

1522P Series Two Axis Positioning and Rate Table Systems

STANDARD FEATURES

- Position Accuracy: ± 10 arc sec
- Limited Rotation for both axes
- Direct-drive, DC brushless servo system
- 24-inch diameter tabletop
- Test load capacity: 150 lbs (68 Kg)
- AERO 4000 Controller
- Fail-safe brakes

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 1522P Series Automatic Positioning and Rate Table System is a low cost two axis system designed to provide precise positioning for large payloads for the development and/or production testing of inertial packages and their components.

The 1522P 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 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 Aerosmith Table Language (ATL) for remote operation.

OPTIONS

- Various sliping packages or wire wrap configurations
- 18 inch diameter Tabletop
- Custom hole pattern
- *For special requirements, please contact Ideal Aerosmith regarding system customization.*

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

1522P Series Performance Specifications

	Inner Axis	Outer Axis
Range of Motion, deg	Standard: ±200 Optional ±360 or Unlimited	Standard: ±200 Optional ±360 or Unlimited
Position		
• Accuracy, arc sec (deg)	±10 (0.00278)	±10 (0.00278)
• Repeatability, arc sec (deg)	± 3 (0.00083)	± 3 (0.00083)
• Homing, arc sec (deg)	± 3 (0.00083)	± 3 (0.00083)
• Display Resolution, deg (approx)	0.0001	0.0001
• Encoder Resolution, deg (approx)	0.00002	0.00002
• Encoder Resolution, counts per rev	16,777,216	16,777,216
Slew Rate		
• Maximum, deg/sec*	100	100
• Minimum, deg/sec (approx.)	0.0001	0.0001
• Command/Display Resolution, deg/sec (approx.)	0.00001	0.00001
Acceleration/Bandwidth (24 inch table top, no load)		
• Peak, deg/sec ² **	650	150
• Max Continuous, deg/sec ²	330	70
• -3dB Bandwidth (no load)	50 Hz	10 Hz
Axis Wobble, arc sec (deg)	5 (0.00139)	5 (0.00139)
Axis Orthogonality, arc sec (deg)	± 5 (0.00139) between consecutive axes	

* For a limited rotation axis, maximum rate is limited to ±100 deg/sec and may not be achievable as it is dependent upon acceleration capabilities (varies with load) and travel limits.

** Peak Acceleration is for a 2 second duration.

System Physical Configuration

Table Interface Characteristics	
• Diameter	Standard size: 24 inches (610) Optional: 18 inches
• Table top hole pattern	Standard: ¼ - 20 UNC tapped holes on a 2 inch (50.8 mm) grid pattern. (Not all holes are available.) Optional: custom hole
• Face Flatness, inches (mm)	0.005 (0.127) TIR
• Face Runout, inches (mm)	0.002 (0.051) at a 6 inch (152.4 mm) Radius
• Material & Surface Finish	Aluminum with 32 RMS Surface Finish
• Tabletop Connectors	Standard: No connectors Option: Two MS style connectors
Test Load Capacity, lbs (Kg)	150 (68) (Balanced).
User Harness/Slip ring Options	Standard: No user harness Options: slip ring packages are available and custom user harnesses.
Controller	Consult AERO 4000 specification for more detailed information
Power Requirement	208-230 VAC ±10%, 1 phase, 50/60 Hz, 12A (FLA), 15A breaker, SCCR 5 kA
Table Dimensions	
• Overall Table Dimensions, inches (mm), approx. (includes swing radius)	60.3 W x 29.1 D x 55.8 H (1532 x 739 x 1417)
• Height of Table top, inches (mm) approx.	55.5 (1410) nominal
• Table Weight, lbs (Kg), approx.	1450 (658)

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

Rev A