

SUCCESS STORY

VIBRATION ISOLATION

PROJECT DATA

Brief description

Vibration isolation of seven ventilation systems.

Requirement

When several HVAC systems are installed in the technical centre of the new DFB and its academy, the transmission of vibrations into the surroundings will need to be minimized.

City, year

Frankfurt am Main, 2020

PROJECT DESCRIPTION

The new DFB and its academy, which is constructed currently, based on the designs of the architectural firm kadawittfeldarchitektur, should be completed by the end of 2021. On the site of the former Frankfurt racecourse, nine hectares of building floors are to be developed where administration and sports will be combined in future. In the course of the new construction, several HVAC systems were to be decoupled in the technical centre. The purpose of this measure is to protect the adjacent building areas against vibrations and secondary airborne noise caused by the HVAC systems.

SOLUTION

To solve the vibration issue, the HVAC systems are installed on intermediate foundations resting on vibration isolating Calenberg Cisador® 80 elastomeric bearings.

Cisador® 80 strips are layed under the intermediate foundations before concreting, with the free areas between the bearings being filled with mineral wool. These areas served as permanent form-work for concreting the foundations on site. With Cisador® 80 in 60 mm thickness a tuning frequency of approx. 10 Hz could be achieved.

The new DFB and its academy, Frankfurt am Main



Visualization ©kadawittfeldarchitektur

