

New NEXO-powered Horacka Multifunkcni Arena sets the benchmark for multi-purpose arenas in the Czech Republic

In the Czech Republic city of Jihlava located at the historical border between Moravia and Bohemia, the Horacka Multifunkcni Arena (HMA) is much more than a home professional ice hockey team HC Dukla Jihlava.

Combining facilities for sports, music, education and business, this striking new arena designed by architects Chybík and Křištof studio is already recognised as a benchmark for multi-purpose municipal venues and seen in terms of what other cities in the country might achieve.

With a crowd capacity of 5581 for sports events and 7416 for concerts, the arena boasts a highly advanced AV technology implementation, undertaken by sound, light, video and staging specialists MusicData based in the town of Velké Meziříčí.

“Our work began in 2019, when we were approached by the architects of the Jihlava arena to design and engineer the sound systems, data networks, power distribution, stage technology, and lighting,” reports MusicData Director Tomas Ourednicek.

“From the very early stages of the project, we were guided by the ambition to realise the architects’ ideas. We sought to fully understand them, develop them, and translate them into the world of modern technology.”

“At the same time, we added a number of additional elements and functions. In doing so, we fundamentally influenced both the final appearance of the interiors and the overall technical functionality of the arena,” adds Stanislav Muryc, Chief Designer at MusicData.

The sound system at the Horacka Multifunkcni Arena covers the stands, the playing area, and all areas of the venue, with system design drawing on the extensive experience of MusicData’s installations in similar multifunctional arenas in the country and including repeated computer simulations and acoustic tests carried out directly in the arena.

“We selected a proven concept using elements from the prestigious French manufacturer NEXO, specifically long-throw GEO S12ST-EN54 loudspeakers. The cluster system ensures even acoustic coverage of the stands. Each cluster is also equipped with two NEXO LS18 subwoofers,” explains Ourednicek.

“The NEXO system offers a number of innovative solutions. For example, the patented Hyperbolic Reflective Wavesource (HRW™) and Configurable Directivity

Device (CDD) provide a wide 120° coverage angle, meaning that only eight clusters are required to cover the entire arena.”

Power and processing are supplied by NEXO NXAMP4x4Mk2 Powered TD Controllers providing a total output of 126,000 watts of clean power.

“After the initial system start-up, it was immediately obvious that the sound would be exceptionally clear and very powerful,” says Ourednicek.

The entire system, including a Yamaha DM7 compact mixing console and Yamaha digital matrix is controlled via the state-of-the-art Dante™ data protocol operating over optical, metallic and wireless networks.

Two and a half tonnes of audio equipment are suspended from the truss structure around the stands, with additional loudspeakers installed behind the seating areas and throughout the arena. The sound system also includes delay elements and advanced software that allows it to adapt to current acoustic conditions in the hall.

During the design phase, particular emphasis was placed on achieving the shortest possible reverberation time so that the space could be used universally. Acoustic ceilings and specially designed seating also contributed to this result. The final configuration of the sound system was refined through a series of computer simulations and repeated adjustments.

“There is an extraordinary level of technical detail here. Every word spoken by the announcer is perfectly intelligible throughout the arena and in the backstage areas,” says popular Czech Television commentator Robert Z.ruba, praising the work of the MusicData technicians.

“We always strive to ensure that our solutions are not only visually attractive and fully functional, but also highly practical” says Ourednicek in conclusion.

“We draw on more than 30 years of experience in designing and installing audiovisual and stage systems, as well as touring with artists across a wide range of Czech and European venues.

“This experience gives us a deep understanding of what is truly required. We know what visiting productions need, how they rig and connect their equipment, and what technical conditions they expect. This knowledge proves invaluable every time.”

For further information on MusicData, visit: musicdata.cz

MusicData, Mesto Jihlava, Pavel Bartak pro CHYBIK + KRISTOF







