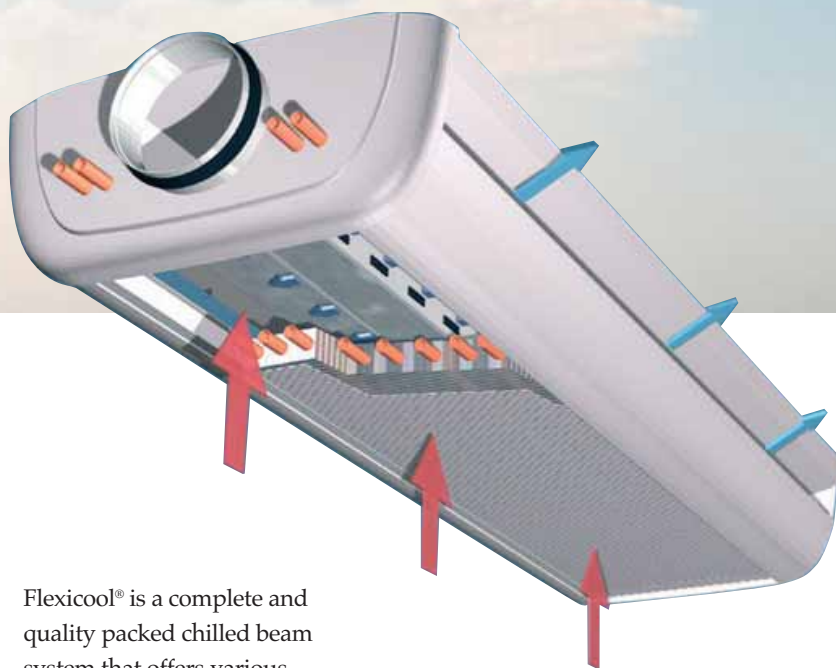


## ***Chilled beams***



# Chilled beams – designed for optimum comfort

Indoor air quality is something we all take for granted. A building with an ineffective air management system can seriously reduce air quality. Air temperature, humidity, CO<sup>2</sup> level, draught and noise all influence our comfort, well-being and efficiency.



Flexicool® is a complete and quality packed chilled beam system that offers various solutions for cooling/heating combined with highly efficient ventilation. Lighting and control equipment are available as accessories.

Choose between induction supply air beams or passive convection beams in various shapes and sizes suitable for integration in false ceilings or for exposed installation.

## Function of chilled beams

In systems with chilled beams, the air is cooled by means of cold water, and the supply airflow rate is dimensioned in a way that

fulfils the requirements of good air quality. Flexicool® chilled beams are a comprehensive range of air conditioning beams suitable for most applications where functions that ensure optimum comfort in the room are considered of great importance. Flexicool® chilled beams are designed to ensure a draught-free and quiet indoor climate, even with greater cooling effects.

## Induction beams

Flexicool® IQIC and IQFC are integrated systems for venti-



»Flexicool® is a complete range of chilled beams and accessories. A system with chilled beams is suitable for ventilation and cooling for high cooling demands and/or where there is a requirement for individual regulation of the temperature.«





lation, cooling and heating, fulfilling most needs for indoor climates. The induction beams are designed to manage high cooling effects. The beams have a patented system for the adjustment of flow, cooling effect and flow pattern. The system can be adapted to suit the changing conditions in the room.

#### Supply air beams

Flexicool® supply air beam QTSB combine ventilation, cooling and, if necessary, heating. The supply air beams are suitable for integration in false ceilings or for exposed installation.

#### Passive convection beams

Flexicool® passive chilled beams cool a room by means of convection. The air is supplied to the room via a separate supply air system.

#### Chilled beams from Fläkt Woods

- Extremely flexible — easily adaptable to meet requirements.
- Adjusted in position in the relevant room as required — facilitates installation as you do not need to choose which room a chilled beam is to be used in before hand.
- Simple adjustment — no need for replacement when the conditions in a room change (for example, refurbishing).
- Easy to install and maintain — low installation and service costs.
- Broad range of stock — fast delivery.
- Easy to dimension correctly — WinDon calculates chilled beams and valves. Different models can be simulated.
- High quality components.
- Our chilled beams have low water pressure drop, which means low operation costs.

#### REFERENCES

- *Chiari Hospital, Italy*
- *Lidl's head office in Helsinki, Finland*
- *Hermia Technology Center in Tampere, Finland*
- *Sturenportti office hotel, Helsinki, Finland*
- *Jönköping University, Sweden*
- *Karlstad University, Sweden*
- *University Tammerfors, Finland*
- *Office building Budejovicka alej, Czech Republic*
- *Ricoh Centre Frankfurt, Germany*
- *Hospital, Malta*
- *Scandic Hotel, Helsinki, Finland*
- *Via Bergognone, Milano, Italy*
- *Visteon, Kerpen, Germany*
- *Le Gauguin, Paris, France*







## New chilled Beam with FPC (Flow Pattern Control)

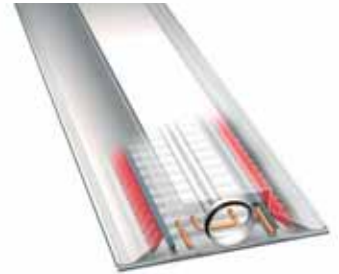
Our new IQ Chilled Beam is totally unique with its FPC (Flow Pattern Control) function that provides high flexibility in new buildings or refurbishments. The combination of FPC and comfort control gives the IQ beam its unique characteristics.

