

## Case: Kamstrup A/S, DK

# Indoor Climate Management with KE Hybrid Systems



*KE Inject textile ducts with laser-cut orifice holes to control the air distribution*

Kamstrup A/S is a Danish full-scale supplier of measuring solutions for remote management of energy and water consumption for energy companies, waterworks etc.

In connection with a refurbishment of the factory in 2011 Textile Based Ventilation and cooling was established in a storage room and a production facility.

**FACTS:**

Contractor: Kamstrup A/S  
Consultant: KE Fibertec AS  
Installer: Glenco A/S



### Active high impulse system for mixing ventilation

All textile ducts are round and made of KE Inject material which is a permeable textile material with groups of small orifice holes in the surface. Technically, the KE Inject system may be regarded as an active high impulse system of mixing ventilation.

The KE Inject System is suited for both cooling, ventilation and heating and KE Fibertec markets three types of KE Inject Systems: Low Velocity, Medium Velocity and JET which is characterized by a patented orifice pattern in the longitudinal direction of the duct.

#### TECHNICAL DATA:

Year of construction: 2011  
 KE Fibertec system: KE-Inject system  
 Colour: Light grey (RAL no. 9002)

#### Room 1:

Air volume: 3,600 m<sup>3</sup>/h in each duct  
 Dimensions: Ø 500 mm x 32,550 mm (3 ducts)

Air volume: 2,200 m<sup>3</sup>/h in each duct  
 Dimensions: Ø 500 mm x 18,100 mm (1 duct)

Suspension: SafeTrack rails  
 Material: Trevira CS (fire retardant) HDC

#### Room 2:

Air volume: 4,250 m<sup>3</sup>/h in each duct  
 Dimensions: Ø 500 x 46,900 mm (4 ducts)

Suspension: SafeTrack rails  
 Material: Trevira CS (fire retardant) HDC



### Control of the air distribution through orifice holes

By changing the design of the holes KE Fibertec can control the air distribution. If you need shorter throws and high degree of mixing, you may apply the patented KE Inject Low Velocity System with large intervals between the orifice groups.

Similarly the KE Inject JET System with small intervals between the orifice groups apply where the air has to travel over a long distance.

”

#### Project Manager Brian Hermansen, Glenco A/S:

*We have had a great co-operation with KE Fibertec for a number of years and we have good experience in using textile ducting. The ducts are tailored to fit the room and its function which will secure a good indoor climate for the employees in the company.*

*At Kamstrup there was a room with several machines that would create a high heat load, however, by taking this into account we were able to dimension a precise cooling thus creating a comfortable and draught-free working environment.*

”





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](http://www.ke-fibertec.com).

### Draught-free solution for a good indoor climate

The solution in the production facility was quite a challenge as the client requested a low inlet temperature, 8 degrees below the temperature in the rest of the room and still maintaining good comfort.

To get an even distribution of the cold air, laser-cut holes were made in the textile ducts which gave a good indoor climate for the staff operating the hot machinery.

The long textile ducts are installed in 5.5 metres high rooms at 9 metres intervals and this requires a very accurate dimensioning.

For more information, please contact:

#### KE Fibertec AS

Tel.: +45 75 36 42 00

E-mail: [info@ke-fibertec.dk](mailto:info@ke-fibertec.dk)

Web: [www.ke-fibertec.com](http://www.ke-fibertec.com)