



DAMPO

**ENGINEERING INNOVATION
TECHNOLOGY AND
INFRASTRUCTURE**





DAMPO

**Engineering,
technology
& infrastructure.**

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About us

We are a team of highly trained specialists in the development and implementation of seismic protection systems.

We provide solutions for the development of secure and competitive infrastructure.

Our main commitment is to promote the best engineering practices, promoting resiliency with systems that increase structural safety and performance throughout the life cycle of buildings, producing results of the highest quality.

We have the licensing of a buckling restrained brace type dissipator developed at the National Autonomous University of Mexico and two patent applications for hysteretic type dissipators, a friction pendulum system and a viscous dissipator.

To offer the best solution, at Dampo we continue to develop more seismic protection systems, as well as technology for monitoring the structural health of buildings.

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We have had the opportunity to collaborate on projects of all types such as: residential buildings, offices, hospitals, schools, low, medium and high-rise buildings, etc.





Mission

Our company uses the highest quality standards in the manufacturing of our devices, as well as in the continuous training of our staff to ensure the excellence and efficiency of our processes.

Vision

Promote the best engineering practices and the seismic resilience of communities.

Consolidate our company as a reliable and prestigious supplier of seismic protection systems.



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Our services

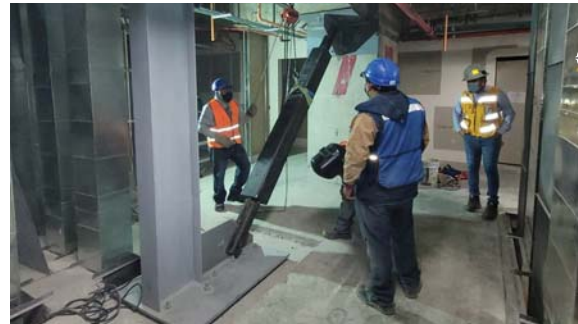
We manufacture and supply different seismic protection systems.



We provide structural consultancy for the modeling, design and installation of seismic protection systems, such as: base isolators, viscous dampers, buckling-restricted braces (BRB), among others.

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We carry out seismic risk assessments for buildings, structural performance diagnoses, estimation of structural and content losses.



We offer specialized training in seismic protection systems, nonlinear analysis and performance-based design.



Environmental vibration and seismic monitoring service.



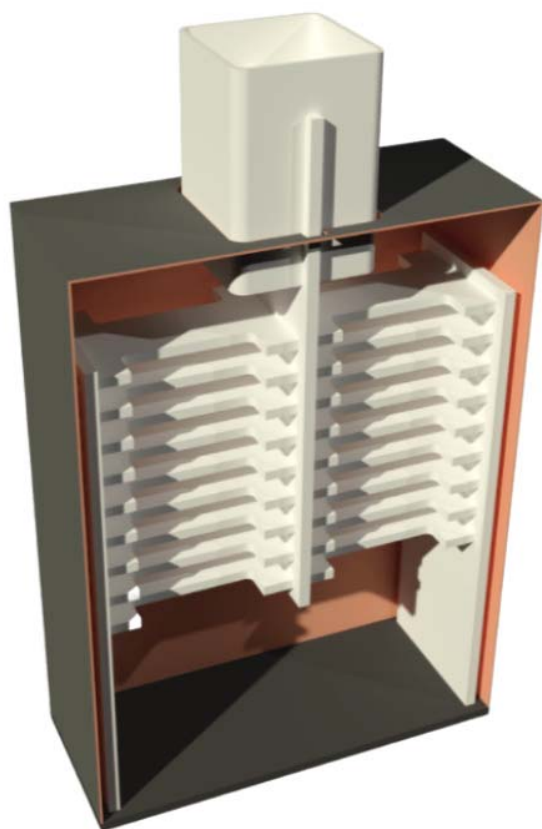


PRODUCTS

PRODUCTS

Hysteretic dissipator

Dampo 1505



The device takes advantage of the hysteretic behavior of steel by means of plastic rotations. Its innovative design allows for any combination of required strength and displacement.

The dissipator includes an outer shell that protects the device and a connection preparation with a round HSS section.

