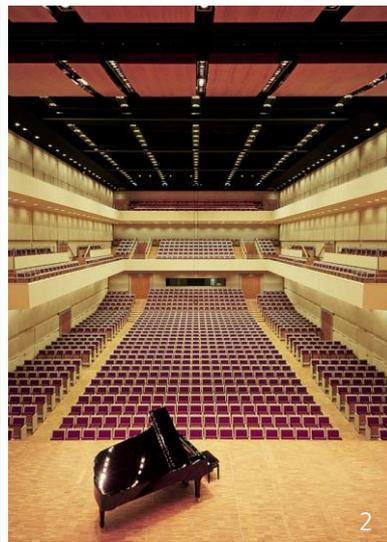




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## GRAFENEGG AUDITORIUM, AUSTRIA

**PROJECT.** The Grafenegg Auditorium is the perfect example of a traditional rectangular hall layout – even though there is hardly a single right angle to be found. The standard rectangular hall for music performances has to be long and high and not too wide.

**ACOUSTICS.** As a medium-sized venue, the Grafenegg Auditorium has a seating capacity of about 1,100. Alternatively, the hall can seat up to approx. 1,300, and its seating capacity may also be reduced to 900. By installing variable sound-absorbing surfaces, there are no acoustical restrictions for the types of performances taking place in the concert hall. The rows of seats are arranged on three levels: the stalls area and the two galleries. Like in old concert halls, the stalls area is largely unraked in order to also make possible other types of events. This does not really affect the audience's auditory experience; however, some resulting sightlines are not absolutely perfect.

To accommodate the hall's ventilation system, a perforated double-floor construction was installed in some parts of the stalls area. For acoustical purposes, the perforated area is small enough to avoid any undesired sound absorption, yet at the same time large enough to ensure the required air supply. This way, in combination with slow flow velocities, all disturbing noise is avoided. Before installation, the acoustical effectiveness of this double-floor construction had been tested and optimized in Müller-BBM's laboratories.



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### CLIENT

Grafenegg Kulturbetriebsgesellschaft mbH, office St. Pölten

### ARCHITECT

Mag. Dieter Irresberger, Vienna, Austria

### PROJECT DATA

Completion in	2008
Gross volume	11,000 m <sup>3</sup>
Cost of construction	25 million euros

### SERVICES RENDERED

Room acoustics

Consulting for architectural design competition, room acoustics simulations, reverberation chamber measurements of floor with air-ducting system, accompaniment of initial operation period, final acceptance testing of ventilation system, reverberation chamber measurements of seating, design of concert hall seating



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1 View from the first gallery to the stage

2 View from the choir balcony

3 Lateral wall in the left-side stalls area: sound-scattering, reflecting wall panels

4 Lateral wall in the left-side stalls area: sound-scattering, reflecting wall panels

5 Entrance foyer to the auditorium

Pictures: Alexander Eugen Koller