

INSTRUKCJA OBSŁUGI

Rekuperatory decentralne WTW-WAND- RC

USER MANUAL

Decentralized heat recovery units WTW-WAND- RC



Instrukcja obsługi / User Manual

Spis treści / Contents

Wersja polska	2-12
Wersja angielska	13-33
1. General information	14
1.1 Description of the unit	14
1.2 How to use this manual	14
1.3 Admonitions	14
2. Safety	14
2.1 General safety instructions	14
2.2 Precautions for installation	14
2.3 Directives / Norms	15
3. Technical data	15
3.1 Features	15
3.2 Technical specification	16
3.3 Dimensions	16
3.4 Construction of the unit	17
4. Operation	18
4.1 Remote controller	18
4.2 Heat recovery unit	19
4.3 BACK UP button	21
5. Synchronisation of a number of units	21
6. Maintenance	21
7. Disposal and recycling	21
8. Troubleshooting	22
9. Product fiche	23
10. Installation	24
11. Remote controller WAND mounting	29
12. External hood installation	30
13. Maintenance	31
14. Maintenance-cleaning register	33

User Manual

WTW-WAND-RC

1. General information

1.1 Description of the unit

WTW-WAND-RC is a decentralized, ductless ventilation unit with heat recovery, intended for residential buildings. Also referred to as "push & pull", WAND-mounted or single-room unit. It is recommended that two units are installed in pair: when one unit is pulling, the other is pushing. Pair of units can be installed in the same room or in different rooms (i.e. living-room and bedroom). The unit is suitable for installation on an outside WAND.



The unit should operate continuously, and only stopped for maintenance or service. When heat exchange is not useful (for example in mid-seasons when indoor and outdoor temperatures are similar), or when heat exchange is not recommended (for example with the option "summer free cooling"), it is recommended to set the unit in "extract-only" or "intake-only" mode and NOT to switch it off.

1.2 How to use this manual

Read this manual carefully before using the product and keep it in a safe place for reference.

This manual is intended as a reference book by which qualified installers can install the WTW-WAND unit and optional device as well. This device must be used according to its purpose. Make sure you have read and understood the manual before you install and/or use the device. Please be informed that we are constantly working on development and improvement of our products hence minor differences between this document and your unit are possible.

1.3 Admonitions



WARNING identifies a hazard that could lead to personal injury, including death



NOTE is used to highlight additional information.

2. Safety

2.1 General safety instructions

This product was constructed up to standard and in compliance with regulations relating to electrical equipment and must be installed by technically qualified personnel. The manufacturer assumes no responsibility for damage to persons or property resulting from failure to observe the regulations contained in this manual.

2.2 Precautions for installation

- The device should not be used for applications other than those specified in this manual.
- After removing the product from its packaging, verify its condition. In case of doubt, contact a qualified technician. Do not leave packaging within the reach of small children or people with disabilities.
- Do not touch the appliance with wet or damp hands/feet.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- Do not use the product in the presence of inflammable vapours, such as alcohol, insecticides, gasoline, etc.

User Manual

WTW-WAND-RC

- If any abnormalities in operation are detected, disconnect the device from the mains supply and contact a qualified technician immediately. Use original spare parts only for repairs.
- The electrical system to which the device is connected must comply with regulations.
- Before connecting the product to the power supply or the power outlet, ensure that: The data plate (voltage and frequency) correspond to those of the electrical mains as well as the electrical power supply/socket is adequate for maximum device power. If not, contact a qualified technician.
- The device should not be used as an activator for water heaters, stoves, etc., nor should it discharge into hot air/fume vent ducts deriving from any type of combustion unit. It must expel air outside via its own special duct.
- Operating temperature: -20°C up to +50°C.
- The device is designed to extract clean air only, i.e. without grease, soot, chemical or corrosive agents, or flammable or explosive mixtures.
- Do not leave the device exposed to atmospheric agents (rain, sun, snow, etc.).
- Do not immerse the device or its parts in water or other liquids.
- Turn off the main switch whenever a malfunction is detected or when cleaning.
- For installation an omnipolar switch should be incorporated in the fixed wiring, in accordance with the wiring regulations, to provide a full disconnection under overvoltage category III conditions (contact opening distance equal to or greater than 3mm).
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Do not obstruct the fan or exhaust grille to ensure optimum air passage.
- Ensure adequate air return/discharge into/from the room in compliance with existing regulations in order to ensure proper device operation.
- If the environment in which the product is installed also houses a fuel-operating device (water heater, methane stove etc., that is not a "sealed chamber" type), it is essential to ensure adequate air intake, to ensure good combustion and proper equipment operation.

2.4 Directives / Norms

- 2014/35/UE Low Voltage Directive (LVD) and 2014/30/UE Electromagnetic Compatibility (EMC), in conformity with the following standards:
- Electrical Safety EN 60335-1(2012)+A11(2014); IEC 60335-2-80(2015); EN 60335-2-80(2003)+A2(2009)
- Electromagnetic Compatibility EN 55014-2(2015); EN 55014-1(2006)+A2(2011), EN 61000-3-2(2014); EN 61000-3-3(2013).

3. Technical data

3.1 Features

- Design front cover (A) removable for cleaning without the use of tools.
- Fan casing (B) and WAND support base (D) made of high quality, impact and UV-resistant ABS, colour RAL9010.
- Integrated multi-colour led (C) to inform about the unit status.
- Smart humidity control
- Integral temperature sensor for the automatic management of the inversion time (comfort mode)
- Automatic anti-frost protection to prevent frost formation on the heat exchange.
- WAND support base (D) provided with a magnet "coupling/uncoupling" system which allows the ventilation unit to be removed from its base during maintenance.
- Back-up touch button (E) at the side of the ventilation unit
- Unique design winglet-type impeller, providing enhanced aerodynamic properties, low noise and increased efficiency.
- Efficient reversible EC motor with integral thermal protection, mounted on sealed for life high quality ball bearings. Designed for continuous reversible running.

User Manual

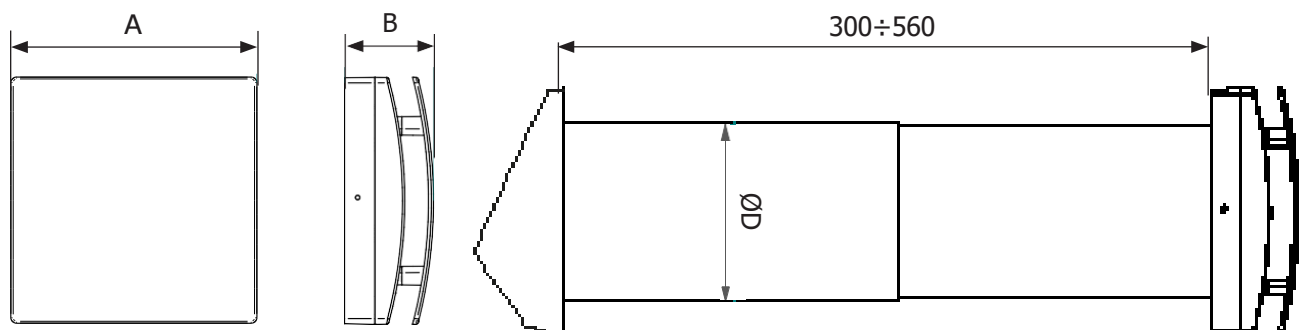
WTW-WAND-RC

- Telescopic pipe (F) adaptable to the WAND thickness.
- Antimortar cap designed to be used also as template during the installation of the WAND support base (D)
- Regenerative heat exchanger with ceramic core (G) with high thermal efficiency, equipped with washable anti-dust filters (H).
- External aluminium cover (I) painted white RAL 9010, with acoustic lining and insect screen.
- Infra-red remote controller, LCD display and WAND base supplied as standard. Made from ABS, RAL 9010.
- The unit is double insulated: no earth connection is required.
- No need of condensation drainage system
- IPX4 degree of protection.
- Power supply 220V to 240V~ 50Hz.

3.2 Technical specification

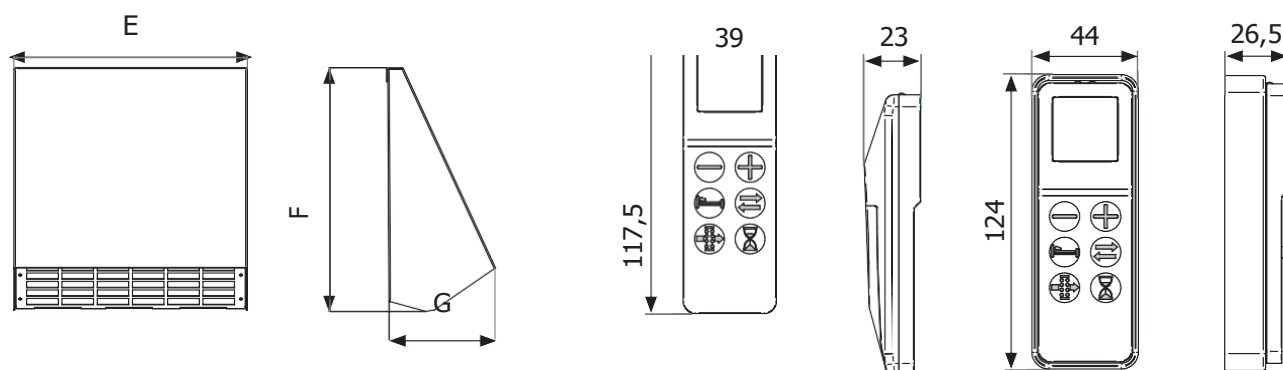
	WTW-WAND-RC-100-25	WTW-WAND-RC-150-60
Air flow rate [m ³ /h]	10 / 14 / 17 / 21 / 25	20 / 30 / 40 / 50 / 60
Power [W]	2 / 2 / 2,5 / 3 / 3,5	2 / 2,5 / 3,5 / 4,5 / 6
Sound pressure [dB(A)] 3m	9 / 14 / 18 / 23 / 27	10 / 14 / 20 / 24 / 26
Ambient temp. [°C]	20° C +50° C	20° C +50° C
Protection class	IPX4	IPX4
Frequency [Hz]	50	50
Voltage [V]	220-240	220-240
Weight [kg]	4,40	4,40

