



MAIN CATALOGUE

IMPRINT

LUNOS Lüftungstechnik GmbH & Co. KG
für Raumlufsysteme
Wilhelmstraße 31 · 13593 Berlin
PO Box 20 04 54 · 13514 Berlin

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

Email info@lunos.de
Web www.lunos.de

HRA 59773 · PHG: LUNOS
Verwaltungs GmbH, HRB 83375
Managing Directors: Til Volckmann,
Andreas Lehmann

Edition: P055657 02.25

Catalogues from previous years become
invalid with the publication of this catalogue.

Illustrations may be different
from the original.

FOOTNOTES: MEASUREMENT METHODS AND STANDARDS

- 1)** Silvento V are fan inserts that still require a flush-mounted or surface-mounted housing.
- 2)** Silvento KL are complete single-pipe fans that are clamped into pre-wall constructions. Silvento KL single-pipe fans fit into the flush-mounted housings of the LUNOS Skalar series.
- 3)** The specified values are achieved at 20°C, 1013hPa and 1.2kg/m³ ambient air density
- 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.
- 9)** 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/m³ 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% deduction.
 - b) According to LÜA (test specification) of the DIBt, max. achievable value.
 - c) According to EN 13141-8 at reference volume flow, see also certificate of usability (abZ) of the DIBt.
 - 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/m³ ambient air density.
 - e) According to EN 13141-7 at reference volume flow, see also certificate of usability (abZ) of the DIBt.
 - f) Determined by the Passive House Institute (PHI), see PHI certificate.
 - g) Sound pressure level at 1m distance, single-point measurement. All data are mathematically rounded.

LUNOS HOME VENTILATION SYSTEMS

Dear customers and business partners,

Fresh air is quality of life - we work more concentrated, sleep better and are generally more relaxed when we are in rooms with fresh air. And it is also a blessing for the property, because mould hardly stands a chance in fresh indoor air.

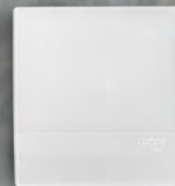
We at LUNOS have been bringing fresh air into new buildings and renovations for over 65 years. Our ventilation units provide the right amount of fresh air constantly and reliably - and very energy-efficiently. They consume significantly less energy than the market average, are recyclable and packaged in an environmentally friendly way, and require little maintenance. We are not only committed to the sustainable use of resources within our own company. We also support selected local and international promotion and aid projects. In short: LUNOS takes the responsibility that a medium-sized company should.

Despite rapid growth, we remain a family-run company with flat hierarchies and short decision-making paths. At the same time, we have a modern high-bay warehouse and our testing and acoustic laboratories are second to none in the industry.

But it is not only in climate protection that we are at the forefront. Our engineers are constantly working on innovative products - with a great deal of success! For several years now, LUNOS has been the market leader in the field of decentralised residential ventilation. You will find everything about our worldwide renowned decentralised ventilation units and other innovations in this new catalogue.

*Your LUNOS team hopes you enjoy
reading and discovering*





LUNOS ventilation systems produce hygienic ventilation of living spaces exceeding requirements and bringing a feel-good factor into the house.



Contents

Main Catalogue



06	Trust in LUNOS	56	Wireless technology
08	Standards & Regulations	58	Products LUNOS wireless system
09	Ecodesign Directive	59	Products EnOcean wireless system
10	Controlled home ventilation	60	homee
12	Exhaust air system	61	KNX
14	System with heat recovery	62	Accessories
16	Hybrid system	62	Interior screens
18	Garage ventilation, cascaded ventilation and basement ventilation	64	External grilles
20	Products from LUNOS	65	Outer hoods
20	Silvento ec	67	Wall mounting
24	AB 30/60	68	Software
26	RA 15-60	68	Diagnostic software
28	Outer wall air vents	69	Design software
32	Active overflow element ILD	70	References
34	Ne ^{xt}	74	LUNOS distribution network
38	Series e ²		
42	Series e ⁹⁰		
44	Series LUNOtherm		
46	Combination of the 160 series		
48	LUNOMAT		
50	Controls		
51	Wireless screen		
52	Smart Comfort		
53	Universal Control		
54	TAC		
55	Gesture Control		

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





Standards & Regulations

Building Energy Act (GEG), DIN 18017-3 & DIN 1946-6

Building Energy Act (GEG)

The **GEG** stipulates that buildings must be permanently airtight. This means that the outer shell of a building must be constructed in such a way that no unwanted air can penetrate or escape through cracks or joints.

Although the GEG itself does not contain any detailed regulations on ventilation, it refers to **DIN 4108**, which stipulates that sufficient air exchange must be ensured in order to prevent damage caused by moisture for reasons of hygiene and to limit indoor air humidity. For interior rooms without windows, such as bathrooms or WCs, mechanical ventilation systems must be used to ensure sufficient air quality. This is regulated in **DIN 18017-3**.

A central aim of the ventilation requirements is to protect against moisture damage and prevent mould growth. In modern, airtight buildings in particular, natural joint ventilation is often not sufficient, meaning that fan-assisted ventilation systems are required. To summarise, the GEG and the corresponding DIN standards ensure that modern buildings are airtight and energy-efficient, while at the same time guaranteeing sufficient ventilation to prevent moisture damage and health problems.

DIN 18017-3

This standard contains essential regulations for the ventilation of windowless rooms in residential buildings, such as bathrooms, WCs or kitchens. Mechanical ventilation systems are prescribed for this ventilation, which transport the exhaust air from these rooms to the outside. These systems must be designed in such a way that they are safe in the event of a fire and that there is no fire transmission through ventilation ducts. A supply air supply must be ensured so that the air can flow in from neighbouring rooms

DIN 1946-6

Version 1946-6 2019 puts decentralised ventilation systems on an equal footing with centralised ventilation systems. In new builds or renovations, DIN 1946-6 ensures that there is sufficient air exchange in residential buildings to prevent moisture damage and mould formation and to maintain air quality. The ventilation stage for moisture protection must function independently of the user. When designing the ventilation system, the necessary volume flows are determined and the appropriate ventilation system is selected. In summary, DIN 1946-6 provides structured guidelines for the planning, installation and maintenance of home ventilation systems to ensure a healthy and mould-free living environment.

LUNOS products are eligible

The energy saving effects of a building are significantly increased through the use of home ventilation.

Beside the energetic plus points the system provides, it also results in a comfortable and always fresh room. In addition to this the protection offered to the building fabric helps to increase the value of the real estate, offering significant financial advantages.

* Sound power level: At 70 % of the maximum volume flow according to (EU 1253/1254/2014). The sound power level indicates how "loud" a unit is. The value is independent of the distance.

Ecodesign Directive

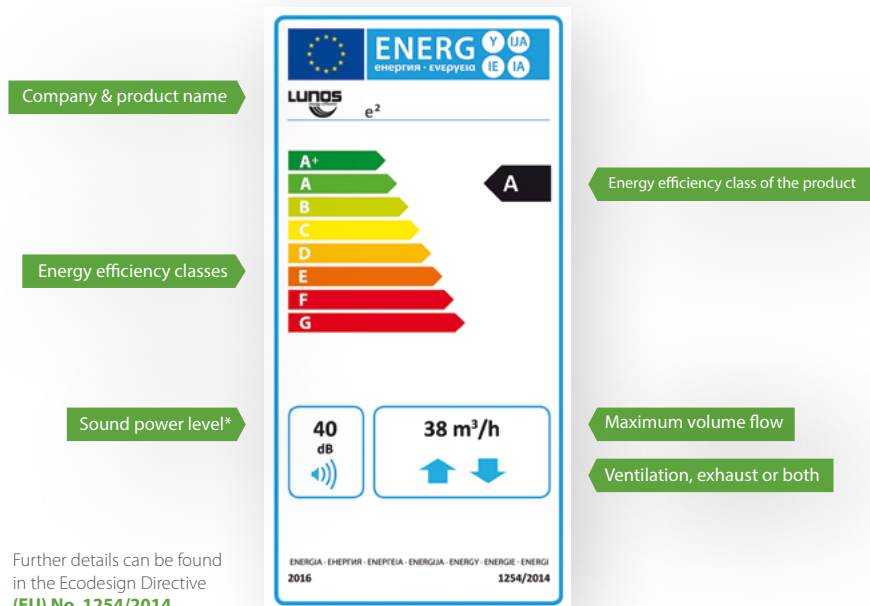


Ecodesign Directive

Regulations (EU) No. 1253/2014 and (EU) No. 1254/2014 require some ventilation equipment to be classified in energy efficiency classes. They range from A+ (top rating) to G and can be easily read off an energy label.

LUNOS guarantees compliance with all product declaration regulations. All products with heat recovery as well as those devices with a maximum power consumption of more than 30 watts are included in the ventilation devices that require a label.

The Silvento ec from LUNOS is so efficient that its maximum power consumption is 14.5 watts. This means that it does not fall under this requirement and must therefore expressly not be labelled.



Controlled home ventilation

The concept

CONCEPT OF VENTILATION SYSTEMS

LUNOS ventilation systems are based on a demand-oriented flow through the entire living area. For efficient ventilation the decentralised fans can be combined to form three different ventilation systems:

The correct system depends on the individual requirements of the project and the habits of the residents.