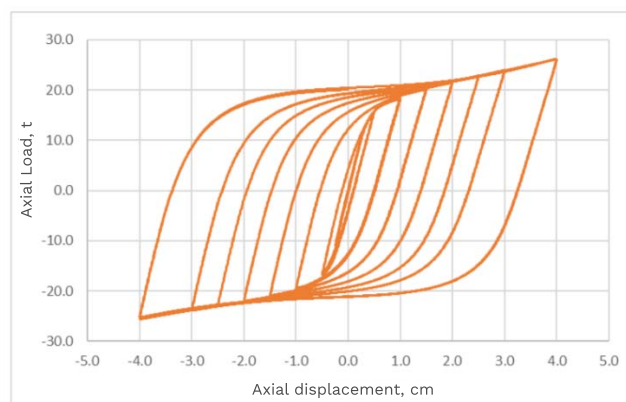


Figure 1

Thanks to its design, the Dampo 1505 dissipator exhibits stable non-linear behavior in both tension and compression, as shown in Figure 1.

This performance makes it ideal for incorporation into earthquake-resistant structures. The devices are installed collinearly with the connecting brace as shown in Figure 2.

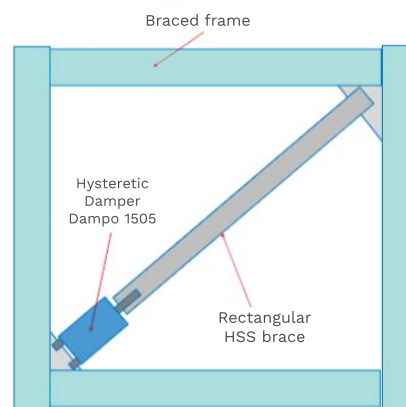
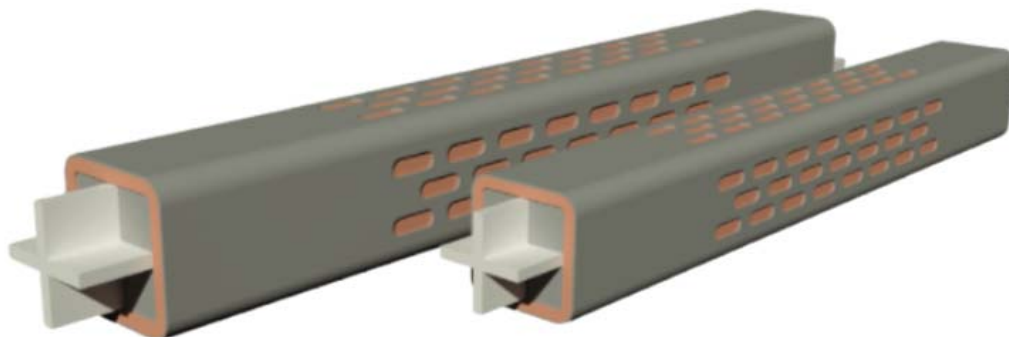


Figure 2

Hysteretic dissipator

Dampo BRB



The Dampo BRB dissipates seismic energy through the deformation of the steel core. The core has a reduced area where energy dissipation is concentrated, while the ends, which are larger, remain elastic.

