SYSTEM WITH HEAT RECOVERY



# **HEAT RECOVERY**

# **Trust in LUNOS** Fresh air for generations

LUNOS is a Berlin-based company and market leader for decentralised residential ventilation systems. The company was founded in 1959 and still has its headquarters in Berlin-Spandau. In 2019, LUNOS established a second location in Brandenburg. With a modern high-bay warehouse and new laboratories, the company has prepared itself for the future. LUNOS products are made in Germany and sold in over 36 countries worldwide. In Germany, the products are sold via the three-stage distribution channel.

### LUNOS stands for more than a living climate

Air moves us - we move air. Because fresh air is important for people, as well as for houses and flats. The core competencies of LUNOS are decentralised controlled home ventilation with and without heat recovery as well as the development and manufacture of energy-efficient fans and outer wall air vents. In addition, LUNOS develops all associated components as well as many other products such as exhaust air fans and facade ventilation systems with concealed ventilation openings.

For decades LUNOS stood for highest quality, functionality and comfort. Ventilation systems, with or without heat recovery, improve the air quality in the house and save energy in everyday life at the same time.

Made in Germany



### **INFORMATIONS**

On our homepage www.lunos.de/en you will find data sheets, user information and much more.



### SYSTEM WITH HEAT RECOVERY



#### FOOTNOTES: MEASUREMENT METHODS AND STANDARDS

3) The specified values are achieved at 20°C, 1013hPa and 1.2kg/m<sup>3</sup> ambient air density and (unless otherwise specified) are achievable between free blowing and 60 Pa disturbance pressure (according to DIN18017-3).
4) When dimensioning the volume flows, please observe the pressure-volume flow characteristics provided by LUNOS and the specifications of the abZ (DIBt approval)
5) Sound power level: The sound power level indicates how "loud" a unit is. The value is independent of the distance.
6) Volume flow of the ALD-SV with an even arrangement of the sound insulation elements.
7) Max. achievable WBG according to EN13141-8 at reference volume flow.
8) At 70 % of the maximum volume flow, according to ErP Directive, EU Regulation 1254/2014.

According to LÜA (test specification) of the DIBt and EN13141-8 max. achievable exhaust air volume flow free blowing at 20°C and 1013hPa ambient conditions as well as 1.2kg/m<sup>3</sup> ambient air density.

a) According to LÜA (test specification) of the DIBt, see also certificate of usability (abZ), when using the wall installation housing 9/MRD as insulation, without 9/MRD 2%

d) According to LÜA (test specification) of the DIBt and EN13141-7 max. achievable
 exhaust air volume flow free blowing at 20°C and 1013hPa ambient conditions as well as 1.2kg/m<sup>3</sup> ambient air density.
 e) According to EN 13141-7 at reference volume flow, see also certificate of usability (abZ)

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g) Sound pressure level at 1m distance, single-point measurement. All data are mathematically rounded.

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# **Controlled home ventilation**

System with heat recovery

# **02** SYSTEM WITH HEAT RECOVERY

With this particularly efficient system, all rooms in the residential unit are equipped with heat recovery units - exactly where they are needed. If you are interested in this type of ventilation, we recommend our proven e<sup>2</sup> series fans.

## Series e<sup>2</sup> A

Axial outer wall ventilators with regenerative heat recovery for living rooms and bedrooms, can be combined with the facade element LUNOtherm.



Exhaust fan with heat recovery for functional rooms.





### Ne<sup>xx</sup>t 🕐

Radial outer wall ventilator with recuperative heat recovery for living rooms, bedrooms and functional rooms. Wall ducting via 160 mm round duct.



### 9/MRD

Wall-mounted housing to accommodate the 160 round duct. Already prefabricated with a gradient to the outside.



#### **Series LUNOtherm**

Facade element, without disturbing ventilation grille on the facade. Can be combined with all devices of the series e<sup>2</sup>.









