

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. Three torque capacities are available, 25 lbFin [11.5 Nm] 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.

Features

■ Configurable clockwise and counter-clockwise speeds, RPM or °/s

■ Digital angle indicator

Rotational travel is indicated in degrees or revolutions, with RS-232 output of angle data.

■ Angle limits

Stop at or cycle between configurable upper and lower angle limits, in degrees or revolutions.

■ Angle dial with 2° resolution

■ Auto-return

The torque table rotates to an angle limit or torque limit (requires a Model M7I or M5I indicator and AC1108 multi-function cable), stops, and reverses direction at full speed to the other angle limit or torque set limit.

■ Cycling

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

■ Configurable button functions

CW and CCW button presses can produce one of the following motions: (1) momentary (button-hold), (2) maintained (button release), or (3) automatic (press and hold for momentary, or quick press and release for maintained motion).

■ Overload protection

Protects the torque sensor against overload (requires a Model M7I or M5I indicator and AC1108 multi-function cable).

■ PC control

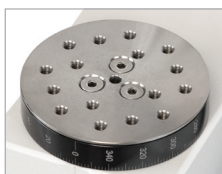
Control the test stand with your own application using a supplied library of motion control and data collection serial commands

Note the following co-requirements:

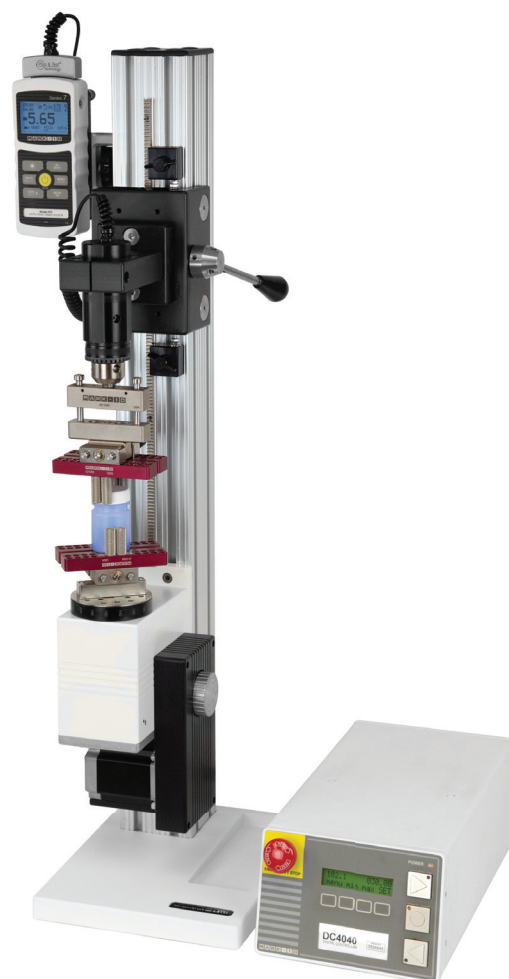
- Model M7I or M5I indicator
- AC1108 multi-function cable
- AC1104 serial cable

■ Password protection

Prevents unauthorized changes to controller settings.



▲ Rotating torque plate includes a matrix of tapped holes for grip or fixture mounting



▲ Model TSTM-DC is shown in a cap torque test, with a Series R50 torque sensor, M5I force/torque indicator, G1023 universal closure grip, and G1053 cap grip



▲ Model TSTMH-DC is shown in a torsion spring test, with a Series R50 torque sensor and M5I force/torque indicator

Optional Equipment



Series R50 universal 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. Mounts to the test stand with AC1016 adapter.



Mounting Kit (AC1016)

MR55-200 to torque test stand



Torque indicators

Displays the torque value measured by a torque sensor. Model M5I or M7I is recommended.



Serial cable, controller to PC (AC1104)

For communicating with a PC for data output and PC control.



Multi-function cable, indicator to controller (AC1108)

Connects an indicator to the controller. This single cable is used to transmit set points, overload signals, and torque data.



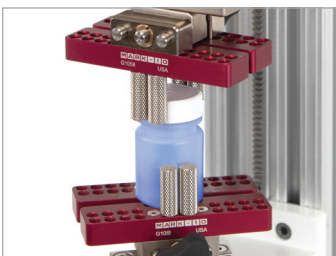
RS-232 to USB adapter (RSU100)

Converts RS-232 to USB output.



