MODEL 1583P THREE AXIS POSITIONING AND RATE TABLE SYSTEM

STANDARD FEATURES

- **Position Accuracy:** ±15 Arc Sec
- **Rate Accuracy:** ±0.001%
- Roll axis rates up to 50 Hz (3000 RPM)
- Direct-drive, DC brushless servo system
- Precision-ground 10 inch diameter tabletop
- Fail-safe brakes
- AERO 4000 Controller
- 2.5 kHz Servo update rate
- Front panel display of status and data
- Local and remote operation
- User-friendly Ideal Aerosmith Table Language (ATL)
- Trapezoidal velocity profiles with programmable velocity and acceleration
- Sinusoidal motion profiles with programmable amplitude and frequency
- Position Profile, Velocity Profile and Flight Profile Modes for simulating complex motion profiles
- Analog position and velocity input
- Analog velocity output

DESCRIPTION

The 1583P Three-axis Positioning and Rate Table System is optimized to provide high dynamic Hardware-In-The-Loop (HWIL) testing for smart weapons technology.

The 1583P Test 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 4000 Controller front panel 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 AERO 4000 controller comes standard with three remote computer interfaces, RS-232, IEEE-488 and Ethernet.

OPTIONS

- Various slipring packages or wire wrap configurations
- *For special requirements, please contact Ideal Aerosmith regarding system customization.*

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

Rev D

Performance Specifications				
	Inner (Roll) Axis		**Middle (Pitch) Axis**	**Outer (Yaw) Axis**
Rotational Freedom Options	Unlimited		1) ± 185 deg (wire wrap) 2) unlimited (sliprings)	1) ± 185 deg (wire wrap) 2) unlimited (sliprings)
Positioning	**Standard**	**High Speed**		
• Accuracy, arc sec (deg)	± 15	± 10	± 15	± 15
• Repeatability, arc sec (deg)	± 3	± 5	± 3	± 5
• Command/Display Resolution, deg	0.0001	0.0001	0.0001	0.0001
Rate				
• Maximum, deg/sec	± 1,080	± 18,000	± 360*	± 360*
• Minimum, deg/sec	± 0.00001	± 0.00001	± 0.00001	± 0.00001
• Command/Display Resolution, deg/sec	0.00001	0.00001	0.00001	0.00001
• Accuracy, % ± Resolution	± 0.001 (measured over 360 degrees of travel)		± 0.001 (measured over 360 degrees of travel)	± 0.001 (measured over 360 degrees of travel)
Acceleration Maximum, deg/sec² (sinusoidal move, no payload)	9600*		8500*	2200*
Bandwidth, -3dB	15 Hz*		15 Hz*	15 Hz*

*Values listed are maximum values and are dependent upon system configuration. Performance parameters may vary between various configurations of the Model 1583P.

System Physical Configuration	
Tabletop	Standard tabletop size is 10 inch diameter (254 mm). Test load mounting provisions are six 3/8-16 threaded holes on a 9 inch (228.6 mm) diameter bolt circle. Custom tabletop and interface patterns available upon request.
Tabletop Connectors	One MS style connector centered on the table top
Number of User Lines	Standard slipring package is 48 lines at 5 amps per line. Custom packages are available.
Test Load Capacity	33 Lbs (15Kg) Centered. 10 in. (254 mm) diameter x 15.75 in. (400 mm) high
Controller	Request data sheet for AERO 4000 Controller for more information.
• Type & Configuration	AERO 4000 Test Table Controller configured in a 19 inch Cabinet
• Communication Interfaces	IEEE-488, RS-232 and Ethernet ports available to user

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

Rev D