3.3 Dimensions



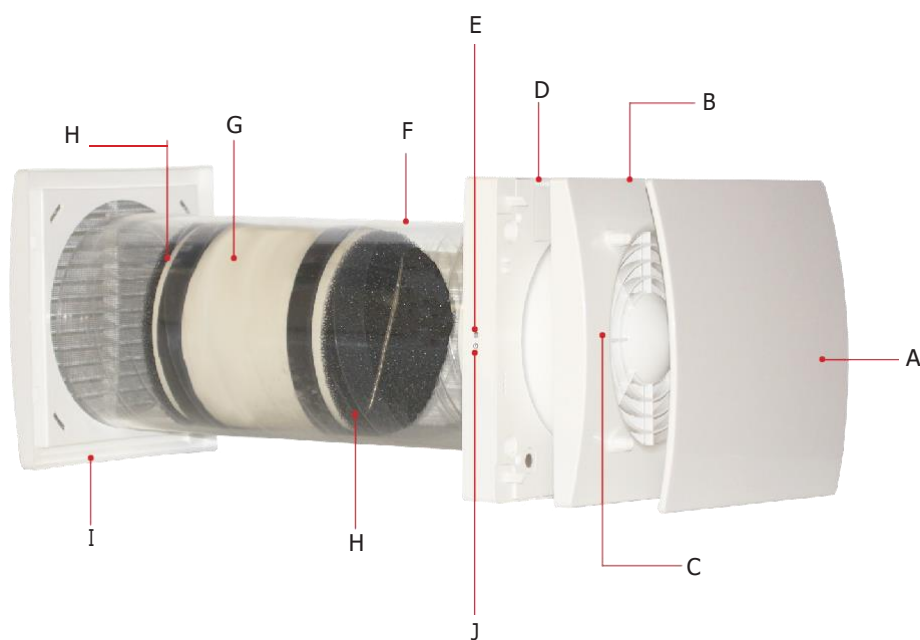
User Manual

WTW-WAND-RC



	A [mm]	B [mm]	C [mm]	ØD [mm]	E [mm]	F [mm]	G [mm]
WTW-WAND-RC-100-25	218	76	270-510	108	205	205	100
WTW-WAND-RC-150-60	218	76	300-560	158	255	255	130

3.4 Construction of the unit

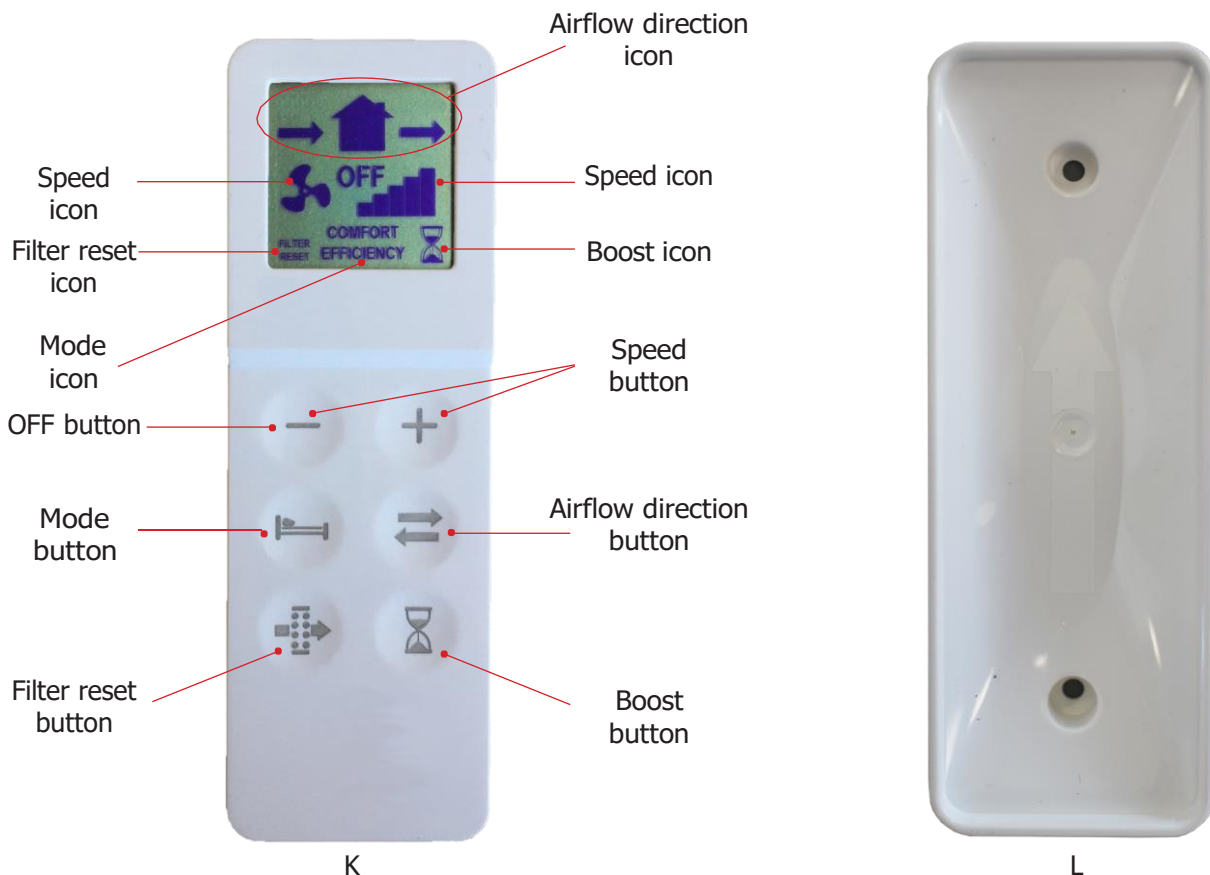


User Manual

WTW-WAND-RC

4. Operation

4.1 Remote controller



The unit is supplied with an infrared remote controller (K) as standard, as well as its support base (L) which can be WAND mounted. A magnet keeps the controller attached to the base.

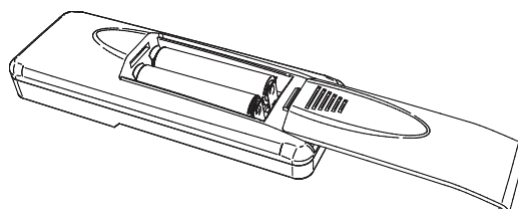
The controller is equipped with an LCD display to visualise the setting to be transferred to the unit. Everytime the button is pressed, the remote controller sends data to the unit. The acoustic signal confirms that the data was recieved. The transmission is unidirectional, which means that the remote controller can not read data from the unit. The IR receiver (J image pag.15) is placed on the left side of the ventilation unit: it is recommended to point the controller towards the receiver when any setting needs to be transferred.

One remote controller can control more units.



NOTE!

To activate the remote controller it is necessary to insert two AAA type batteries (not supplied).




















User Manual

WTW-WAND-RC

4.2 Heat recovery unit


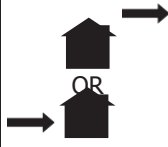





When switched on the unit emits a long acoustic signal.

Through the IR controller the following functionalities can be activated/deactivated. When one setting is transferred to the unit, a short acoustic signal is emitted and a green led flashes.

Functionality	Description	Controller button	Icon	LED	Acoustic Signal
Airflow direction					
Alternate	The unit runs in extract/intake at the selected speed: the inversion time is automatically defined thanks to the integral temperature sensor.			green	short
Extract	The unit runs in extract only at the selected speed.			green	short
Intake	The unit runs in intake only at the selected speed.			green	short
Mode (active only if the airflow direction is set on alternate)					
Comfort	Optimisation of the acoustic and thermal comfort. The inversion time varies automatically from 40÷120 seconds, thanks to the integral temperature sensor. The first time cycle is of 120 seconds, then it varies automatically according to the detected temperature conditions.			green	short
Efficiency	Optimisation of the thermal efficiency. The inversion time is fixed at about 70 seconds.			green	short
Continuous running speed					
	Speed 1: 20m³/h	— +		green	short
	Speed 2: 30m³/h	— +		green	short
	Speed 3: 40m³/h	— +		green	short
	Speed 4: 50m³/h	— +		green	short
	Speed 5: 60m³/h	— +		green	short
Off position					
	Pressing the — button for 3 seconds, the units switches off, emitting a long acoustic signal. To re-activate the unit, press any button.	—	OFF	red	long
BOOST speed					
	The unit runs at speed 5 (maximum) for 15 minutes, in extract only; then it returns to the previously selected mode/speed. The BOOST speed cannot be activated if the controller is OFF.			fixed blue	short

User Manual

WTW-WAND-RC

<i>Free cooling</i>					
	The unit runs in "extract only" or "intake only" to avoid heat recovery when not needed.			green	short
<i>Filter reset</i>					
	Every 3 months a yellow warning led switches on (fixed light) to indicate that the filters have to be maintained. Press the dedicated button for 5 seconds to reset the timing.		FILTER RESET	green	short
<i>Smart humidity control</i>					
	When the humidity sensor detects a quick variation of the Relative Humidity level, the running speed automatically increases to the next higher speed. After 10 minutes from the last quick RH variation, the unit returns running at the selected speed. The smart humidity control is active if the airflow direction is set on alternate or extract only: if speed 5 has been selected no speed increase happens. To disable this functionality, press the  button for 5 seconds: on the top side of the LCD display the symbol  is shown.			flashing blue	
<i>Antifrost</i>					
	This functionality prevents frost building up on the heat exchanger due to extremely cold air. When it is activated, the unit runs in extract only at speed 1, for 30 minutes.			fixed red	
<i>Acoustic signal</i>					
	Any time a setting is transferred from the controller to the unit, a short acoustic signal is emitted. This can be deactivated by pressing the  button for 7 seconds, after when a green led flashes to indicate that the acoustic signal is off. To reactivate the acoustic signal repeat the same operation for 7 seconds until the led becomes green and an acoustic signal is emitted.			green	short

User Manual

WTW-WAND-RC

4.3 BACK UP button

In case the remote controller gets lost or the batteries are dead, the device can be controlled, to a limited extent, using the BACK UP button. You can choose speed 1 or 3 and turn off the heat recovery unit. (C image pag.15). The airflow direction is always alternate and the operation mode (either comfort or efficiency) is the last selected from the remote controller.

