibility, settlement characteristics, and consolidation behavior, which is essential in geotechnical engineering and soil mechanics research. Proper selection and care of the LVDT are crucial to obtaining reliable and meaningful test results.

2.36		Equipamento	2.36 3 LVDT for measuring vertical displacements in oedometer tests 10 mm range / (3 LVDT para medir deslocamentos verticais em testes de odômetro faixa de 10 mm)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1990	**Fornecedor**	Wykehan Farrance
Nº Série	-	**Marca**	Wykehan Farrance
Nº IST	-	**Modelo**	WF HS25
Id. Resp.	-	**Capacidade**	10 mm

Localização	Operacional		Utilização		Ficha	
Zona 2	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

Não operacionais.

Purpose

An LVDT (Linear Variable Differential Transformer) designed for measuring vertical displacements in oedometer tests with a 10 mm range is a specialized displacement sensor used in geotechnical and soil mechanics testing. Oedometer tests, also known as consolidation tests, are conducted to study soils' compression and settlement behavior under various loadings.

VDTs are valuable instruments in oedometer testing as they provide precise measurements of vertical displacements during consolidation. These measurements are critical for determining soil compressibility, settlement characteristics, and consolidation behavior, which is essential in geotechnical engineering and soil mechanics research. Proper selection and care of the LVDT are crucial to obtaining reliable and meaningful test results.

2.37		Equipamento	2.37 2 LVDT for measuring vertical displacements in triaxial tests 20 mm range / (2 LVDT para medir deslocamentos verticais em testes triaxiais Faixa de 20 mm)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2011	**Fornecedor**	VISHAY
Nº Série	-	**Marca**	VISHAY
Nº IST	-	**Modelo**	50394801 e 50394802
Id. Resp.	-	**Capacidade**	20 mm

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

O 802 está em funcionamento, o 801 não está operacional.

Purpose

An LVDT (Linear Variable Differential Transformer) designed for measuring vertical displacements in triaxial tests with a 20 mm measurement range is a specialized displacement sensor used in geotechnical and soil mechanics testing. Triaxial tests are conducted to study the mechanical properties of soils under different stress conditions.
LVDTs are valuable instruments in triaxial testing as they provide precise measurements of vertical displacements during the deformation of the soil specimen. These measurements are essential for characterizing the mechanical behavior of soils, including shear strength, consolidation properties, and stress-strain responses. Proper selection and care of the LVDT are crucial to obtaining reliable and meaningful test results.

2.38		Equipamento	2.38 3 LVDT for measuring vertical displacements in oedometer tests 10 mm range / (3 LVDT para medir deslocamentos verticais em testes de odômetro faixa de 10 mm)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2011	**Fornecedor**	Wykehan Farrance
Nº Série	-	**Marca**	Wykehan Farrance
Nº IST	-	**Modelo**	30-WF6-207
Id. Resp.	-	**Capacidade**	10 mm

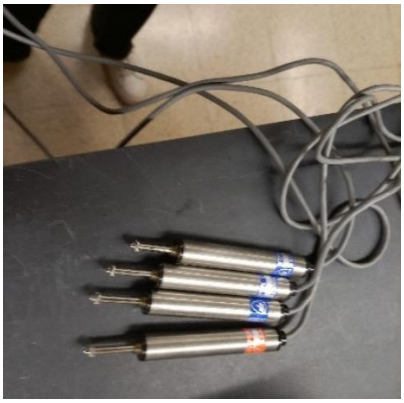
Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

OK, precisam de dataloger compatível da NI.

Purpose

To measure vertical displacements in oedometer tests with a 10 mm range, you would typically use an LVDT (Linear Variable Differential Transformer) designed explicitly for this purpose. An LVDT is a highly accurate and precise displacement sensor commonly used in geotechnical and soil mechanics testing.
LVDTs are valuable instruments in oedometer testing as they provide precise measurements of vertical displacements during consolidation. These measurements are critical for determining soil compressibility, settlement characteristics, and consolidation behavior, which is essential in geotechnical engineering and soil mechanics research. Proper selection and care of the LVDT are crucial to obtaining reliable and meaningful test results.



2.39		Equipamento	2.39 Direct shear device and cell for 5 and 7 cm diameter specimens / (Dispositivo de cisalhamento direto e célula para amostras de 5 e 7 cm de diâmetro)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1970	**Fornecedor**	Wykehan Farrance
Nº Série	96332	**Marca**	Wykehan Farrance
Nº IST	000007916	**Modelo**	P35105 ou 25730?
Id. Resp.	-	**Capacidade**	5 and 7 cm

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Não operacional.

Purpose

Direct shear tests are commonly conducted in geotechnical engineering to determine the shear strength properties of soil specimens. The test involves shearing a soil specimen along a predetermined failure plane. For this purpose, direct shear devices and cells are used, and they come in different sizes to accommodate specimens of various diameters, including 5 cm and 7 cm.

Direct shear tests are fundamental in geotechnical engineering for assessing the shear strength properties of soils. Choosing an appropriate direct shear device and cell is essential to obtaining reliable and meaningful test results.

2.40		Equipamento	2.40 2 air pressure transducers max 150Psi=1,5MPa / (2 transdutores de pressão de ar máx. 150 Psi=1,5 MPa)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Fairchild
Nº Série	-	**Marca**	Fairchild
Nº IST	-	**Modelo**	15362U
Id. Resp.	-	**Capacidade**	Max 150 Psi=1,5 MPa

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

Não operacional.

Purpose

In geotechnical engineering, air pressure transducers with a maximum pressure range of 150 psi (pounds per square inch) or 1.5 MPa (megapascal) can be valuable instruments for various applications related to soil and rock mechanics, particularly when studying pore water pressure, soil compaction, or other geotechnical parameters.

Air pressure transducers are valuable tools in geotechnical engineering, as they provide critical data for understanding soil behavior, consolidation characteristics, permeability, and other parameters. Properly selecting and using these transducers is essential to ensure the reliability and accuracy of geotechnical test results.

2.41		Equipamento Registo	2.41 2 air pressure transducers max 3,5 MPa / (2 transdutores de pressão de ar máx. 3,5 MPa) Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Fairchild
Nº Série	-	**Marca**	Fairchild
Nº IST	-	**Modelo**	10162U
Id. Resp.	-	**Capacidade**	Max 3,5 MPa

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Não operacional.

Purpose

In geotechnical engineering, air pressure transducers with a maximum pressure range of 350 psi (pounds per square inch) or 3.5 MPa (megapascal) can be valuable instruments for various applications where it's necessary to measure and monitor air or gas pressures within that range. These transducers are essential in construction, geotechnical testing, and soil mechanics research.

Air pressure transducers are critical in geotechnical engineering and soil mechanics research, providing essential data for understanding soil behavior, consolidation properties, permeability, and shear strength characteristics. The proper selection, installation, and maintenance of these transducers are necessary to ensure the reliability and accuracy of geotechnical test results.

2.42		Equipamento Registo	2.42 Microwave oven / (Forno de micro-ondas) Alban Kuriqi 09 / 06 / 2023
Ano	2008	**Fornecedor**	Crown
Nº Série	-	**Marca**	Crown
Nº IST	-	**Modelo**	20090671
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

-

Purpose

The use of microwave ovens in geotechnical engineering and related fields is somewhat unconventional. Still, it may have specific applications in laboratory or research settings, such as Soil Drying, Sample Preparation, Dielectric Property Studies, and Thermal Testing. Microwave ovens in geotechnics are supplementary and task-specific rather than a standard practice.

2.43		Equipamento	2.43 Air compressor for ressonant column tests / (Compressor de ar para testes de coluna ressonante)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Westing House
Nº Série	-	**Marca**	Westing House
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 1	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

Não operacional.

Purpose

An air compressor is an essential component in the conduct of resonant column tests in geotechnics. Resonant column tests are a common laboratory technique used to determine the dynamic properties of soil samples. These tests involve subjecting soil specimens to various levels of cyclic shear stress while monitoring their response. An air compressor is crucial in providing the necessary mechanical energy to conduct resonant column tests in geotechnics. It helps apply cyclic shear stresses to soil specimens at controlled frequencies and amplitudes, which is essential for evaluating the dynamic properties of soils. The precise control of the air compressor is critical in ensuring accurate and reliable test results.

2.44		Equipamento	2.44 Air pump to create vacuum / (Bomba de ar para criar vácuo)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2008	**Fornecedor**	Perta
Nº Série	8600124	**Marca**	Perta
Nº IST	00108314	**Modelo**	86-D2001
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 1	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

-

Purpose

Air pumps, precisely vacuum pumps, are essential tools in geotechnics for various applications. Creating a vacuum using air pumps has several vital uses in this field, including soil sampling, permeability tests, consolidation testing, compaction testing, sample preparation, soil-water characterization, and sample preservation. Overall, creating and controlling a vacuum is crucial in geotechnics to ensure that tests and research are conducted under controlled conditions, which better reflect real-world scenarios. This contributes to a more accurate understanding of soil properties and behavior, facilitating informed engineering design and decision-making.

2.45		Equipamento	2.45 46 strain gauges resist 120+/- 0.3 ohms / (Extensômetros Equipamento 46 resistem a 120+/- 0,3 ohms)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Tokio Sokki Kenkyujo Co. Lda
Nº Série	-	**Marca**	Tokio Sokki Kenkyujo Co. Lda
Nº IST	-	**Modelo**	FLK-6-11
Id. Resp.	-	**Capacidade**	120+/- 0.3 ohms

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

Não operacional.

Purpose

Strain gauges are sensitive devices commonly used in geotechnical engineering to measure the strain or deformation in materials like soil, rock, or structural components. Common applications include:
Soil Settlement: Strain gauges are installed in boreholes to measure settlement in the ground during construction or long-term monitoring.
Tunnel and Dam Monitoring: They assess stress and strain in tunnels, dams, and other underground structures.
Foundation and Pile Testing: Strain gauges help evaluate the performance of foundations and piles.
Slope Stability Analysis: For monitoring the stability of slopes and embankments.
Structural Health Monitoring: In some cases, they are used in geotechnical aspects of structural health monitoring of bridges, retaining walls, and other infrastructure.

2.46		Equipamento	2.46 2 large ovens max temperature 250ºC / (2 fornos grandes temperatura máxima 250ºC)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Eliwell
Nº Série	-	**Marca**	Eliwell
Nº IST	-	**Modelo**	EWTR910
Id. Resp.	-	**Capacidade**	250 ºC

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

1 operacional, a outra não.

Purpose

Large ovens with a maximum temperature of 250°C can be utilized in various geotechnical applications. These ovens provide a controlled and elevated temperature environment, which is beneficial for several purposes in geotechnics.
When using large ovens for geotechnical purposes, adhering to industry standards and guidelines is crucial to ensure accurate and reliable results. Proper sample preparation, temperature control, and data recording are essential to the success of geotechnical tests and research involving ovens. Here are some common uses: soil testing and analysis, aggregate and material testing, bitumen and asphalt testing, curing and stabilization, drying drilling and borehole samples, and thermal gravimetric analysis (TGA).

