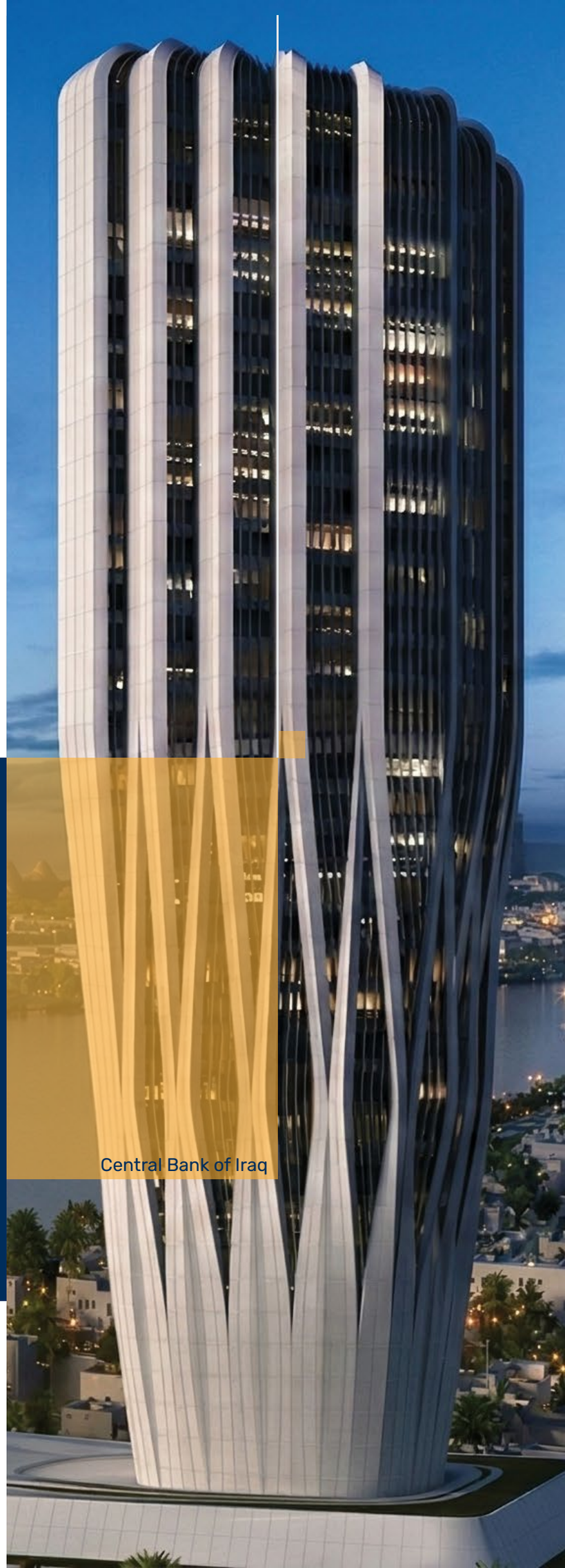
tis®
Earthquake Technologies

Your Strong Shield Against Earthquakes



Central Bank of Iraq

2026

20.000 m^2
indoor area

200.000 m^2
outdoor area

TİS Earthquake Technologies Factory

tis®
Earthquake Technologies

Globally-known and praised actor in earthquake engineering market

tis.com.tr

About Us

TİS Earthquake Technologies was established in 2014 under the name TİS Technological Isolator Systems and began its operations with the aim of developing advanced technological solutions in earthquake engineering. The company officially opened its manufacturing plant in 2016 and continues its operations with a manufacturing infrastructure comprising 20,000 m² of indoor space and 20,000 m² of outdoor space.

Positioned as Türkiye's first and only domestic manufacturer of friction pendulum seismic isolators, TİS has become a strong technology brand competing globally through its engineering solutions, high manufacturing capacity, and technologies compliant with international standards.

As of 2025, the company name was updated to TİS Earthquake Technologies. Going beyond its role as a product manufacturer, the company has evolved into an engineering and technology enterprise that develops integrated earthquake technologies, participates in international projects, and plays an influential role on a global scale.

Haydarpaşa Railway Station Overpass Bridge

Vision

Our primary objective is to become a leading engineering brand recognized as a benchmark not only in Türkiye but also globally—one that develops technology, establishes standards, and delivers field-validated solutions in earthquake engineering.

We aim to establish a robust R&D ecosystem founded on the principles of high performance, long service life, and reliability in seismic isolation and energy-dissipation technologies, while continuously advancing our engineering expertise to shape the future of the industry.

Mission

We aim to develop, manufacture, and implement advanced engineering-based earthquake technologies to ensure that structures remain safe, operational, and sustainable during and after earthquakes.

Accordingly, we conduct all design, analysis, testing, and manufacturing processes in compliance with international standards and deliver products whose performance has been validated through prototype and production testing.

Through academic–industry collaborations, we continuously advance our engineering expertise and develop science- and data-driven solutions. In earthquake isolation and energy dissipation technologies, we develop reliable, sustainable, and high-performance systems that address the needs of different structural types.

Timeline

2012

The foundations of the company were laid through the initiative of MİM Engineering and AS Construction, with technical consultancy provided by Prof. Dr. Haluk Sucuoğlu and Prof. Dr. Gian Michele Calvi.

2014

TİS Technological Isolator Systems was established.

A circular issued by the Ministry of Health made the use of seismic isolators mandatory in public hospitals with 100 or more beds.

The company began operations as Türkiye's first and only domestic manufacturer of friction pendulum seismic isolators, and one of only a few such manufacturers worldwide.

2015

A patent was obtained for the seismic isolator.

2016

ETA and CE certifications were obtained for the seismic isolator.

The TİS factory was opened.

The first sale was made for the Bursa Kestel State Hospital project.

2017

The first historical monument project, the Zeynel Bey Tomb, was completed.

The first data-center project, Turkcell İzmir Data Center, was completed.

The first international sale was made to Italy; this was also the first bridge project for which we supplied seismic isolators.

2019

CE certification was obtained for the Spherical Bearing (TSB), and the product was released to the market.

CE certification was obtained for the Pot Bearing (TPB), and the product was released to the market.

The first TPB application was completed for the METU Wind Tunnel project.

2020

TP-Cell (Plastic Hinge Cell) was developed.

The first private-sector investment for which we carried out seismic isolation work was for the Hotel Cursula project in Italy.

2021

Our first seismically isolated school project was completed in Italy.

First spherical-bearing sale: Kars Taşlıgüney Viaduct.

2022

We entered the South American market.

The first application in the Far Eastern market was completed through our first project in Taiwan.

The first seismically isolated industrial-facility project was completed.

The 10,000th seismic-isolation device was manufactured.

2023

During the February 6 Kahramanmaraş earthquakes, TİS friction pendulum isolators demonstrated superior and successful performance under real earthquake conditions.

The 100th seismically isolated project was completed.

2024

The seismic isolator installed at the 600-Bed Osmaniye State Hospital was uninstalled from its column and retested after four years of service and two major earthquakes, confirming its long-term performance.

Exports have reached more than 10 countries.

We have exported to 15 countries

The first project in Africa was completed.

2025

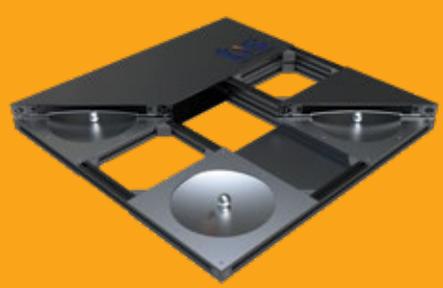
Our company name has been updated to TİS Earthquake Technologies Ind. and Com. Inc.

