

EVO-10S

Compact single-axis positioning and rate table

EVO-10S is a compact, single-axis positioning and rate table which features all required performance parameters for test and calibration of MEMS or FOG based inertial navigation systems or optronic payloads.



BENEFITS

- Best price/performance ratio on the market
- Compact size
- Horizontal or vertical use
- Best-in-class rate stability
- Unrivaled dynamic performance
- Maintenance free
- Lowest cost of ownership

TABLE FEATURES

- Direct drive brushless electric motors
- High accuracy optical encoders
- Compatible with climatic chamber operations
- Full tabletop surface available for payloads mounting (no connectors restriction)

CONTROLLER FEATURES

- iXblue nGine controller including:
 - Patented auto-tuning of controller parameters
 - Patented adaptive sine bandwidth enhancement
 - Auto tuned anti-cogging
 - Real-time built-in-test
 - Advanced unbalance and fault detection
- iXblue ProaXe Graphical User Interface (GUI)

TRACK RECORD

iXblue leverages 60 years of unique experience in the design and manufacturing of advanced position/rate tables and motion simulators. This includes over 15 years of expertise combining direct drive brushless electric motors and optical encoders. This unique experience allows iXblue to build the most accurate, stable and dynamic systems, meeting all the requirements for testing of inertial and optronic payloads.

ADVANCED PERFORMANCE

EVO-10S is designed with key components chosen for having the best quality. Brushless motors, optical encoders and slip-ring capsules are critical to the performance of the complete system. Every EVO-10S comes with iXblue nGine controller and ProaXe Graphical User Interface, which are the most advanced control electronics in terms of performance, efficiency and safety.

SCALABILITY

EVO-10S can evolve with your process. The compact, single-axis test-table may be used with the axis vertical as a rate table or horizontal to measure gravity ($\pm 1g$).

TECHNICAL SPECIFICATIONS

Payload definition

No load inertia	0.008 kg.m ²
Nominal payload mass	12 kg
Maximum payload mass	20 kg
Tabletop	Hard-anodized aluminum alloy 250 mm diameter Other dimensions available on request

Mechanical specifications

Angular freedom	Unlimited
Position accuracy	≤ 5 arc sec
Position repeatability	≤ 2 arc sec
Wobble	≤ 5 arc sec

nGine controller interfaces

Remote communication interfaces	Standard: RS-232 and Ethernet Optional: IEEE-488.2 (GPIB) or USB
Inputs and outputs	Scalable analog inputs and outputs for position and rate Digital inputs for control and trigger Digital outputs Event pulse generation
Graphical User Interface	ProaXe GUI software supplied for user PC

Table interfaces

Mechanical interface (Tabletop)	Custom tabletop adapters according to end-user (Unit Under Test)
Standard slip-ring	50 ways: 2 A, 110 VAC
Alternative slip-rings	Customer specified

Physical characteristics

	Table	Rack
Weight	25 kg	6 kg
Dimensions (L x H x W)	392 x 269 x 329 mm	426 x 360 x 127 mm

Dynamic specifications

Rate range	±3000 deg/s
Maximum acceleration	> 40000 deg/s ²
Bandwidth at ±1 dB and ±5 deg-phase (adaptive sine)	> 150 Hz
Slew profiling	Rate and acceleration limited
Rate stability over 360 deg	0.001 % (10 ppm)
Rate command resolution	±0.001 deg/s

Environmental specifications

Power voltage	115/230 VAC 50/60 Hz
Operating temperature	+15°C to +35°C