DAMPTECH
Earthquake protection

Innovations in Seismic Protection

Company facts and figures:

- 22 years of experience
- Projects in 12 countries:

  Japan, Türkiye, US, China, India, South Korea,

  Middle East, Denmark, Chile, Greece, Germany
- 12 projects in Japan
- Tallest building in Japan
- Patented solutions
- Inventor of RFD technology
- Resilient Design, able to withstand multiple earthquakes
- Capacity 1 to 10,000 kN
- Stroke 10 – 2,000 mm

Damptech damper installed in buildings, Japan

Damptech damper device

Advantages of the technology:

- Efficiently protects buildings, lives, and structures against several earthquakes
- Reliable performance
- Can be fine tuned at any time
- Economical devices
- Easy to install
- Max. energy dissipation among all damper types
- Can take large displacements
- Many different design models & applications
- Resilient design, withstanding multiple EQs or storms
- Reduced base shear, uplift, resulting in smaller foundations
- Reduced torsion in irregular buildings
- Reduced floor accelerations and drift i.e. important in Hospitals
- New build: 10-20% reduction in steel tonnage, due to smaller sizes of beams and columns
- Retrofit: minimize drift and minimize impact on existing structure

Applications

- Concrete, steel and timber buildings
- Supplementary damping for base isolation of buildings and bridges
- Cable-stayed bridges, cable vibrations
- Precast reinforced concrete buildings
- Bridges and elevated highways
- LPG tanks
- Other
  - Elevated floors for sensitive equipment
  - Machine vibrations
  - Shock absorbers
  - Wind turbines

Testing

- Technical University of Denmark (DTU)
- National Center for Research on Earthquake Engineering (NCREE), Taiwan
- Waseda University, Tokyo, Japan
- Takenaka Research Laboratory, Tokyo,
- Takenaka Testing Lab Osaka, Japan
- Kyoto University, Japan
- Sekisui House, R&D Institute, Kyoto, Japan
- Kawakin Core-Tech, R&D Institute, Japan
- Dynamic Isolation Systems, NV, USA

2.5 MN, Test Machine at DTU

12 Projects in Japan

Including Japan tallest building

Tallest building in Japan
Osaka, 2011

Our experience:

Base isolation Osaka, Japan
4 towers, 40- 46 floors

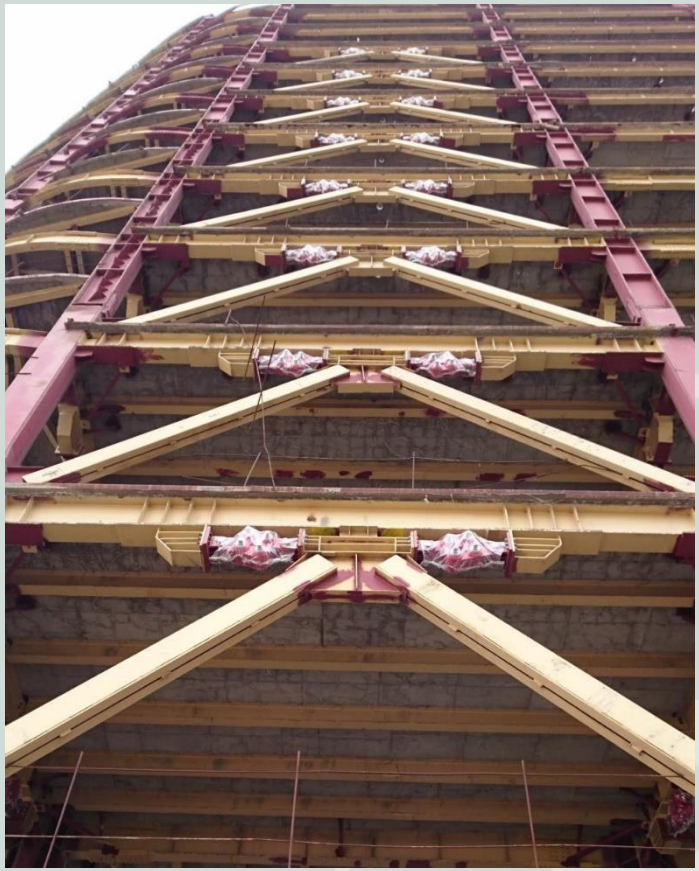
From new high-rise to lower retrofit in concrete and steel

Hospital with 432 dampers, 2020

800 bed hospital

4J Dampers - 300, 400, 500 kN

Significant reductions in story displacements and accelerations felt by the patients and hospital equipment.