# e<sup>2</sup> series

# Flexible in any field

No fan has the decentralized ventilation with heat recovery so characterized like the e<sup>2</sup> from LUNOS.

e<sup>2</sup>60short The e<sup>2</sup>60 for narrow outer walls

from 200 mm wall thickness or increased sound insulation e<sup>2</sup>short The short one: for small outer walls from 200 mm

wall thickness

e<sup>2</sup>60

The powerful one: constant pressure with a volume flow from 5 - 60 m<sup>3</sup>/h efficient for use in living room and bedroom

The classic: proven and

### LUNOS pbD-HEAT EXCHANGER

- 70 % less production energy
- 50 % weight saving
- 100 % recyclable

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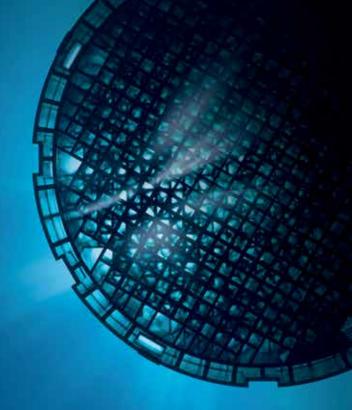




Characteristics	e²60	e <sup>2</sup> 60short	e²	e²short
Volume flow <sup>9)</sup>	5 - 60 m³/h	5 - 60 m³/h	15 - 38 m³/h	15 - 38 m³/h
Heat supply level accor- ding to DIBt १००,	85 - 96 %	89 %	90 %	86 %
Approval number	Z-51.3-455	Z-51.3-479	Z-51.3-450	Z-51.3-450
Max. degree of heat supply <sup>b)</sup>	96 %	89 %	94 %	88 %
Heat supply level accor- ding to EN 13141-8 at reference volume flow	20 m <sup>3</sup> /h: 96 % 40 m <sup>3</sup> /h: 90 % 60 m <sup>3</sup> /h: 85 %	40 m <sup>3</sup> /h: 83 % 60 m <sup>3</sup> /h: 80 %	20 m³/h: 93 % 38 m³/h: 91 %	20 m³/h: 85 % 38 m³/h: 80 %
Max. standard sound level difference D <sub>n,e,w</sub> <sup>39</sup>	67 dB	67 dB	54 dB	54 dB
Sound power level $L_W^{3}$	from 18 dB(A)	from 18 dB(A)	from 29 dB(A)	from 28 dB(A)
Power consumption <sup>3) 9)</sup>	0,4 - 3,3 W	0,4 - 3,3 W	0,7 - 4 W	0,6 - 3,9 W
Minimum installation length	280 mm (lower on request)	200 mm	280 mm	200 mm
Dimensions	Plug-in unit Ø 154 x 243 mm	Plug-in unit Ø 154 x 160 mm	Plug-in unit Ø 154 x 243 mm	Plug-in unit Ø 154 x 168 mm
Compatibility	All 160 systems incl. LUNOtherm and outer hoods as external finish	All 160 systems incl. LUNOtherm and outer hoods as external finish	All 160 systems incl. LUNOtherm and outer hoods as external finish	All 160 systems incl. LUNOtherm and outer hoods as external finish
Energy efficiency class	A+	A	A	A

For footnotes on measurement methods and standards, see page 3.





# Ready for the demands of the future.

Thanks to its very low power consumption and intelligent motor control, the e<sup>2</sup>60 is extremely energy efficient and easily achieves energy efficiency class A+.



Highly efficient heat exchanger with a degree of heat supply of 90 % resp. 83 %

> Sound-optimised fan unit with pressureconstant ec-motor

Patented air diffuser for optimal inflow

Inner screen with washable G3 filter

Wireless screen with washable G3 filter or optional fine particle filter

### LUNOS pbD-HEAT EXCHANGER

- 70 % less production energy
- 50 % weight saving
  100 % recyclable
- 100 % recyclable

# e<sup>2</sup> 60 and e<sup>2</sup> 60 short The reference units in their class



# With classified wind pressure stability and high volume flows, the e260 is a reference device in its class.

The consequent improvement of the ec-technology and the wing aerodynamics ensures particularly low noise emissions. The fact that the e<sup>2</sup>60 achieves the high heat supply level of 96 % is largely due to the patented air diffuser and the polymer-based rotary angle heat exchanger (pbD-heat exchanger), which ensure a particularly even flow. The innovative design of the heat exchanger with its optimised

flow geometry and homogeneous surface inflow plays a large part in this.  $e^260$  is the first axial fan to achieve a constant volume flow at high back pressures. This outstanding feature of external motor control ensures that the  $e^260$  is the first unit of its type to meet the requirements of pressure class S1 according to DIN 13141-8. This makes it easy to use in areas with high wind pressures, such as on the coast or at high altitudes. A further advantage of the  $e^{2}60$  is its high volume flow bandwidth. With the smaller heat exchanger of the  $e^{2}60$ short, the range of application is extended to slim outer walls with a wall thickness of 200 mm or more or for rooms with higher sound protection requirements.

