

# OBSOLETE

## SCORSBY MOTION TEST TABLE (1411E and 1412E Series)

The Models 1411E and 1412E Scorsby Motion Test Tables are designed to simulate the 3 motions of flight: roll, pitch, and yaw. Originally designed for shop, production, qualification testing, and exercising of gyroscopic aircraft instruments, the Scorsby table became a standard in the aircraft industry. Currently, the Scorsby table is used for testing inertial sensors including gyroscopic components and motion sensing systems in a wide variety of industries.

The Scorsby table has a synchronous AC motor with a gear train that provides smooth Scorsby motion at a constant frequency. The 1412E series is identical to the 1411E series except for the addition of a larger flywheel coupled to the shaft of the drive motor to dampen speed changes. This addition provides a uniform, constant acceleration and deceleration of the table top at the start, stop, or auto-reverse of each cycle. This feature is desirable for sensitive instruments that require a slower acceleration/deceleration or zero dwell time between auto-reverse cycles. The pitch, roll and yaw motions are achieved with a single rotating shaft and Ideal Aerosmith's patented head design. The sinusoidal motion of each of the axes is related to the shaft motion and can not be controlled independently.



- *Small and lightweight for easy bench top mounting*
- *Approved for many aircraft gyroscopic instrument tests*
- *Anodized aluminum mounting platform for durability and corrosion resistance*
- *Designed with ball bearings for smooth motion and long life*
- *Flat, precision-ground table top mounting surface*
- *Tilting head with engraved markings for easy adjustment*
- *Positive stop allows quick setting of the tilt head to frequently used positions*
- *Integral bubble level on table top and leveling screws on base plate provide quick, easy leveling*
- *Motor and drive train designed for reliability and long life*
- *Control switch for selecting operating modes*
- *Oscillation reversing with electronic cycle counter provides testing versatility from 1 to 9 cycles*
- *IEC 60320 Power inlet module*

## SPECIFICATIONS

(All measurements in inches unless otherwise noted)

<b>Standard Parameters for 1411E and 1412E</b>	
Control Modes	Off, Left, Right, Oscillate
Overall Dimensions	10.25 W x 10.25 L x 9.64 H (260.4 x 260.4 x 244.9 mm)
Rate of Motion	6 Cycles per Minute (10 Seconds per Cycle)
Tilt Angle Range	0 to 15 Degrees, Infinitely Adjustable
Tilt Angle Markings	0, 1½, 7½, 10, and 15 Degrees
Test Load Capacity	Up to 40 lbs (18 kg) Centered Loading, Up to 25 lbs (11 kg) Eccentric Loading
Operating Temperature Range	32 to 130 Degrees F (0 to 54 Degrees C)
Electrical Power Requirements	115 Volts, 60 Hz standard (see optional parameters for 50 Hz and 230 Volts) IEC 60320 Power inlet module
Mounting Platform Dimensions	10 x 10 inch (254 x 254 mm) tabletop with Square Pattern 10-32 UNF Threaded Holes, 2 inch (50.8 mm) centers
Shipping Weight	Approximately 34 lbs (15 kg)
Finish	Royal Blue Paint on Case Black Anodizing per MIL-A-8625 Type II, Class 2 on Mounting Platform

	<b>Model</b>
1411E	Off, Left, Right, and Oscillate Modes
1412E	Larger flywheel coupled to the shaft on the drive motor provides a uniform, constant acceleration and deceleration of the table top at the start, stop, or auto-reverse of each cycle. For sensitive instruments that require a slower acceleration/deceleration or zero dwell time between auto-reverse cycles.

## Buyers Guide

Standard model is configured for use with 60 Hz, 115 VAC. If above optional parameters are desired, specify the electrical requirements by including the option codes after the base model number.

<b>Model Number</b>	<b>Part Number</b>	<b>Description</b>
Model 1411E	230255-1	115Vac, 60 Hz
Model 1411E-50	230255-2	115Vac, 50 Hz
Model 1411E-230	230255-3	230Vac, 60 Hz
Model 1411E-50-230	230255-4	230Vac, 50 Hz
Model 1412E	230255-5	115Vac, 60 Hz, with flywheel
Model 1412E-50	230255-6	115Vac, 50 Hz, with flywheel
Model 1412E-230	230255-7	230Vac, 60 Hz, with flywheel
Model 1412E-50-230	230255-8	115Vac, 50 Hz, with flywheel

- Our Model 1421 Scorsby offers additional features including variable speed, a 30° table top tilt angle, and computer controlled automation via RS-232 interface.
- For special requirements or custom specifications, contact Ideal Aeromsmith
- Prices and specifications are subject to change without notice
- Revision D