

WE MAKE SCREENS – FOR AN AUDIENCE OF 18,000 VIEWERS.

Mitsubishi Electric's video cube for the Lanxess Arena.

The Lanxess Arena in Cologne is setting new standards as Germany's largest events hall – now it does the same with its video cube. The video cube, which is probably the largest indoor video cube in the world, impresses tens of thousands of viewers with brilliant and film-free images.



20 tons of high technology floats impressively above the playing field.

36,000 eyes are directed at our screens.

The Lanxess Arena is a superlative events hall: With 18,000 seats, 83,700 square meters of usable space, 1,000 employees, large screens for direct video transmissions, a restaurant, bistro, bars, shops and much, much more.

Various events take place within this impressive structure: From sports to shows, to events and entertainment and even concerts.

The arena has had another attraction since September 2007: the video cube with Mitsubishi Electric technology.

An impressive location – featuring our impressive technology.

Made from four large screens at 27.04 square meters each, the cube is, according to our information, one of the largest and most modern continuous indoor video cubes in the world.

The arena's high requirements for image quality, flexibility, weight and power use led to choosing the AVL-IDT10 LED system from the Diamond Vision series from Mitsubishi Electric.

The new cube should ensure, even with a flexible division of the windows to be displayed, homogenous screens with a continuous surface, exact color uniformity and fine, flimmer-free image quality, since it is simultaneously being used to display scores, for live and VTR shows, repeats and advertisements.

The cube weighs around 20 tons and can display up to eight different video images at the same time. The AVL-IDT10 LED system achieves a brightness of 2,000 cd/m², so it guarantees brilliant images even if there is strong ambient light. Each screen can display more than 16 billion colors.

The AVL-IDT10 components provide extraordinary contrast with their nearly black surfaces. A pixel distance of 10 millimeters ensures high image sharpness regardless of the viewing angle. The AVL-IDT10 system is based on the 3-in-1 LED SMD (Surface Mount Device) technology, where three LEDs are built into one.

The individual modules can be easily combined to create small or large walls and cubes, with no differences between them in brightness or color. This allows for homogenous color representation even for flexible shows with VTR material, live recordings or solid graphics at any time.

The "Color Space Conversion" system developed by Mitsubishi Electric ensures natural color rendering for shows of any kind. It allows for individual colors to be configured independently of one another. Aspect ratios of both 16:9 as well as 4:3 are supported. Lastly, it ensures a correspondingly large image in HD quality useful, for example, for sporting events (the Cologne Sharks call the LANXESS Arena home). The wide viewing angle of 160 degrees means viewers in each and every seat have a perfect view of the cube.

Our teamwork: Upon delivery and installation

Delivered directly from the Japanese city of Nagasaki, the system arrived in Cologne on airplanes and in sea containers. The blocks, which are around 27 square meters each, were set up in six elements (modules) for transportation purposes. The installation process, under the project leadership of Dirk Strohmenger, lasted 14 days and nights. A team of ten engineers from Mitsubishi Electric and Lang AG traveled to Cologne specifically to install the cube. They were supported by the production and technical team of the LANXESS ARENA. Deutsche Telekom provided assistance with

technical and financial expertise in realizing the video cube. The video cube was attached to eight chain hoists with a total length of 40 meters, making it moveable and positionable to the millimeter.

Our conclusion

The new video cube offers many advantages over the previous model used in the Arena. Since it's based on LED technology it's estimated to have a considerably longer lifespan than the old model. LED technology represents a true quantum leap with regards to visual possibilities. The cube weighs 500 kilograms less, meaning that additional cameras or lighting modules can be attached for TV recordings, for example. The AVL-IDT10 system from Mitsubishi Electric creates a continuous surface that can be structured flexibly, with exact color uniformity and natural color rendering. Thanks to the intense brightness of 2,000 cd/m², the cube can be operated at 25 percent brightness without having to compromise on image quality. This protects the LEDs, saves power and also keeps operating costs low at the same time. The new cube is just about maintenance free. However, should maintenance work be necessary, it can be done quickly and easily from both the rear as well as the front side.

