

Textile Based Ventilation in Aerial Perspective



Draught-free air distribution and healthy indoor climate

In September 2014 Bel Air Aviation opened up the doors for their new domicile and helicopter hangar in Esbjerg. Six ventilation ducts of each 20 metres provide uniform air distribution in the hangar, and the ducts are fitted with Ø18 mm nozzles that direct the air into the occupied zone below.



FACTS:

Architect: Arkitekterne Vejen Engineer: NIRAS, Esbjerg Installation contractor: Lassen Ventilation Materials: KE Fibertec





Fresh air through 160 nozzles

Bel Air Aviation transports personnel to offshore production facilities in the North Sea. Currently the company owns five helicopters. For the sake of the staff and the valuable machinery, ventilation requirements for the hangar are high.

Each of the six ventilation ducts have been laid out for an air volume of 1,800 m³/h, totally 10,800 m³/h, and suspended in a single Safetrack rail. In order to supply heated air at 11 metres above the floor it was necessary to install a total of 160 Ø18 mm nozzles in the duct surface.

In this way we succeeded in creating even air distribution throughout the 2,500 m² hangar.

TECHNICAL DATA:

Year of construction: 2014

System: KE DireJet® with Ø18 mm nozzles

Colour: Light grey (RAL 9002)

Material: LDC-FR

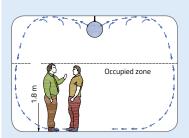
Suspension: Single Safetrack



Consultants recommend textile ducts

The engineering consultancy company, NIRAS in Esbjerg considered both steel based and textile based ventilation for Bel Air, however, on an earlier project, space problems had inspired the choice of textile ducts, and this was also the recommendation in this case.

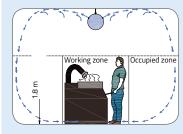
Another decisive factor was the competitive price - "and a visit by a KE Fibertec salesman who was able to give useful guidance on textile based ventilation as well as assisting with the layout of the project," says Civil Engineer Charlotte Damsgaard.



Occupied zone for high impulse systems

As with low impulse ventilation, the occupied zone is not a standardised area, but a zone which is defined from one project to another in consultation with the architect and client.

The occupied zone is often defined as the zone from the floor up to a height of 1.8 m above people who are in a standing position doing their job, while this height is set to 1.1 m for people who are seated.



Working zone for high impulse systems

In the case of industrial premises, it may also be appropriate for high impulse systems to divide the room up into a working zone as the state of the air may vary from the general level as a result of industrial processes.

Heat and pollution sources are often present which require special measures to be able to maintain a satisfactory indoor climate in the working zone. If processes are carried out which cause extreme pollution, textile based ventilation should therefore be supplemented with local extraction vents.



Installation contractor Steen Lassen at Bel Air Aviation's domicile, the former seamen's home in Esbjerg



Textile based ventilation is an excellent solution. The ducts are suspended 100% straight in the rails and that looks good. We always recommend textile ducts. They provide even air distribution and healthy indoor climate and they are both easier and quicker to install than steel ducts.

In the helicopter hangar at Bel Air we had to install ducts that were 20 metres long. At first our fitter was somewhat sceptical, but it soon turned out to be a manageable job.

Steen Lassen Lassen Ventilation ApS





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.

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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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