01 EXHAUST SYSTEM

02 SYSTEM WITH HEAT RECOVERY

03 HYBRID SYSTEM

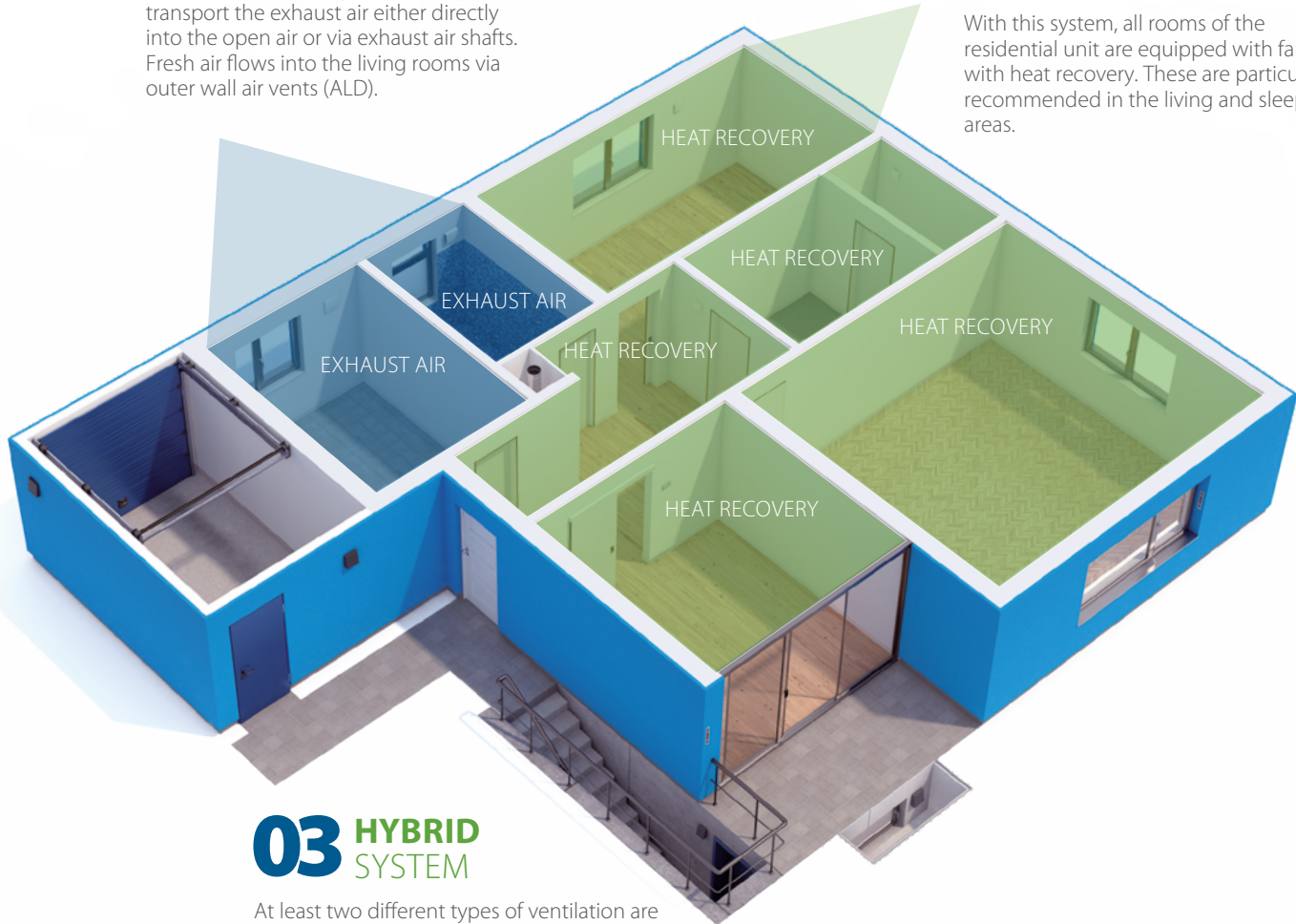
ACCORDING TO DEMAND	Inside comes	Going out	Inside stays	Outside stays
	» Fresh, filtered air	» Humid and odour-contaminated air from kitchen, bathroom, WC etc » Pollutants and outgassings from paints, carpets, furniture etc.	» Valuable heating energy, in systems with heat recovery	» Suspended matter and insects (through filter inserts) » Noise (through soundproofed outer wall elements) » Wind (through wind pressure protection on the outer wall elements)

01 EXHAUST SYSTEM

Exhaust air systems are very well suited for functional rooms such as bathrooms, kitchens or even utility rooms. They transport the exhaust air either directly into the open air or via exhaust air shafts. Fresh air flows into the living rooms via outer wall air vents (ALD).

02 SYSTEM WITH HEAT RECOVERY

With this system, all rooms of the residential unit are equipped with fans with heat recovery. These are particularly recommended in the living and sleeping areas.



03 HYBRID SYSTEM

At least two different types of ventilation are used. While the living spaces have fresh air with only very low heat loss thanks to heat recovery units, exhaust air rooms such as the bathroom or kitchen can be ventilated cost-effectively.

Controlled home ventilation

Exhaust system

01 EXHAUST SYSTEM

Fans in the bathroom, kitchen, toilet or utility room transport the exhaust air either directly into the open air or via exhaust air shafts. The resulting slight negative pressure "pulls" fresh, filtered air through the outer wall air vents into the living and working areas. Of Particular note: With humidity-, CO₂ and VOC-controlled home ventilation, a system approved by the building authorities, ventilation heat losses can be saved to a considerable extent.

Silvento ec

Depending on the application or requirement, the suitable Silvento ec-fan can be used. Available as surface-mounted, flush-mounted or clamp-in fans.



RA 15-60

Radial outer wall fan with four ventilation stages and round cross-section. Can be combined with the facade element LUNOtherm.



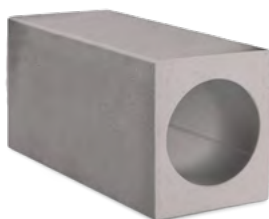
ALD, ALD-SV and ALD-S

Outer wall air vents with filter, silencer and, if necessary, wind pressure protection.



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 ALD, ALD-SV, ALD-S or RA 15-60.



EXHAUST SIDE

SUPPLY SIDE



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 e² series fans.

Series e² A A+

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



Series e⁹⁰ A

Exhaust fan with heat recovery for functional rooms.



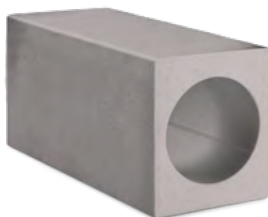
Ne^{xt} A

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 e².





SUPPLY & EXHAUST
AIR **WITH HEAT
RECOVERY**



Controlled home ventilation

Hybrid System

03 HYBRID SYSTEM

In hybrid systems, at least two different types of ventilation are used together. Combinations of exhaust air units and fans with heat recovery are particularly effective: While living spaces have constant fresh air without heat loss thanks to heat recovery units, classic exhaust air rooms such as bathrooms, toilets, kitchens or hot water boilers can be ventilated cost-efficiently as required. For windowless bathrooms and WCs, such an exhaust air unit is even mandatory.

For windowless bathrooms & toilets, the use of exhaust air devices according to DIN 18017-3 is mandatory.

Series e² A A+

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



Ne^{xt} A

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



Silvento ec

Depending on the application or requirement, each fan of the Silvento ec series can be used as a surface-mounted, flush-mounted or clamp-in fan.



RA 15-60

Radial exhaust wall fan with four ventilation stages and round cross-section. Can be combined with the facade element LUNOtherm.



SUPPLY & EXHAUST
AIR **WITH**
HEAT RECOVERY

EXHAUST SIDE



Controlled home ventilation

Garage ventilation, cascaded ventilation and basement ventilation



SPECIAL TYPES OF VENTILATION SYSTEMS

Garage ventilation

Humidity in garages is a well-known problem. Especially in the cool season, vehicles bring humidity in the form of rainwater, snow and ice deposits into the protective shell thus causing condensation and mould problems. However, even the humidity of warm summer air can settle on the garage walls as condensation and cause humidity problems. Not only the building structure of the garage, but also the vehicles can suffer damage in the form of flash rust or mould. Ventilation with heat recovery via two fans from the e² series ensures that the garage is ventilated as required without cooling it down too much. In addition, exhaust gases, such as odours from lubricants and other chemicals, are replaced by fresh air.

Cascaded ventilation

The term cascaded ventilation refers to 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 room ventilated in cascade (without directly installed ventilation system) is called secondary room. In our example, the bedroom with e² is the primary room and the adjacent room is the secondary room. Only rooms of the same or a similar type of use should be connected. Air flows from the primary to the secondary room and should therefore not come from bathrooms, WCs, kitchens or utility rooms to prevent odour transfer. For example, bedrooms can easily be cascaded with children's rooms for ventilation with the active cross-flow element ILD, and living rooms with study rooms or storage rooms.

Cellar ventilation

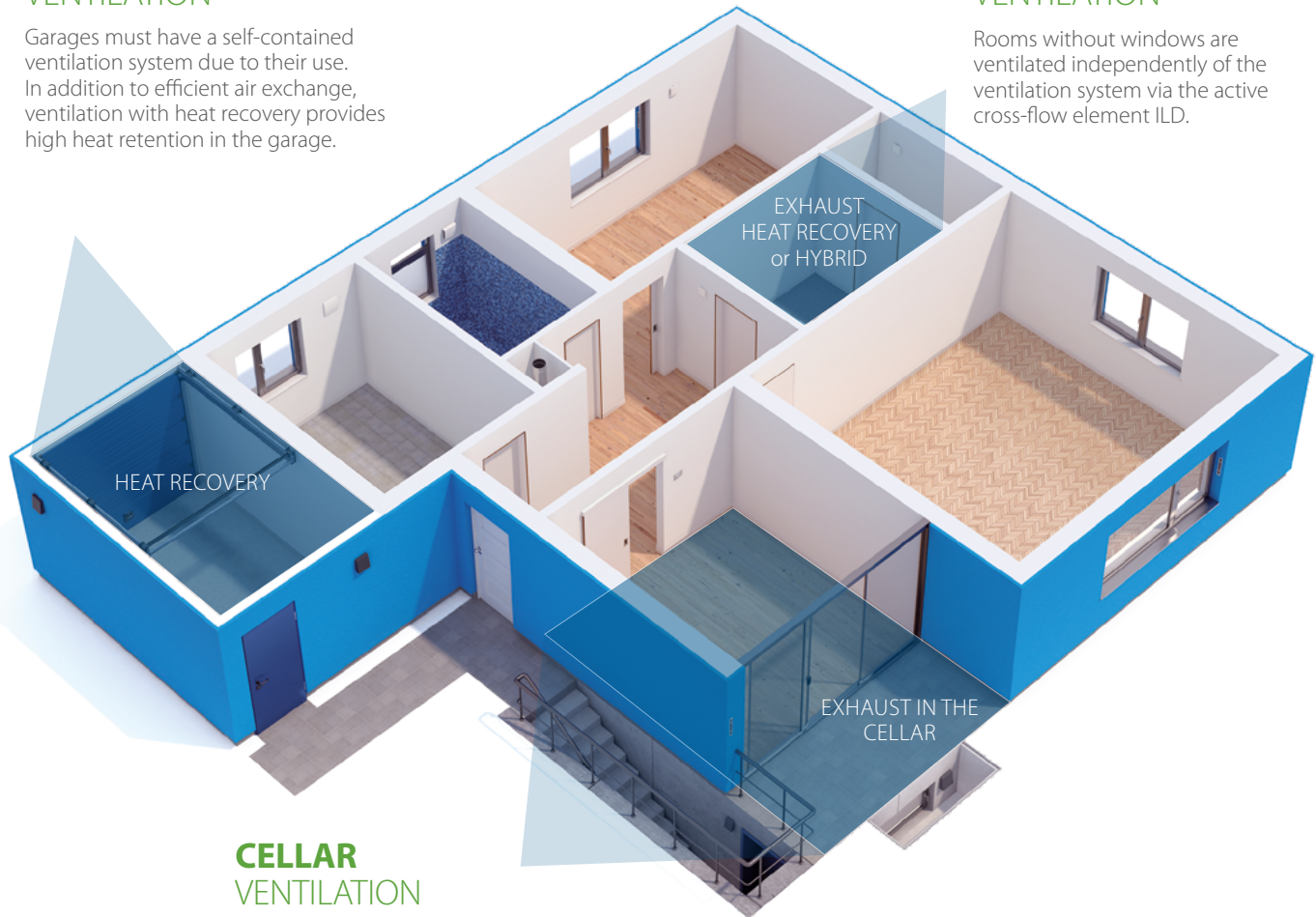
Cellar ventilation requires a specially designed solution. The cellar board of the Silvento ec is equipped with the appropriate programming to meet the special requirements of basement ventilation. Together with carefully placed ALD, the Silvento ec ensures clean and hygienic ventilation of the basement area. Thanks to the sensor technology integrated in the basement board, the fan can draw conclusions about the indoor and outdoor humidity and thus adjust the ventilation in a way similar to dew point monitoring. A pleasant room climate can thus be easily achieved in both heated and unheated basement rooms.

