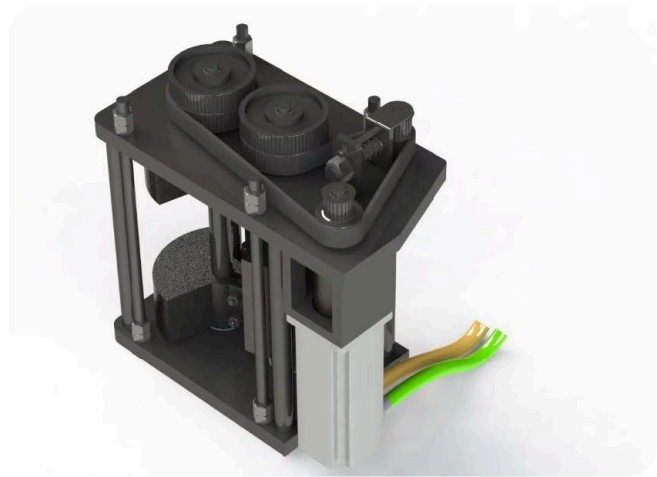


ECCENTRIC MASS SHAKER EMS-300025

High-Performance Servo-Driven Vibration and Seismic Simulation System

The **QuakeLogic EMS-300025 Eccentric Mass Shaker** is a high-precision vibration generator designed to simulate real-world dynamic and seismic forces. Powered by a **Schneider servo-motor system**, it delivers up to **3000 kgf dynamic force at 25 Hz** with smooth, accurate frequency control.



 **QUAKELOGIC**

Compact, durable, and easy to operate, the EMS-300025 enables engineers and researchers to evaluate the performance, stability, and durability of structures and components under controlled vibration environments—identifying weaknesses and ensuring compliance with safety standards before deployment.

Key Features

High-Force Output:

Up to 3000 kgf @ 25 Hz

Precision Control:

Schneider BMH100 servo motor with digital drive

Adjustable Frequency & Amplitude:

Variable pulley ratio (1/2 – 1/3) and configurable eccentric mass (2 – 8 disks)

Horizontal Excitation:

Realistic simulation of operational or seismic loading

Robust Construction:

Heavy-duty steel frame with M16 anchoring points

Energy Efficient:

6 kW, three-phase AC system

Low Maintenance:

Smooth servo operation with minimal mechanical wear

Applications



Structural Testing

Structural testing of **buildings, bridges, and civil infrastructure**



Automotive & Aerospace

Automotive and aerospace component durability and fatigue assessment



Electronics & Machinery

Electronics and machinery vibration performance testing



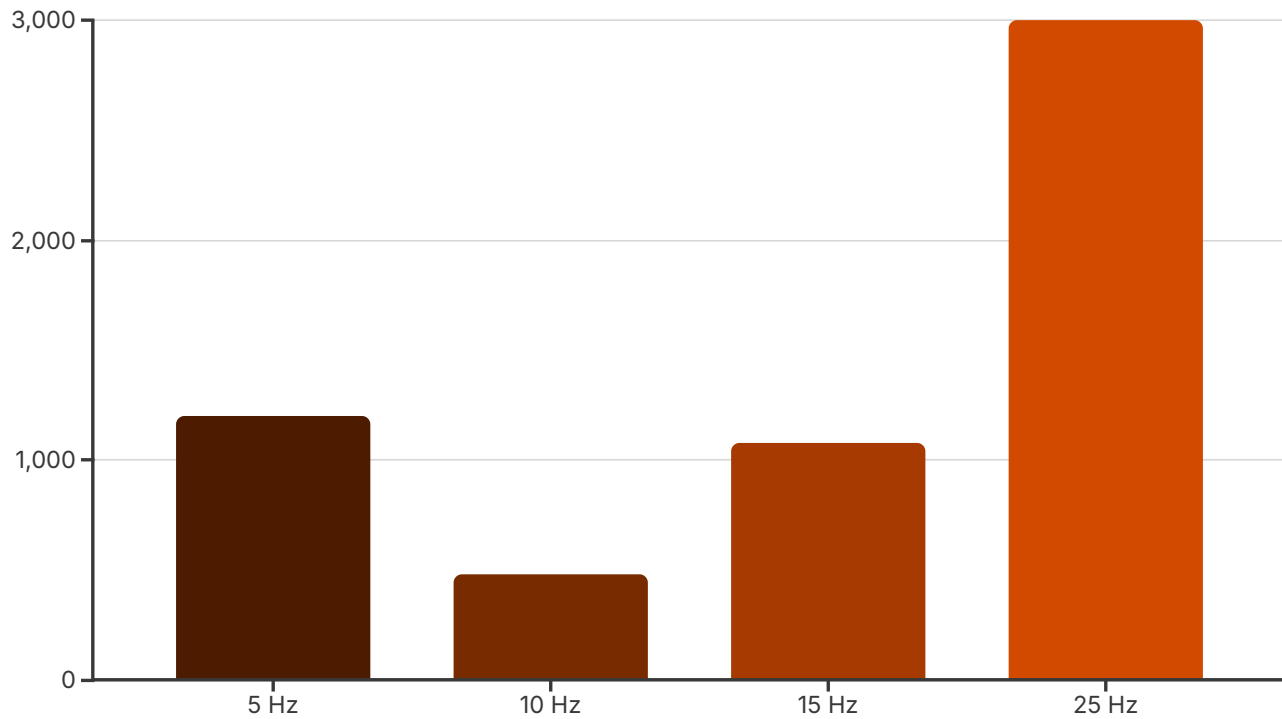
Research & Education

Research and education in seismic, mechanical, and structural dynamics

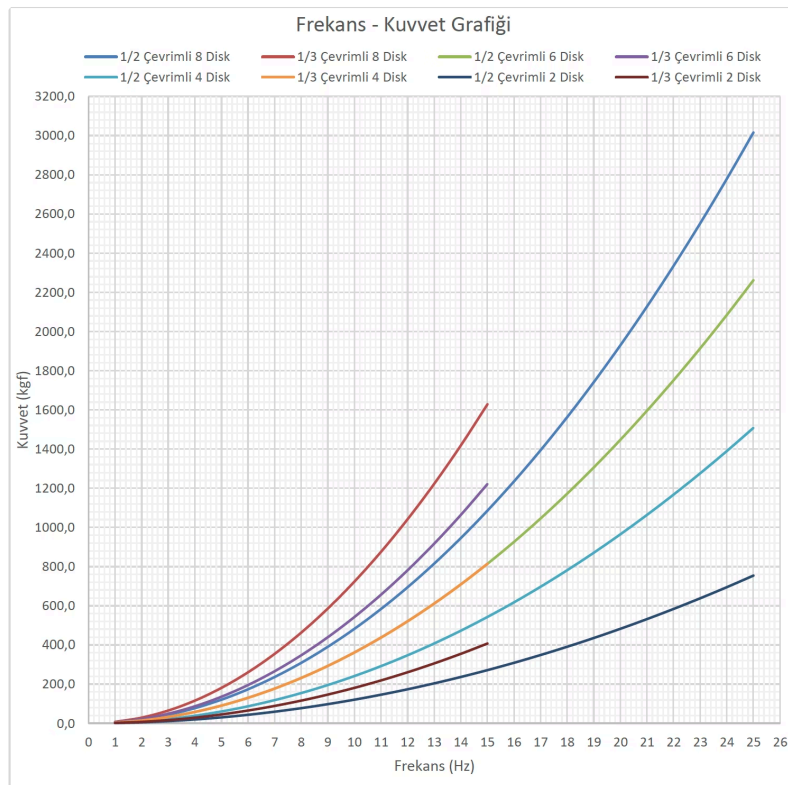
Technical Specifications

Parameter	Specification
Model	EMS-300025
Type	Eccentric Mass Shaker
Maximum Force Output	3000 kgf @ 25 Hz / 1630 kgf @ 15 Hz
Frequency Range	1 – 25 Hz
Actuator Type	Schneider Servo Motor (BMH100 Series)
Maximum Speed	3000 rpm
Eccentricity (per disk)	0.175 kg·m
Number of Disks	8 total (4 per shaft)
Approx. Disk Weight	4.2 kg each
Belt-Pulley Ratio	1/2 – 1/3 (adjustable)
Force Axis	Horizontal
Power Requirement	6 kW, 3-phase 220 V AC
Dimensions (L × W × H)	475 × 250 × 460 mm
Device Weight	106 kg
Mounting	4 × M16 anchoring points
Frame Material	Powder-coated steel
Operating Temperature	0 °C to 45 °C

Performance Example



Note: 5 Hz \approx 1200 kgf (8 disks, 1/2 ratio), 10 Hz \approx 480 kgf, 15 Hz \approx 1080 kgf, 25 Hz \approx 3000 kgf (maximum)



Motion Capacity

The system allows frequency scanning in **eight different configurations** by combining **various cycle ratios (1/2 and 1/3)** with **different mass counts (8, 6, 4, or 2 disks)**.

Advantages

“ Compact and portable
suitable for lab or field testing

“ Configurable mass and pulley
ratio
for flexible test parameters

“ Smooth operation
with servo-controlled precision

“ Built for long-term reliability
and repeatable results

Typical Use Cases



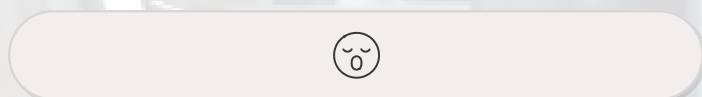
Earthquake Simulation

Earthquake simulation for scaled structures



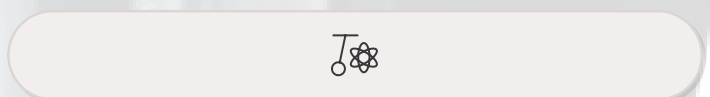
Seismic Qualification

Seismic qualification of equipment and components



Fatigue & Resonance Testing

Fatigue and resonance testing in aerospace and automotive systems



Laboratory Demonstrations

Laboratory demonstrations for vibration and dynamics research

Product Information

 **Product Name:** Eccentric Mass Shaker – EMS-300025

Product Page: <https://products.quakelogic.net/product/eccentric-mass-shaker/>

Sales & Contact Information



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About QuakeLogic

QuakeLogic Inc. is a global leader in **earthquake engineering, structural health monitoring, and vibration testing technologies**. With a product portfolio ranging from advanced **shake tables** and **vibration generators** to full-scale **smart monitoring systems**, QuakeLogic provides cutting-edge solutions that empower engineers, researchers, and industries to build safer, more resilient structures worldwide.