2.47		Equipamento	2.47 2 large oven max temperature 250ºC / (1 fornos grandes temperatura máxima 250ºC)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2015	**Fornecedor**	U-Test
Nº Série	-	**Marca**	U-Test
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	250 ºC

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

1 operacional, partilhada com o LVCT.

Purpose

Large ovens with a maximum temperature of 250°C can be utilized in various geotechnical applications. These ovens provide a controlled and elevated temperature environment, which is beneficial for several purposes in geotechnics.
When using large ovens for geotechnical purposes, adhering to industry standards and guidelines is crucial to ensure accurate and reliable results. Proper sample preparation, temperature control, and data recording are essential to the success of geotechnical tests and research involving ovens. Here are some common uses: soil testing and analysis, aggregate and material testing, bitumen and asphalt testing, curing and stabilization, drying drilling and borehole samples, and thermal gravimetric analysis (TGA).

2.48		Equipamento	2.48 Small oven / (Forno pequeno)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Memmet
Nº Série	-	**Marca**	Memmet
Nº IST	-	**Modelo**	Tv30U SS6025
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

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Purpose

Small ovens are also valuable tools in geotechnical engineering and can serve several vital purposes due to their compact size and portability. Here are some common uses of small ovens in geotechnics: moisture content determination, proctor test for soil compaction, specific gravity measurement, sample preparation for unconfined compression tests,
Small ovens are beneficial when limited space or mobility is required for fieldwork or on-site testing. Their ability to quickly and accurately dry and condition samples makes them indispensable tools for geotechnical professionals working on various projects. As with any testing equipment, proper procedures and adherence to standards are essential to ensure the reliability and validity of results.

2.49		Equipamento	2.49 Water distillatory device / (Dispositivo de destilação de água)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2008	**Fornecedor**	POBEL
Nº Série	7603949	**Marca**	POBEL
Nº IST	00108321	**Modelo**	DESA 0075
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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Purpose

Water distillation devices are not typically a primary tool used in geotechnical engineering; however, there are specific scenarios within geotechnics where distilled or purified water may be required. Here are some instances in which a water distillation device might find application in geotechnical engineering: sample preparation, consolidation testing, chemical analysis, grain size analysis.

While a water distillation device can help ensure the purity of water in these specific situations, it is not a standard tool in geotechnical engineering laboratories. Instead, many geotechnical laboratories rely on water purification systems or high-quality water sources to provide the necessary quality for testing. Distilled water is typically reserved for situations where absolute purity is required to prevent contamination or interference with the conducted geotechnical tests.

2.50		Equipamento	2.50 Ressonant column triaxial test apparatus and loading device / (Aparelho de teste triaxial de coluna ressonante e dispositivo de carregamento)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	1992	**Fornecedor**	Seiken, Inc
Nº Série	-	**Marca**	Seiken, Inc
Nº IST	-	**Modelo**	DTC-158
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

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Purpose

The Resonant Column Triaxial Test (RCTT) apparatus and its associated loading device are specialized geotechnical testing equipment used to evaluate the mechanical properties of soil and rock materials under dynamic loading conditions. Here's how they are used in geotechnics: soil and rock dynamic properties testing, liquefaction potential assessment, ground improvement techniques, pavement material characterization, foundation design, seismic site characterization, research, and development.

In an RCTT test, the loading device applies cyclic or resonant shear loads to a soil sample while measuring the resulting displacements and stresses. The dynamic properties of the soil are determined from the sample's response to the dynamic loading. The apparatus allows geotechnical engineers and researchers to assess the behavior of soils and rocks under realistic dynamic conditions, critical for various engineering projects, including designing earthquake-resistant structures and foundations.

2.51		Equipamento	2.51 Torsional dynamic triaxial apparatus, with hydraulic unit and servo pneumatic loader / (Aparelho triaxial dinâmico torcional, com unidade hidráulica e carregador servo pneumático)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Seiken, Inc
Nº Série	-	**Marca**	Seiken, Inc
Nº IST	-	**Modelo**	DTC-166
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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Purpose

The Torsional Dynamic Triaxial Apparatus, equipped with a hydraulic unit and servo-pneumatic loader device, is an advanced piece of geotechnical testing equipment designed for studying the dynamic mechanical properties of soils and rock materials under shear loading conditions. Here's how this apparatus is used in geotechnics: dynamic shear modulus and damping ratio measurement, liquefaction studies, soil-structure interaction analysis, and pavement material characterization.
In summary, the Torsional Dynamic Triaxial Apparatus, with its hydraulic and pneumatic components, is an essential tool for geotechnical engineers and researchers to assess the dynamic behavior of soils and rocks under shear loading conditions. It plays a crucial role in improving the understanding and prediction of geotechnical responses in various dynamic loading scenarios.

2.52		Equipamento	2.52 2 Top and bottom porous stones for the ressonant column with 7 cm diameter / (2 Pedras porosas superior e inferior para a coluna ressonante com 7 cm de diâmetro)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	-
Nº Série	-	**Marca**	-
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	7 cm

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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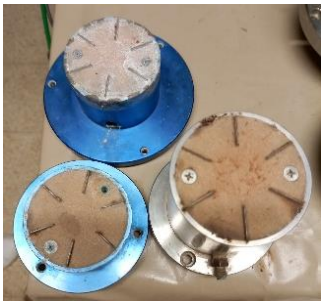
Purpose

Top and bottom porous stones are crucial in resonant column testing, especially when working with a 7 cm diameter sample in geotechnics. Here's how these porous stones are used in this context: sample containment, preventing sample escaping, fluid permeability, sample sealing, and load distribution.
In geotechnical engineering, the resonant column test determines the dynamic properties of soils and rocks, including the dynamic shear modulus (G) and damping ratio (D). The presence of top and bottom porous stones is critical for maintaining sample integrity while allowing fluid flow, which is essential for accurate measurements during dynamic loading conditions.
These stones facilitate measuring how the sample responds to cyclic shear forces, providing valuable data for geotechnical analyses and engineering design, especially in



applications where dynamic forces, such as earthquakes or vibrations, play a significant role.	

2.53		Equipamento	2.53 2 Top and bottom porous stones for the torsional triaxial with 7cm diameter / (2 Pedras porosas superior e inferior para o triaxial torcional com 7cm de diâmetro)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	-
Nº Série	-	**Marca**	-
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	7 cm

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

-

Purpose

Using top and bottom porous stones in geotechnical testing is common when conducting torsional triaxial tests with a 7 cm diameter sample. These porous stones serve specific functions within the testing process: sample containment, fluid flow control, sample containment, load distribution, and fluid drainage.

In torsional triaxial tests, the objective is often to determine various mechanical properties of soil or rock samples, including shear strength parameters and the impact of shear forces under different loading conditions. The presence of top and bottom porous stones is crucial for sample containment and controlled fluid flow. This ensures the sample's integrity while allowing for accurate pore pressure measurements and stress-strain behavior during torsional loading.

These porous stones contribute to the reliability and accuracy of the test results and are integral to understanding the mechanical behavior of geotechnical materials under shear loading conditions.

2.54		Equipamento	2.54 2 Top and bottom porous stones for the torsional triaxial with 10 cm diameter / (2 Pedras porosas superior e inferior para o triaxial torcional com 10 cm de diâmetro)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	-
Nº Série	-	**Marca**	-
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	10 cm

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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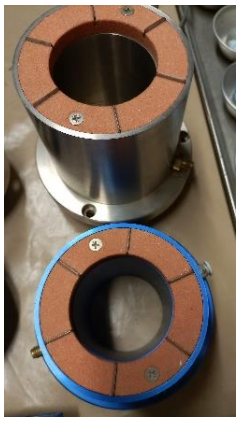
Purpose

Using top and bottom porous stones in geotechnical testing is common when conducting torsional triaxial tests with a 10 cm diameter sample. These porous stones serve specific functions within the testing process: sample containment, fluid flow control, sample containment, load distribution, and fluid drainage.

In torsional triaxial tests, the objective is often to determine various mechanical properties of soil or rock samples, including shear strength parameters and the impact of shear forces under different loading conditions. The presence of top and bottom porous stones is crucial for sample containment and controlled fluid flow. This ensures the sample's integrity while allowing for accurate pore pressure measurements and stress-strain behavior during torsional loading.
These porous stones contribute to the reliability and accuracy of the test results and are integral to understanding the mechanical behavior of geotechnical materials under shear loading conditions.



2.55		Equipamento	2.55 2 Top and bottom porous stones for the ressonant column with bender elements with 7cm diameter / (2 Pedras porosas superior e inferior para a coluna ressonante com elementos dobradores com 7 cm de diâmetro)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	-
Nº Série	-	**Marca**	-
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	7 cm

Localização	Operacional		Utilização		Ficha	
Zona 1	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

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Purpose

When using a resonant column apparatus with bender elements for a 7 cm diameter sample, top and bottom porous stones are integral components in geotechnical testing. These stones serve specific purposes in the resonant column test with bender elements: sample containment, reventing sample escape, fluid permeability, sample sealing, and load distribution.
In geotechnical engineering, the resonant column test with bender elements determines various dynamic properties of soils and rocks, including the dynamic shear modulus (G) and damping ratio (D). The presence of top and bottom porous stones is critical for maintaining sample integrity, allowing fluid flow, and facilitating accurate measurements during dynamic loading conditions. These stones are essential for understanding how geotechnical materials respond to dynamic forces, such as vibrations, which is critical for engineering design, soil characterization, and earthquake engineering applications.

2.56		Equipamento	2.56 Bender elements piezo receiver 8 channels and 2 interfaces / (Receptor piezo de elementos dobradores 8 canais e 2 interfaces)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	FEUP
Nº Série	-	**Marca**	FEUP
Nº IST	-	**Modelo**	PR17981
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 1	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

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Purpose

Bender elements, often combined with piezo receivers and data interfaces, play a significant role in geotechnical testing and research. This equipment is precious for studying the mechanical properties of soils and rocks, including their stiffness, shear wave velocity, and other geotechnical characteristics. Here's how bender elements, piezo receivers, and data interfaces are used in geotechnics: stiffness measurement, shear modulus and damping ratio, and wave propagation studies.

In geotechnical engineering, this combination of equipment is beneficial for characterizing the dynamic properties of soils and rocks, especially under dynamic loading conditions. It is critical to assess soil liquefaction potential, seismic site response, and soil-structure interaction. Researchers and engineers use bender elements, piezo receivers, and data interfaces to gain insights into geotechnical materials' behavior and make informed decisions in various engineering applications, such as foundation design, earthquake engineering, and geotechnical site investigations.

2.57		Equipamento	2.57 Wood scale and plates / (Balança e pratos de madeira)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	-
Nº Série	-	**Marca**	-
Nº IST	-	**Modelo**	3.55
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 1	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

Não operacional (peça de museu).

