

iQ Star Astra
Energy efficient chilled beam





The right climate at the right time. Purposeful and energy efficient.

The modern office is dynamic. With laptops and mobiles we can work where we want and carry out our tasks wherever it's convenient. Success in business today also calls for flexibility to meet new demands, where rearrangements of people, walls and furniture should be realized with a minimum of effort. This includes making sure that the indoor working climate remains at its optimum.





iQ Star is a new family of chilled beams from Fläkt Woods with the high quality required to easily adapt to new conditions. They are designed for the modern offices, with equal focus on the importance of a productive working climate and the need to care for the environment.

Attractive designs, smart functions, flexible construction and energy saving features make these chilled beams true iQ Stars.

iQ Star Astra

Flexibility, sustainability and energy efficiency are the main characteristics of our integrated Chilled Beam, Astra. It has the ground-breaking Boost function where the air flow is adjusted automatically, depending on the level of CO₂ in a room, which is affected by people.

Flexibility in the room

Modern offices not only have a fast turnover of occupancy during the day, their layout often changes in periods of

6-12 months. Fläkt Woods' range of chilled beams is totally unique with its Flow Pattern Control function that provides high flexibility in new buildings or refurbishments. The air flow can be directed up to 45 degrees through integrated vanes. When increased air flow is required, the vanes can be adjusted into different directions, to increase comfort.

More than cooling

Other functions such as a sprinkler system, smoke detectors and modern lighting increases comfort and flexibility.



Increased productivity and low energy costs through Demand Controlled Ventilation

Today, most people spend over 90 percent of their time indoors e.g. at home, in schools, at hospitals and offices. Breathing fresh indoor air is vital for our health, performance and well-being.



Flow Pattern Control

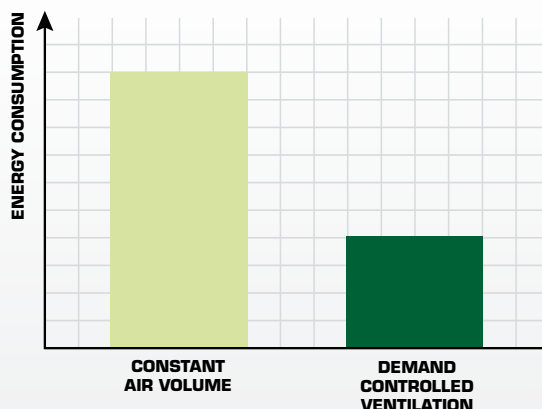
The unique Flow Pattern Control (FPC) can direct the airflow up to 45 degrees through integrated vanes. Different directions can be set at sections of 300 mm in the beam.

Accessories

Flexibility is increased by the numerous accessories available for iQ Star.

Boost

Astra has Boost function. The air flow is adjusted automatically, depending on the level of CO₂ in a room, affected by people.



Demand controlled ventilation provides desired ventilation based on the actual occupancy of the room. It increases indoor air quality and saves energy normally wasted in ventilating unoccupied spaces. This can be applied to areas where there are frequent changes in occupancy, such as conference rooms, board rooms, cafeterias etc. Field experience indicates that actual occupancy levels are at least 25% lower and perhaps as much as 60% lower. In normal office building the offices are not occupied more than 60% of the time during a normal working day. This means that demand controlled ventilation can reduce ventilation as well as heating and cooling loads by 10%–30%.



User-friendly controller for optimal performance

The STRA-14 room controller is specifically developed for Astra. It is pre-programmed for chilled beam applications and contains a wide range of control functions for flexibility, comfort and energy efficiency.

The user-friendly display enables fast and easy access for change of set-points and control parameters. For optional integration with building management systems, STRA-14 has Modbus communication as standard.

Experience has shown that the level of CO₂ in a room is a reliable indicator of the indoor air quality, and is therefore used as the determining parameter in the integrated Boost function in Astra. A high level of CO₂ in a room indicates that the ventilation rate is insufficient to obtain an adequate indoor quality.

This is a common situation in rooms with large variations or peaks in load, therefore STRA-14 can be equipped with an optional CO₂-sensor and thereby offer a control function

where the controller shifts to Boost mode if the level of CO₂ exceeds the set point value, in this mode the integrated Boost damper opens and the air flow is increased until the level of CO₂ has decreased to the lower set point value.

The built in operator button on STRA-14 can also be used to activate the Boost mode, after 60 minutes the controller then change back to its preset operating mode.

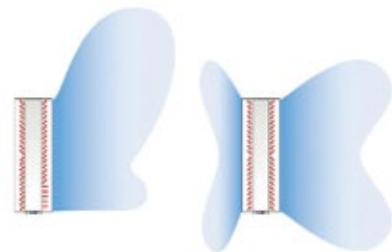


Flexibility in the room

Astra has the unique Flow Pattern Control (FPC) function that provides high flexibility in new buildings or refurbishments. The airflow can be directed up to 45 degrees through integrated vanes. When increased air flow is required, the vanes can be adjusted into different directions, in order to increase the comfort.

Astra 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.