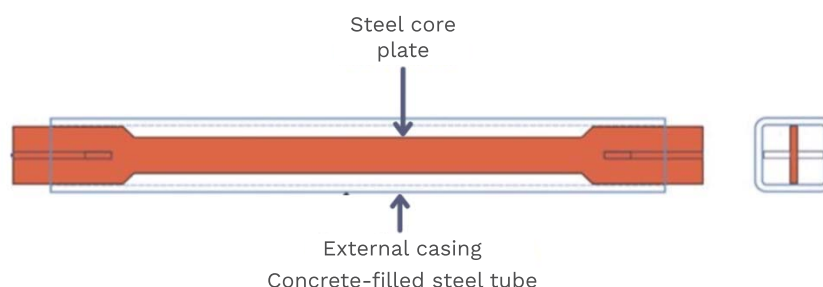


Figure 3

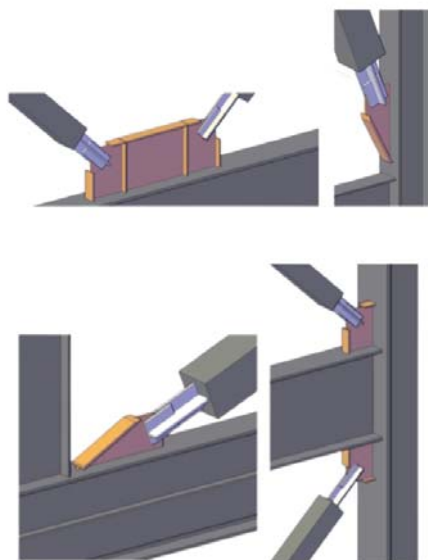


Figure 4

The concrete filling and steel casing prevent buckling of the core when subjected to compression loads.

It contains a non-stick material that decouples the core from the concrete filling, allowing the core to work properly.

The devices are installed like a conventional brace and different geometries can be used for their installation as can be seen in Figure 4.

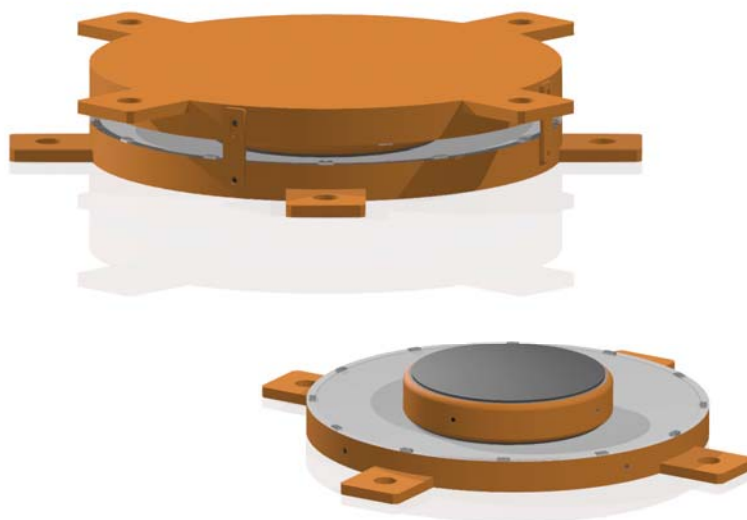


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Dampo seismic isolator

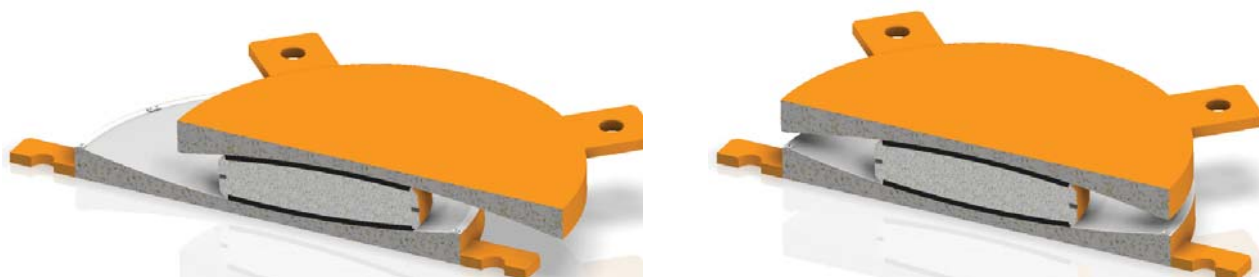
It is a friction-type sliding isolation system, which takes advantage of the characteristics of the physical behavior of the sliders to extend the period of the structural system.


The device aims to decouple the movement of the ground and the structure, allowing the latter to behave as a rigid body. This significantly reduces story drifts and the internal forces in structural elements resulting from earthquakes.



They are installed to the structure with anchors and require contact surfaces in both the foundation and the superstructure. The dimensions of the anchors are small, depending on the required load and the maximum displacements.

They can be easily modeled in commercial programs.



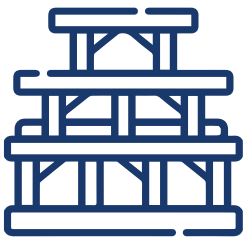


Advantages of using seismic protection systems

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- ◆ Reduces the cost of the structure between 10 - 15 %.
- ◆ Reduction of loads imposed on the foundation, therefore, cost savings.



