

**AUTOMATIC DIRECT / RESIDUAL
SHEAR TEST MACHINE**



SOIL

Automatic Direct / Residual Shear Test Machine



PRODUCT MODEL

- TMS-4180 | Automatic Direct / Residual Shear Test Machine, 220-240 V 50-60 Hz
- TMS-4182-1 | Shear Box Assembly, 60x60 mm
- TMS-4182-2 | Specimen Cutter, 60x60 mm
- TMS-4182-3 | Extrusion Dolly, 60x60 mm
- TMS-4183-1 | Shear Box Assembly, Ø 60 mm
- TMS-4183-2 | Specimen Cutter, Ø 60 mm
- TMS-4183-3 | Extrusion Dolly, Ø 60 mm
- TMS-4184-1 | Shear Box Assembly, 100x100 mm
- TMS-4184-2 | Specimen Cutter, 100x100 mm
- TMS-4184-3 | Extrusion Dolly, 100x100 mm
- TMS-4185-1 | Shear Box Assembly, Ø 100 mm
- TMS-4185-2 | Specimen Cutter, Ø 100 mm
- TMS-4185-3 | Extrusion Dolly, Ø 100 mm
- TMS-4186-1 | Shear Box Assembly, Ø 2.5 inch
- TMS-4186-2 | Specimen Cutter, Ø 2.5 inch
- TMS-4186-3 | Extrusion Dolly, Ø 2.5 inch
- TMS-4181-6 | Slotted Weight Set, 50 kg (4x10 kg + 1x5 kg + 2x2 kg + 1x1 kg)

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INFORMATION

Manufacturer : TESTMAK INS.LAB.MAK.SAN.VE TİC. PAZ. İTH. İHR. LTD. STİ

Country of Origin : TURKEY

Product Name: Automatic Direct / Residual Shear Test Machine

Code of Product: TMS-4180

STANDARDS

TS 1900-2 | ASTM D3080 | BS 1377-7 | AASHTO T236 | NF P094 071-1/2

DESCRIPTION

Automatic Direct Residual Shear Test Machine is used to determine the resistance to shearing of all types of soil specimens, both consolidated and drained, undisturbed or remoulded. The Test Machine can accommodate specimens dia. 50, 60, 100mm, and square 60x60, 100x100 mm. All shear box assemblies are designed to contain water that surrounds the specimen. The Assemblies consist of a shear box with a rigid wall square or round hole complete with a vertical loading pad grooved back face, a grooved retaining plate, 2 pcs. porous plates, 2 pcs. plane grids and 2 pcs. perforated grids.

The Machine is motorized and floor mounted. Supplied with carriage assembly load hanger and integral 9:1, 10:1 and 11:1 lever loading device as standard. The beam loading device which is used to amplify the vertical load on the shear box assembly can receive up to 50 kg of weight. The total load on the specimen can reach up to 5 kN (5000 N).

Specifications

- The machine is driven by high resolution servomotor and gear box assembly.
- Speed range is fully stepless variable over the range 0.00001 to 9.99999 mm/min for both direction(forward and reverse). After test the reverse speed is 10 mm/min.).
- 5 kN load ring is used for load measurement.
- Displacement limits are controlled by limit switch.
- Shear Box Assembly, Slotted Weight Set and other optional accessories including specimens cutter and extrusion dolly should be ordered separately.

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Firmware:

The Direct and Residual shear software is developed according to ASTM D3080, BS 1377:7 and AASHTO T 236 standards to use with Direct Residual Shear Machine. Direct residual and shear software consist of two sections. First section is used for the consolidation of the sample prior to shear.

- Electronic control unit Touch-Screen color graphic display, that runs like a standard PC based on Windows operating system, for the management of the data.
- The machine can perform the tests without any external PC.
- Unlimited memory storage with: USB ports
- Turkish and English languages support.
- The results can be submitted as a report or can be exported to Microsoft Excel for advanced reanalyze procedures.

TECHNICAL SPECIFICATIONS

Technical Specification	
Capacity	5 kN
Speed Range	0.00003 to 9.99999 mm/min
Maximum Vertical Load	0 to 500 N applying 5000 N using 10:1 beam loading device
Horizontal Travel	± 18 mm
Dimensions	520x640x900 mm
Weight (approx)	90 kg
Power	1100 W



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