Speed	LED colour	Acoustic signal
speed 1	single green led	short, single
speed 3	double green led	short, single
OFF	red led	long

5. Synchronisation of a number of units

It is possible to synchronize up to 10 units contemporaneously, through wire (2 pole twisted pair type, max 30m length) so to have mode and inversion time synchronized. When the unit is switched on for the first time, the rotation direction of each unit (clockwise or anti-clockwise) is automatically established. Other functionalities like speed, smart humidity control and boost, continue to be controlled independently on each single unit.

Conditions and scenarios during synchronization process:

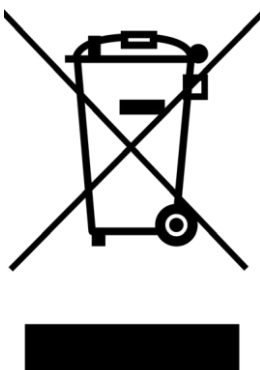
1. Each device must have been turned on independently. Turning on one device will NOT turn on the other synchronized units.
2. The fan speed is set on each unit independently.
3. The change between Alternate / Extract / Intake modes (↔) is independent for each unit. If, for example, only in one unit the intake mode is turned on, the other units will continue to operate in alternate mode.
4. The change of the COMFORT / EFFICIENCY modes is synchronized, i.e. a change of mode in one unit results in a change to all units.

Wiring diagram as per Fig. 16B

6. Maintenance

Maintenance can be carried out by the user as indicated in page 28.

7. Disposal and recycling



Information on disposal of units at the end of life.







This product complies with EU Directive 2002/96/EC.

The symbol of the crossed-out dustbin indicates that this product must be collected separately from other waste at the end of its life. The user must, therefore, dispose of the product in question at suitable electronic and electro-technical waste disposal collection centres, or else send the product back to the retailer when purchasing a new, equivalent type device. Separate collection of decommissioned equipment for recycling, treatment and environmentally compatible disposal helps to prevent negative effects on the environment and on health and promotes the recycling of the materials that make up the equipment. Improper disposal of the product by the user may result in administrative sanctions as provided by law.

User Manual

WTW-WAND-RC

8. Troubleshooting

Anomaly	Possible cause	Solution
No icon shown on the controller LCD display	Batteries are dead	Change the batteries
	Batteries are not present	Check that batteries are in there
	Batteries are wrongly positioned	Position the batteries correctly
The unit does not execute the command sent from the remote control	Lack of communication between the unit and the remote controller	Go closer to the unit, pointing the controller to the receiver on the left side of the unit
The unit does not operate	There is no voltage	Check that the unit is correctly wired to the main supply
	Ventilation unit does not couple correctly with the support base	Check that the coupling is properly done
The unit operates at the maximum speed	The Boost functionality is activated, on the display the icon  is shown	Wait until the boost timing ends (15 minutes) or deactivate the boost function pressing the  button.
Unit speed suddenly increases	The smart humidity control is activated	Wait until the smart humidity control phase ends (10 minutes) or deactivate the humidity control function pressing the  button for 5 seconds.
Fixed yellow led	Dirty filters	Filters maintenance/replacement is needed: reset filter operation has to be done (see page 18)
Fixed red led	Antifrost protection is activated	Wait until the antifrost phase ends (30 minutes)
Fixed blue led	Boost is activated	Wait until the boost timing ends (15 minutes) or deactivate the boost function pressing the  button.
Flashing blue led	Smart humidity control is activated	Wait until the humidity control phase ends (10 minutes)
Fixed purple led	Ventilation unit does not couple correctly with the support base	Check that the coupling is properly done 
Acoustic signal to disable		Press the  button for 7 seconds: a green led flashes.

User Manual

WTW-WAND-RC

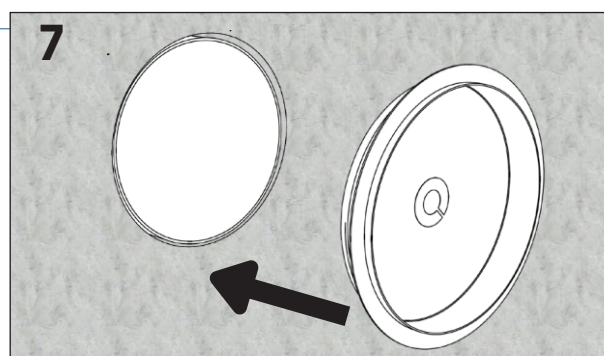
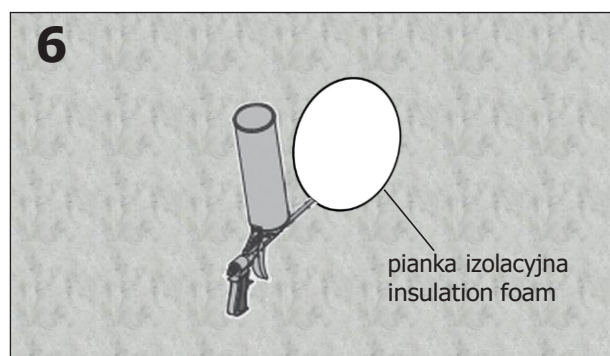
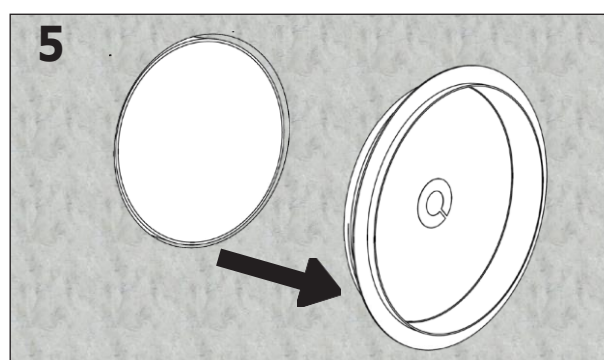
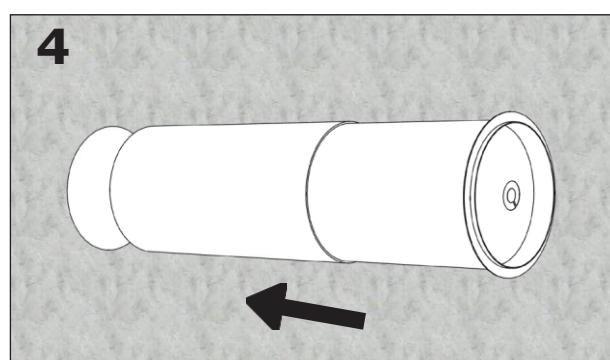
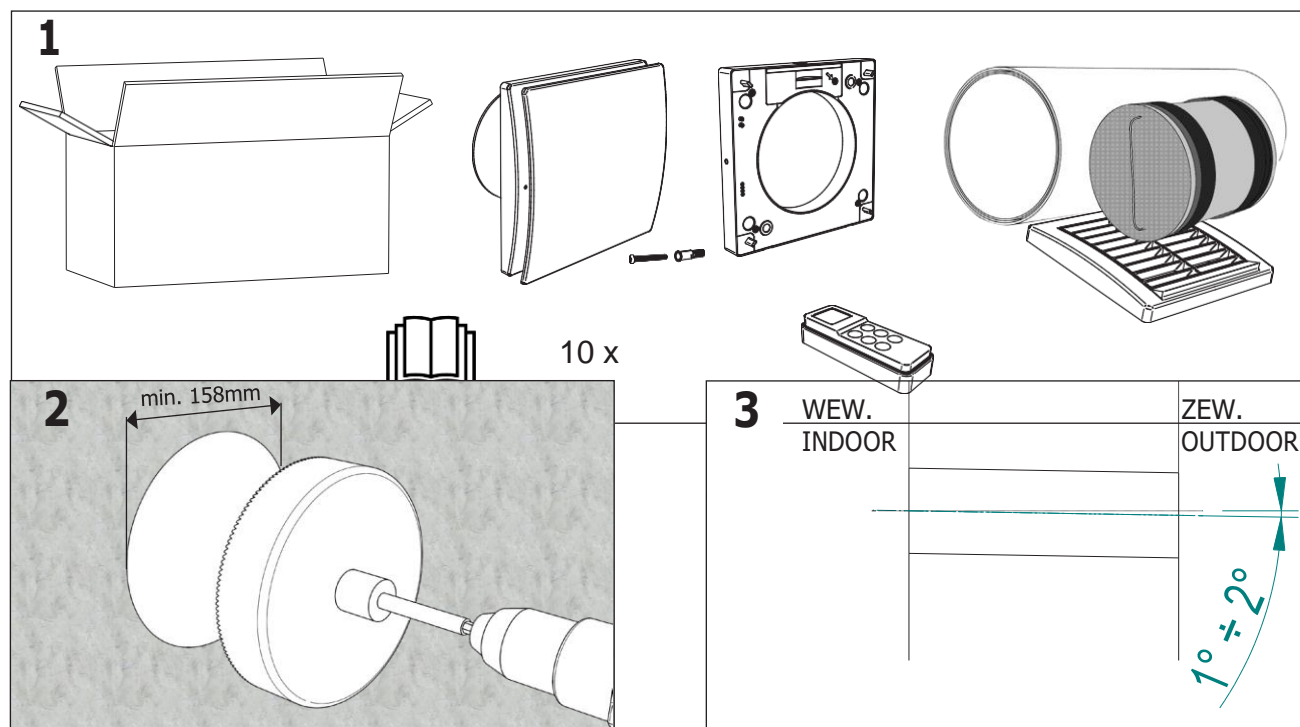
9. Product fiche

