IDEAL AEROSMITH

Datasheet

1553P
Three Axis Motion Table

STANDARD FEATURES

- Position Accuracy: ± 36 arc sec
- Direct-drive, DC brushless servo system
- Fail-safe brakes
- Large, unobstructed field of view perfect for antenna testing
- Multiple mounting surfaces for auxiliary electronics

AERO 4000 CONTROLLER FEATURES

- .NET interface over Ethernet
- Front panel display of status and data
- Local and remote operation
- Trapezoidal velocity profiles with programmable velocity and acceleration
- Sinusoidal motion profiles with variable amplitude and frequency
- Profile Modes for simulating complex motion

DESCRIPTION

The 1553P Motion Table is designed to provide precise position, rate and acceleration motion for the development and/or production testing of inertial packages and their components requiring a large and unobstructed field of view. Its payload mounting surface is above the rest of the structure allowing a clear view upwards and outwards for antenna testing.

The 1553P Motion Table is a servo-controlled system that features direct-drive DC brushless motors, precision optical encoders and a microprocessor that provides accurate and reliable motion control. The table can be operated from the AERO 4000 Controller front panel for local control through a computer interface for remote control.

This test table system is designed for ease of operation and is programmed with the Ideal Aerosmith Table Language (ATL) for remote operation.

OPTIONS

- Various slip ring packages or wire wrap configurations
- Horizontal configuration on pitch axis
- *For special requirements, please contact Ideal Aerosmith regarding system customization.*

For much more detailed information, contact Ideal to request a Specification Document.

1553P Performance Specifications			
	Roll Axis	**Pitch Axis**	**Yaw Axis**
Range of Motion, deg	Option 1: ± 35 (wire wrap) Option 2: Unlimited (slip ring)	± 55	Option 1: ± 60 (wire wrap) Option 2: Unlimited (slip ring)
Position			
• Accuracy, arc sec (deg)	± 36 (0.01)	± 36 (0.01)	± 36 (0.01)
• Repeatability, arc sec (deg)	± 36 (0.01)	± 36 (0.01)	± 36 (0.01)
• Display Resolution, deg (approx)	0.001	0.001	0.001
Rate			
• Maximum, deg/sec	± 40	± 40	± 40
• Display Resolution, deg/sec (approx)	0.001	0.001	0.001
• Accuracy	± 1%	± 1%	± 1%
Acceleration (no load)			
• Peak (2 second), deg/sec^2	40	40	40
• Max Continuous, deg/sec^2	20	20	20

System Physical Configuration	
Overall Table Dimensions, inches (mm)	76.0 (1930) W x 43.6 (1107) D x 87.4 (2220) H
Table Interface Characteristics	
• Size, inches (mm)	28.0 (711) x 24.75 (629)
• Material	Aluminum
Test Load Envelope, inches (mm)	28.0 (711) x 24.75 (629) x 10.0 (254) H
Test Load Capacity	100 lbs (45.4 kg) balanced CG 5 inches (127 mm) maximum above tabletop
User Harness/Slip Ring	10 lines at 2 amps each + 1 GBit Ethernet Connection
Controller	Consult AERO 4000 specification document SP4499 for more detailed information
• Size, inches (mm)	23.3 (592) W x 30.0 (762) D x 73.6 (1869) H
• Weight, lbs. (Kg)	500 (227)

LIST OF DELIVERABLES

Documentation

Digital media files including pdf versions of the following;

1. Operation Manual describing the proper operation, service, maintenance, software, schematics and calibration of the system.
2. Acceptance Test Procedures including In-process and Factory Acceptance Test results
3. Component manufacturer's documentation.

Standard Hardware

1. 3-Axis Motion Table
2. AERO 4000 Test Table Controller- Three Axis Configuration
3. Interconnecting Cables (between table and console)
4. Accessory Kit (includes 1 set of mating connectors and fuses)

An expedited lead-time may be available on any of the tables and options. Please contact Ideal. Rev A
Specifications, options and pricing are subject to change without notice.