LUNOS
energy-efficient

**EXHAUST**

# 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 (ALD). 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.

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

**INFORMATION**

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

## 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/m$^3$ 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.
All data are mathematically rounded.

# 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-, $CO_2$ 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.

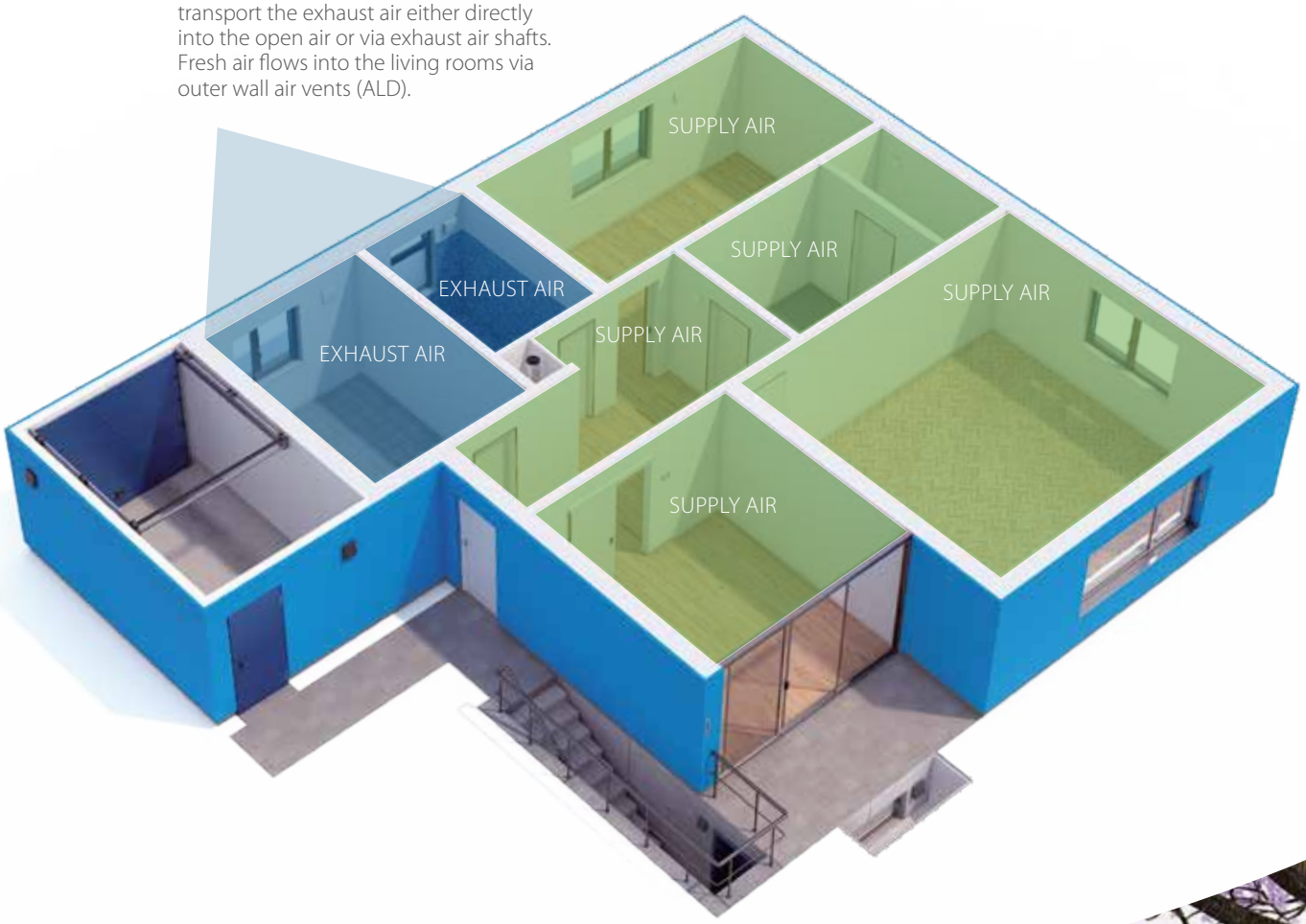
**ALD, ALD-SV and ALD-S**
Outer wall air vents with filter, silencer and, if necessary, wind pressure protection.

