EXHAUST SYSTEM



EXHAUST

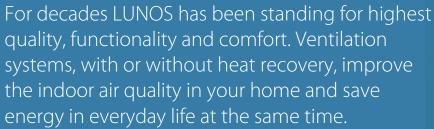
Trust in LUNOS Fresh air for generations

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 is still based in Berlin-Spandau. In 2019 a second location was opened in Brandenburg. This created even more expansion opportunities for the company, which manufactures its products Made in Germany and sells them in over 36 countries worldwide. In Germany, the products are sold through the three-level distribution channel.

LUNOS stands for more than a living climate

The core competencies of LUNOS lie in decentralised controlled residential ventilation with and without heat recovery, as well as in the development and manufacture of energy-efficient fans and outer wall air vents. LUNOS can draw on over 60 years of experience with axial fans. Over the decades, we have continuously developed these special fans used for exhaust air systems. In the first years of the company's history the air could still easily flow in through leaks in the outer walls. Later the first outer wall air vents, then called ZL (for Zuluft = supply air), were developed to bring fresh air into the home in a more controlled manner. With the advent of exhaust air units with pressure-constant radial motors and the publication of new regulations for denser, energy-saving housing construction methods, LUNOS once again launched a new ALD generation onto the market. We have been setting standards by means of this proactive approach - the next generation is always just one decisive development step away.



Made in Germany



INFORMATIONEN

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





Controlled home ventilation

Exhaust System

O1 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-, CO_2 and VOC-controlled domestic 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, any Silvento ec-fan can be used. Available as surface-mounted, flush-mounted or clamp fans.



RA 15-60

Radial external wall fan with four ventilation stages and round crosssection. 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. H x W x D: 240 x 210 x 500 mm

LUNOtherm-S and -S+

Facade element, without disturbing ventilation grille on the facade. Can be combined with ALD, ALD-SV or ALD-S.









Exhaust air systems are highly suitable for functional rooms such as bathrooms, kitchens or utility rooms. They transport the exhaust air to the outside - either directly or via exhaust air shafts. Fresh air flows into the living rooms via ALD.

HEAT RECOVERY

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.

EXHAUST AIR

HEAT RECOVERY

HEAT RECOVERY

03 COMBINED SYSTEM

At least two different types of ventilation are used. While the living spaces have fresh air without heat loss thanks to heat recovery units, exhaust air rooms such as the bathroom or kitchen can be ventilated cost-effectively.

Silvento ec





Silvento ec One motor - endless solutions



Determine the functions of the Silvento ec simply by selecting one of seven control boards:

Basic board and basic board 90:

Seven ventilation stages from 15 to 90 m³/h with time lag, interval switching and switch-on delay configurable

Comfort board and Comfort board 90: Basic board plus humidity and temperature sensor

Comfort board+ and Comfort board 90+: Comfort board plus VOC sensor for detecting odours in the air

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

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

Movement sensor module: with radar-based sensor

Wireless module: Control via wireless without further cabling

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

SILVENTO EC TECHNICAL DATA

Silvento-Type V-EC ¹⁾ or KL-EC ²⁾	Basic board 5/EC-ZI and 5/EC-ZI 90	Comfort board 5/EC-FK and 5/EC-FK 90	Comfort board+ 5/EC-FK+ and 5/EC-FK 90+	Cellar board 5/EC-KE
Volume flow	0/15/20/30/40/45/ 50/60/(90) m ³ /h	0 - 60 (90) m³/h	0 - 60 (90) m³/h	0 - 60 m³/h
Sound power level L _W * ³⁾		from 18	3 dB(A)	
Power consumption ³	1,8 - 6,2 (14,5) W			
Supply voltage		200 - 240 V A	AC 50/60 Hz	
Control voltage		0 - 1	0 V	
Protection class		IP>	(5	

1) Silvento V are ventilator inserts that still require a flush or surface-mounted housing. 2) Silvento KL are complete single-pipe fans that are clamped in pre-wall constructions. Silvento KL single-pipe fans fit into the flush-mounted housings of the LUNOS Skalar series. 3) Free blowing * Sound power level: The sound power level indicates how "loud" a unit is. The value is independent of the distance. The volume flow rates stated in the product documentation refer to an installation with 20 - 70 Pascal counterpressure. In case of deviations, the values can be adjusted precisely.

