

## Press Release

### Separating Ventilation and Temperature Regulation

**Kampmann GmbH has a new concept for compliance with the 2009 Energy-Saving Directive (EnEV), §15: Users and the environment will benefit.**

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**Lingen (Ems), 13.07.2010 – Current compliance with the new Energy-Saving Directive (EnEV), §15, is based on a simple scheme to guarantee heat recovery above a supply air volume of 4,000 m<sup>3</sup>/h; the choice is generally a central ventilation unit that simultaneously takes on the role of heating up the air in the room. The disadvantages of this approach have to be taken into consideration. The new system solution proposed by Kampmann GmbH is simpler, more cost-effective and environmentally-friendlier, ingeniously linking the benefits of decentralised temperature regulation and centralised heat recovery.**

The most costly disadvantage of temperature-regulating centralised ventilation lies in its method of operation. As a moderate air volume is not always enough for satisfactory temperature regulation, the volume of fresh air supplied to cooling or heating elements via mixing flaps or recirculating flaps. This results in a large air volume that has to be pushed with great expenditure of energy by the fans through the resistance in the heat exchangers, filter and flaps. The cooled or heated air then has to be transported again with great force from

fans through large-dimensioned air ducts to where it is needed.

### **Separating the functions is more efficient**

Smaller and more efficient is possible. The new Kampmann centralised/decentralised system solution is based on a simple approach: ventilation and temperature regulation need **not necessarily be provided with one unit**. The functions can be split: CO<sub>2</sub> sensors or motion detectors determine the air quality required; the ventilation unit provides the rooms with fresh external air and EnEv-compliant heat recovery and used air is discharged. In contrast, heating and cooling is only provided where it is needed: in the rooms themselves, by means of temperature sensors, time clocks and adjustable thermostats.

### **Smaller air volumes mean significant savings**

The combination of decentralised air conditioning and centralised heat recovery brings together the benefits of both concepts and eliminates their disadvantages. At the very heart of the new system solution is the Airblock C, a compact ventilation unit with efficient heat recovery and integral bypass. After filtration and heat recovery by a crossflow heat exchanger, only the volume of fresh air needed is passed through the unit - reducing the energy consumption of the fans to an absolute minimum! With CO<sub>2</sub>-managed fresh air supply, the air volume is reduced and thus the power consumption again. In the rooms themselves, decentralised Kampmann products, such as the Ultra air handling unit for large spaces, unit heaters or fan convectors provide the individual "comfort" or working temperature required. When fresh air is not needed, they operate simply in energy-saving recirculating air mode.

### **Comparison of SFP data is impressive**

The following comparative data makes it clear how sensible a centralised/decentralised combination is: the Airblock C has an SFP (specific fan power) figure of < 2,000 Ws/m<sup>3</sup>, this is the maximum

permitted figure in compliance with the Energy-Saving Directive (EnEV). The Ultra large-space air handling unit has an SPF figure of 100 to 170 Ws/m<sup>3</sup> and a unit heater 100 to 200 Ws/m<sup>3</sup>. This is compared with SFP figures of < 2,000 Ws/m<sup>3</sup>, produced by a conventional centralised ventilation unit that also heats and cools. Heating or cooling only with a centralised ventilation unit is as uneconomical as fetching bread in a HGV.

Kampmann GmbH offers the Airblock C with different levels of heat recovery and decentralised air conditioning in three mode and output sizes: C 5 ( = 5,000 m<sup>3</sup>/h), C 7 (7,000 m<sup>3</sup>/h) and C 9 (9,000 m<sup>3</sup>/h). It is possible to fit it indoors as well as outdoors and there is also a range of decentralised units available. Their low power and current uptake results from their low air resistance and small fans. All of the components are coordinated with each other so that the variation options are almost limitless.

### **Feasible for every space**

This new solution is feasible for almost every requirement. Many retail stores are already benefitting from the advantages of linking centralised and decentralised technology. A new cinema complex is also currently fitting the technology where the combination of fan convectors is providing the right and correct temperature of fresh air. With a maximum air volume of 9,000 m<sup>3</sup>/h, the Airblock C provides the requisite volume of fresh air during the performances, pre-warmed by heat recovery, depending on the external temperature. Fan convectors provide the remaining heat requirement and temperature regulations during the performances. In industry, two Airblock C 9 units provide an agricultural service provider's warehouse with demand-led fresh air.

In all cases, there is a much lower overall consumption of power than the use of a centralised ventilation unit.

### **Benefits at a glance**

- Filtered fresh air, discharge of extract air,

- EnEV-compliant heat recovery (optionally with approx. 50 %, 60 % or 80 % heat recovery),
- A compact design of ventilation unit - Airblock C - in three capacities,
- Optimum air conditioning,
- Lower procurement costs compared with a centralised unit providing heating/cooling,
- Enormous energy-savings in operation,
- CO<sub>2</sub> savings,
- Minimal ductwork, minimal space requirement,
- No pressure and heat losses by heating and cooling elements in the fresh air supply,
- Decentralised end units as required for individual room temperature regulation.

### Summary

The new German Energy-Saving Directive EnEV, § 15, prescribes heat recovery above a supply air volume of 4,000 <sup>3</sup>/h. The resource-saving, space-saving and cost-saving solution is decentralised air conditioning and centralised heat recovery.

More information: [www.kampmann-uk.co.uk](http://www.kampmann-uk.co.uk)

(207 words/1,505 characters)

### **Photo 1** (*1\_AirblockC.jpg*)

Airblock C

### **Photo 2** (*2\_AirblockC\_System.jpg*)

Combination of Airblock C with decentralised units: heating up the air takes place only in the occupied areas

### **Photo 3** (*3\_Ausblas\_Ultra.jpg*)

Air blow through Ultra air handling unit for large spaces

### **Diagram 1** (*Diagramm1\_Leistungsaufnahme\_Jahresverlauf.jpg*)

Electric power consumption during the year

**Diagram 2** (*Diagramm2\_Leistungsaufnahme\_Tagesverlauf.jpg*)

Electric power consumption during the day

**Photo 4** (*4\_Hermann\_Ensink.jpg*)

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**Source:** Kampmann GmbH