



One of the largest construction projects currently taking place in Germany – the ‘Messehalle 11’ in Frankfurt am Main – uses the GELU air curtain systems made by the company Frico GmbH, which is based in Schlierbach, Baden-Württemberg.

The new Exhibition Hall in Frankfurt chose energy efficient solutions from Frico

The building, which is an architectural masterpiece, requires the style and design of the individual components used in the project to be perfect; in addition to this, all devices installed also have to be truly energy efficient. A competition product was planned and put out for tender. The task at hand was to optimise the individual devices as well as improving and maximising the energy use of the individual types of devices currently available. Approx. 40 individual systems are set for completion.

The concept suggested and offered by GELU-Frico succeeded in optimising the planned parameters further in both design and energy conservation through the intelligent design of details. These important reasons ultimately proved to be why customers, planners and the installation company all decided to choose the Frico product.

The air curtain systems for the exposed main entrance are round devices with a span length of 4.00 m. These devices incorporate the installation ports of the water and electricity connections via side consoles, which makes the entire construction blend in neatly with the interior design concept.

To provide particularly high efficiency, the air intake port is located on the segment directed towards the ceiling. This means that the warm spatial air in the upper part of the building only has to be heated with a smaller delta-t device and thus expensive and valuable energy can be saved. To increase the efficiency of the air curtain flow, the nozzle, which has a long air guidance section integrated in the casing, has been tangentially shifted towards the centre and the entrance opening.

The remaining entrances, some of which have higher passageways, have all been planned with double air curtain systems that have different technical dimensions. This energy efficient air curtain concept was also optimised by Frico, including intelligent design details, and was able to convince with the corresponding arguments.

One of the most important points was that with the double air stream concept by Frico, the intake grilles are installed in the upper part of the casing and the accumulated heat in the upper area of the room is used for the frontal, unheated air curtains as well as for the heated air stream directed at the room. This way a high level of energy efficiency is achieved and energy can also be saved.

Facts - Messehalle 11

The new Exhibition Hall 11 and the Portalhaus will be further unique features of the Frankfurt exhibition grounds – a functional building that reflects the spirit of its time. The hall and the new Portalhaus will be completed in time for the 2009 IAA motor show and will serve as the new entrance hall for the west side of the grounds.

The new exhibition hall will offer over 23,000 square metres of exhibition space and unite innovative functionality with aesthetic charm. The building complex will not only offer the best possible facilities for events of every kind; it will also make the west side of the grounds more attractive and improve the overall view of the city.

Gerlinde Fuss Technical Director



Active in the development, design and sale of air curtain systems for more than 20 years, Gerlinde Fuss rises to new challenges on a daily basis.

She also places a considerable level of importance on consulting services and on providing support in the area of project planning.

Designing and developing forward-looking, market-driven and energy efficient products and services for the customer is very important to her. So is also trying to create standard products which correspond with the latest market developments in terms of design, maintenance and the conservation and sparing of energy.

The most recent air curtain devices are designed in combination with split and/or external units with corresponding condensers. This solution thus enables not only an intelligent use of the excess energy for the heating of the air curtain air, but it also makes possible the connecting to external units on a closed-loop basis.

A further technical solution is an especially low-noise compact device which is both high-performance and extremely efficient. It also offers the option of using low water temperatures (40/35°C) in a highly efficient and energy-saving way.