Theater Zuidplein ‘Kunstenpand’
Rotterdam, NL

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Making your world a quieter place

Property Owner
City of Rotterdam

Main Contractor
Heijmans, Ballast-Nedam, Baens afbouw

Structural Engineer
Zonneveld ingenieurs b.v

Acoustic Consultant
DGMR, NIEMAN

Architect
De Zwarte Hond, BURO M2R

OVERVIEW

Zuidplein Theatre (Kunstenpand) is the new cultural hotspot of Rotterdam. Part of the ambitious ‘Hart van Zuid’ development surrounding the Ahoy Arena and Zuidplein Shopping Center, the 12.500 m^2 Zuidplein Theatre houses a lobby, two auditoriums, a café-restaurant and part of the Rotterdam Library.

The semitransparent veil-like façade is designed to draw passersby in, making art and culture accessible to a wider audience.

Stravibase SEB, VHS & Fix

- Designed to support very large loads whilst being significantly smaller in plan dimensions than traditional elastomer bearings (Stravibase VHS)
- Provides a high degree of structural stability and up-lift force resistance due to the precompression controlled device (Stravibase Fix)

AT A GLANCE

CHALLENGES

- Various solutions were needed to effectively manage noise levels, ranging from elastomeric bearings to acoustic ceiling hangers
- Relatively high loads per supporting surface

BENEFITS

- Quick and easy to install solutions
- On site supervision
- Effectively and safely manages high-impact energy

SOLUTION

Due to strict noise regulations, the two auditoriums are positioned on the metro side, furthest away from the residential buildings. But in order to achieve the high level of sound insulation required, various CDM Stravitec noise and vibration solutions were designed that meet the load specifications and acoustic requirements.

Stravibase SEB elastomeric bearings support the auditorium floors, while the walls are connected to the steel structure using the Stravibase Fix system. Stravilink CC60 acoustic ceiling hangers and elastomer wall strips add to the design.

For the roof construction of the small auditorium, the Stravibase VHS system was used for the relatively high loads per supporting surface. This system can absorb high loads and at the same time provide excellent acoustic performance.

Since the quality of the solution also depends on the execution, Delta-L and CDM Stravitec not only designed and supplied these systems, but also gave installation instructions on site and carried out inspections of the installation of the systems.

Photography: Scagliola Brakkee

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