#### Can be combined with inner screens of the 160 series



Standard Inner screen



Sound insulation



Comfort inner screen (plastic design)



Hygiene inner screen (glass design)



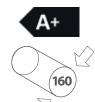
Comfort inner screen (glass design)



Hygiene inner screen (plastic design)



Wireless screen with integrated control system



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F7\*-FILTER

Special pollen and fine dust filters that simply leave annoying particles outside. F7\*-filters included with the hygiene inner screens.



\*Equivalent to 55% according to ISO 16890 ePM1.

# e<sup>go</sup> series

# 3 x heat recovery for exhaust rooms

With or without wireless control for bathrooms, WCs and kitchens

# e<sup>go</sup>60-RF new

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Supply and exhaust air in one unit with the new heat exchanger and newly developed, innovative ec motors. Equipped with LUNOS wireless control as standard

# ego & ego-RF (new

The reference in functional room ventilation with the new LUNOS heat exchanger, now also available as a wireless version e<sup>90</sup>-RF

Weather protection outer hood with separate air streams and insect protection —

Highly efficient polymer-based rotary angle heat exchanger with a max. degree of heat supply of 92 %

Quiet fan units with newly developed ec motors in counterflow arrangement for simultaneous ventilation and exhaust Flow-optimized inner screen with separate supply and exhaust air openings and washable G3 or pollen filter

Integrated wireless control with humidity and temperature sensors for automatic control with e<sup>90</sup>-RF and e<sup>90</sup>60-RF

### LUNOS pbD-HEAT EXCHANGER

- 70 % less production energy
- 50 % weight saving
- 100 % recyclable

LUNOS

# e<sup>go</sup> series

The smallest, lightest and most efficient fans with supply and exhaust air in just one unit

# In one e<sup>go</sup>, two fans provide simultaneous air supply and exhaust. Therefore, operation in pairs is not necessary.

The new e<sup>90</sup> series provides fresh air in functional room ventilation. Proven for over 10 years, the e<sup>90</sup> is equipped with the latest achievements of the LUNOS development department. All three fans in the e<sup>90</sup> series are equipped with the new pbD heat exchanger, making them even more sustainable while maintaining the same energy efficiency. The new ec motors of the e<sup>90</sup>60-RF not only make the fan quieter and more efficient, but also increase the exhaust air flow rate to 60 m<sup>3</sup>/h. The e<sup>go</sup>-RF and e<sup>go</sup>60-RF can be operated particularly conveniently with a wirelessly connected Smart Comfort control unit. With the EnOcean wireless module UNI-EO fitted, control is easily possible via the RC-EO remote control or via app.

### Outer hood

The e<sup>go</sup> can be combined with the universal hood or the two-channel outer hood\* on the façade.

Universal hood white



Two-channel outer hood white



\*Our two-channel aluminium outer hoods can be painted in RAL colours on request



Two-channel outer hood anthracite



Δ+

e<sup>9°</sup>60-RF



For footnotes on measurement methods and standards, see page 3.



**Volume flow**<sup>9)</sup> 5 - 20 m<sup>3</sup>/h (heat recovery), 45/ 60 m<sup>3</sup>/h (exhaust)

Max. degree of heat supply<sup>b)</sup>

Heat supply level

Max. standard sound level difference D<sub>n,e,w</sub> <sup>3</sup> 46 dB

Sound power level L<sub>W</sub><sup>3) 5,</sup> from 28 dB(A)

**Power consumption** <sup>3) 9)</sup> 1 - 4,9 W

Supply voltage 12 V DC SELV

**Core drilling** Ø 162 mm

Minimum installation length 300 mm

**Dimensions** Screen 237 x 217 mm Plug-in unit Ø 154 x 300 mm

Protection class

e<sup>go</sup>60-RF ec-Motor

# Nexxt

# Heat recovery unit

The Ne<sup>xx</sup>t is not only suitable for home ventilation, but also for use in kindergartens, schools, offices, hotels and medical practices. The Ne<sup>xx</sup>t also delivers the best results in areas where extraordinary wind loads prevail or high sound insulation is required.