The 20,000th seismic-isolation device was manufactured.

The T-BRB and T-FVD products have been released on the market.

TİS products reached five continents.

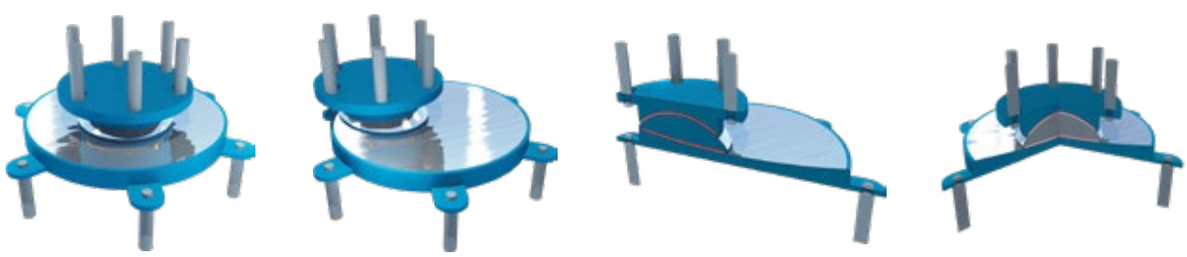
The 150th seismically isolated project was completed.



TİS Earthquake Technologies Products

Tested.
Certified.
Proven in the Field.

Single Curved Surface Friction Pendulum Seismic Isolator: TSP



TSP (TIS Single Pendulum) is a friction pendulum seismic-isolation device with a single spherical surface. TSP devices are designed to dissipate seismic forces and provide effective protection for structures in achieving the “operational” structural-performance objective during seismic activity.

TSP consists of a steel sliding element positioned between two backing plates with different radius of curvature and the patented special sliding material Technoslide, applied to the sliding and rotation surfaces.

One surface of the TSP sliding element rests on the steel backing plate. In addition to accommodating horizontal displacement, this surface dissipates energy during an earthquake through its friction mechanism. The other surface of the sliding element is fixed to the opposing backing plate and permits rotational movement only. The curved sliding surfaces provide TSP devices with a re-centering capability during an earthquake.

TSP devices are generally preferred for relatively lightweight structures located in regions with low to moderate seismic activity and are particularly suitable for projects requiring high rotational capacity.

Double Curved Surface Friction Pendulum Seismic Isolator: TDP

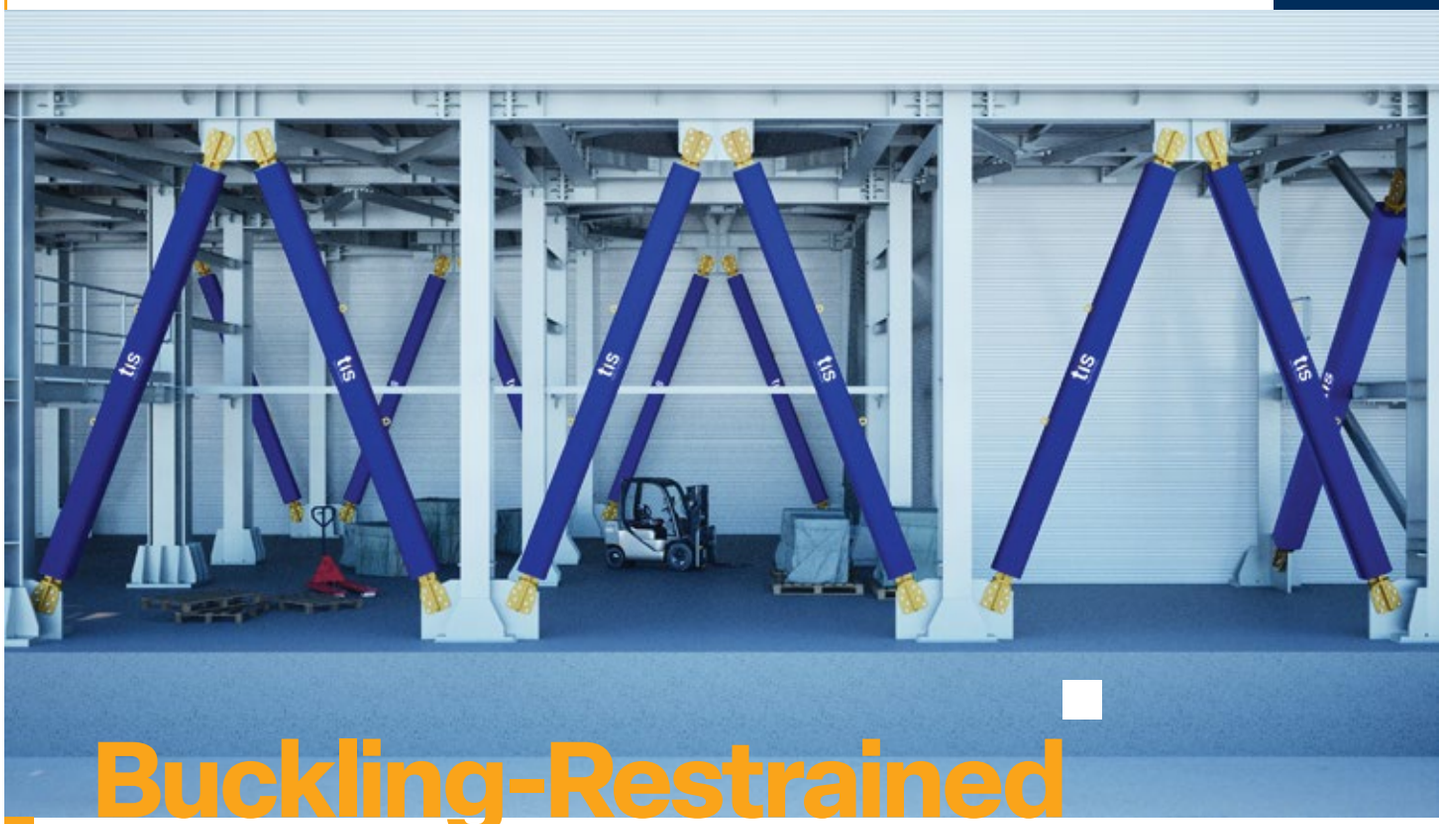
9

TDP (TIS Double Pendulum) is a friction pendulum seismic-isolation device with two spherical surfaces. TDP devices are designed to dissipate seismic forces and provide effective structural protection in achieving the “operational” structural-performance objective during seismic motion . For the same overall dimensions, the advanced sliding mechanism of the TDP enables higher horizontal-displacement capacities than the TSP, allowing more economical and compact devices to be used.

TDP consists of a steel sliding element, which may also be designed with an internal articulation to accommodate high rotational demands, positioned between two backing plates with the same radius of curvature, together with the patented Technoslide material developed by TİS and used on the sliding and rotation surfaces.

The two sliding surfaces located on the steel backing plates accommodate horizontal displacement while dissipating energy during an earthquake through the friction mechanism. Since horizontal movement occurs simultaneously on both sliding surfaces, TDP devices offer a more compact design than TSP devices. When the sliding element is designed as articulated, it may incorporate an internal hinge. The curved sliding surfaces provide TDP devices with a Re-centering capability under earthquake effects.

TDP devices can be used in all types of structures designed with seismic-isolation systems.



Buckling-Restrained Brace: T-BRB

T-BRB is a new-generation Buckling-Restrained Brace (BRB) member specially developed by our company. Unlike conventional BRB systems, T-BRB does not contain mortar or concrete infill; it consists entirely of steel components and our patented Technoslide material used on the sliding surfaces.