GARAGE VENTILATION

Garages must have a self-contained ventilation system due to their use. In addition to efficient air exchange, ventilation with heat recovery provides high heat retention in the garage.

CASCADED VENTILATION

Rooms without windows are ventilated independently of the ventilation system via the active cross-flow element ILD.



CELLAR VENTILATION

The ventilation of cellar rooms becomes an innovative solution due to the optimised programming of the Silvento board 5/EC-KE and the combination with an ALD.

Silvento ec



Silvento ec

One motor – endless solutions



Determine the functions of the Silvento ec simply by selecting the control board:

Basic board: Seven ventilation stages from 15 to 60 (90) m³/h with time lag, interval switching and switch-on delay configurable

Comfort board: Basic board plus humidity and temperature sensor

Comfort board+: Comfort board plus VOC sensor for detecting odours in the air

Cellar board: Comfort board with special programming for the requirements of cellar rooms

All boards can each be combined with a plug-in expansion module:

Motion detector: with radar-based sensor

Wireless module: Control via wireless without further cabling

Dimensions: Surface-mounted with 269 x 269 x 109,5 mm (W x H x D), cover with 260 x 260 x 23 mm and flush-mounted housing with 262 x 262 x 90,5 mm

SILVENTO EC TECHNICAL DATA

Silvento-Type <i>V-EC¹⁾ or KL-EC²⁾</i>	Basic board 5/EC-ZI (90)	Comfort board 5/EC-FK (90)	Comfort board+ 5/EC-FK+ (90+)	Cellar board 5/EC-KE
Volume flow ^{3) 4)}	0/15/20/30/40/45/ 50/60/(90) m ³ /h	0 - 60 (90) m ³ /h	0 - 60 (90) m ³ /h	0 - 60 m ³ /h
Sound power level L _w ^{3) 5)}	from 18 dB(A)			
Power consumption ³⁾	1,8 - 6,2 (14,5) W			
Supply voltage	200 - 240 V AC 50/60 Hz			
Control voltage	0 - 10 V			
Protection class	IPX5			

For footnotes on measurement methods and standards, see page 2.

The sound power level is only 18 dB(A) at 15 m³/h (basic ventilation) and 35 (52) dB(A) at 60 (90) m³/h (demand ventilation).

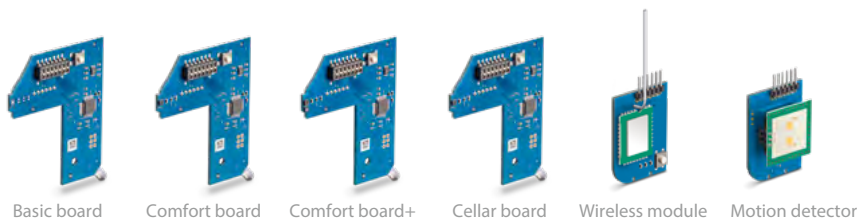
Recommendation

LUNOS recommends the use of the newly developed diagnostic software for the use of logging functions. All functions and their advantages on page 68.

Silvento ec V-EC & KL-EC

The modular system for fan inserts and clamp-in fans

The control boards are integrated in the filter frame and can be easily configured and replaced if necessary by removing the screen. There is one slot on all boards, which can be equipped with an additional module.



Basic board	Comfort board	Cellar board	Comfort board+
Selection of different volume flows for basic ventilation and demand ventilation possible: 15/20/30/40/45/50/60/(90), cellar board 15/20/30/40/45/50/60			
Time delay configurable to 0, 15 or 30 minutes			-
Interval switching: 30 minutes ventilation every four hours or 15 minutes ventilation every two hours			-
Switch-on delay can be set to OFF, 45 or 120 seconds			-
Slot for an additional module: - Radar-based motion detector 5/BM or - FM-EO wireless module or - Service kit with WiFi connection			
Filter change display			
-	Stepless comfort humidity-temperature control	Stepless comfort humidity-temperature-control	Stepless comfort humidity-temperature-VOC-control

Comfort ventilation with the PLUS

The Comfort board+ combines the infinitely variable humidity-temperature control with an additional VOC sensor.

Now odours and other volatile hydrocarbon compounds that impair the quality of the room air are also detected by the Comfort board+. The Silvento ec automatically vents the polluted air. The result is a constantly pleasant room climate with fresh, clean air.

Cellar ventilation

The Silvento ec with the suitable board is the new, innovative solution for cellar ventilation. It ensures clean and hygienic ventilation of the cellar area. Comfort and a pleasant room climate can thus be easily achieved. Thanks to the sensors integrated in the cellar board, the fan can draw conclusions regarding the indoor and outdoor humidity and thus adjust the ventilation in a manner similar to dew point monitoring. A permanent voltage is required for this.

Silvento ec

Configuration of the installation housing



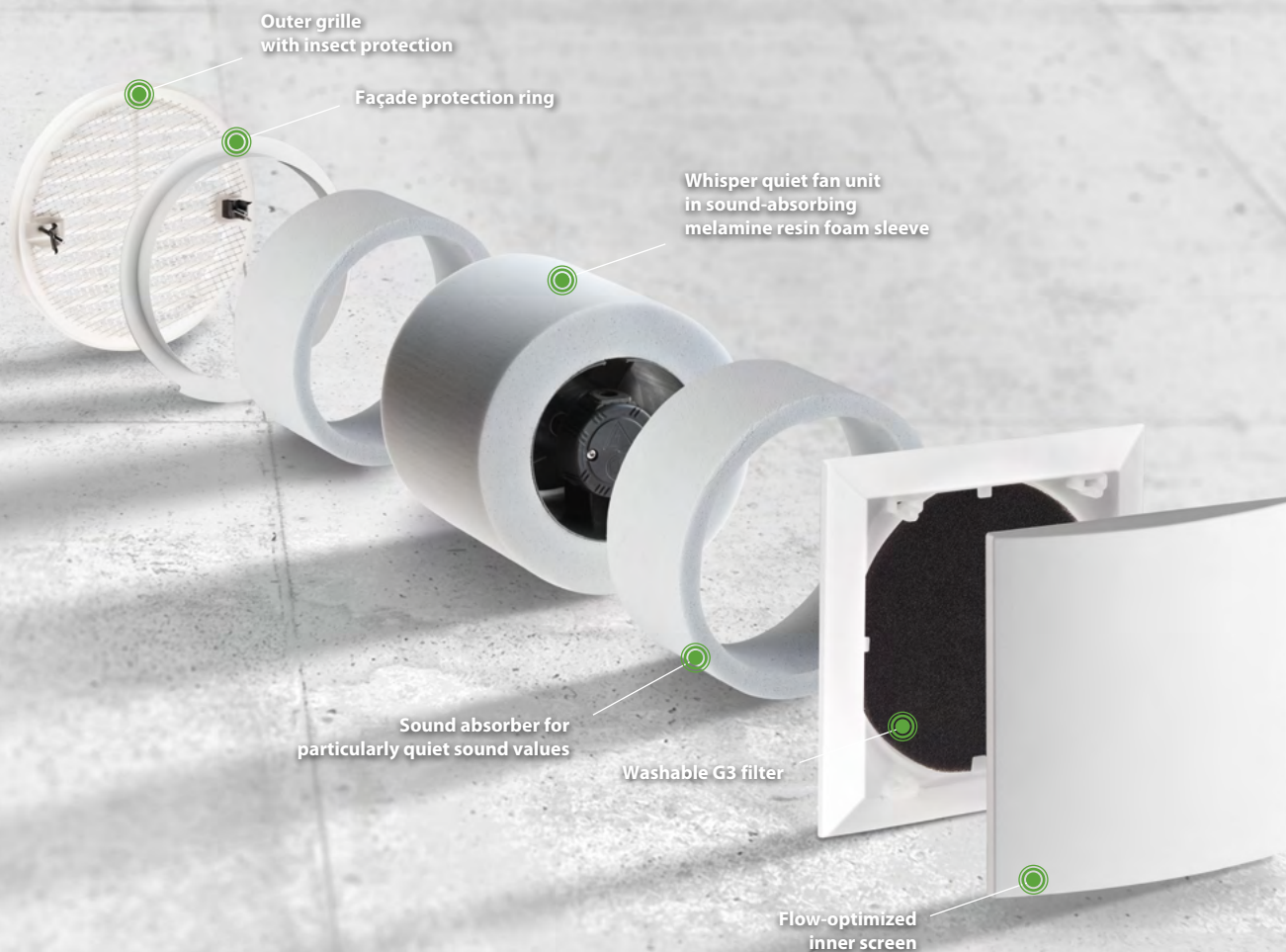
Type, dimensions (H x W x D in mm)	Blow-out connection <i>Length in mm</i>	Fire protection
Surface-mounted housing 3/AP, 269 x 269 x 109,5	Axially outgoing conical blow-out connection (DN 75 to DN 80), Length 69	–
Surface-mounted housing 3/AP-B 269 x 269 x 109,5	Metallic, axial outgoing blow-out connection (DN 80), length 79	With shut-off device K90-18017, suitable for installation in kitchens, connection diameter DN 80, with leakage airtight non-return valve
In-wall housing 3/UP 262 x 262 x 102,5 Installation depth 90,5 (without blow-out connection)	Radial or axial conical blow-out connection (DN 75 to DN 80), Length 69	–
In-wall housing 3/UP-BR, 270 x 270 x 114,5 Installation depth 102,5	Metallic, radially outgoing blow-out connection (DN 80), Length 64	With shut-off device K90-18017, suitable for installation in kitchens, connection diameter DN 80, with leakage airtight non-return valve
In-wall housing 3/UP-BA 270 x 270 x 114,5 Installation depth 102,5, with blow-out connection 175,5	Metallic, axial outlet blow-out connection (DN 80), Length 73	With shut-off device K90-18017, suitable for installation in kitchens, connection diameter DN 80, with leakage airtight non-return valve

All Silvento in-wall housings are also available as two-room variants.