- ◆ Control lateral displacements and prevent damage to the structure.
- ◆ Improve structural performance.



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Guarantees

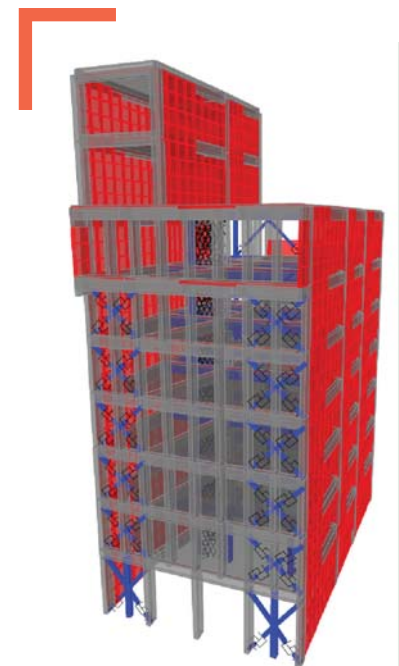


- ◆ Our plants are certified with ISO 9001, ensuring the quality of the devices.
- ◆ Our devices can withstand several large earthquakes without the need to replace them. We have demonstrated this with rigorous experimental tests.

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Services without cost

- ◆ We develop structural proposals with the use of seismic protection systems, showing benefits such as: economic and structural performance.
- ◆ We provide courses and advice to structural offices on: seismic protection systems, their connections, non-linear analysis and performance based design.
- ◆ We advise the structural office at all times from the conception of the building to the detailed engineering.





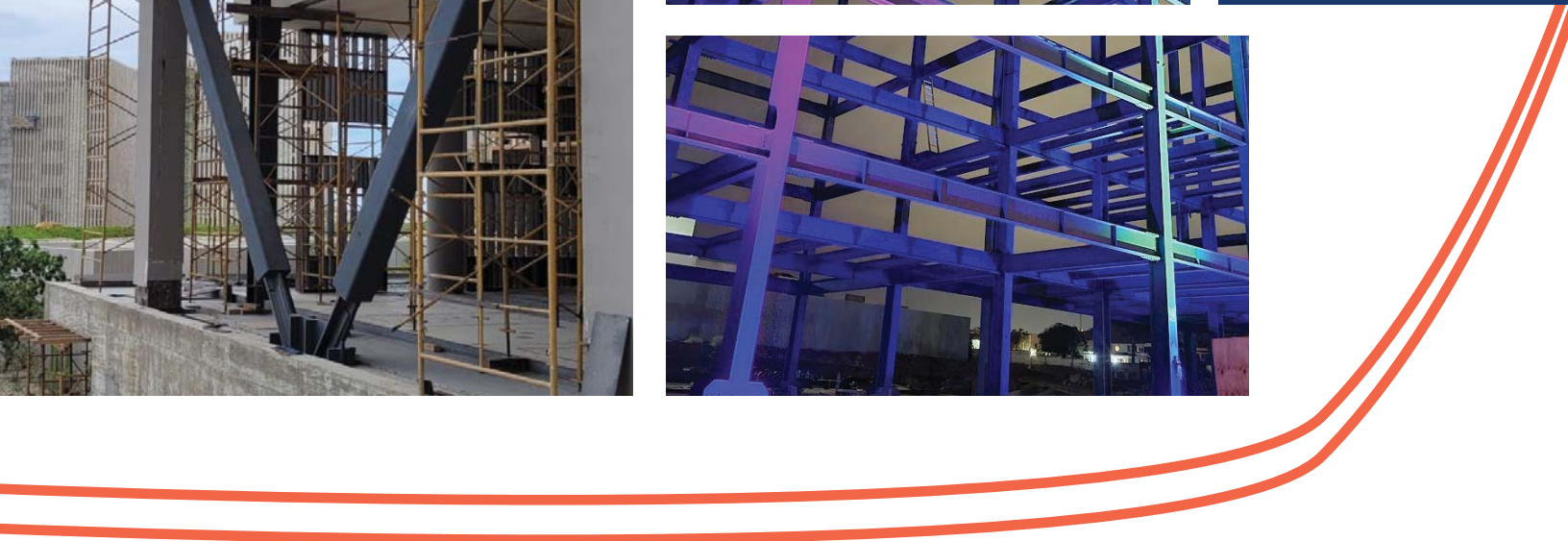
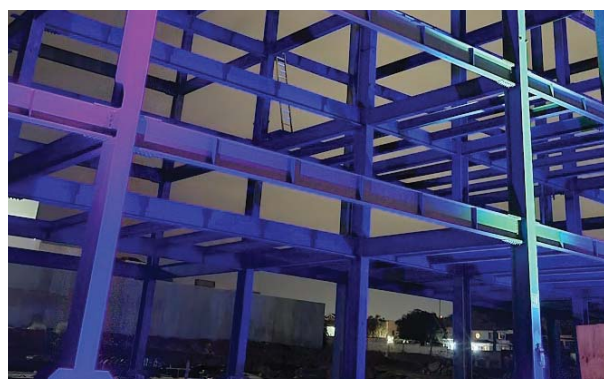
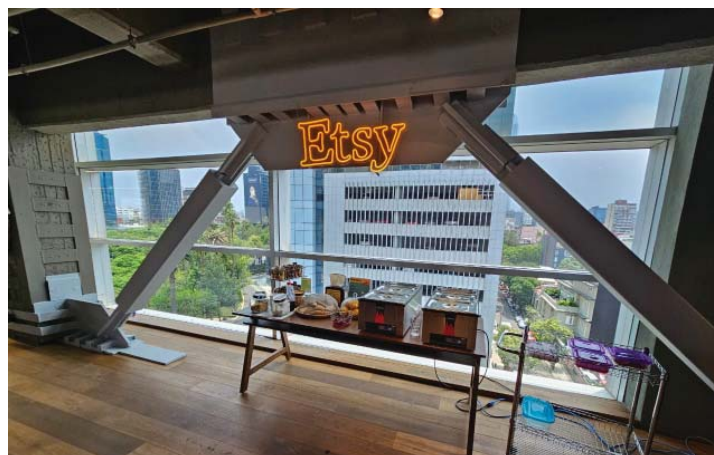
PROJECTS

