

Versatile. Flexible. Efficient.



LiMAS – Light Multi Axial Shaker

Multi-axis vibration test bench with
combined environmental simulation
IABG Fatigue Strength Laboratory

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With the multi-axis **6DOF vibration test bench LiMAS** it will be possible to realize **accelerations of up to 130 m/s²** within a **frequency range of 0.5 to 200 Hz** and a **maximum load of 1 000 kg**. The integrated climatic chamber allows a wide variety of environmental conditions, as these may significantly influence the product behavior.

Our fatigue strength laboratory is **DIN EN ISO 17025** accredited, enabling us to meet and provide the highest quality standards to our customers.

Fields of application:

Aerospace

Simulation of transient loads (e.g. windmilling tests):

- Fan Blade Out
- Sustained Engine Imbalance

Automotive

Vibration test of automotive (sinus, random noise and road load simulations, etc.) commercial (transport simulations, rough road track, etc.) vehicle components:

- Brakes, body panels, engine components, axle components
- Heat exchanger and exhaust systems, batteries, fuel tanks

Energy

Synthetic and real-time earthquake simulation:

- Telecommunication equipment
- Power generation and transfer components

Reproduction of transient occurrences:

- Wind gust loads
- Plane crash on buildings and facilities
- Mechanical spalling

Transport

Vibration and shock tests:

- Rail vehicle components
- Electronic systems used on rail vehicles

Data acquisition

- Acceleration, Displacement, Strain, Temperature, Humidity

Mounting surface

- 2 000 x 2 300 mm

General specifications	
Test item mass	up to 1 000 kg
Frequency range	0,5 to 200 Hz
Maximum acceleration (600 kg / 1 000 kg)	
Vertical	±130 m/s ² / ±100 m/s ²
Longitudinal	±80 m/s ² / ±70 m/s ²
Diagonally	±105 m/s ² / ±70 m/s ²
Maximum paths	
Vertical	+135 to -160 mm
Longitudinal	±100 mm
Diagonally	±115 mm
Maximum angle	
Roll	±7,4°
Pitch	+7,0° to -8,2°
Yaw	±5,2°
Environmental conditions	
Temperature range	-40°C to +95°C
Humidity	up to 95% relative humidity



AUTOMOTIVE



INFOCOM



MOBILITY, ENERGY & ENVIRONMENT



AERONAUTICS



SPACE



DEFENCE & SECURITY

About IABG

IABG offers integrated, ground-breaking solutions in the sectors Automotive • InfoCom • Mobility, Energy & Environment • Aeronautics • Space • Defence & Security. We provide independent and competent consulting. We implement with future viability and target orientation. We operate reliably and sustainably. Our success is based on an understanding of market trends and requirements, on our staff's technological excellence and a fair relationship with our customers and business partners.

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