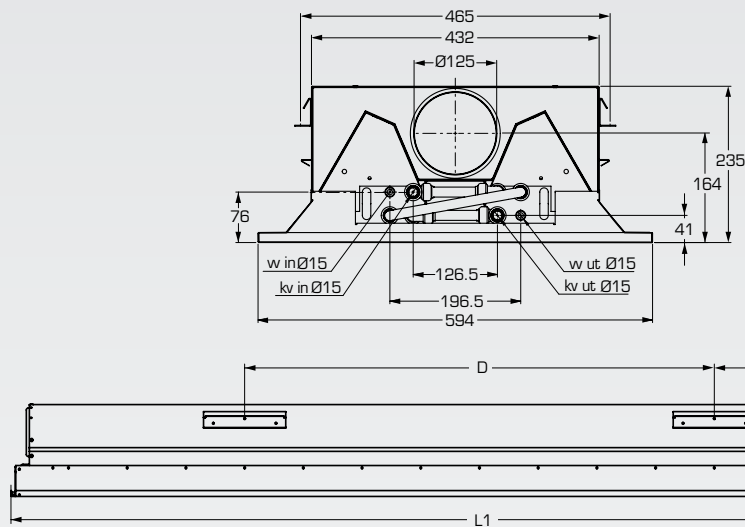
Quick selection iQ Star Astra chilled beam

Cooling effect in W incl supply air

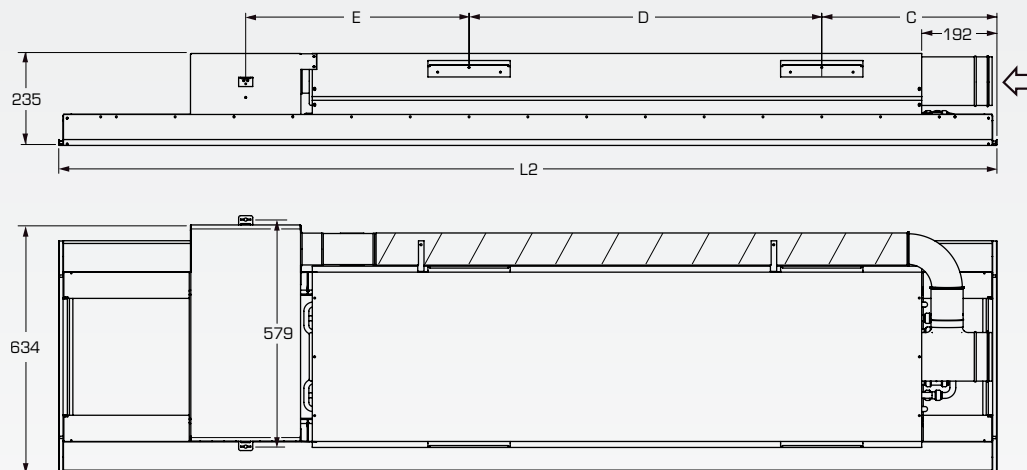


The diagram shows the approximate cooling effect P_{tot} in W with water flow $q_w = 0.1$ l/s, temperature difference between room air and supply air $\Delta t = 8^\circ\text{C}$, pressure drop 70 Pa on the air side and max. sound pressure level $L_{A10} = 30$ dB(A).

iQ Star Astra chilled beam



iQ Star Astra chilled beam with Boost function IQAZ-22



Dimensions

Size	L1	L2	C	D	E
IQIE-120-1-c-dd-ee	1194	1794	297	600	420
IQIE-180-1-c-dd-ee	1794	2394	447	900	570
IQIE-240-1-c-dd-ee	2394	2994	597	1200	720
IQIE-300-1-c-dd-ee	2994	3594	747	1500	870
IQIE-120-2-c-dd-ee	1794		897	600	
IQIE-180-2-c-dd-ee	2394		1047	900	
IQIE-240-2-c-dd-ee	2994		1197	1200	
IQIE-300-2-c-dd-ee	3594		1347	1500	

Weight

Weight per meter of chilled beam	kg/m
Beam dry weight	22.3
Beam water filled, cooling	23.2
Beam water filled, cooling and heating	23.7

We Bring Air to Life

Fläkt Woods is a global leader in air management. We specialise in the design and manufacture of a wide range of air climate and air movement solutions. And our collective experience is unrivalled.

Our constant aim is to provide systems that precisely deliver required function and performance, as well as maximise energy efficiency.

Solutions for all your air climate and air movement needs

Fläkt Woods is providing solutions for ventilation and air climate for buildings as well as fan solutions for Industry and Infrastructure.

Air Handling Units (AHUs)

Modular, compact and small AHU units. Designed to ensure optimisation of indoor air quality, operational performance and service life.

Air Terminal Devices and Ducts

Supply and exhaust diffusers and valves for installation on walls, ceiling or floor are all included in our large range and fit all types of applications.

Chilled Beams

Active induction beams for ventilation, cooling and heating, and passive convection beams for cooling. For suspended or flush-mounted ceiling installation – and multi-service configuration. With unique Comfort Control and Flow Pattern Control features.

Residential ventilation

A complete range of products for residential ventilation. Consists of ventilation units, exhaust air fans and cooker hoods designed to optimise indoor comfort and save energy.

Energy recovery

Dessicant-based product and systems that recover energy, increase ventilation and control humidity.

Fans

Advanced axial, centrifugal and boxed fans for general and specialist applications. Comprehensive range including high temperature and ATEX compliant options. Engineered for energy efficiency and minimised life cycle cost.

Chillers

Air-cooled and water-cooled chillers with cooling capacity up to 1800kW. Designed to minimise annual energy consumption in all types of buildings.

Controls and drives

Variable speed drives and control systems, all tested to ensure total compatibility with our products. Specialist team can advise on energy saving and overall system integration.

Acoustical Products

A complete line of sound attenuating products, including rectangular and round silencers, Media Free silencers, custom silencers and acoustic enclosure panels.

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The logo for Fläkt Woods, featuring the company name in a bold, green, sans-serif font. A stylized green swoosh underline is positioned beneath the 't' in 'Woods'.