AB 30/60

Axial fan

Exhaust air unit with ec-motor, can also be combined with the LUNOtherm facade element.



AB 30/60

Cost-efficient home ventilation

With its low power consumption, the AB 30/60 is energy-efficient and thus makes an active contribution to environmental protection.

The AB 30/60 axial fan is installed directly into the outer wall. It can be used alone or together with units of the e² series and is used for ventilating functional rooms such as kitchens and bathrooms. The ec-motor with built-in electronics allows direct connection to the mains supply without additional components. Computer-optimised fan blades in

combination with an efficient flow channel and extensive sound insulation material ensure that the AB 30/60 provides optimum sound insulation from the outside and a very low noise level. Best performance for the environment due to low power consumption.

Can be combined with inner screens of the 160 series



Standard
Inner screen



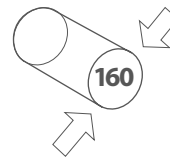
Comfort Inner screen
(plastic design)



Comfort Inner screen
(glass design)



Sound insulation
Inner screen



EXHAUST AIR



TECHNICAL DATA

Volume flow ³⁾
35/70 m³/h

Sound power level L_w ^{3) 5)}
from 36 dB(A)

Power consumption ³⁾
1,5/4,9 W

Supply voltage
100-240 V 50/60 Hz

Core drilling
Ø 162 mm

Minimum installation length
170 mm

Dimensions
Ø 154 x 130 mm

Protection class
IP44

For footnotes on measurement methods and standards, see page 2.

AB 30/60

RA 15-60

Radial fan

The perfect combination of consistency of pressure and renovation simplicity



RA 15-60

Perfect for outside exhaust air rooms



Exhaust air unit with ec motor, can also be combined with the LUNOtherm facade element.

The RA 15-60 owes its extraordinarily good pressure characteristic curve to the radial ec motor in combination with a very stable housing. In addition, the multi-surface sound absorbers give the RA 15-60 unexpected low running noise as well as optimal sound insulation from the outside.

With the aid of a LUNOS control system or the wireless screen it is possible to operate the motor with humidity control, wireless and/or time functions.

Can be combined with inner screens of the 160 series



Standard
Inner screen



Comfort Inner screen
(plastic design)



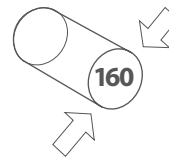
Comfort Inner screen
(glass design)



Sound insulation
Inner screen



Wireless screen with
integrated control system



EXHAUST AIR

TECHNICAL DATA

Volume flow ³⁾
15 - 60 m³/h

Sound power level L_w ^{3) 5)}
from 24 dB(A)

Power consumption ³⁾
0,6 - 7,2 W

Supply voltage
12 V DC SELV

Core drilling
Ø 162 mm

Minimum installation length
180 mm

Dimensions
Ø 154 x 147 mm

Protection class
IP20

For footnotes on measurement methods and standards, see page 2.

RA 15-60

Outer wall air vents

For renovation and new construction -
sound-optimised and weatherproof

Outer wall air vents

Comfortable climate in tight buildings

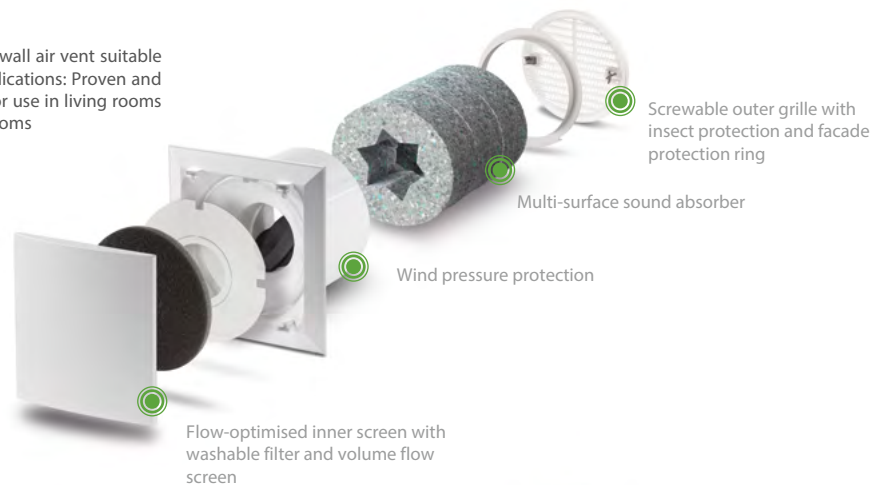


Inner and outer city traffic affects our home climate.

For a high level of living comfort, it is essential to integrate well thought-out sound insulation measures in wall construction, windows and fresh air supply. Due to the high sound insulation dimensions, the LUNOS ventilation system achieves an air exchange without significant losses in the quality of living. The outer wall air vents ALD, ALD-SV and ALD-S serve as passive air supply for living rooms and bedrooms. They are mainly used in combination with LUNOS exhaust air units of the Silvento range. A constant negative pressure is created by the exhaust air in the functional rooms, such as the bathroom and kitchen, which transports fresh air into the house via the outer wall air vents. When planned in accordance with standards, this ensures user-independent ventilation in accordance with DIN 1946-6.

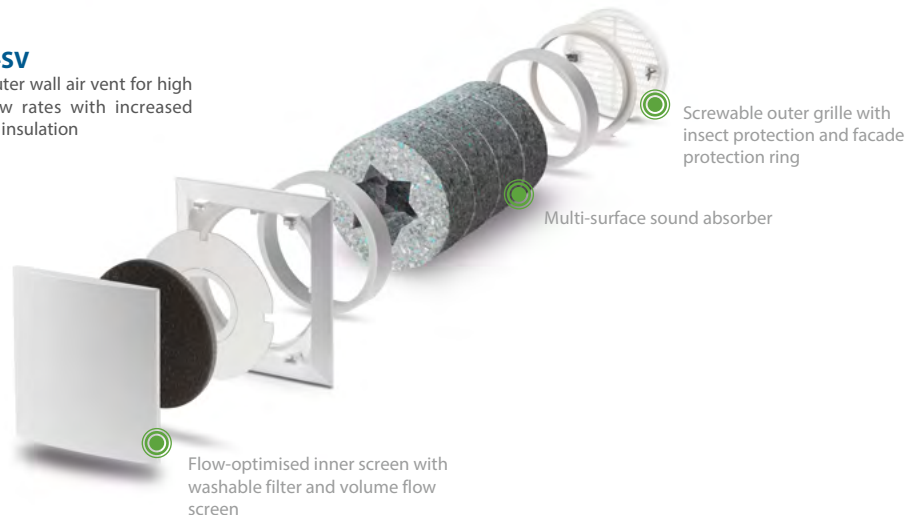
ALD

The outer wall air vent suitable for all applications: Proven and efficient for use in living rooms and bedrooms



ALD-SV

The outer wall air vent for high air flow rates with increased sound insulation

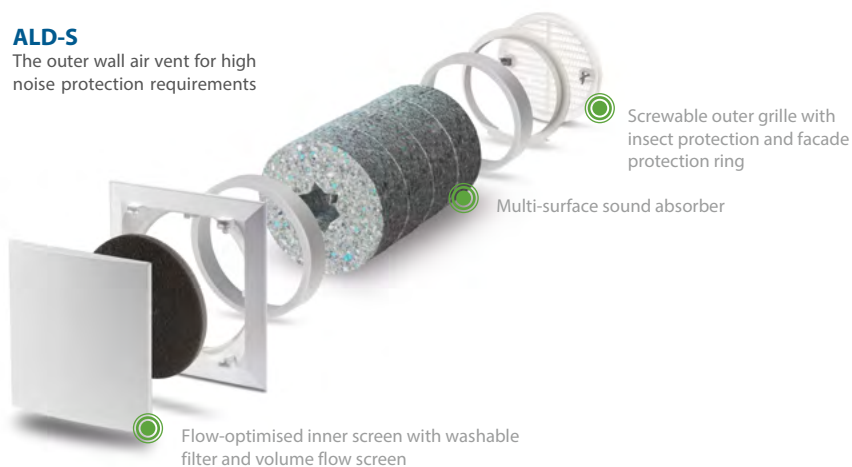


Outer wall air vents

Comfortable climate in tight buildings

ALD-S

The outer wall air vent for high noise protection requirements



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



Hygiene Inner screen (glass design) incl. F7* filter



Hygiene Inner screen (plastic design) incl. F7* filter



Home ventilation
with feel-good factor
- of course from
LUNOS



Outer wall air vents

Technical data



ALD

Length of built-in unit: 360 mm
Ø: 154 mm

"V_{3l}" :	at 8 Pa	at 4 Pa
⊗	25 m³/h	18 m³/h
○	20 m³/h	13,5 m³/h
○	15 m³/h	10 m³/h