ПРОЕКТЫ



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Insurgentes 1260

Location:
Mexico City

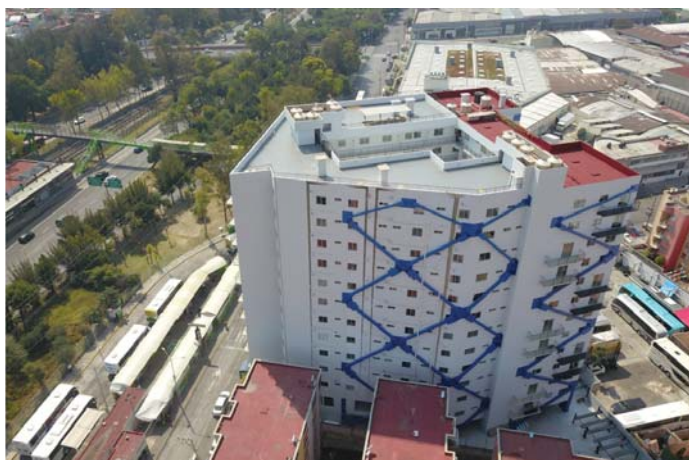
Year:
2019

Device:
70 - Dampo 1505

Height:
45.7 m

Structural Engineering:
PYDE Ingeniería

Seismic rehabilitation of an apartment building damaged in the 2017/09/19 earthquake. The original structural was resolved with moderate ductility concrete frames. It was reinforced by increasing the resistance of the columns and controlling lateral displacements through energy dissipators.



Reforma 390



Location:
Mexico City

Year:
2021

Device:
190 Dampo BRB

Height:
94.6 m

Structural Engineering:
INGPT Ingeniería

Apartment building with 25 levels of 29,464 m² of construction, conceptualized with moderate ductility concrete frames. The structure was rehabilitated using buckling restrained braces to comply with the new requirements of the Mexican Standard.



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Edificio administrativo Caja Popular

Location:
Querétaro

Year:
2021

Device:
36 Dampo BRB

Height:
27.2 m

Structural Engineering:
Jaza Ingeniería



Construction of the administrative offices of «Caja Popular Querétaro», designed with high ductility steel frames and energy dissipators in both the main building and the parking building.



