

**HEAT RECOVERY** 

## **Trust in LUNOS**

Fresh air for generations

#### Quality is what stands the test of time

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

Because fresh air is important for people, as well as for houses and flats. The core competencies of LUNOS are decentralised controlled residential ventilation with and without heat recovery as well as the development and manufacture of energy-efficient fans and external wall diffusers. 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.





## **INFORMATION**

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





## **Controlled home ventilation**

System with heat recovery

## 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.

## e<sup>2</sup> series A A+

Axial external wall ventilators with regenerative heat recovery for living rooms and bedrooms, can be combined with LUNOtherm-S und LUNOtherm-S+.



Exhaust fan with heat recovery for functional rooms.



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





#### 9/MRD

Wall-mounted housing to accommodate the 160 round duct. H x W x D: 240 x 210 x 500 mm



#### LUNOtherm-S and -S+

Facade element, without disturbing ventilation grille on the facade.







# 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>short

The short one: for small outside walls from 200 mm wall thickness

## e<sup>2</sup>60short

The e<sup>2</sup>60 for narrow outer walls from 200 mm wall thickness



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



Characteristics	e²60	e²60short	e²	e <sup>2</sup> short
Volume flow	5 - 60 m³/h	5 - 60 m³/h	15 - 38 m³/h	15 - 38 m³/h
Max. degree of heat supply	97 %	87 %	94 %	88 %
Heat supply level according 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 m <sup>3</sup> /h: 93 % 38 m <sup>3</sup> /h: 91 %	20 m³/h: 85 % 38 m³/h: 80 %
Max. standard sound level difference D <sub>n,e,w</sub>	67 dB	67 dB	54 dB	54 dB
Sound power level L <sub>W</sub>	from 18 dB(A)	from 18 dB(A)	from 29 dB(A)	from 28 dB(A)
Power consumption	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 module Ø 154 x 243 mm	Plug-in module Ø 154 x 160 mm	Plug-in module Ø 154 x 243 mm	Plug-in module Ø 154 x 168 mm
Compatibility	All 160 systems incl. LUNOtherm and external hoods as external finish	All 160 systems incl. LUNOtherm and external hoods as external finish	All 160 systems incl. LUNOtherm and external hoods as external finish	All 160 systems incl. LUNOtherm and external hoods as external finish
Energy efficiency class	A+	A	A	A

All data are mathematically rounded.



# e<sup>2</sup>60 [esquaredsixty] & e<sup>2</sup>60short

## 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+.



## 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 provision level of 96 % is largely due to the newly developed and patented air diffuser, which ensures a particularly even flow through the heat exchanger.

The e<sup>2</sup>60 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<sup>2</sup>60 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<sup>2</sup>60 is its high volume flow bandwidth.

With the smaller heat accumulator of the  $e^260$ short, the range of application is extended to slim outer walls with a wall thickness of 200 mm or more.



## Nexxt

## **Heat recovery unit**

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



## Nexxt

## Heat recovery unit



## Low noise level and maximum passive soundproofing

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 FM-EO radio 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 95,5 %. 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.

#### **Nexxt NXT-E**

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

#### **Nexxt 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

Wireless module for bidirectional wireless transmission



### OPTIONAL F7\*- and F9\*\*-Filter

For highest demands on hygiene



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

#### **OPTIONAL**

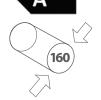
### **Electrical flap closure**

Electrical flap closure 9/KVEN-2 for Ne<sup>xx</sup>t based on the 160 round duct. It opens or closes the panel feed-through automatically when the unit is switched on or off



### Recommendation

As an extension of the range of functions and for the use of logging functions, LUNOS recommends the use of the diagnostic software.





## Nexxt

## The modular system for the perfect fan



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



## **Ne<sup>xx</sup>t** Technical data



Characteristics	NXT-E and NXT		
Volume flow	15 - 110 m³/h		
Max. degree of heat supply	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 <sub>n,e,w</sub>	49 dB		
Sound power level L <sub>W</sub>	from 20 dB(A)		
Power consumption*	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		

<sup>\*</sup>At 70 % of the maximum volume flow, according to ErP Directive, EU Regulation 1254/2014. All data are mathematically rounded.





