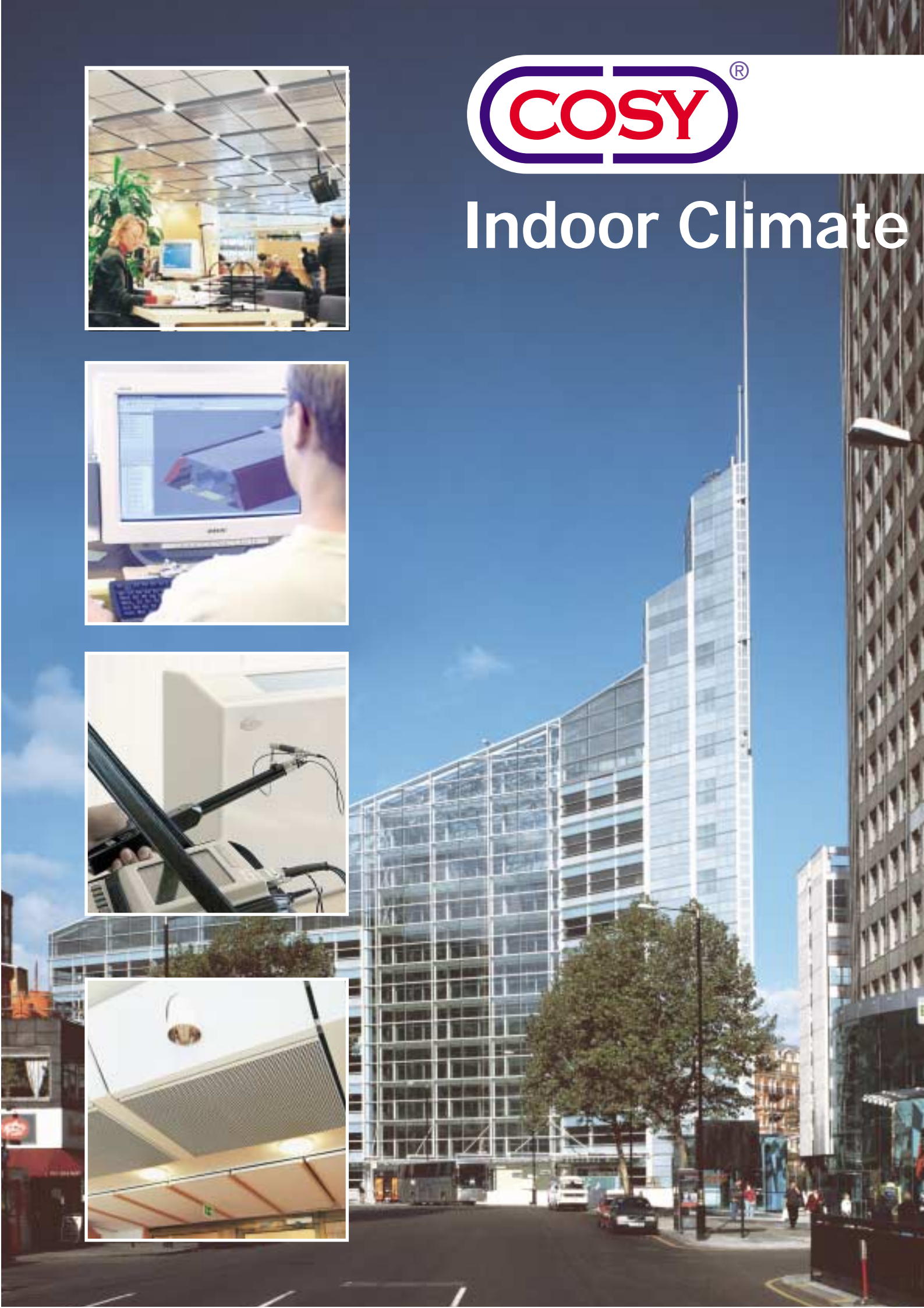




# Indoor Climate



Good design of air conditioning systems will create high levels of comfort whilst minimizing energy consumption.

Cooling equipment which can utilize fairly high water temperature and still maintain good levels of comfort can contribute to a successful project with reduced capital and running cost.