Consultants and customers have since long asked for a chilled beam that can be adjusted almost like a ceiling diffuser. This is to fulfil the requirements for the best possible indoor climate.

Now the solution is here. The IQ Chilled Beam with the unique Flow Pattern Control (FPC) where the airflow can be directed up to 45 degrees through integrated vanes.

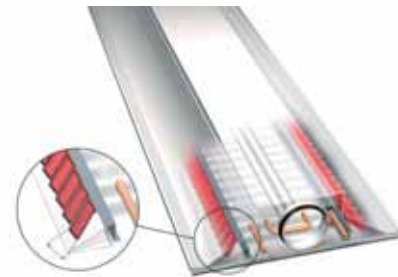
Different directions can be set at sections of 600 mm in the beam.

The IQ chilled beam with FPC is available in lengths of 1.2 m, 1.8 m, 2.4 m or 3.0 m. The flow pattern is easily and safely adjusted by a simple operation. Is also available with 1-way flow. FPC is available for induction air supply beams only.

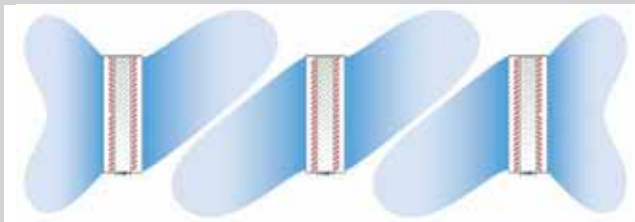
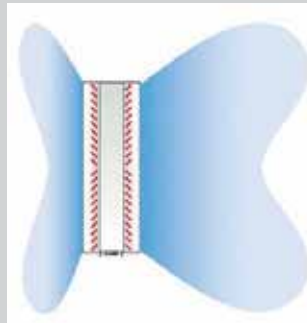
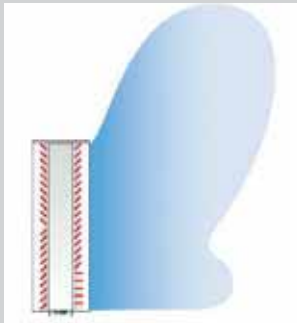


### **IQ Beams with FPC function**

- Adjustable air vanes in the outlet
- Optimised for minimal noise and pressure drop
- Sections of 60 cm



- Adjustable air vanes: 0° + 15° + 30° + 45°
- Unique combination with comfort control



### **IQ Beams with FPC function**

Highest possible efficiency can be maintained by adjusting the comfort control and air vanes!

A combination of different angles on one side is possible.

When increased air flow is required, the flow pattern can be adapted to maintain optimal comfort in the room!



# Development

We have one of Europe's most extensive laboratories for testing ventilation products. This enables us to continually test new and existing products.

Our laboratory is unique in that it is equipped with all components required for an entire ventilation system. The products

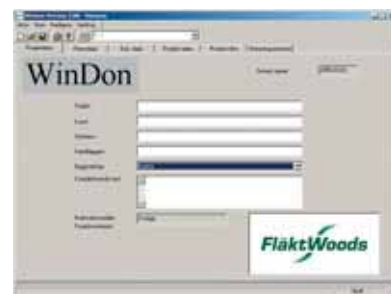
are tested in testing rooms designed to simulate "real life" environments, for example, an office or conference room.

We are able study sound levels, airflow / balancing, exhaust risks, comfort and control strategies within the laboratory. We are also able to see how the products perform in real life situations.

In one of the laboratories there is even a measurement robot that measures temperatures and air flow speeds. This enables us to determine throw lengths and comfort zones and to measure cooling effects.

We also carry out full scale tests with adjustments of room dimensions and loads.

Additional calculations can be done with CFD calculations. CFD (Computer Fluid Dynamics) is an advanced method of calculation that can be used to determine air movements in a room, for example.



## WinDon 2.8

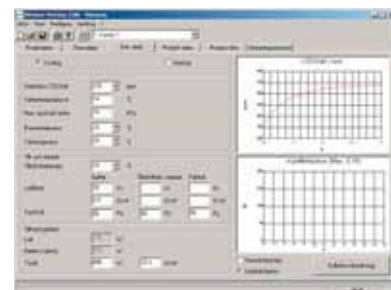
WinDon is our product selection program that offers effective support for fast selection for every specific project. The program provides all the technical information required.

### Simulations

In WinDon, the flow pattern in a room can be simulated for mixing as well as displacement ventilation and for active and passive chilled beams. Each relevant operation can be displayed on screen, for both a vertical section and horizontally. Cooling requirement calculations can also be made in the program.

