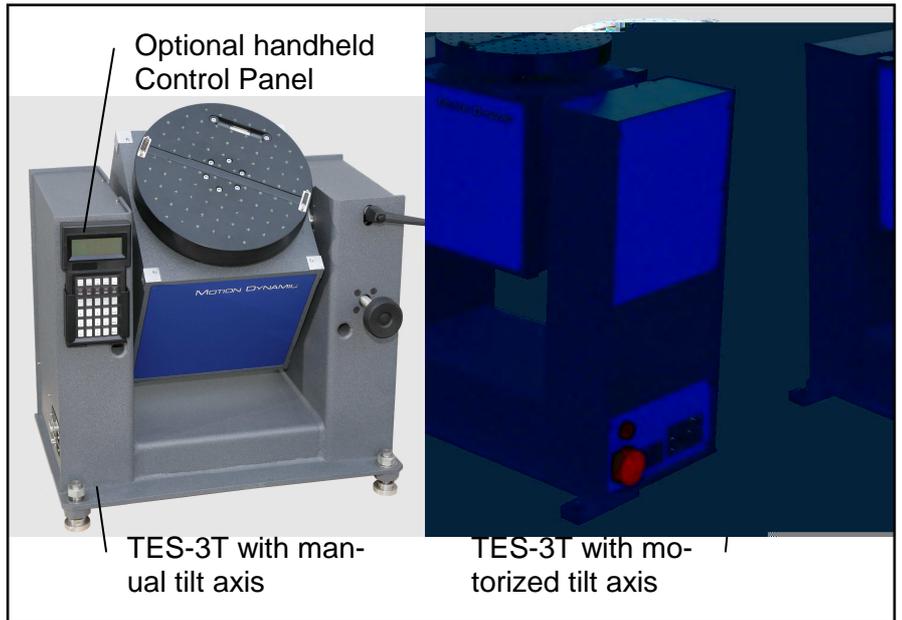


Test Fixture Series TES-3T

Features

- Single Axis Rate Table mounted in stand with horizontal tilt axis
- Rate range +/-1500 deg/s; good instantaneous rate stability; rate resolution of 0.001 deg/sec
- Accurate positioning with excellent repeatability
- Tilt axis with manual slow motion positioning or motorized positioning drive



Description

The Test Fixture TES-3T is designed for angular positioning, precise uniform rate and angular motion profiling. They can accommodate a wide variety of payloads. The table top has a pattern of threaded holes to fasten the payload. There is a precision bubble level imbedded in the table top defining the vertical orientation of the table axis. The main drive assembly consists of a cast aluminum housing mounted in a welded tilt-stand.

The inner table axis is driven by a direct drive brushless servo motor delivering high torque and smooth rates over a wide speed range. Ripple and cogging torque are reduced by the skewed motor pole design. The table axis is furnished with a 30-line slipring capsule rated for two Amperes. The lines terminate in two D-sub connectors at the platen and corresponding connectors at the base. The controller and the power supplies are part of the drive cube. The controller is operated via a host computer. Its software is based on Lab-View™ and comes along with the controller on a CD ROM.

The Tilt-stand features a horizontal axis positioned manually by opposing push spindles. Optional the tilt axis can be equipped with a motorized positioning drive. Large payloads must be balanced around the tilt axis by adding counterweights on the bottom side of the drive module