Purpose

Wood scales and plates are commonly used in geotechnics for various purposes, particularly in soil mechanics and geotechnical testing. These wooden components serve multiple functions in the field of geotechnical engineering:

It's important to note that while wooden scales and plates are versatile and valuable in geotechnical applications, they should be adequately cleaned and maintained to prevent contamination of soil samples and ensure the accuracy of test results. In some advanced geotechnical tests, non-wooden materials, such as steel or plastic, may be used for their specific properties and durability.

2.58		Equipamento	2.58 Scale máx 200g, 0,01g Type: 184629 / (Escala máx 200g, 0,01g Tipo: 184629)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Sartorius-Werke Gmbh
Nº Série	-	**Marca**	Sartorius-Werke Gmbh
Nº IST	-	**Modelo**	2442
Id. Resp.	-	**Capacidade**	máx 200 g

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Não operacional.

Purpose

A scale with a maximum capacity of 200 grams and a precision of 0.01 grams (often called a precision balance) is commonly used in geotechnical engineering for various purposes. The precise measurements provided by this type of scale are essential for accurate testing and analysis of soil and rock samples.
In summary, precision scales with a capacity of 200 grams and a readability of 0.01 grams are indispensable tools in geotechnical engineering and soil science. They provide the accuracy needed for various laboratory tests, quality control, and research applications, contributing to the reliability of geotechnical data and analyses.

2.59		Equipamento	2.59 Scale with arm máx 10kg Code: 557 Spec / (Balança com braço máx 10kg Código: 557 Especificação)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Fairbanks Morse CO
Nº Série	-	**Marca**	Fairbanks Morse CO
Nº IST	-	**Modelo**	G473741
Id. Resp.	-	**Capacidade**	máx 10 kg

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

-

Purpose

A scale with an arm and a maximum capacity of 10 kg, identified by code 557, is commonly employed in geotechnical applications for various tasks that require the measurement of relatively larger loads. These scales are typically used in field and laboratory settings to provide accurate weight measurements in geotechnics.
Scales with a maximum capacity of 10 kg and an arm, as identified by code 557, are versatile tools in geotechnical engineering. They can measure relatively larger loads and samples, making them invaluable for numerous applications related to soil characterization, construction, foundation design, and geotechnical testing.

2.60		Equipamento Registo	2.60 Mould extractors for proctor tests / (Extratores de molde para testes proctor) Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	-
Nº Série	-	**Marca**	-
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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Purpose

Mould extractors are essential equipment used in geotechnical engineering, particularly in soil mechanics, for conducting Proctor tests. Proctor tests determine the optimal moisture content and maximum dry density of soil samples, which are critical for geotechnical design and construction. Some applications: sample extraction, preventing sample disturbance, sample preparation, repeatability and consistency, multiple testing, data collection, and quality control.

Mould extractors are instrumental in ensuring that soil samples are extracted adequately from Proctor molds with minimal disturbance. This is essential for obtaining accurate and consistent test results used in geotechnical engineering for soil classification, compaction control, and the design of foundations, dams, and other geotechnical structures.

2.61		Equipamento Registo	2.61 Survey sample extractor / (Extrator de amostras de sondagens) Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	-
Nº Série	-	**Marca**	-
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

-

Purpose

A survey sample extractor, commonly used in geotechnics, is a tool or device designed to collect soil or rock samples from the subsurface for testing, analysis, and surveying purposes. These extractors are used explicitly in geotechnical investigations to obtain representative samples and data from the ground. Here are some key aspects and applications of survey sample extractors in geotechnics: sampling for site characterization, soil classification, strength and deformation properties, contaminant assessment, sampling for geophysical surveys, and foundation design.

Survey sample extractors come in various forms, including soil augers, soil coring equipment, rock coring tools, and more. The choice of extractor depends on the specific requirements of the geotechnical investigation, the type of soil or rock being sampled, and the depth of sampling required.

Accurate and representative sampling is crucial in geotechnical engineering because it forms the foundation for informed decision-making in construction, foundation design, environmental assessments, and other geotechnical applications.

2.62		Equipamento	2.62 Cylindrical shaper of samples / (Modelador cilíndrico de amostras)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	SOILTEST
Nº Série	-	**Marca**	SOILTEST
Nº IST	-	**Modelo**	C-202
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

Off.

Purpose

A cylindrical shaper of samples, often referred to as a sample extruder or sample compactor, is a device commonly used in geotechnical engineering and soil mechanics to prepare cylindrical soil samples. These samples are essential for conducting various geotechnical tests and experiments. Here's how a cylindrical shaper of samples is used in geotechnics: sample preparation, consolidation testing, triaxial testing, direct shear testing, unconfined compression testing, permeability testing, soil classification, and sample storage.

The cylindrical shape of the samples is particularly advantageous because it provides a consistent geometry for testing. This ensures that test results are reliable and comparable across different samples and testing procedures. Cylindrical sample shapers come in various sizes to accommodate additional testing requirements and sample sizes.

In geotechnical engineering, the quality and consistency of soil samples are crucial for accurate assessments of soil properties, which, in turn, influence the design and construction of foundations, dams, and other civil engineering projects. Cylindrical sample shapers play a significant role in achieving these goals by facilitating the preparation of standardized samples for a wide range of geotechnical tests.

2.63		Equipamento	2.63 Triaxial chargements repetes graves with transducers for measuring local deformations, 15cm diametro / (Cargas triaxiais repetem sepulturas com transdutores para medição de deformações locais, 15cm de diâmetro)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	CETE
Nº Série	-	**Marca**	CETE
Nº IST	-	**Modelo**	TCRG 158D
Id. Resp.	-	**Capacidade**	15 cm

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Não operacional.

Purpose

A "Triaxial Charger for Repeated Loading Tests with Transducers for Measuring Local Deformations" is a specialized geotechnical testing apparatus used to perform repeated loading tests on soil or rock samples in a controlled laboratory environment. This equipment is precious for assessing geotechnical materials' behavior and deformation characteristics under repeated loading conditions. Here's how it is used in geotechnics: sample preparation, assembly of the triaxial cell, transducer installation, triaxial loading, data collection, deformation analysis, and material characterization.

This specialized equipment is crucial in understanding how geotechnical materials respond to repeated loading conditions, which can be encountered in various construction and infrastructure projects. It provides essential data for designing safe and stable geotechnical structures and assessing the long-term performance of these structures under dynamic loads.	

2.64		Equipamento	2.64 2 inox pressure reservoirs / (2 reservatórios de pressão inox)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Wykehan Farrance
Nº Série	-	**Marca**	Wykehan Farrance
Nº IST	-	**Modelo**	17043
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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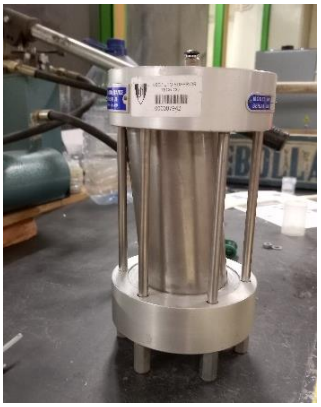
Purpose



2.65		Equipamento	2.65 3 perspex pressure reservoirs / (3 reservatórios de pressão perspex)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Controls
Nº Série	-	**Marca**	Controls
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

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Purpose

Perspex pressure reservoirs, often called Perspex cells or pressure vessels, play a vital role in geotechnical engineering for various soil and rock mechanics applications. These transparent or translucent pressure vessels are typically made from acrylic glass (often known by the brand name "Perspex"). They are used to simulate high-pressure conditions in the laboratory for studying the behavior of soils and rocks. Here are a few critical applications and uses of Perspex pressure reservoirs in geotechnics: triaxial testing, permeability testing, consolidation testing, soil behavior research, teaching and visualization, quality control, and material testing.

Overall, Perspex pressure reservoirs are valuable tools in geotechnical engineering as they enable researchers, engineers, and students to conduct experiments and tests that provide insights into the mechanical and hydraulic behavior of soils and rocks under controlled laboratory conditions. Their transparency allows direct observation of these

materials under pressure, contributing to a better understanding their properties and behavior in real-world geotechnical applications.	

2.66		Equipamento Registo	2.66 Dynamic compactor / (Compactador dinâmico) Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Tecnilab
Nº Série	-	**Marca**	Tecnilab
Nº IST	-	**Modelo**	Mod 500B
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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Purpose

Dynamic compactors, or vibratory or impact compactors, are heavy construction machinery used in geotechnical engineering to improve soil and create a stable foundation for various infrastructure projects. These machines use dynamic forces to compact soil and other granular materials efficiently. Here are some typical applications and uses of dynamic compactors in geotechnics: compaction of loose soils, airport runway construction, landfill construction, highway and road construction, railway construction, earthquake mitigation, site remediation, pipeline trench backfilling, embankment construction, foundation preparation.

Dynamic compactors are versatile and essential machines in geotechnical engineering and construction. They offer an efficient and effective way to improve soil properties, making it suitable for various construction and infrastructure projects while ensuring the long-term stability and safety of the built structures.

2.67		Equipamento Registo	2.67 Static compactor with support / (Compactador estático com suporte) Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Kango
Nº Série	-	**Marca**	Kango
Nº IST	-	**Modelo**	900k
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Ok.

Not present in the lab.

Purpose

Static compactors with support, also known as static rollers or static compacting equipment, are commonly used in geotechnical engineering for soil compaction and quality control. These machines apply a static load to the soil, typically through their weight, to compress and densify it. Here are some of the critical applications and uses of stationary compactors with support in geotechnics: soil compaction, quality control testing, subgrade preparation, embankment construction, airport runway and taxiway construction, railway track bed preparation, foundation compaction, landfill construction and rehabilitation, pipeline trench backfilling.

Soil Stabilization: In some cases, static compactors can be used for soil stabilization, which involves improving the mechanical properties of soil through compaction to support structures and reduce soil erosion. Static compactors with support play a critical role in geotechnical engineering by ensuring that soil meets the necessary compaction standards for various construction and infrastructure projects. Their reliability and precision make them valuable tools for achieving soil stability and long-term performance.	

2.68		Equipamento	2.68 Static compactor with support / (Compactador estático com suporte)	
		Registo	Alban Kuriqi	09 / 06 / 2023
Ano	-	**Fornecedor**	Kango	
Nº Série	-	**Marca**	Kango	
Nº IST	-	**Modelo**	638k	
Id. Resp.	-	**Capacidade**	-	

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

-

Purpose

Static compactors with support are essential for soil compaction and various construction applications in geotechnical engineering. These machines apply a static load to the soil and use their weight to compact and densify it. Here are some common uses of stationary compactors with support in geotechnics: subgrade preparation, road and pavement construction, embankment construction, airport runway, and taxiway construction, railway track bed preparation, foundation compaction, landfill construction and rehabilitation, pipeline trench backfilling, soil improvement and stabilization, quality control testing.

Static compactors with support are valuable tools in geotechnical engineering as they facilitate efficient soil compaction, which is crucial for achieving stability, durability, and long-term performance in various construction and infrastructure projects. Their precise and reliable compaction capabilities make them essential for maintaining the integrity of structures built on or with compacted soil.

