

1572PMO Series Two Axis Positioning and Rate Table Systems

STANDARD FEATURES

- Position Accuracy: ± 15 arc sec
- Limited Rotation for both axes
- Direct-drive, DC brushless servo system
- 36-inch diameter table top
- Test load capacity: 265 lbs (120 Kg)
- AERO 4000 Controller
- Fail-safe electric brakes (inner axis) and stow locks (both axes)

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 1572PMO 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 Ideal Aerosmith 1572PMO Two Axis Positioning and Rate Table System features a servo controlled, direct drive brushless torque motor on the inner axis with an AERO 4000 Digital Controller. The inner axis can be controlled locally via the Controller interface, or remotely via a host PC. The outer axis is controlled manually and provides precise positioning feedback by way of absolute optical encoder.



In the Ideal Aerosmith line of motion simulation table systems, the 1572PMO Series is considered to be a medium to high accuracy system designed for larger payloads and for low to medium dynamic performance applications.

OPTIONS

- Various slip ring packages or wire wrap configurations
- Various table top diameters
- 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.

1572PMO Series Performance Specifications

	Inner Axis	Outer Axis
Range of Motion, deg	Standard: ±540 Optional: ±360 or Unlimited	Standard: ±100 Optional: ±360 or Unlimited
Axis Encoder Type	Absolute	Absolute
Position		
• Accuracy, arc sec (deg)	±15 (0.00416)	±15 (0.00416)
• 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
Rate		
• Maximum, deg/sec*	±360	N/A
• Minimum, deg/sec (approx.)	0.00001	N/A
• Command/Display Resolution, deg/sec (approx.)	0.00001	N/A
• Display Resolution, deg (approx)	0.00001	N/A
• Accuracy, (Average of 10 readings, measured over 1 rev)	0.001% ± resolution	N/A
• Stability (measured over 1 rev)	0.001%	N/A
Acceleration/Bandwidth (36 inch table top, no load)		
• Peak, (2 sec. duration), deg/sec ²	725	N/A
• Max Continuous, deg/sec ²	510	N/A
• -3dB Bandwidth	50 Hz	N/A
Axis Wobble, arc sec (deg)	5 (0.00139)	5 (0.00139)
Axis Orthogonality, arc sec (deg)	± 5 (0.00139) between consecutive axes	

System Physical Configuration

Table Interface Characteristics	
• Diameter	Standard size: 36 inches (914) Optional: Various diameter table tops available
• 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
• Surface 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: MS style connectors
Test Load Capacity, lbs (Kg)	265 (120) (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, 15A (FLA), 20A breaker, SCCR 5 kA
Table Dimensions	
• Overall Table Dimensions, inches (mm), approx. (includes swing radius)	78.6 W x 39.1 D x 54.7 H (1996 x 993 x 1389)
• Height of Table top, inches (mm) approx.	47.7 (1212) nominal
• Table Weight, lbs (Kg), approx.	1900 (864)

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

Rev A