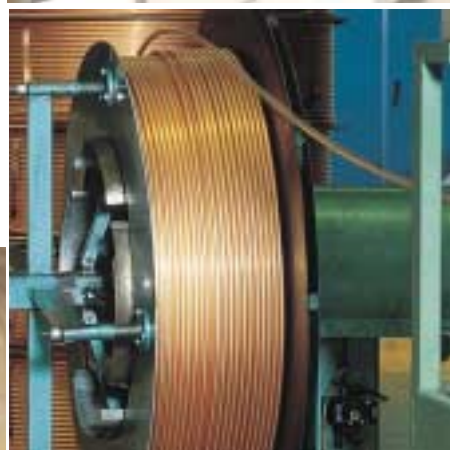
Chilled beam and chilled ceiling products using high temperature water can create an ideal environment in most commercial and industrial applications. With a high level of comfort people will enjoy their working environment to be more productive and effective.

**COSY**<sup>®</sup> Cooling System AB is a company specialized on indoor climate, comfort cooling and cooling systems. The company was started 1987 and has its original technology and development from Ericsson Telecommunications. The technology has been used for telephone- and radiobase stations in more than 30 countries.

The products are manufactured in Sweden and marketed in most of the European countries with the registered trade mark COSY.

All Cosy products are tested and validated to the NordTest method.

Our production is certified to ISO 9001.





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# Active chilled beam for exposed installation



## CBLA

*Cooling capacity up to 330 W/m at a temperature differential of 10 °C and an air flow of 10 l/s,m*

Our new types of active chilled beams have been designed and developed to provide high cooling capacity with an attractive compact modern design. With the different types and functions of beams available it is possible to find the right beam for every application.

The beams can be used for exposed or concealed application and can be used in both new and refurbishment projects. With the fresh air supply and chilled water coil combined in one unit the active chilled beams can provide both the ventilation and cooling requirement of a project.

Extensive testing and development have ensured the active chilled beams can provide high levels of comfort throughout the occupied zone in a room.

By creating a negative pressure in the beam, room air is induced over the cooling coil. This then mixed with the fresh/supply ventilation air before being discharged into the room.

The cooling capacity is controlled by varying the water flow.

The beams can be manufactured for one- or two-way air distribution.

## CBLA

is an active chilled beam made for exposed installation closed to the false ceiling or suspended. This beam takes the air from the room through the perforated bottom plate. The cooled air is distributed through the upper narrow slots along the length of the beam with a minimum risk of draught and with a low noise level.

To meet the today's high standards of hygiene and maintenance the bottom plate can be easily removed for inspection and cleaning.



*With the specially constructed installation brackets the installation is quick and easy.*



# Active chilled beams for concealed installation



**CBLO xx60**

*Cooling capacity up to 700 W/m at a temperature differential of 10°C and an air flow of 10 l/s,m*



**CBLO xx30**



**CBLE**

*Cooling capacity up to 345 W/m at a temperature differential of 10°C and an air flow of 10 l/s,m*

With our beams, CBLO och CBLE, both the required supply air and the cooling need are taken care of. The function and the construction minimize the risk for climate disturbances like high temperature gradients and draught problems.

The room air induces through the coil by the negative pressure created by the supply air and in combination with natural convection. The supply air and the room air are mixed in a controlled way which makes it possible to reach high cooling capacities.

With the different types and functions of the beams it's always possible to find the right beam for every situation.

Exposed or concealed installation.

New buildings or renovations.

The cooling capacity is controlled by varying the water flow rate.

The beams can be manufactured for one- or two way air distribution.

## **CBLO xx60 and xx30**

are open active chilled beams – CBLO-xx60 is one of the most powerful on the market. The beams are constructed both for concealed and exposed installation.

CBLO is a well function supply air device. The cooled air is distributed through the narrow slots along the length of the beam with a minimum risk of draught and with a low noise level.

To meet the today's standards for hygiene and maintenance can the the bottom plate easily be removed for inspection and cleaning.

The visible bottom plate can be finished with the same material used for the false ceiling or fitted with acoustic material.

The supply air duct can be easily be removed in the event of different operating requirements.

## **CBLE**

is a covered active chilled beam for integration in the false ceiling when you don't want the room air to circulate above the false ceiling.

The room air inducts through the perforated bottom plate and the cooled air is distributed to the room through the discharge slots at the edge of the beam and across the false ceiling.



