



DATA CENTER
SOLUTIONS



SEISMIC ISOLATOR SYSTEMS



Founded in 2003, SAMM Technology offers cutting-edge products and services in the fields of telecommunication infrastructure and data center by producing in line with the expectations and needs of its customers.

With more than 20 years of experience, SAMM Technology has become one of the important suppliers of Europe in terms of capacity, technology and innovation by continuously investing in production, technology, R&D and people.

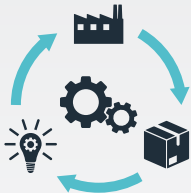
SAMM Teknoloji produces high performance fiber optic cables, fiber optic cable assemblies, data center infrastructure products and structured cabling solutions in its two factories located in the Gosb/Gebze industrial zone.

SAMM also has a ministry-approved research and development center since 2017.



20+ Years' Experience

With more than 200 employees and 2 factories, we have achieved several significant projects in telecommunication fiber optic infrastructure.



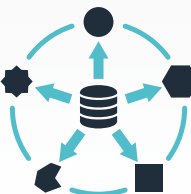
World Class Production

With systematic and scientific methods, we always focus on reaching the highest quality in our fiber optic cable production and assembly lines.



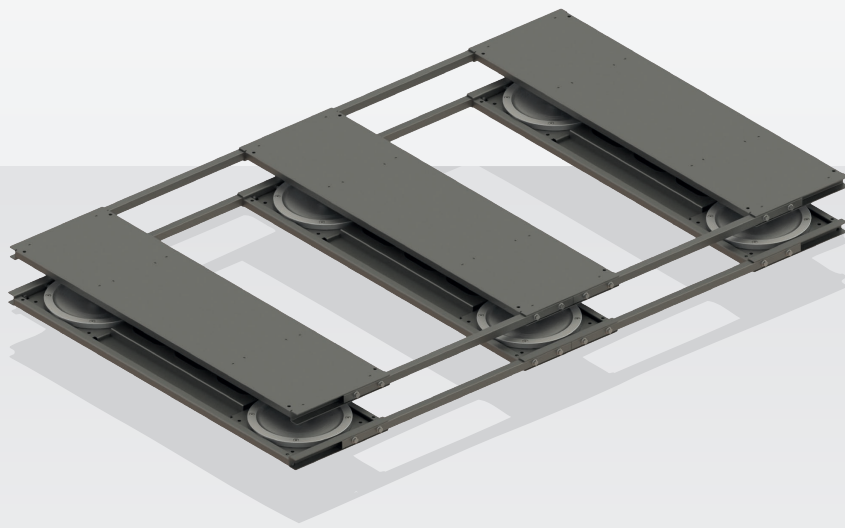
Connecting Continents

An advantageous shipping location, at the intersection of Asia, Europe and the Middle-East.



Innovative Solutions

We are passionate about responding to customer demand and keeping pace with the ever-evolving telecommunication and fiber optic technologies.



DATA CENTER SEISMIC ISOLATOR SYSTEMS

Benefits of Seismic Isolators in Data Centers

1 Server and Equipment Protection

Sensitive hardware like servers, UPS systems, network switches, and data units are protected from damage during earthquakes.

2 Prevention of Data Loss

The risk of data loss caused by hardware failures is minimized, ensuring the security of critical information.

3 Ensures Operational Continuity

Systems remain functional during an earthquake; service interruptions, downtime, or system crashes are prevented.

4 Secures Network and Power Connections

Racks stay in place, preventing issues such as disconnected cables, network outages, or power interruptions.

5 Prevents Business and Service Loss

Uninterrupted service ensures the protection of data, applications, and services, which improves reputation and customer trust.

6 Protects Hardware Investment

Damage to high-cost hardware and infrastructure equipment is prevented, eliminating the need for costly reinvestment.

7 Reduces Risk of Injury

By preventing rack tipping or falling equipment, personnel safety is maintained.

8 Quick and Retrofittable Installation

Easily integrated into existing data centers without the need for additional construction. Suitable for both new and existing systems.

