



Scorsby Motion Test Table (1411E & 1412E Series)

FEATURES

- 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

DESCRIPTION

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.

OPTIONS

- *For special requirements, please contact Ideal Aerosmith regarding system customization.*

Model 1411E and 1412E Specifications	
Control Modes	Off, Left, Right, Oscillate
Overall Dimensions, in. (mm)	10.25 W x 10.25 L x 9.64 H (260.4 x 260.4 x 244.9)
Rate of Motion	6 Cycles per Minute (10 Seconds per Cycle)
Tilt Angle Range	0 to 15 Degrees, Infinitely Adjustable
Tilt Angle Markings	0, 1 ½, 7 ½, 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° F (0° to 54° 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, in. (mm)	10 x 10 (254 x 254) 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

Comparison of Model 1411E and 1412E	
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.

Buyer's Guide		
Model Number	Part Number	Description
1411E	230255-1	115 Vac, 60 Hz
1411E-50	230255-2	115 Vac, 50 Hz
1411E-230	230255-3	230 Vac, 60 Hz
1411E-50-230	230255-4	230 Vac, 50 Hz
1412E	230255-5	115 Vac, 60 Hz, with flywheel
1412E-50	230255-6	115 Vac, 50 Hz, with flywheel
1412E-230	230255-7	230 Vac, 60 Hz, with flywheel
1412E-50-230	230255-8	230 Vac, 50 Hz, with flywheel

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

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