

1553VE THREE AXIS MOTION TABLE



STANDARD FEATURES

- **Position Accuracy:** ± 36 arc sec
- Direct-drive, DC brushless servo system
- Fail-safe brakes
- Large, unobstructed field of view perfect for antenna testing
- Multiple mounting surfaces for auxiliary electronic

DESCRIPTION

The 1553VE Motion Table is designed to provide precise position, rate and acceleration motion for the development and/or production testing of inertial packages and their components requiring a large and unobstructed field of view. Its payload mounting surface is above the rest of the structure allowing a clear view upwards and outwards for antenna testing.

The 1553VE Motion Table is a servo-controlled system that features 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 5 ELITE Controller, for local control through a computer interface for remote control.

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 slip ring packages or wire wrap configurations
- Horizontal configuration on pitch axis

For much more detailed information, contact Ideal Specification Document.

Rev C

1553VE Performance Specifications

	Roll Axis	Pitch Axis	Yaw Axis
Range of Motion, deg	Option 1: ± 35 (wire wrap) Option 2: Unlimited (slip ring)	± 55	Option 1: ± 60 (wire wrap) Option 2: Unlimited (slip ring)
Position			
• Accuracy, arc sec (deg)	± 36 (0.01)	± 36 (0.01)	± 36 (0.01)
• Repeatability, arc sec (deg)	± 36 (0.01)	± 36 (0.01)	± 36 (0.01)
• Display Resolution, deg (approx)	0.001	0.001	0.001
Rate			
• Maximum, deg/sec	± 40	± 40	± 40
• Display Resolution, deg/sec (approx)	0.001	0.001	0.001
• Accuracy	± 1%	± 1%	± 1%
Acceleration (no load)			
• Peak (2 second), deg/sec ²	40	40	40
• Max Continuous, deg/sec ²	20	20	20

System Physical Configuration

Overall Table Dimensions, inches (mm)	76.0 (1930) W x 43.6 (1107) D x 87.4 (2220) H
Table Interface Characteristics	
• Size, inches (mm)	28.0 (711) x 24.75 (629)
• Material	Aluminum
Test Load Envelope, inches (mm)	28.0 (711) x 24.75 (629) x 10.0 (254) H
Test Load Capacity	100 lbs (45.4 kg) balanced CG 5 inches (127 mm) maximum above tabletop
User Harness/Slip Ring	10 lines at 2 amps each + 1 Gigabit Ethernet Connection
Controller	Consult AERO 5 ELITE specification for more detailed information
Type and Configuration	AERO 5 ELITE Controller
• Size, inches (mm)	23.3 (592) W x 30.0 (762) D x 73.6 (1869) H
• Weight, lbs. (Kg)	500 (227)

Rev C