The Relationship Between Misinterpreted Richter Magnitude and Isolator Effectiveness

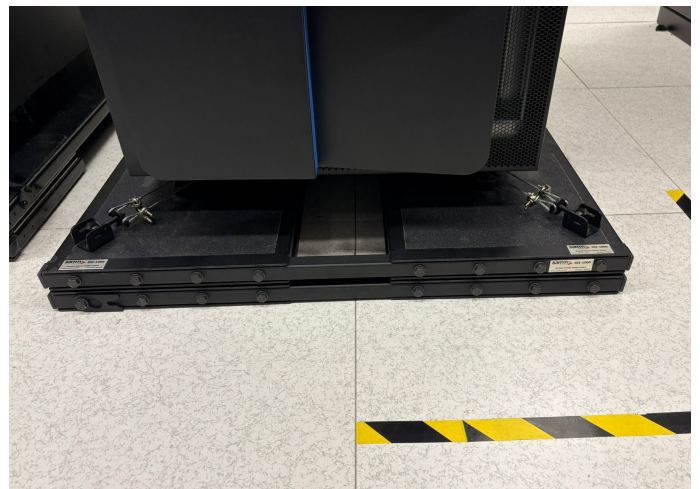
Some manufacturers use statements such as “withstands magnitude 7–9 earthquakes” when describing their products. This is incorrect and misleading information.

- **The Richter** scale measures the magnitude of an earthquake that is, the amount of energy it releases and indicates the overall intensity of seismic waves. However, the severity and frequency of ground motion at the Earth’s surface are far more critical factors in determining the performance of seismic isolators.
- **Seismic isolators** are designed to reduce the intensity and frequency of ground motion. They protect structures by damping energy or allowing flexible movement. However, while the Richter scale measures the total energy released by an earthquake, ground-motion frequency and acceleration are what directly determine the performance of seismic isolators.

A large earthquake (Richter 7.5) can generate low-frequency, long-duration ground motions that seismic isolators handle well. A smaller quake (Richter 5.0) may produce higher-frequency, short-duration shaking, leading to different isolator performance. Thus, there is no direct correlation between isolator effectiveness and Richter magnitude.