ERICSSON



# Passive chilled beams for exposed installation



**ECAK**

*Cooling capacity up to 405 W/m at a temperature differential of 10 °C*



**ECBK**

*Cooling capacity up to 455 W/m at a temperature differential of 10 °C*

Chilled beams can be used in all types of premises where cooling is required. By absorbing heat, mainly by natural convection, the passive chilled beams maintain the room temperature at an even and comfortable level.

Operations of the chilled beam is based on the natural convection process and is self-regulating.

The air velocity increases or decreases in relation to the heat load within the room.

This ensures good comfort with a minimum risk of draught. The beams are completely quiet in operation.

The coil is made of refrigeration grade copper tubes with aluminium fins. The casing is made of painted steel plates.

## **ECAK**

Every third fin is extended to provide optimum performance and to make an attractive design.

ECAK is manufactured in three widths - 300, 450 and 600 mm.

## **ECBK**

This beam incorporates a white painted steel casing with a perforated bottom plate.

The standard height is 120 mm but to achieve higher capacity it is possible to extend the height to 235 mm.

This will provide c:a 35% increase in cooling capacity.

ECBK is manufactured in three widths - 300, 450 and 600 mm.





SÖDERHALLARNA

TERACOM

www.soderhallarna.se

BUTIK

RESTAURANGER

SÄLHALL

BUTIKER

SÄLHALL

CAFE SÖDERESPRESSO

KEBAB

# Passive chilled beams for concealed installation



CAB



CBU



CABU



ECEU

On this page we are showing our passive chilled beams for installation above the false ceiling.

The function is the same as for ECAK and ECBK.

The beams are as standard not painted but it is possible to provide them in a selected colour.

The coil is made of refrigeration grade copper tubes with aluminium fins. The casing is made of steel plates.

It is important to calculate the opening area of the perforated plates and/or grilles in the false ceiling in the right way to avoid negative effect on the natural convection.

## CAB

This chilled beam has the same type of coil as ECAK but is delivered with non painted fins and side plates.

CAB is manufactured in three widths - 300, 450 and 600 mm.

*Cooling capacity up to 405 W/m at a temperature differential of 10°C*

## CBU

Can be delivered with a higher casing which will increase the cooling capacity between 25-30%.

CBU is manufactured in three widths - 300, 450 and 600 mm.

*Cooling capacity up to 370 W/m at a temperature differential of 10°C*

## CABU

Our most powerful chilled beam especially made for premises with high heat loads – laboratories, conference halls, shops etc

CABU is manufactured in three widths - 300, 450 and 600 mm.

*Cooling capacity up to 615 W/m at a temperature differential of 10°C*

## ECEU

ECEU is a beam like CBU with a higher cooling capacity.

ECEU has 2 rows of copper tubes like CABU.

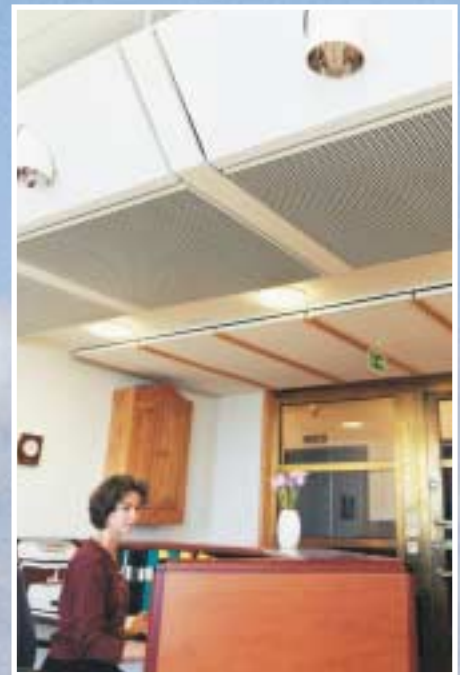
ECEU is manufactured in three widths - 300, 450 and 600 mm.

*Cooling capacity up to 560 W/m at a temperature differential of 10°C*





McDRIVE



# Radiant ceilings for cooling and heating



EKT/EVT



ETKK

COSY radiant ceilings are developed to be installed in premises where there are especially high demands of the thermal environment.