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). Volume flows can be adjusted in case of deviations from the setpoint.

Recommendation

LUNOS recommends the use of the newly developed diagnostic software as an extension of the scope of functions and for the use of logging functions.

7

Silvento ec V-EC & KL-EC the modular system for fan trays and terminal fans

The control boards are integrated in the filter frame and can be easily configured and replaced if necessary by removing the cover. There is a slot on both the Basic board and the Comfort board, which can be equipped with an additional module.



Basic board	Comfort board	Cellar board	Comfort board+	
	erent volume flows for 30/40/45/50/60/(90)	basic ventilation and c	lemand ventilation	
Time delay confi	gurable to 0, 15 or 30	minutes	-	
	g: 30 minutes ventilat ntilation every two ho		-	
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 - Diagnostic cable				
Filter change indicator				
-	Stepless comfort hu control	midity-temperature	Stepless comfort hu- midity-temperature- VOC-control	

Comfort ventilation with the PLUS

The new boards Comfort board+ and Comfort board 90+ 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. Commissioning is carried out in connection with the boards type 5/EC-FK+ or 5/EC-FK 90+ and the switch type 5/W2 FK.

Cellar ventilation

The Silvento ec with the suitable board is the new, innovative solution for cellar ventilation from LUNOS. It ensures clean and hygienic ventilation of the cellar area. Comfort and a pleasant room climate can thus be easily achieved. Commissioning takes place in conjunction with the Type 5/EC-KE board and the Type 5/W2 FK switch. Thanks to the sensors integrated in the basement 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 B x T in mm)	Blow-out connection Length in mm	Fire protection
D.	Surface-mounted housing 3/AP, 269 x 269 x 109,5	Axially outgoing conical blow-out connection (DN 75 to DN 80), Length 69	-
- O.	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

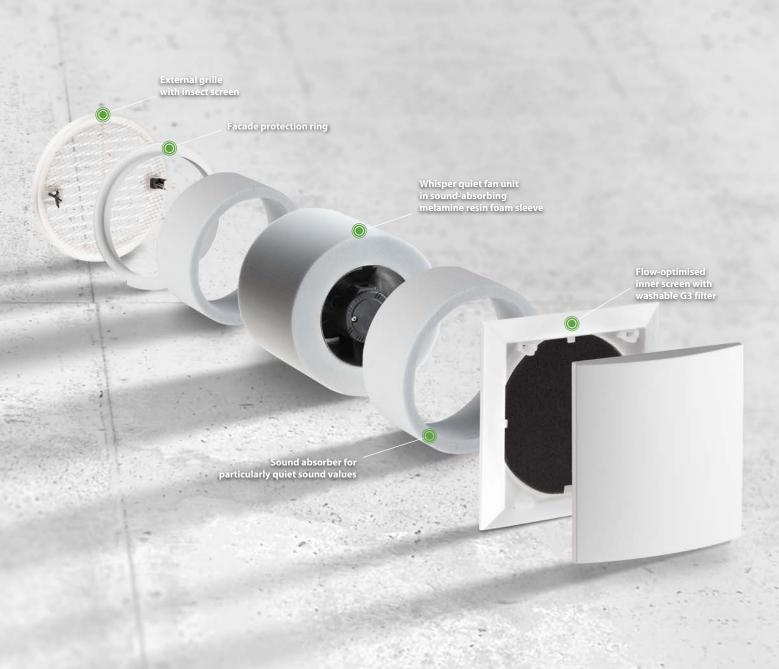
All Silvento in-wall housings are also available as two-room variants.



