

### Dalian International Convention Center (DICC) equipped with Kling & Freitag



The Dalian International Conference Center (DICC) China, which was designed by Austrian star architects Coop Himmelb(l)au, is located at the eastern dock in the industrial area which is locally known as “Diamond Harbour”. With more than ten five-star hotels, the industrial area at the eastern dock is also the main venue for the Davos Summer Forum in China. The project was funded by Dalian’s government, and covers an area of 4.3 hectares. The DICC is an international conference, cultural and business centre of superlatives, where conferences, exhibitions and events are held. With its unique shape and façade, the building is already a landmark for the Dalian area.



Overall, the DICC consists of an underground floor and four upper floors. Inside, there is a large theatre and 34 meeting rooms of various sizes which are designed with capacities of from 20 to 200 people for all kinds of meetings, banquets, shows, launch events, corporate events and other multifunctional purposes. There is also an exhibition area of several thousand square metres, as well as the large theatre with 1,900 seats and a banquet hall with 2,500 seats.

Müller BBM designed and implemented the acoustics in the theatre. With precise spatial analysis, which was necessary for the distinct, modern architectural design made of steel and glass, considerable emphasis was placed on a good sound concept. The sound system should be suitable for an extremely wide range of operas, ballet, musicals, classical and modern concerts and also for meetings. For investors, it was very important that the system offered a high dynamic range and correspondingly high sound pressure. The positions of the speakers were simulated before implementation to make further improvements prior to construction.



The Kling & Freitag sound system was selected on the basis of these requirements. In addition to the main sound system, a VIVACE system was implemented in the large theatre. With this technology, the reverberation time of the room can be changed as needed to flexibly adapt the acoustic ambience of the programme.



The system can also be used as an effect pattern for tuning for concerts of various musical genres, such as classical, jazz, pop, rock & roll, electronic, folk, etc. In addition, the system can achieve a 3D effect sound. Behind the edge of the stage, there are 14 x K&F SONA 5 units, which are responsible for various effects and for the audience directly in front of the stage. Furthermore, 22 x K&F SONA 5 speakers are installed on the handrails of the balcony platforms on the 1st, 2nd and 3rd floors. 39 x K&F CA 1001 units are mounted on the side walls and the rear wall of each platform to achieve the horizontal multi-track playback and the playback of the electronic reverberation of the VIVACE system.



20 x K&F CA 106 units are installed below the balconies to cover the range of sound shadows. 5 x K&F CA 1215 full-range speakers and 3 x K&F SWi 115E subwoofers are hung vertically from the theatre's ceiling to achieve effects such as the voice of God. All speakers in combination form an acoustically perfect 360° hall effect throughout the auditorium, which is almost perceived as the naturally reflected sound.



With 2,500 seats, the large banquet hall of the DICC also serves as the main conference hall for the World Economic Forum “Summer Davos”. The K&F SEQUENZA 10 line array systems are used as the main PA speakers. To the right and left of the main stage of the main conference hall, there are 2 x K&F SEQUENZA 10B subwoofers and 6 x K&F SEQUENZA 10W units which provide precise coverage of the room.



The compact size of the SEQUENZA 10 speaker fits aesthetically well into the architecture of the main conference hall. At each of the outer ends, 2 x K&F ACCESS B10 units complement the system. 24 x K&F CA-1215 speakers are installed in the hall ceiling. The sound system provides clear, good speech intelligibility, which is important for industry events. However, the room also has other daily functions, such as large banquets, and small performance and video projections. For these purposes, 8 x K&F CA 1215 units were installed in the interior side and rear walls. In addition, 8 x K&F LINE 212-9 SP and 4 x K&F SW 215E SP active subwoofers are available in the large theatre and ballroom as mobile systems when needed.

From 11 to 13 September 2013, the first international World Economic Forum Summer Davos was successfully held at the DICC. About 2,100 people from politics, business and industry from over 90 countries took part in the large meetings and conferences. Thanks to the excellent speech intelligibility of the sound, the World Economic Forum Summer Davos was, according to the organizers “not only a feast of good thoughts”, but, thanks to the Kling & Freitag sound systems installed, also a memorable, “feast of good voices.”.

[www.kling-freitag.de](http://www.kling-freitag.de)