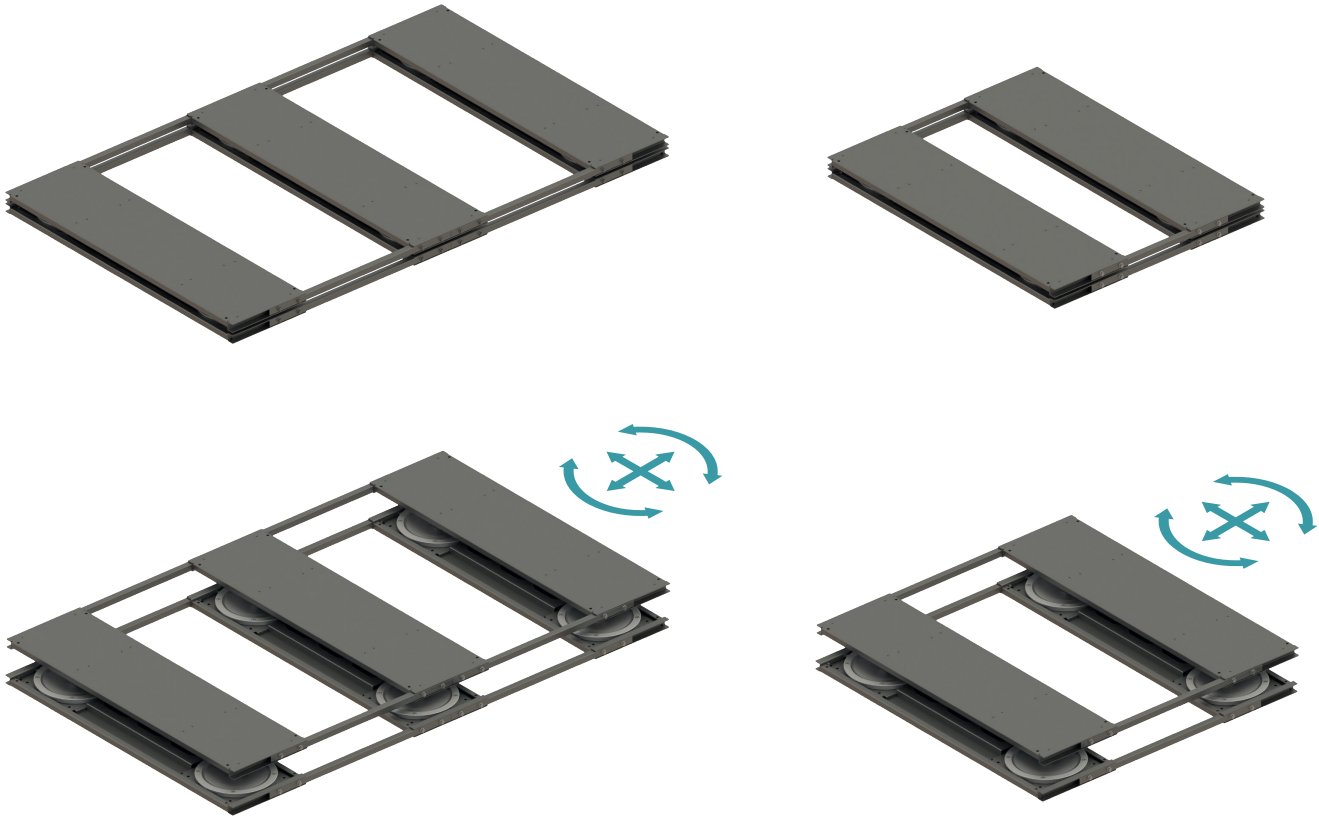
In Conclusion

The Richter scale measures only total earthquake magnitude, while seismic isolator performance depends on factors such as ground-motion frequency, amplitude, duration, and soil conditions. Therefore, linking isolator performance directly to Richter magnitude is misleading.



SSI-1000 Seismic Isolator

SAMM Teknoloji's SSI-1000 Seismic Isolators effectively damp seismic energy by isolating the horizontal ground movements that structures and sensitive equipment are exposed to during an earthquake. These isolators operate using steel balls that move on specially designed inclined surfaces, providing high displacement capacity and automatically re-centering themselves using gravity, thereby maintaining system stability. This minimizes the risk of damage, protects sensitive equipment, and ensures operational continuity.



How Does It Work?

1 Friction Pendulum Mechanism

The isolator consists of a bottom plate with a concave surface and a steel ball that moves freely on it. The upper load plate such as a cabinet or equipment) is supported on this ball. During an earthquake, the ball slides along the concave surface, creating a pendulum-like motion.

2 Control of Horizontal Movement

Instead of transferring horizontal ground motion directly to the upper structure, the isolator converts it into a controlled sliding movement. The duration and intensity of this motion are determined by the radius of the concave surface and the friction coefficient.

3 Energy Dissipation

Thanks to the frictional contact, part of the earthquake energy is dissipated as heat. This significantly reduces the amount of energy transmitted to the structure above.

4 Self-Centering

When the earthquake stops, the ball returns to the center of the concave surface due to gravity. This feature ensures that the structure returns to its original position after the earthquake, preventing permanent displacement.

Application Areas

- 1 **Data Centers:** Protection of servers and other sensitive equipment.
- 2 **Hospitals:** Protection of medical devices and emergency equipment.
- 3 **Cultural and Historical Assets:** Preservation of artworks and important cultural heritage.
- 4 **Industrial Facilities:** Protection of production equipment against earthquake damage.
- 5 **Critical Business Buildings:** Protection of equipment such as UPS systems and system cabinets.

Technical Specifications

- Capable of responding to seismic movements from all directions with 360-degree coverage.
- Offers high seismic damping capacity with a maximum displacement of 206 mm.
- Recommended maximum operating load is 2,000 kg, and it has been tested with loads up to 3,000 kg.
- Fully compliant with the Telcordia GR-63 Core standard.
- Special steel alloy is used in the bearings to resist potential damage during operation.
- Maintenance-free and requires no consumables.
- Features excellent re-centering capability.
- Modular and compact mechanical design.
- Includes a locking mechanism that immobilizes the entire structure during cabinet loading and unloading.