Ne<sup>xx</sup>t NXT with 9/NXT-IB for external regulation by wireless or control

# Ne<sup>xx</sup>t Decentralized heat recovery unit



#### Low noise level and maximum passive soundprotection

The Ne<sup>xx</sup>t is extremely energy-efficient thanks to its very low power consumption: the ec technology with high efficiency enables low power consumption. The integrated controller ensures perfect interaction between the various components. Equipped with humidity-temperature sensors, the automatic control system ensures efficient ventilation with moisture protection even in the standard version. Optionally, the Ne<sup>xx</sup>t can be equipped with the EnOcean FM-EO wireless module for control and communication with other LUNOS components and for SmartHome integration. The heart of the Ne<sup>xx</sup>t is the plug-in unit with heat exchanger, which is equipped with innovative membrane technology and achieves a heat recovery rate of up to 96 %. In addition, the

mode of operation of the heat exchanger ensures that it is largely ice-free and provides comfort in the interior due to the additional re-humidification.

#### Ne<sup>xx</sup>t NXT-E

Equipped with an integrated control element in the inner screen, the NXT-E can be operated directly on the unit.

#### Ne<sup>xx</sup>t NXT

The NXT differs from the NXT-E only in its control capability. The required external regulation can be taken over by all 12 V controls from LUNOS.

#### OPTIONAL FM-EO

EnOcean wireless module for bidirectional wireless transmission.



### OPTIONAL F9\*\*-Filter

For the highest demands of hygiene. Already equipped with F7\*-Filters as standard.

#### OPTIONAL

**Electrical flap closure** 

It opens or closes the panel feedthrough automatically when the unit is switched on or off



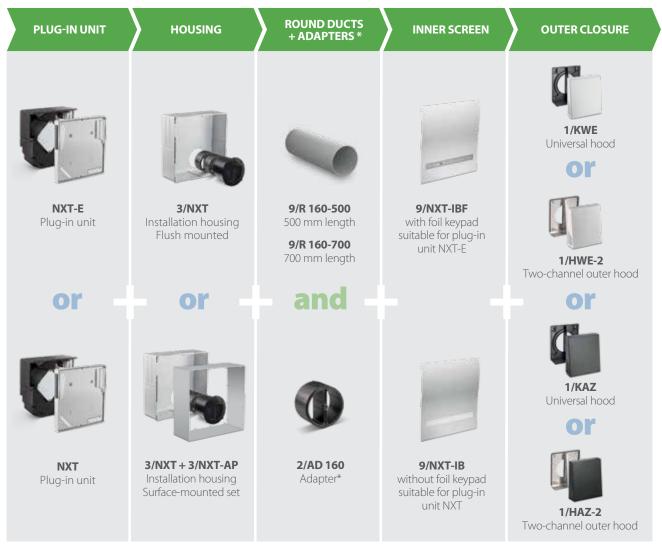




\*Equivalent to 55% according to ISO 16890 ePM1. \*\*Equivalent to 80% according to ISO 16890 ePM1

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# **Ne<sup>xx</sup>t** The modular system for the perfect fan



\*From 30 cm an adapter is required for each 10 cm or part thereof of the round duct.







Characteristics	NXT-E and NXT		
Volume flow <sup>3)</sup>	15 - 110 m³/h		
Max. degree of heat supply <sup>7)</sup>	96 %		
Heat supply level according to EN 13141-8 at reference volume flow	25 m³/h: 96 % 50 m³/h: 89 % 75 m³/h: 84 %		
Max. standard sound level difference $D_{n,e,w}^{3}$	49 dB		
Sound power level L <sub>W</sub> <sup>3)</sup>	from 20 dB(A)		
Power consumption <sup>3) 8)</sup>	22 W		
Supply voltage	200-240 V   50/60 Hz (115 V   60 Hz on request)		
Core drilling	162 mm		
Minimum installation length	Surface-mounted: 110 mm, flush-mounted: 280 mm		
Depth for wall mounting	172 mm Housing + 105 mm Flap closure in wall ducting		
Dimensions of the device	480 mm x 480 mm x 170 mm		
Size inner screen	510 mm x 510 mm x 66 mm		
Size outer hood	235 mm x 205 mm x 72 mm		
Energy efficiency class	A		
Protection class	IP22		

For footnotes on measurement methods and standards, see page 3.