AB 30/60

Axial fan

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



LUNOS

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 e^2 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)



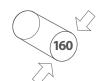
Comfort Inner screen (glass design)



Sound insulation Inner screen



Wireless screen (without radio control)



EXHAUST AIR

TECHNICAL DATA

Volume flow

Sound power level* L_W from 36 dB(A)

Power consumption 1,5/4,9 W

Supply voltage 100-240 V 50/60 Hz

Core drilling Ø 162 mm

Minimum installation length 170 mm

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

Dimensions Ø 154 x 130 mm

Protection class

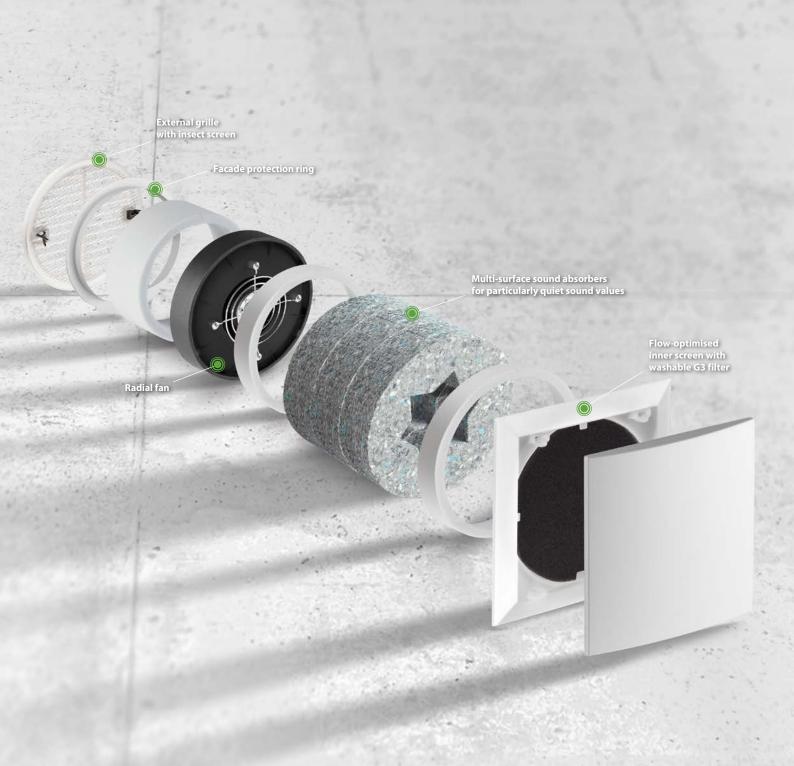
AB 30/60

11

RA 15-60

Radial fan

The combination of consistency of pressure and renovation simplicity



LUNOS

RA 15-60 Perfect for outside exhaust air rooms



Exhaust air unit with ec-motor, can also be combined with the LUNOtherm-S und LUNOtherm-S+ 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 undreamt-of low running noise as well as optimal sound insulation from the outside.

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

Can be combined with inner screens of the 160 series



Standard

Inner screen



Comfort Inner screen (plastic design)



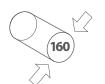
Comfort Inner screen (glass design)



Sound insulation Inner screen



Wireless screen with integrated control system



EXHAUST AIR

TECHNICAL DATA

Volume flow

Sound power level* L_W from 24 dB(A)

Power consumption 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 mn

Protection class

*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. **RA 15-60**

Outer wall air vents

For renovation and new construction - sound-optimised and weatherproof

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Martin Constant

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Outer wall air vents Comfortable climate in tight buildings

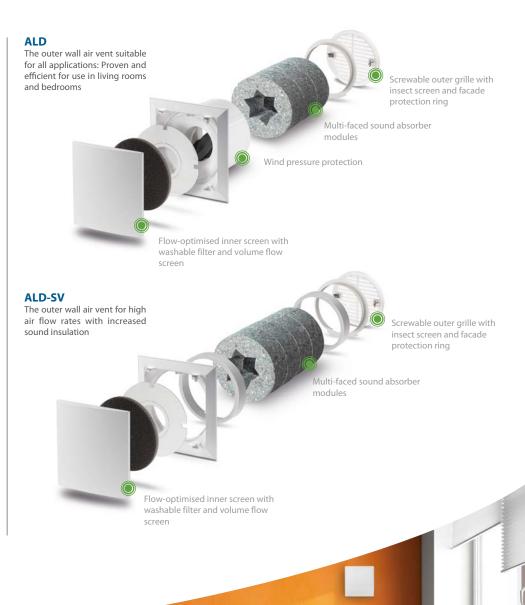


Inner and outer city traffic affects our home climate.