**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.

# 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).




# Silvento ec

## Radial fan

Versatile in use as a clamp-in fan, surface-mounted and in-wall-mounted fan




Silvento KL-EC for a universal quick installation

# 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) $m^3$/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

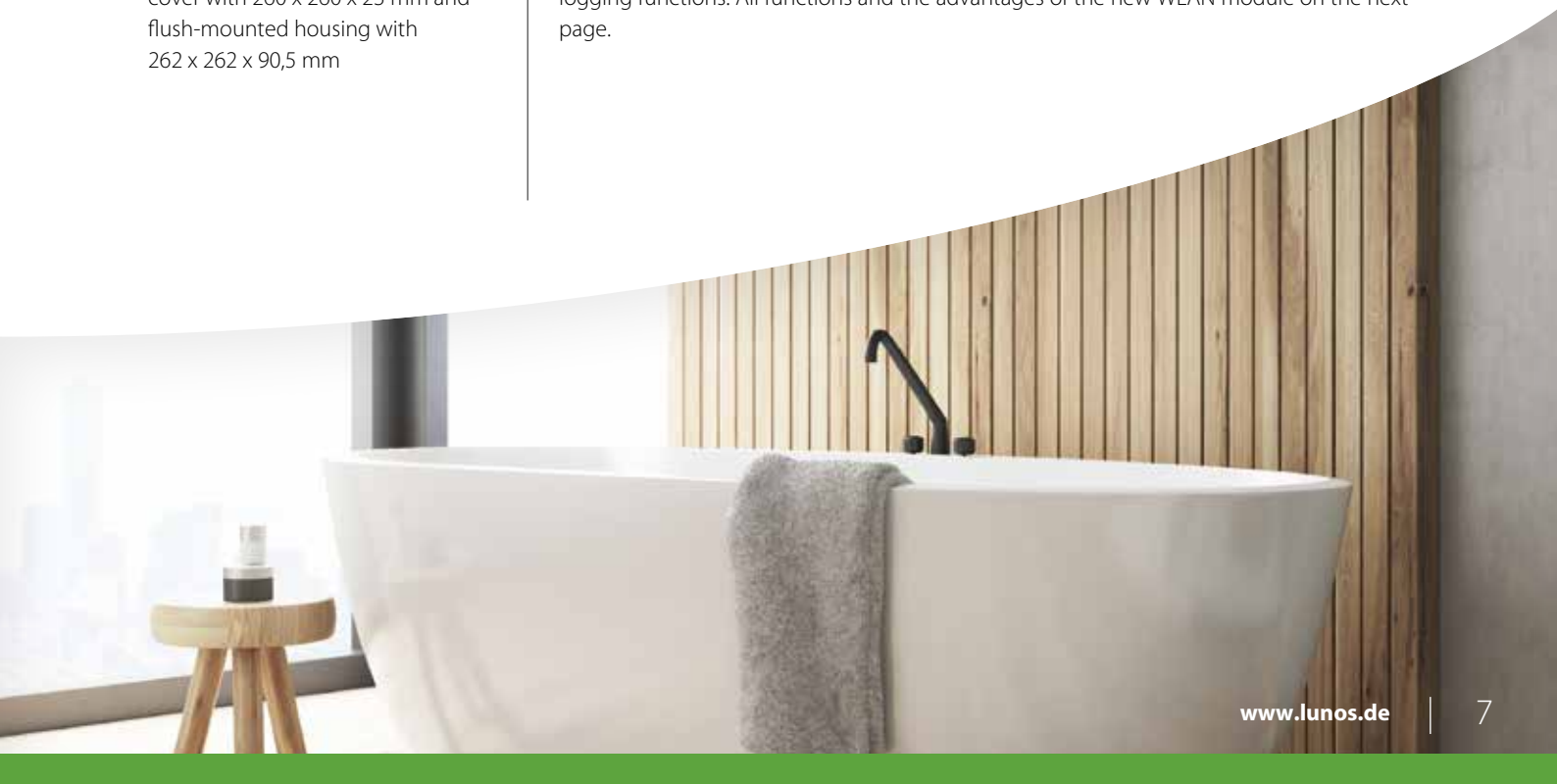
| **Silvento-Type** *V-EC[1] or KL-EC[2]* | Basic board 5/EC-ZI (90) | Comfort board 5/EC-FK (90) | Comfort board+ 5/EC-FK+ (90+) | Cellar board 5/EC-KE |
|---|---|---|---|---|
| **Volume flow**[3) 4)] | 0/15/20/30/40/45/ 50/60/(90) $m^3$/h | 0 - 60 (90) $m^3$/h | 0 - 60 (90) $m^3$/h | 0 - 60 $m^3$/h |
| **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 3.

