

Condomínio Fábrica 1921

Lisbon, PT



Case Study



Property Owner

Teixeira Duarte



Main Contractor

Teixeira Duarte



Architect

Broadway Malyan



Structural Engineer

Quadrante



Acoustic Consultant

Energia Técnica

OVERVIEW

FÁBRICA 1921 is a mixed-use residential development at the heart of the Benfica district in Lisbon, Portugal. Built on the site of a former textile factory, the new condominium which retains part of the historic facade, project features over 160 one- to four-bedroom apartments inserted in more than 4000 m² of social, leisure, and well-being areas. The development houses a gym, a rooftop pool, a kid's club with access to a playground, and outdoor spaces for relaxation.

Building acoustic standards has always been a major concern since the building design has started. FÁBRICA 1921 is located minutes away from the city centre and is surrounded by numerous cafés and restaurants.

Stravifloor Mat, Stravigym HP

- Low-profile roll-out isolation solutions made of regenerated materials, providing cost-effective structure-borne noise protection (Stravifloor Mat)
- "High Performance" discrete floating floor with high mechanical resistance and acoustical performance (Stravigym HP)

Stravifloor Deck

- High-performance low-profile deck floor system with high bending stiffness for both concrete and light wooden construction



SOLUTION

To reduce the impact noise, 11.000 m² of high-performance [Stravifloor Mat-W8_a](#) resilient rubber mats were installed as an underscreed for all the floors in the building (common areas). The wavy profile of the underscreed helps reduce the contact area to the subfloor, thereby reducing the dynamic stiffness of the material and maximizing its performance.

A [Stravifloor Deck](#) floating floor using dovetailed metal deck sheets on which a thin concrete slab is poured to form inertia blocks which decouple the rooftop swimming pool from the rest of the building.

FÁBRICA 1921, with its focus on healthy living, features two gyms equipped with discrete [Stravigym HP](#) gym floating floors and our patented [dBooster[®]](#) technology. These 'High Performance' floors are engineered to control vibrations and minimize low-frequency impact noise generated by various fitness activities such as running, using weight machines and certain types of free weights.

AT A GLANCE

CHALLENGES

- Roof top swimming pool at 8th floor over apartments
- Two gyms floors at 7th floor located alongside apartments

BENEFITS

- Effective reduction of the transmission of vibrations and structure-borne noise, associated with people diving and playing in the rooftop pool, to the apartments
- Low profile solutions designed to isolate impact noise from different activities, being weight drops in the gym or people walking in common areas of the building

11.000 m²
Stravifloor
Mat-W8_a

173 m²
Stravigym HP
with dBooster[®]

86 m²
Stravifloor
Deck