For a high level of living comfort, it is essential to integrate well thoughtout 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 outside wall air diffusers. When planned in accordance with standards, this ensures user-independent ventilation in accordance with DIN 1946-6.





under

5



Can be combined with inner screens of the 160 series







Standard Inner screen

new

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



Wireless screen (without radio control)

EXHAUST

16

*Equivalent to 55% according to ISO 16890 ePM1

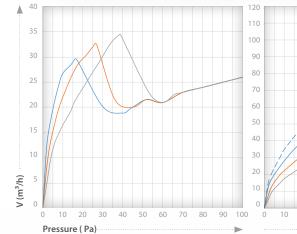
Outer wall air vents

Technical data

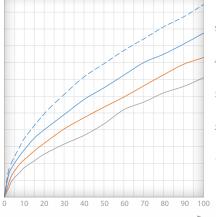


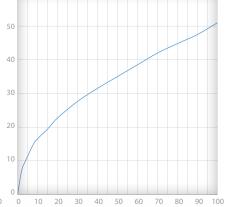
ALD Length of built-in unit: 360 mm Ø: 154 mm		ALD-SV		ALD-S				
			Length of built-in unit: 360 mm Ø: 154 mm		Length of built-in unit: 360 mm Ø: 154 mm			
` ∨ : ⊗ ⊙ ⊙	at 8 Pa 25 m³/h 20 m³/h 15 m³/h	at 4 Pa 18 m³/h 13,5 m³/h 10 m³/h	"∨: ⊗ ©	at 8 Pa 25/30* m³/h 20 m³/h 15 m³/h		'V: ⊠	at 8 Pa 15 m³/h	at 4 Pa 10 m³/h
Sound insulation Sound insulation Dn,e,w Wall thickness Dn,e,w Wall thickness			Sound ins Dn,e,w	Sound insulation Dn,e,w Wall thickness				
	A) 360 mm A) 500 mm		53 – 66 dB(# 61 – 71 dB(#				(A) 360 mm (A) 500 mm	

The given sound insulation values apply to the above-mentioned volume flows with a round duct completely filled with sound absorbers. *Volume flow of the ALD-SV with an even arrangement of the sound insulation elements. All data are mathematically rounded.



SUPPLY AIR





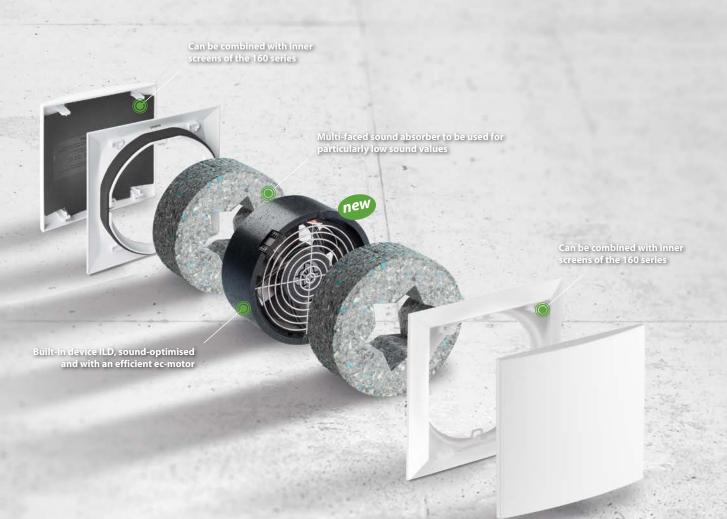
Without volume flow screen Volume flow screen Ø 70 mm Volume flow screen Ø 56 mm





Inner wall air vent

The solution for cascaded ventilation



Compatibility

ILD can be combined with all exhaust air systems, ALD, the e² 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 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



Sound insulation

Inner screen

Wireless screen with integrated control system

'neW



Comfort inner screen (glass design)



160

TECHNICAL DATA

Volume flow

Sound power level* LW

Power consumption

Supply voltage 12 V DC SELV

Core drilling Ø 162 mm

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 distance



Controls

Whether with gesture or automated

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

Silvento ec

Switchable via the automatic humidity-temperature sensor system, by switch, radio module, TAC or Gesture Control.

