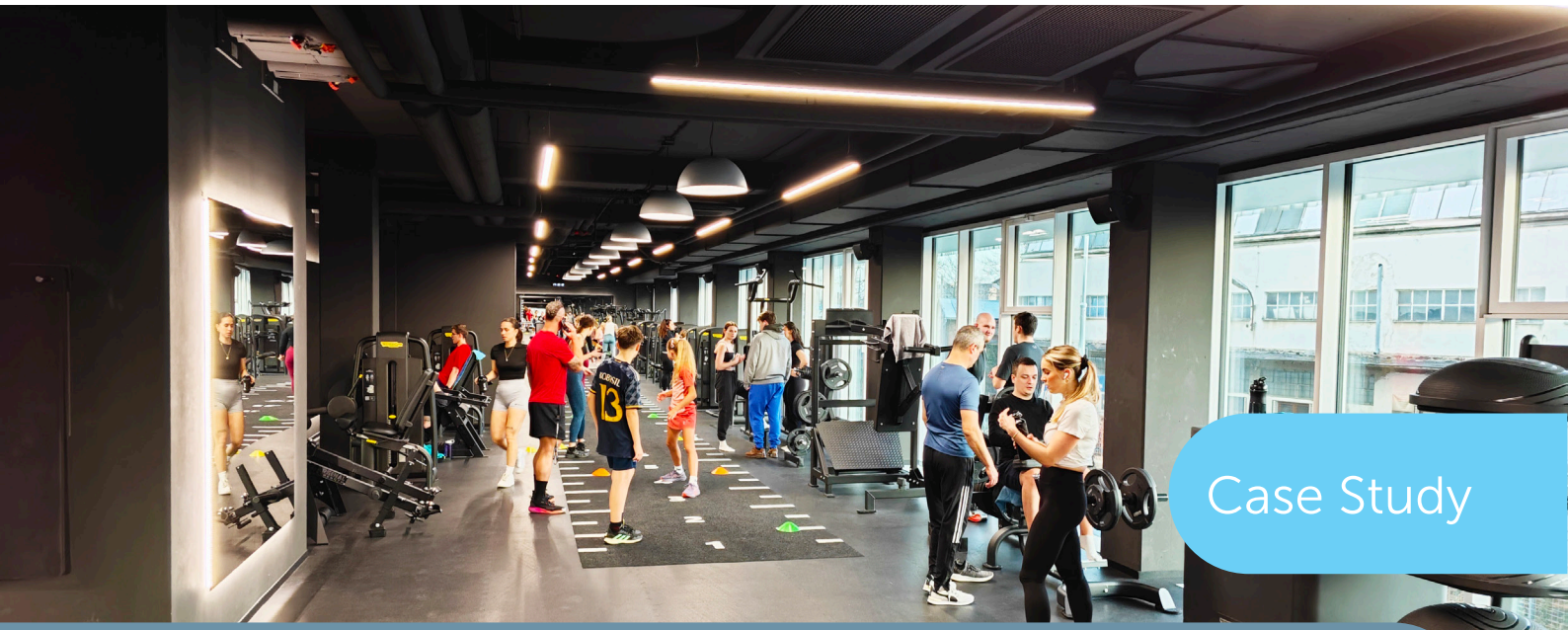
Winning Fitness
Brno, CZ

cdm stravitec
Making your world a quieter place



Case Study

Main Contractor
LERAM building s.r.o.

Architect
TIPRO projekt s.r.o.

Acoustic Consultant
Ing. Karel Šnajdr

Stravigym HP

"High-performance" discrete isolator floating floor system that offers high mechanical resistance and acoustical performance. Suitable for areas with medium impact energy, like strength or cardio areas.

Stravigym XP

Extreme Performance discrete isolator floating floor system specifically intended for use in free-weight areas offering superior structural resistance and acoustical performance.

OVERVIEW

This project is located in a residential building near Brno's main train station and city center.

It involves the development of a spacious fitness facility on the first floor, with views overlooking an inner-block park and, in part, the historic section of the city. The gym is organized into several functional zones to accommodate a variety of activities.

Although the building is relatively new, it was originally designed for office use and later repurposed into a mixed-use space combining residential and commercial functions. As a result, integrating a high-impact facility like a gym within the residential structure posed specific challenges, particularly regarding noise and vibration control.

It was essential to prevent the transmission of impact and structural noise to the apartments located above the gym.

This context significantly increased the importance of meeting comfort and acoustic performance requirements to ensure the well-being of the building's residents.

AT A GLANCE

CHALLENGES

- Need to have a leveled floor between areas with different demands and consequently different floor systems.
- Need to mechanically fix some of the equipment such as racks and increase mechanical resistance of specific zones with higher weight drops.
- Compliance with residential acoustic limits required effective attenuation of fitness impacts and vibrations.

BENEFITS

- Different solutions across various zones were possible to level using overheight.
- Quiet gym operation with effective noise and vibration isolation for the residential units above.
- Reinforcing the load distribution layer made by wooden boards where anchoring equipment is needed.
- High shock absorption in the free weight zone thanks to Stravigym XP with GympactLayer-45, reducing noise from dropped weights.
- Zoned system design allowed tailored solutions for each gym area, balancing performance and

SOLUTION

CDM Stravitec was involved in the design phase, requiring close and prompt collaboration with the architect, acoustician, and building contractor. This included the provision of test floor samples for on-site acoustic measurements, helping to determine the most suitable solution for each gym zone and use case.

Based on these tests and CDM Stravitec's expertise, different floating floor systems were installed throughout the gym: Stravigym XP with Springs and GympactLayer-45 in the Free Weight Zone, Stravigym HP with Springs in the Strength Zone, Stravigym HP with Pads in the Cardio Zone.
In addition to meeting stringent acoustic requirements, several technical challenges had to be addressed.

These included accommodating service and cable routing within the system void, ensuring level transitions between different zones by integrating wooden beams as overheight to match build-up heights, and reinforcing specific areas of the floor to support heavy equipment such as power racks.

Thanks to this tailored approach and close coordination between all stakeholders, the final solution successfully met the acoustic, functional, and structural demands of a modern gym within a residential environment.

171 m² (1.8 ft²)	492 m² (5.3 ft²)	179 m² (1.9 ft²)
Stravigym XP with GympactLayer-45	Stravigym HP on Springs	Stravigym HP on Pads

REUTENBEEK 9-11, 3090 OVERIJSE, BELGIUM
T +32 2 687 79 07 / F +32 2 687 35 52
INFO@CDM-STRAVITEC.COM / WWW.CDM-STRAVITEC.COM