1573VE SERIES THREE AXIS POSTIONING AND RATE TABLE SYSTEM

STANDARD FEATURES

- **Position Accuracy:**
  - Model 1573VE15: ±15 arc sec
  - Model 1573VE8: ±8 arc sec
- **Rate Accuracy:** ±0.001% ± Resolution
- Direct-drive, DC brushless servo system
- 24-inch diameter tabletop
- Fail-safe brakes
- Available with slip ring package for unlimited rotation or a wire wrap design for a limited rotation system

AERO 5 ELITE CONTROLLER FEAUTRES

- 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

DESCRIPTION

The 1573VE 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.

The 1573VE Series test tables are servo-controlled, direct-drive table with an AERO 5 ELITE Controller. The Table System can be controlled locally via the controller interface, or remotely via a host PC.

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

OPTIONS

- Integral Thermal Chamber
- Various slip ring packages or wire wrap configurations
- 18 to 32-inch diameter Tabletops
- High-speed inner or middle axis

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

Rev F

1573VE Series Performance Specifications			
	Inner Axis	**Middle Axis**	**Outer Axis**
Range of Motion, deg	Standard: Unlimited Optional ± 540	± 540 or Unlimited	± 540 or Unlimited
Position			
• Accuracy, arc sec (deg)	P8: ± 8 (0.00222) P15: ± 15 (0.00417)	P8: ± 8 (0.00222) P15: ± 15 (0.00417)	P8: ± 8 (0.00222) P15: ± 15 (0.00417)
• Repeatability, arc sec (deg)	± 3 (0.00083)	± 3 (0.00083)	± 3 (0.00083)
• Display Resolution, deg (approx)	0.0001	0.0001	0.0001
Rate			
• Maximum, deg/sec*	Standard ± 1080 Optional ± 1800	Standard ± 360 Optional ± 600	± 360
• Minimum, deg/sec (approx)	0.00001	0.00001	0.00001
• Display Resolution, deg/sec (approx)	0.00001	0.00001	0.00001
• Accuracy, % ± Resolution (average of 10 readings, measured over 1 rev)	± 0.001%	± 0.001%	± 0.001%
Acceleration/Bandwidth			
• Peak, deg/sec^2 **	5200	550	95
• Max Continuous, deg/sec^2 ***	1150	150	50
• -3dB Bandwidth (no load)	75 Hz	20 Hz	15 Hz
Axis Wobble, arc sec (deg)	5 (0.00139)	5 (0.00139)	10 (0.00278)
Axis Orthogonality, arc sec (deg)	± 5 (0.00139) between consecutive axes		

* 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.

** Acceleration is based on a standard 24 inch aluminum tabletop without payload and a maximum rate of 950 deg/sec for the inner axis and 240 deg/sec for the middle axis. Performance diminishes at higher rates. Peak Acceleration is for a 2 second duration.

*** Acceleration is based on a standard 24 inch aluminum tabletop without payload and a maximum rate of 950 deg/sec for the inner axis and 360 deg/sec for the middle axis. Performance diminishes at higher rates.

System Physical Configuration	
Table Interface Characteristics	
• Diameter	Standard sizes: 18, 24, 28 or 32 inches (457, 610, 711, or 813 mm) Test load mounting provisions are 1/4-20 tapped holes on a two-inch (50.8 mm) grid pattern. Custom tabletop and interface patterns available upon request.
• 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	Two 128-pin MS style connectors
Test Load Capacity, lbs (Kg)	Without thermal chamber: 150 (68) (Balanced). With thermal chamber: 125 (57) Balanced.
User Harness/Slip ring Options	Standard wire wrap package is 156 lines. Standard slip ring packages are 70, 100, 120, 160, 180 and 210 lines. (Availability varies by axis configuration.) Custom slip ring packages are available.
Integral Thermal Chamber	Integral Thermal Chamber options are available. Contact Ideal for more information regarding options.
Controller	Consult AERO 5 ELITE Data Sheet for more detailed information
• Size, inches (mm)	23.3 (592) W x 31.0 (787) D x 82.2 (2088) H
• Weight, lbs (Kg)	1150 (522)

Rev F