The close tube spacing provides an optimized and uniform surface temperature and a fast response in the event of changes of the heat load. The chilled ceiling can be ordered in many different lengths and widths and has been designed for reliability, long service life and simple installation.

## EKT/EVT

The radiant ceiling EKT/EVT can be installed in a common T-section framework, freely suspended or secured to the ceiling. The top of the chilled ceiling is insulated.

The flange and frame are made of extruded aluminium sections and the water tubes are made of copper.

The chilled ceiling is test pressured at the factory and is delivered ready for installation on site.

**Cooling capacity up to 110 W/m<sup>2</sup> at a temperature differential of 10°C**

**Heating capacity up to 340 W/m<sup>2</sup> at a temperature differential of 30°C**

## EKTK

The radiant ceiling EKTK is intended for freely suspended installation.

The height is only 16 mm.

**Cooling capacity up to 150 W/m<sup>2</sup> at a temperature differential of 10°C**





# Fan coils

Our fan coils are made for a market with high demands on sound level, function, quality and design.

## EFCT and EFCV

EFCT is made for dry cooling where the inlet water temperature is above the dew point.

EFCV is made for wet cooling and equipped with a drip tray for collecting condensate.

EFCT and EFCV can be delivered in four sizes and can be used for cooling, heating or cooling/heating.

Different types of room control systems can be chosen with electronic or manuell functions.

EFCT and EFCV can be applied to either wall or ceiling installation, for offices, hotels, computer rooms etc.

- **New design**
- **Wall or ceiling installation**
- **Low sound level**
- **3 - speed fan**

## Induction - and pressure boxes

The fan coils can be equiped with specially made induction-and pressure boxes when a very low sound level is required.



## Main data

Type	EFCT-10	EFCT-12	EFCT-15	EFCT-21	EFCV-10	EFCV-12	EFCV-15	EFCV-21
Cooling capacity - Speed 2 W	1 380	1 400	1 840	2 870	1 800	2 090	2 830	4 450
Temperature differential °C	10	10	10	10	15	15	15	15
Heating capacity - Speed 2 W	1 820	2 040	2 600	4 050	2 110	2 500	3 310	5 070
Temperature differential °C	30	30	30	30	30	30	30	30
Witdh mm	1 045	1 265	1 485	2 145	1 045	1 265	1 485	2 145



# Dealer Tables



We have during many years together with Atlas Snickeri AB developed different kinds of solutions for the financial market. We have together created a new generation of customized solutions for dealer tables with integrated cooling technology. With this new technology it is possible to create a good thermal environment both for people and the electronic equipment. COSY delivers the cooling equipment and the desk manufacturer designs and manufactures the desk furnitures. The furnitures can be used for different applications. The furniture is manufactured to a very high quality and designed according to the customers requirement.

The cooling unit is installed inside the table and integrated with the electrical equipment. The room air is induced through a high efficient filter and cools down the equipment inside the table. With this patented air device the cool air is distributed back into the room. The temperature of the distibuted air is electronic controlled to maintain comfort levels high.



SEB

SEB

# Accessories and Room control systems



## ETL fresh air supply unit

Size 100, 125 and 160 for combination with COSY passive chilled beams.  
ETL consists of an air device and a plenum chamber with an adjustable damper.  
ETL is located at one end of the chilled beam with the direction of the air flow along the underside of the beam.



## Installation kits

For a quick and simple installation.  
The chilled beam can easily be adjusted both horizontally and vertically.

## Grilles

White painted aluminium grilles for openings in the false ceiling.

Is made for standard T-profiles.

Colour: NCS 0502-Y

Dim: 593x593 and 1193x593 mm



## Room control systems

Room temperature controllers  
Actuators  
Valves  
Transformers



# Product development and documentation

At our main office in Solna we make the product development, testing and documentation.

In our test lab we can simulate different conditions and document capacities and comfort criterias.

Special tests of our products are also made by the Swedish National Testing and Research Institute.



- Capacities validated to the NordTest Method
- Comfort criterias validated to ISO 7730



Cooling System AB, established in 1987, is a company that specialized in comfort cooling and indoor climate control. The product range is marketed under the COSY registered trademark and manufactured intirely in Sweden.

Active chilled beams – Passive chilled beams – Radiant ceilings  
Fan Coils – Dealer Tables – Room control systems.



**COOLING SYSTEM AB**

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