OBSOLETE

THE IDEAL WAY

Model 1562-12-488-UC
Two-Axis Positioning and Rate Table System

The Model 1562-12-488-UC Positioning Table is designed for position testing and calibration of multi-axis inertial sensor packages.

STANDARD FEATURES:

- *Direct-drive, brushless servo system*
- *Front panel local control and remote operation via computer interface*
- *User-friendly Ideal Aerosmith Table Language (ATL)*
- *High-accuracy digital motion control system*
- *Controller display of status and data*
- *Rack-mounted control instrumentation*
- *Precision ground aluminum testing platform with anodized finish*
- *Limit switches and fail-safe brakes*
- *Trapezoidal motion profiles with programmable velocity and acceleration*
- *Sinusoidal motion profiles*
- *Can be used as a bench model or with an optional floor pedestal*
- *AERO 900 Digital Controller included*

DESCRIPTION

The 1562-12-488-UC is a portable, bench-top configuration that provides a cost effective solution for testing small, medium accuracy, multiple-axis inertial systems. The compact design makes it ideal for laboratory use. These tables have wire wrap allowance for limited rotation applications, which is an economical alternative to using slip rings. Wire wrap test tables are designed for high reliability, minimal electrical noise, and low maintenance. Each of these test tables use high precision mechanical bearings which are preloaded to minimize axis wobble and friction characteristics. Each test table has a hard, anodized aluminum table platform for mounting the units under test (UUT).

Rate testing can be accomplished via trapezoidal or sinusoidal motion profiles. The table design allows for independent or simultaneous testing on two axes of a two-axis package. The user can also perform tests on a

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3-axis package by rate or position testing each of the 3 axes independently, without having to re-mount the package. In this case, each of the 3 axes is tested consecutively, not concurrently.

The 1562-12-488-UC test table is a servo controlled system that features direct-drive brushless motors and the Ideal Aerosmith digital motion control system. The field proven digital motion control system provides accurate and reliable axis motion control. These test tables may be operated from a keypad interface on the controller or remotely via a host PC and IEEE-488 (GPIB) Communication Interface. Each table is designed for ease of operation and programmed with the Ideal Aerosmith Table Language (ATL) for remote operation. Available commands include changing position, rate, acceleration, sinusoidal and controller parameters. The position and rate are continuously displayed on the controller monitor and may be sampled by a remote computer at any time.

The table can be mounted to a lab bench or an optional floor pedestal. The Controller and Servo Amplifier Chassis are mountable in a standard 19 inch rack.

OPTIONS

- Floor pedestal w/ various heights for stand-alone configurations
- Table Controller and Servo Amp Chassis mounted in a cabinet
- Configured for various power requirements

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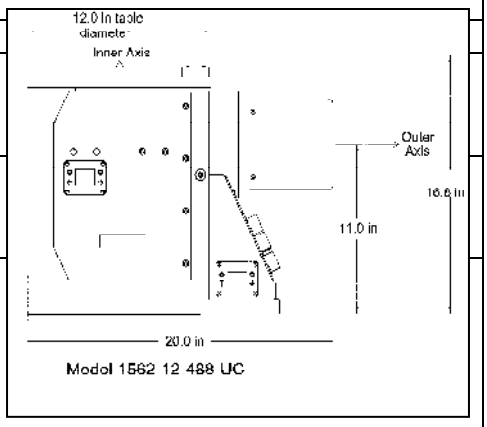
PERFORMANCE SPECIFICATIONS	
Positioning: • Accuracy, absolute • Resolution • Repeatability • Encoder Output • Homing	 ±45 arc sec (0.0125 °) 2.6 arc sec (0.00072°) ± 10 arc sec (0.0028°) 507,904 Cts/Rev Automatic Absolute with User defined 0° positions
Rate: • Maximum • Minimum • Resolution • Accuracy (measured over 180 deg)	 ± 50 deg/sec 0.01 deg/sec 0.01 deg/sec 0.1% ±0.01 deg/sec
Acceleration: • Motor Torque, both axes • Resolution • Maximum Acceleration (w/ test load installed) - Inner - Outer • Minimum Acceleration	 6 lbf-ft 0.726 deg/sec/sec 500 deg/sec/sec 250 deg/sec/sec 0.726 deg/sec/sec

PHYSICAL CONFIGURATION	
Table Surface Characteristics: • Diameter • Face Flatness • Surface Finish	 12 inches (305 mm) 0.01 inch TIR 32 microinches
Test Load Capacity: • Weight • Dimensions	 30 lbs (13.6 Kg) centered 7 x 7 x 7 inches (178 mm)
Orthogonality, maximum (adjacent gimbal)	±30 arc sec
Wobble	±20 arc sec
Rotational limits: • Inner Axis • Outer Axis	 ±180 deg ±90 deg
Leveling: • Range • Resolution	 ±1 degree Continuous
Analog Velocity Monitor Mode: • Output Type • Position Capture Frequency • DAC Resolution • Update Frequency, approx • Selectable Time Interval for calculating velocity • Selectable scaling • Selectable Bias	 ± 10V 1024 Hz 16 Bit 10 ms per axis 10 to 100 ms 0.001 to 1000 V/(deg/s) -9.998 to 9.998 V
Axis Balancing (Outer Axis) • Method • Resolution	 Sliding counterweights Continuous
Axis Locks	Fail-safe Electric Brake
Communication Interface	IEEE-488
Power Requirements	115 VAC; 50/60 Hz; 15 Amp



Operating Environment: • Temperature • Relative Humidity	 50 to 95° F 5 to 85% (non-condensing)

WWW.IDEAL-AEROSMITH.COM • EAST GRAND FORKS, MN USA • VOICE (218) 773-2455 • FAX (218) 773-7665