



# WL800

**Ventilation unit for operation in exhaust  
and circulating modes**

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## **Technical specifications and installation instructions**

Item numbers 60461-60466, 60471-60476



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# 1. Description

The **Ventilation Unit WL800** is installed in the ridge area of conservatories replacing the normal glazing. The **WL800** discharges air into the outer atmosphere (exhaust mode) or circulates the air inside (circulation mode).

The **WL800** communicates via radio with the building control systems WS1 and (KNX) WS1000 Color or Style. Using an integrated temperature sensor inside the ventilation unit, the building control systems can utilize the circulation mode to gain heat or to reduce water condensation.

With the ventilation modules RF-WL, the **Ventilation Unit WL800** can be automatically controlled in different levels. In addition to that, the **WL800** can be manually and directly controlled via the radio remote control Remo 8, the pushbutton interface RF-B2-UP or via the solar radio pushbuttons Corlo P RF.

## Functions:

- **Exhaust mode and Circulation mode**
- Every **WL800** requires an air intake opening of not less than 18,360 mm<sup>2</sup> (Comfort: 38,400 mm<sup>2</sup>)
- **Air circulation to gain heat** (Automatic function of control units WS1/WS1000): Warm air from the ridge area is distributed throughout the whole room by the ventilation unit
- **Air circulation to reduce condensation water** (Automatic function of control units WS1/WS1000): Using a special calculating process, the control units recognize critical conditions of temperature and dew point and start the ventilation unit, usually even before any moisture starts settling.
- **Wireless activation.** Radio connection is automatically established after switching on of the mains voltage
- **Smoothly running radial fans**
- Continuously variable
- Highly **insulated and thermally decoupled housing** (no cold bridges)
- Extremely **tight-closing flap** with self-locking drive and load limit switch
- **Pressure-resistant mounting panel**
- Installation along with self-cleaning panes possible, due to silicon-free processing
- Power and radio electronics arranged inside, but outside of the air flow. Maintenance possible entirely from inside
- Automatic control and manual operation possible with the following control systems:  
WS1 Color, WS1 Style, WS1000 Color, WS1000 Style, KNX WS1000 Color, KNX WS1000 Style (all from software version 1.811)
- Automatic control possible with the following ventilation modules:  
RF-WL, RF-WL 0-10 V
- Manual operation possible with the following radio transmitters:  
Remo 8 (from version 1.1), RF-B2-UP, Corlo P1 RF, Corlo P2 RF

### 1.0.1. Scope of delivery

- Mounting panel with ventilation unit and 10 m connection cable for voltage supply

## 1.1. Technical specification

Voltage	230 VAC, 50 Hz
Cable length Voltage Supply	10 m
Power consumption in exhaust mode	minimal speed: approx. 8 W maximal speed: approx. 124 W
Radio frequency	868.2 MHz
Net air output	Exhaust air: max. approx. 555 m <sup>3</sup> /h, Circulation air: max. approx. 163 m <sup>3</sup> /h (For exact measuring criteria please inquire at Elsner Elektronik)
Required air intake opening	minimum 18,360 mm <sup>2</sup> (approx. 184 cm <sup>2</sup> ) Please observe the instructions in chapter <i>Air intake opening</i> , page 3
Sound pressure at a distance of 3 m	Exhaust mode: approx. 37.2 dB(A) at medium speed approx. 47.0 dB(A) at maximum speed Circulation mode: approx. 41.3 dB(A) at medium speed approx. 54.1 dB(A) at maximum speed
Heat transition coefficient	0.9 W/m <sup>2</sup> K (Fan including standard panel)
Panel insulation density	60 kg
Panel compressive strength	350 kPa
Inclination for mounting	0° (flat roof) to 90° (wall mounting) • In case of wall mounting (from 70° to 90°), the additional option "wall device" must be ordered (surcharge). • In case of flat roof mounting, water on the panel must not exceed the height of 2 cm.