Horizontal / wall mounting kit (TSF002)

Pair of mounting legs for adapting the test stand to a bench, instead of the base.



Grips and attachments

For a variety of applications.



Axial compensator (AC1029)

Allows for axial movement in threaded fasteners, bottle caps, and similar torque testing applications.



MESUR® gauge software (15-1004)

Tabulates and plots torque vs. time or torque vs. angle. Also calculates statistics, exports to Excel, and more.

Specifications

All models	
Speed accuracy:	±0.2% of setting, ±0% variation with load
Rotational travel accuracy:	±0.7° [0.002 rev.]
Rotational travel resolution:	0.1° [0.01 rev.]
Rotational travel repeatability:	0.1° [0.0003 revolutions]
Throat:	4.10" [104 mm]
Manual adjustment:	12° / adjustment knob revolution
Maximum slider travel:	15.5" [394 mm]
Slider travel rate:	1.047" [26.6 mm] / lever revolution
Universal power supply:	80-250 VAC

Model	Maximum torque	Speed range
TSTM(H)-DC	100 lbFin [11.5 Nm]	0.01 – 15 RPM [0.05 – 90°/s]
TSTM(H)-DC-1	200 lbFin [22.0 Nm] at 7.5 RPM, decreasing proportionally to 100 lbFin at 15 RPM	0.01 – 15 RPM [0.05 – 90°/s]
TSTM(H)-DC-2	25 lbFin [2.8 Nm]	0.04 – 60 RPM [0.2 – 360°/s]

In The Box



The test stands are shipped as shown above, and include the following accessories:

- | | |
|--|---|
| (1) Controller | (1) Base with hardware (vertical models) |
| (1) Controller connection cable | (2) Mounting leg with hardware (horizontal models) |
| (1) Indicator mounting kit | (1) Additional column cap with hardware (horizontal models) |
| (1) Encoder cable | (1) Power cord |
| (1) Column cap with hardware | |
| (1) Allen wrench set | |
| (4) Thumb screw for mounting indicator | |

Ordering Information

Model	Description
TSTM-DC	Torque stand, motorized, vertical, 100 lbFin [11.5 Nm], 110 V*
TSTMH-DC	Torque stand, motorized, horizontal, 100 lbFin [11.5 Nm], 110V*
TSTM-DC-1	Torque stand, motorized, vertical, 200 lbFin, 110V *
TSTMH-DC-1	Torque stand, motorized, horizontal, 200 lbFin, 110V *
TSTM-DC-2	Torque stand, motorized, vertical, 60 RPM max, 25 lbFin, 110V *
TSTMH-DC-2	Torque stand, motorized, horizontal, 60 RPM max, 25 lbFin, 110V *
Additional items to consider	
AC1108	Multi-function cable, M7I/M5I indicator to test stand
AC1104	Serial cable, test stand to PC
RSU100	Communication adapter, RS-232 to USB
TSF002	Horiz. / wall mounting kit
AC1016	Mounting adapter, MR55-200 to test stand
SP-2736-12	Column extension, 12 in. / 305 mm
SP-2736-24	Column extension, 24 in. / 610 mm
SP-2736-42	Column extension, 42 in. / 1065 mm
SP-2496	Upgrade to 200 lbFin, factory retrofit
SP-2624	Upgrade to 60 RPM, factory retrofit