### High quality

The possibility of carrying out full scale test simulations and making fast calculations and projections in WinDon, means that we can guarantee comprehensive products and projections of the highest quality.

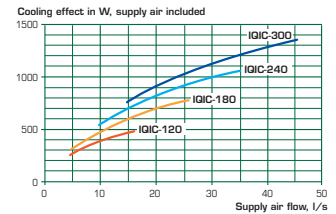
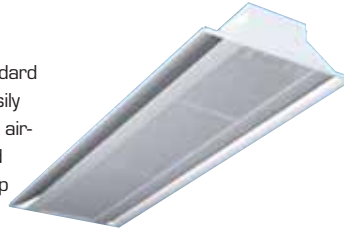


# Fast selection

## Induction beams

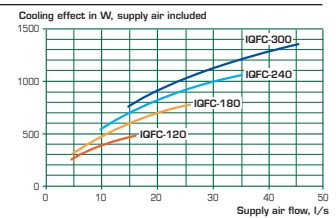
### IQIB(C)

- IQIC chilled beam for integration in false ceilings • Suitable for standard 600 mm false ceiling modules • Capacity and flow directions are easily set • The bottom plate can be pushed aside to enable adjustment of airflow and capacity for inspection and cleaning • Patent pending sound attenuator • Mounting brackets for quick and easy mounting — lift up — snap on.



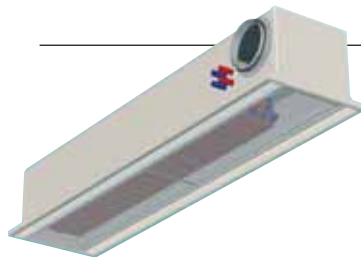
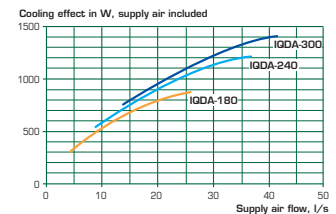
### IQFC

- IQFC chilled beam for exposed installation • Air flow through beam is directed diagonally upwards • Capacity and flow directions are easily set • The bottom plate can be pushed aside to enable adjustment of airflow and capacity for inspection and cleaning • Patent pending sound attenuator • Enclosures for connections available as accessories • Mounting brackets for quick and easy mounting — lift up — snap on



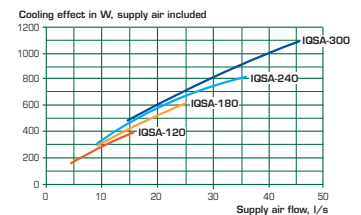
### IQDA

- IQDA customized beam for exposed installation • Exclusive and smooth design • Capacity and flow directions are easily set • Patent pending sound attenuator • Mounting brackets for quick and easy mounting — lift up — snap on



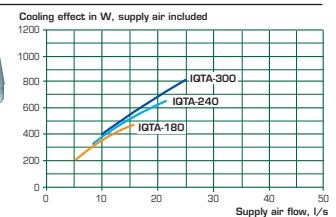
### IQSA

- IQSA chilled beam for integration in false ceilings • Suitable for standard 300 mm false ceiling modules • Capacity and flow directions are easily set • The bottom plate can be pushed aside to enable inspection and cleaning • Patent pending sound attenuator • Mounting brackets for quick and easy mounting — lift up — snap on.



### IQTA

- IQTA chilled beam for exposed installation • Air and water connection within extended casing (30 cm/60 cm) • Available in three standard lengths, 210, 270 and 330 mm • Installed using special brackets attached to the wall or ceiling • The bottom plate can be pushed aside to enable inspection and cleaning.

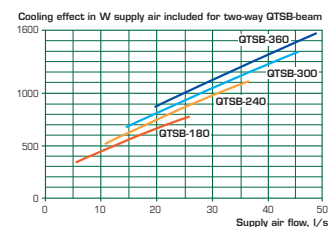


## Supply air beam



### QTSB

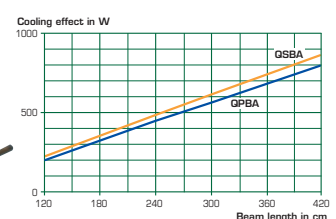
- QTSB chilled beam for integration in false ceilings or for exposed installation • Suitable for standard 600 mm false ceiling modules • The coil, duct and casing are easy to clean and the side plates easy to remove • Patented integrated sound attenuator available as an option • Adapted control and adjustment equipment available as an option • Quick and easy installation with attachments or directly onto the ceiling's support profiles using brackets.



## Passive chilled beams

### QP(S, B)A, QS(S, B)A

- QP and QS chilled beams for integration in false ceilings or for exposed installation • The coil and casing are easy to clean and the side plates easy to remove • Adapted control and adjustment equipment available as an option • Quick and easy installation with attachments or directly onto the ceiling's support profiles using brackets.



***We Bring Air to Life***



**Fläkt Woods Group provides a full range of products and solutions for building ventilation, air treatment and industrial air movement.**

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