

Technical data sheet

Item number: 5.00065
MatchCode/Type: ESD5.2.SBC40.25
Designation: **Direct shear device / frame shear device 5 kN load, 2 kN shear force**
with round shear box 40 cm², h = 25 mm
www.geomation.de/en/ESD5.2



Intrastat code: 90248019 **Country of origin:** DE **Net weight (kg):** 56,945
Drawing number:
Electrical data: 230 VAC / 50 Hz, 25 W
Dimensions: 350 x 350 x 550 mm (BxTxH)
Standards: DIN EN ISO 17892-10; DIN EN 18137-3; GOCT 12248
Catchwords:

Fully automatic direct shear device for carrying out direct shear tests according to DIN EN ISO 17892-10; DIN EN 18137-3; GOCT 12248
Modular direct shear device consisting of a pneumatic loading device equivalent to the test press PLS5 and the removable shear box SSD2

Characteristics:

- compact laboratory tabletop device for performing direct shear tests according different standards such as ISO 17892-10
- also suitable for unidimensional compression tests and consolidation tests according DIN EN ISO 17892-5
- high speed multi-core-system with bus coupling, each drive unit (e.g. horizontal and vertical gear) using it's own high resolution closed-loop controller with 1 ms sampling time
- high-precision settlement measuring with digital dial gauge (resolution 1µm)
- settlement measurements from sample contact or beginning from start (for detection of the initial settlement)
- automatic detection of the sample contact
- regulated electropneumatic drive for normal stress generation
- regulated electromechanical drive for generating the horizontal shear stress with integrated shear path measurement
- robust construction, all water or soil-contacting parts are made of stainless steel, including the filter stones
- very compact design with a high stiffness frame
- horizontal low-friction guided lower shear frame and vertical low-friction guided upper shear frame
- stepless adjustment (between 0 and 2 mm) and fixation of the shear gap after consolidation process
- serial interface for PC-controlled testing with data logging using a standard-PC with the software GeoDESC
- automatic limitation of the load, the shear force to prevent sensor damages
- manual adjustment of the upper trust plate and the shear slide

Delivery includes:

- SSD2 shear cell with integrated 2 kN force sensor
- Shear frame with freely adjustable shear gap
- load cell 5 kN for normal force measuring
- dial gauge 12,5 mm, resolution 1 µm
- IEC connection cable (CEE-7/7)
- connection cable for PC, length 5 m (9-pin COM-Port / RS232)
- pneumatic hose with NW5 plug system, length 5 m
- "GeoDESC-Excel" software license

Specifications:

system pressure: 3.5 bar
sample area and dimensions: 40 cm², Ø = 71.4 mm; h = 25 mm
normal stress: up to 1250 kN/m² (resolution 0.5 kN/m²)
settlement measurement: up to 12.5 mm (resolution 0.001 mm)
shear stress: up to 500 kN/m² (resolution 0.3 kN/m²)
shear rate: 0.001 to 10 mm/min
maximum shear path: 21 mm
shear gap: 0 to 2 mm (adjustable)
dimensions: 350 x 350 x 550 mm
weight: approx. 53 kg (load frame approx. 32kg, shear box approx. 21 kg)
power supply: 230 VAC / 50 Hz
power consumption: 25 W

Recommended accessories (not included):

- Compressor
- Filter pressure regulator
- Software package EXL.DIRECTSHEARTEST
- PC system

Scope of delivery (for 1 pcs.):

Quantity	Article-No.	Discription
1 pcs.	5.00036	ESD5.2
1 pcs.	5.00038	ESD5.2
		SBC40.25
1 pcs.	2.00007	KAS-E5/0,2
1 pcs.	2.00003	DMU12,5/1000
1 pcs.	2.00024	DMU-EXTPOW
1 pcs.	9.00001	GEO-LIZ
		Direct shear device 5 kN load, 2 kN shear force
		Shear frame set 40 cm², round, sample height 25 mm
		Strain gauge load cell 5 kN - normal force -
		digital gauge 12,5 mm 1/1000, with battery
		Option: external power supply for DMU's
		Licence for GeoDESC / EXCEL

Recommended accessories (not included):

Quantity	Article-No.	Discription
1 pcs.	9.00041	GeoDESC.SHEAR
1 pcs.	4.00020	KOMPR8.15
1 pcs.	4.00021	FDR6
		Software package GeoDESC / EXCEL "Direct shear testing"
		laboratory compressor 8 bar
		pressure regulation with filter