

# The benefits of the new e<sup>2</sup> at a glance

## LUNOS apartment ventilation systems with heat recovery

Innovation as tradition – the e<sup>2</sup> of LUNOS







#### **Environmentally friendly**



#### Innovative



#### Lean



#### Compatible



#### Universal

#### We consider sustainability to be important!

The term of sustainable building work is currently being used more often than ever before. Sustainable building also means that the technology implemented considers this word. LUNOS stands for sustainability.

All products are made exclusively of materials that preserve both nature and resources and are processed just as gently.

- Made in Berlin -



You can get more information from

LUNOS Lüftungstechnik GmbH für Raumluftsysteme Wilhelmstraße 31 · 13593 Berlin Postfach (OPB) 20 04 54 · 13514 Berlin

Telephone +49(0)30 362001-0 Facsimile +49(0)30 362001-89

www.lunos.de · info@lunos.de

#### Technical Data e<sup>2</sup>

Heat recovery efficiency 85-90 % Delivered volume 15-30 m<sup>3</sup>/h Power intake per device from 1,4 W Specific fan power  $0.09 \text{ W/m}^3/\text{h}$ 230 V/50 Hz Voltage/frequency ca. 20-30 % Humidity recovery from 16,5 dB(A) Noise level Sound level difference 42 dB Diameter of unit 150 mm Length of unit 243 mm Min. of wall thickness inkl. pattern and thermal insulation 300 mm Diameter of core bore 162 mm Dimension of inside cover plate 180 x 180 mm Diameter outside grid 180 mm or LUNOtherm Bath and shower room area from area1

- RoHS and WEEE compliant
- Tested according to DIN 308 and DIBT Standard
- EnEV and DIN 1946-6 compliant
- Used in low energy houses











# 2 energy-efficient Controlled apartment ventilation with the new e<sup>2</sup>







#### Silent

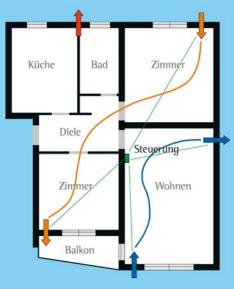
Highly efficient motors with state-of-the-art electric technology in combination with mechanical-flow, reworked and especially balanced fans have almost eliminated the known ventilation noises.

With a total of 17 dB (A)\* in level 1 and 19 dB (A)\* at level 2 (each 15, or resp. 30 m<sup>3</sup>/h volume throughput) the fans are well below the required values of DIN 4109 of 30 dB for living and sleeping rooms.

As comparison: 3 dB decrease stands for 50 % less sound intensity. A ventilator that just complies with this standard is therefore 16 times as loud. Once again new standards set in matters noise.









#### **Environmentally friendly**

With a specific fan power of 0.09 W/m<sup>3</sup>/h the e<sup>2</sup> is second to none in matters of energy efficiency and thus contributes actively to environmental protection and at the same time spares your purse. The requirements of the current DIN 1946-6 for devices of the efficiency class E are undercut by far which clearly underline the world class of the device.



#### **Innovative**

The e<sup>2</sup> operates according to the known principle of regenerative heat exchange which has almost been developed to perfection by the company LUNOS. The so-called AcuVent storage stone is located in the middle of the airflow of an electric motor with axial fan. By a reversing airflow, which results for the targeted change of direction of the fan, the ceramics are charged with heat – energy that is offloaded into the room air and discharged again to the air added from outdoors. This is carried out so effectively that a mere 10 % of the heating energy is lost by the ventilation.

Efficient filters are just as important. Allergy patients can take a deep breath, pollen and airborne particles can no longer enter the living areas.



### Energy efficiency made by LUNOS!

Ventilation with heat recovery is even more energy saving than ever before thanks to the LUNOS  $e^2$ :

Power requirement per device is a mere:

1.4 W at 15 m<sup>3</sup>/h volume delivered

2.8 W at 30 m<sup>3</sup>/h volume delivered

This results in a specific fan power of  $0.09 \text{ W/m}^3$  and a heat recovery efficiency of 85-90 %.



The e<sup>2</sup> is the smallest roomwise apartment ventilation device with heat recovery and is based on the principle of regenerative heat exchange. With the help of state-of-the-art manufacturing processes it has been possible to develop a compact heat exchanger from a ceramic composite material which supplies a thermal efficiency factor of approx. 85-90 %.

The combination with highly efficient electric motors and an intelligent control has made it possible for LUNOS to develop one of the most economical ventilators.



## Compatible

If a LUNOS ventilation system has already been installed, the e<sup>2</sup> can be inserted through the outlets/passages of the types ALD-R 160 or ALD-R 160 L with LUNOtherm. In a new building the LUNOS e<sup>2</sup> can also be combined with all LUNOtherm elements. In combination with the LUNOtherm façade element only a small slit remains in the window reveal. Hardly anything can be seen from outside. Unattractive grids or large wall installations belong to the past.



#### Universal

In a new building, as in a renovated building, the LUNOS e<sup>2</sup> can be used. The e<sup>2</sup> is either installed in a new building with the help of a wall recess casing position between the stones, or subsequently, e.g. when renovating with the help of a 162 mm large core bore. The wall need only be a minim 30 cm thick. The cabling is effected directly from the control which is installed in the appertaining flush-mount pattress. From there only three leads of cable are required which are charged with 12 V extra low voltage.