# Inner wall air vent ILD

Active cross-fl ow element for installation in interior walls



# Compatibility

ILD can be combined with all exhaust air systems, ALD, the e<sup>2</sup> and e<sup>go</sup> series, as well as, Ne<sup>xx</sup>t and LUNOMAT. Synchronized conveying directions and volume flows can be created or independently controllable (ILD) systems can be set up.

# ILD Inner wall air vent

Ventilation for previously out-of-reach rooms



### Easy ventilation of adjoining rooms in combination with ILD and the existing ventilation control or via a separate control for ILD

The active cross-flow element ILD is set up with the inner screens of the 160 series. It can also be equipped with sound absorbers. The application area of the ILD are interior rooms that must be ventilated via another room. If there is no outer wall available in a living space, then one or more ILDs can be used to create a coupling with other rooms supplied by fresh air and thus

establish an active air connection. For example an e<sup>2</sup> ventilation system can be installed in a bedroom (=primary room) and an adjacent interior side room (=secondary room) can be ventilated by an ILD. The ILD is the ideal supplementary ventilator for cascaded ventilation in a living space.

#### Can be combined with inner screens of the 160 series.



Standard inner screen



Comfort inner screen (plastic design)



Sound insulation Inner screen



Wireless screen with integrated control system



Comfort inner screen (glass design)





#### **TECHNICAL DATA**

Volume flow<sup>3</sup>

Sound power level Lw<sup>3/5)</sup>

Power consumption<sup>3</sup>

Supply voltage 12 V DC SELV

**Core drilling** Ø 162 mm

**Minimum installation length** 

Dimensions Plug-in unit Ø 154 x 60 mm

#### **Cascaded ventilation**

**Cascaded ventilation** The term cascaded ventilation is used to describe the interconnection of living spaces that cannot be ventilated independently of each other. The directly ventilated room (with an installed ventilation system) is called primary room and the cascaded ventilated room (without a directly installed ventilation system) is called secondary room. For example, the bedroom with e<sup>2</sup> is the primary room and the sadiacent dressing room is the secondary room. adjacent dressing room is the secondary room. Only rooms of the same or similar type of use should be connected. Air flows from the primary to the secondary room and should therefore not come from bathrooms, toilets, kitchens or utility rooms to prevent odour transfer. For example, rooms, and living rooms can be cascaded with work rooms or storage rooms.



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# LUNOMAT

# **Central home ventilation unit**

Fresh air supply of the living areas, by pressure-resistant and highly efficient ec radial motors for volume flows up to 125 m<sup>3</sup>/h.



# **LUNOMAT** The first central home ventilation unit from LUNOS



# Highly efficient enthalpy heat exchanger with a heat supply efficiency of up to 95 %

With a highly efficient enthalpy heat exchanger and a heat supply level of up to 95%, the LUNOMAT is the performance professional for the supply of fresh air to living spaces. Thanks to exchangeable filters of the class F7, the LUNOMAT can be adapted to the most diverse requirements. The pressure-resistant and highly efficient ec radial motors are also suitable for volume flows of up to 125 m<sup>3</sup>/h at 100 Pa and ensure optimum air distribution via an appropriate duct network. In short: The LUNOMAT is the all-round talent from LUNOS for central home ventilation. The LUNOMAT can be operated by all LUNOS control systems:

TAC, Smart Comfort, universal control and gesture control. Of course, it is also possible to receive commands from the common smart home controls or homee via optional wireless modules.

### OPTIONAL F7\*-Filter

Exchangeable filters of class F7\* available



\*Equivalent to 55% according to ISO 16890 ePM1.





For footnotes on measurement methods and standards, see page 3.

