1522VE SERIES TWO AXIS

POSITIONING AND RATE TABLE SYSTEM

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 5 ELITE Controller
- Fail-safe brakes

DESCRIPTION

The 1522VE 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 1522VE Series test tables are servo controlled, direct-drive table with an AERO 5 ELITE Motion Controller. The Table System can be controlled locally via the Controller interface, or remotely via a host PC.

AERO 5 ELITE CONTROLLER

- 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 slipring packages or wire wrap configurations
- 18 inch diameter Tabletop
- Custom hole pattern

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

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

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1522VE 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	Refer to AERO 5 ELITE Data Sheet for more detailed information.
• Type & Configuration	AERO 5 ELITE Controller configured in a console.
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)

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