

Vivid sounds, moving shapes

A Catalan take on Venetian blinds helped create a flexible theatre and performance space in Perpignan, France

The Théâtre de l'Archipel's curtains are designed to improve the venue's acoustics

The brief for the new Théâtre de l'Archipel in Perpignan in Southern France asked for a theatre designed as a house for high-profile drama productions (being part of the national network of Drama Theatres), as well as a performing arts centre for Catalan culture. From the onset of the project, one of the key questions therefore was how to combine the acoustic requirements for an intimate drama theatre for non-amplified speech with those – both in terms of audience capacity and acoustic volume – for larger events (music, traditional dance, etc).

The acoustic concept, developed in close collaboration with Ateliers Jean Nouvel and Brigitte Metra Architects from Paris, as well as theatre planners Ducks Scéno, features a

sound-reflective acoustic curtain as a 'room divider', allowing a significant reduction of the size of the room both spatially and acoustically. In its largest configurations, the room has a total seating capacity of 1,099 distributed over a main floor parterre and a single balcony (both rear and side balconies). In order to reduce the size of the room and create an acoustic quality suited to non-amplified speech, a system of two independent 'screens' can be lowered from the ceiling, closing off the balcony as well as all seats located under the balcony, resulting in a single-level classical proscenium theatre with 636 seats.

One of the screens consists of PVC-coated fabric, sufficiently heavy enough to reflect the required mid- and high-frequency components for good speech intelligibility and to create an intimate acoustic environment for drama. The other screen consists of precisely shaped wooden slats that can be lowered in front of the sound-reflective acoustic screen, following the principle of a Venetian blind. The horizontal wood slats provide an architectural room boundary and create acoustic reflections back down to the audience, enhancing early acoustic energy in the smaller configuration. The screen is designed to avoid excessive absorption or resonance. The wood slats can also be lowered with no reflective curtain behind, creating a visually intimate



Photo: Kahle Acoustics



environment within the larger acoustic volume. In addition, to adapt the acoustic quality for amplified events, variable acoustic curtains can be deployed on the entire side walls (through openings between the side balconies and the walls), and in front of the rear walls on both levels. For large unamplified events, all absorptive and reflective curtains are stored above the ceiling of the auditorium. The curved outer walls become visible and acoustically active. Their pseudorandom sculpted shapes are designed to reflect sound in a diffuse manner and suppress unwanted focusing.

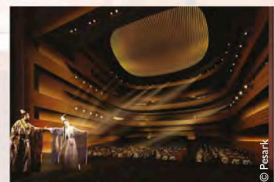
During the construction phase, the artistic direction took advantage of the possibilities offered by the design – being more versatile than

required by the original brief – to assign a stronger importance to the programming of concerts (both amplified and unamplified) and opera productions.

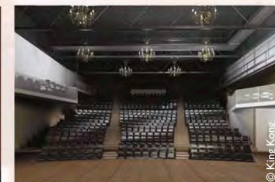
The new Théâtre de l'Archipel also houses a 400-seat black box, a rehearsal room, workshops, storage spaces, dressing rooms and offices. The various spaces are housed within five separate buildings connected by two glass foyers. The theatre opened on 10 October 2011 with a specifically commissioned show, followed by a full season of varied performances taking full advantage of the flexibility and potential of the space. ■

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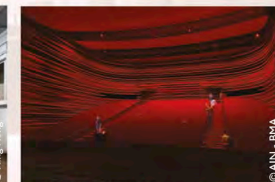
OPENINGS 2011



Opera House - Wuxi China



Concert Hall Jazz in Marcillac - Marcillac France



Théâtre de l'Archipel - Perpignan France

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Fine acoustics is not there to be seen, it should blend with the architecture

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