2.69		Equipamento	2.69 Electrical mixers with 2 mixing spoons, 10 speeds and timer / (Batedeiras elétricas com 2 colheres misturadoras, 10 velocidades e timer)	
		Registo	Alban Kuriqi	09 / 06 / 2023
Ano	-	**Fornecedor**	Controls	
Nº Série	-	**Marca**	Controls	
Nº IST	-	**Modelo**	B72	
Id. Resp.	-	**Capacidade**	-	

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

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Purpose

Electric mixers with two mixing spoons, multiple speeds, and timers are not typically used in geotechnics. Geotechnics is a branch of civil engineering that deals with soil and rock mechanics, foundation design, and the study of subsurface materials. It involves soil testing, sampling, and various laboratory and field procedures to understand and analyze the properties of the Earth's subsurface. The equipment used in geotechnics is specific to soil and rock testing, and it includes tools and machines such as sieves and sieve shakers, triaxial testing machines, consolidation apparatus, proctor compaction machines, direct shear test apparatus, parameters, and penetrometers.	

2.70		Equipamento	2.70 Oven electric plate KP1056A / (Placa elétrica de forno KP1056A)	
		Registo	Alban Kuriqi	09 / 06 / 2023
Ano	-	**Fornecedor**	Severin	
Nº Série	-	**Marca**	Severin	
Nº IST	-	**Modelo**	80KT	
Id. Resp.	-	**Capacidade**	-	

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

Not present in the lab.

Purpose

An electric oven plate like the KP1056A is used in geotechnics is specialized for soil testing, sampling, and analysis. Such equipment includes sieves, triaxial testing machines, consolidation apparatus, and penetrometers, as mentioned in a previous response.

2.71		Equipamento	2.71 Oven electric plate / (Placa elétrica do forno)	
		Registo	Alban Kuriqi	09 / 06 / 2023
Ano	-	**Fornecedor**	Crussels	
Nº Série	-	**Marca**	Crussels	
Nº IST	-	**Modelo**	700W	
Id. Resp.	-	**Capacidade**	-	

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

Off.

Purpose

Electric oven plates, used in geotechnical engineering, are specifically designed for soil and rock testing, soil sampling, and various laboratory and field procedures related to the behavior and properties of Earth's subsurface materials.	

2.72		Equipamento	2.72 Datalogger asphalt PSU / (Datalogger asfalto PSU)	
		Registo	Alban Kuriqi	09 / 06 / 2023
Ano	-	**Fornecedor**	Tecnilab	
Nº Série	-	**Marca**	Tecnilab	
Nº IST	-	**Modelo**	CRT 1024	
Id. Resp.	-	**Capacidade**	-	

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

Não – Vias. Not presetent in the lab, belongs to the transportation lab

Purpose

Dataloggers combined with asphalt pavement monitoring systems and PSU (Portable Seismic Pavement Analyzer) devices have practical applications in geotechnical engineering, specifically in pavement engineering and analysis. These tools are used in geotechnics: pavement quality assessment, non-destructive testing, performance monitoring, quality control during construction, research, analysis, retrofitting, and maintenance.

In summary, in conjunction with PSU devices, dataloggers play a crucial role in geotechnical engineering, specifically in pavement analysis and quality assessment. They enable non-destructive testing, quality control, performance monitoring, and research in the context of asphalt pavements. This information helps engineers and researchers make informed pavement design, construction, maintenance, and rehabilitation decisions.

2.73		Equipamento	2.73 Air pressure system asphalt test / (Teste de asfalto do sistema de pressão de ar)	
		Registo	Alban Kuriqi	09 / 06 / 2023
Ano	-	**Fornecedor**	Tecnilab	
Nº Série	-	**Marca**	Tecnilab	
Nº IST	-	**Modelo**	CRT 1024	
Id. Resp.	-	**Capacidade**	-	

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

Não – Vias. Not presetent in the lab, belongs to the transportation lab

Purpose

Air pressure systems in the context of asphalt testing are commonly used in geotechnical engineering to evaluate the properties of asphalt mixtures and assess their suitability for various construction and infrastructure projects. Here's how air pressure systems are used in geotechnics for asphalt testing: density and compaction testing, permeability testing, stiffness, and modulus testing, mix design and quality control, research and development, and pavement performance prediction. In geotechnics, using air pressure systems in asphalt testing enhances the understanding of asphalt materials and aids in designing and constructing durable pavements. It supports research and development efforts to advance the field of pavement engineering. These systems ensure asphalt pavements' long-term performance and sustainability in various infrastructure projects.	

2.74		Equipamento	2.74 Load frame and dynanometer ring / (Estrutura de carga e anel do dinamômetro)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	Tecnilab
Nº Série	-	**Marca**	Tecnilab
Nº IST	-	**Modelo**	BLH Electronics
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

Não – Vias. (Not presetent in the lab, belongs to the transportation lab)

Purpose

Load frames and dynamometer rings play essential roles in geotechnical engineering by facilitating various soil and rock testing procedures. They measure and apply forces, stresses, and loads to soil or rock samples in laboratory and field settings. Here's how load frames and dynamometer rings are used in geotechnics: load frame (geotechnical testing machine), triaxial testing, uniaxial testing, consolidation testing, direct shear testing, California bearing ratio (CBR) testing, dynamometer ring (dial ring), measurement of axial loads, quality control, research and experimentation, load monitoring.

Both load frames and dynamometer rings are crucial in geotechnical engineering, enabling the accurate measurement and controlled application of loads during various soil and rock testing procedures. They play a central role in understanding the mechanical behavior of geotechnical materials and in designing safe and reliable foundations and infrastructure projects.

2.75		Equipamento	2.75 4 small molds and 2 large compaction molds, with 2 light compaction rams, 1 heavy compaction ram and 1 mold extraction ram / (4 moldes pequenos e 2 moldes grandes de compactação, com 2 pilões compactação leve, 1 pilão de compactação pesada e um pilão para extracção de moldes)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	-
Nº Série	-	**Marca**	-
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

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Purpose

The equipment you've described, including small molds, large compaction molds, light and heavy compaction rams, and a mold extraction ram, is commonly used in geotechnics for soil compaction tests. This equipment is integral to various laboratory testing procedures that assess soil samples' compaction characteristics and mechanical properties. Here's how each component is used in geotechnical engineering: small molds, large compaction molds, light compaction rams, heavy compaction ram, and mold extraction ram. These components, when used in combination, allow geotechnical engineers and soil scientists to assess how soil compacts under controlled conditions. The results of these tests provide critical data for the design and construction of foundations, dams, roads, and other infrastructure projects. By understanding the compaction characteristics of the soil, engineers can optimize construction practices and ensure the long-term stability and performance of geotechnical structures.
These laboratory tests help determine factors such as the maximum dry density, optimal moisture content, and shear strength of soil samples, enabling engineers to make informed decisions during the design and construction of geotechnical projects.

2.76		Equipamento	2.76 3 molds for CBR tests / (3 moldes para ensaios CBR)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	-
Nº Série	-	**Marca**	-
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

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Purpose

Molds for California Bearing Ratio (CBR) tests are an integral part of geotechnical engineering and play a crucial role in assessing the load-bearing capacity of soils. CBR tests are widely used in geotechnics to evaluate soils' strength and bearing capacity for various construction and pavement applications. Here's how molds for CBR tests are used in geotechnics: sample preparation, sample compaction, load application, penetration measurement, and calculation of CBR design considerations.

Molds for CBR tests are available in different sizes to accommodate various soil samples, and they are constructed to meet specific standards and requirements for accuracy and consistency. These molds are a fundamental component of CBR testing equipment and essential for obtaining reliable soil strength and bearing capacity data. The results of CBR tests play a crucial role in the design, construction, and maintenance of infrastructure projects such as roads, highways, and airfields.	

2.77		Equipamento	2.77 Sand bottle test / (Ensaio de garrafa de areia)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	-
Nº Série	-	**Marca**	-
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 3	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

Ok, falta calibrar.

Purpose

The sand bottle test, or the sand replacement test, is a geotechnical test method used to determine soil's in-situ density and compaction characteristics, especially cohesionless soils like sand and gravel. This test is valuable for assessing the relative density of soil, which is crucial for various engineering applications, such as foundation design, earthworks, and construction quality control. Here's how the sand bottle test is used in geotechnics: sample collection, determination of moisture content, calibration of the sand bottle, field setup, sand replacement, determination of volume, calculation of dry density, adjustment for moisture content

The sand bottle test provides valuable information about the in-situ density of soil, which is essential for designing foundations, dams, and other geotechnical structures. Engineers and geotechnical professionals use this test's results to assess the soil's suitability for construction and to optimize compaction efforts to achieve the desired density.

2.78		Equipamento	2.78 WP4 - Water potentiometer device 0.5-180 MPa / (WP4 - Dispositivo de potenciômetro de água 0,5-180 MPa)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2015	**Fornecedor**	Decagon
Nº Série	WP4C01169	**Marca**	Decagon
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	0.5-180 MPa

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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Purpose

A Water Potentiometer device, often called a WP4, is a specialized instrument used in geotechnical engineering to measure and monitor water pressure within soil or rock formations at various depths. This device is precious in geotechnical applications that require precise measurement and analysis of pore water pressure. Here's how a WP4

Water Potentiometer is used in geotechnics: monitoring pore water pressure, field testing, triaxial testing, slope stability analysis, foundation design, and permeability studies. Research and Data Collection: WP4 Water Potentiometers are essential for research studies in geotechnical engineering. They enable data collection related to pore water pressure and its influence on various soil behaviors, contributing to the development of more accurate models and design practices. In summary, a WP4 Water Potentiometer device is a critical tool in geotechnical engineering for measuring and monitoring pore water pressure in soil and rock formations. The data collected with this device is used for safety assessments, slope stability analysis, foundation design, permeability studies, and various research applications. It is essential for understanding the behavior and characteristics of geotechnical materials in different contexts.	

2.79		**Equipamento** **Registo**	2.79 National Instruments datalogger +/-5V with 8 inputs / (Registrador de dados da National Instruments +/- 5V com 8 entradas) Alban Kuriqi 09 / 06 / 2023		
Ano	2015	**Fornecedor**	National Instruments		
Nº Série	-	**Marca**	National Instruments		
Nº IST	-	**Modelo**	-		
Id. Resp.	-	**Capacidade**	+/-5V with 8 inputs		
Localização		**Operacional**	**Utilização**	**Ficha**	
Zona 2		Sim X Não	I&D X Ensino X	Técnica - Utilização X	
Obs. - **Purpose** National Instruments data loggers with multiple analog input channels, such as those with eight inputs and a range of +/-5V, can be employed in geotechnics for data acquisition and monitoring applications. These versatile data acquisition systems are used to gather, record, and analyze data related to soil properties, structural behavior, and environmental conditions. Here's how they can be used in geotechnical engineering: soil monitoring, structural health monitoring, environmental monitoring, settlement monitoring, laboratory testing, vibrations and seismic monitoring, geotechnical instrumentation calibration, and remote data collection. National Instruments data loggers are known for their flexibility and compatibility with various sensors and transducers, making them suitable for multiple geotechnical monitoring and data acquisition tasks. The data collected using these systems is vital for assessing soil behavior, structural performance, and the safety and stability of geotechnical projects.					

