



1573 Series Multi-Axis Precision Positioning and Rate Table Systems

STANDARD FEATURES

- Position Accuracy: ± 20 arc sec
- Rate Accuracy: 0.005%
- Direct-drive, DC brushless servo system
- AERO 832 Digital Controller
- Local and remote operation
- User-friendly Ideal Aeromsmith Table Language (ATL)
- Front panel display of status and data
- 24 inch diameter tabletop
- Fail-safe brakes
- Trapezoidal velocity profiles with programmable velocity and acceleration
- Sinusoidal motion profiles with programmable amplitude and frequency
- Position Profile and Velocity Profile Modes for simulating complex motion profiles
- Analog Input/Output
- Limited Rotation Wire wrap design for a limited rotation system

DESCRIPTION

The 1573 Series Automatic Positioning and Rate Table Systems are designed to provide precise position, rate and acceleration motion for the development and/or production testing of inertial packages and their components.

1573 Series test tables are servo-controlled systems that feature 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 832 Controller front



panel for local control or through a computer interface for remote control. This test table system is designed for ease of operation and is programmed with the Ideal Aeromsmith Table Language (ATL) for remote operation.

The 1573 Series Table Systems come standard with two remote computer interfaces, IEEE-488 and RS-232.

OPTIONS

- Various slinging packages or wire wrap configurations
- Integral Thermal Chambers
- 18 to 36 inch diameter Tabletops
- Vacuum Chamber System
- High speed inner axis (1500 deg/sec max rate)
- Enhanced analog velocity output update rate (8 KHz – standard is 1 KHz)
- Rack-mount cabinet for controller
- *For special requirements, please contact Ideal Aeromsmith regarding system customization.*

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

1573 Series Performance Specifications

Rotational Freedom options for all axes	1) Unlimited rotation (slipring) 2) ± 540 deg. (wire wrap)
Positioning	
• Accuracy, arc sec	± 20
• Repeatability, arc sec	± 5
• Display Resolution, deg	0.00025
Rate	
• Maximum*, deg/sec	Inner Axis: ± 1080 or 1500 Middle Axis: ± 360 or 600 Outer Axis: ± 360
• Minimum, deg/sec	0.0005
• Display Resolution, deg/sec	0.0005
• Accuracy, % \pm Resolution (measured over 360 deg.)	± 0.005
Axis Wobble, arc sec	10
Orthogonality between consecutive axes	± 10

*For a limited rotation axis, maximum rate is limited to ± 360 deg/sec and may not be achievable as it is dependent upon acceleration capabilities (varies with load) and travel limits.

System Physical Configuration

Tabletop	
• Diameter	Standard sizes: 18 to 32 inches (457 to 813 mm). Test load mounting provisions are 1/4-20 threaded holes on a two-inch (50 mm) grid pattern. Custom tabletop and interface patterns available upon request.
• Face Flatness	0.005 inches (.127 mm) TIR
• Face Runout	0.002 inches (.051 mm) @ 6 inch (152.4 mm) Radius
• Material & Surface Finish	Aluminum with 32 RMS Surface Finish
• Tabletop Connectors	MS style connectors
Test Load Capacity	150 Lb (68 Kg) Centered. With thermal chamber: 125 lbs (57 Kg) Note: The accuracy performance specifications shown are based on a centered, 150 lb maximum payload. The system is rated for much larger loads, but some performance specifications may be affected.
User Harness/Slipring Options	Standard wire wrap package is 156 lines. Standard slipring packages are 70, 100, 120, 160, 180 and 210 lines. (Availability varies by axis configuration.) Custom slipring packages are available.
Integral Thermal Chamber	Integral Thermal Chamber options are available. Contact Ideal for more information regarding options.
Leveling	± 1 degree (Continuous)
Controller	Request data sheet for AERO 8x2 controller for more information
• Type & Configuration	AERO 832 Three-Axis Digital Controller configured in a 19 inch Rack Mountable Chassis
• Communication Interfaces	IEEE-488 and RS-232 ports available to user

For additional information or special requirements, contact Ideal Aerospine. Specifications subject to change without notice. Please call for pricing.

Rev B