

## Case: IKEA Älmhult, Sweden

# A good indoor climate solution for IKEA store

Efficient building process management with KE Fibertec's logistics concept

The world's first IKEA store was opened in 1958 in Älmhult, Sweden. In 2012 this original store was replaced by a new and more modern building and at the same time 25 textile ducts were installed in four different sections of the store.

The challenge was to guarantee a uniform distribution of fresh air so that the air would reach customers and staff even in rooms with high ceiling.

### Lasercut holes or nozzles

For the sections with a room height of max. 4 metres a textile duct solution with lasercut holes was made, and for the high bay warehouse measuring nearly 10 metres from floor to ceiling the tailored textile ducts were fitted with 24 mm nozzles. This created a directional air distribution in order to avoid "dead zones".

#### FACTS:

Contractor:	IKEA
Installation contractor:	YIT
Supplier:	ACP Luftbehandlingsprodukter AB /KE Fibertec AS
Consulting engineers:	Andersson & Hultmark

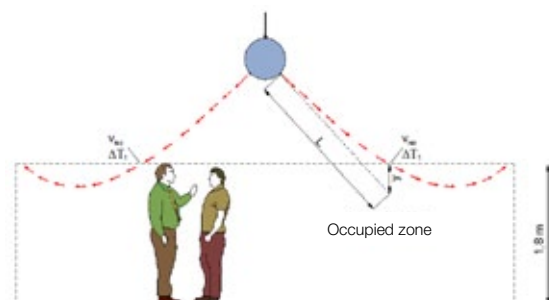


The system is manufactured in sections of each 5 metres that are connected by means of zippers. The sections are suspended in the ceiling using double rows of aluminium rails. Naturally, the textile material is fire retardant.

**Mixing ventilation ensures a uniform air distribution**

As shown below the air is supplied at a high velocity outside the occupied zone. Eventually the air will move towards the occupied zone for the benefit of the customers and staff of the store.

In this way the room will have a draught-free air distribution and a healthy indoor climate.



**KE Fibertec's logistics concept**

KE Fibertec has developed a concept that enables us to deliver large orders in stages, to a specific site, and at a specific time with a 15 minutes notice to the customer.

The materials are packed on pallets marked with the designated section of the building site. This makes it much easier for the contractor to control the building process and that was a key factor in IKEA's choice of supplier.

The logistics concept is closely connected with our internal quality assurance system, and KE Fibertec is certified according to the ISO 9001 standard.

**DATA:**

Construction year: 2012  
 KE Fibertec system: KE Inject®-System  
 Colour: Light Grey



**TECHNICAL DATA OF ALL SECTIONS:**

**Market hall, level 1**

Max. static pressure: 60 Pa  
 Total delivery of air min./max.: 3.6 m³/s / 11.26 m³/s  
 Delivery air temperature min./max.: +15°/+20°C (+30°C night time heating)  
 Height above floor: 3535 mm to lower edge of duct

Textile duct 1 (5): Air delivery 1640 l/s Ø630 L=37 m Ø500 L=25 m	Textile duct 2 (1): Air delivery 1560 l/s Ø630 L=32 m Ø500 L=28 m	Textile duct 3 (1): Air delivery 1750 l/s Ø500 L=18 m Ø400 L=35 m	Textile duct 4 (1): Air delivery 500 l/s Ø400 L=20 m
---	---	---	--

**Furniture display, level 2**

Max. static pressure: 60 Pa  
 Total delivery of air min./max.: 2.5 m³/s / 11.2 m³/s  
 Delivery air temperature min./max.: +15°/+20°C (+30°C night time heating)  
 Height above floor: 3885 mm to lower edge of duct

Textile duct 5 (2): Air delivery 1350 l/s Ø630 L=35 m Ø500 L=25 m	Textile duct 6 (2): Air delivery 1680 l/s Ø630 L=35 m Ø500 L=25 m	Textile duct 7 (3): Air delivery 1700 l/s Ø630 L=35 m Ø500 L=25 m Ø400 L=12 m
---	---	---

**Storage facility, level 2**

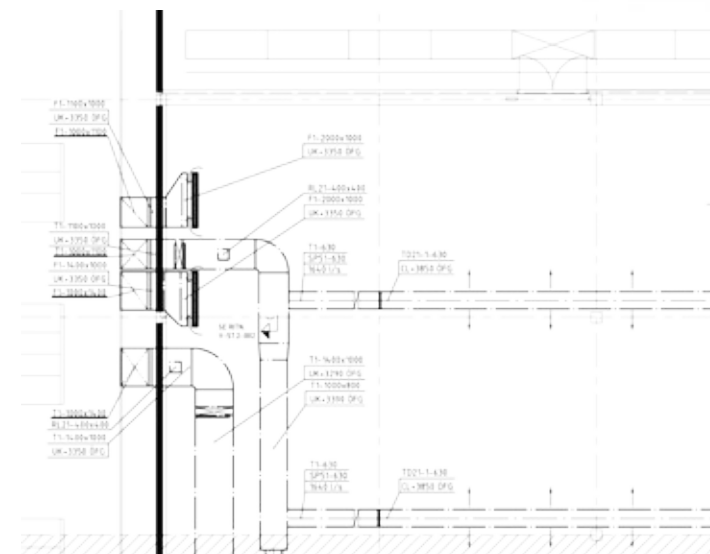
Max. static pressure: 120 Pa  
 Total delivery of air min./max.: 3 m³/s / 10.2 m³/s  
 Delivery air temperature min./max.: +15°/+20°C (+30°C night time heating)  
 Height above floor: 9850 mm to lower edge of duct

Textile duct 8 (6 stk.): Air delivery 1700 l/s Ø600 L=37.5 m Ø500 L=21 m Ø400=20 m
--

**Glass house, level 1**

Max. static pressure: 90 Pa  
 Total delivery of air min./max.: 2.5 m³/s / 7.42 m³/s  
 Delivery air temperature min./max.: +15°/+20°C (+30°C night time heating)  
 Height above floor: 6300 mm to lower edge of duct

Textile duct 9 (3): Air delivery 1955 l/s Ø630 L=33 m Ø500 L=30 m	Textile duct 10 (1): Air delivery 1555 l/s Ø630 L=20 m Ø630 L=10.5 m Ø500 L=19.5 m
---	--



” Carl Kvennefors, ACP Luftbehandlingsprodukter AB

*We have had a long-term cooperation with KE Fibertec in Denmark. They always supply the best quality on the market, and their competitive logistics concept was a key factor as to why we got the IKEA order.*

”





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).

For more information, please contact:

**KE Fibertec AS**  
 Tel. 75 36 42 00  
[info@ke-fibertec.dk](mailto:info@ke-fibertec.dk)  
[www.ke-fibertec.com](http://www.ke-fibertec.com)

**ACP Luftbehandlingsprodukter AB**  
 Tel. +46 42 29 34 00  
[info@acp.se](mailto:info@acp.se)  
[www.acp.se](http://www.acp.se)