2.80		**Equipamento** **Registo**	2.80 1 GDS 200cc/4MPa standard pressure volume controller / (1 controlador de volume de pressão padrão GDS 200cc/4 MPa) Alban Kuriqi 09 / 06 / 2023		
Ano	2015	**Fornecedor**	GDS		
Nº Série	-	**Marca**	GDS		
Nº IST	-	**Modelo**	-		
Id. Resp.	-	**Capacidade**	200cc/4MPa		
Localização		**Operacional**	**Utilização**	**Ficha**	
Zona 2		Sim X	I&D X	Técnica -	

	Não	Ensino -	Utilização -

Obs. -

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Purpose

The GDS (Geotechnical Data Systems) 200cc/4MPa standard pressure volume controller is a specialized equipment used in geotechnical engineering for conducting pressure-volume (P-V) tests on soil and rock samples. These tests are essential for understanding geotechnical materials' mechanical and volumetric properties under different stress and pressure conditions. Here's how the GDS 200cc/4MPa standard pressure volume controller is used in geotechnics: triaxial testing, confining pressure application, pore water pressure control, volume measurement, stress-strain behavior analysis, consolidation testing, research, and material characterization.

The GDS 200cc/4MPa standard pressure volume controller is a specialized tool that plays a significant role in understanding geotechnical materials' mechanical and hydraulic properties. The data obtained from tests using this equipment is vital for geotechnical design, construction, and soil and rock behavior assessment in a wide range of civil engineering and geotechnical applications.

2.81		Equipamento	2.81 Crison datalogger and probes for pH and electrical conductivity measurements / (Crimson Data logger e sondas para medições de pH e condutividade elétrica)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2010	**Fornecedor**	CRISON
Nº Série	-	**Marca**	CRISON
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X	I&D X	Técnica -
	Não	Ensino X	Utilização X

Obs.

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Purpose

Crison dataloggers and probes designed for pH and electrical conductivity measurements are not commonly used in traditional geotechnical engineering. Geotechnical engineering primarily studies soil and rock mechanics, foundation design, and subsurface materials. However, there are specific scenarios where pH and electrical conductivity measurements could be relevant in a geotechnical context: environmental monitoring, soil contamination assessment, soil stabilization, soil amendment testing, research, and site-specific investigations.

In these cases, Crison dataloggers and probes designed for pH and electrical conductivity measurements may be used for data collection and analysis. These instruments can help understand and manage specific aspects of geotechnical projects involving soil properties and potential environmental implications. However, it's important to note that traditional geotechnical testing equipment and methods primarily focus on soil mechanics, compaction, shear strength, and related parameters. They do not typically include pH and electrical conductivity measurements as standard tests.

2.82		Equipamento	2.82 Thermal needle probes 0.20 - 1.0 W/m. K / (Sondas térmicas de agulha 0,20 - 1,0 W/m. K)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2016	**Fornecedor**	Applied Precision
Nº Série	9616080275	**Marca**	Applied Precision
Nº IST	-	**Modelo**	IPN 1100
Id. Resp.	-	**Capacidade**	0.20 - 1.0 W/m. K

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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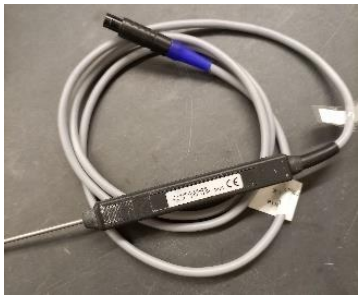
Purpose

Thermal needle probes with a specified range of thermal conductivity (0.20 - 1.0 W/m·K) are used in geotechnics for measuring the thermal properties of soils and rock materials. These probes are valuable for studying heat transfer characteristics in the subsurface and understanding how temperature variations impact geotechnical properties. Here's how thermal needle probes are used in geotechnical engineering: thermal conductivity measurements, thermal resistance testing, heat flow analysis, thermal conductivity profiling, thermal response testing, environmental impact studies, permafrost and frozen ground studies, and thermal barrier analysis.

In summary, thermal needle probes are instrumental in geotechnical engineering for characterizing the thermal properties of soils and rocks, assessing heat transfer in the subsurface, and optimizing geothermal systems and other applications. Understanding the thermal behavior of geotechnical materials is vital for designing energy-efficient and sustainable geotechnical solutions and ensuring the stability and performance of infrastructure projects.



2.83		Equipamento	2.83 Thermal needle probes 0.035 - 0.2 W/m. K / (Sondas térmicas de agulha 0,035 - 0,2 W/m. K)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2016	**Fornecedor**	Applied Precision
Nº Série	9616020255	**Marca**	Applied Precision
Nº IST	-	**Modelo**	IPN 1100
Id. Resp.	-	**Capacidade**	0.035 - 0.2 W/m. K

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

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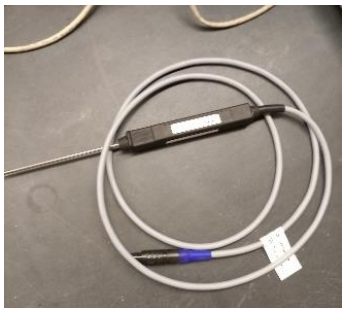
Purpose

Thermal needle probes with a thermal conductivity range of 0.035 - 0.2 W/m·K are valuable tools in geotechnical engineering for measuring and assessing the thermal properties of soils and rock materials. These probes are used in various applications related to heat transfer, thermal analysis, and geothermal energy. Here's how thermal needle probes with this range of thermal conductivity are used in geotechnics: thermal conductivity measurement, ground temperature profiling, geothermal system design, thermal response testing (TRT), environmental impact studies, infrastructure stability, permafrost and frozen ground studies, geotechnical material characterization.

In summary, thermal needle probes with a thermal conductivity range of 0.035 - 0.2 W/m·K are essential tools in geotechnical engineering for assessing heat transfer properties, designing geothermal systems, understanding temperature changes in the subsurface, and evaluating the impact of temperature on various geotechnical applications. These probes contribute to the design of energy-efficient and sustainable



geotechnical solutions while ensuring the stability and performance of infrastructure projects.	

2.84		Equipamento	2.84 Thermal bath with thermometer and thermotronic II immersion thermostat / (Thermal bath com termómetro e termostato de imersão termotronic II)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2017	**Fornecedor**	SELECTA
Nº Série	-	**Marca**	SELECTA
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Nova.

Purpose

A thermal bath with a thermometer and an immersion thermostat like the Thermotronic II can be used in geotechnics for various laboratory testing and sample preparation processes that involve temperature control. While not the primary equipment in geotechnical engineering, these components are often utilized in geotechnical laboratories for specific applications, including sample preparation, consolidation testing, triaxial testing, permeability testing, freezing and thawing tests, material characterization, research, and experimentation.

The thermometer and immersion thermostat, such as the Thermotronic II, allow precise temperature control and monitoring during these geotechnical laboratory tests and experiments. Temperature control is essential to ensure that the tests are conducted under controlled and repeatable conditions, necessary for accurate data collection and analysis in geotechnical engineering.

While thermal baths and immersion thermostats are not used in every geotechnical project, they are valuable tools in geotechnical laboratories for specialized testing and research that involves temperature-dependent soil and rock properties.

2.85		Equipamento	2.85 Multimeter keysight 34460A with automatic data acquisition software / (Multimeter keysight 34460A com software de aquisição automática de dados)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2019	**Fornecedor**	KEYSIGHT
Nº Série	MY57102111	**Marca**	KEYSIGHT
Nº IST	4333000048500000	**Modelo**	34460A
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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Purpose

The Keysight 34460A multimeter, when used in conjunction with automatic data acquisition software, can be applied in geotechnics for various purposes involving data collection, monitoring, and analysis. Although not a primary geotechnical tool, it can be helpful in specific applications. Here's how it can be used in geotechnics: soil moisture monitoring, piezometer data collection, strain and deformation measurements, foundation settlement monitoring, temperature measurements, laboratory testing, and remote data collection.
The Keysight 34460A multimeter, known for its accuracy and precision, can provide reliable data when used in geotechnical applications. When paired with data acquisition software, it allows for automated data collection, real-time monitoring, and historical data analysis. This can aid in understanding the behavior of geotechnical materials, structures, and environmental conditions, contributing to the overall success and safety of geotechnical projects.

2.86		Equipamento	2.86 Pedestal and stainless steel flat top plate for Brazilian assays / (Pedestal e placa de topo plana inox para ensaios Brasileiros)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2018	**Fornecedor**	IST
Nº Série	-	**Marca**	IST
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X	I&D X	Técnica -
	Não	Ensino -	Utilização -

Obs. -

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Purpose

In geotechnical engineering, a pedestal and stainless-steel flat-top plate are used in Brazilian tensile strength or indirect tensile strength testing, commonly called Brazilian tests. These tests determine the tensile strength of rock or concrete specimens. The pedestal and top plate play a crucial role in conducting these tests. Here's how they are used: specimen preparation, mounting the specimen, application of load, and measurement of tensile strength.
Using a pedestal and stainless-steel flat-top plate in Brazilian tests ensures the load is applied uniformly to the specimen's top surface. This leads to consistent and reliable results, making it a valuable tool for understanding the tensile strength properties of geological materials in geotechnics. Rock mechanics and civil engineering often use these tests to assess the tensile strength of rock, concrete, and other materials that may experience tensile loading in various applications.

2.87		Equipamento	2.87 1 door fridge KUNFT KSD2531 / (Frigorífico 1 porta KUNFT KSD2531)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2019	**Fornecedor**	KUNFT
Nº Série	-	**Marca**	KUNFT
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X	I&D X	Técnica -

	Não		Ensino	X	Utilização X

Obs.

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Purpose

Refrigeration units, such as fridges, are not typically used directly in traditional geotechnical engineering applications due to their household or commercial nature. However, in specialized geotechnical or related research, there might be some unconventional uses or applications: sample storage, cement curing, drilling fluids, and sample preparation. In geotechnical fieldwork, portable refrigeration units could be used to store temperature-sensitive geotechnical instruments, particularly in remote or extreme environments where temperature control is essential to maintain the accuracy of measurements.

2.89		Equipamento	2.88 PERSPEX chamber for electroosmosis in floors with side reservoirs and electrodes / (Câmara PERSPEX para electroosmose em solos com reservatórios laterais e eléctrodos)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2015	**Fornecedor**	IST
Nº Série	-	**Marca**	IST
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 2	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

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Purpose

A PERSPEX chamber designed for electroosmosis in floors with side reservoirs and electrodes is a specialized piece of equipment used in geotechnical engineering to study and influence pore water flow within soil or other porous materials. Electroosmosis is a process that involves the movement of water within the soil under the influence of an electric field. This equipment is used in geotechnics: electroosmotic flow studies, pore water velocity measurement, soil improvement techniques, dewatering and consolidation, and environmental impact assessments.