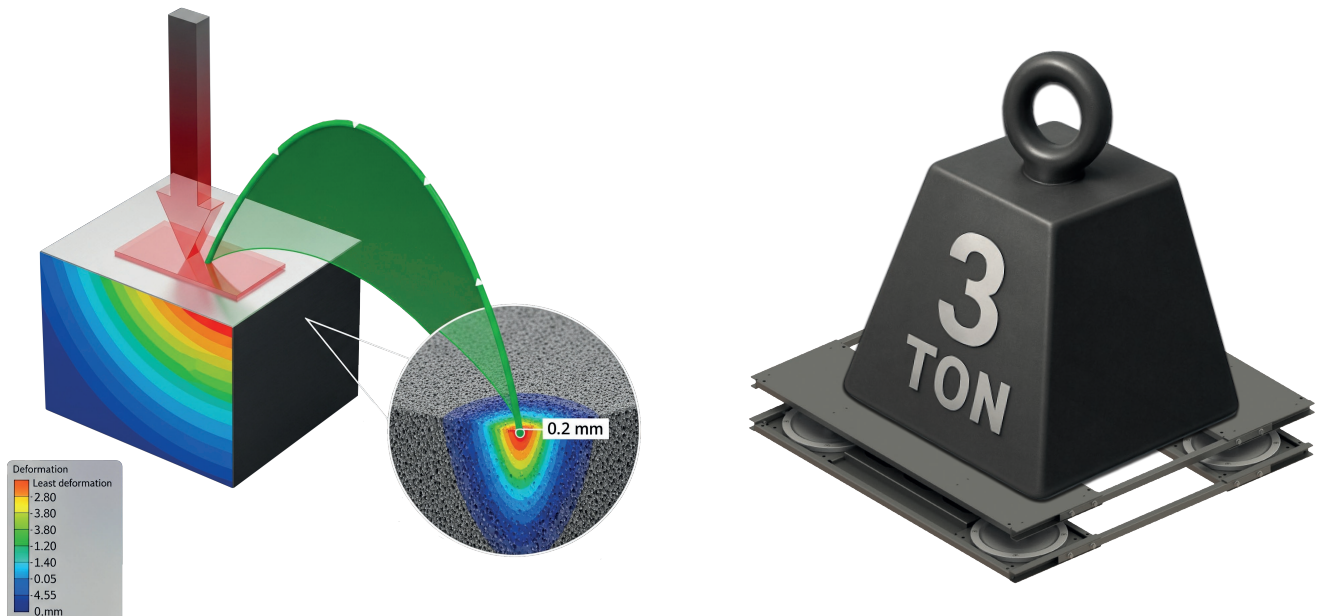
Load-Bearing Requirements of Under-Cabinet Isolators in Data Centers

Standards such as EIA-310, IEC 60297, and ANSI/EIA-310-D define the general design and load-bearing requirements of server racks. Typical server cabinets support between 500 kg and 1,000 kg, while specially engineered models can handle loads ranging from 1,000 kg up to 2,000 kg.

Load Capacity Testing of SSI 1000 Isolators

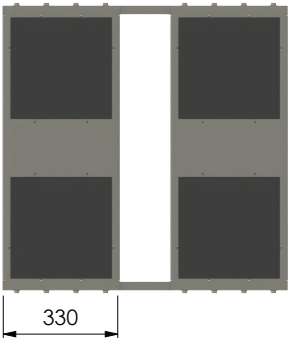
Our SSI 1000 isolators have undergone rigorous stress and performance testing. Even under extreme loads of 3000 kg, no cracks, dents, or track marks were observed on the isolator plates. This demonstrates their exceptional mechanical durability and long-term performance. Additionally, the isolators showed zero deformation or structural damage throughout the tests.