**TECHNICAL DATA** 

**Volume flow**<sup>*d*)</sup> 40 - 125 m<sup>3</sup>/h at 100 Pa

Max. degree of heat supply <sup>b)</sup>

**Heat supply level**<sup>e</sup>/ 75 m<sup>3</sup>/h: 92 % 100 m<sup>3</sup>/h: 87 % 125 m<sup>3</sup>/h: 85 %

Heat supply level according to PHI<sup>*f*</sup>

**Device sound**<sup>g)</sup> **at 100 m<sup>3</sup>/h, 100 Pa** 45 dB(A)

Specific Power consumption (SPI) at 50 Pa<sup>3/e/</sup> 0,3 W/(m<sup>3</sup>/h)

Max. power consumption at 125 m<sup>3</sup>/h,100 Pa<sup>3/d</sup> 52 W

**Mains voltage** 100 - 240 V | 50/60 Hz

External and internal leakage Class A1

**Dimensions (H x W x D)** 805 x 555 x 190 mm

Installation options New construction and renovation Ceiling and wall mounting 4 x DN 125 mm Outlets

LUNOMAT

# Controls

## Whether with gesture or automated

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LUNOS offers control systems that can be adapted exactly to the wishes and requirements.

# 5/UNI-FT & 5/UNI-RF

Can be controlled automatically, standard with humidity/temperature control and time delay module, also available as wireless version

## **Gesture control**

Contactless controllable with 60 RGB LEDs and many standby display options

### Wireless screen

With integrated wireless control and wireless operation, housed in a sleek design screen

## Smart Comfort & Smart Comfort wireless

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Especially easy to operate: one touch of a button is enough, also available as wireless version

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# TAC

The all-rounder from LUNOS can be configured for the most diverse ventilation scenarios

# Gesture Control

Universal controllers and devices of the Ne<sup>xx</sup>t and/ or Silvento ec series can be connected to the two outputs of the Gesture control. More than with other ventilation systems, decentralised ventilation is about effectiveness and the sensible addition of the various fans in the system. For the optimal implementation of energy-efficient ventilation, control systems are required that network the ventilation system in a meaningful way while ensuring easy operation.

LUNOS provides different types of control: the Universal Control, the Touch Air Comfort, the Smart Comfort and the Gesture Control. The universal control as well as the Smart Comfort are also available as LUNOS wireless variants 5/UNI-RF and 5/SC-RF with integrated wireless module. Just like the wireless screen, they can be easily coupled with each other via the LUNOS wireless protocol and also have a slot for the UNI-EO wireless module. This makes it possible to control the connected fans via home automation systems or homee.

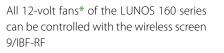
# Wireless screen with 5/UNI-RF The complete technology under one hood

The wireless screen combines elegant design for the living room with the control technology of the universal control. The built-in 5/UNI-RF with humidity and temperature sensors has an integrated wireless module that allows communication with other 5/UNI-RF controls and wireless screens without additional wiring. In automatic mode (heat recovery mode), the outdoor temperature and outdoor humidity are included in the intelligent control of e<sup>2</sup> series units and the volume flows are adjusted according to the differences in humidity between inside and outside. Other LUNOS wireless products or smart home controls with UNI-EO wireless module UNI-EO can be connected.



### Functions

- » Including power supply unit for direct connection to 230 V, 50/60 Hz.
- » Built-in 5/UNI-RF with integrated LUNOS wireless module for connection with further 5/UNI-RF controls and wireless screens
- » EnOcean wireless module UNI-EO can be connected for smart home connection, app control, etc.
- » Automatic humidity control with humidity and temperature sensors
- Manual control via pushbutton on the screen (four-stage) or optional connection of external switches possible
- » Integrated delay time and interval operation
- » 0 10 V input for connection to the TAC or to the home automation system



**Optional device combinations** 



\*except e<sup>go</sup> series



# **Wireless technlogy**



### The LUNOS wireless system •

- The secure wireless system for your home
- Smart Comfort 5/SC-RF, Universal control 5/UNI-RF, wireless screen 9/IBE-RF as well as ego-RF and ego60-RF can operate with the LUNOS wireless system

The LUNOS wireless system is an independent system that transmits bidirectionally at 868 MHz. Our wireless controls and wireless screens are equipped with LUNOS wireless modules and can be connected to the homee Smart Home central unit or to other Smart Home systems via an EnOcean UNI-EO module.