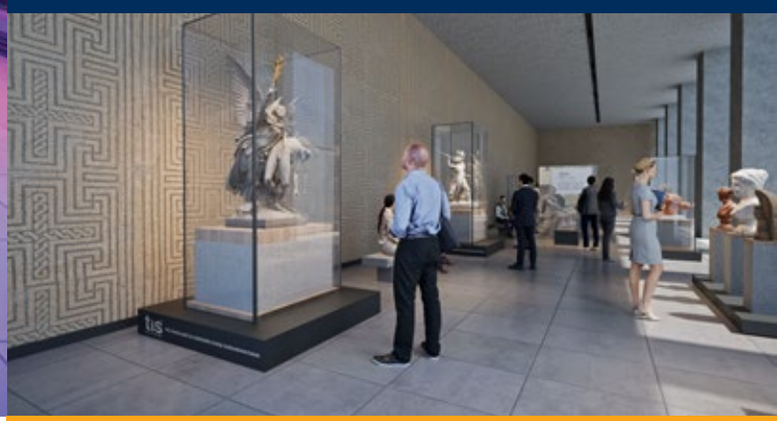
During an earthquake, T-BRB dissipates seismic energy through the controlled and ductile yielding behavior of its core plate, thereby enhancing the seismic performance of the structure. T-BRB exhibits stable hysteretic behavior under cyclic tensile and compressive loading. Thanks to its detachable steel encasement and replaceable core plate, a T-BRB member damaged during a severe earthquake can be quickly, economically, and practically renewed.

BRB frame systems are widely used around the world, particularly in regions with high seismic hazard, to improve the earthquake performance of structures. They are preferred in countries with advanced earthquake engineering practices, such as Japan, the United States, Canada, China, Taiwan, Türkiye, and New Zealand, in residential and office buildings, high-rise structures, industrial facilities, hospitals, educational institutions, and public buildings.

In addition, BRB systems provide an effective solution for the seismic retro-fitting of existing structures. The fact that T-BRB requires no concrete or mortar infill, consists entirely of steel components, and features a detachable design provides significant advantages in terms of installation, maintenance, and replacement.

With its high energy dissipation capacity, ductile and stable behavior, ease of installation, and replaceable core plate, T-BRB offers a reliable, economical, and sustainable solution for earthquake engineering.

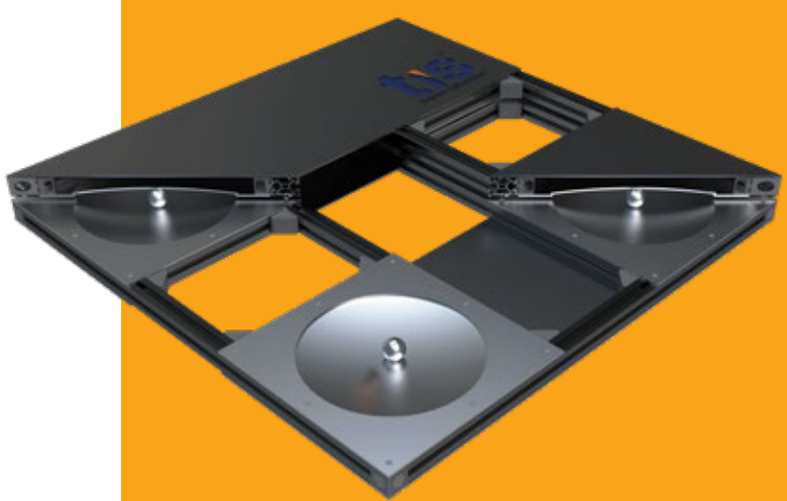
Seismic Protection Deck: T-SPD



T-SPD (TIS Seismic Protection Deck) floor and equipment-isolation systems are designed to protect non-structural elements, equipment, and valuable objects within a structure from the destructive effects of earthquakes.

Unlike whole-building seismic-isolation systems, these systems are installed directly beneath the specific area or equipment to be protected. They stand out through their compact design and flexibility of application.

They have been developed to protect sensitive equipment such as computer cabinets, vibration-sensitive laboratory and hospital devices, archive shelvs, and museum artifacts.



Spherical Bearing: TSB

TSB (TIS Spherical Bearing) is a spherical structural bearing used to connect different structural elements where moment release and force/displacement control are required.

TSB consists of several steel components that slide and rotate relative to one another in response to structural demands, together with the patented special sliding material Technoslide.

The operating principle of TSBs is primarily to transfer forces generated in one part of a structure to another part at the required level under service-load effects such as traffic, thermal expansion, and shrinkage. TSB devices also provide a higher rotational capacity than other bearing types.

By eliminating the aging and other physical limitations associated with the elastomeric component of a TPB, the TSB provides exceptionally high performance and durability. It also offers a considerably longer service life than alternative bearing systems.

TSBs are designed in accordance with all relevant sections of EN 1337, particularly EN 1337-1, EN 1337-2, and EN 1337-7. Where required, other international and/or local codes, such as AASHTO, may also be applied in the design and manufacturing of TSB devices.

Types

TSBs can be designed and manufactured in three different types according to structural requirements. All three TSB types can also be designed and manufactured with anti-uplift capability to resist tensile forces.

- Fixed spherical bearing: TSB-FX
- Free-sliding spherical bearing: TSB-FS
- Guided sliding spherical bearing: TSB-GS

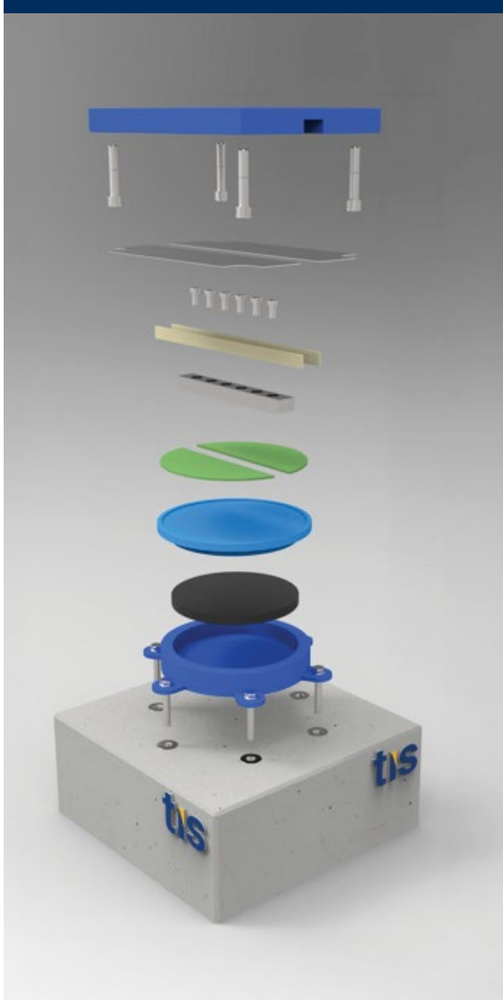
Pot Bearing: TPB

TPB (TIS Pot Bearing) is a pot-type structural bearing used to connect different structural elements where moment release and force/displacement control are required.

Its general configuration consists of a steel pot, an elastomeric pad, and a steel piston incorporating sliding and guiding mechanisms where required.

The operating principle of TPBs is primarily to transfer forces generated in one part of a structure to another part at the required level under service-load effects such as traffic, thermal expansion, and shrinkage. TPB devices also accommodate sliding movement and a specified degree of rotation.

TPBs are designed in accordance with all relevant sections of EN 1337, particularly EN 1337-1, EN 1337-2, and EN 1337-5. Where required, other international and/or local codes, such as AASHTO, may also be applied in the design and manufacturing of TPB devices.



Types

TPBs can be designed and manufactured in three different types according to structural requirements. All three TPB types can also be designed and manufactured with anti-uplift capability to resist tensile forces.

