



STANDARD FEATURRES

- **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 5 ELITE Controller
- Fail-safe electric brakes (inner axis) and stow locks (both axes)

DESCRIPTION

The 1572VE/MO 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 1572VE/MO Two Axis Positioning and Rate Table System features a servo controlled, direct drive brushless torque motor on the inner axis with an AERO 5 ELITE 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.

AERO 5 ELITE CONTROLLER FEATURES

- Aerosmith Table Language (ATL) for remote operation over Ethernet
- Data Acquisition streaming at up to 20 kHz over Ethernet
- Highly-customizable Graphical User Interface
- Local and remote operation
- Trapezoidal velocity profiles with programmable velocity and acceleration
- Signal Generator to execute motion based on sine, sine sweep, step, triangle, or sawtooth signals, with configurable amplitude and frequency
- Motion Files for simulating complex motion
- Analog Input control in Position or Velocity modes

OPTIONS

- Various slip ring packages or wire wrap configurations
- Various table top diameters
- Custom hole pattern

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

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

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1572VE/MO 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 5 ELITE 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)

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