# Smart Home extension via ))

- Only one EnOcean module is required to control your ventilation system while travelling - simply plug the appropriate module into the master and connect it to homee
- All LUNOS wireless products can be used as masters

# Our LUNOS wireless system – simply make Smart Home ready

The LUNOS wireless system with bidirectional wireless technology - energy efficient and safe. An EnOcean module makes the LUNOS wireless system Smart Home-compatible.



The bidirectional wireless technology transmits reliable signals with very small amounts of energy. For the connection of the LUNOS wireless products (RF) with the Smart Home the equipment with an EnOcean module UNI-EO is sufficient. The transmitters with EnOcean technology can be operated partly without batteries and therefore with low maintenance. The necessary energy is generated by the piezoelectricity of switches or solar cells. In order to control the ventilation system via smartphone, tablet or computer, LUNOS recommends the use of the homee Smart Home central unit, which already has a WLAN interface as standard and thus provides for the connection to the Internet. With the EnOcean expansion module from homee, the LUNOS wireless modules are integrated into the smart home control center. But the easy-to-use interface, available as an app for iOS and Android or as a WebApp, can be used to control more than just the ventilation: all smart home functions can be operated via this one application.

# LUNOS wireless system

Our products for the safe control of your ventilation





### Wireless controls 5/UNI-RF & 5/SC-RF

The wireless controls **5/UNI-RF** and **5/SC-RF** has all the functions of the proven 5/UNI-FT and 5/SC-FT. Thanks to the LUNOS wireless module integrated as standard, it enables communication with LUNOS wireless products. Communication with EnOcean products or smart home controls is possible via the EnOcean module UNI-EO without additional wiring.



#### Wireless screen 9/IBF-RF

The wireless screen combines elegant design for the living room with the control technology of the universal control. It is equipped as standard with the 5/UNI-RF with humidity and temperature sensor and an integrated wireless module and a power supply unit for direct connection to 230 V, 50/60 Hz and. Suitable for all devices of the e<sup>2</sup> series and RA 15-60.



new

In the e<sup>90</sup>-RF and e<sup>90</sup>60-RF fan versions, the elegant design screen of the e<sup>90</sup> covers the universal wireless control (5/UNI-RF) and a power supply unit. This means that both e<sup>90</sup>s only require a 230 V, 50/60 Hz connection and can be controlled by wireless or regulate themselves automatically via the humidity and temperature sensors of the built-in universal control unit.

# Smart Home wireless technology

EnOcean products for smart home connectivity



#### Wireless module UNI-EO

The UNI-EO wireless module is used for universal control and Smart Comfort and ensures constant communication with the coupled EnOcean wireless components and Smart Home. So it is possible for connected e<sup>2</sup> devices to actively delivers supply air when an exhaust fan transmits a switched demand ventilation by a wireless command.



#### Wireless module FM-EO

The FM-EO wireless module is compatible with all Silvento ec and Ne<sup> $\infty$ </sup>t models. The Silvento ec can also optimise the ventilation behaviour with the coupled outdoor sensor SFT-EO. In conjunction with e<sup>2</sup> fans on a universal control unit with UNI-EO module, sensor values can be exchanged and the ventilation operations of the systems can be coordinated.



#### **Humidity Temperature Sensor SFT-EO**

The external humidity temperature sensor SFT-EO can be installed almost anywhere and does not require any additional power supply. When SFT-EO is coupled as an indoor sensor to UNI-EO or FM-EO modules, the values of the wireless sensor are compared. Coupled as an outdoor sensor with UNI-EO, the intelligent control unit compares indoor and outdoor climate and adjusts ventilation accordingly.



The RC-EO remote control is battery-free,

shock and splash-proof and is therefore

suitable for all areas of everyday life. Cou-

pled with the UNI-EO module or the

FM-EO wireless module, all connected de-

vices can be controlled by wireless com-

mand. Two channels are available for

switching ventilation levels and special

**Remote control RC-EO** 

functions.

#### Flush-mounted module UPM-EO

The UPM-EO flush-mounted module is a transmitter and receiver for wireless signals. Connected to a simple push-button or series switch switching commands can be transmitted by wireless. This is how a simple fan, such as the AB 30/60, becomes wireless. Especially during renovation work, this allows the fan to be operated

manually at a later date without the need for complex cable laying.