## **Reversing technology for exhaust air rooms**For bathrooms, WCs and kitchens



## ego

## Supply and exhaust air in one unit



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

The e<sup>go</sup> ensures optimum ventilation with heat recovery in bathrooms, WCs and kitchens. It combines supply and exhaust air by means of two small fans located inside the fan.

The e<sup>go</sup> is one of the world's smallest fans for domestic ventilation with heat recovery in the two-channel unit class.

#### **Outer hood**

The e<sup>go</sup> can be combined with the two-channel outer hood on the façade





### **TECHNICAL DATA**

#### Volume flow

5 - 20 m³/h (heat recovery), 45 m³/h (exhaust

Max. degree of heat supply

92 %

#### Heat supply level\*

91%

Max. standard sound level difference D<sub>n,e,w</sub>

Sound power level\*\* L<sub>W</sub> from 28 dB(A)

Power consumption

Power consumptior 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 module Ø 154 x 300 mm

**Protection class** 

IP22

\*According to EN 13141-8 at reference volume flow

flow.
\*\*Sound power level:

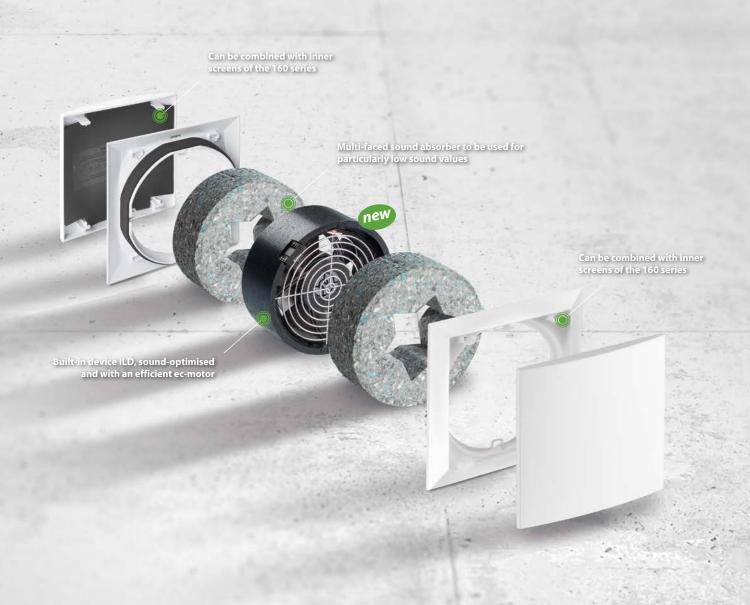
The sound power level indicates how "loud" a device is. The value is independent of the distance. All data are mathematically rounded

**6**30



## Inner wall air vent

The solution for cascaded ventilation



## **Compatibility**

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

## Inner wall air vent ILD

Ventilation for previously out-of-reach rooms



Easy ventilation of adjoining rooms in combination with the existing ventilation control or via a separate control with the new ILD from LUNOS

The active cross-flow element ILD is set up using the 160 modular system and can be equipped with sound absorbers in addition to the fan insert ILD and two inner screens. The application area of the ILD are interior rooms that must be ventilated via another room. If there is no external wall available in a living space, then one or more ILDs can be used to create a coupling with other rooms 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.

### **TECHNICAL DATA**

**Volume flow** 

Sound power level\* LW

**Power consumption** 

Supply voltage 12 V DC SELV

**Core drilling** 

Minimum installation length

**Dimensions** 

Built-in unit Ø 154 x 60 mm

#### **Cascaded ventilation**

The term cascaded ventilation is used to describe the interconnection of living spaces that cannot be ventilated independently of

The directly ventilated room (with an installed the cascaded ventilated room (without a directly installed ventilation system) is called secondary room. For example, the bedroom with e² is the primary room and the 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,

For example, bedrooms can easily be cascaded with children's rooms, and living rooms can be

\*Sound power level": The sound power level indicates how "loud" a device is. The value is independent of the

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



Standard inner screen



Comfort inner screen (plastic design)



Comfort inner screen (glass design)



Sound insulation Inner screen



Wireless screen with integrated control system





# 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 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 apartment 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.