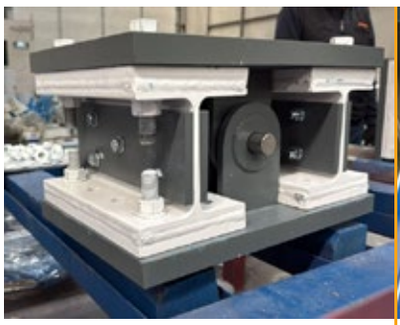
- Fixed pot bearing: TPB-FX
- Free-sliding pot bearing: TPB-FS
- Guided sliding pot bearing: TPB-GS

TP-Cell (TIS Plastic Hinge Cell) is a metallic seismic-protection device that provides a continuous connection between beam ends and column faces. Designed to accommodate the high rotational demands generated during severe earthquakes, it effectively dissipates seismic energy through predictable and stable cyclic moment-rotation behavior.

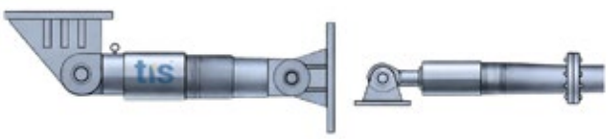
As an all-steel energy-dissipation device, TP-Cell simulates the formation of a “plastic hinge” within a frame or frame-wall system. Its key feature is that specific components can be replaced following a severe earthquake, allowing the device to be reused. Its compact dimensions also enable rapid and straightforward on-site installation.

TP-Cells are particularly suitable for steel and precast-concrete structures. They can also be applied to reinforced-concrete frames when an appropriate anchorage system is designed.

Plastic Hinge Cell: TP-Cell



Fluid Viscous Dampers: T-FVD



T-FVD (TİS Fluid Viscous Damper) is a velocity-dependent energy-dissipation device used in structural engineering. Its primary purpose is to dissipate earthquake energy during an earthquake transferred to the structure by converting it into heat through the movement of a piston within a viscous fluid.

In seismic applications, T-FVDs generally increase the structural damping ratio by between 15% and 35%, reducing interstory drifts story drifts and internal forces. In regions of very high seismicity, they may also be installed at the same interface as seismic-isolation units to control displacements.

Seismic Gap Joints: T-SGJ

T-SGJ (TİS Seismic Gap Joints) are specialized components designed to preserve the integrity of the seismic gaps required in all seismically isolated structures.

Designed using flexible and durable materials, these joints prevent impact between adjacent structural units and preserve architectural continuity and integrity under both normal service conditions and seismic movement when the isolation devices are activated.

By accommodating both horizontal and vertical displacements, T-SGJs ensure the proper functioning of seismically isolated structures and prevent damage to seismic gaps during an earthquake.

Depending on the function and location of the structure, seismic gap joints can be designed to safely accommodate pedestrian, passenger-vehicle, and truck loads. Customized solutions can also be developed for corners, elevator shafts, and stairwell areas.

Structural Health Monitoring: T-SHM

T-SHM (TİS Structural Health Monitoring) devices are precision measurement systems developed to measure, record, and analyze fundamental structural-response parameters such as acceleration, displacement, and interstory drift.

These devices enable the continuous or event-based assessment of seismic and operational performance, providing consistent data for evaluating structural behavior and verifying the effectiveness of seismic-protection systems.

TİS Earthquake Technologies Services

Structural Design

Structural design services are provided in accordance with applicable regulations and defined performance objectives. Safe, economical, and practical engineering solutions are provided for structures subjected to earthquake effects.

Structural Assessment

The load-bearing systems, seismic safety, and performance levels of existing structures are evaluated through advanced engineering analyses. Strengthening requirements are determined based on scientific data.

Advanced Seismic Analyses

The actual earthquake behavior of structures is modeled with high accuracy using nonlinear time-history analyses and performance-based design methods. Advanced analysis and design services are provided for critical and high-importance structures.

Structural Health Monitoring Systems

Integrated sensor and monitoring infrastructure continuously tracks structural behavior before, during, and after earthquakes. The resulting data supports safety, maintenance, and performance management.

On-Site Installation and Application Services

The installation of seismic isolators and seismic-protection systems, together with site coordination and quality-control processes, is carried out by specialist teams. Compliance with the project requirements is assured on site.

After-Sales Support and Technical Services

Post-installation maintenance, periodic inspections, and technical consultancy services are provided. Fast and reliable support is offered to ensure the long-term performance of the systems.

tis.com.tr/services

TİS Earthquake Technologies R&D

Patented Technology.
International Standards and Approvals.
Advanced Seismic Isolation Technology.

Integrated Earthquake Technologies

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Earthquake engineering is one of the most critical disciplines shaping the future of structural safety. TİS approaches seismic isolation not merely as an application technique, but as an integrated engineering and technology strategy, placing R&D at the core of this approach.

While the February 6, 2023 Kahramanmaraş earthquakes validated the field performance of TIS solutions, they also clearly demonstrated the need for more diverse, practical, and accessible solutions for both new and existing structures. For TİS, this process was not only an experience that confirmed the success of its existing technologies, but also an important turning point highlighting the need for earthquake technologies developed in Türkiye to assume a pioneering role and achieve a broader impact in global perspective.

Technoslide

TİS Technological Isolator Systems was established with contributions from academic consultants internationally recognized for their work in the field. The company's first R&D activity was the development of Technoslide, a friction material that forms one of the key elements of its competitive and innovative solutions.

Developed in collaboration with Politecnico di Milano, Technoslide underwent approximately two years of comprehensive and demanding testing before being patented. In terms of both chemical composition and manufacturing methodology, Technoslide delivers superior performance compared with commonly used PTFE- and PE-based materials.

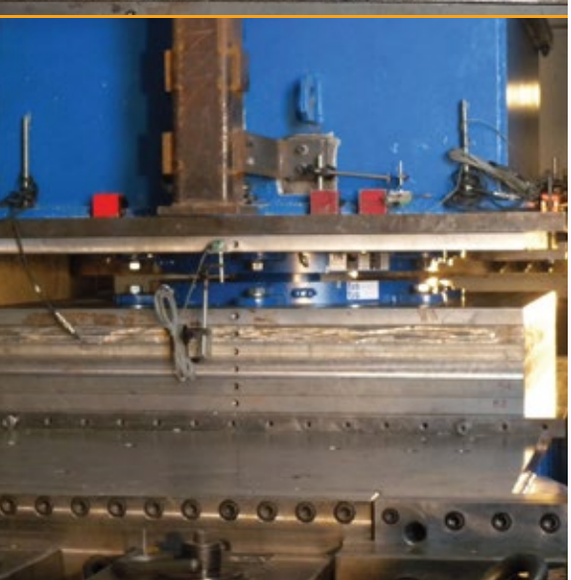
Development Period:
2014–2015

Development Objective:
To develop a high-performance sliding material for use in friction pendulum seismic isolators.

Collaboration and Support:
Politecnico di Milano

Result:
Technoslide, a material delivering superior performance compared with PTFE- and PE-based alternatives, was developed and patented.