Mark	
Model	WTW-WAND-RC-150-60
SEC class	A
SEC warm climates	-18,1 kWh/m ² .a
SEC average climates	-41,7 kWh/m ² .a
SEC cold climates	-83 kWh/m ² .a
Energy label	Yes
Unit typology	Residential - bidirectional
Type of drive	Multi-speed drive
Type of Heat Recovery System	Heat recovery
Thermal efficiency of heat recovery	74 %
Maximum flow rate	60 m ³ /h
Electric power input at maximum flow rate	6W
Sound power level (L _{WA})	40dBA
Reference flow rate	41 m ³ /h
Reference pressure difference	10 Pa
Specific power input (SPI)	0,08 W/m ³ /h
Control factor	0,65
Control typology	Local demand control
Maximum internal leakage rate	N/A
Maximum external leakage rate	1 %
Internal mixing rate	N/A
External mixing rate	N/A
Visual filter warning	N/A
Instructions to install regulated grilles	N/A
Internet address for preassembly/disassembly instructions	
Airflow sensitivity to pressure variations	N/A
Indoor/outdoor air tightness	50 m ³ /h
AEC - Annual electricity consumption - warm climates	0,6 kWh
AEC - Annual electricity consumption - average climates	0,6 kWh
AEC - Annual electricity consumption - cold climates	0,6 kWh
AHS - Annual heating saved - warm climates	19,5 kWh
AHS - Annual heating saved - average climates	43,2 kWh
AHS - Annual heating saved - cold climates	84,4 kWh

Instrukcja obsługi

WTW-WAND-RC

10. Montaż/ Installation

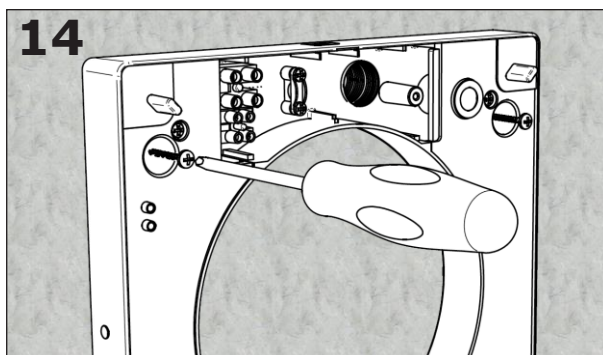
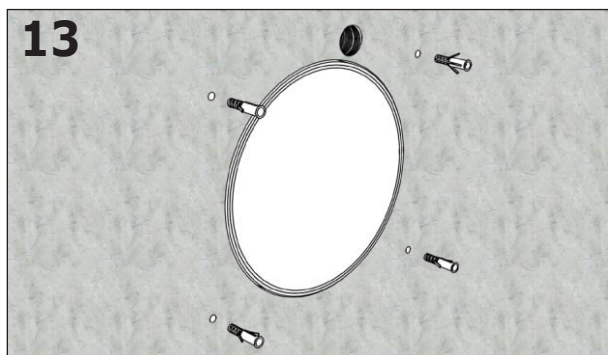
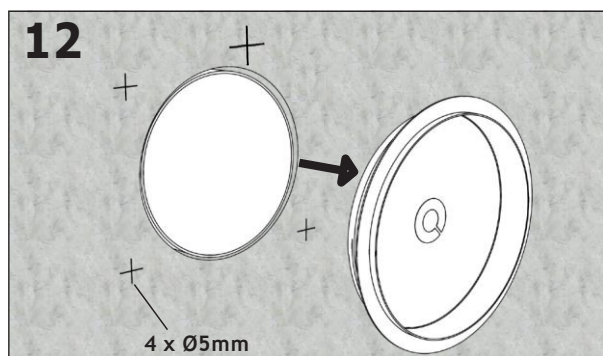
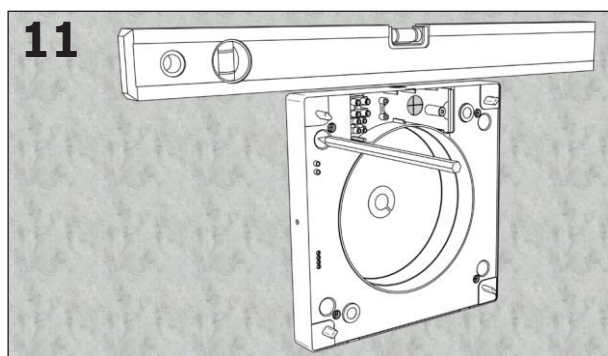
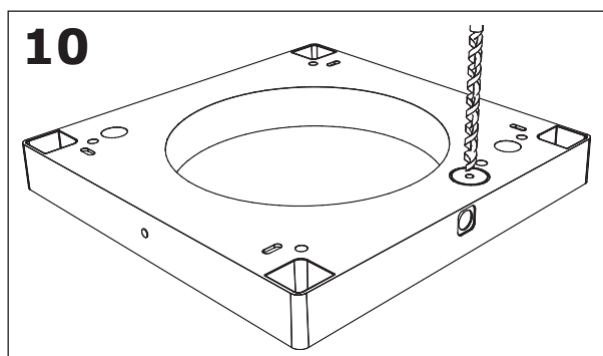
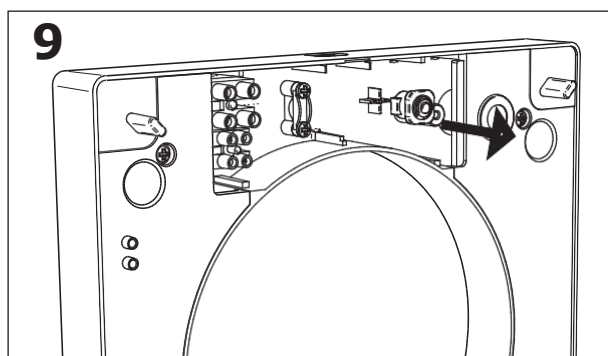
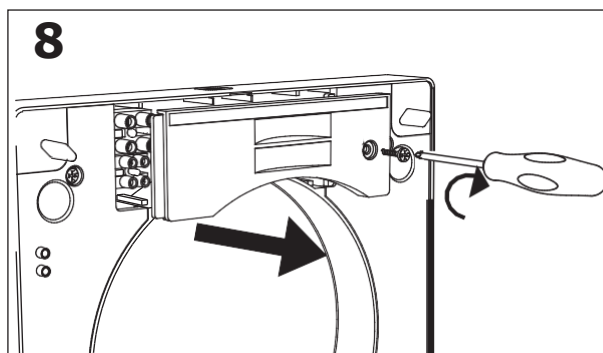