The product is compliant with the provisions of EU guidelines.

### 1.1.1. Air intake opening

Sufficient sizing of the air intake opening is an important functional and comfort factor when utilizing motorised ventilation units. If the air intake opening size falls below the minimal size (18,360 mm<sup>2</sup> or approx. 184 cm<sup>2</sup>), reduced air performance as well as draught and flow noises can be the result. Comfortable ventilation is achieved with an opening size starting at 38,400 mm<sup>2</sup> (384 cm<sup>2</sup>) for each WL800.

### **Ventilator combinations ventilator WL800 with supply air unit WL-Z**

Requirement:	Ventilator combination:	Note:
Minimum	1 WL-Z per 1 WL800	Air performance is achieved. Draught may occur depending on building situation and utilization
Comfort	2 WL-Z per 1 WL800	

#### **1.1.2. Dimensions**

Ventilator height	Outside approx. 150 mm Inside approx. 165 mm (at panel thickness of 30 mm, with different thickness, the height inside changes respectively)
Ventilator width	approx. 651 mm
Ventilator depth	Outside approx. 304 mm Inside approx. 254 mm
Standard panel	approx. 1050 mm x 750 mm (Width x Depth), thickness approx. 30 mm. The standard panel can be trimmed on three sides (see Fig. 1, Page 5)

#### **Deviating panel thickness**

Panels with deviating thickness 24-29 mm and 31-60 mm available for an additional charge.

#### **Deviating panel dimensions**

- A. Standard panel cut (Article numbers 60471-60476): Panel is cut from standard panel. The ventilation unit must be positioned parallel to one of the panel edges.
- B. Individual custom size: Panels larger than standard size and/or with deviating ventilator position (not parallel to one of the edges) on request.

#### **Tolerance**

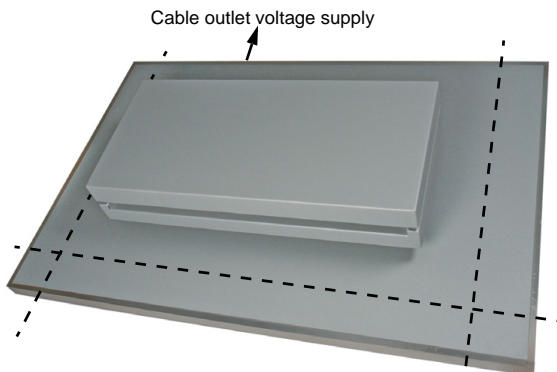
The tolerance for panel width and length for standard and custom sizes is  $\pm 3$  mm.

#### **Minimum panel sizes:**

(at shortening or custom panel)

Minimum width	approx. 751 mm <i>plus</i> the measure needed for mounting on both sides
Minimum depth	approx. 405 mm <i>plus</i> the measure needed for mounting above and below

Fig. 1  
Trimming of stand-  
ard panel



### 1.1.3. Colours

Standard colours for ventilator and panel (included in price):

- RAL 9016 Traffic White
- RAL 9006 White Aluminium
- RAL 9007 Grey Aluminium

All other RAL colours are also available at an additional charge (also two-coloured in-side – outside).

**Hinweis:** The delivered colour tones are similar to the RAL colours specified. Deviations due to technical reasons are possible. Due to the different nature of the surface of the panel and ventilator housing, slightly different degrees of lustre can occur.

## 2. Installation and start-up

### 2.1. Installation notes



Installation, testing, operational start-up and troubleshooting should only be performed by an electrician.



#### **DANGER!**

#### **Risk to life from live voltage (mains voltage)!**

There are unprotected live components within the device.

- VDE regulations and national regulations are to be followed.
- Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.

- Do not use the device if it is damaged.
- Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.