TSP / TDP Friction Pendulum Seismic Isolators



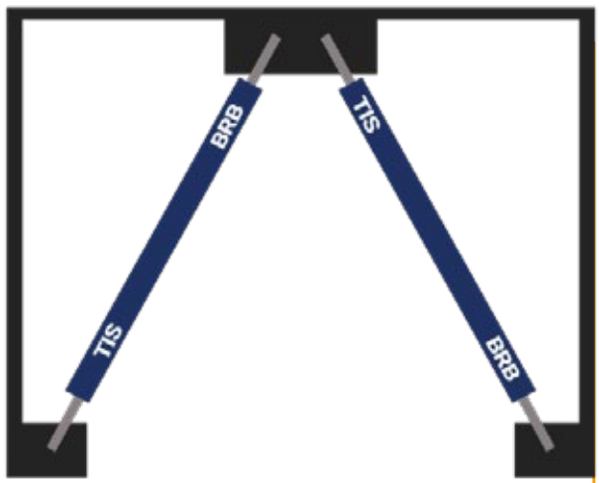
Development Period:
2015

Development Objective:
To improve structural safety in accordance with the defined performance criteria by reducing the earthquake forces transferred to the structure.

Collaboration and Support:
Studio Calvi
Politecnico di Milano

Result:
Steel-based Single Pendulum (TSP) and Double Pendulum (TDP) friction pendulum seismic-isolation systems were developed. Compliance with international standards was achieved through European Technical Assessment (ETA) and CE marking.

T-BRB
Buckling-Restrained Brace



Development Period:
2025

Development Objective:
To design a replaceable core in an all-steel system using a specially developed patented sliding material, thereby creating a more economical solution that enables faster intervention following an earthquake.

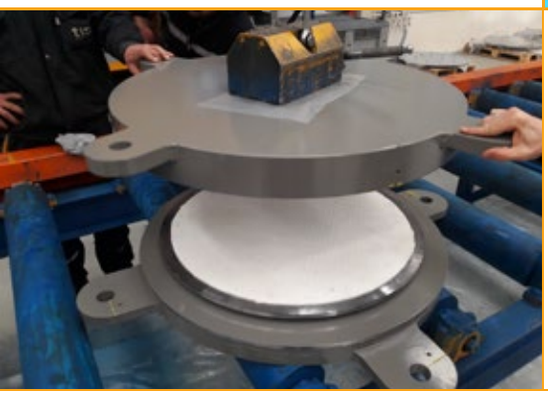
Collaboration and Support:
Manisa Celal Bayar University

Result:
A system suitable for both new construction and the seismic strengthening of existing structures was developed.


Bolted


Welded


Pinned



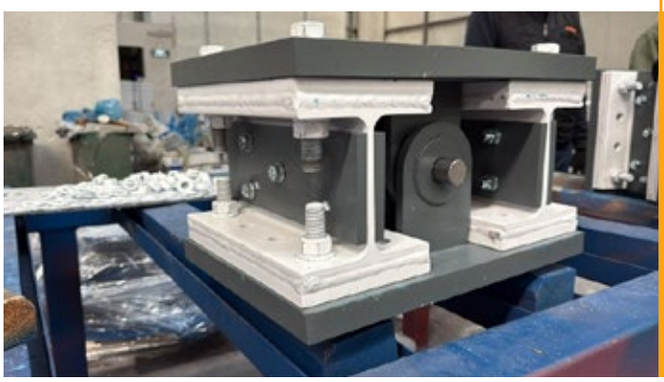
TPB / TSB
Spherical and Pot Bearings

Development Period:
2017–2019

Development Objective:
To provide safe load transfer and controlled movement in transportation structures, including bridges, viaducts, and podium applications.

Collaboration and Support:
Politecnico di Milano

Result:
Products were developed for transportation and podium structures, and CE marking was obtained.



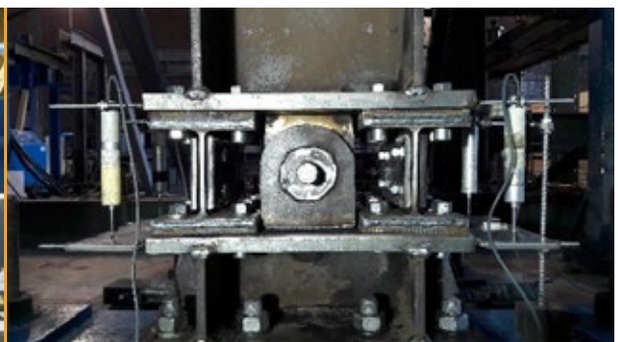
TP-Cell
Energy-Dissipating Connection Element

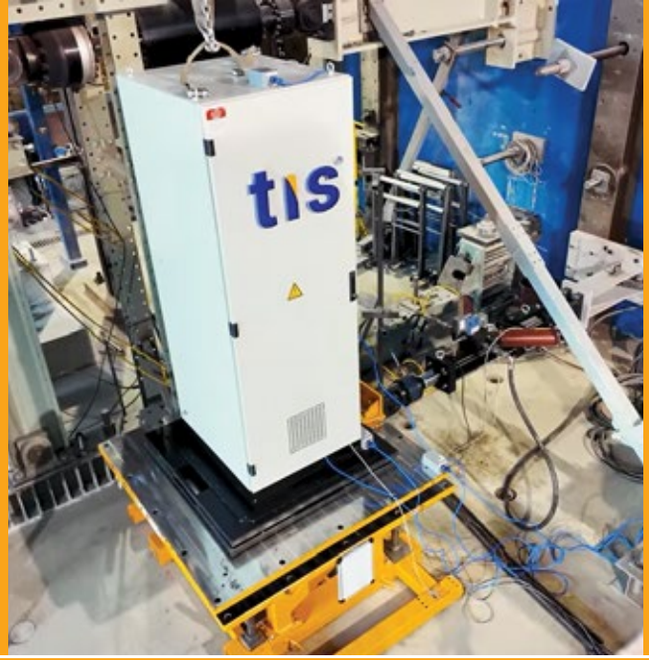
Development Period:
2020

Development Objective:
To dissipate earthquake energy at beam-column connections in steel and precast structures through replaceable components.

Collaboration and Support:
TÜBİTAK 1505 – University–Industry Collaboration Support Program,
Middle East Technical University

Result:
Doctoral Dissertation, Department of Civil Engineering, METU
Thesis No.: 859573





T-SPD
Seismic Protection Deck

Development Period:
2025

Development Objective:
To protect sensitive equipment and/or a designated area within a structure from earthquake effects where whole-building seismic isolation cannot be applied.

Collaboration and Support:
TÜBİTAK 1501 – Industrial R&D Support Program,
Sistek Seismic Technology

Result:
Master's Thesis, Department of Civil Engineering, METU
Thesis No.: 995419

Earthquake Technologies

Knowledge-based engineering, validated technology, and an uninterrupted R&D approach.

TİS develops solutions that shape the future of earthquake safety.

Proven in Real Earthquakes

The major Kahramanmaraş-centered earthquakes of February 6, 2023 marked an important turning point, as friction pendulum seismic isolators were comprehensively tested under real earthquake conditions for the first time in history. All our seismically isolated structures demonstrated the expected performance during this major event and remained continuously operational. These results proved the effectiveness and reliability of our products not only theoretically but also in the field, bringing them international recognition.

1 Performance Proven Under Real Earthquake Conditions

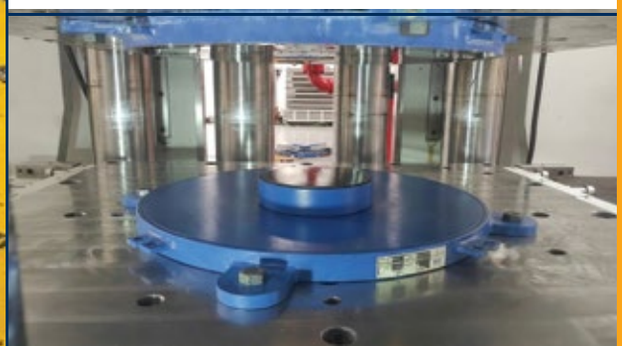
Friction pendulum seismic isolators were subjected to some of the largest earthquakes ever recorded and proved their reliability by fully demonstrating the predicted performance in the field.