Instrukcja obsługi

WTW-WAND-RC

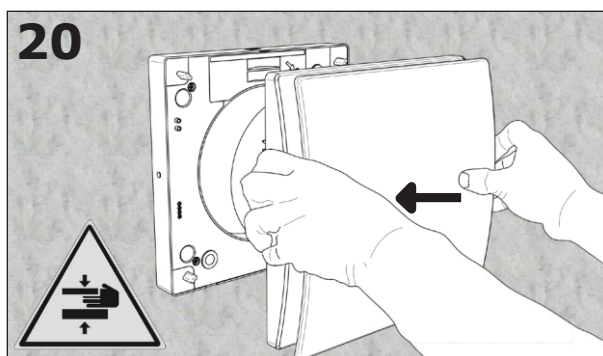
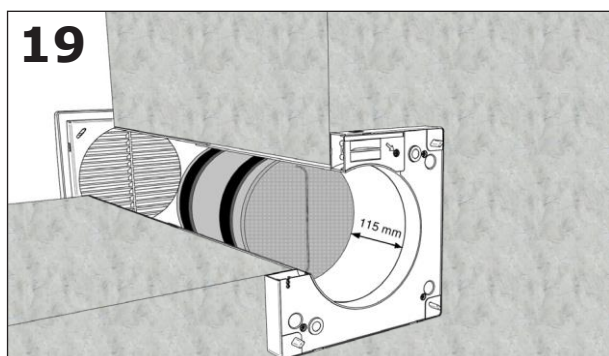
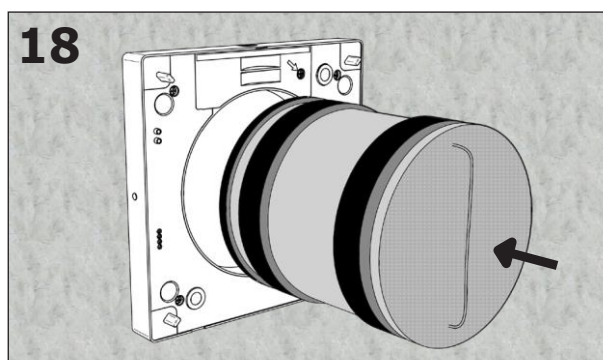
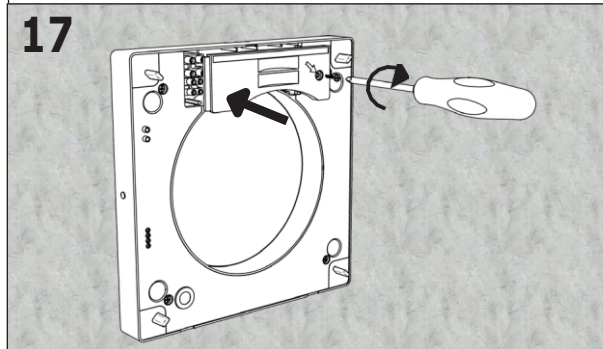
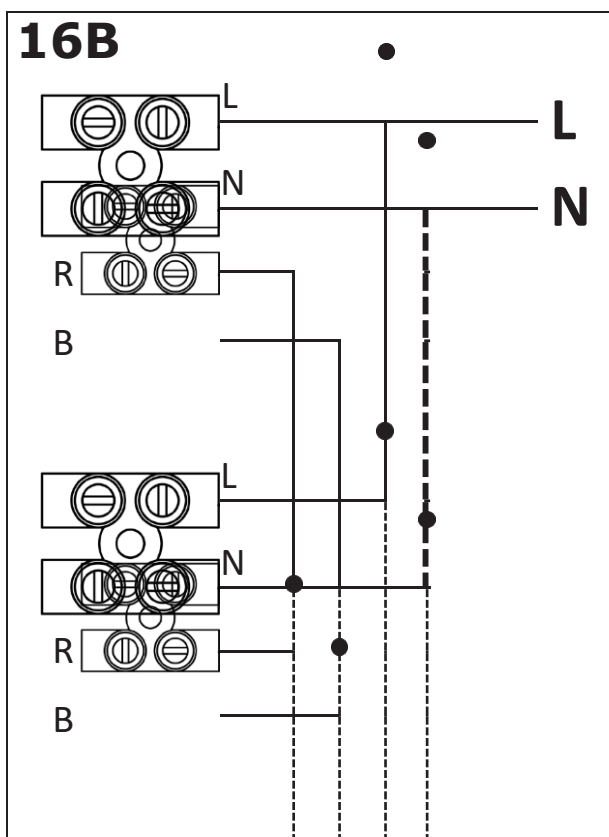
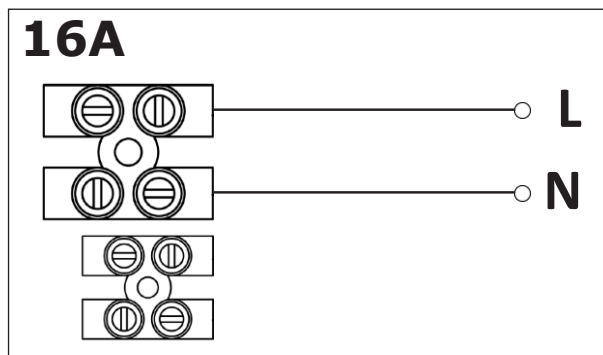
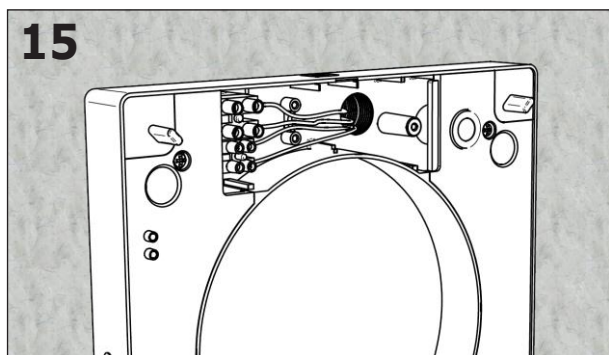


UWAGA! Włot wpuszczanego kabla:
NOTE! Recessed Cable entry:
H03VV-F; H05VV-F 2 X 0,5 ÷ 1,5 mm²



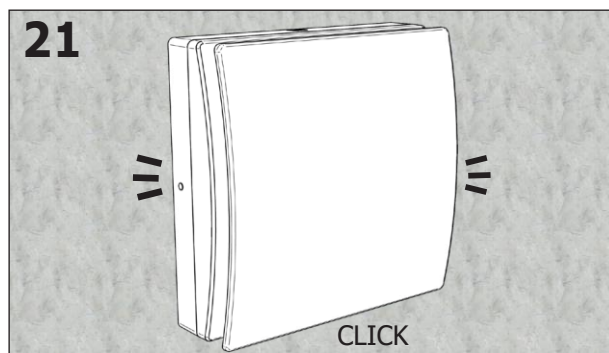
Instrukcja obsługi

WTW-WAND-RC

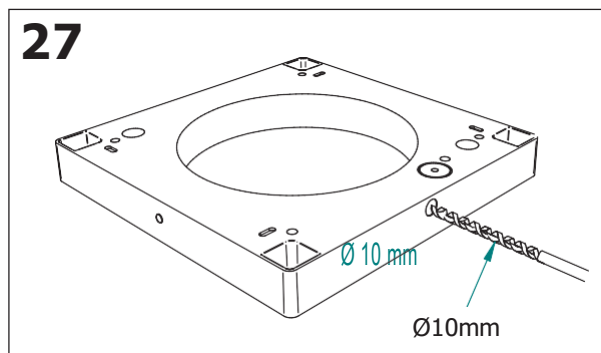
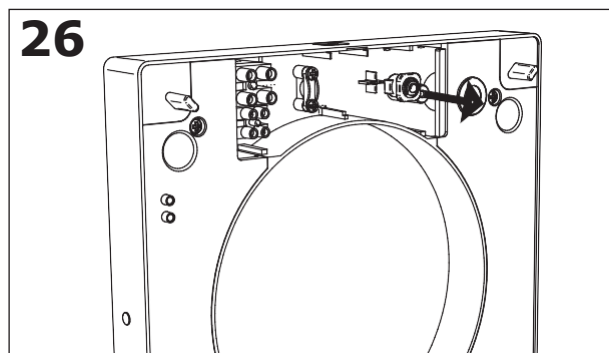
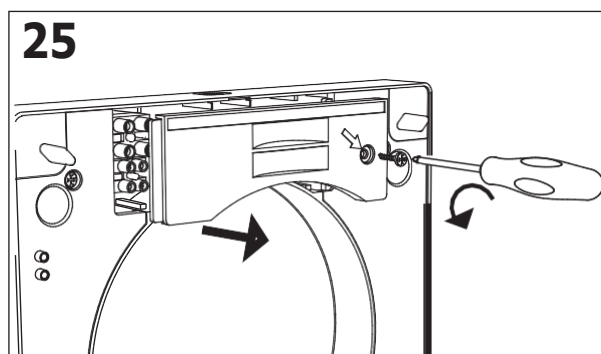
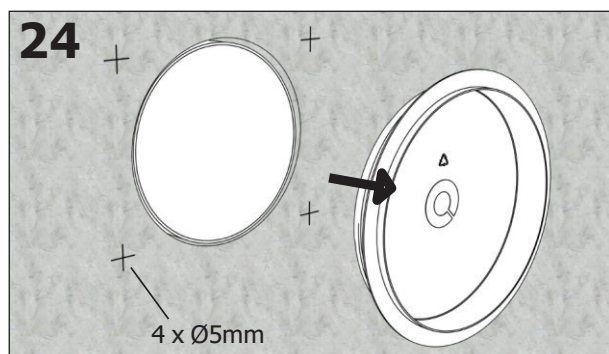
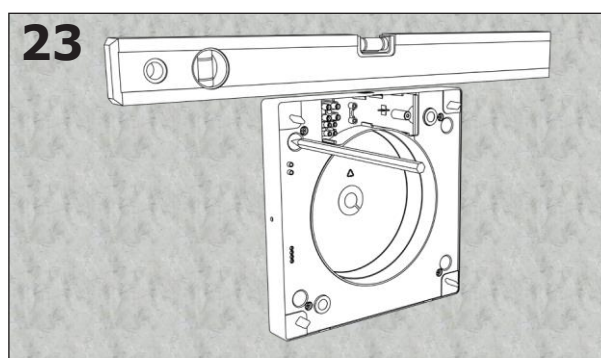
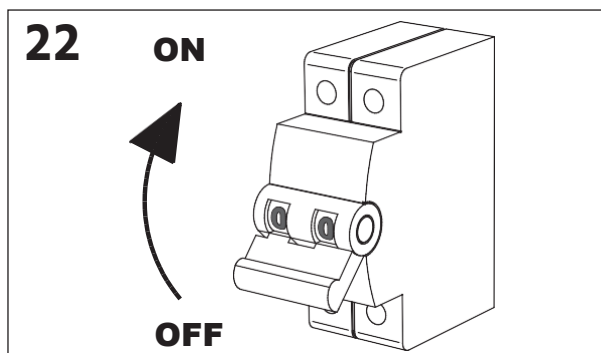