Epione Medical



Location:
Ensenada

Year:
2022

Device:
204 Dampo BRB

Height:
49.5 m

Structural Engineering:
SPI Ingeniería

Medical development in the north of the Mexico that consists of a hospital, an office building and a shopping mall. The structure was designed with moderate ductility steel frames and seismic protection systems.



Torre Hidalgo

18-story apartment building, located in Guadalajara. Designed with low ductility steel frames in both directions and seismic protection systems throughout the height.



Location:
Guadalajara

Year:
2022

Device:
288 Dampo BRB

Height:
66.3 m

Structural Engineering:
Pondera Ingeniería



Reforma 333

Location:
Mexico City

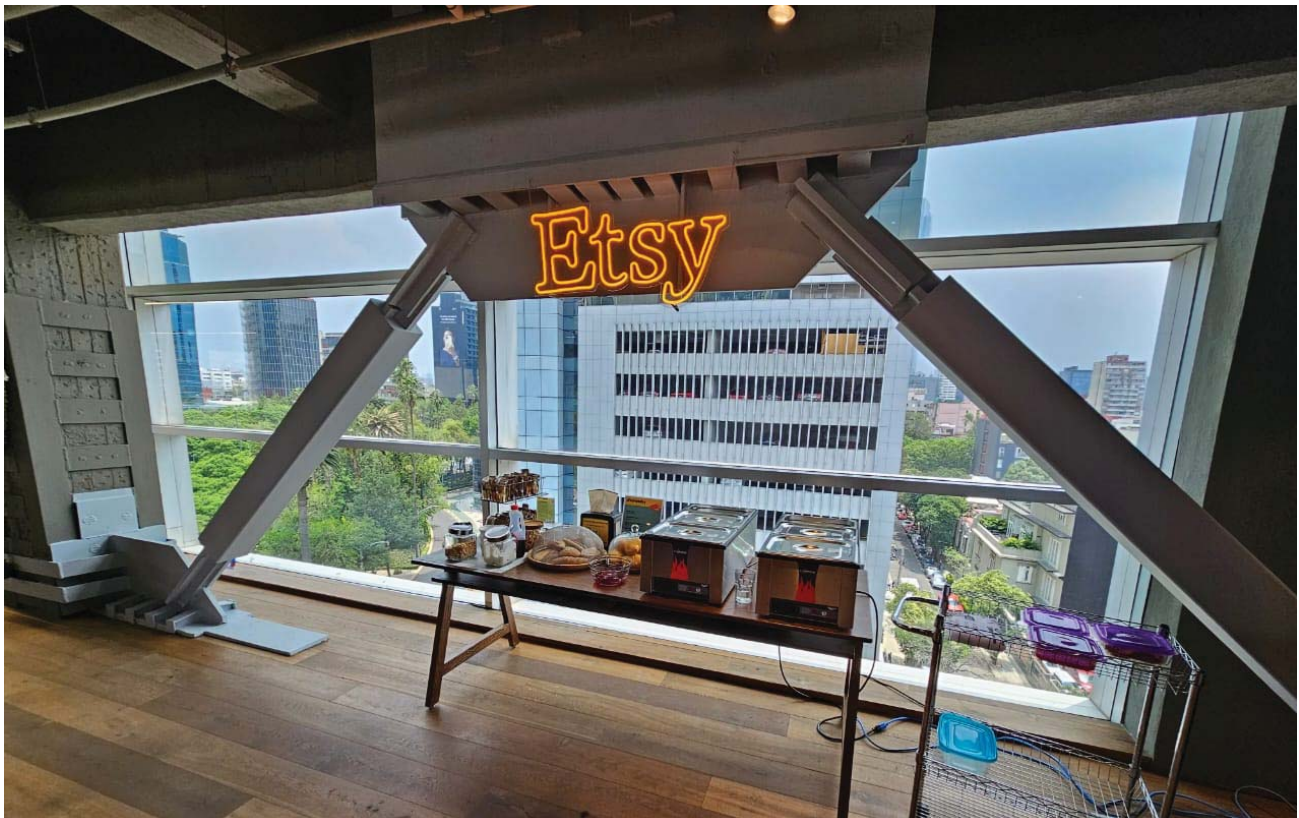
Year:
2022

Device:
34 Dampo BRB

Height:
31.8 m

Structural Engineering:
SIEST Ingeniería

Built in the 1950s, it was rehabilitated to meet the requirements of current building regulations. It was built with concrete frames in both directions. The reinforcement consisted of seismic protection systems to control lateral displacements.