2 Post-Earthquake Validation: An Isolator Uninstalled and Retested

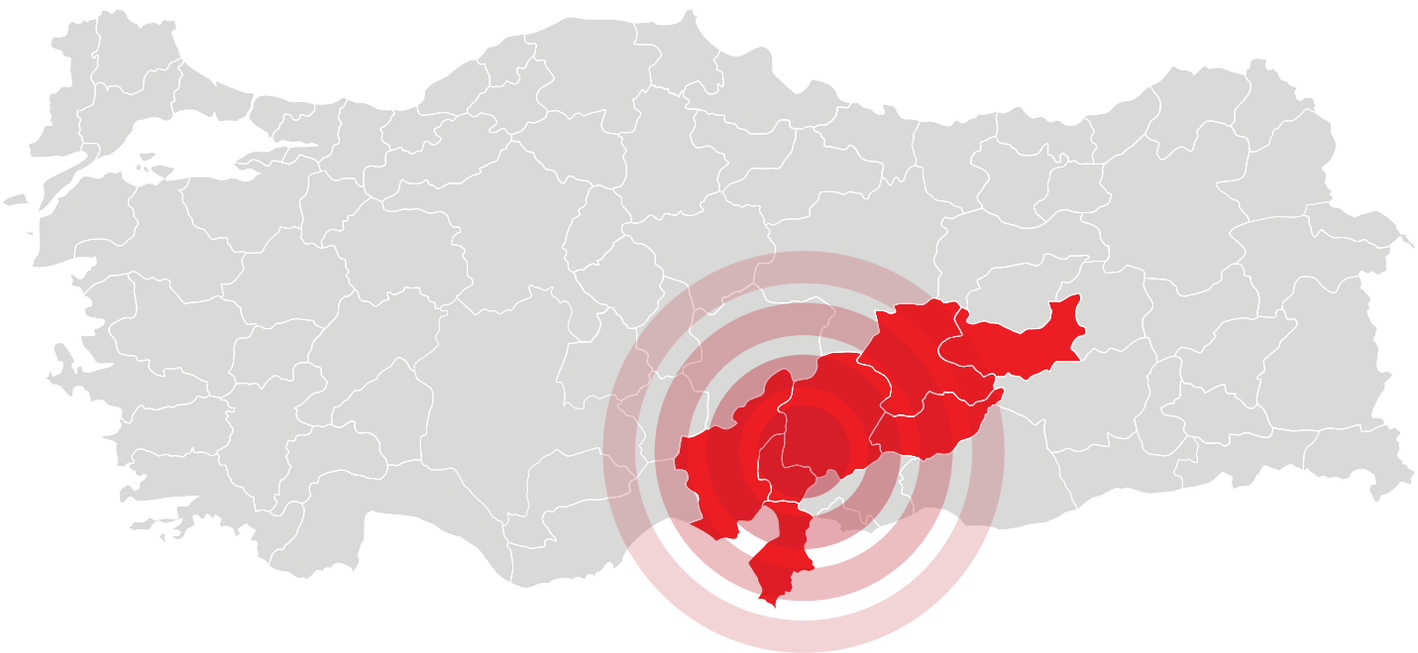
One of the TDP friction pendulum seismic isolator devices designed and manufactured under a Ministry of Health projecthas served at the 600-Bed Osmaniye State Hospital, a Ministry of Health of Türkiye project, for four years. After experiencing two major earthquakes, it was uninstalled and retested, demonstrating that it had maintained its predicted superior performance.

3 Scientific Evaluation and International Reports

The 2023 Pazarcık and Elbistan earthquakes created a real-world open laboratory for the field of seismic isolation. The “General Evaluation Report on Seismically Isolated Hospitals Following the 2023 Pazarcık and Elbistan Earthquakes” demonstrates the engineering expertise and scientific approach of TİS Earthquake Technologies. In addition, international scientific publications have examined the earthquake performance of seismically isolated structures incorporating TİS Earthquake Technologies products. These studies have highlighted the significant contribution of the systems to structural safety, operational continuity, and the protection of sensitive equipment within buildings. The findings further support the field success of TİS solutions through international scientific evaluation.



February 6, 2023 Kahramanmaraş Earthquakes



With its friction pendulum seismic isolators, TİS successfully passed the largest real-world earthquake test recorded to date.

Mw 7.8 – Main earthquake centered in Pazarcık
Mw 7.5 – Second major earthquake centered in Elbistan

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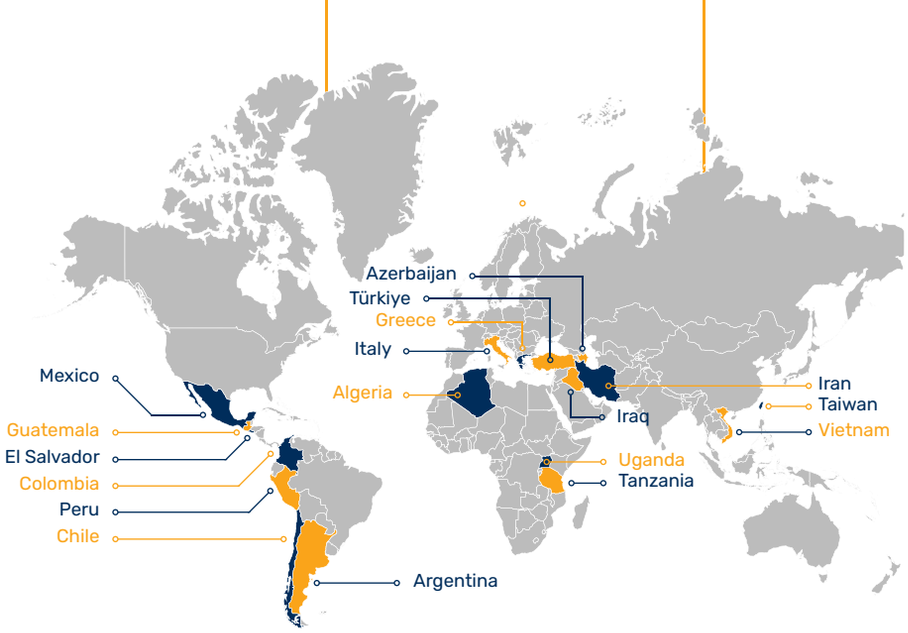
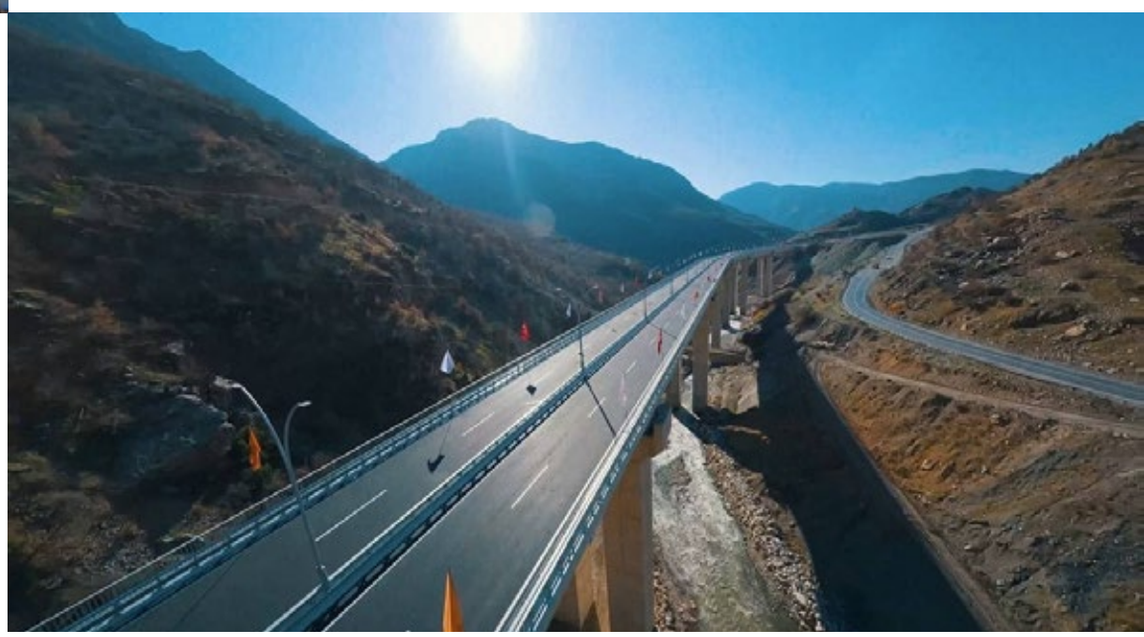
Adıyaman Maternity and Children's State Hospital
Hatay Dörtyol State Hospital
Kahramanmaraş Maternity and Children's Hospital
Malatya Battalgazi State Hospital
Malatya Maternity and Children's Hospital
Malatya Doğanşehir State Hospital
Osmaniye Düziçi State Hospital
Osmaniye State Hospital