#### **TECHNICAL DATA**

Volume flow

40 - 125 m<sup>3</sup>/h at 100 Pa

Max. degree of heat supply

Heat supply level\*

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

Device sound at 100 m<sup>3</sup>/h, 100 Pa

45 dB(A)

Specific

Power consumption (SPI) at 50 Pa\* 0,3 W/(m³/h)

Max. power consumption at 125 m³/h,100 Pa 52 W

Mains voltage 100 - 240 V | 50/60 Hz

-----

External and internal leakage

Dimensions (H x W x D)

Installation options

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

\*According to EN 13141-7 at reference volume flow. All data are mathematically rounded.

#### **OPTIONAL F9 FILTER**

Exchangeable filters of classes F7\* available







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

## **Controls**

## Whether with gesture or automated

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

## 5/UNI-FT | 5/W2U

Can be controlled automatically, standard with humidity/temperature control and time delay module, wireless module UNI-EO connectable

1 111 11

## **Gesture Control**

Contactless controllable with 60 RGB LEDs and many standby display options

## Wireless screen

Can be controlled wireless, automatically or by standard with humidity-temperature control and integrated wireless module







new

## TA

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

## **Smart Comfort**

Especially easy to operate: one touch of a button is enough, wireless module UNI-EO connectable

## **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 can also be equipped with the UNI-EO wireless module when used with Smart Comfort and Gesture Control.

The wireless screen automatically controls the connected fan via the integrated humidity-temperature control, via push-button or via wireless signals from an external 5/UNI-RF, home automation systems or homee.

## Wireless screen with 5/UNI-RF

The complete technology under one screen

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. Other LUNOS wireless products or smart home controls with UNI-EO wireless module can be connected.

The wireless screen is also available as a pure design screen without wireless control.

#### **Functions**

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

#### **Optional device combinations**

All 12-volt fans\* of the LUNOS 160 series can be controlled with the wireless screen 9/IBF-RF. As a design solution for all ALD and fans without wireless technology, the wireless screen 9/IBF is also available as a pure screen without wireless control.





# Wireless technology

## For easy smart home connectivity

A wireless technology that meets the high requirements of LUNOS must be extremely energy efficient and safe.



## **Brain Cube & EnOcean Cube**

The Brain Cube as basis of the homee smart home system with the EnOcean Cube as link to the LUNOS products makes the ventilation system smart.

The bidirectional wireless technology transmits reliable signals with very small amounts of energy. The transmitters 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 extension module from homee the LUNOS radio 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.

## Wireless technology

## Products for ventilation in the smart home





## Remote control RC-EO

The RC-EO remote control is battery-free, shock and splash-proof and is therefore suitable for all areas of everyday life. Coupled with the UNI-EO module or the FM-EO wireless module, all connected devices can be controlled by radio command. Via the two available channels, volume levels can be switched and special functions activated and deactivated.



## Wireless screen 9/IBF-RF and wireless control 5/UNI-RF

The wireless screen **9/IBF-RF** combines elegant design for the living room with the control technology of the universal control. It is equipped as standard with a power supply unit for direct connection to 230 V, 50/60 Hz and the 5/UNI-RF with humidity and temperature sensor and an integrated wireless module. For a uniform interior design, it is also available as a pure design screen without wireless control.

The wireless control **5/UNI-RF** has all the functions of the proven 5/UNI-FT. Thanks to the wireless module integrated as standard, it enables communication with LUNOS wireless products, wireless screens or Smart Home controls without additional wiring.



## 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, such as our 5/W2T, switching commands can be transmitted by radio. 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.



