

Auditoria

10th

Anniversary Edition

Annual 2013

Festival of light

How Busan Cinema Center has brought glitz and glamour to a culture-loving South Korean city

Inside:

Herzog & de Meuron's Elbphilharmonie

TPC's royal appointment in Muscat

Singapore's Star in the making

QNCC: a work of art in the Doha desert

In perfect harmony

Traditional Chinese design meets contemporary German architecture at the new Qingdao Grand Theatre

The theatre is designed to be suitable for hosting a variety of performance events

In the East China city of Qingdao, between the Lao mountain area and the Yellow Sea, stands the new Qingdao Grand Theatre. Designed by gmp Architects von Gerkan, Marg and Partner (gmp), the building includes an opera house that accommodates an audience of up to 1,600, a 1,200-capacity concert hall and a multi-purpose hall with 400 seats.

The theatre's halls and facilities make it ideal for a broad variety of events, such as classical concerts, operas, musical and ballet performances, acrobatics and many other events. World-famous orchestras – including the Berlin Symphony Orchestra and the Moscow State Orchestra – gave guest performances in Qingdao shortly after the inauguration, consolidating the theatre's international standard.

Architecture and acoustics

The venue's acoustic design was developed and refined by Müller-BBM in close collaboration with gmp. The key concept was to divide the two main functions of the theatre into separate complexes, which are connected by a light roof construction. The shape of the opera hall is a mix of the ancient horseshoe-style and modern Chinese theatre design. With an inclined stalls area, seating boxes and two balconies, the hall meets modern expectations in terms of sightlines and even sound distribution.

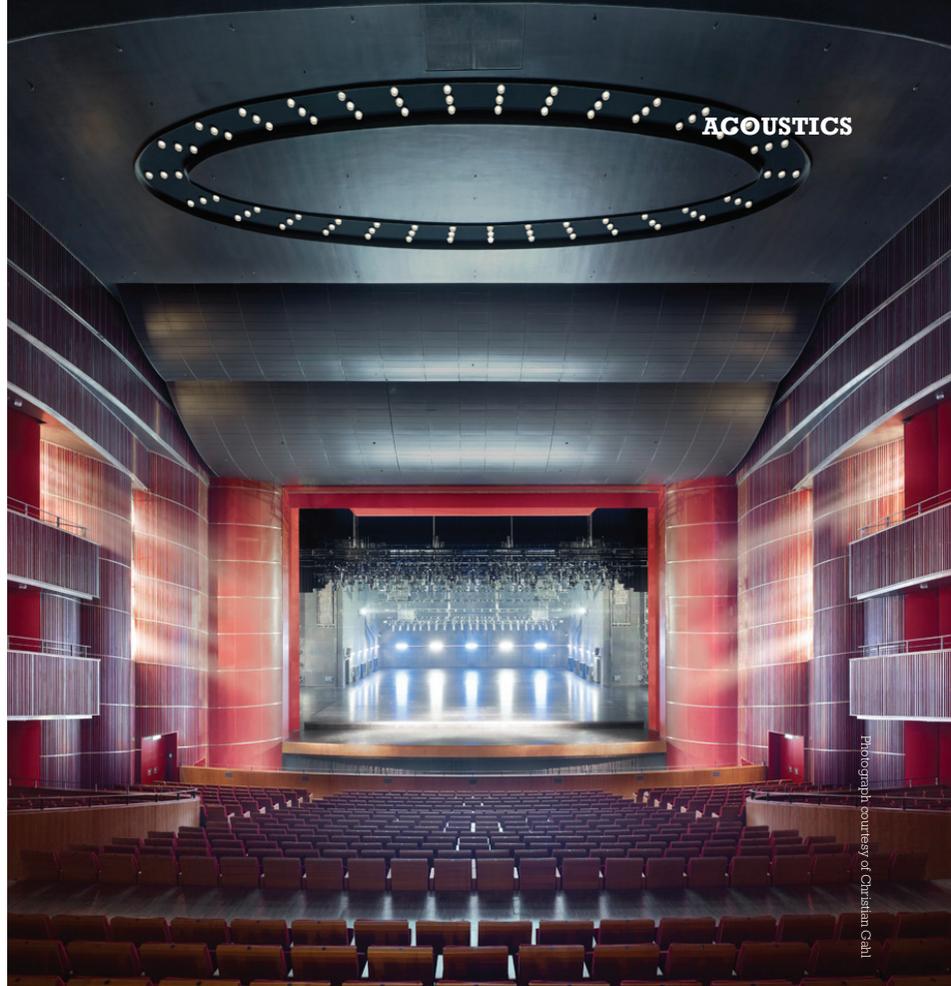
The reverberation time was adjusted to around 1.9 seconds to create a richness of sound for the orchestra, although the definition for a singer's position is rather high. The loudspeakers are positioned behind movable flaps inside the ceiling and are mainly used for speeches and announcements. These flaps are closed during performances to allow for natural acoustic transmission. The concert hall was planned as a perfectly proportioned classical shoebox with a narrowed stalls area surrounded by balconies. The volume of approximately 13,500m³ inside the hall enables a reverberation time of 2-2.2 seconds for classical symphony performances. The materials and surface design were purposefully selected to harmoniously combine architectural and acoustical design.



After the decision was taken to use the hall exclusively as a guest performance venue, the planned orchestra rehearsal room was redesigned into a multipurpose hall for different kinds of performances. With the aid of an architectural acoustic enhancement system – which as of yet hasn't been installed – even chamber music performances can be performed in this small hall.

As a result of the 1:1 sample mock-ups on the building site, which are rather unusual in China, the acoustically sophisticated coverings of the walls, balustrades and ceilings are of excellent quality. To ensure this high standard, the German architectural and acoustic designers guided the local planning partners during the whole planning and building process, until the project had been successfully completed. ■

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Photograph courtesy of Christian Gahl

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