Since beginning its sales operations, TİS Earthquake Technologies has manufactured and delivered 30,000 devices for 170 projects. More than 700 devices have successfully completed prototype tests conducted in accordance with EN 15129, ASCE/SEI 7, and/or the Turkish Building Earthquake Code 2018. These tests were conducted and documented at EUCENTRE in Pavia, Italy; Caltrans SRMD in San Diego, USA; E-Isolation in Japan; the Earthquake Engineering Research & Test Center of Guangzhou University in Guangzhou, China; Hengwei Inspection Testing and Certification Group in China; and ESQUAKE in Eskişehir, Türkiye. In addition, more than 15,000 devices have undergone Factory Production Control tests in accordance with the same standards. These tests were performed at independent, accredited isolator-testing laboratories and successfully documented.

Our References

170	30000	18	5
projects	devices	countries	continents

Featured Projects

Hatay Factory Strengthening Project, Türkiye

The design, manufacturing, and laboratory testing of the T-BRB systems used in the seismic-strengthening project of a factory building in Kırıkhan, Hatay were carried out by TİS Earthquake Technologies.

In this project, a total of 38 T-BRBs with cross-sectional areas of 20.0 cm^2 and 22.5 cm^2 and lengths ranging from 4,100 mm to 5,200 mm were used in accordance with the architectural and engineering requirements of the structure. Incorporating systems with yield capacities of 600 kN and 700 kN, the project represents a successful example of innovative engineering solutions for improving the seismic performance of reinforced-concrete structures.

Peru Healthcare & Clinical Center, Peru

T-BRB systems were used in a healthcare and clinical-center building whose construction began in Peru in 2026. The project incorporates 42 devices, divided into project-specific capacity classes according to the building's different functional areas and varying load demands. The systems were designed to cover a broad performance range in terms of yield and maximum tensile/compressive forces and were optimized to provide high ductility and energy-dissipation capacity throughout the structure. The project is a strong example of the high-performance and flexible seismic-control approach offered by TİS solutions for healthcare facilities.

Chile Data Centers

Seismic Isolation in Light-Gauge Steel Structures

We developed tailored solutions for four distinct data center projects in Chile featuring light-gauge steel structural systems, where standard seismic isolation systems proved inadequate due to the structures' low structural weight. As part of this effort, our TSP product was specially designed and manufactured to include a total of 575 units, each with an average displacement capacity of ±450 mm. Thanks to these custom solutions—which have undergone the necessary design and testing processes and are now ready for implementation—light-gauge steel structures in Chile have been designed with seismic isolation, ensuring that critical systems are protected during earthquakes and continue to operate without interruption.

Juarez Building Hamburgo 307, Mexico

This is a seismically isolated residential project developed by SeismicPS in Mexico. The seismic isolators used in the structure were designed, manufactured, and installed by TİS Earthquake Technologies. Selected for projects in different geographies and regions with high seismic risk, this solution reflects an engineering approach whose reliability has been proven internationally and demonstrates TİS's global experience in seismic-isolation technologies.

Device: TİS Double Pendulum (TDP)
Project year: 2023
Total production quantity: 21
Isolator displacement capacity: ±300 mm
Isolator vertical load capacities: 5600/ 8900/ 10600 kN

Zeynel Bey Tomb, Türkiye

Built in 1473 for the son of the Akkoyunlu ruler who was killed in the Battle of Otlukbeli, the Zeynel Bey Tomb was relocated from its original site, which was at risk of flooding under the Ilısu Dam project, to an open-air museum two kilometers away. Upgraded with seismic isolators supplied by TİS Earthquake Technologies, the tomb is now protected against potential earthquakes. The project is a rare example of cultural heritage and advanced engineering coming together.

Device: TIS Double Pendulum (TDP)
Project year: 2017
Total number of devices: 8
Isolator displacement capacity: ±420 mm
Isolator vertical load capacities: 1250 kN

Central Bank of Iraq

The pot-type structural bearings used in the podium building at the entrance to the Central Bank of Iraq—an internationally prestigious project designed by Zaha Hadid in Baghdad—were designed and manufactured by TİS Earthquake Technologies. Ten types of bearings were used at different levels and roof sections of the project. As one of Iraq's landmark structures, the building incorporates TİS engineering solutions.

- **Device:** TİS Pot Bearing (TPB)
- **Project year:** 2020
- **Total production quantity:** 92
- **Bearing vertical load capacities:** 150 – 3000 kN
- **Bearing displacement capacities:** ± 50/50 – 450/50 mm
- **Bearing rotational capacities:** ± 0.004 – 0.02 rad

Atasay Atelier Towers, Türkiye

Atasay, one of the leading companies in the jewelry industry, constructed its modern manufacturing workshops in Yenibosna on a site twice the size of Istanbul's Grand Bazaar. In this project—the world's first and only jewelry atelier equipped with seismic isolators—the isolators designed and installed by TİS Earthquake Technologies protect both the structure and the precious metals against potential earthquakes.

Device: TİS Double Pendulum (TDP)
Project year: 2024
Total number of devices: 226
Isolator displacement capacity: ±820mm
Isolator vertical load capacities: 6000 / 40000 / 47500 kN

New Sibaritide Hospital, Italy

The New Sibaritide Hospital in Italy is a reinforced-concrete hospital project incorporating seismic isolators. The isolators designed and manufactured by TİS Earthquake Technologies safeguard the hospital against earthquakes. The project represents an innovative approach to protecting critical healthcare infrastructure.

Device: TİS Double Pendulum (TDP)
Project year: 2021
Total number of devices: 426
Isolator displacement capacity: ± 400 mm
Isolator vertical load capacities: 2500 / 3500/ 5250 / 7500 kN

Kars Taşlıgüney II Viaduct, Türkiye

This highway bridge on the Erzurum–Kars Motorway was constructed using the cast-in-place balanced-cantilever method. It has a total length of 573 meters and reaches a height of 120 meters at its deepest point. The anti-uplift guided spherical bearings used at the bridge abutments were designed to safely accommodate high axial compression and tensile forces, as well as the large horizontal displacements expected during an earthquake. TİS contributed to the seismic performance of the structure by designing, manufacturing, and installing these specialized spherical bearings, which have a compression capacity of 25,000 kN, a tensile capacity of 8,500 kN, and a movement capacity of ±1,000 mm.