## Wireless module UNI-EO for universal control

The UNI-EO wireless module is used for universal control and Smart Comfort and ensures constant communication with the coupled LUNOS wireless components. This includes both the processing of received sensor values and switching commands as well as the transmission of system states. Automatic modes can be extended and optimized. The control system can also adapt the operation of the connected devices to linked ventilation components. For example, it is possible for connected e<sup>2</sup> devices to actively supply supply air when an exhaust fan transmits a switched demand ventilation by a wireless command.



#### **External 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. If you have coupled the SFT-EO as an indoor sensor to the UNI-EO or FM-EO modules, the values of the wireless sensor and internal sensors are compared and ventilation is based on the climatic conditions thus transmitted. When coupled as an outdoor sensor with the UNI-EO module, the intelligent control unit compares the absolute values of indoor and outdoor climate and adjusts the ventilation accordingly.



## Wireless module FM-EO for Silvento ec and Ne<sup>xx</sup>t

The FM-EO wireless module is compatible with all Silvento ec and Nexxt models. In the exhaust air system, the Silvento ec and the ventilation behaviour can also be optimised 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. The same applies to the combination Nexxt and Silvento ec. If several Nexxt units are operated in one utilisation unit, a temperature-controlled ventilation operation can be achieved by targeted cross-ventilation of the units among themselves. It is also possible to react efficiently to varying outside temperatures and to keep the inside temperature constant.

## **Inner screens**

## 160 series

#### **Comfort inner screen**

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 x W x D) 197 x 185 x 83 mm Description: **9/IBG-H** 



Simple screen with timeless elegance for universal use in the 160 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 filters, one piece each of filter class G2 and G3



incl. G2 and G3 filters (H x W x D) 250 x 250 x 78 mm Description: **9/IBS** 

## **External grille & outer hoods**

Round, square & soundproofed





## Plastic grille Ø 180 mm

for round ducts Ø 160 mm with facade protection ring, 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 screen, pluggable Description: 1/RME 175 stainless steel Designation: 1/RMK 175 copper



## Plastic grille Ø 115 mm

for round ducts Ø 90 - 100 mm, Insect screen, with claw fastening Description: 1/BE 115 sanded Description: 1/WE 115 white Description: 1/AZ 115 anthracite



## Metal grille 228 mm

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



#### Metal grille Ø 150 mm

for round ducts Ø 80 - 125 mm, Insect screen, pluggable Description: 1/RME 150 Stainless steel Designation: 1/RMK 150 copper



#### Two-channel outer hood Aluminium

(H x W x D) 235 x 205 x 72 mm for round ducts Ø 160 mm, insect screen, with sound insulation, for screwing. Increase of the standard sound level difference by up to

Description: 1/HAZ-2 anthracite powder-coated Description: 1/HWE-2 white powder-coated

Two-channel variant for ego and Nexxt



#### **Outer hood aluminium**

(H x W x D) 170 x 140 x 72 mm

for round ducts up to Ø 105 mm, insect screen, with sound insulation, to screw. Increase of the standard

sound level difference by up to 6 dB.

Description: 1/HWE 115 white powder-coated Description: 1/HAZ 115 anthracite powder-coated



### 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



## Representatives

Germany





- Berlin, Brandenburg
- Saxony
- Thuringia
- Mecklenburg-Western Pomerania
- Hamburg, Schleswig-Holstein
- Southern North Rhine-Westphali.
- Lower Saxony, northern North Rhine-Westphalia
- Saxony-Anhal
- Rhineland-Palatinate Saarlance
- Hesse, western Franconia, northern Baden
- Baden-Württemberg
- Franconia
- Bayaria



# Representatives International







## LUNOS Lüftungstechnik GmbH & Co. KG für Raumluftsysteme

Wilhelmstraße 31 · 13593 Berlin PO Box 20 04 54 · 13514 Berlin

Phone +49 30 362001-0 Fax +49 30 362001-89

info@lunos.de www.lunos.de