Hotel Solaz

Location:
Los Cabos
Year:
2023

Device:
62 Dampo BRB

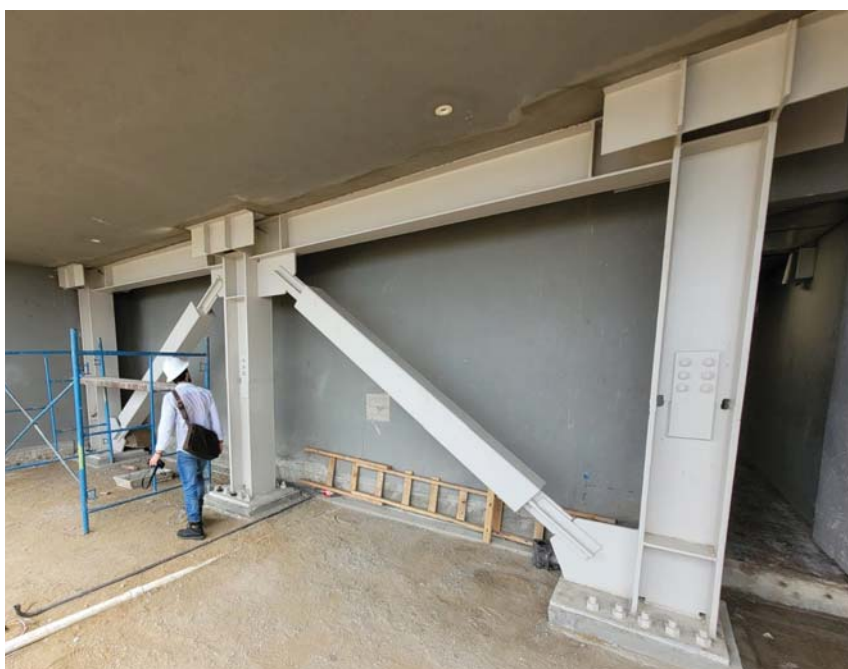
Height:
15.5 m



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Structural rehabilitation of some buildings of the hotel complex located in the north of Mexico.



Gabriel Mancera 309



Reconditioning of a structure originally designed to house offices and reinforced to meet the requirements for hospital use. The original structure was designed with concrete frames in both directions. The lateral displacement were controlled with seismic protection systems.

Location:
Mexico City

Year:
2023

Device:
48 Dampo BRB

Height:
28.7 m

Structural Engineering:
Inesco Ingeniería



Londres 107

11-story apartment building designed with low-ductility concrete frames. The structure was rehabilitated using energy dissipators to comply with the new building requirements.

