

1292MA Series Two Axis Positioning and Rate Table Systems

STANDARD FEATURES

- Position Accuracy: ± 15 arc sec outer axis
- Direct-drive, DC brushless servo system (outer axis), manual inner axis.
- Rate accuracy (outer axis): 0.005%
- 18 inch inside diameter table top
- Test load capacity: 66 lbs (30 Kg)
- 1291BL Controller
- RS-232 or RS-485 interface
- Fail-safe electric brakes (outer axis) and stow locks (inner axes)
- 50 line slip ring
- Labview interface
- User-friendly Ideal Aerosmith Table Language (ATL)
- Trapezoidal velocity profiles with programmable velocity and acceleration
- Sinusoidal motion profiles with variable amplitude and frequency
- Configurable and scalable Analog Input
- Configurable and scalable Analog Output (1 KHz update frequency)
- Sinusoidal Motion with programmable frequency and amplitude
- Capable of querying the current position, velocity, and acceleration

DESCRIPTION

The 1292MA Series Automatic Positioning and Rate Table System is a low cost two axis system designed to provide precise positioning for medium payloads for the development and/or production testing of inertial packages and their components.

The Ideal Aerosmith 1292MA Two Axis Positioning and Rate Table System features a servo controlled, direct drive brushless torque motor on the outer axis with a 1291BL



1292MA-SR50

Digital Controller. The outer axis is controlled remotely via a host PC. The inner axis is controlled manually and provides precise positioning feedback by way of absolute optical encoder.

OPTIONS

- Various slip ring packages or wire wrap configurations
- Various table top configurations
- Custom hole pattern
- *For special requirements, please contact Ideal Aerosmith regarding system customization.*

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

1292MA Series Performance Specifications

	Horizontal Inner (Tilt) Axis	Vertical Outer (Azimuth) Axis
Range of Motion, deg	±180	Unlimited
Axis Encoder Type	Absolute	Absolute
Position		
• Accuracy, arc sec (deg)	±60 Lock (0.01666)	±15 (0.00416)
• Repeatability, arc sec (deg)	N/A	± 3 (0.00083)
• Homing, arc sec (deg)	N/A	± 3 (0.00083)
• Display Resolution, deg (approx)	N/A	0.001
• Encoder Resolution, deg (approx)	N/A	0.000043
• Encoder Resolution, counts per rev	N/A	8,388,608
Rate		
• Maximum, deg/sec*	N/A	150
• Minimum, deg/sec (approx.)	N/A	0.000172
• Command/Display Resolution, deg/sec (approx.)	N/A	0.000172
• Display Resolution, deg (approx)	N/A	X.XXXX
• Accuracy, (Average of 10 readings, measured over 1 rev)	N/A	0.005% of commanded rate ± 0.000172 deg/sec
• Stability (measured over 1 rev)	N/A	0.005%
Acceleration/Bandwidth (36 inch table top, no load)		
• Peak, (2 sec. duration), deg/sec ²	N/A	>150
• Max Continuous, deg/sec ²	N/A	150
• -3dB Bandwidth	N/A	>20
Axis Wobble, arc sec (deg)	10 (0.00278)	5 (0.00139)
Axis Orthogonality, arc sec (deg)	± 36 (0.01) between consecutive axes	

System Physical Configuration

Table Interface Characteristics	
• Table top, inches (mm)	Outside Diameter: 22.05 (560) Inside Diameter: 18.11 (460)
• Table top hole pattern	N/A
• Surface Flatness, inches (mm)	0.002 (0.05) TIR
• Material & Surface Finish	Anodized aluminum with 32 RMS Surface Finish
• Tabletop Connectors	Standard: Qty 1 680M21WA4SL201, 170-037-273L000 and 180-078-273L000
Test Load Capacity, lbs (Kg)	66 (30) (Balanced).
User Harness/Slip ring Options	50 line slip ring; 4 lines @ 8A, 4 lines @ 4A, 42 lines @ 2A 10 milliohms maximum per ring, measured at 30 deg/sec
Controller	Consult AERO 3500 specification for more detailed information
Power Requirement	115VAC ±10%, 1Ø, 50/60 Hz, 8A (FLA), 10 Breaker, 5kA SCCR 230VAC ±10%, 1Ø, 50/60 Hz, 4A (FLA), 10 Breaker, 5kA SCCR
Test Table	
• Overall Table Dimensions, inches (mm), approx. (includes swing radius)	38 W x 38 D x 57.9 H (965 x 965 x 1471)
• Height of Pitch Axis, inches (mm) approx.	46.9 (1191) nominal
• Table Weight, lbs (Kg), approx.	661 (300)
• Leveling Range, deg	±1.5
• Axis Lock, inner axis	Every 15 deg
• Emergency Stop, located on controller	Push-twist-release button
• Mobility	Casters and retractable leveling feet

For additional information or special requirements, contact Ideal Aerosmith. Specifications subject to change without notice. Please call for pricing.

Rev A