OBSOLETE

THE IDEAL WAY

ISO 9001
Ideal Aerosmith, Inc.
CERTIFIED

SINGLE-AXIS PRECISION POSITIONING AND RATE TABLE SYSTEM

(Series 1601)

FEATURES

- Rate Accuracy: 0.001% (Over 1 revolution)
- Rate Range: 0.0005 up to 10,000 Deg / Sec
- Position Accuracy: 2 Arc Sec
- Position Repeatability: 0.0005 Deg
- High-torque, direct-drive, DC brush-type servo system
- Local and remote operation
- User-friendly Ideal Aerosmith Table Language (ATL)
- Front panel display of status and data
- Rack-mountable control chassis
- Precision-ground anodized aluminum tabletop
- Fail-safe brake
- Trapezoidal motion profiles with programmable velocity and acceleration
- Sinusoidal motion profiles with variable amplitude and period.
- Aero 900 Controller

DESCRIPTION

The Series 1601 Automatic Positioning and Rate Table System is designed to provide precise position, rate and acceleration motion for the development and/or production testing of navigation sensor systems such as Fiber Optic Gyros (FOG), Ring Laser Gyros (RLG), Inertial Navigation Systems (INS) and accelerometers.

The 1601 test table is a servo controlled system featuring a direct-drive DC brush-type motor, precision optical encoder and a microprocessor that provides accurate and reliable motion control. The table can be operated from the front panel keypad for local control or through a computer interface for remote control. This test table system is designed for ease of operation and is programmed with the Ideal Aerosmith Table Language (ATL) for remote operation.

The remote computer interface standard is IEEE-488, RS-232 is offered as an option. Available commands include control of position, rate, acceleration, and controller parameters.

The Series 1601 may be configured for limited rotation or with sliprings for unlimited axis rotation based on specific customer requirements.

OPTIONS

- Precision Rate
- RS-232 communications interface
- Shot pins for manual positioning
- High-quality, low-noise slip rings for continuous rotation applications
- Various tabletop diameters
- Custom user cables for transferring UUT signals through the test table axis
- Temperature Chambers for environment testing
- Vacuum Chamber System
- External Analog Input
- Analog velocity output option
- High speed position latching option
- Horizontal axis orientation
- Tilt stand
- *For special requirements, accuracies or custom specifications, please contact Ideal Aerosmith, Inc.*

Additional information on Ideal Aerosmith products is available on the Internet at: http://www.ideal-aerosmith.com
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Performance Specifications Model Number				
	1601-2	**1601-3**	**1601-4**	**1601-5**
Rotational Freedom	Unlimited	Unlimited	Unlimited	Unlimited
Rate (Contact Ideal Aerosmith for specifications with Precision Rate Option)				
• Maximum, deg./sec.	1,000	1,000	3,000	10,000
• Minimum, deg./sec	0.00008	0.00008	0.00016	0.0008
• Resolution (over entire range) deg/sec	0.00008	0.00008	0.00016	0.0008
• Accuracy (measured over 360 deg) % ± Resolution	± 0.001	± 0.001	± 0.001	± 0.01
Positioning				
• Range, deg	0.0000 to 359.99999	0.0000 to 359.99999	0.0000 to 359.9999	0.0000 to 359.9999
• Accuracy, arc sec	± 2	± 2	± 5	± 18
• Resolution, deg.	0.000039	0.000039	0.000078	0.00039
• Repeatability, deg	± 0.0005	± 0.0005	± 0.001	± 0.002
Peak Acceleration, degsec² (Configured with 14 inch diameter tabletop without payload installed)	17,000	22,000	17,000	1,000

System Physical Configuration	
Table Surface Characteristics:	
• Diameter	The table top is available in a range of sizes, from 14 to 48 inches (356 to 1219 mm) in diameter. Test load mounting provisions are 1/4-20 threaded holes on a two-inch (50 mm) grid pattern. Other interface patterns available upon request.
• Face Flatness	.005 inches (.127 mm) TIR (for 14 inch diameter tabletop)
• Face Runout	.002 inches (.051 mm) @ 6 inch (152.4 mm) Radius
• Material	Aluminum
• Surface Finish	32 RMS
Test Load Capacity	150 Lb (68 Kg) Centered Larger load capacities available, contact Ideal
Test Table	
• Height - Tabletop to Floor	37 inches (940 mm) nominal
• Overall Dimensions	24 W x 24 D x 37 H inches (Varies w/ tabletop dia.) (610 W x 610 D x 940 H mm)
• Weight	515 Lb (234 Kg)
Leveling	
• Range	+/- 1 degree
• Resolution	Continuous
Controller	
• Type	AERO 900 Test Table Controller
• Configuration	19 inch Rack Mountable Chassis
• Communications Interface	IEEE-488 Standard, RS-232 is optional

For special requirements or custom specifications, contact Ideal Aerosmith
Specifications are subject to change without notice
Please call for pricing information
Revision E