Instrukcja obsługi

WTW-WAND-RC

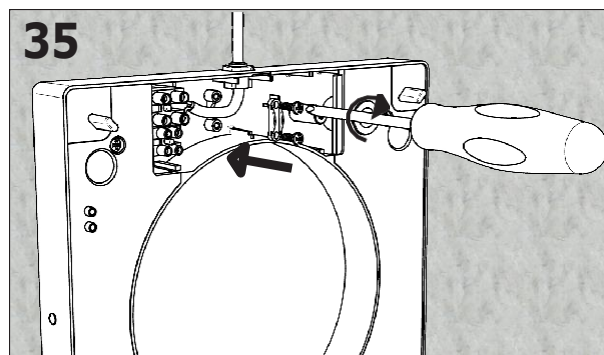
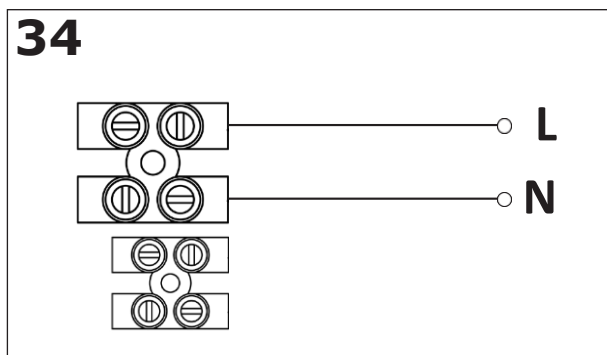
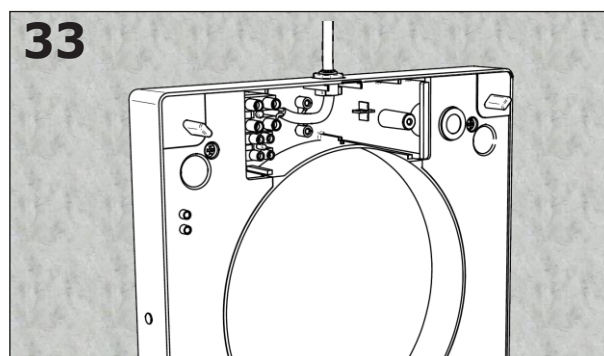
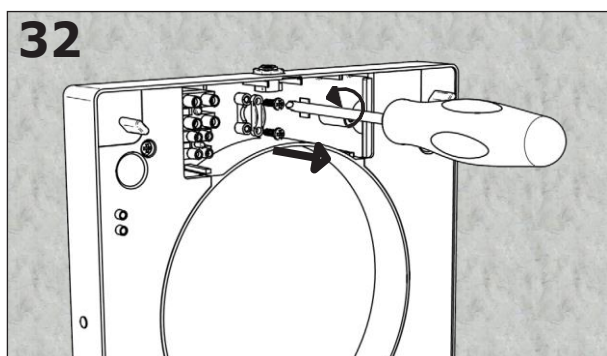
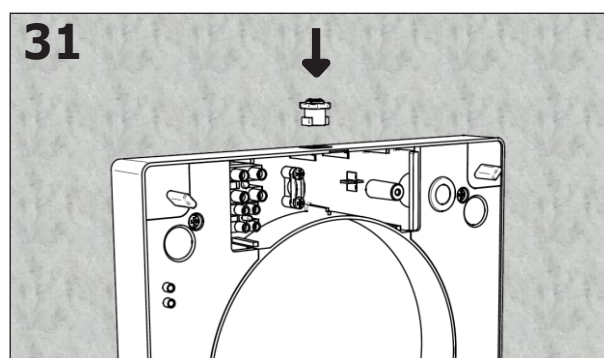
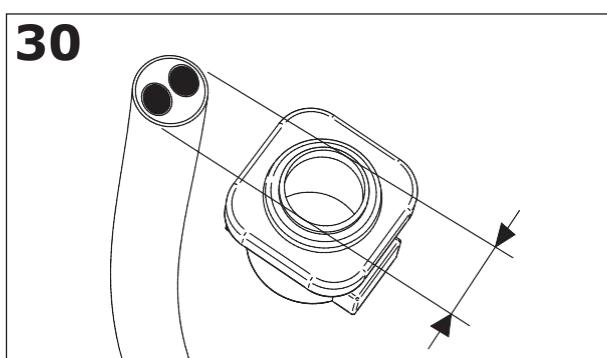
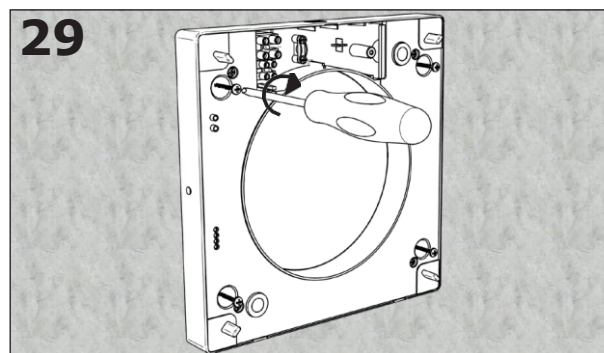
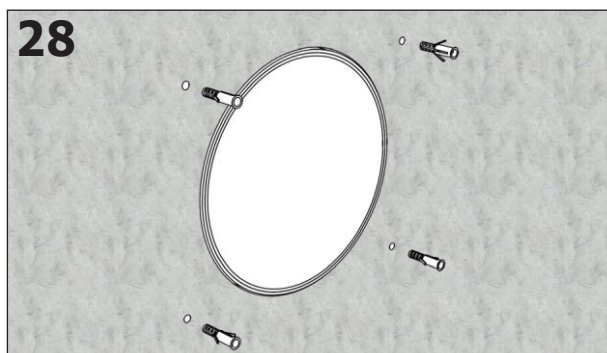


UWAGA! Kabel:
NOTE! Surface cable (for one unit wiring):
 H03VV-F ; H05VV-F
 2 X 0,5 ÷ 1,5 mm²



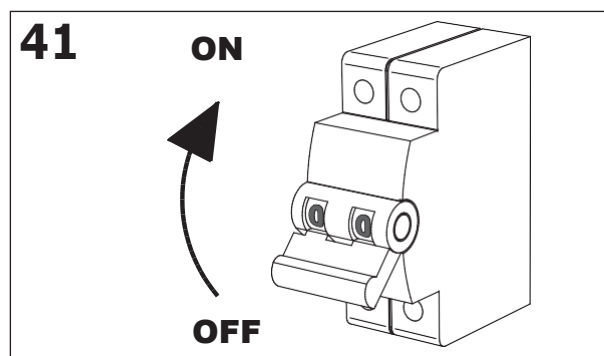
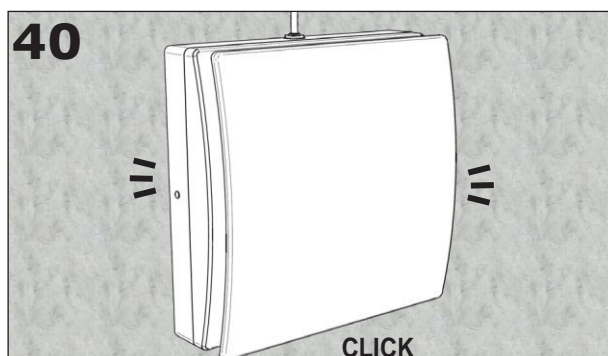
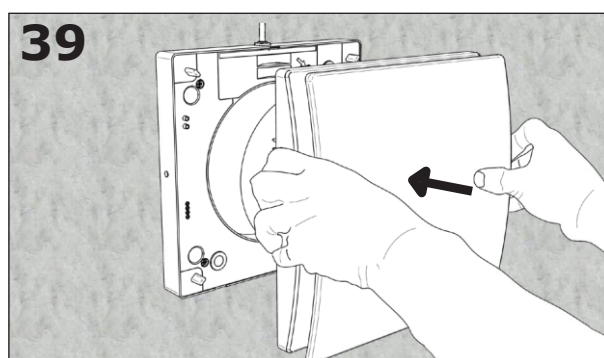
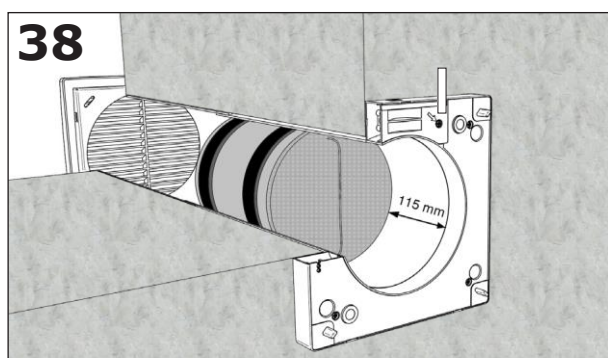
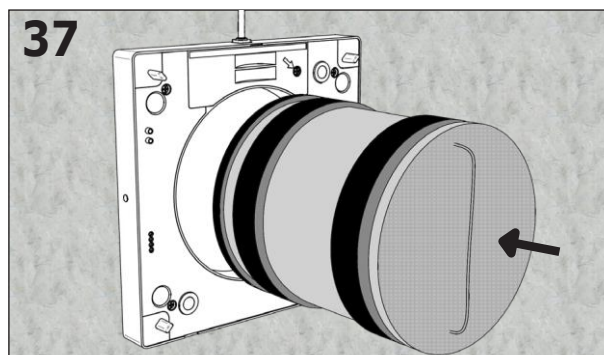
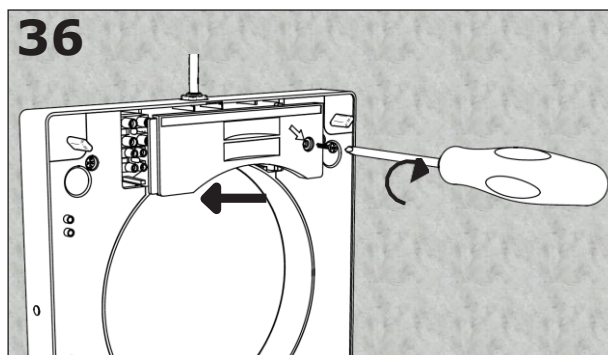
Instrukcja obsługi