Sound insulation

Dn,e,w Wall thickness

50 – 65 dB(A)	360 mm
56 – 69 dB(A)	500 mm

ALD-SV

Length of built-in unit: 360 mm
Ø: 154 mm

"V_{3l}" :	at 8 Pa	at 4 Pa
⊗	25/30 ^{o)} m³/h	18 m³/h
○	20 m³/h	13,5 m³/h
○	15 m³/h	10 m³/h

Sound insulation

Dn,e,w Wall thickness

53 – 66 dB(A)	360 mm
61 – 71 dB(A)	500 mm

ALD-S

Length of built-in unit: 360 mm
Ø: 154 mm

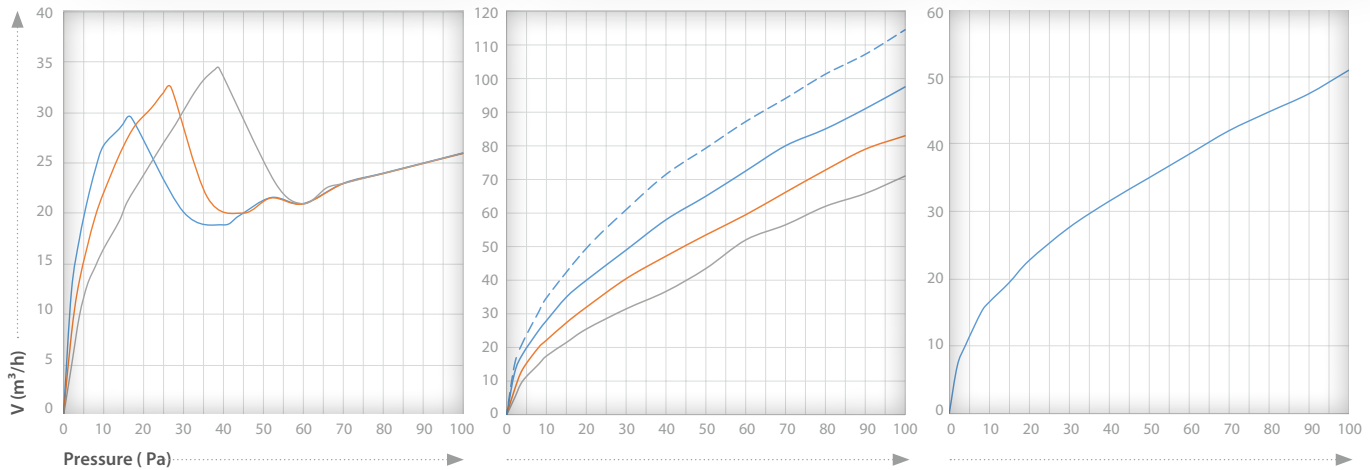
"V_{3l}" :	at 8 Pa	at 4 Pa
⊗	15 m³/h	10 m³/h

Sound insulation

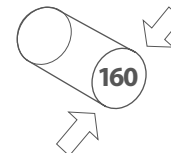
Dn,e,w Wall thickness

56 – 71 dB(A)	360 mm
67 – 75 dB(A)	500 mm

The given sound insulation values apply to the above-mentioned volume flows with a round duct completely filled with sound absorbers.
For footnotes on measurement methods and standards, see page 2.



Straight arrangement of sound absorbers
Without volume flow screen
Volume flow screen Ø 70 mm
Volume flow screen Ø 56 mm



EXHAUST AIR

www.lunos.de

Inner wall air vent

Active cross-flow element for installation in interior walls



Compatibility

ILD can be combined with all exhaust air systems, ALD, the e² and e⁹⁰ series, as well as, Ne^{xt} 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 e² 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)



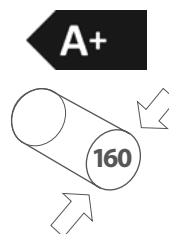
Comfort inner screen
(glass design)



Sound insulation
Inner screen



Wireless screen with
integrated control system



TECHNICAL DATA

Volume flow³⁾
26 - 40 m³/h

Sound power level L_w^{3) 5)}
from 33 dB(A)

Power consumption³⁾
0,7 - 1,5 W

Supply voltage
12 V DC SELV

Core drilling
Ø 162 mm

Minimum installation length
100 mm

Dimensions
Plug-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 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 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, toilets, kitchens or utility rooms to prevent odour transfer. For example, bedrooms can easily be cascaded with children's rooms, and living rooms can be cascaded with work rooms or storage rooms.

For footnotes on measurement methods and standards, see page 2.

ILD

Ne^{xx}t

Heat recovery unit

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



Ne^{xx}t

Decentralized heat recovery unit

**Low noise level and maximum passive soundprotection**

The Ne^{xx}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^{xx}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^{xx}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^{xx}t NXT-E

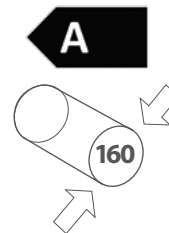
Equipped with an integrated control element in the inner screen, the NXT-E can be operated directly on the unit.

Ne^{xx}t NXT

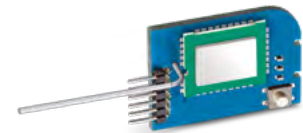
The NXT differs from the NXT-E only in its control capability. The required external regulation can be taken over by all 12 V controls from LUNOS.

OPTIONAL**Electrical flap closure**

It opens or closes the panel feed-through automatically when the unit is switched on or off

**HEAT
RECOVERY****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.



*Equivalent to 55% according to ISO 16890 ePM1.

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

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.

Ne^{xx}t

Technical data



Characteristics	NXT-E and NXT
Volume flow ³⁾	15 - 110 m ³ /h
Max. degree of heat supply ⁷⁾	96 %
Heat supply level according to EN 13141-8 at reference volume flow	25 m ³ /h: 96 % 50 m ³ /h: 89 % 75 m ³ /h: 84 %
Max. standard sound level difference $D_{n,e,w}$ ³⁾	49 dB
Sound power level L_w ³⁾	from 20 dB(A)
Power consumption ^{3) 8)}	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	
Protection class	IP22

For footnotes on measurement methods and standards, see page 2.

e² series

Flexible in any field

No fan has the decentralized ventilation with heat recovery so characterized like the e² from LUNOS.

e²60short

The e²60 for narrow outer walls from 200 mm wall thickness or increased sound insulation

e²short

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

e²

The classic: proven and efficient for use in living room and bedroom

e²60

The powerful one: constant pressure with a volume flow from 5 - 60 m³/h

new

LUNOS pbD- HEAT EXCHANGER

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

e² series

Technical data



Characteristics	e ² 60	e ² 60short	e ²	e ² short
Volume flow ⁹⁾	5 - 60 m ³ /h	5 - 60 m ³ /h	15 - 38 m ³ /h	15 - 38 m ³ /h
Heat supply level according to DIBt ^{9) a)} , Approval number	85 - 96 % Z-51.3-455	89 % Z-51.3-479	90 % Z-51.3-450	86 % Z-51.3-450
Max. degree of heat supply ^{b)}	96 %	89 %	94 %	88 %
Heat supply level according to EN 13141-8 at reference volume flow	20 m ³ /h: 96 % 40 m ³ /h: 90 % 60 m ³ /h: 85 %	40 m ³ /h: 83 % 60 m ³ /h: 80 %	20 m ³ /h: 93 % 38 m ³ /h: 91 %	20 m ³ /h: 85 % 38 m ³ /h: 80 %
Max. standard sound level difference D _{n,e,w} ³⁾	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 ^{3) 9)}	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 2.

e²60

[esquaredsixty]

e²60short

[esquaredsixtyshort]

Ready for the demands of the future.

Thanks to its very low power consumption and intelligent motor control, the e²60 is extremely energy efficient and easily achieves energy efficiency class A+.



new

LUNOS pbD- HEAT EXCHANGER

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

e²60 and e²60 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 e²60 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. e²60 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 e²60 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 e²60 is its high volume flow bandwidth. With the smaller heat exchanger of the e²60short, 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



Comfort inner screen (plastic design)



Comfort inner screen (glass design)



Wireless screen with integrated control system



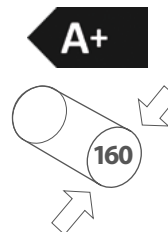
Sound insulation Inner screen



Hygiene inner screen (glass design)



Hygiene inner screen (plastic design)



HEAT RECOVERY

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^{go} series

3 x heat recovery for exhaust rooms

With or without wireless control
for bathrooms, WCs and kitchens

e^{go}60-RF **new**

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

e^{go} & e^{go}-RF **new**

The reference in functional room
ventilation with the new LUNOS
heat exchanger, now also available
as a wireless version e^{go}-RF



new

LUNOS pbD- HEAT EXCHANGER

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

e⁹⁰ series

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

In one e⁹⁰, two fans provide simultaneous air supply and exhaust. Therefore, operation in pairs is not necessary.

The new e⁹⁰ series provides fresh air in functional room ventilation. Proven for over 10 years, the e⁹⁰ is equipped with the latest achievements of the LUNOS development department. All three fans in the e⁹⁰ 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 e⁹⁰60-RF not only make the fan quieter and more efficient, but also increase the exhaust air flow rate to 60 m³/h. The e⁹⁰-RF and e⁹⁰60-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 e⁹⁰ can be combined with the universal hood or the two-channel outer hood* on the façade.

Universal hood white



Universal hood anthracite



Two-channel outer hood white



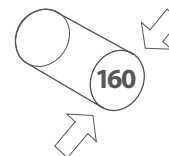
Two-channel outer hood anthracite



e⁹⁰60-RF



e⁹⁰ & e⁹⁰-RF



HEAT RECOVERY



TECHNICAL DATA

Volume flow⁹⁾

5 - 20 m³/h (heat recovery), 45/ 60 m³/h (exhaust)

Max. degree of heat supply⁹⁾

92 %

Heat supply level⁴⁾

91 %

Max. standard sound level difference D_{n,e,w}³⁾

46 dB

Sound power level L_w^{3)/5)}

from 28 dB(A)

Power consumption^{3)/9)}

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

IP22

new

e⁹⁰60-RF ec motor



e⁹⁰

For footnotes on measurement methods and standards, see page 2.

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

LUNOtherm series

Facade element

For open façade design, extra sound insulation and almost invisible.