The sound power level is only 18 dB(A) at 15 $m^3$/h (basic ventilation) and 35 (52) dB(A) at 60 (90) $m^3$/h (demand ventilation).

### Recommendation

LUNOS recommends the use of the newly developed diagnostic software for the use of logging functions. All functions and the advantages of the new WLAN module on the next page.



# **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 | Comfort board+ | Cellar board | Wireless module | Motion detector

| 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:<br>- Radar-based motion detector 5/BM or<br>- FM-EO wireless module or<br>- Service kit with WLAN 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 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.

new

**SILVENTO ec WLAN module**

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

### Silvento ec servicekit based on the requirements of DIN 1946-6

» 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

# Silvento ec

## Configuration of the installation housing

| | **Type, dimensions** *(H x W x D in mm)* | **Blow-out connection** *Length in mm* | **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, with leak-proof non-return damper |
|  | **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, with leak-proof non-return damper |
|  | **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, with leak-proof non-return damper |

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.

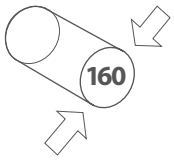
### Can be combined with inner screens of the 160 series

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 3.

# 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

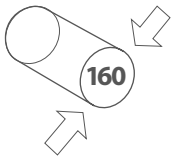
Standard
Inner screen

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 3.

# Outer wall air vents

For renovation and new construction – sound-optimised and weatherproof

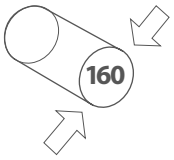
# Outer wall air vents

## 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.



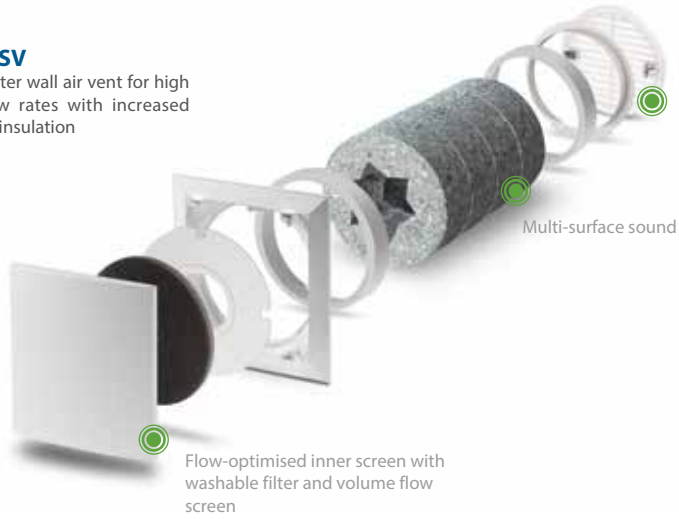

**SUPPLY AIR**

**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

Screwable outer grille with insect protection and facade protection ring

Multi-surface sound absorber

Flow-optimised inner screen with washable filter and volume flow screen

### 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

*Equivalent to 55% according to ISO 16890 ePM1

# Outer wall air vents
## Technical data

### ALD

**Length of plug-in unit:** 360 mm
**Ø:** 154 mm

| $\dot{V}^{3)}$: | 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 plug-in unit:** 360 mm
**Ø:** 154 mm

| $\dot{V}^{3)}$: | at 8 Pa | at 4 Pa |
|---|---|---|
| ⊠ | 25/30[6)] 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