WTW-WAND-RC

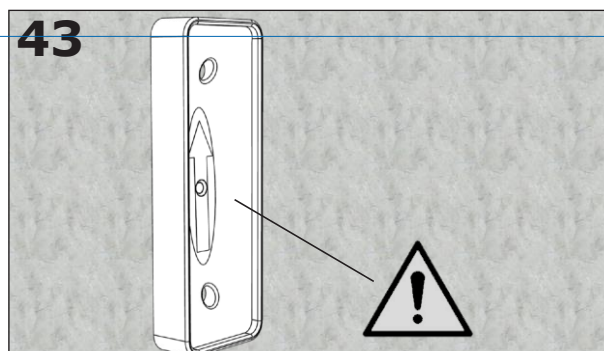
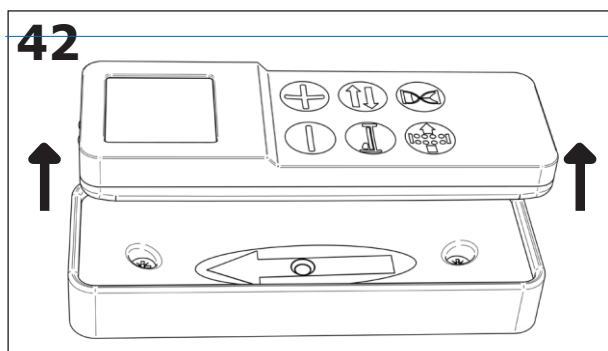


Instrukcja obsługi

WTW-WAND-RC

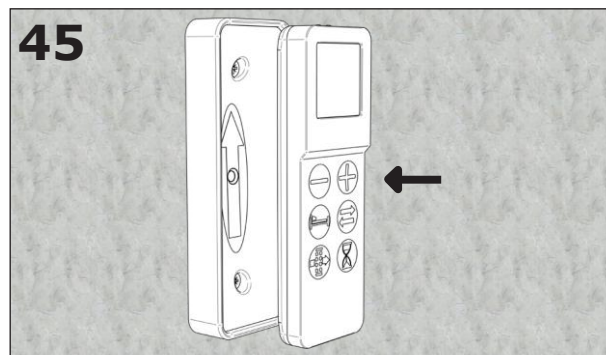
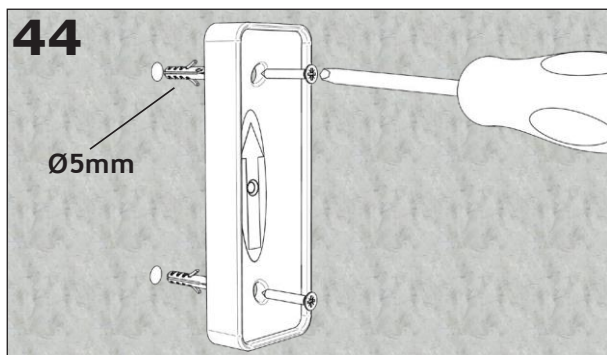


11. Montaż ścienny pilota/ Remote controller WAND mounting

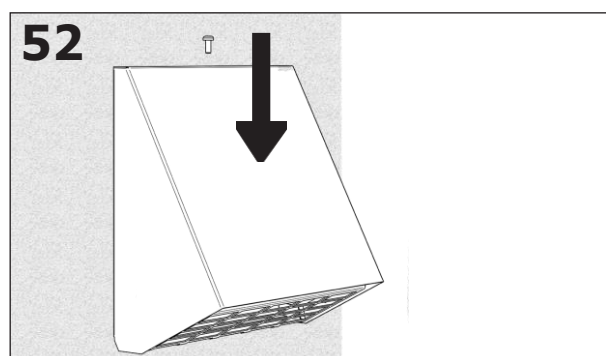
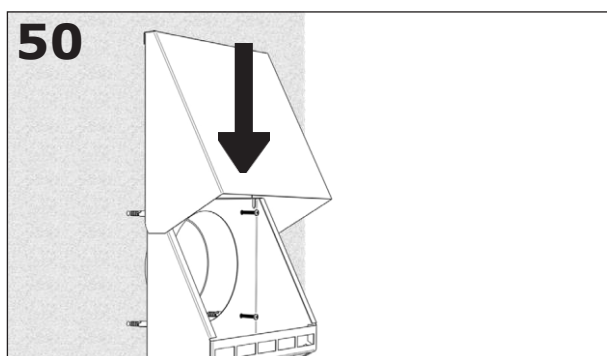
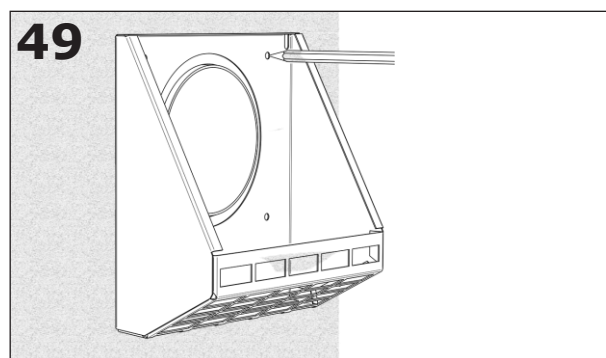
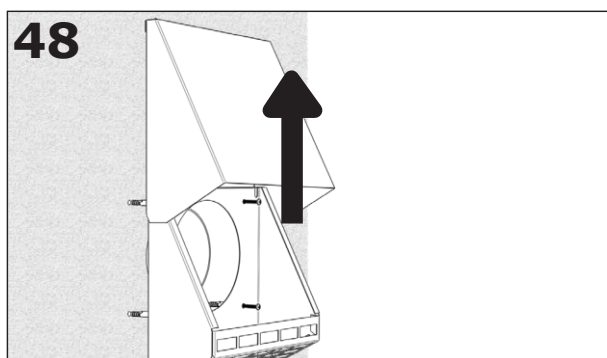
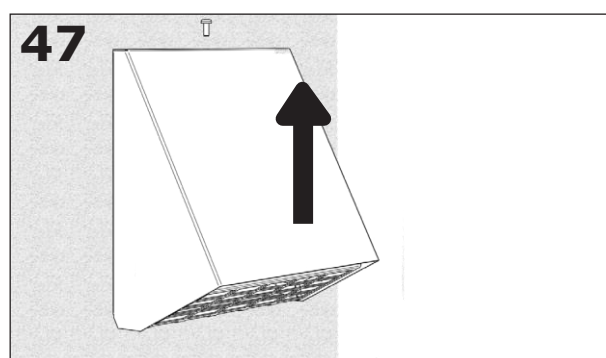
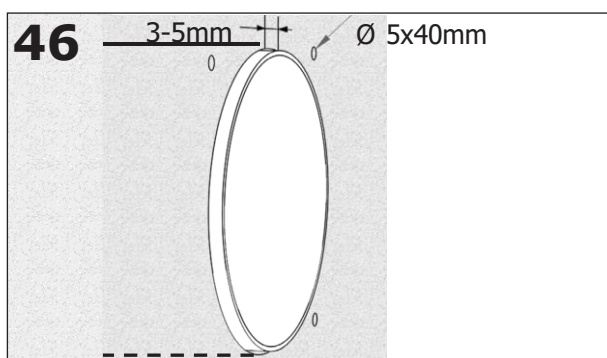