In summary, a PERSPEX chamber designed for electroosmosis in geotechnical applications is a valuable tool for studying pore water movement within soils and geotechnical materials. It is used to conduct experiments, analyze pore water velocity, and investigate the potential for soil improvement and remediation techniques. This information is crucial for geotechnical engineers working on soil behavior, groundwater management, and ground improvement projects.

2.89		Equipamento	2.89 Copper plate electrodes for electrical resistivity in cubic soil samples / (Eléctrodos de placa de cobre para resistividade eléctrica em provetes cúbicos de solos)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2016	**Fornecedor**	IST
Nº Série	-	**Marca**	IST
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

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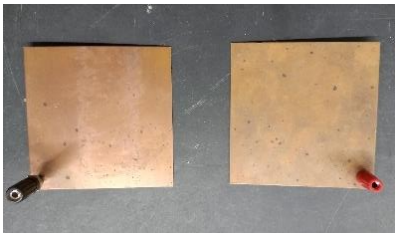
Purpose

Copper plate electrodes used for electrical resistivity measurements in cubic soil samples are an essential tool in geotechnical engineering for studying the electrical properties of soils. Electrical resistivity measurements help assess the soil's ability to conduct electrical current and provide valuable information about subsurface conditions. Here's how copper plate electrodes are used in geotechnical applications: resistivity surveys, site characterization, monitoring groundwater movement, soil property assessment, environmental impact studies, foundation design, slope stability analysis, and subsurface imaging.

Copper plate electrodes are versatile and widely used in geotechnical engineering for non-destructive subsurface investigations. By measuring electrical resistivity, geotechnical engineers can gain valuable insights into the characteristics of soils and subsurface materials, helping ensure the safety, stability, and performance of geotechnical projects.



2.90		Equipamento	2.90 32 kN load cell STALC9-32kN-003-000 / (Célula de carga 32 kN STALC9-32kN-003-000)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2020	**Fornecedor**	GDS
Nº Série	70665	**Marca**	GDS
Nº IST	-	**Modelo**	Stal C9
Id. Resp.	-	**Capacidade**	32 kN

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Ok. Por montar.

Purpose

A 32 kN load cell, such as the STALC9-32kN-003-000, is a specialized instrument used in geotechnical engineering for measuring and monitoring loads and forces in various geotechnical applications. These load cells are designed to handle substantial forces and are valuable for collecting data on soil mechanics, foundation design, and structural stability. Here's how a 32 kN load cell can be used in geotechnics: foundation load monitoring, retaining wall and slope stability, pile load testing, soil load testing, tunneling and underground structures, load testing for bridge foundations, instrumentation and monitoring, research and experimentation, safety assessments.

Overall, load cells play a crucial role in geotechnical engineering by providing data on the loads and forces acting on various structures and materials. This information is essential for ensuring geotechnical projects' safety, stability, and performance, from foundations and retaining walls to tunnels and deep foundations.

2.91		Equipamento	2.91 6 Transdutor linear 25mm (Strain Gauge) / (Transdutor linear 25mm (Strain Gauge))
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2021	**Fornecedor**	GDS
Nº Série	G10658	**Marca**	GDS
Nº IST	-	**Modelo**	25 mm
Id. Resp.	-	**Capacidade**	25 mm

Localização	Operacional		Utilização		Ficha	
Zona 2	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

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Purpose

A "Transdutor linear 25mm" (linear transducer with a 25mm range) is a versatile instrument used in geotechnical engineering for various applications that measure linear displacement or deformation in soil, rocks, or geotechnical structures. This type of transducer can be employed in various scenarios to collect data related to soil behavior, structural movement, and deformation. Here are some typical applications of a linear transducer in geotechnics: settlement monitoring, retaining wall movement, slope deformation, tunnel and excavation monitoring, pile or foundation load testing, soil deformation in laboratory tests, structural health monitoring, geotechnical research, real-time monitoring, safety assessments.

Overall, linear transducers with a 25mm range are valuable tools in geotechnical engineering for measuring and monitoring linear displacement and deformation. They play a crucial role in assessing the safety, stability, and performance of geotechnical structures and materials in various applications.

2.92		Equipamento	2.92 Type pressure transducer Pa620c-4MPag-B2AV-2.5-GDS01 / (Tipo transdutor de pressão Pa620c-4MPag-B2AV-2.5-GDS01)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2021	**Fornecedor**	GDS
Nº Série	70496	**Marca**	GDS
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 2	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

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Purpose

The "Pa620c-4MPag-B2AV-2.5-GDS01" type pressure transducer is a specialized instrument designed to measure pressure, typically in geotechnical and environmental monitoring applications. Geotechnical engineers and researchers use pressure transducers to collect data related to soil and groundwater conditions. Here are some typical applications of pressure transducers in geotechnics: pore water pressure monitoring, piezometer installation, settlement monitoring, soil compaction control, underground structures, dewatering and drainage control, environmental impact assessments, borehole testing, research and experimentation, seismic studies.

The type "Pa620c-4MPag-B2AV-2.5-GDS01" may have additional features or specifications tailored to particular geotechnical applications. It's essential to refer to the manufacturer's documentation and guidelines for the transducer's proper installation, calibration, and data collection in geotechnical projects. Pressure transducers play a vital role in geotechnical engineering by providing data on subsurface pressure conditions helping engineers make informed decisions related to foundation design, slope stability, groundwater management, and environmental assessments.	

2.93		Equipamento	2.93 Pressure Transducer Type Pa620c-4MPag-B2AV-2.5-GDS01 / (Transdutor pressão Tipo Pa620c-4MPag-B2AV-2.5-GDS01 /)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2021	**Fornecedor**	GDS
Nº Série	70497	**Marca**	GDS
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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Purpose

The "Pressure Transducer Type Pa620c-4MPag-B2AV-2.5-GDS01" is a specific type of pressure transducer designed for measuring and monitoring pressures in geotechnical and environmental applications. Pressure transducers like this one are crucial tools in geotechnical engineering for collecting data related to subsurface pressures, groundwater levels, and other pressure-related parameters. Here are some typical applications of this type of pressure transducer in geotechnics: pore water pressure measurement, piezometer installation, settlement monitoring, soil compaction control, underground structures, dewatering and drainage control, environmental impact assessments, borehole testing, research and experimentation, seismic studies.
The type "Pa620c-4MPag-B2AV-2.5-GDS01" likely has specific features and specifications tailored to geotechnical applications. Referring to the manufacturer's guidelines for proper installation, calibration, and data collection in geotechnical projects is essential. Pressure transducers are crucial tools in geotechnical engineering, providing valuable data on subsurface pressure conditions and groundwater behavior. These are critical for decision-making in foundation design, slope stability, groundwater management, and environmental assessments.

2.94		Equipamento	2.94 Syringe pump / (Bomba de seringas)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2021	**Fornecedor**	New Era Pump
Nº Série	299568	**Marca**	New Era Pump
Nº IST	-	**Modelo**	1000
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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Purpose

Syringe pumps are typically not used directly in traditional geotechnical engineering applications. Geotechnical engineering primarily focuses on soil and rock mechanics, foundation design, site investigations, and structural stability. However, there might be unconventional and research-based uses of syringe pumps in geotechnics: laboratory testing, fluid flow experiments, soil sample preparation, pore pressure generation, and hydraulic conductivity testing.
It's important to note that while syringe pumps may have some unconventional uses in geotechnical research or educational settings, they are not standard equipment in geotechnical engineering. Traditional geotechnical applications involve soil testing, site investigations, structural assessments, and construction activities where specialized equipment is used for drilling, sampling, and testing soil and rock materials.

2.95		Equipamento	2.95 Penetrometer / (Penetrómetro)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2021	**Fornecedor**	Controls
Nº Série	20602084	**Marca**	Controls
Nº IST	-	**Modelo**	16-T0161
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 2	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

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Purpose

A penetrometer is a widely used instrument in geotechnical engineering for assessing the mechanical properties of soil. There are various types of penetrometers, including standard penetration test (SPT) equipment, cone penetration test (CPT) equipment, dynamic cone penetrometers (DCP), and static cone penetrometers (SCP). Here's how penetrometers are used in geotechnics: standard penetration test (SPT), cone penetration test (CPT), dynamic cone penetrometer (DCP), static cone penetrometer (SCP), soil classification, foundation design, slope stability analysis, environmental assessments.
Overall, penetrometers are versatile instruments that play a fundamental role in geotechnical engineering for assessing soil properties, subsurface conditions, and the mechanical behavior of soil materials. They are integral in geotechnical site investigations, foundation design, and construction quality control.

2.96		Equipamento	2.96 4 un. Glass pycnometers 100 ml Linex Boron 3.3 / (4 un. Picnómetros de Vidro 100 ml Linex Boro 3.3)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2021	**Fornecedor**	Linex
Nº Série	Nº 18, 76, 86, 96	**Marca**	Linex
Nº IST	-	**Modelo**	100 ml
Id. Resp.	-	**Capacidade**	100 ml

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

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Purpose

Glass pycnometers are laboratory instruments that measure various materials' densities, including soils and sediments. They are not typically used directly in geotechnical fieldwork but are essential for soil testing and analysis in geotechnical laboratories. The 100 ml Linex Boron 3.3 glass pycnometer is designed to hold a known volume of liquid, which can determine the density of solid materials like soil samples. Here's how glass pycnometers are used in geotechnical testing: density determination, porosity analysis, quality control, soil classification, sedimentation analysis, laboratory research, and soil moisture content.
While glass pycnometers are not used in geotechnical fieldwork, they are essential tools in geotechnical laboratories. These instruments help geotechnical professionals and researchers characterize soil properties, assess the quality of construction materials, and understand the behavior of soils under various conditions. Accurate density and porosity measurements are crucial for proper foundation design, slope stability analysis, and soil compaction control in geotechnical engineering.

2.97		Equipamento	2.97 3 un. Glass pycnometers 250 ml Linex Boron 3.3 / (3 un. Picnómetros de Vidro 250 ml Linex Boro 3.3)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2021	**Fornecedor**	Linex/Simax
Nº Série	Nº 31, 32, 66	**Marca**	Linex/Simax
Nº IST	-	**Modelo**	250 ml
Id. Resp.	-	**Capacidade**	250 ml

Localização	Operacional		Utilização		Ficha	
Zona 3	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

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Purpose

A 250 ml glass pycnometer, such as the Linex Boron 3.3, is a laboratory instrument used in geotechnical engineering for determining the density and porosity of soil, sediment, and other granular materials. While it is not used in the field, glass pycnometers are essential for conducting various tests and analyses in geotechnical laboratories. Here's how a 250 ml glass pycnometer is used in geotechnics: density measurement, porosity analysis, soil classification, quality control, sedimentation analysis, laboratory research, moisture content determination. In summary, a 250 ml glass pycnometer is a fundamental tool in geotechnical laboratories for conducting soil density and porosity tests. Accurate density and porosity measurements are essential for understanding the engineering properties of soils, assessing water retention, and ensuring that construction materials meet the required quality standards. These measurements are crucial in geotechnical engineering and are used in various applications, including foundation design, slope stability analysis, and soil compaction control.