3 Tons Load - Good Surface Resistance



Seismic Isolator Platform Layout

SSI-1000 Single Platform

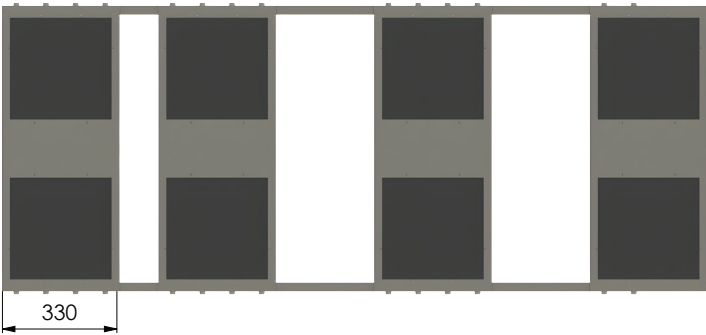


Top View of a Single Platform



Front View of a Single Platform

SSI-1000 Multiple Platforms

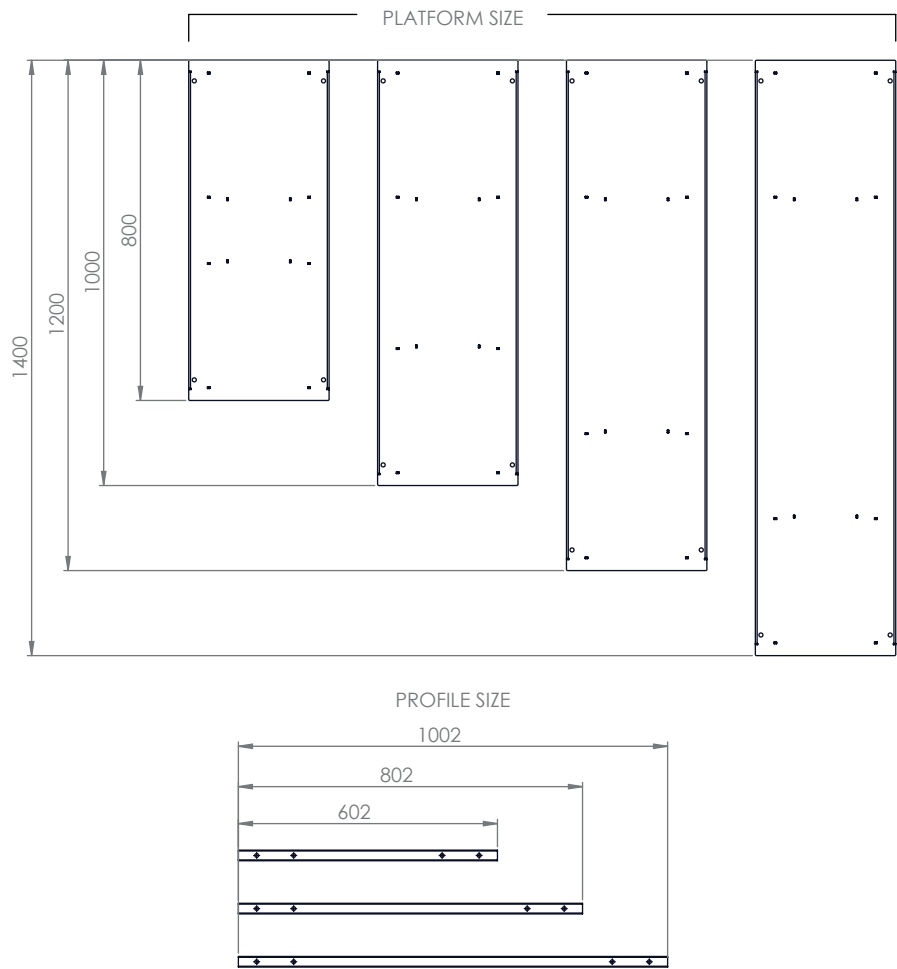


Top View of Multiple Platforms

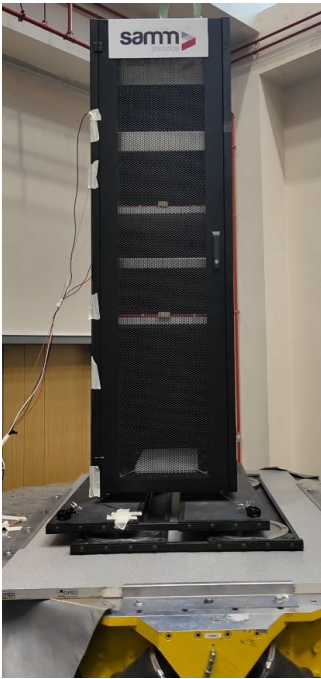
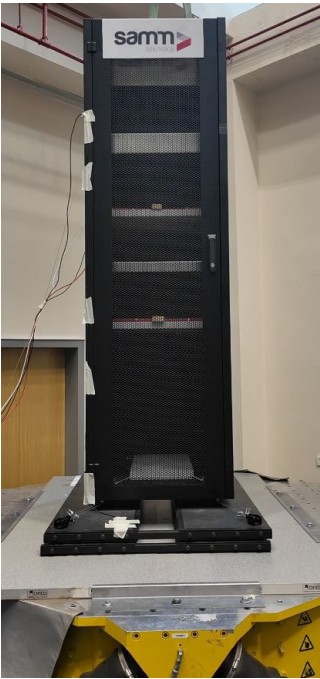


Front View of Multiple Platforms

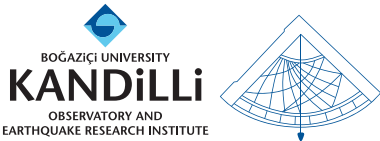
Standard Dimensions



Shaking Table Test



Product Validation Partners



Kandilli Observatory and Earthquake Research Institute

Dimensions & Packing

Standard Platform Module Sizes	Net Weight Kg	Gross Weight Kg	Packing Dimensions LxWxH mm
SSI-1000_PM330x800mm_Platform Module	29.00	30.50	900x430x70
SSI-1000_PM330x1000mm_Platform Module	31.50	33.30	1100x430x70
SSI-1000_PM330x1200mm_Platform Module	34.00	36.10	1300x430x70
SSI-1000_PM330x1400mm_Platform Module	36.00	38.40	1500x430x70

Other Platform Module Size Options	Net Weight Kg	Gross Weight Kg	Packing Dimensions LxWxH mm
SSI-1000_PM330x600mm_Platform Module	26.50	27.70	700x430x70
SSI-1000_PM330x700mm_Platform Module	28.00	29.35	800x430x70
SSI-1000_PM330x900mm_Platform Module	30.50	32.15	1000x430x70
SSI-1000_PM330x1100mm_Platform Module	32.50	34.45	1200x430x70
SSI-1000_PM330x1300mm_Platform Module	35.00	37.25	1400x430x70