Instrukcja obsługi

WTW-WAND-RC



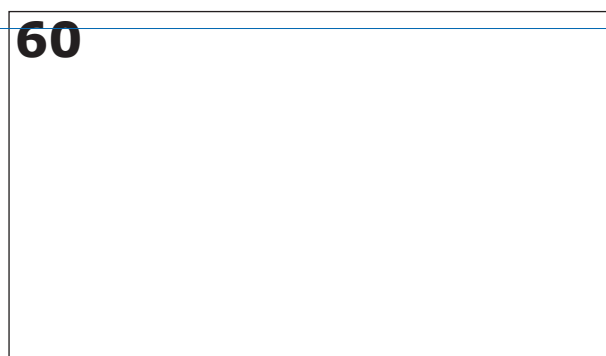
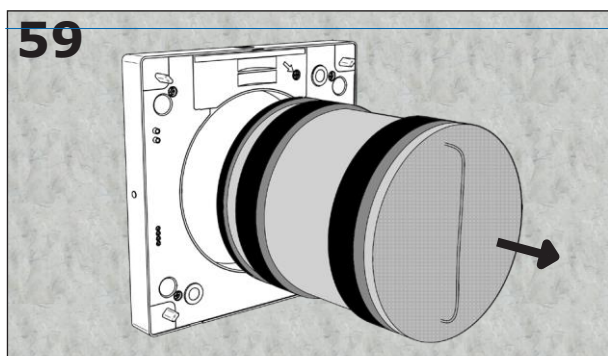
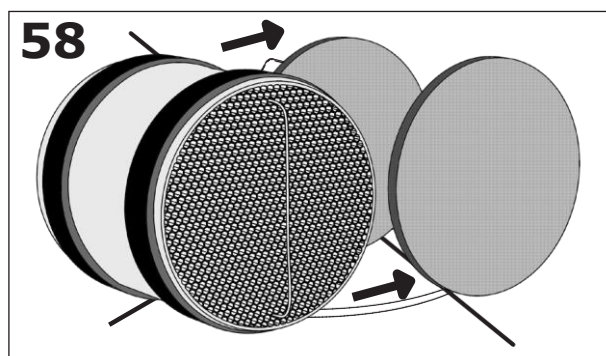
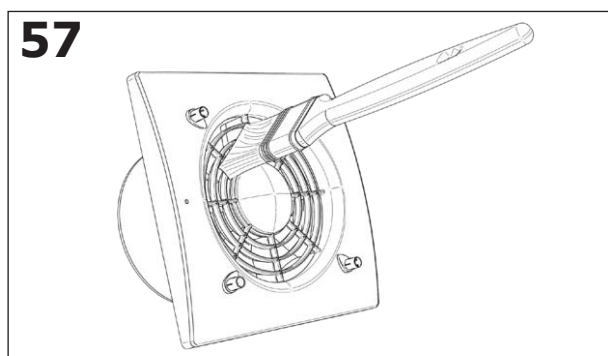
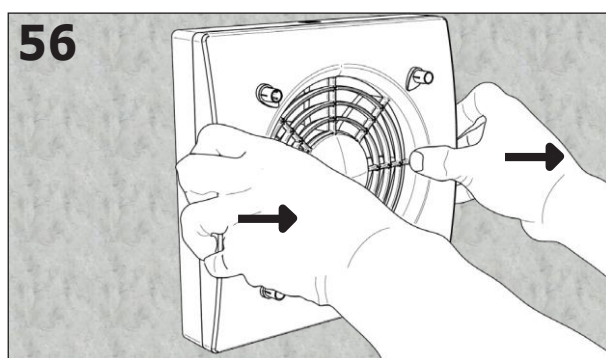
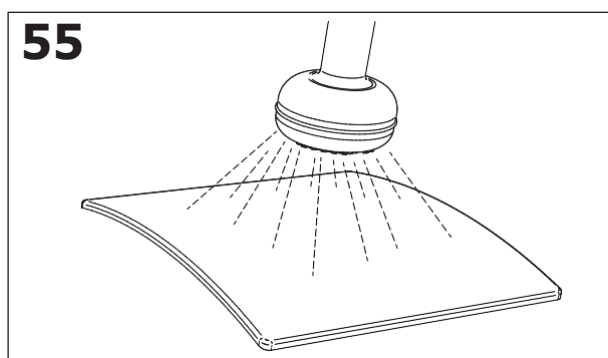
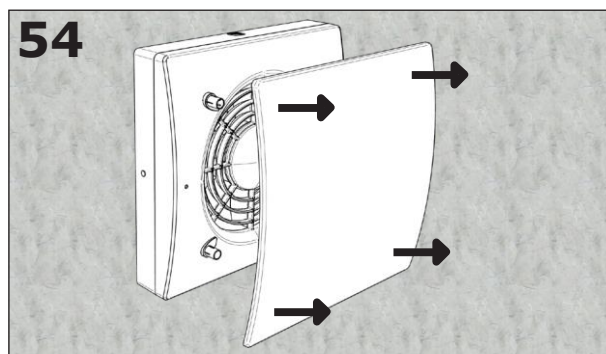
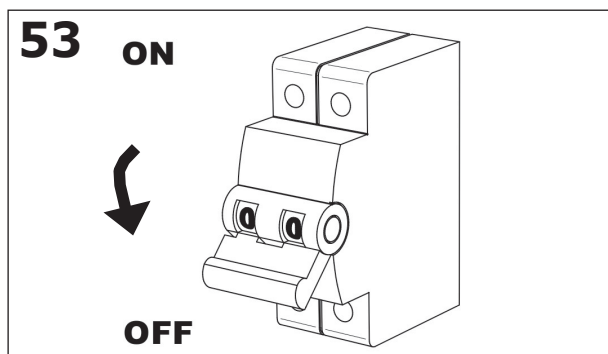
12. Montaż czerpni zewnętrznej/ External hood installation



Instrukcja obsługi

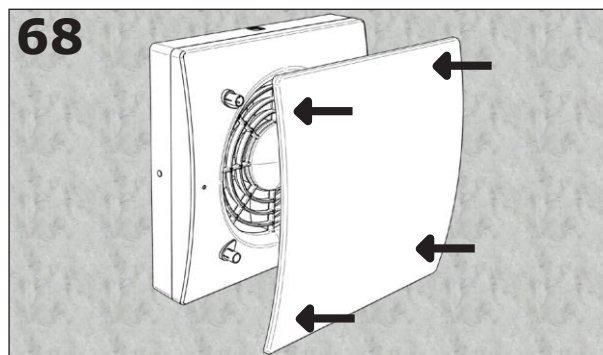
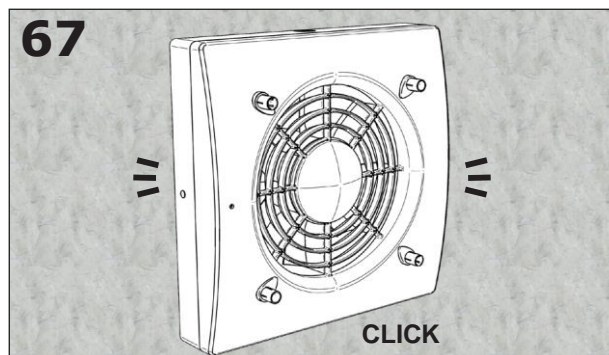
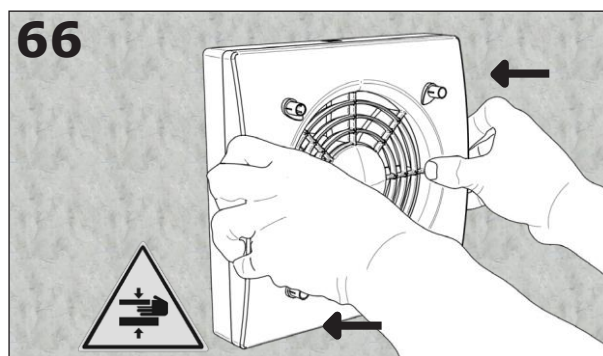
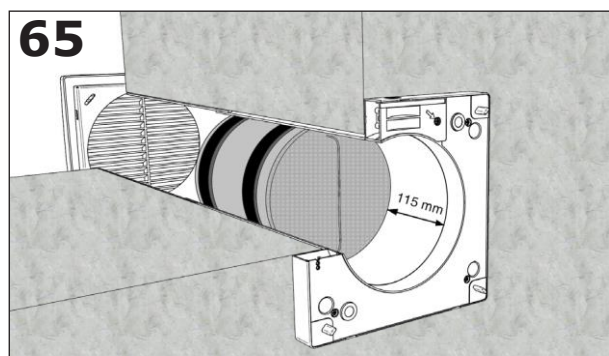
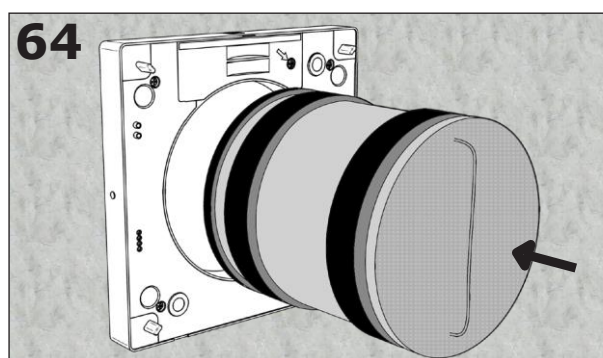
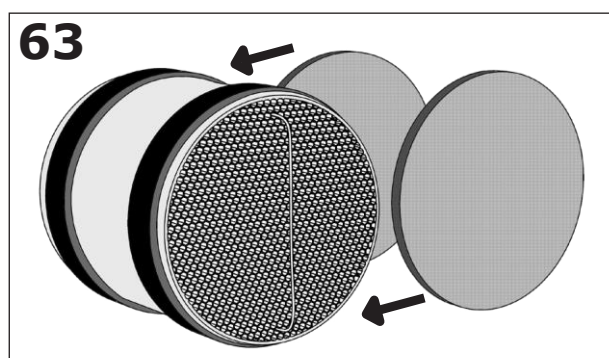
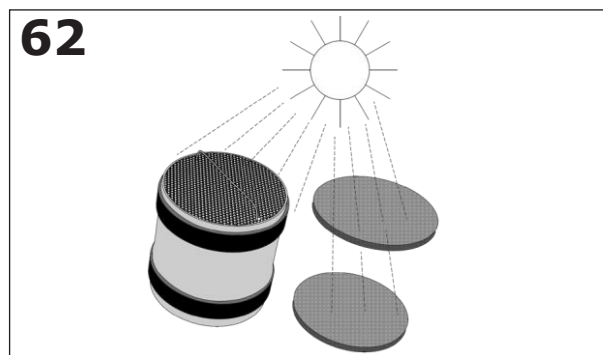
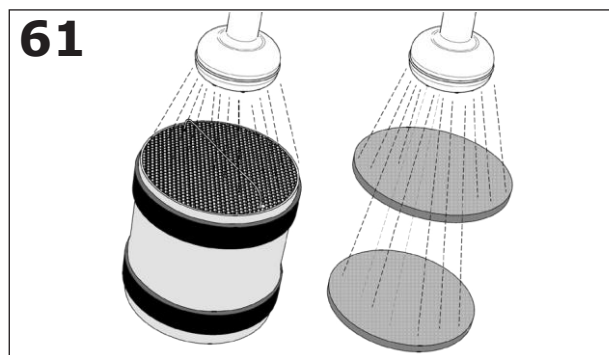
WTW-WAND-RC

13. Konserwacja/Maintenance



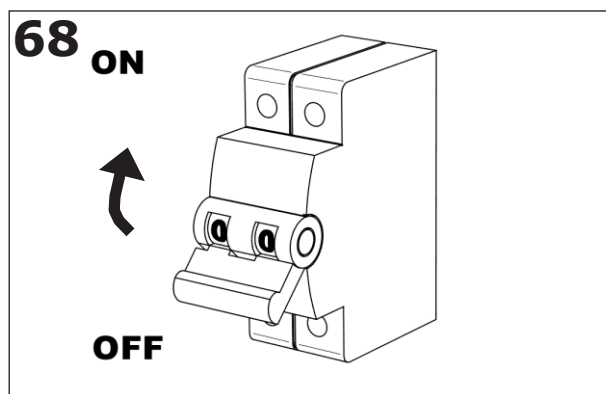
Instrukcja obsługi

WTW-WAND-RC



Instrukcja obsługi

WTW-WAND-RC



**14. Rejestr prac konserwacyjnych, serwisowych /
Maintenance-cleaning register**

[illegible]