LUNOtherm-S, S+, G and G+

The sound protection LUNOS facade elements



With the LUNOtherm series the facade design is finally no longer restricted

Due to its position in the window lintel or in the window reveal, the element is inserted directly into the insulation layer of the thermal insulation composite system (ETICS) and is almost invisible from the outside. The LUNOtherm can be installed above or next to the window, so that the combination with a roller shutter box is also possible without any problems. With the new straight LUNOtherm-G, even more installation options are now available. Together with the sound absorber 9/SD-LS, the LUNOtherm-S or -G becomes the LUNOtherm-S+ or G+, which easily achieves values of up to 75 dB. It goes without saying that both LUNOtherm can be retrofitted with the sound absorber even when installed. The façade elements are particular-

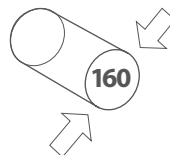
ly easy to process. The ventilation opening can be positioned variably and the deflection of the air - and thus also the sound - by a further 90° ensures the high sound insulation properties of LUNOtherm-S and -S+. A significantly lower weight and an adaptable standard size additionally enable better handling in logistics and on the construction site.

In combination with the ALD-S, the LUNOtherm-S+ can achieve a standard sound level difference of up to 75 dB.

Benefit from the various advantages of our product series: Especially the e² series and the ALD can be excellently combined with LUNOtherm series.

Facade protection insert and bird screen

More protection for the façade through the LUNOtherm series in heavily stressed areas or in exposed locations.



Registration number
LUNOtherm-S, S+ and LUNOtherm-G, G+
Z -56.212-3628



TECHNICAL DATA

LUNOtherm-S and LUNOtherm-S+

Dimensions (H x W x D): 930 x 700 x 60 mm
Dimensions outer grille (H x W): 345 x 53 mm

LUNOtherm-G and LUNOtherm-G+

Dimensions (H x W x D): 350 x 582 x 60 mm
Dimensions outer grille (H x W): 345 x 53 mm

Suitable for installation in an ETICS approved by the building authorities. Installation with over-insulation or under-insulation possible.

Sound absorber for LUNOtherm-S

Type 9/SD-LS for retrofitting
Dimensions (H x W x D): 579 x 131 x 37 mm

LUNOtherm-S, S+ and LUNOtherm-G, G+ have a general technical approval according to DIBt

LUNOtherm-S and -G are supplied in 60 mm thickness and are processed by the façade builder in the same way as an ETICS insulation panel. Detailed installation instructions can be requested or downloaded from the download area. As the LUNOtherm-S and -G is installed in the fire flashover area, its suitability has been tested as part of the general building inspectorate approval of the DIBt.

LUNOtherm

Combination of the 160 series

For decentralised ventilation technology

01 PLUG-IN UNITS

Series e²



RA 15-60



AB 30/60



02 ROUND DUCTS HOUSINGS

9-R 160-500
Length 500 mm



03 INNER SCREENS

9/IBE



9/IBK



9/IBG



9/IBF-RF



04 OUTER CLOSURES LUNO^{therm}

Plastic, round
1/BE 180, 1/WE 180,
1/AZ 180



metal, round, square
1/RME 175, 1/QME 228
1/RMK 175, 1/QMK 228



Outer hood, plastic and metal
1/KWE, 1/KAZ und 1/HWE,
1/HAZ, 1/HES



Use two-channel outer closures!

ALD

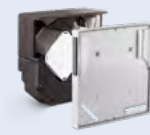


ALD-S



ALD-SV


e⁹⁰, e⁹⁰-RF and e⁹⁰60-RF

Ne^{xt}-E and Ne^{xt}

9-R 160-700
Length 700 mm

3/NXT, 3/NXT + 3/NXT-AP
and 9/R 160-500


9/IBS



9/IBG-H



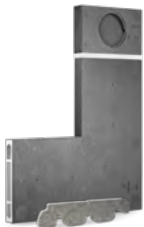
9/IBK-H


Two-channel screen 2/EGI,
2/EGI-RF
(Scope of delivery e⁹⁰ series)

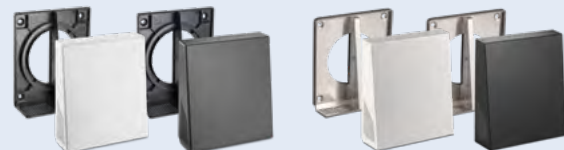

9/NXT-IBF



9/NXT-IB


LUNOtherm-S, S+

LUNOtherm-G, G+

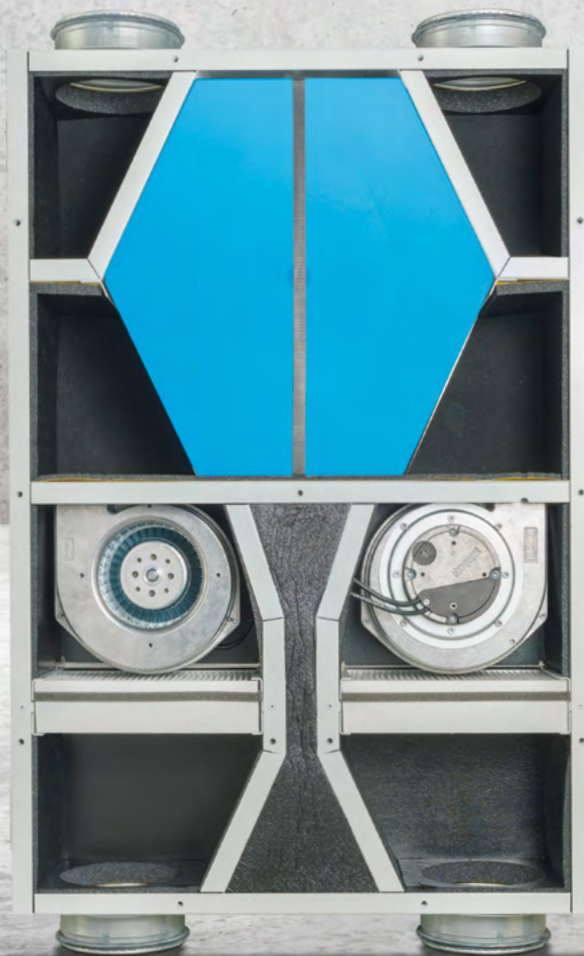
new


Two-channel hood, plastic and metal
1/KWE, 1/KAZ and 1/HWE-2, 1/HAZ-2


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 m³/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 m³/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.

Replacement filter

Exchangeable filters of class F7* available



*Equivalent to 55% according to ISO 16890 ePM1.



HEAT RECOVERY

TECHNICAL DATA

Volume flow^{d)}

40 - 125 m³/h at 100 Pa

Max. degree of heat supply^{a)}

95 %

Heat supply level^{d)}

75 m³/h: 92 %
100 m³/h: 87 %
125 m³/h: 85 %

Heat supply level according to PHI^{f)}

83 %

Device sound^{g)}

at 100 m³/h, 100 Pa
45 dB(A)

Specific

Power consumption (SPI)

at 50 Pa^{h)}
0,3 W/(m³/h)

Max. power consumption

at 125 m³/h, 100 Pa^{h)}
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

For footnotes on measurement methods and standards, see page 2.

LUNOMAT

Controls

Whether with gesture or automated

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

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

TAC

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

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 LUNOS wireless module that allows communication with other 5/UNI-RF, Smart Comfort wireless controls and wireless screens without additional wiring. In automatic mode, outside temperature and outside humidity are integrated into the intelligent control of e² series devices and the volume flows are adjusted according to the humidity differences between inside and outside. Other LUNOS wireless products or smart home controls with EnOcean UNI-EO wireless module 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 LUNOS wireless 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

All 12-volt fans* of the LUNOS 160 series can be controlled with the wireless screen 9/IBF-RF.



*except e⁹⁰ series



Smart Comfort 5/SC-FT & 5/SC-RF

Ventilation at the touch of a button – exactly as required

This control is extremely easy to operate. The different ventilation modes and also the humidity-temperature mode recommended for continuous operation can be set directly at the touch of a button. If the unit is in the recommended humidity-temperature mode, the ventilation system works particularly efficiently and keeps the room climate at an optimum level.

The 5/SC-RF control is equipped with the LUNOS wireless module.

Functions

- » Automatic humidity control, intensive ventilation, night setback and summer ventilation selectable via push buttons
- » Four different lower limits of the humidity range adjustable
- » Humidity and frost protection functions
- » EnOcean wireless module UNI-EO can be connected for smart home connection, app control, etc.
- » 0 - 10 V input for connection to the TAC or to the home automation system
- » Control 5/SC-RF with integrated wireless module for LUNOS wireless system

Optional device combinations

The Smart Comfort can control all 12-volt fans from LUNOS. With an appropriately configured 0-10 V output, different fan types can also be controlled via connected universal controls. The Smart Comfort wireless can additionally be coupled with other Smart Comfort wireless controls (5/SC-RF), universal wireless controls (5/UNI-RF) and the LUNOS wireless screen.



Wireless module
UNI-EO connectable



Smart Comfort 5/SC-FT
Ventilation exactly as required



Smart Comfort wireless 5/SC-RF
with LUNOS wireless module

5/UNI-FT & 5/UNI-RF

Humidity and temperature control as standard

With the universal control unit 5/UNI-FT, every ventilation unit can be controlled automatically. It is equipped as standard with humidity/temperature control and time delay module and has a summer mode. The universal control unit is a multifunctional 12-volt control unit that can be operated with a simple two-pole series switch.

The 5/UNI-RF control is equipped with the LUNOS wireless module.

Functions

- » Automatic humidity control
- » Manual control via series switch (four-stage)
- » Integrated time tracking with interval operation
- » EnOcean wireless module UNI-EO can be connected for smart home connection, app control, etc.
- » 0 - 10 V input for connection to the TAC or to the home automation system

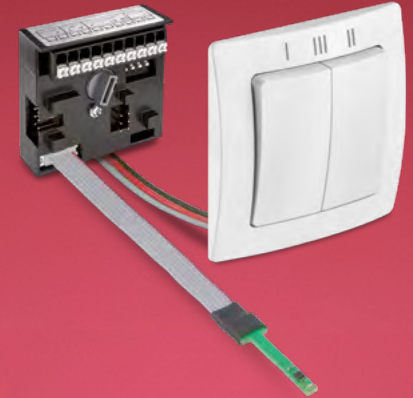
- » Control 5/UNI-RF with integrated wireless module for LUNOS wireless system

Optional device combinations

All 12-volt fans of LUNOS can be controlled via the universal controller 5/UNI-FT. With an appropriately configured 0-10 V output, different fan types can also be controlled via connected universal controls. The universal wireless control is additionally equipped with the LUNOS wireless module. This makes it easy to link it to other universal wireless controls (5/UNI-RF), Smart Comfort wireless controls (5/SC-RF) and the LUNOS wireless screen.