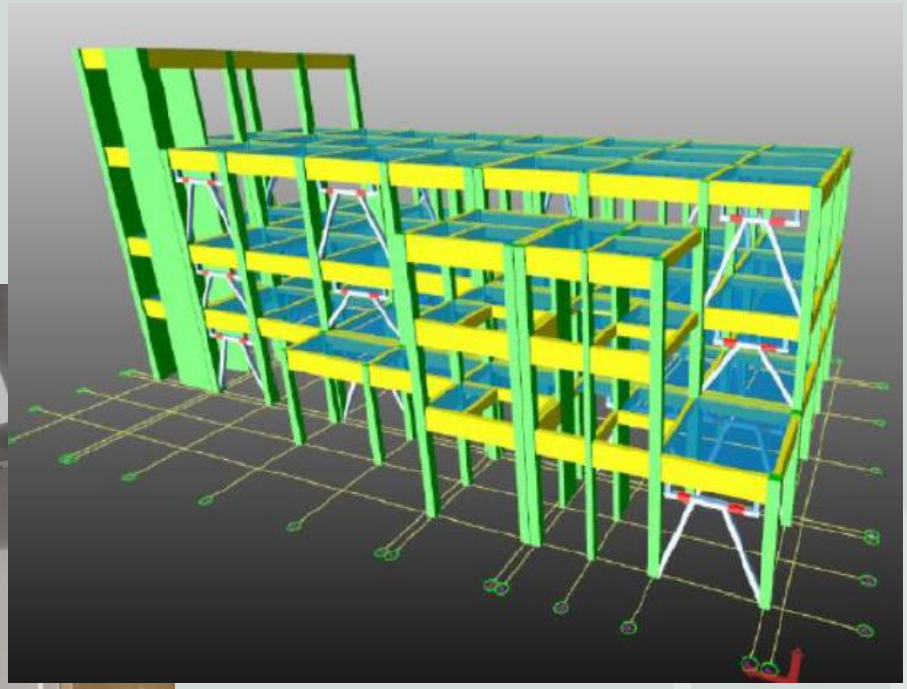
Noor Hospital

No. of Floors: 11 **No. of Dampers: 150** **Capacity :300&500 kN**

Retrofitting of precast building

Retrofitting of Precast building

Retrofitting of RC industrial building, Türkiye



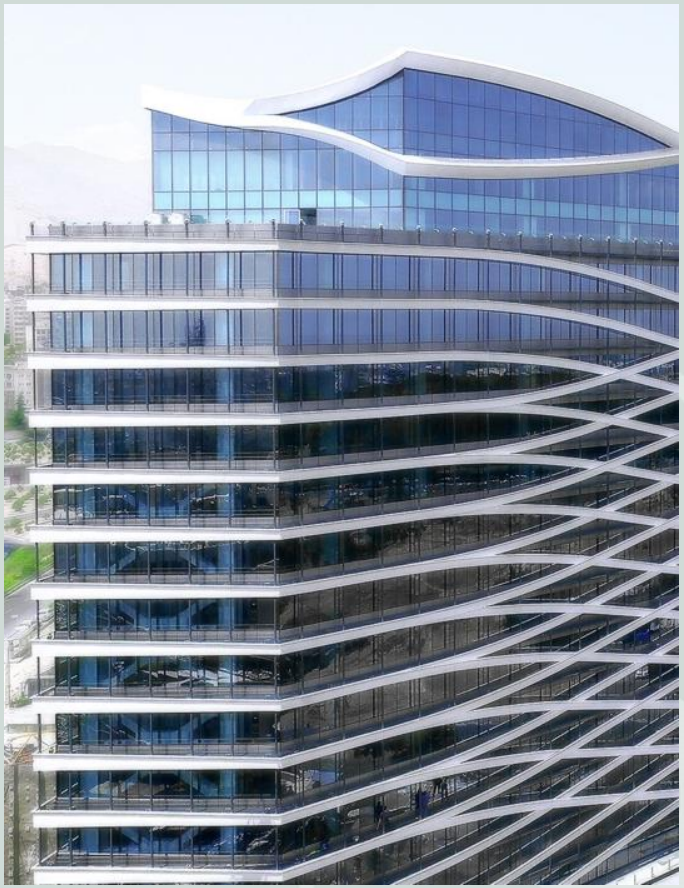
Retrofitting of precast industrial factory