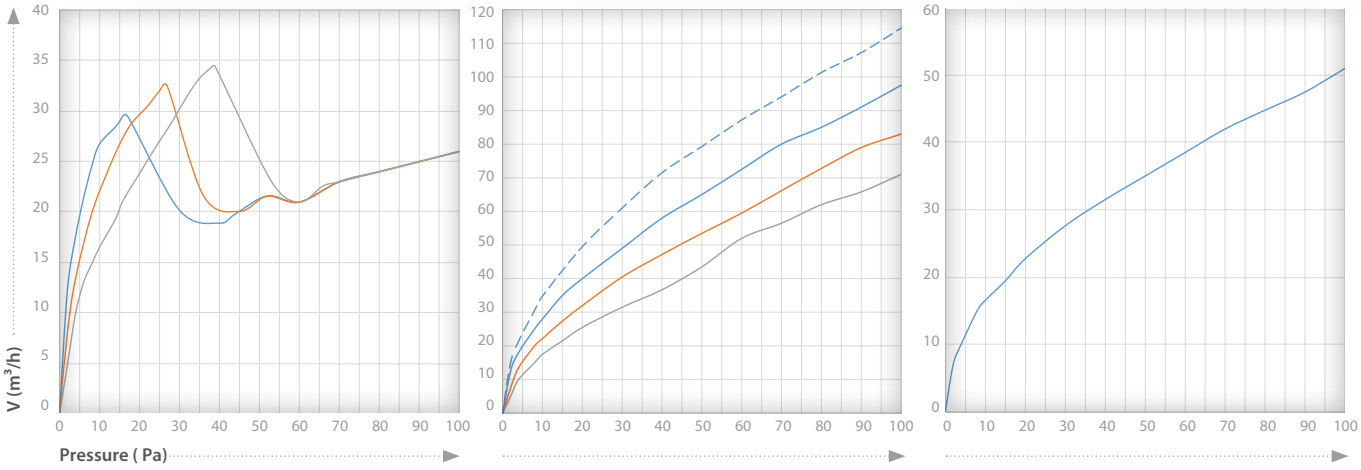
**Length of plug-in unit:** 360 mm
**Ø:** 154 mm

| $\dot{V}^{3)}$: | at 8 Pa | at 4 Pa |
|---|---|---|
| ⊠ | 15 m³/h | 10 m³/h |

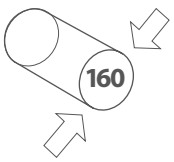
**Sound insulation**

| Dn,e,w | Wall thickness |
|---|---|
| 56 – 71 dB(A) | 360 mm |
| 67 – 75 dB(A) | 500 mm |

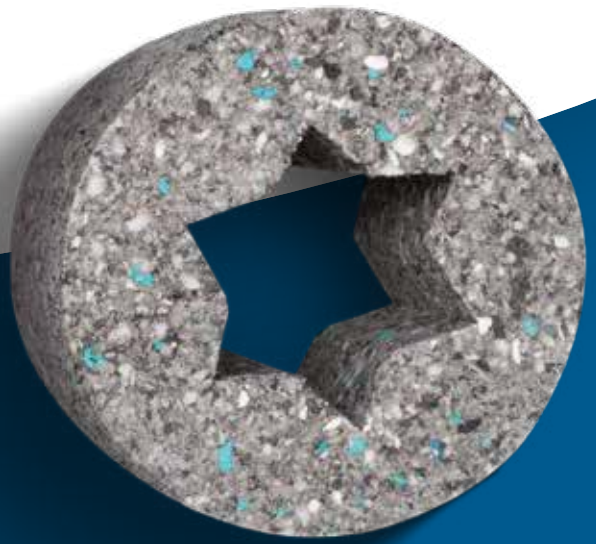
The given sound insulation values apply to the above-mentioned volume flows with a round duct completely filled with sound absorbers.
For footnotes on measurement methods and standards, see page 3.




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




## SUPPLY AIR



# Inner wall air vent ILD

Active cross-flow element for installation in interior walls


## Compatibility

ILD can be combined with all exhaust air systems, ALD, the $e^2$ and $e^{go}$ series, as well as, $Ne^{xx}t$ and LUNOMAT. Synchronized conveying directions and volume flows can be created 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 ILD and the existing ventilation control or via a separate control for ILD**

The active cross-flow element ILD is set up with the inner screens of the 160 series. It can also be equipped with sound absorbers. The application area of the ILD are interior rooms that must be ventilated via another room. If there is no outer wall available in a living space, then one or more ILDs can be used to create a coupling with other rooms supplied by fresh air and thus establish an active air connection. For example an $e^2$ 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

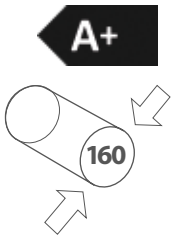
Standard inner screen

Comfort inner screen (plastic design)

Comfort inner screen (glass design)

Sound insulation Inner screen

Wireless screen with integrated control system




### TECHNICAL DATA

**Volume flow** [3]
26 - 40 $m^3/h$

**Sound power level $L_W$** [3) 5)]
from 33 dB(A)

**Power consumption** [3]
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 $e^2$ 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 3.