SSI-1000_PM330x1500mm_Platform Module	37.50	40.05	1600x430x70

Connection Profiles Ordering Codes	Net Weight Kg	Gross Weight Kg	Packing Dimensions LxWxH mm
SSI-1000_CP602mm_Connection Profile (4 PC/Set)	4x1.2=4.8	5.65	215x725x70
SSI-1000_CP802mm_Connection Profile (4 PC/Set)	4x1.6=6.4	7.44	215x925x70
SSI-1000_CP1002mm_Connection Profile (4 PC/Set)	4x2.1=8.8	10.01	215x1025x70

Ordering Codes

Standard Platform Module Sizes	Connection Profiles Ordering Codes
SSI-1000_PM330x800mm_Platform Module	SSI-1000_CP602mm_Connection Profile (4 PC/Set)
SSI-1000_PM330x1000mm_Platform Module	SSI-1000_CP802mm_Connection Profile (4 PC/Set)
SSI-1000_PM330x1200mm_Platform Module	SSI-1000_CP1002mm_Connection Profile (4 PC/Set)
SSI-1000_PM330x1400mm_Platform Module	
SSI-1000_PM330x600mm_Platform Module	
SSI-1000_PM330x700mm_Platform Module	
SSI-1000_PM330x900mm_Platform Module	
SSI-1000_PM330x1100mm_Platform Module	
SSI-1000_PM330x1300mm_Platform Module	
SSI-1000_PM330x1500mm_Platform Module	

Accessories Ordering Codes
SSI-1000_CFB1_Cabinet Fixing Bracket Set
SSI-1000_RL1_Movement Restriction Lock

Platform Modules Packing



Connection Profiles Packing





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SAMM Teknoloji İletişim San. ve Tic. A.Ş.



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