Series TSTM-DC advanced motorized torque test stands are designed for a wide variety of applications, including closure torque testing, fastener torque testing, and more. Two torque capacities are available, 100 lbFin (11.5 Nm) and 200 lbFin (22 Nm).

The stands include a torque loading plate with tapped holes for grip and fixture mounting. Stepper motor design eliminates speed variation with load. A lever-operated slider with travel stops makes engaging and disengaging samples quick and efficient. A modular mechanical design allows the stand to be configured for a variety of applications.

The controller features an integrated angle display and output, programmable angle travel limits, PC control capability, programmable cycling, auto return, overload protection, password protection, and more.

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>TSTM-DC / TSTMH-DC: 100 lbFin (11.5 Nm)</th>
<th>TSTM-DC-1 / TSTMH-DC-1: 200 lbFin (22.0 Nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum torque:</td>
<td>100 lbFin (11.5 Nm)</td>
<td>200 lbFin (22.0 Nm)</td>
</tr>
<tr>
<td>Speed range:</td>
<td>0.01 - 15 RPM [0.05 - 90°/s]</td>
<td>0.04 - 60 RPM [0.2 - 360°/s] *</td>
</tr>
<tr>
<td>Speed accuracy:</td>
<td>±0.2% of setting, ±0% variation with load</td>
<td>±0.2% of setting, ±0% variation with load</td>
</tr>
<tr>
<td>Maximum programmable travel limits:</td>
<td>±999,999.9° / ±2,777.77 revolutions</td>
<td>±999,999.9° / ±2,777.77 revolutions</td>
</tr>
<tr>
<td>Rotational travel accuracy:</td>
<td>±0.7° / 0.02 rev.</td>
<td>±0.7° / 0.02 rev.</td>
</tr>
<tr>
<td>Rotational travel repeatability:</td>
<td>0.1° / 0.01 rev.</td>
<td>0.1° / 0.01 rev.</td>
</tr>
<tr>
<td>Rotational travel resolution:</td>
<td>0.1° / 0.01 rev.</td>
<td>0.1° / 0.01 rev.</td>
</tr>
<tr>
<td>Universal power supply:</td>
<td>80-250 VAC</td>
<td>80-250 VAC</td>
</tr>
<tr>
<td>Slider travel rate:</td>
<td>1.047° [26.6 mm] / lever revolution</td>
<td>1.047° [26.6 mm] / lever revolution</td>
</tr>
</tbody>
</table>

* Maximum torque decreases proportionately with speed, as follows:
- Maximum torque at 30 RPM = 50 lbFin (5.6 Nm)
- Maximum torque at 60 RPM = 25 lbFin (2.8 Nm)

Features

- Grip / fixture mounting plate with 25 #10-32 threaded holes
- Integrated angle indication with programmable travel limits
- Base may be removed for alternative mounting

Optional Hardware

- Series R50 torque sensors
  Mount directly to the test stand. Capacities available from 10 ozFin to 100 lbFin (7 to 1,150 Ncm).

- Model MR55-200 torque sensor
  200 lbFin (22 Nm) capacity. Requires optional mounting adapter.

- Force/torque indicator
  Displays the torque value. Several models are available. All mount directly to the test stand.

- Communication cables and USB converter
Controller Features

- **Computer Control**
  An RS-232 port is provided to interface with a PC. A command set is provided to allow for full control from a PC. The following are required with PC control:
  - Model M7i or M5i force/torque indicator
  - 09-1162 multi-function cable
  - 09-1056 serial cable

- **Digital Angle Indication**
  Rotational travel is indicated in degrees or revolutions, with output of angle data.

- ** Programmable Angle Limits**
  Stop at or cycle between programmable upper and lower angle limits. Programmable in degrees or revolutions.

- **Overload Protection**
  Protects the torque sensor against overload (requires a Model M7i or M5i force/torque indicator and 09-1162 multi-function cable). The user programs the desired percentage of full scale of the sensor.

- **Auto-return**
  The torque table rotates to an angle limit or torque set point (requires a Model M7i or M5i force/torque indicator and 09-1162 cable), stops, and reverses direction at full speed to the other angle limit or torque set point.

- **Cycling / Dwell Time**
  Same as auto-return, but with the ability to program up to 100,000 cycles. Programmable dwell time for upper and lower limits (set independently) can be set up for up to 10,000 seconds. Independent CW and CCW speeds may be programmed.

- **Programmable CW / CCW Button Functions**
  Programmable CW and CCW button functions - momentary motion, maintained motion, or auto.

- **Independent CW and CCW Speeds**
  Programmable independent speeds for CW and CCW directions.

- **Selectable Speed Units of Measurement (RPM and deg/s)**

- **Password Protection**
  Prevents unauthorized changes to controller settings.

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* Contains a universal power supply (80 - 240V) and includes a 110V US power cord. Add suffix ‘E’ for Euro cord, ‘U’ for UK cord, or ‘A’ for Australian cord.
Ex: TSTM-DCE, TSTM-DC-1U, TSTMH-DC-2A

Power cords also available for purchase individually.
Dimensions

in [mm]

TSTM-DC

TSTMH-DC

CONTROLLER

Specifications subject to change without prior notice