

Multi-purpose arena uses textile ducting for ventilation, heating and cooling



Multi-purpose arena gives new life to local area

The municipality of Nyköping in Sweden wants to attract new citizens. As a means to achieve this goal, they have built a multi-purpose arene of 40,000 m² in total. The textile based ventilation systems by KE Fibertec have been installed in a multi-purpose hall, three training courts, and a gym.

FACTS:

Consulting engineers:	K-Konsult Installation Sörmland AB
Contractor:	Ventilationsprojekt i Nyköping AB
Materials:	Svante Lundbäck AB / KE Fibertec AS

Even air distribution and healthy indoor climate

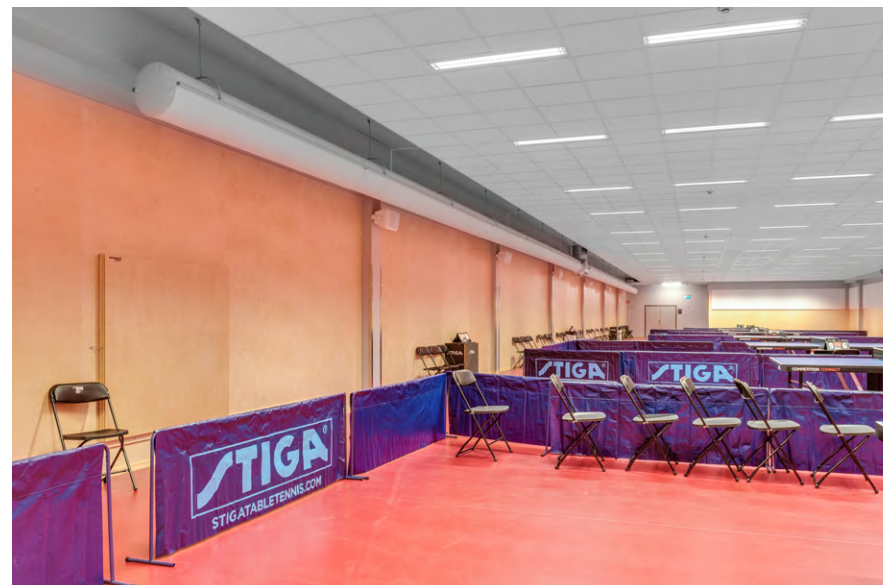
In all facilities designed to hold a large number of people and physical activity, a constant air exchange is of vital importance. At the same time draught must be avoided, and for this purpose textile ducts are particularly suited as the air is distributed evenly through the entire length of the duct.

Consulting engineer specifies textile ducting

K-Konsult Installation Sörmland AB were consulting engineers on this project. They specified textile based ventilation for all halls based on their positive experience with this type of ventilation. According to them the whole process was a success, right from point of installation to fully functional ventilation system.

Flexible solution with flexible materials

The large variety of activities in a multi-purpose arena such as this makes high demands on the air distribution and also demands on the indoor climate. It requires great accuracy in the layout phase and makes high demands on the ventilation product.



TECHNICAL DATA OF ARENA, TRAINING AND TABLE TENNIS COURTS:

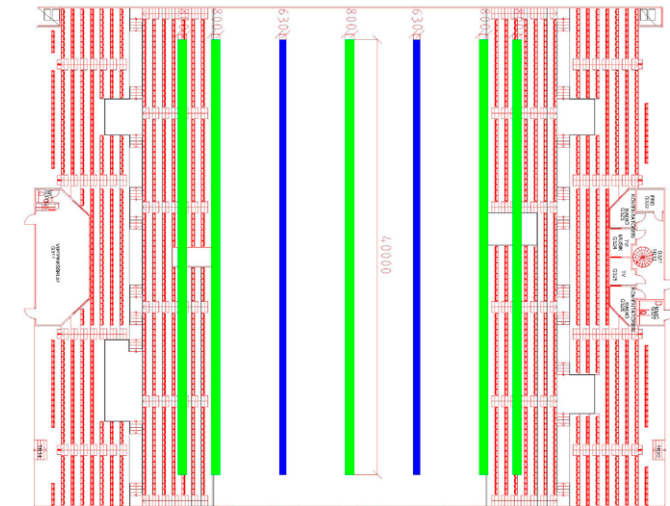
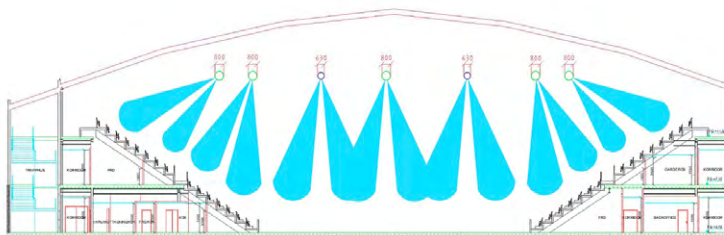
	Dimensions:	System:	Colour:	Volume of air l/s each:	Pressure loss (Pa):	Suspension:
Arena	5 x 800 x 40000	KE-DireJet®	Dark grey	3300/3400	91/96	DualArch
	2 x 630 x 40000	KE-DireJet®	Dark grey	1900	93	DualArch
Training courts	4 x 630 x 40000	KE-DireJet®	Light grey	1300/1500	97/101	DualArch
Table tennis court	1 x 400 x 18000	KE-Inject®	Light grey	615	65	DualArch
	1 x 400 x 20000	KE-Inject®	Light grey	685	66	DualArch





Fresh air in multi-purpose arena

The venue will host various events, such as handball, soccer, concerts, trade fairs etc. and has a maximum capacity of 3,000 spectators. The textile ducts are used for ventilation and heating and operate on four levels to ensure correct temperature and CO₂ level in the entire arena. The nozzles of the KE-DireJet® system are designed for directional airflow and will deliver the air into the occupied zone.



Level 1:

Basic flow of 3.8 m³/s distributed on the blue ducts.

Level 2:

Begins at too high CO₂ level or temperature. Totally 10.6 m³/s distributed on the blue ducts and the two green ducts above the beams.

Level 3:

Begins at too high CO₂ level or temperature. Totally 17.4 m³/s distributed on the blue ducts and the four green ducts above the beams.

Level 4:

When required, 3.3 m³/s air is distributed from the green duct in the middle, generating a total airflow of 20.7 m³/s.



KE Fibertec AS is market leader in Textile Based Ventilation. We create good indoor climate through our tailored textile ducts for installation in sports arenas, offices, laboratories, schools etc.

Textile ducts are customizable, easy to install, washable, hygienic, and come in all shapes and colours.

For more information please visit our website: www.ke-fibertec.com



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