

# OBSOLETE

## SINGLE-AXIS POSITIONING AND RATE TABLE SYSTEM (Model 1280)

### FEATURES

- Rate Accuracy: 0.01% (Over 1 revolution)
- Rate Range: 0.001 to 1,000 Deg/Sec (standard)  
0.001 to 3,000 Deg/sec (high speed option)
- Position Accuracy: 1 Arc Min
- Position Repeatability: +/- 10 arc sec
- Closed loop servo control
- RS-232 Remote Interface
- User-friendly Ideal Aerosmith Table Language (ATL)
- Front panel display of status and data
- Touch Screen Local Interface
- Precision-ground anodized aluminum tabletop
- Trapezoidal motion profiles with programmable velocity and acceleration
- 22 user slip rings
- Sinusoidal Motion
- Pedestal for Floor Mounting
- Vacuum Line from Base to Tabletop  
(Not available with high speed option)

### DESCRIPTION

The Model 1280 Single Axis Positioning and Rate Table System is designed to provide precise position, rate and acceleration motion for the development and/or production testing of military and/or commercial rate and position sensors.

Accurate and reliable motion control of the 1280 test table is achieved with a servo controlled system consisting of a direct drive DC torque motor, a precision optical encoder, and the Ideal Aerosmith AERO 800 microprocessor based motion controller. Position, rate, and acceleration are commanded locally from the front panel keypad or remotely through the standard RS-232 or the optional IEEE-488 computer interface. This test table system is designed for ease of operation and is programmed with the Ideal Aerosmith Table Language (ATL) for remote operation.



*Model 1280 with optional tilt stand and thermal chamber*

### OPTIONS

- IEEE-488 communications interface
- 48 or 66 line slip ring package
- Temperature Chambers for environmental testing
- Vacuum Chamber System
- Tilt stand with  $\pm 180$  deg range, at 45 deg Increments
- High speed option
- High speed position latching option
- Model 1280A provides similar performance with higher torque
- Analog velocity output option
- *For special requirements, accuracies or custom specifications, please contact Ideal Aerosmith, Inc.*

## Model 1280 Performance Specifications

Rotational Freedom:	Unlimited
Rate:	
<ul style="list-style-type: none"> <li>• Maximum, deg/sec</li> <li>• Minimum, deg/sec</li> <li>• Resolution (over entire range) deg/sec</li> <li>• Accuracy (measured over 360 deg) % <math>\pm</math> Resolution</li> </ul>	1000.000 (standard) 3000.000 (high speed option) .001 .001 .01
Positioning:	
<ul style="list-style-type: none"> <li>• Range, deg</li> <li>• Accuracy, arc min</li> <li>• Resolution, deg</li> <li>• Repeatability, arc sec</li> <li>• Homing</li> </ul>	0.000 to 359.9995 +/- 1 .0005 +/- 10 Automatic Absolute with user defined 0° position
Peak Acceleration (Configured with 14" tabletop and without payload)	
<ul style="list-style-type: none"> <li>• Standard 1280</li> <li>• Model 1280A</li> </ul>	2500 deg/sec <sup>2</sup> 10,000 deg/sec <sup>2</sup>

## Model 1280 System Physical Configuration

Table Surface Characteristics:	
<ul style="list-style-type: none"> <li>• Diameter</li> <li>• Hole Pattern</li> <li>• Face Flatness</li> <li>• Face Runout</li> <li>• Material</li> <li>• Surface Finish</li> </ul>	14 inches (356 mm) (Other diameters available upon request.) 1/4-20 threaded holes on a two-inch (50 mm) grid pattern. (Other interface patterns available upon request.) .005 inches (.127 mm) TIR (for 14 inch diameter tabletop) .002 inches (.051 mm) @ 6 inch (152.4 mm) Radius Aluminum 32 RMS
Test Load Capacity:	
<ul style="list-style-type: none"> <li>• axis vertical</li> <li>• axis horizontal (the model 1280 is secured to the optional tilt stand)</li> </ul>	200 lbs (90 Kg) centered 50 lbs (23 Kg) Provisions to balance 300 in-lbs moment load about the horizontal axis are provided with the tilt stand option.
Electrical Access to the UUT:	
<ul style="list-style-type: none"> <li>• slip ring lines (standard)</li> <li>• slip ring resistance variation (standard)</li> </ul>	22 lines, 2 amps each , 210 Volt DC, single conductor, 24 AWG Note: optional temp chamber uses 4 slip ring lines 20 milliohms @ 30 deg/sec, 6 Volt DC, 50 milliamps current
Test Table with pedestal:	
<ul style="list-style-type: none"> <li>• Dimensions</li> <li>• Weight</li> </ul>	16 x 16.5 x 36.3 inches High (406 mm Wide x 419 mm Deep x 922 mm High) 169 lbs. (76.6 Kg)
Note: Dimensions and weights for 1280 with optional Thermal Chamber, and/or Tilt Stand available upon request	
Axis Lock:	Fail-Safe Electric Brake
Leveling:	
<ul style="list-style-type: none"> <li>• Range</li> <li>• Resolution</li> </ul>	+/- 1 degree Continuous
Controller:	
<ul style="list-style-type: none"> <li>• Type</li> <li>• Configuration</li> <li>• Communication Interface</li> </ul>	AERO 800 Test Table Controller Bench top or 19 inch Rack Mountable Chassis RS-232 standard, IEEE-488 optional
Vacuum Line: (Not available with high speed option or the 66 line slip ring)	Pneumatic air line for testing vacuum instruments 1/4 NPT Male on Base, 1/8 NPT female on Tabletop
Operating Environment:	
<ul style="list-style-type: none"> <li>• Temperature</li> <li>• Relative Humidity</li> </ul>	50 to 95° F (10 to 35° C) 20% to 85% non-condensing
Power Requirements:	Standard: 115 VAC, 50/60 Hz, 10 A Standard Receptacle Optional: 230 VAC, 50/60Hz, 5 A Through use of an external transformer
For complete specifications on the Model 1280 and associated options, please request the Ideal Aerosmith Specification Document for the 1280 series	

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