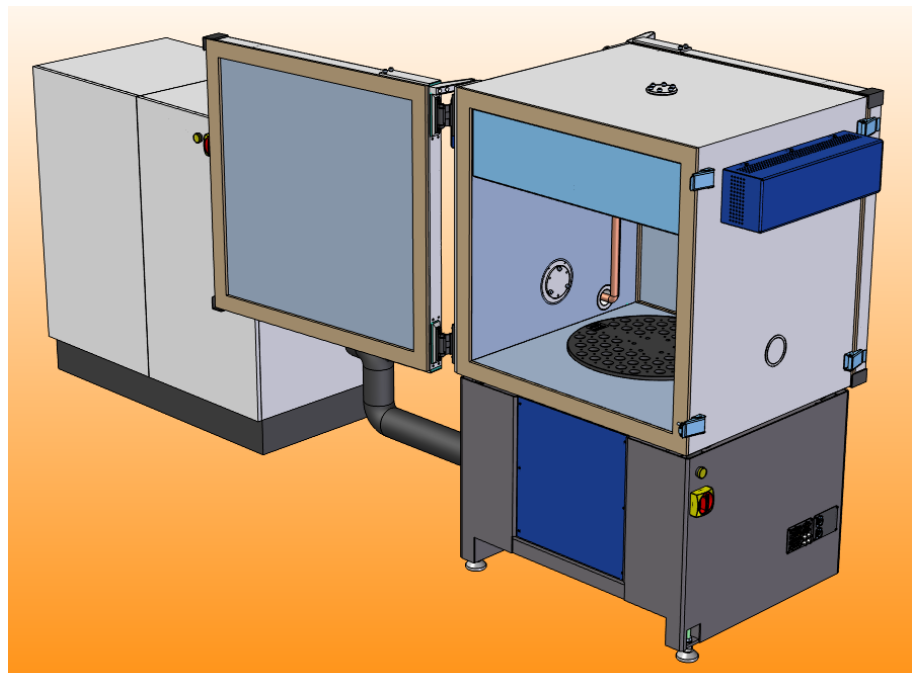


Test Fixture Series TES-3_TM

Modes of Operation

- Positioning: absolute with a Resolution of <math><0.0001\text{deg}</math>.
- Rate: no drift, good instantaneous rate stability with a Resolution of <math><0.001\text{deg/sec}</math>
- Indexing: for tracking applications
- Analog: command and optional analog readout with 14 bit resolution
- Temperature Chamber with a Range of



Description

The Series TES-3 Test-Fixtures offer accurate angular positioning, precise uniform rotation and angular motion profiling. All operations are commanded via the handheld paddle or by an optional host computer. The control software delivered with the instrument is based on LabView™. The fixture is designed for the testing and calibration of integrated packages and subassemblies.

Payloads are mounted on table top platen. A pattern of threaded holes accept a variety of test loads. Electrical access to the payload is dimensioned for different power ratings and signals. The lines terminate on the platen and the base casting by D-Sub connectors.

The Series TES-3 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.

A freestanding mechanical refrigeration unit is connected via the dual passage rotary joint to the cooling assembly of the chamber. The sealed cooling system uses environmental friendly refrigerants. The chamber is heated by electric heaters. Fans agitate the air inside the chamber and assure uniform temperature monitored by thermal sensors.

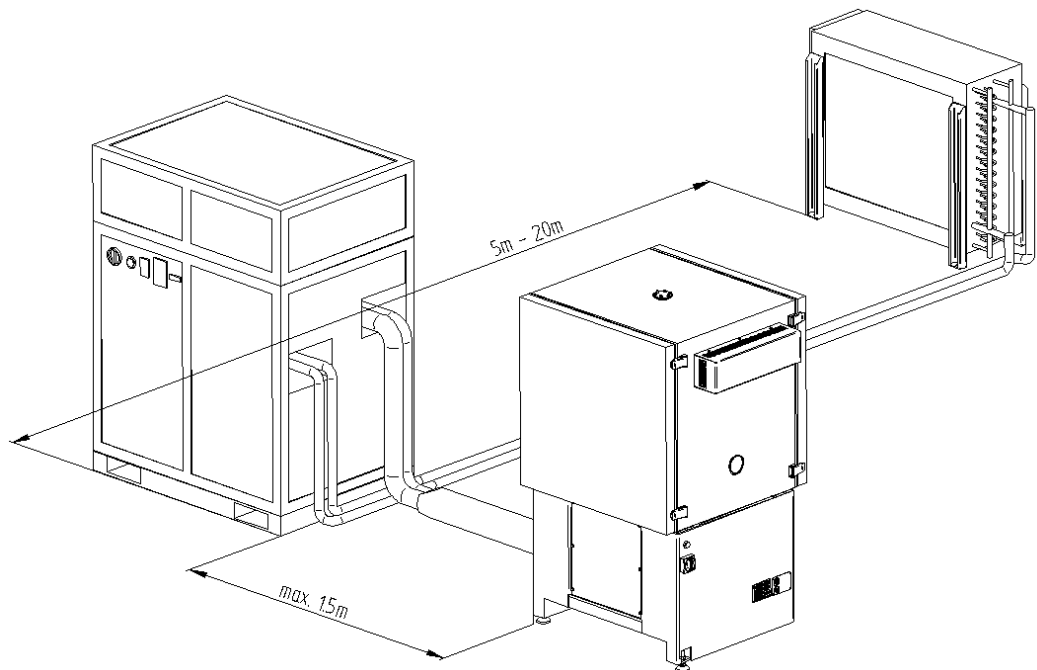
Specification Summary

General Configuration

Payload nominal	245dia x 250mm cylinder, 20kg; (30kg max.)
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, Optional are table tops up to Dia 660mm available
Platen flatness	±0.05mm
Axis alignment	support point perpendicular or orthogonal to the drive axis within ±<math><3\text{arc sec}</math>
Axis wobble	±<math><2\text{arcsec}</math>

Series TES-3_TM

Dynamic		<u>nominal, cont.</u>	<u>peak</u>
	Torque	20Nm	40Nm
	Axis inertia, (no load)	0.09kgm ²	
	Acceleration (no load)	±10'000deg/s ²	±20'000deg/s ²
	Bandwidth (-3dB)	>60Hz	
	Rate range	±1500deg/sec	
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} or ±<4,5arcsec _{peak-peak}	
	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.		
Temperature Chamber	Temperature Range	-55°C to +100°C	
	Temperature Stability	<±1°C	
Command	Through RS-232/484 interface, at a baud rate of 115200, or optional high-speed data interface or via handheld		



Options	Table-Top:	of different sizes
	Sliprings:	40Way- or 60 Way
	Interfaces:	High-Speed Data Interface or Handheld terminal