



## eHybrid

– Design a sustainable future...



*Why do we consume valuable energy when it's not really needed? Lindab's new eHybrid is the best solution for a perfect indoor climate, offering energy savings that typically exceed 30%. eHybrid - Design a sustainable future...*

## The best indoor climate solution at no additional cost

Simplifying construction is one of Lindab's core values and has been at the very heart of developing the eHybrid solution. By combining ventilation, heating, cooling and lighting functions into one 'plug and play' unit, we made the installation much simpler and faster compared to installing separate products. This saves both space and installation costs. In practise, this means the best indoor climate at no additional cost, and with the 34% lower energy consumption. The eHybrid solution sets new standards for an economical, sustainable and comfortable indoor climate.

The production process for eHybrid, as well as the materials and components in this solution, have been chosen from a sustainability standpoint. eHybrid - design a sustainable future...

# Why do we consume valuable energy when it's not really needed?

Everybody knows that increased energy consumption affects our environment and is one of the factors influencing climate change. Every single person on earth consumes about 3,200 kWh of electrical energy each year.

Annual electricity consumption, kWh per capita : (Source: IEA 2005)

- Global average - 2,600
- USA - 14,000
- Europe - 6,000
- India - 500

Since the global population is growing and humanity is historically inclined towards consuming more electricity for comfort, convenience and industrial purposes all pointers indicate that these figures will increase in the future. So, how can you contribute to change the future?

Daily office work requires us to be flexible and mobile. Did you know that the average office space is only occupied for 50-70% of working hours? Supply systems for ventilation, cooling, heating and lighting, cannot differentiate whether an individual employee is present or not. This means that the system consumes just as much energy regardless of whether people are present. In other words, there is a large savings potential from adapting the supply systems to the individual.



*After vacating the room, the system switches to energy saving mode and adjusts the supplied functionalities to their pre-set values.*

Lindab has solved the energy saving issue in unoccupied zones without compromising the best indoor climate. We have built all energy consuming functions into a single device and then added real demand-control. With Lindab's eHybrid solution, we have gathered the best energy saving technologies from three different fields, chilled beams, VAV and lighting. Lindab's new eHybrid is the best solution for a perfect indoor climate and offers energy savings that typically exceed 30%.

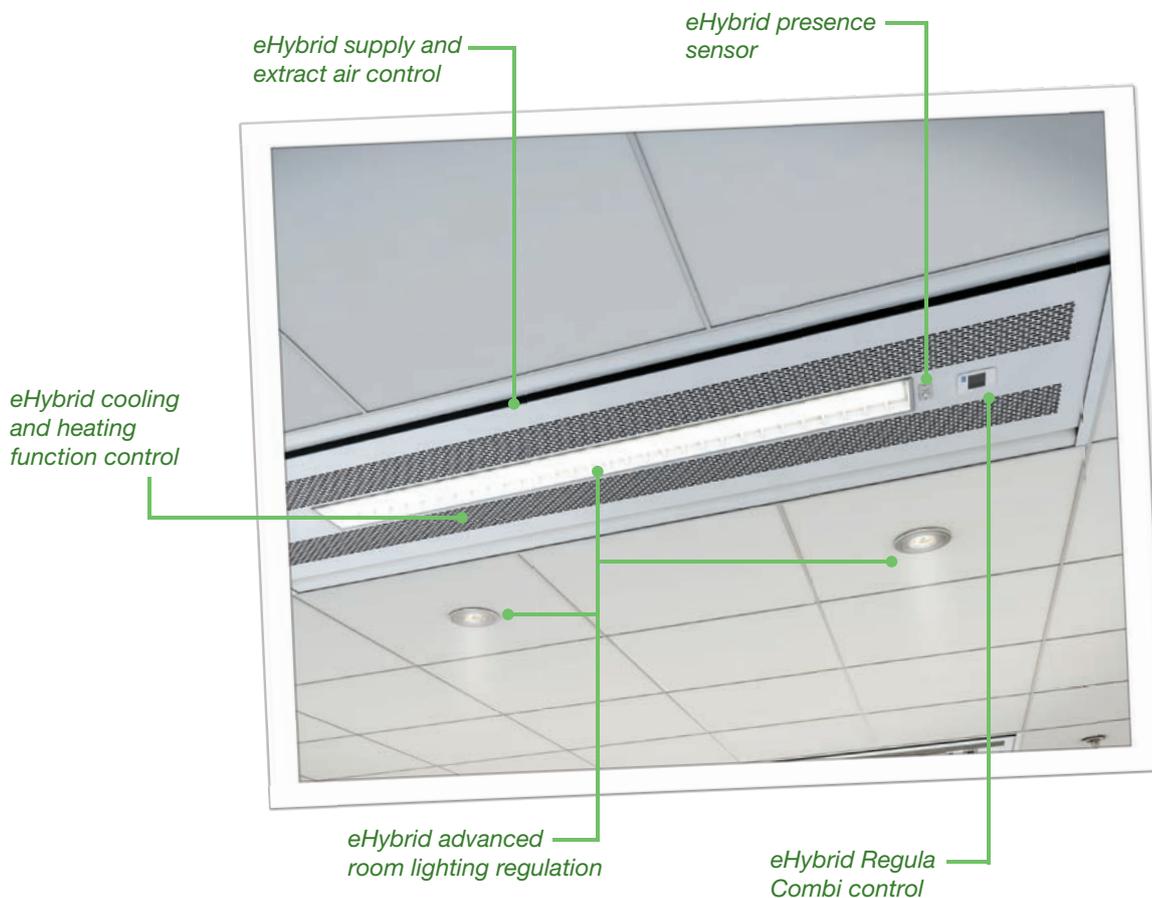
Since there is an obvious connection between energy consumption and climate change, Lindab will contribute to a better world by considerably reducing energy consumption in air-conditioned commercial buildings through demand control.

