

## Press Release

### **ISH Launch The quietest on the market: fresh air for schools**

**Lingen (Ems), 10.03.2011 – Kampmann GmbH launches the solution for stuffy classrooms: the decentralised KLIMANAUT 800 ventilation unit provides ventilation with fresh air and is the quietest on the market. This unit will be premiered at the ISH in Hall 8/stand C30 and Hall 11/stand B30.**

The KLIMANAUT 800 unit achieved its four development targets in the company's own Research & Development Centre at Kampmann GmbH:

1. A tried-and-tested fresh air temperature management system is to be modified for ventilation in schools.
2. It should guarantee the best possible diffusion of fresh air in a classroom.
3. It should incorporate leading quiet acoustics.
4. Untrained people should be able to operate it easily.

#### **1. Fresh air unit for classrooms**

Kampmann GmbH reverted to its tried-and-tested fresh air technology from the KLIMANAUT product range for the development of a ventilation unit for schools. It combines controlled ventilation with a fresh air supply, alternative cooling with natural evaporation cooling and highly efficient heat recovery.

#### **Compact and versatile in its use**

Numerous studies by different institutes have shown that classrooms

require an air volume of between 600 and 800 m<sup>3</sup>/hr. Therefore, the modification to the unit started with the adjustment of the maximum performance capacity to 800 m<sup>3</sup>/hr. Then the external accessories (supply and extract air grilles, etc.) were conveniently integrated into the unit. As the KLIMANAUT 800 operates as an entirely decentralised unit, its installation merely requires the following: two air ducts for the fresh and exhaust air through the shell of the building; a connection to the mains water and removal of the condensed water over and above a power supply. For this reason, it is versatile to use within a classroom as a compact cupboard unit and can also be retrofitted.

## **2. Diffusion of fresh air deep into rooms**

Lack of oxygen and odour pollution are a thing of the past with its well-known, efficient displacement ventilation. A layer of fresh air, so-called displacement, fills the entire floor of the room in the process. It rises vertically up any people and warm objects with its natural thermal uplift, dissipating pollutants gently and supplying people with an ideal supply of fresh air. The classrooms do not need any air distribution ducts.

## **A particularly pleasant outlet temperature**

A further technical refinement creates a particularly pleasant outlet temperature. It is provided depending on the temperature of the room and is predefined by a controller. The supply air that is mixed with secondary air leaves the unit at a low temperature and becomes more pleasant through sensory reactions. Any draughts are effectively avoided.

## **3. Whisper-quiet acoustics**

The phase in the company's in-house sound measurement laboratory within the Research & Development Centre was particularly significant. Two methods directed us to our leading whisper-quiet acoustics: a sound-optimised unit body and a sound-attenuated

interior. This way, Kampmann achieved market-leading values: The whisper-quiet 30 dB(A) at an air volume of 600 m<sup>3</sup>/hr (32 dB(A) at 800 m<sup>3</sup>/hr) from a distance of only one metre are scarcely perceptible for starters.

#### **4. Simple to operate**

Timer programs automatically adapt to the usage of the room. However, if a room is unexpectedly occupied, a simple press of a button starts up the unit. It is also possible to control it using fully-automated building management systems, for example, if a school is using a KLIMANAUT unit in every classroom to supply fresh air. Caretakers or external building service providers can control it conveniently using a single control system, even online.

#### **Conclusion**

Pupils and teachers benefit from the constant fresh air with the KLIMANAUT 800 ventilation unit for schools without the disadvantages of window ventilation. It is barely audible, easy to operate and requires minimum structural work. Here we have a sustainable, tried-and-tested technology incorporated into a compact housing and offering great benefits. It complies with all aspects of the relevant requirements of DIN and VDI guidelines and guarantees massive energy-saving potential thanks to its effective heat recovery and integrated control system.

#### **Mechanical ventilation is practically inevitable**

Kampmann GmbH, based in Lingen, is successful throughout the world with its technologically leading systems for heating, cooling and ventilation. It recorded a turnover of around € 70 million in the 2010 financial year, 30 % of which was from exports. Kampmann GmbH is the market leader in the Netherlands with its KLIMANAUT fresh air technology. There they have already recognised that the mechanical ventilation of home, work and classrooms is practically inevitable. In Germany this awareness is continuously growing.

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

[www.klimanaut.de](http://www.klimanaut.de)

(756 words/4,891 characters)

**Photo 1** (*1\_KN800\_Frischluftdurchdringung.jpg*)

Fresh air penetrates right through the room: people enjoy an optimum supply of fresh air and pollutants are carefully carried off.

**Photo 2** (*2\_KN800\_Verdraengungslueftung\_Render.jpg*)

Simulated effect: induction exhaust air/discharge supply air

**Photo 3** (*3\_KN800\_Schallentwicklung\_Schallkartierung.jpg*)

On the left is shown the development of sound while the unit starts up over ten minutes, and on the right the sound is mapped on the three surfaces at one operating point.

**Bild 4** (*4\_KN800\_final\_Schallmesslabor.jpg*)

The finished KLIMANAUT 800 in the acoustic measuring laboratory.

Photo source: Kampmann GmbH