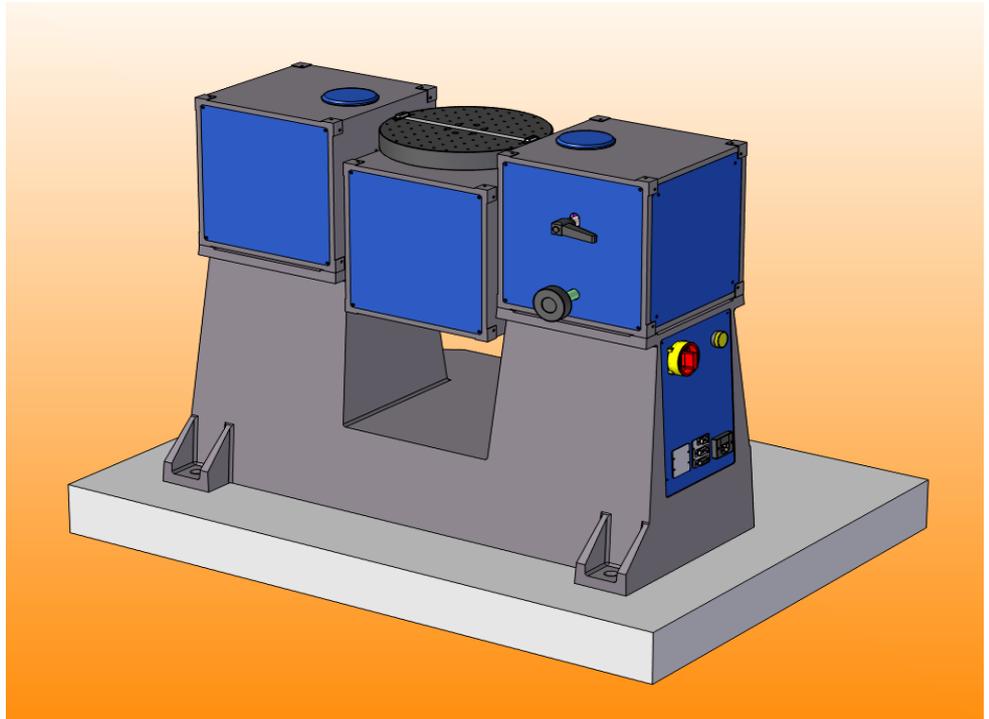


Test Fixture Series TES-3H3

Modes of Operation

- Positioning: absolute with a Resolution of 0.0001deg.
- Rate: no drift, good instantaneous rate stability with a Resolution of 0.001deg/sec
- Indexing: for tracking applications
- Analog: command and optional analog readout with 14 bit resolution



Description

The Series TES-3H3 Test-Fixtures offer an optimal price/performance ratio and are especially suitable for in-process checks and depot level measurements. Angular positioning, precise uniform rotation and angular motion profiling are typical operation modes. All operations are commanded via an optional host computer or handheld device. The control software delivered with the instrument is based on LabView™.

Payloads are mounted on table top platen. A pattern of threaded holes accept a variety of test loads. Electrical access is provided by shielded lines terminated on the platen and the base casting by D-Sub connectors.

The Series TES-3H3 Test-Fixture consists of modular cube assemblies with precision bearings and the required servo components. The drive module houses the direct drive brushless torquer, the high resolution encoder, the slip ring capsule, the amplifier/controller assembly and power supply. All components are interchangeable facilitating repair and spare part supply management.

Specification Summary

General Configuration

Payload nominal	245dia x 250mm cylinder, 20kg; (30kg max.)
Sliprings to UUT	2 lines 5Amp single 12 lines 2Amp single 14 lines 2Amp twisted shielded pairs terminated in two pairs D-Sub connectors on table top and base
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 orthognality	<±3arcsec
Axis wobble	<±2arcsec

Test Fixture Series TES-3H3

Dynamic

	<u>Inner Axis</u>	<u>Outer Axis</u>
Rate	±1500deg/s	±500deg/s
Acceleration (no load)	10'000deg/s ²	1'000deg/s ²
Torque	20Nm	20Nm
Axis inertia, (no load)	0.09kgm ²	0.7kgm ²
Bandwidth (-3dB)	>60Hz	>20Hz

Position command

Position transducer	SIN/COS high-resolution, absolute
Position range	0 to 359.9999deg unlimited rotation
Position slew	Profiling within rate and acceleration limits
Position resolution	<0.04arcsec
Position accuracy	<3arcsec _{RSS}
Position repeatability	better ±2arcsec

Rate command

Rate slew	Profiling within acceleration and jerk limits
Rate resolution	<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	<25arcsec/s ²

External Analog Command

Analog signals can be entered via a D-Sub connector.

Command

Via host computer through RS-232 interface, at a baud rate of 115200, or optional hardware in the loop board

Optional

Different number of slipping lines
Hardware in the loop boards