Particularly when you are away from your workstation, Lindab's eHybrid solution adapts to that change and uses less energy than common solutions without affecting the high comfort quality.

# Demand controlled activity means lower energy consumption

With its intelligent sensor and control devices, the eHybrid is an excellent choice for low energy use and environmental awareness. Upon entering the room, a sensor detects the human presence and turns on all the supplied functions in the room, such as ventilation, cooling, heating and lighting. The light level sensor also regulates the light level output according to the ambient light level in the room. After vacating the room, the system switches to energy saving mode and adjusts the supplied functions to their pre-set values. eHybrid has acted as the intelligent energy saver it is.

eHybrid is also the ideal indoor climate solution when sustainable energy sources are used – heat pumps, free cooling from sea or groundwater and surplus heating.



# High flexibility and future adaptability

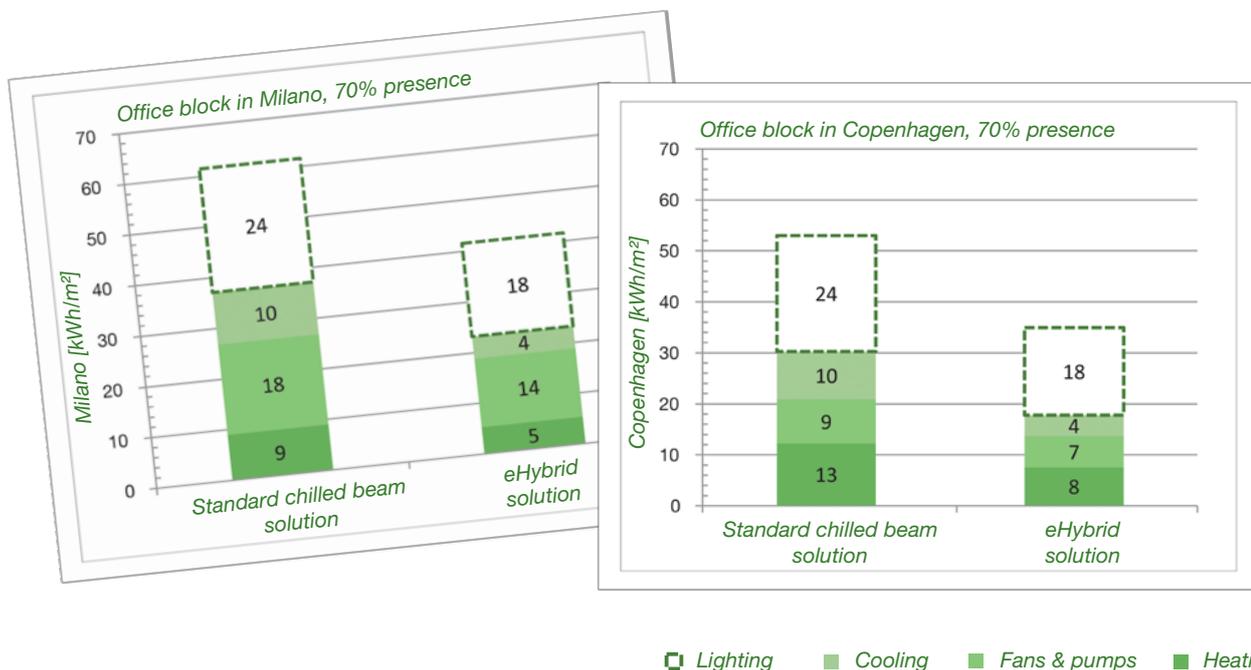
As with Lindab's other chilled beams, an eHybrid system offers a great deal of architectural freedom and easy adaption to future room usage. The traditional wall-mounted radiator system can be part of the eHybrid solution but it can also be replaced by the optional built-in heating solution in Lindab's chilled beams without the constraints of conventional radiator piping on the interior architecture.



## Smart technology for energy savings

Combining water and air technology into the eHybrid solution results in a number of energy saving advantages. eHybrid automatically selects the airflow. From maximum cooling flow, to fresh air-flow down to minimum flow, the demand controlled and variable air-flow reduces energy consumption, as does the reduced ventilated air volume needed to fulfil the fresh air requirements. Furthermore, the demand controlled lighting and automatic light levelling reduces energy consumption.

A recent study by the independent consultant company WSP, comparing a conventional chilled beam solution with eHybrid in various operating conditions, clearly shows the reduced energy consumption of eHybrid. WSP's LEED calculations, based on a typical seventy percent occupancy of office premises, resulted in a typical energy saving of around 34% using eHybrid.



*This diagram shows how much energy you are able to save by using Lindabs eHybrid solution, the energy consumption of both solutions is based on WSP's study.*

## Low energy use and added sustainability

The use of different environmental and energy classification rankings – LEED, BREEAM, Green Building, Green Star – is steadily on the increase. The reason behind this is simple. Society, owners, tenants and users want buildings that combine good indoor climate with low energy use and sustainable performance. Letting an eHybrid system manage the room's ventilation, cooling/heating and lightning means an improved energy and environmental ranking – and of course happy and satisfied tenants. Fully utilising eHybrid's potential, and combining it with the use of renewable energy sources, makes a substantial and positive difference in energy consumption and rankings of these types.



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