# 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, wireless module, TAC or Gesture Control.**

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

### AB 30/60

**Can be controlled by switch and with external time delay and interval.**

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 wireless screen.


**Wireless module**
The Silvento ec can be remote-controlled directly via the connected FM-EO. The RA 15-60 can be controlled either with a LUNOS wireless control or an additional UNI-EO wireless module.

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 universal control as well as the Smart Comfort are also available as LUNOS wireless versions 5/UNI-RF and 5/SC-RF with integrated LUNOS wireless module. Just like the wireless screen, they can be easily coupled with each other via the LUNOS wireless protocol and also have a slot for the EnOcean UNI-EO wireless module. It is also possible to control the connected fans via home automation systems or homee.

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

# 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 system 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 e$^{go}$ series

# Wireless technlogy


**The LUNOS wireless system**

- The secure wireless system for your home
- Smart Comfort 5/SC-RF, Universal control 5/UNI-RF, wireless screen 9/IBE-RF as well as e$^{go}$-RF and e$^{go}$60-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

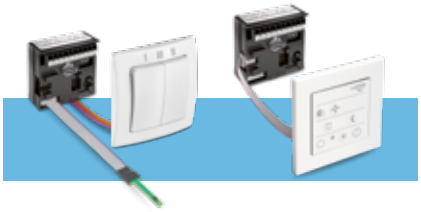
## Our LUNOS wireless system – simply make Smart Home ready

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

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

# LUNOS wireless system

## Our products for the safe control of your ventilation



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

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

### Wireless screen 9/IBF-RF

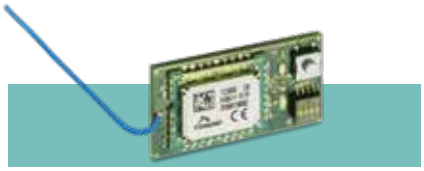
The wireless screen combines elegant design for the living room with the control technology of the universal control. It is equipped as standard with the 5/UNI-RF with humidity and temperature sensor and an integrated wireless module and a power supply unit for direct connection to 230 V, 50/60 Hz and.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


### Wireless screen from $e^{go}$-RF & $e^{go}$60-RF

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

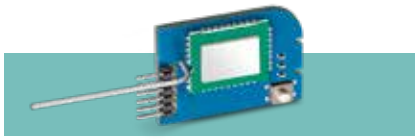
# Smart Home wireless technology

## EnOcean products for smart home connectivity



### Wireless module UNI-EO

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



### Wireless module FM-EO

The FM-EO wireless module is compatible with all Silvento ec and Ne$^{xx}$t models. The Silvento ec can also optimise the ventilation behaviour with the coupled outdoor sensor SFT-EO. In conjunction with $e^2$ 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.

# 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**

### Standard inner screen

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

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

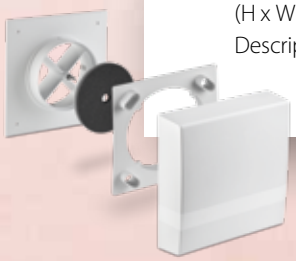
### Wireless screen

Elegant design screen including wireless control and power supply for all* 12V devices of the 160 series (except e$^{go}$ series).

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

### 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 ≥ 45%.



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

*Equivalent to 55% according to ISO 16890 ePM1.

# Outer hoods & outer grilles

## Soundproofed & round or square

### 160 single and two-channel system, soundproofed

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

### 160 single-channel system, soundproofed

**Outer hood aluminium* and stainless steel**
(H x W x D) 235 x 205 x 72 mm
for round ducts Ø 160 mm, insect screen, with sound insulation, to screw. Increase of the standard sound level difference by up to 6 dB.
Description: 1/HWE white powder-coated
Description: 1/HAZ anthracite powder-coated
Description: 1/HES stainless steel brushed

**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

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

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

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

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

**Plastic grille Ø 115 mm**
For round ducts Ø 90 - 100 mm,
UV-resistant, with insect protection, and claw fastening
Description: 1/BE 115 sanded
Description: 1/WE 115 white
Description: 1/AZ 115 anthracite

**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

# 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 Raumluftsysteme**
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

P055803 03.25 Design: www.peerneumann.com

**WWW.LUNOS.DE**