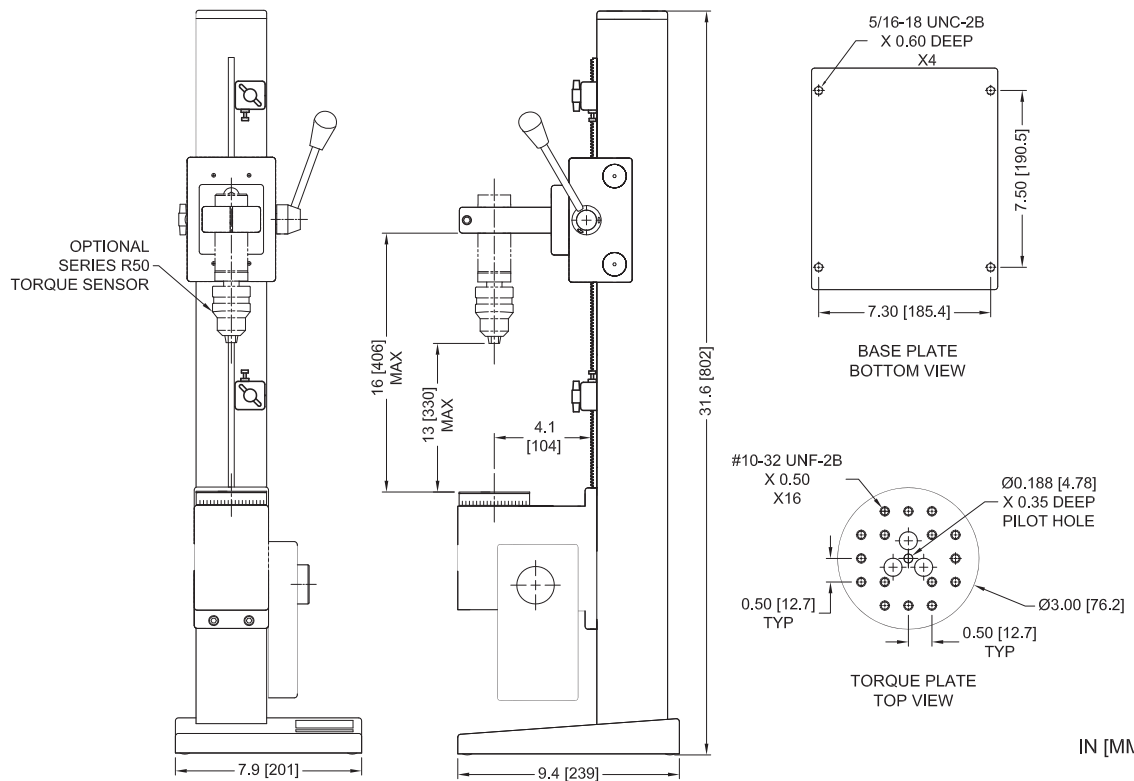
Alternative Power Cords

TSTM-DC contains a universal power supply (80 - 240V) and power cord with US prong style. Select alternative power cords from the table below.

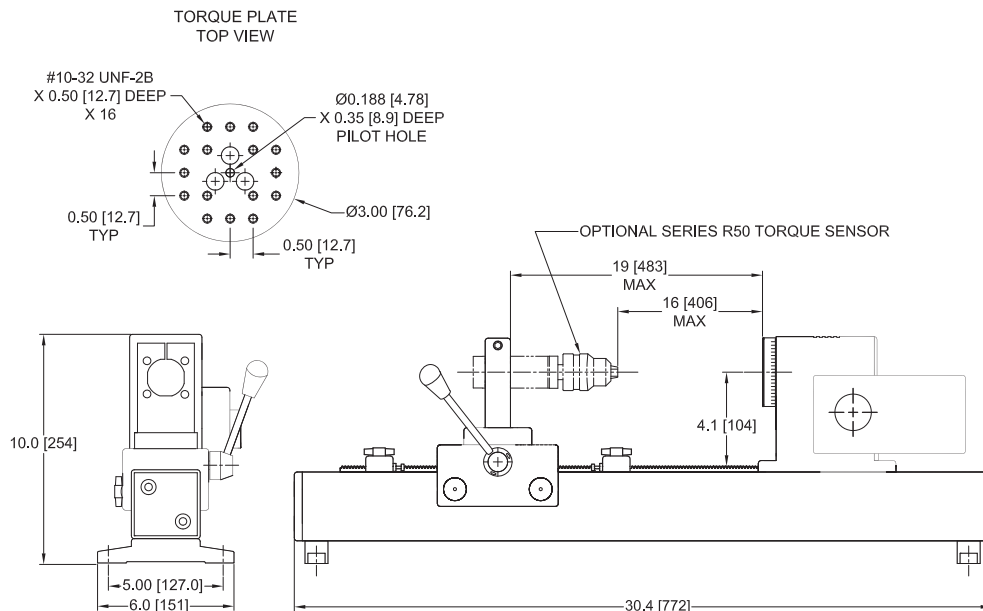
Model	Description
AC1139	Power cable, EUR
AC1140	Power cable, UK
AC1141	Power cable, AUS

Dimensions in [mm]

TSTM-DC



TSTMH-DC



CONTROLLER

