

Efficient and draft-free air change in restaurant



Low air velocity and a healthy indoor air quality

In Esbjerg, DK, a new restaurant, Flammen, recently opened in the local shopping mall, Broen. In order to ensure efficient and draft-free air distribution, D-shaped low impulse textile ducts have been installed in the kitchen, the mezzanine, and above the buffet/grill.

In the restaurant approx. 6 m above the floor a round textile duct with a few inject holes was installed with the purpose of generating good air mixing and by that a healthy indoor climate.

With textile ducts the customer has obtained a solution that matches both design and interior of the restaurant.



Facts

Installation contractor: Rap Montage
Textile ducts: KE Fibertec AS

TECHNICAL DATA:

Year of construction: 2018
System: KE-Low Impulse
Colour: Light Grey
Material: GreenWeave
Suspension: D-Alu



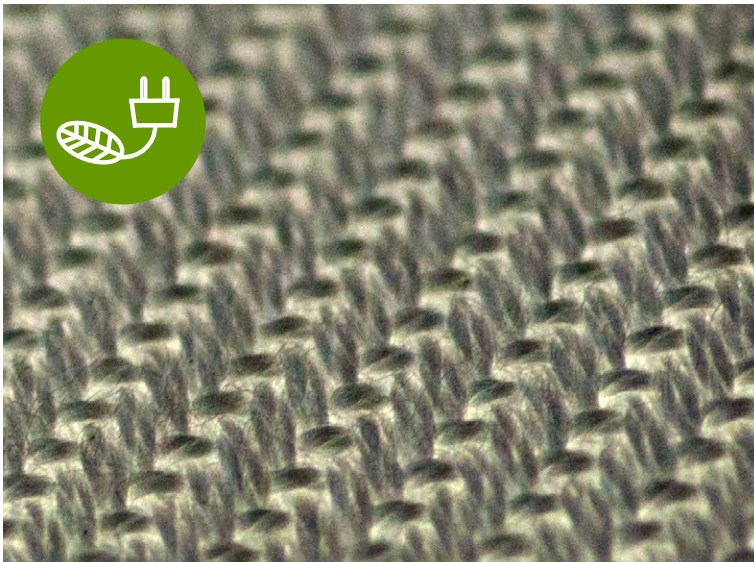


Highest dust holding capacity on the market

The textile ducts for Flammen are made of the easy-to-clean GreenWeave material that features the highest dust holding capacity on the market.

Because of the special texture of GreenWeave we control the air penetration through the entire duct surface and therefore do not consider hole patterns that may attract dirt particles to the surface.

For that reason textile ducts of GreenWeave will typically have long washing intervals and may be a very profitable and cost-efficient solution for the end user.



The GreenWeave material

- Clean breathing air. GreenWeave filters the supply air as an M6 prefilter acc. to EN779:2012
- Longer washing intervals with staple fibre yarns that ensure largest possible textile surface. GreenWeave has a dust holding capacity of 25 g/m² textile surface acc. to EN779:201
- No chemical additives. GreenWeave is made of 100% recyclable material and is Cradle-to-Cradle certified
- Fire tested acc. to EN13501 B-S1-d0 without any finishing treatment
- Hygienic and washable material that does not condense
- Max. shrinkage of 0.5%
- Optional antistatic feature

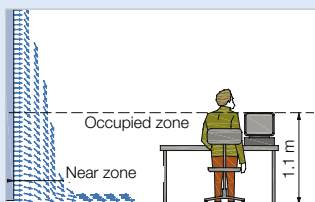


Low impulse ventilation

The air distribution principle for horizontal low impulse systems is based on passive thermal displacement where the air is supplied at a lower temperature in relation to the air in the room.

Because of the difference in density, with the cooled air being heavier than the warmer air in the room, the room air is displaced below the duct while the supply air continues moving towards the floor.

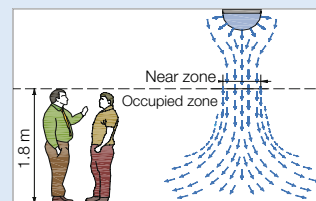
The air flow in the room is then based on natural air movements where the air is driven by the difference in density and convection flows from heat-releasing activities and processes, hence the term "passive thermal displacement".



OCCUPIED ZONE FOR LOW IMPULSE SYSTEMS

The occupied zone is the area in a room which people occupy for a long period of time and is defined as the area where efforts are made to maintain the indoor climate at a general level. 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.



NEAR ZONE FOR LOW IMPULSE SYSTEMS

In the case of horizontal low impulse systems, the near zone is defined as the zone under the textile ducting where there is the biggest risk of a "cold downdraught" or of draughts in general. The width of the near zone can be reckoned to be no more than three times the duct diameter.

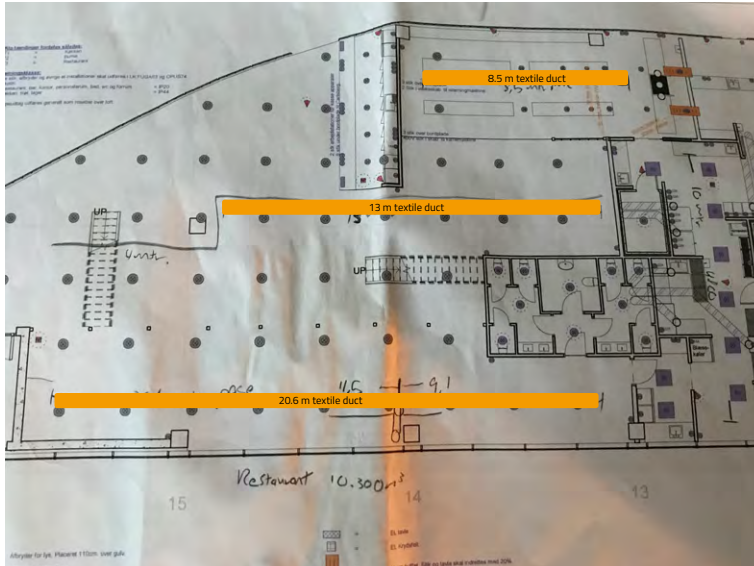
In the case of vertical low impulse systems, the near zone is defined as the local zone around the duct where the air velocity is too high in relation to the room's comfort requirements (depending on the room category).



In the project's design phase we had to allow for a large air change in an area of only a few cubic metres, and especially the kitchen was a challenge. To get a solution that would not involve draft problems we chose textile ducts, and a quick search led us to KE Fibertec. We are very satisfied with our cooperation. They are trustworthy and if we present any changes, our order is soon updated which we highly appreciate.

Rasmus Kristensen, Rap Montage





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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