# **Inner screens** 160 series

#### **Comfort inner screens**

The direct sound impact on the resident is reduced - the result is a more pleasant living experience. The glass variants also impress with their elegant and modern design.



In plastic design (H x W x D) 191 x 180 x 60 mm Description: **9/IBK** 



In plastic design incl. F7\* filter, increased hygiene protection (H x W x D) 191 x 180 x 77 mm Description: **9/IBK-H** 



**In glass design** (H x W x D) 197 x 185 x 66 mm Description: **9/IBG** 



In glass design incl. F7\* filter, increased hygiene protection (H × W × D) 197 × 185 × 83 mm Description: **9/IBG-H** 

#### **Standard inner screen**

Simple screen with timeless elegance for universal use in the 160 series. (except  $e^{go}$  series).



(H x W x D) 180 x 180 x 35 mm Description: **9/IBE** 

#### Sound insulation inner screen

Increase of the standard sound level difference by up to 6 dB, reduction of the inherent noise, incl. washable filter class ISO Coarse  $\ge$  45%.



(H x W x D) 250 x 250 x 78 mm Description: **9/IBS** 



Elegant design screen including wireless control and power supply for all\* 12V devices of the 160 series (except e<sup>go</sup> series).



(H x W x D) 230 x 185 x 53 mm Description: **9/IBF-RF** 

\*Equivalent to 55% according to ISO 16890 ePM1.

# **Outer hoods & outer grilles**

Soundproofed & round or square





# 160 single and two-channel system, soundproofed

### **Universal hood**

Suitable for all devices of the 160 series and Ne<sup> $\infty$ </sup>t, recyclable plastic, (H x W x D) 235 x 213 x 74 mm, UV-resistant, for round ducts Ø 160 mm, insect protection, with sound insulation, to screw. Increase of the standard sound level difference by up to 6 dB. Description: 1/KAZ anthracite Description: 1/KWE white

#### Two-channel outer hood Aluminium\*



(H x W x D) 235 x 205 x 72 mm for round ducts Ø 160 mm, insect protection, with sound insulation, to screw. Increase of the standard sound level difference by up to 6 dB. Description: 1/HAZ-2 anthracite powder-coated Description: 1/HWE-2 white powder-coated

#### 160 single-channel system, soundproofed



**Outer hood aluminium\* and stainless steel** (H x W x D) 235 x 205 x 72 mm

for round ducts Ø 160 mm, insect screen, with sound insulation, to screw. Increase of the standard sound level difference by up to 6 dB.

Description: 1/HWE white powder-coated Description: 1/HAZ anthracite powder-coated Description: 1/HES stainless steel brushed

\*Our aluminium outer hoods can be painted in RAL







### Plastic grille Ø 180 mm

For round ducts Ø 160 mm with facade protection ring, UV-resistant Claw fastening and insect protection, Description: 1/BE 180 sanded Description: 1/WE 180 white Description: 1/AZ 180 anthracite

### Metal grille Ø 175 mm

For round ducts Ø 125 - 160 mm, Insect protection, pluggable Description: 1/RME 175 stainless steel Designation: 1/RMK 175 copper

## Metal grille 🛛 228 mm

For round ducts Ø 160 mm, Insect protection, pluggable Description: 1/QME 228 Stainless steel Designation: 1/QMK 228 copper

# Representatives

Germany





- Baden-Württemberg
- Bavaria
- Berlin, Brandenburg
- Franconia
- Hamburg, Schleswig-Holstein
- Hesse, Western Franconia, North Bader
- Lower Saxony, northern North Rhine-Westphalia
- Mecklenburg-Western Pomerar
- Rhineland-Palatinate, Saarland
- Saxony
- Saxony-Anhalt
- Southern North Rhine-Westphalia
- Thuringia



# Representatives International





- Australia
- Austria
- Bosnia and Herzegovina
- Canada
- Chile
- Chin
- Colombia

- Cyprus
- Czech Repub
- Denmark

- Ireland

- Italy
- Latvia
- Lithuar
- Malta
- INIEXICO
- Netherlands
- Norway

- Poland
- Portugal
- Switzerlan
- Slovenia
- Slovakla
- South Kore
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