2.98		Equipamento	2.98 Automatic electric press VJTech Triscan-50 Pro / (Prensa electrica automática VJTech Triscan-50 Pro)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2021	**Fornecedor**	VJ Tech
Nº Série	1682128	**Marca**	VJ Tech
Nº IST	IST-ID: 4333000062400000	**Modelo**	VJT-5000P
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 2	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

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Purpose

The Automatic Electric Press VJTech Triscan-50 Pro is a specialized laboratory instrument for geotechnical engineering and soil testing applications. This equipment performs various tests and measurements on soil and rock samples to assess their mechanical properties and behavior. Here are some typical applications of the Triscan-50 Pro in geotechnics: unconfined compression testing, triaxial testing, consolidation testing, direct shear testing, resilient modulus testing, triaxial and direct shear testing on rock samples, quality control, and research, data collection and analysis.

The Triscan-50 Pro is a versatile and precise testing instrument crucial in geotechnical engineering. It allows engineers and researchers to assess the mechanical properties of soils and rocks, which is fundamental in the design of foundations, retaining structures, dams, and other geotechnical projects. The results from tests conducted using this equipment inform engineering decisions and ensure the safety and performance of geotechnical structures.

2.99		Equipamento	2.99 Shearmatic cutting machine / (Máquina de corte shearmatic)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2021	**Fornecedor**	Wykehan Ferrance
Nº Série	21006214	**Marca**	Wykehan Ferrance
Nº IST	IST-ID: 4333000062620000	**Modelo**	27-WF21E80
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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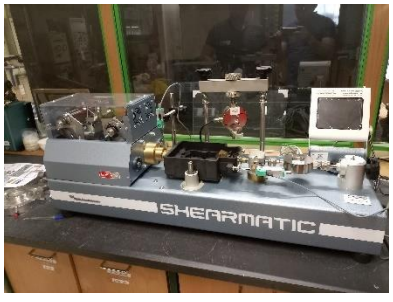
Purpose

The Shearmatic cutting machine is a specialized laboratory instrument commonly used in geotechnical engineering for preparing and testing soil and rock samples. This machine is designed to precisely cut and trim soil or rock specimens to specific dimensions required for various geotechnical tests. Here are the primary applications of the Shearmatic cutting machine in geotechnics: sample preparation, direct shear testing, unconfined compression testing, triaxial testing, resilient modulus testing, California bearing ratio (CBR) testing, sample trimming, and calibrations.

The Shearmatic cutting machine is a valuable tool in geotechnical laboratories, as it plays a crucial role in ensuring that soil and rock samples are prepared accurately and consistently for a wide range of geotechnical tests. Proper sample preparation is essential for obtaining reliable data that inform engineering design and decision-making, such as foundation design, slope stability analysis, and pavement design.



2.100		Equipamento	2.100 UPS APC Back-UPS RS 1500 / (UPS APC Back-UPS RS 1500)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2021	**Fornecedor**	APC
Nº Série	-	**Marca**	APC
Nº IST	IST: 000006540	**Modelo**	Back-UPS RS 1500
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

Verificar.

Purpose

The role in ensuring the continuity of geotechnical laboratory operations, data management, and safety. Geotechnical laboratories often rely on various electronic equipment and computer systems for data acquisition, analysis, and monitoring. The UPS (Uninterruptible Power Supply) system, like the APC Back-UPS RS 1500, serves as a backup power solution. Its use in geotechnical labs can be beneficial in several ways: data protection, instrument protection, the accuracy of test results, uninterrupted testing, safety and compliance, continuous monitoring, data backup, and emergency procedures.

While the APC Back-UPS RS 1500 is not directly involved in geotechnical fieldwork or site investigations, its use in geotechnical laboratories helps maintain data integrity, instrument protection, and operational continuity. This contributes to the accuracy and reliability of geotechnical testing and research, making it an essential component of the laboratory infrastructure.

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2.101		Equipamento	2.101 UPS APC Back-UPS RS 1500 / (UPS APC Back-UPS RS 1500)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2006	**Fornecedor**	APC
Nº Série	-	**Marca**	APC
Nº IST	IST: 00090947	**Modelo**	Back-UPS RS 1500
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

Verificar.

Purpose

The role in ensuring the continuity of geotechnical laboratory operations, data management, and safety. Geotechnical laboratories often rely on various electronic equipment and computer systems for data acquisition, analysis, and monitoring. The UPS (Uninterruptible Power Supply) system, like the APC Back-UPS RS 1500, serves as a backup power solution. Its use in geotechnical labs can be beneficial in several ways: data protection, instrument protection, the accuracy of test results, uninterrupted testing, safety and compliance, continuous monitoring, data backup, and emergency procedures.

While the APC Back-UPS RS 1500 is not directly involved in geotechnical fieldwork or site investigations, its use in geotechnical laboratories helps maintain data integrity, instrument protection, and operational continuity. This contributes to the accuracy and

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reliability of geotechnical testing and research, making it an essential component of the laboratory infrastructure.	

2.102		Equipamento	2.102 UPS APC Back-UPS RS 1000 / (UPS APC Back-UPS RS 1000)		
		Registo	Alban Kuriqi	09 / 06 / 2023	
Ano	2007	**Fornecedor**	APC		
Nº Série	-	**Marca**	APC		
Nº IST	IST: 00103280	**Modelo**	Back-UPS RS 1000		
Id. Resp.	-	**Capacidade**	-		
Localização		**Operacional**	**Utilização**	**Ficha**	
Zona 1		Sim X Não	I&D X Ensino X	Técnica - Utilização X	
Obs. - **Purpose** The role in ensuring the continuity of geotechnical laboratory operations, data management, and safety. Geotechnical laboratories often rely on various electronic equipment and computer systems for data acquisition, analysis, and monitoring. The UPS (Uninterruptible Power Supply) system, like the APC Back-UPS RS 1500, serves as a backup power solution. Its use in geotechnical labs can be beneficial in several ways: data protection, instrument protection, the accuracy of test results, uninterrupted testing, safety and compliance, continuous monitoring, data backup, and emergency procedures. While the APC Back-UPS RS 1500 is not directly involved in geotechnical fieldwork or site investigations, its use in geotechnical laboratories helps maintain data integrity, instrument protection, and operational continuity. This contributes to the accuracy and reliability of geotechnical testing and research, making it an essential component of the laboratory infrastructure.					Packed

2.103		Equipamento	2.103 UPS APC Back-UPS Pro 1500 / (UPS APC Back-UPS Pro 1500)		
		Registo	Alban Kuriqi	09 / 06 / 2023	
Ano	-	**Fornecedor**	APC		
Nº Série	-	**Marca**	APC		
Nº IST	-	**Modelo**	Back-UPS Pro 1500		
Id. Resp.	-	**Capacidade**	-		
Localização		**Operacional**	**Utilização**	**Ficha**	
Zona 1		Sim X Não	I&D X Ensino X	Técnica - Utilização X	
Obs. Verificar. **Purpose** The role in ensuring the continuity of geotechnical laboratory operations, data management, and safety. Geotechnical laboratories often rely on various electronic equipment and computer systems for data acquisition, analysis, and monitoring. The UPS (Uninterruptible Power Supply) system, like the APC Back-UPS RS 1500, serves as a backup power solution. Its use in geotechnical labs can be beneficial in several ways: data protection, instrument protection, the accuracy of test results, uninterrupted testing, safety and compliance, continuous monitoring, data backup, and emergency procedures.					Packed

While the APC Back-UPS RS 1500 is not directly involved in geotechnical fieldwork or site investigations, its use in geotechnical laboratories helps maintain data integrity, instrument protection, and operational continuity. This contributes to the accuracy and reliability of geotechnical testing and research, making it an essential component of the laboratory infrastructure.	

2.104		Equipamento	2.104 UPS APC Back-UPS ES 500 / (UPS APC Back-UPS ES 500)		
		Registo	Alban Kuriqi		09 / 06 / 2023
Ano	-	**Fornecedor**	APC		
Nº Série	-	**Marca**	APC		
Nº IST	IST: 000006576	**Modelo**	Back-UPS ES 500		
Id. Resp.	-	**Capacidade**	-		

Localização	Operacional		Utilização		Ficha	
Zona 1	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

Verificar.

Purpose

The role in ensuring the continuity of geotechnical laboratory operations, data management, and safety. Geotechnical laboratories often rely on various electronic equipment and computer systems for data acquisition, analysis, and monitoring. The UPS (Uninterruptible Power Supply) system, like the APC Back-UPS RS 1500, serves as a backup power solution. Its use in geotechnical labs can be beneficial in several ways: data protection, instrument protection, the accuracy of test results, uninterrupted testing, safety and compliance, continuous monitoring, data backup, and emergency procedures.

While the APC Back-UPS RS 1500 is not directly involved in geotechnical fieldwork or site investigations, its use in geotechnical laboratories helps maintain data integrity, instrument protection, and operational continuity. This contributes to the accuracy and reliability of geotechnical testing and research, making it an essential component of the laboratory infrastructure.

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2.105		Equipamento	2.105 UPS APC surge protector battery backup 325VA / (UPS APC protetor de sobretensão bateria backup 325VA)		
		Registo	Alban Kuriqi		09 / 06 / 2023
Ano	-	**Fornecedor**	APC		
Nº Série	-	**Marca**	APC		
Nº IST	-	**Modelo**	-		
Id. Resp.	-	**Capacidade**	325VA		

Localização	Operacional		Utilização		Ficha	
Zona 1	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

Verificar.

Purpose

The role in ensuring the continuity of geotechnical laboratory operations, data management, and safety. Geotechnical laboratories often rely on various electronic equipment and computer systems for data acquisition, analysis, and monitoring. The UPS (Uninterruptible Power Supply) system, like the APC Back-UPS RS 1500, serves as a

Packed

backup power solution. Its use in geotechnical labs can be beneficial in several ways: data protection, instrument protection, the accuracy of test results, uninterrupted testing, safety and compliance, continuous monitoring, data backup, and emergency procedures. While the APC Back-UPS RS 1500 is not directly involved in geotechnical fieldwork or site investigations, its use in geotechnical laboratories helps maintain data integrity, instrument protection, and operational continuity. This contributes to the accuracy and reliability of geotechnical testing and research, making it an essential component of the laboratory infrastructure.	