Device: TİS Spherical Bearing (TSB)
Project year: 2021
Total number of devices: 8
Isolator displacement capacity: ± 1000 mm
Isolator vertical load capacities: 25.500 / 8.500 kN

Tunel De Oriente, Colombia

The bridge constructed as part of the Túnel de Oriente Project—one of Colombia's most important transportation investments—forms one of the region's critical highway connections. In this region of high seismic hazard, the structure was designed with seismic-isolation technology to maintain operational continuity and structural safety during an earthquake. The seismic isolators used in the project were designed, manufactured, and installed on site by TİS, improving the bridge's earthquake resilience.

- **Device:** TİS Double Pendulum (TDP)
- **Project year:** 2025
- **Total number of devices:** 12
- **Isolator displacement capacity:** ± 485 mm
- **Isolator vertical load capacities:** 14700 / 16100 kN

Hotel Cursula, Italy

The Hotel Cursula project, developed in the town of Cascia in Italy's Perugia region, is a specialized investment that prioritizes earthquake safety in the tourism and hospitality industry. Base-isolation technology was selected to protect guests and ensure that the building remains operational after an earthquake. The TDP seismic isolators used in the project were designed and manufactured by TİS, providing the structure with an advanced level of protection against potential earthquakes.

- **Device:** TİS Double Pendulum (TDP)
- **Project year:** 2020
- **Total number of devices:** 36
- **Isolator displacement capacity:** ± 300 mm
- **Isolator vertical load capacities:** 2000 / 4000 kN

Aydın City Hospital, Türkiye

This is one of the major 950-bed healthcare investments developed by the Ministry of Health. The project demonstrates TİS's advanced engineering expertise and outstanding manufacturing capability through the use of TDP seismic isolators with a displacement capacity of ±1,000 mm, making them among the largest isolators manufactured worldwide to date. Thanks to this high displacement capacity, the structure was designed to maintain its performance even during severe earthquakes, providing a reliable seismic-isolation solution that supports the hospital's safe and uninterrupted operation following an earthquake.

Device: TİS Double Pendulum (TDP)
Project year: 2021
Total number of devices: 727
Isolator displacement capacity: ± 1000 mm
Isolator vertical load capacities: 12700 / 17300 / 22600 / 29900 / 40900 kN

Gaziantep ASCE Residences Development, Türkiye

In addition to being a prestigious residential project that introduces seismic-isolation technology to housing developments, it is Türkiye's first project to apply seismic isolation to villa-type structures. Designed to maximize earthquake safety, the structures were equipped with a seismic-isolation system. The seismic isolators used in the project were designed, manufactured, and installed by TİS, providing residents with a reliable solution that offers advanced structural protection, increased safety, and enhanced living comfort during an earthquake.

- **Device:** TİS Double Pendulum (TDP)
- **Project year:** 2024
- **Total number of devices:** 658
- **Isolator displacement capacity:** ± 170 mm
- **Isolator vertical load capacities:** 2000/4600/9400/12900 kN

Istanbul University Hasdal Campus, Türkiye

Istanbul University Hasdal Healthcare Campus is a comprehensive healthcare investment developed through a collaboration between TOKİ and Istanbul University. This seismic-isolation system was selected to provide the highest level of earthquake safety across the multiple hospital blocks included in the project. TİS designed, manufactured, and installed the TDP seismic isolators used in the project, helping the healthcare campus remain safe and continuously operational after an earthquake.

- **Device:** TİS Double Pendulum (TDP)
- **Project year:** 2021
- **Total number of devices:** 867
- **Isolator displacement capacity:** ±450 mm / ± 630 mm
- **Isolator vertical load capacities:** ranging from 7,700 kN to 34,000 kN

Abdi İpekçi Sports Complex, Türkiye

The project was developed as one of Türkiye's major sports investments using modern engineering solutions. TİS designed, manufactured, and installed the seismic isolators used between the reinforced-concrete primary structural system and the steel roof of Block B. Through this specialized solution, the roof system was designed to accommodate earthquake effects in a controlled manner, supporting the safety, durability, and long-term performance of the structure.

- **Device:** TİS Double Pendulum (TDP)
- **Project year:** 2022
- **Total number of devices:** 46
- **Isolator displacement capacity:** ±500 mm
- **Isolator vertical load capacities:** 1800 / 4000 kN

Our Quality, Environmental, and Occupational Health and Safety Policy

At TİS, by adopting a sustainable management approach in the fields of quality, environment, and occupational health and safety, we undertake to:

Continuously improve our management system by ensuring full compliance with ISO 9001 Quality, ISO 14001 Environmental, and ISO 45001 Occupational Health and Safety Management System standards;

Prioritize customer satisfaction by manufacturing products compliant with quality, environmental, and safety standards and delivering them on time;

Maintain our leadership in the industry by improving manufacturing and project-management processes while optimizing costs;

Invest in employee training, improve competencies, encourage active participation in training programs, and provide advanced engineering solutions;

Improve our manufacturing processes to minimize waste and energy consumption by reducing the use of natural resources with a strong commitment to environmental protection;

Conduct our operations in full compliance with international standards and legal requirements;

Protect the information security and personal data of our customers, suppliers, stakeholders, and employees, respond to potential breaches as quickly as possible, and ensure uninterrupted business continuity.

Testing

TİS products are validated through comprehensive testing processes conducted at independent, internationally accredited laboratories. To date, more than 700 prototype tests and over 15,000 production tests have been completed. Testing is performed at both the prototype and production stages to ensure product performance and reliability.

Prototype Tests

- EUCENTRE – Pavia, Italy
- Caltrans SRMD (UCSD) – San Diego, USA
- E-Isolation – Japan
- Earthquake Engineering Research & Test Center of Guangzhou University – Guangzhou, China
- Hengwei Inspection Testing and Certification Group – China
- ESQUAKE – Eskişehir, Türkiye

At these laboratories, products were evaluated under high axial loads, high velocities, and large displacements, and their performance was validated.

Special Tests

- Clover leaf test – UCSD Caltrans SRMD, USA
- Uplift test – UCSD Caltrans SRMD, USA / E-Isolation, Japan
- High-displacement testing (>1 m) – E-Isolation, Japan / UCSD Caltrans SRMD, USA / Earthquake Engineering Research & Test Center of Guangzhou University, Guangzhou, China / Hengwei Inspection Testing and Certification Group, China
- Low-temperature testing – ESQUAKE, Türkiye
- Long-term behavior testing – Politecnico di Milano, Italy / ESQUAKE, Türkiye
- Aging tests – EUCENTRE, Italy / Politecnico di Milano, Italy
- Exceedance of displacement capacity – TİCEM, Türkiye
- High-velocity testing (+1 m/s) – UCSD Caltrans SRMD, USA

Production Tests

- 15,000 kN vertical-load capacity and 1,500 kN horizontal-load capacity
- Maximum horizontal velocity capacity of 100 mm/s
- Maximum horizontal displacement capacity of ±500 mm

Through these tests, fundamental performance parameters such as strength, friction behavior, and movement capacity are continuously monitored and verified throughout the manufacturing process.

Certificates

TİS products are certified in accordance with international quality, safety, and engineering standards. Manufacturing, quality-management, and product-performance processes are audited according to international standards and certified by independent organizations. These certificates demonstrate that TİS solutions are designed, manufactured, and tested in compliance with European and international engineering standards.

TİS holds the following principal certificates:

- CE Certificate of Constancy of Performance
- ISO 9001 – Quality Management System
- ISO 14001 – Environmental Management System
- ISO 45001 – Occupational Health and Safety Management System
- ETA – European Technical Assessment
- Fire Resistance Test Certificate

TÜVNORD

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Kahramankazan/Ankara

Head Office:

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