Retrofitting of precast industrial building, food factory

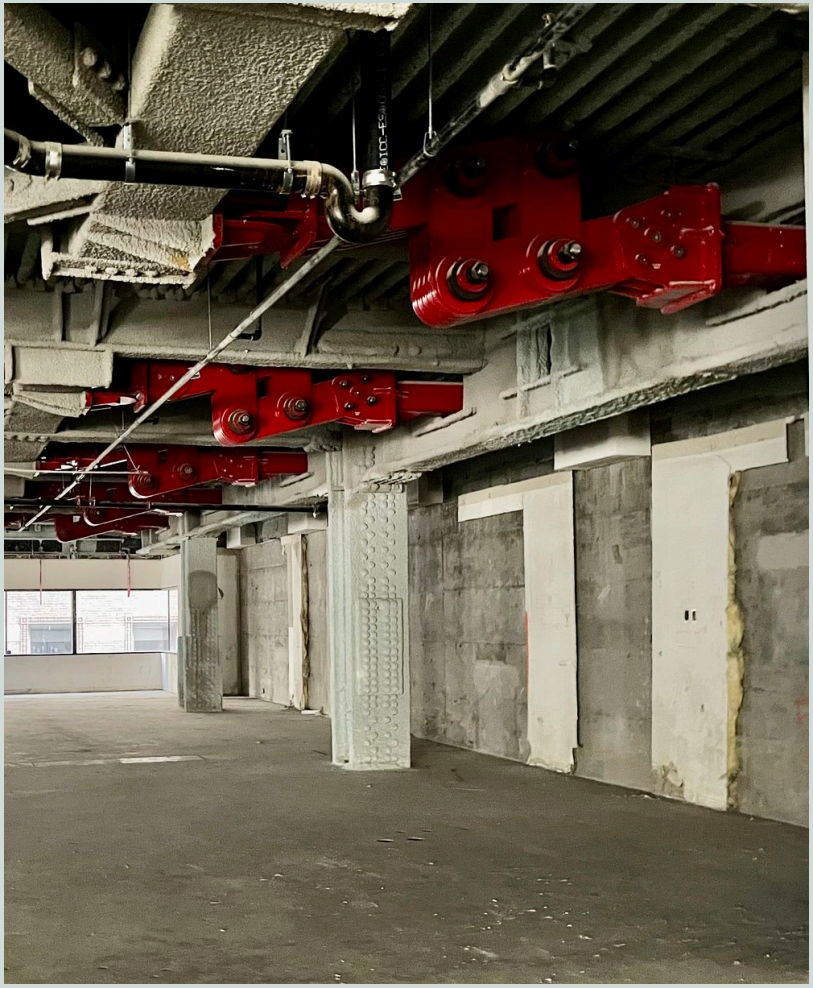
Retrofitting of precast industrial building, sweets factory

New building in Chile
24 floors with diagonal bracing

Retrofitting of 18 story building to 20 story, bank HQ



Project in USA: The Bank of California




DAMPTECH
Earthquake Protection


HOLMEN

Contacts

Dr. Eng. Imad Mualla
Chief Technical Officer
Denmark Tel.: (+45)40592798
im@damptech.com

Thomas Koefoed, CEO Damptech
Denmark Tel.: (+45) 2428 9525
tko@damptech.com

www.damptech.com