

TM 201 TORSION TESTING MACHINE, 30 N-m.

GENERAL DESCRIPTION

This is a bench top educational machine for torsion test of small specimens.

It consists of two parallel stainless steel tubes fixed together at both ends. At one end is a worm gear reducer where a torsion load is applied, and angular displacement measuring devices. At the other end is a torsion tubes with an arm attached to a load cell for measurement of torsion in both forward and reverse direction. This torsion shaft unit is slidable along the tubes to take up different length specimen. Both worm gear and torsion shaft have drive sockets for hexagonal head specimen. Round specimen requires special adapters. Torque is applied manually.

The equipment is designed such that torsion shaft angular displacement, or parallel tubes and loading arm deflections are negligible under maximum load. Angle of twist on the specimen is indicated by angular scales on the worm gear reducer shafts. A revolution counter is provided at the gear box to measure total input revolutions.

Instruction manual is also included.



Photograph includes optional equipment

EXPERIMENT CAPABILITIES:

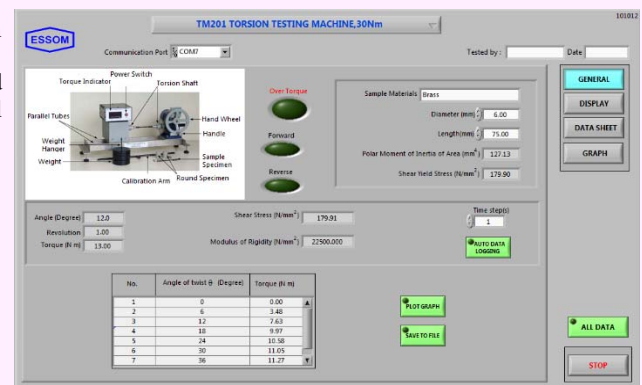
- Determination of modulus of rigidity and yield shear stress.
- Determination of modulus of rupture in torsion.
- Reversed torsion test to determine torsion hysteresis.

TECHNICAL DATA

- Capacity : 30 Nm
- Drive shaft ends : 12.7 mm (1/2 in) square
- Drive sockets : 3/8 in. whitworth for hexagonal specimen.
- Maximum specimen length : 250 mm
- Input shaft rotation:
 - Revolution counter : 5 digits
 - Circular scale : 360 × 1 degree graduation
- Specimen angle of twist
 - Circular scale : 360 × 1 degree reading
 - Indirect reading by circular scale on input shaft: 1/60 degree reading
- Torque digital display : 0.1 N-m resolution.
- Software for data display and analysis by computer (separately supplied).
- Power supply : 220V, 1 Ph, 50Hz. Other power supply is available on request.

OPTIONAL ACCESSORIES AND SPECIMENS

- TM 201- 001 Adapters for round specimen.
- TM 201- 002 Torque arm with weight hanger and standard weights for torque calibration.
- TM 201- 005 Hexagonal head specimen
- TM 201- 010 Angle digital display.
- TM 201- 011 Torsiometer for accurate measurement of strain diameter specimen.
- TM 201- 040 Additional DC gear motor with speed control and synchronous belt drive system instead of manual operation.
- Maximum specimen length can be extended on request.
- Other specimen materials can be supplied on request.
- TM 201- 050 Computer Interface
This includes rotary encoder, computer interface unit.
- Other optional equipment, please contact manufacturer (essom@essom.com)



Net (unpacked) shipping dimensions WxLxH : 40 x 140 x 45 cm (without gear motor)
Net weight : Approx. 110 kg

Net (unpacked) shipping dimensions WxLxH : 40 x 160 x 45 cm (with gear motor)
Net weight : Approx. 130 kg