The Silvento ec can be operated in many different ways. Using the FM-EO radio module, it can even be remote-controlled via app in the Smart Home.

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external time delay and interval.

Can be controlled by switch and with

AB 30/60

Due to its 230 V connection, the AB 30/60 is particularly easy to connect to a switch. RA 15-60 Can be combined with Universal Control, Smart Comfort, TAC, Gesture Control and wireless screen.

Due to its 12 V radial motor, the RA 15-60 is compatible with all LUNOS 12 V controls and the new wireless screen.

new

21°C

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Radio module

The Silvento ec can be remote-controlled directly via the connected FM-EO. For the RA 15-60, only one UNI-EO radio module is required in addition to the Universal Control. More than other ventilation systems, decentralised ventilation is all about effectiveness and sensible supplementation to the system's various fans. For the optimal implementation of energy-efficient ventilation, control systems are required that network the ventilation system in a smart way while ensuring easy operation. LUNOS provides different types of control: Universal Control, Touch Air Comfort, Smart Comfort and Gesture Control.

The Silvento ec and AB 30/60 fans can also very easily be directly connected to a switch.

In its new version, the universal control can also be equipped with the UNI-EO radio module when used with Smart Comfort and Gesture Control.

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
- » 0 10 V input for connection to the TAC or to the home automation system

new

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.







*except e^{go}

Wireless technology

For easy smart home connectivity

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





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.



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.



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 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.



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 e² devices to actively supply supply air when an exhaust fan transmits a switched demand ventilation by a wireless command.



Wireless module FM-EO for Silvento ec and Ne^{xx}t

The FM-EO wireless module is compatible with all Silvento ec and Ne^{xx}t 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 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. The same applies to the combination Ne^{xx}t and Silvento ec. If several Ne^{xx}t 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.



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 Designation: **9/IBK**



In plastic design incl. F7 filter for cleaning the fresh air from pollen and fine dust, increased hygiene protection (H x W x D) 191 x 180 x 77 mm Designation: **9/IBK-H**

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



In glass design incl. F7 filter for cleaning the fresh air from pollen and fine dust, increased hygiene protection (H x W x D) 197 x 185 x 83 mm Designation: **9/IBG-H**

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 Designation: **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 Designation: **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 Designation: 1/BE 180 sanded Designation: 1/WE 180 white Designation: 1/AZ 180 anthracite



Metal grille Ø 175 mm

for round ducts Ø 125 - 160 mm, Insect screen, pluggable Designation: 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 Designation: 1/BE 115 sanded Designation: 1/WE 115 white Designation: 1/AZ 115 anthracite



Metal grille 228 mm

for round ducts Ø 160 mm, Insect screen, pluggable Designation: 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 Designation: 1/RME 150 Stainless steel Designation: 1/RMK 150 copper



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. Designation: 1/HWE 115 white powder-coated Designation: 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 aluminium white powder-coated Description: 1/HAZ aluminium anthracite powder-coated Description: 1/HES stainless steel brushed

Representatives

Germany







Representatives International





- Belgiu
- Canada
- Chil
- Chir
- Croatia
- Czech Republic
- Denma
- Estonia

- Finland
- Frai
 - Great Brit
 - Greece
 - Hunga
 - India
 - Irelanc
 - Italy
 - Japar
 - Latvia

- Lithuania
- Luxembo
- 101010000
- Netherlands
- New Zealand
- Norway
- Poland
- Portuga
- Sweden
- Switzenanu

- Slovakia
- Slovenia
- South Afric
- South Korea
- Spain
- Thailan
- Ukraine
- USA

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WWW.LUNOS.DE QUALITY IS THAT STANDS THE TEST OF TIME