Specification Summary

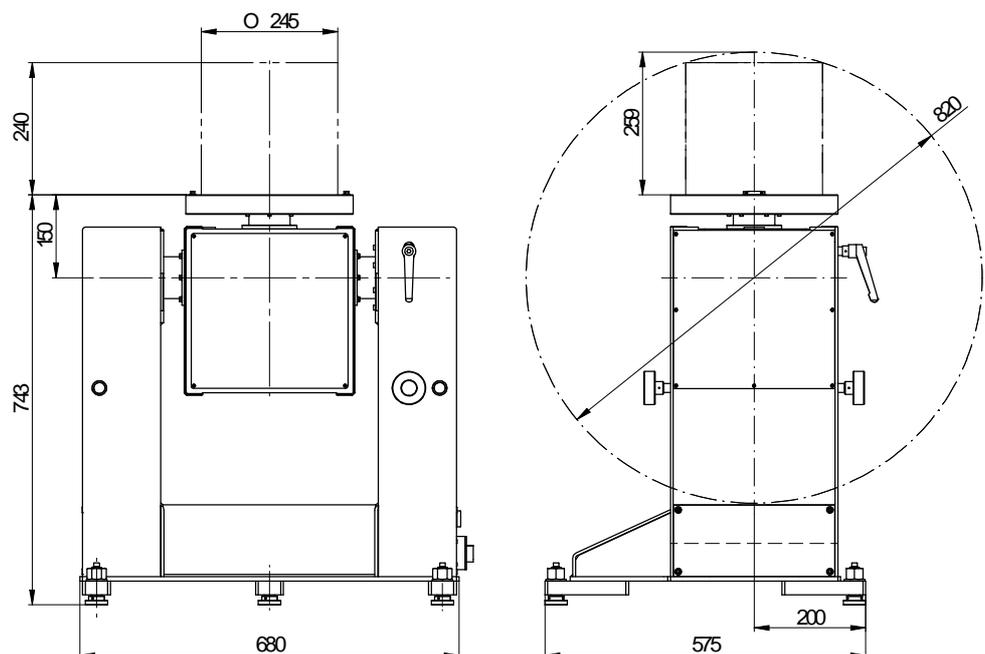
General Configuration

Payload nominal	245dia x 240mm cylinder, 20kg;
Sliprings to UUT	terminated in two pairs D-Sub connectors on table top and base
standard	28 lines rated for 2A and 2 lines rated for 5Amp
optional	36 lines rated for 2A and 4 lines rated for 5Amp
Mounting platen	300mm dia., aluminum hard anodized with grid of threaded mounting holes, M5 with Heli-coil insert on 25mm spacing,
Platen flatness	±0.05mm
Axis alignment	support point perpendicular or orthogonal to the drive axis within ±<3arc sec
Axis wobble	±<2arcsec

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<u>Table Axis</u>	Torque	20 Nm
	Axis inertia, (no load)	0.09 kgm ²
	Acceleration (no load)	±10'000 deg/s ²
	Bandwidth (-3dB)	>60 Hz
Position command	Position transducer	SIN/COS high-resolution, absolute
	Position range	0 to 359.9999 deg unlimited rotation
	Position slew	Profiling within rate and acceleration limits
	Position resolution	<0.04 arcsec
	Position accuracy	<4 arcsec RSS or ±<6 arcsec peak-peak
	Position repeatability	better ±2 arcsec
Rate command	Rate range	±1500 deg/sec
	Rate slew resolution	Profiling within acceleration and jerk limits Rate <1 arcsec/s
	Rate stability	0.001% of commanded rate over one revolution
	Event pulse	1/revolution
Acceleration Control	Rate changes can be performed with controlled acceleration.	
	Acceleration Limit	can be set within the dynamic range
	Command Resolution	<25 arcsec/s ²
Command	Through RS-232 interface, at a baud rate of 115200, via optional handheld paddle or compatible input device or host computer	
<u>Tilt axis</u>	Actuation	manual, fine adjustment opposing push spindles
	Position transducer	SIN/COS high-resolution, absolute
	Position range	±180 deg
	Position resolution	<2.0 arcsec
Optional tilt axis drive	Actuation	servo motor with anti backlash gear
	Position accuracy	<7 arcsec RSS or ±<10 arcsec peak-peak
	Position repeatability	better ±2 arcsec
	Tilt slew speed	< 20 deg/sec

Outline Dimensions



All dimensions in mm and subject to change without notice.