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The device is only to be used for its intended purpose. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

The device may only be used as a fixed-site installation; that means only when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

## 2.2. Notes on wireless equipment

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When planning facilities with devices that communicate via radio, adequate radio reception must be guaranteed. The range of wireless control will be limited by legal regulation and structural circumstances. Avoid sources of interference and obstacles between receiver and transmitter, that could disturb the wireless communication. Those would be for example:

- Walls and ceilings (especially concrete and solar protection glazing).
- Metal surfaces next to the wireless participants (e. g. aluminium construction of a conservatory).
- Other wireless devices and powerful local transmitters (e.g. wireless headphones), which transmit on the same frequency (868,2 MHz). Please maintain a minimum distance of 30 cm between wireless transmitters for that reason.

## 2.3. Instructions for simultaneous operation of a non-roomsealed firing installation

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Non-roomsealed firing installations are e.g. heating devices operated with gas, oil, wood or coal, flow heaters, water heaters, cookers and ovens that are supplied with combustion air from the room where they are installed and that have an exhaust system (e.g. chimney) through which the exhaust gas is discharged into the atmosphere.



### **WARNING!**

#### **Danger to life from toxic combustion gases!**

If the ventilation unit is operated in exhaust mode simultaneously with a non-roomsealed firing installation in the same room or area, toxic combustion gases may be drawn from the chimney or vent into the room, if there is not enough supply air.

- Consult the responsible chimney sweeper. He is able to assess the complete ventilation area of the apartment and point out measures for secure air supply (e.g. openings in doors/windows that cannot be closed, safety contacts on windows/ventilation devices or similar)

When the ventilation unit is running in circulation mode, the simultaneous operation of a non-roomsealed firing installation is harmless.

## 2.4. Assembly

The **Ventilation Unit WL800** can be installed in any inclination from 0° (flat roof) to 90° (wall mounting). In case of mounting angles from 70° to 90°, the additional option "wall device" must be ordered (surcharge). In case of mounting on a flat roof, water on the panel must not exceed the height of 2 cm. The air outlet must face the direction that is opposite to the weather side.

Leave sufficient distance to walls or ledges when installing the fan so that the blower unit can be easily removed for disassembly.

- Keep a distance of at least 60mm to the wall so the interior hood can be removed (ill. 4)
- Leave sufficient room for disassembly of the blower unit. The blower unit is 340mm in length

Please note the instructions and the drawing in chapter *Disassembly for maintenance*, page 8.



Fig. 2

The smaller ventilator hood with the logo faces inward.

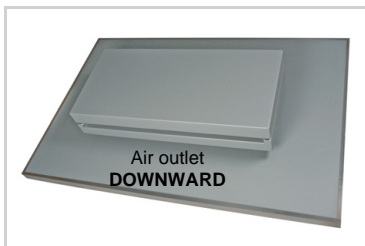


Fig. 3

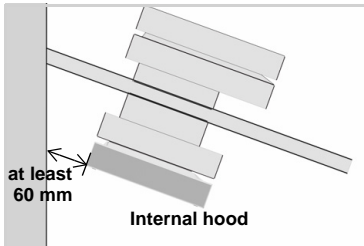
When the ventilation unit is installed with an inclination, the air outlet on the outside must face downward, so as to prevent water or dirt from entering (rain, snow, leaves etc.).

## 2.4.1. Disassembly for maintenance

**It is not necessary to remove the blower unit when installing the ventilation unit.**

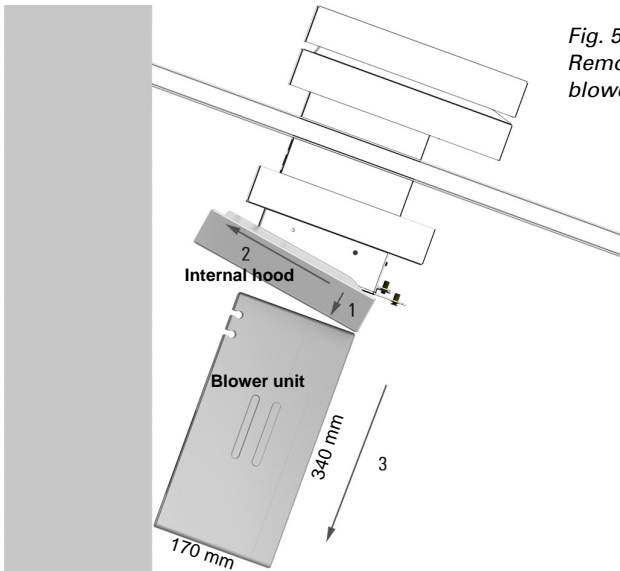
The following distances and measurements must be taken into consideration in order to be able to remove the blower unit from the ventilation unit for servicing:

- Keep a distance of at least 60mm between the internal hood and the wall (Fig. 4).
- Leave sufficient room for disassembly of the blower unit. The blower unit is 340mm in length (Fig. 5)



*Fig. 4*

Keep a distance of at least 60mm to the wall so the interior hood can be removed.



*Fig. 5*

*Remove internal hood and blower unit.*

### **To remove blower unit for servicing:**

1. Remove the screws on the internal hood and pull the hood down on the air discharge side.
2. Shift the hood approx. 60mm and remove it.



- Pull the blower unit down parallel to the housing.

## 2.5. Connection

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Connect the mains voltage (230 V AC continuous voltage):

green-yellow	Protective conductor
1	Neutral conductor
2	Outer conductor L1

## 3. Establish wireless connection

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To establish the wireless connection, the fan cover does not need to be removed.

- Set the control unit and/or remote control or the button to teaching mode (observe the corresponding manual/data sheet).
- Switch on the power supply to the fan and/or shut off the power supply briefly if the unit is already supplied with power.
- The fan will send a "Teach" telegram every 10 seconds for 5 minutes after connecting the power.
- The wireless connection will be established automatically. The building control system will display "Device has been taught".

The fan will stop sending "Learn" telegrams once the reply "taught" (for a learning process) or a control command (in the event of a power failure during operation) is received from a control unit.

## 4. Maintenance

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The function of the unit should be checked by the specialized dealer/installation technician once a year and the ventilation device cleaned from any dirt. No aggressive detergents must be used for cleaning.

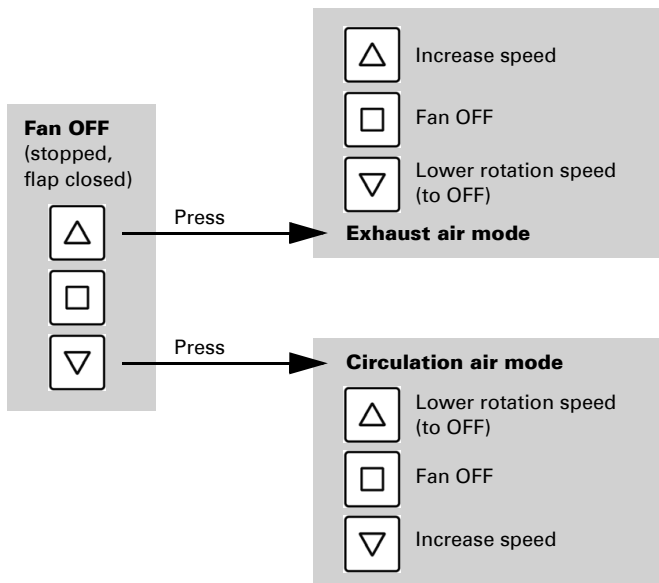
## 5. Operation with remote control Remo 8

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A **briefly pressing the arrow keys** adjusts the speed of the fan in 10% increments (10 fan speeds altogether).

**Longer pressing of the arrow keys** changes the speed continuously. If you release the key, the speed stops changing.

**Note:** Radio interference (rarely) may cause the speed to continue changing after the key is released. In this case, briefly press the key again to stop it.



Each time the **OFF** state is reached, the speed change stops automatically, so that a direct change between exhaust and circulation modes is impossible.