Location:
Mexico City

Year:
2023

Device:
176 Dampo BRB

Height:
40.8 m

Structural Engineering:
CTC Ingenieros



Insurgentes 149

Location:
Mexico City

Year:
2021

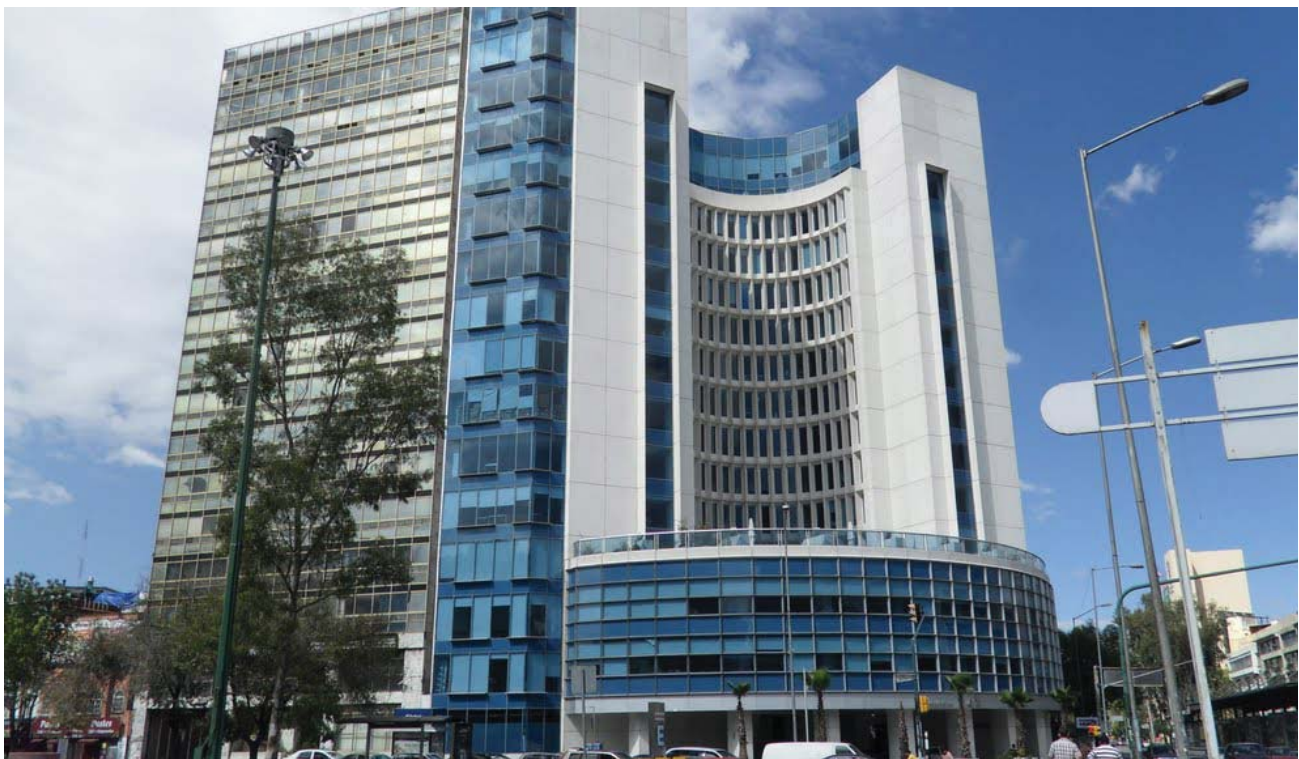
Device:
36 Dampo BRB

Height:
27.2 m

Structural Engineering:
Monte de Oca
Ingenieros



Structural rehabilitation with seismic protection systems of an iconic structure in Mexico City.



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PROJECTS

Navarrete 56

Location:
Mexico City

Year:
2023

Device:
30 Dampo BRB

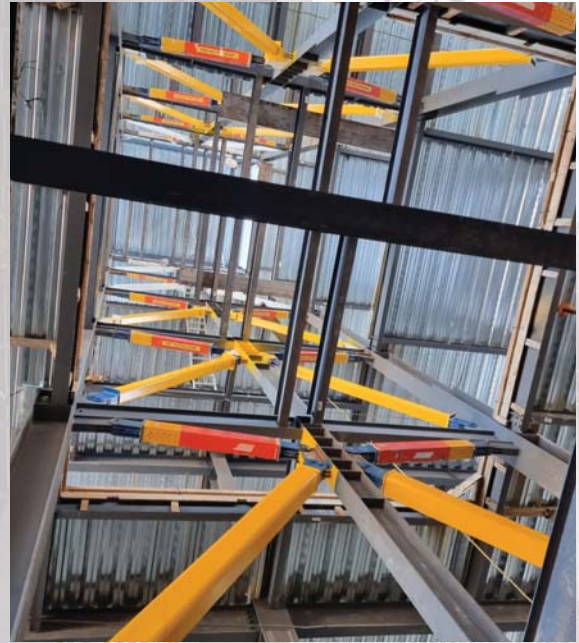
Height:
33.1 m

Structural Engineering:
IDEA Diseñadores



Departmental development in the center of Mexico City which considers the use of energy dissipators to control lateral displacements and a system of concrete frames.

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(55) 2775 9464



info@dampo.com.mx



www.dampo.com.mx