Wireless module
UNI-EO connectable



Universal control 5/UNI-FT
with humidity/temperature control



Universal wireless control 5/UNI-RF
with LUNOS wireless module

TAC

Touch Air Comfort – the multitalent of LUNOS, wireless with the universal control unit 5/UNI-RF

The TAC can be configured for different ventilation scenarios. This control proves to be an energy-efficient combination artist: either different fans or individual universal controls are connected to the three outputs of the control. The integrated power supply unit is absolutely sufficient for a three-room apartment, for example, in which four e² in the living rooms and one Silvento ec in the bathroom are controlled. If there is a higher demand for ventilation units to supply larger apartments or single-family homes, the Touch Air Comfort can also regulate several universal controls with or without wireless module.

Optional device combinations

The 12 V fans of the 160 series as well as the Ne^{xt} and Silvento ec can be connected directly.

Alternatively, almost any number of fans can be connected via universal controls and operated via the TAC.



CO₂ sensor SCO₂-TAC connectable



A continuous measurement of the CO₂ values enables the TAC to control the fans according to the air quality.

Functions

- » E-Ink display for lowest power consumption
- » Integrated humidity/temperature sensor
- » Expandable with the CO₂ sensor SCO₂-TAC
- » direct operation of up to four e² or two e⁹⁰ or one RA 15-60
- » Silvento ec fans can be directly connected and controlled via the low voltage input
- » Further devices can be controlled via connected 5/UNI-FT wired or 5/UNI-RF via LUNOS wireless system
- » Comfort functions such as night setback, summer ventilation, etc. also via weekly schedule via integrated real-time clock
- » Humidity and frost protection functions
- » USB interface for software updates, language changes and export of recorded operating and sensor data
- » Dimensions: (W x H x D) 155 x 97 x 20 mm (wall mounting), incl. deep electronics box, horizontal installation, dimensions: (W x H x D) 143 x 70 x 75 mm

Gesture control

Ventilate with a gesture – wireless with the universal control unit 5/UNI-RF

The Gesture control works via an electromagnetic field, which can be activated by different gestures - that means contactless. Under the touch unit there are 60 RGB LEDs, which give feedback during operation and signal activated functions and states in an easily understandable way. A gesture control regulates up to two ventilation areas, which are controlled individually. Both connectable ventilation areas can be controlled independently of each other via connected universal controls with or without a wireless module.

Functions

- » Select standby displays: time, temperature/humidity level, filter runtime, night light
- » Limit values of the humidity range adjustable
- » Two areas to be ventilated can be controlled independently of each other
- » The comfort functions intensive ventilation, night setback and summer ventilation can be individually parameterised in running time and level
- » Humidity and frost protection functions
- » Different device types adjustable via one control system
- » Control of the LUNOS wireless system possible via 5/UNI-RF

Optional device combinations

Universal controls as well as devices of the Ne^{xt} and/or Silvento ec series can be connected to the two outputs of the gesture control. These two control paths or channels can be controlled separately, so that two different areas can easily be controlled independently of each other. This means that the entire ventilation system of a residential unit can be operated via one control.



Wireless technology



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 e⁹⁰-RF and e⁹⁰60-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 EnOcean plug-in module:

- 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

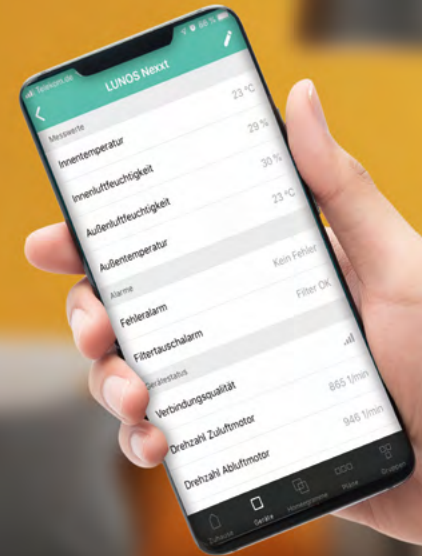
Wireless technology

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.



App available
for iOS, Android
or as WebApp



5/UNI-RF & 5/SC-RF, 9/IBF-RF and e⁹⁰ wireless screen

The LUNOS products with the new bidirectional LUNOS wireless standard.



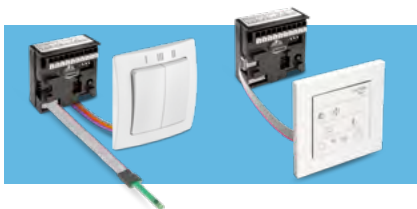
Brain Cube & EnOcean Cube

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.



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 e² series and RA 15-60.



Wireless screen from e⁹⁰-RF & e⁹⁰60-RF

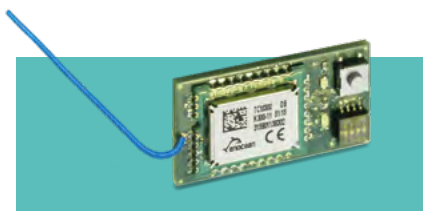
In the e⁹⁰-RF and e⁹⁰60-RF fan versions, the elegant design screen of the e⁹⁰ covers the universal wireless control (5/UNI-RF) and a power supply unit. This means that both e⁹⁰s only require a 230 V, 50/60 Hz connection and can be controlled by wireless or regulate themselves automatically via the humidity and temperature sensors of the built-in universal control unit.

Possible connections of LUNOS wireless products and ventilation devices without LUNOS wireless system with the homee Smart Home centre with EnOcean modules

- » All control units and wireless screens **with** LUNOS wireless system have a slot for the EnOcean wireless module UNI-EO.
- » Universal control and Smart Comfort **without** LUNOS wireless system also have a slot for the EnOcean wireless module UNI-EO.
- » The TAC control unit is wireless-compatible via connected Universal RF control units (5/UNI-RF).
- » The Silvento ec and Ne^{xt} ventilation units can be fitted directly with the EnOcean FM-EO wireless module.
- » Ventilation units without a slot, such as the AB 30/60, which is controlled via a two-pole switch, become wireless with the UPM-EO wireless module in the switch box.

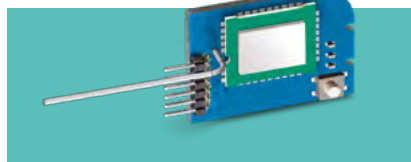
Smart Home wireless technology

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 e² devices to actively deliver 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^{xt} models. The Silvento ec can also optimise the ventilation behaviour with the coupled outdoor sensor SFT-EO. In conjunction with e² 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.



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 wireless command. Two channels are available for switching ventilation levels and special 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.

homee Smart Home

The modular central unit

homee is a modular smart home control center that enables the linking of various trades and technologies. It provides a clearly structured and easy-to-use interface in the form of an app for iOS and Android or as a WebApp. The central unit is the white Brain Cube, which already has a WLAN interface as standard. This ensures both the connection to the Internet and communication with WLAN-capable smart home devices. This Brain Cube can then be supplemented by further cubes, each of which represents a wireless technology. So the optional cube with the EnOcean, ZigBee and Z-Wave wireless standards can be stacked on top of the central unit, which can then be expanded to form a universal communication interface. The modular smart home central homee also enables communication between devices and sensors from different manufacturers by means of so-called homee-grams. These can be used to trigger sensor-dependent switching actions, for example, and even across different systems. This makes ventilation more convenient than ever before.

Brain Cube

The Brain Cube is the central control unit and forms the basis of the homee Smart Home. Here, the signals received by the optionally available wireless cubes are processed. The Brain Cube connects to the local network via WLAN, so that it and the connected wireless components can be reached from anywhere.



EnOcean Cube

With the EnOcean Cube wireless modules from LUNOS can be integrated and controlled from homee. It sends all information to the Brain Cube, which then processes it. Conversely, the Brain Cube sends instructions from app and homee programs via the EnOcean Cube to the LUNOS wireless modules, which control the fans accordingly.



HOMEE PRODUCTS ORDER

Codeatelier GmbH

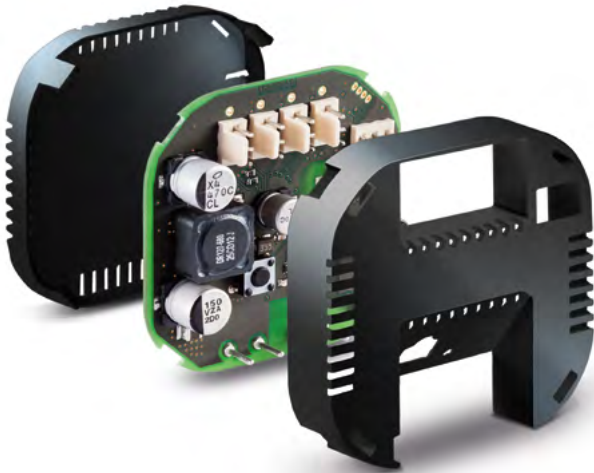
Kollwitzstraße 1
73728 Esslingen

hello@codeatelier.com
www.hom.ee
Shop: www.store.hom.ee

KNX-Control

KNX Control4

The KNX LUNOS Control4 module enables the control of decentralised ventilation units with heat recovery and exhaust air fans via the KNX bus. It can network several modules with each other via the KNX bus and thus enable any desired operation. For direct control of the ventilation devices, the existing push-button inputs can be used. The module has an integrated KNX bus coupler and can be integrated, parameterised and controlled in the usual way in a KNX installation.



LUNOS GOES KNX
With our partner

**Arcus Electronic Design
Services GmbH**

Rigaer Str. 88
10247 Berlin

Phone + 49 30 259 339 14
Fax + 49 30 259 339 15
info@arcus-eds.de
www.arcus-eds.de

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

*Equivalent to 55% according to ISO 16890 ePM1.

Inner screens

160 series

Wireless screen

Elegant design screen including wireless control and power supply for all* 12V devices of the 160 series.



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

Standard inner screen

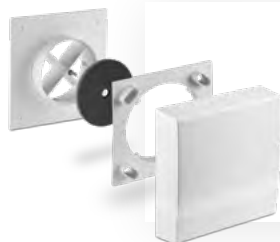
Simple screen with timeless elegance for universal* use in the 160 series.