2.106		Equipamento Registo	2.106 UPS Eurotech Smart UPS / (UPS Eurotech Smart UPS) Alban Kuriqi 09 / 06 / 2023		
Ano	-	**Fornecedor**	Eurotech		
Nº Série	100008180036	**Marca**	Eurotech		
Nº IST	-	**Modelo**	UPS1000EU		
Id. Resp.	-	**Capacidade**	-		
Localização		**Operacional**	**Utilização**	**Ficha**	
Zona 1		Sim X Não	I&D X Ensino X	Técnica - Utilização X	
Obs. Verificar. **Purpose** The Eurotech Smart-UPS, like other uninterruptible power supply (UPS) systems, can be beneficial in geotechnics when it comes to maintaining the continuity of critical operations in geotechnical laboratories or offices. Geotechnical engineering involves a range of activities, from laboratory testing to data analysis, and consistent power supply is essential for several reasons: data protection, instrument protection, the accuracy of test results, uninterrupted testing, safety and compliance, continuous monitoring, data backup, and emergency procedures. In summary, as a reliable and high-quality UPS system, the Eurotech Smart-UPS can play a crucial role in maintaining the integrity and continuity of geotechnical engineering work. It ensures that critical operations, data protection, and safety systems remain functional during power disruptions, contributing to the reliability and success of geotechnical projects and laboratory work.					Packed

2.107		Equipamento Registo	2.107 UPS Phasak PH9406 / (UPS Phasak PH9406) Alban Kuriqi 09 / 06 / 2023		
Ano	2013	**Fornecedor**	Phasak		
Nº Série	-	**Marca**	Phasak		
Nº IST	20132752	**Modelo**	PH9406		
Id. Resp.	-	**Capacidade**	-		
Localização		**Operacional**	**Utilização**	**Ficha**	
Zona 2		Sim X Não	I&D X Ensino -	Técnica - Utilização -	
Obs. - - **Purpose**					

The Phasak PH9406 Uninterruptible Power Supply (UPS) is a device that provides backup power to connected electronic equipment during power outages or fluctuations. While not directly associated with geotechnical fieldwork, a UPS like the Phasak PH9406 can benefit geotechnical engineering laboratories and offices. Here's how it can be used in geotechnics: data protection, instrument protection, the accuracy of test results, uninterrupted testing, safety and compliance, continuous monitoring, data backup, and emergency procedures.
While the Phasak PH9406 UPS may not be directly involved in fieldwork, it is crucial in maintaining data integrity, instrument protection, and operational continuity in geotechnical laboratories and offices. These factors contribute to the accuracy and reliability of geotechnical tests and research, which, in turn, informs engineering decisions and ensures the safety and performance of geotechnical projects.

2.108		Equipamento	2.108 Load cell 5 kN capacity / (Célula de carga 5 kN de capacidade)	
		Registo	Alban Kuriqi	09 / 06 / 2023
Ano	2022	**Fornecedor**	VJTech	
Nº Série	123412	**Marca**	VJTech	
Nº IST	-	**Modelo**	STA-2-500	
Id. Resp.	-	**Capacidade**	5 kN	

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X	I&D X	Técnica -
	Não	Ensino X	Utilização X

Obs.

Novo.

Purpose

Load cells with a 5 kN (kilonewton) capacity are commonly used in geotechnical engineering for various applications that involve measuring and monitoring loads or forces. Geotechnical load cells are used to ensure the stability and safety of structures, assess the bearing capacity of foundations, and gather data for research and analysis. Here are some typical uses of load cells with a 5 kN capacity in geotechnics: foundation load testing, retaining wall and slope stability, tunnel and underground structure monitoring, soil and rock testing, bridge and dam assessments, geotechnical research, monitoring excavation and construction, anchor and soil nail testing, load testing of piles and deep foundations, infrastructure health monitoring.
Load cells with a 5 kN capacity are versatile instruments that aid geotechnical engineers and researchers in ensuring the stability and safety of geotechnical structures, conducting material testing, and contributing to geotechnical research and development. They provide valuable data for designing and assessing foundations, slopes, retaining structures, and other geotechnical projects.

2.109		Equipamento	2.109 Submersible load cell 5 kN capacity / (Célula de carga submersível 5kN de capacidade)	
		Registo	Alban Kuriqi	09 / 06 / 2023
Ano	2022	**Fornecedor**	VJTech	
Nº Série	79730	**Marca**	VJTech	
Nº IST	-	**Modelo**	STALC3-5kN-003-VJT01	
Id. Resp.	-	**Capacidade**	5kN	

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X	I&D X	Técnica -

	Não		Ensino	X	Utilização X

Obs.

Novo.

Purpose

Submersible load cells with a 5 kN (kilonewton) capacity are specialized instruments designed for underwater or submerged applications. While load cells in geotechnics are typically used for measuring loads and forces in various geotechnical engineering projects, submersible load cells extend their utility to underwater or submerged conditions. Here are some specific use cases for submersible load cells with a 5 kN capacity in geotechnics: submerged foundation load testing, underwater structure monitoring, offshore geotechnical testing, underwater anchor and pile load testing, submerged excavation and dredging, underwater geotechnical research, monitoring submerged geological features, submersible data collection, marine, and offshore construction.

Submersible load cells with a 5 kN capacity are essential for geotechnical engineers and researchers working in underwater or submerged conditions. They provide accurate load and force measurements, contributing to the safety and performance of underwater infrastructure, research projects, and geotechnical operations in aquatic environments.

2.110		Equipamento	2.110 Dosing peristaltic pump / (Bomba peristáltica doseadora)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2018	**Fornecedor**	FWT SYS
Nº Série	E18L17210	**Marca**	FWT SYS
Nº IST	IST-ID: 4333000005890000	**Modelo**	VPER-N
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 2	Sim	X	I&D	X	Técnica	-
	Não		Ensino	-	Utilização	-

Obs. -

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Purpose

Dosing peristaltic pumps can find applications in geotechnical engineering, primarily in laboratory testing and research settings. These pumps are designed to precisely dispense and control the flow of fluids, making them useful in various geotechnical applications. Here are some potential uses of dosing peristaltic pumps in geotechnics: soil and rock testing, permeability testing, sediment, and erosion studies, chemical injection, grouting and ground improvement, sample preparation, environmental monitoring, and field testing.

Dosing peristaltic pumps offer a high degree of accuracy and control over fluid flow, making them suitable for geotechnical applications that require precise dosing or injection of fluids. Their versatility in controlling flow rates and volumes makes them valuable tools for laboratory testing, research, and various geotechnical engineering projects.

2.111		Equipamento	2.111 Analog microscope with digital viewfinder lens / (Microscópio analógico com lente visor digital)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	AMSCOPE
Nº Série	-	**Marca**	AMSCOPE
Nº IST	-	**Modelo**	M600?
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino X	Técnica - Utilização X

Obs.

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Purpose

An analog microscope with a digital viewfinder lens can have applications in geotechnical engineering, particularly in examining and analyzing soil and rock samples. This combination of analog and digital technologies offers the benefits of traditional microscopy and the advantages of digital image capture and analysis. Here are some potential uses of an analog microscope with a digital viewfinder lens in geotechnics: sample analysis, grain size analysis, particle shape analysis, mineral identification, porosity and void analysis, asbestos analysis, image documentation, education and training, quality control, Geological Investigations.

By combining the benefits of traditional analog microscopy with digital image capture and analysis, this type of microscope can enhance the accuracy and efficiency of geotechnical sample analysis. It allows geotechnical professionals to perform detailed visual inspections, capture images for documentation, and carry out quantitative analyses of soil and rock samples, contributing to better-informed geotechnical assessments and engineering decisions.

2.112		Equipamento	2.112 LED Light projector base for microscope / (Base projector de luz led para microscópio)
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	-	**Fornecedor**	AMSCOPE
Nº Série	-	**Marca**	AMSCOPE
Nº IST	-	**Modelo**	-
Id. Resp.	-	**Capacidade**	-

Localização	Operacional	Utilização	Ficha
Zona 1	Sim X Não	I&D X Ensino -	Técnica - Utilização -

Obs. -

-

Purpose

An LED light projector base for a microscope can be valuable in geotechnics, particularly in laboratory and research settings. This accessory enhances the functionality of a standard microscope by providing adjustable LED lighting for sample examination and analysis. Here are some applications of an LED light projector base in geotechnical engineering: enhanced illumination, mineral identification, grain size analysis, particle shape analysis, porosity and void analysis, asbestos identification, and image documentation.

The adjustable LED light projector base enhances the capabilities of a microscope in geotechnical laboratories and research settings. It provides consistent, controllable illumination for detailed examination and analysis of soil and rock samples, contributing to more accurate assessments, research, and geotechnical engineering decisions.

2.113		Equipamento	2.113 Triaxial chamber for samples up to Ø76mm (Max Pressure=3500kPa) / (Câmara triaxial para amostras até Ø76mm (Pressão Máx=3500kPa))
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2022	**Fornecedor**	VJTech
Nº Série	4751920	**Marca**	VJTech
Nº IST	00114198	**Modelo**	VJT0475
Id. Resp.	-	**Capacidade**	Máx 3500kPa

Localização	Operacional		Utilização		Ficha	
Zona 2	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

Novo. Testar.

Purpose

A triaxial chamber designed for samples with a diameter of up to Ø76mm (76 millimeters) is essential in geotechnical engineering and soil mechanics. It allows geotechnical professionals to perform triaxial tests on soil and rock samples, which are crucial for understanding the mechanical behavior of geologic materials under different stress and strain conditions. Here's how a triaxial chamber for samples up to Ø76mm is used in geotechnics: triaxial testing, shear strength analysis, stress-strain analysis, consolidation tests, permeability testing, sample preparation, controlled stress, and pore pressure.

In summary, a triaxial chamber designed for samples up to Ø76mm is versatile and crucial geotechnical equipment. It enables geotechnical engineers and researchers to conduct various tests and analyses on soil and rock samples. It provides valuable geotechnical design, research, and quality control data in civil and environmental engineering projects.

2.114		Equipamento	2.114 3D Printer blocks one MKII / Impressora 3D blocks one MKII
		Registo	Alban Kuriqi 09 / 06 / 2023
Ano	2022	**Fornecedor**	BLOCKS
Nº Série	BLKR21-001-015	**Marca**	BLOCKS
Nº IST	-	**Modelo**	One MKII
Id. Resp.	-	**Capacidade**	-

Localização	Operacional		Utilização		Ficha	
Zona 2	Sim	X	I&D	X	Técnica	-
	Não		Ensino	X	Utilização	X

Obs.

Novo.

Purpose

A 3D printer like the "3D Printer Blocks One MKII" can have various applications in geotechnics, particularly in the design and prototyping of geotechnical equipment, models, and components. Here are some potential uses of a 3D printer in geotechnical engineering: prototyping and model building, customized equipment, soil and rock sample holders, instrumentation mounting, geotechnical models, field equipment components, education and training, data visualization, research and development, and structural analysis.

The "3D Printer Blocks One MKII" and similar 3D printers offer flexibility and precision, allowing geotechnical professionals to design and produce custom components and models tailored to their project requirements. This capability can improve geotechnical engineering projects and research efficiency, accuracy, and cost-effectiveness.