



#### Situation

The integration of gyms in mixed-use buildings provides short distances as well as modern infrastructure but also requires effective sound control solutions. With the newly constructed functional building of football club SSV Jahn Regensburg, the goal was to combine offices and physiotherapy rooms downstairs and a gym upstairs on the second floor. Another highlight is the press room right next to the fitness area with its glass front and view over the entire football pitch.

The architectural design shows that there are sensitive areas adjacent to the planned gym which required a specific concept of noise isolation and thus, the challenge was clear: An excellent sound control solution without any compromises to the sports related properties of the flooring was needed. Fitness and Acoustics – the link of two core strengths of **REGUPOL**.

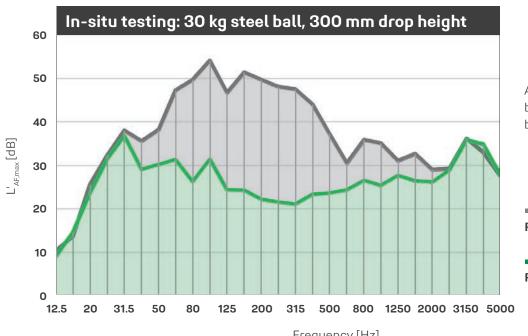
## Project details

- Net Floor Area 1,100 m²
- Gym area 200 m²
- Press room 80 m²
- Physiotherapy 30 m²
- Offices 45 m²



# WE'VE GOT IT COVERED WITH

# **REGUPOL SONUSFIT**

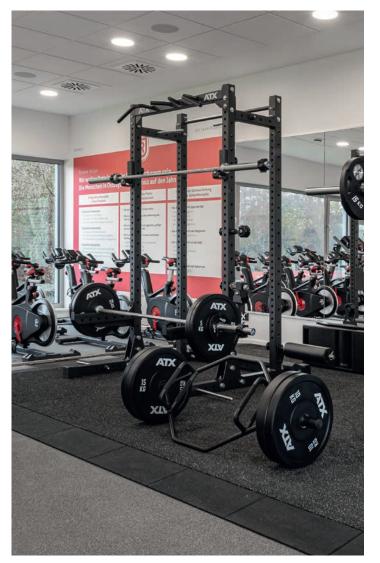


At approx. 2000 Hz the background noise level has been reached.

**REGUPOL** everroll impact

**REGUPOL** sonusfit m-series 517

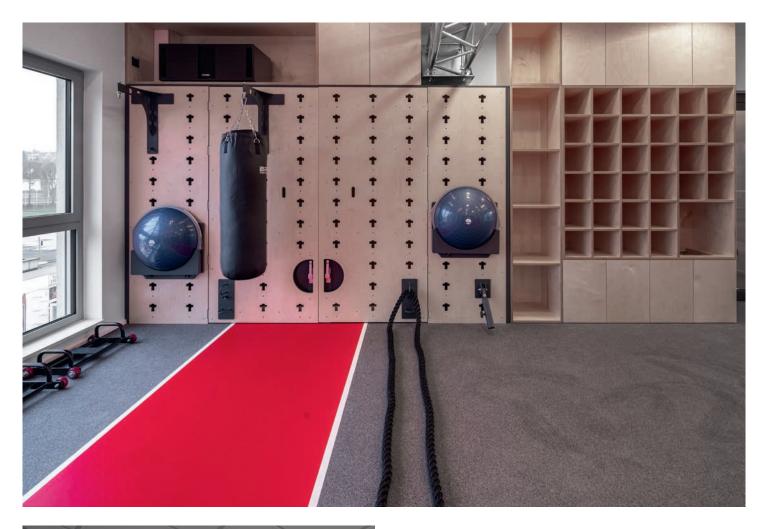
Frequency [Hz]

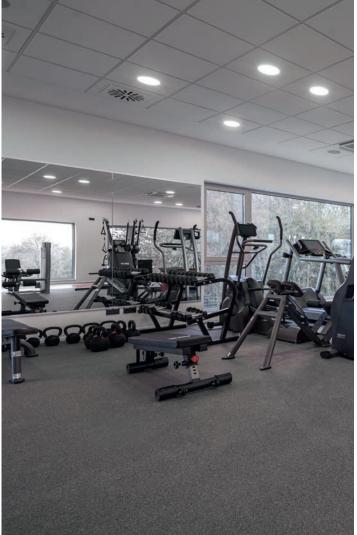


#### The world of acoustics

Thanks to our **REGUPOL sonusfit c-series** the conflict-free use of the sensitive areas like the offices, the physiotherapy rooms or the press room is possible. Incorporated in this customized system is a floating screed with a low resonance frequency which isolates disturbing noise from weight dropping or sprint exercises effectively, especially in the low frequencies. The various requirements in the cardio and free-weight area can be fulfilled successfully with this individual solution. To allow for the specific need of sound insulation in the free-weight area, our system REGUPOL sonusfit m-series 517 completes the floor build-up. The sprint- and cardio area has been fit out with our REGUPOL everroll impact fitness flooring. It is the combination of both the low frequent screed design and the different flooring solutions that unifies the various uses within the building successfully.

The result of the acoustic test was a sound pressure level of  $L'_{nw}$  25 dB, tested on the bare screed without any floor coverings. This almost unmeasurable result was extraordinary even in the low frequency range below 100 Hz as the spectrum adaptation term  $C_{_{\rm I,50-2500}}$  was only 3 dB. The excitation of the build-up with realistic testing devices confirmed the excellent acoustical performance of the system even under heavy impacts and especially in the low frequencies. A 30 kg steel ball was dropped from 300 mm height to simulate the professional workout.





#### The world of sports

For the professionals from SSV Jahn Regensburg the functionality of the floor is a must to train successfully and thanks to our **REGUPOL everroll** fitness flooring there are no compromises to be made. The floor covering is always part of our **REGUPOL sonusfit** systems and provides an enormous force reduction which not only protects the athlete but also reduces the impact onto the floor and therefore the energy into the building structure significantly. Additionally, the systems do offer an excellent resilience and support sprinting, lifting and bodyweight exercises.

#### Conclusion

The low frequent screed of the **REGUPOL sonusfit c-series** in combination with the flooring system **REGUPOL sonusfit m-series** reduces the sound level drastically. Moreover, the challenging requirements for fitness related properties of the flooring are met by selecting specific flooring build ups in different areas of the gym which enables the professionals to train safely and effectively.

Stephan Burmeister, Managing Director of SSV Jahn Regensburg, confirms the success story, saying: "Our athletes are enjoying the training on the new **REGUPOL** fitness floor which also fulfills our expectations regarding the noise reduction."



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