(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 filter class ISO Coarse $\geq 45\%$.



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

*except e⁹⁰ series



Outer grilles

Round & square



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



Plastic grille Ø 115 mm

For round ducts Ø 90 - 100 mm,
UV-resistant, Insect protection,
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 protection, 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 protection, pluggable
Description: 1/RME 150 Stainless steel
Designation: 1/RMK 150 copper



Outer hoods

160 single-channel system, soundproofed



Outer hood aluminium*

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

for round ducts up to Ø 105 mm, insect protection, 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*

(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/HWE white powder-coated

Description: 1/HAZ anthracite powder-coated



Outer hood stainless steel

(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/HES stainless steel brushed



Outer hoods

160 single and two-channel system, soundproofed



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/HWE-2 white powder-coated



Universal hood

Suitable for all devices of the 160 series and Ne^{xt}, 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/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



Universal hood

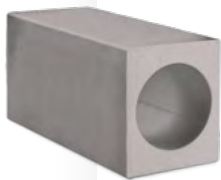
Suitable for all devices of the 160 series and Ne^{xt}, recyclable plastic,
(H x W x D) 235 x 213 x 74 mm, UV-resistant, for round ducts Ø 160 mm, insect protection, with sound insulation, to screw.
Increase of the standard sound level difference by up to 6 dB.
Description: 1/KAZ anthracite

*Our aluminium outer hoods can be painted in RAL colours on request



Wall mounting

Housings & Ducts

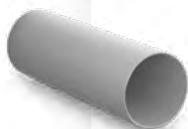


Wall-mounted housing 9/MRD

(H x W x D) 240 x 210 x 500 mm

Wall-mounted housing made of EPS with slope to the outside. Suitable for all round ducts of the 160 series and also usable with LUNOtherm. Can be shortened continuously. By using the insulating wall mounting case, a 2% higher heat recovery rate can be planned in accordance with DIBt.

Description: 9/MRD



Round duct

For all devices of the 160 series and can also be used with LUNOtherm

Description: 9/R 160-500 (Ø x L) 160 x 500 mm

Description: 9/R 160-700 (Ø x L) 160 x 700 mm



Diagnostic software and tools

from LUNOS

LUNOS fans can be quickly and flexibly adapted on site to the planning/design and individual requirements. For this purpose, most LUNOS controllers and devices have a diagnostic interface that provides limited access to the firmware and allows extended configuration and calibration via LUNOS' own software. In addition, errors can be found and problems solved. The operating data of the fan can also be read out via the same interface. This allows you to perform comprehensive diagnostics and troubleshooting on site. With an existing Internet connection, it is also possible to analyse the data remotely together with LUNOS customer support.

Silvento ec servicekit

- » Can be operated via WLAN using a smartphone, tablet, PC or Mac
- » Advanced configuration and calibration
- » Production data acquisition and analysis
- » Operating hours, motor running time, filter service life, sensor data, and switching operations, control priorities, activated ventilation stages, occurring back pressures
- » Easy to connect with all Silvento ec control boards

new



SILVENTO ec WLAN-Module

- Website-based without extra software
- Connection without cable via WLAN
- Small and flexible



Design software

from LUNOS

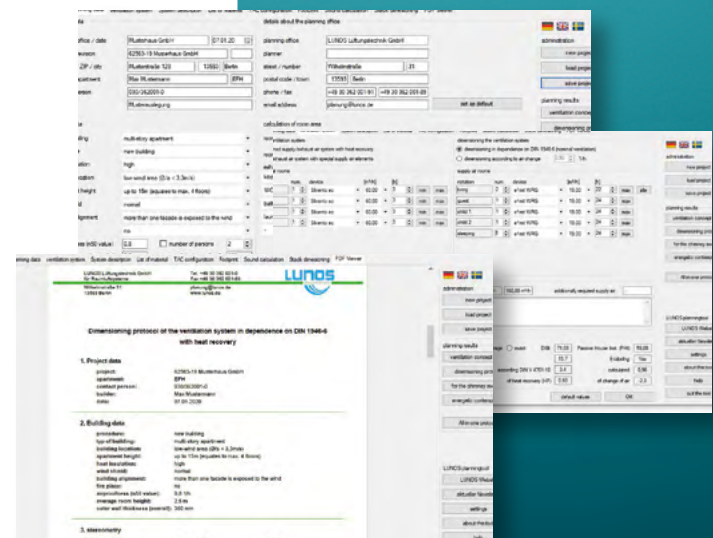


The design is based on the recognized rules of technology and meets the requirements of DIN 1946-6, which is used to determine the necessary volume flows to ensure the minimum air exchange rate for the protection of the building structure. These volume flows depend on the number of exhaust air rooms, the living space and the tightness, location and orientation of the building. The fan-assisted home ventilation is designed according to the nominal ventilation stage, which covers the required air exchange rate during normal use.



Design tool based on the specifications of DIN 1946-6

- » Proof of the necessity of ventilation measures (ventilation concept part 1)
- » Design related to exhaust air spaces or useful area
- » Design of the outdoor air volume flows
- » Calculation for moisture protection, reduced ventilation, nominal and intensive ventilation
- » Calculation of the infiltration volume flows
- » Component design of the ventilation system such as fans, outer wall air vents and overflow cross sections
- » Consideration of the requirements for exhaust air systems in connection with fireplaces
- » Calculation of efficiency and effectiveness of the planned ventilation system
- » Creation of complete material lists
- » Preparation of component certificates for sound insulation depending on the structure of the outer wall
- » All calculation results are output by the design tool in clear reports in PDF format
- » Placement of the components in the floor plan by our qualified planning team





REFERENCES

Examples of energy-efficient ventilation

Low-energy house Clane

Kildare, Ireland



RENOVATION

Building type	Renovation of a farmhouse from the 18th century with the addition of a modern building complex to create a low-energy house
Building owner	Jordan family, Kildare - Ireland
Ventilation concept	Controlled home ventilation with heat recovery
Supply and exhaust air	Living spaces: e ² with heat recovery Function rooms: e ⁹⁰ with heat recovery
Completion	Spring 2017
Energy standard	Low-energy house with a decentralised ventilation system with heat recovery, air heat pump with separate split evaporator and sufficiently dimensioned separate storage tank, high thermal insulation and triple thermal insulation glazing.



References

New building and Renovation



NEW BUILDING

Plus-Energy-Project Powerhouse, Berlin

Building type	New construction of an innovative plus-energy project with 128 two- to four-room apartments spread over five buildings.
Building owner	HOWOGE housing association, Berlin
Ventilation concept	Controlled home ventilation with heat recovery in a decentralised hybrid system with exhaust air fans in the functional rooms
Supply and exhaust air	Living spaces: e ² with heat recovery
Exhaust air	Exhaust air units of the Silvento-ec series are installed in the functional rooms.
Completion	Late summer 2017
Energy standard	Plus Energy House Standard: Holistic energy concept with solar thermal system, which in combination with the district heating network enables a balanced heat supply. Supplemented by photovoltaic system, hybrid ventilation system with heat recovery and high thermal insulation.



RENOVATION

Bahnhofstraße 17, Neumarkt

Building type	Core renovation and extension of an apartment block with commercial unit
Property developer	Dörmann Projekt GmbH
Ventilation concept	Controlled home ventilation with heat recovery in a decentralised hybrid system
Supply and exhaust air	e ² 60 with heat recovery and facade-side closure via the facade element LUNOtherm
Exhaust air	Exhaust air units of the Silvento UP series with humidity and temperature sensors are installed in the functional rooms.
Completion	2023
Energy standard	KfW-40 standard: high thermal insulation, triple-glazed windows, hybrid ventilation system with heat recovery, Heating and hot water production via heat pump.

References

Renovation



RENOVATION

Plus-Energy-MFH, Bern, Switzerland

Building type	An apartment building from the 1950s is turned into a small power station. According to data from the cantonal building programme in Switzerland, the building is the first in the city of Bern to meet the highest energy requirements. Multi-family house with five family apartments and two penthouse apartments.
Building owner	Quadrat AG, Zollikofen
Ventilation concept	Controlled home ventilation with heat recovery in a decentralised system
Supply and exhaust air	Living spaces: e^2 with heat recovery Function rooms: e^{90} with heat recovery
Completion	May 2014
Energy standard	Plus Energy House of GEAk category AA (GEAK=Building Energy Performance Certificate of the cantons, comparable to Dena Energy Performance Certificate): triple-glazed windows, ventilation system with heat recovery, solar thermal system and photovoltaic system with an electricity surplus of 7 %.



RENOVATION

Mariandl at the sea, Prora

Building type	The historic building complex of the unfinished seaside resort in Prora on the island of Rügen has been gradually renovated in recent years. In the process, the Mariandl at the sea was created - a recreational residence consisting of 128 holiday flats with a unique concept: Alpine mountain hut flair is to meet the relaxing ambience of the coast. This required an efficient ventilation plan that fulfils the requirements of the coastal location as well as the comfort requirements of the guests. This is why the building owners decided to work with LUNOS
Building owner	Mariandl at the sea, Binz
Ventilation concept	Controlled home ventilation with heat recovery in a decentralised hybrid system
Supply and exhaust air	Living spaces: e^2 with heat recovery Function rooms: Exhaust air units of the Silvento UP series
Completion	End of 2019
Energy standard	High thermal insulation, hybrid ventilation system with heat recovery

Representatives

Germany



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

Representatives

International



- Australia
- Austria
- Bosnia and Herzegovina
- Canada
- Chile
- China
- Colombia
- Cyprus
- Czech Republic
- Denmark
- Great Britain
- Greece
- Iceland
- India
- Ireland
- Italy
- Latvia
- Lithuania
- Malta
- Mexico
- Netherlands
- New Zealand
- Norway
- Poland
- Portugal
- Switzerland
- Slovenia
- Slovakia
- South Korea
- Thailand
- USA

LUNOS Lüftungstechnik GmbH & Co. KG
für Raumlufsysteme

Wilhelmstraße 31 · 13593 Berlin

PO Box 20 04 54 · 13514 Berlin

Phone +49 30 362001-0

Fax +49 30 362001-89

Email info@lunos.de

Web www.lunos.de



WWW.LUNOS.DE