



single room heat recovery

with remote controller



Installation, maintenance & user manual

Applicable to the following Aircycle ONE+ models:

PRODUCT CODE	DESCRIPTION
AF 90-CYC-ONEP-100	aircycle ONE+ 100
AF 90-CYC-ONEP-150	aircycle ONE+ 150

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PLEASE KEEP THESE INSTRUCTIONS WITH THE PRODUCT.
Please read this manual fully prior to installing the MVHR unit.

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IMPORTANT

This appliance is not intended for use by persons (including children) with reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

1.0 Introduction

A continuous running, low energy, ultra-quiet, alternate flow supply and extract fan with heat retention for use in habitable areas such as living rooms, bedrooms, dining rooms, basements and hallways.

The unit provides ventilation and reduces indoor air pollutants and humidity levels. The unit is ideal for tackling problems associated with condensation dampness such as mould growth.

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. livingroom and bedroom). The unit is suitable for installation on an outside wall.

The unit should operate continuously, and only be 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.

1.1 Model Variations

PRODUCT CODE	DESCRIPTION
AF 90-CYC-ONEP-100	aircycle ONE+ 100
AF 90-CYC-ONEP-150	aircycle ONE+ 150

1.2 Product Guarantee

This product is guaranteed against defects for a period of 2 years from date of purchase with the first year covering parts and labour and the remaining year covering parts only.

In the instance of a defect, Brookvent may repair the product, replace the product free of charge or refund the cost of the product at Brookvent's own discretion. In terms of installation, operation and maintenance please follow all instructions provided. If this product has been misused, not properly maintained or handled carelessly it may lead to this guarantee being declared void.

Brookvent does not accept liability for damage caused by non-observance of the installation instructions. Service activities must be carried out by Brookvent or by competent installers using original Brookvent parts. This guarantee does not affect your statutory right as a consumer.

Brookvent operate a policy of continuous innovation and improvement and thus reserve the right to alter product specifications and appearances without notice.

2.0 Safety

The following information must be read carefully to ensure safe installation and operation of the unit.

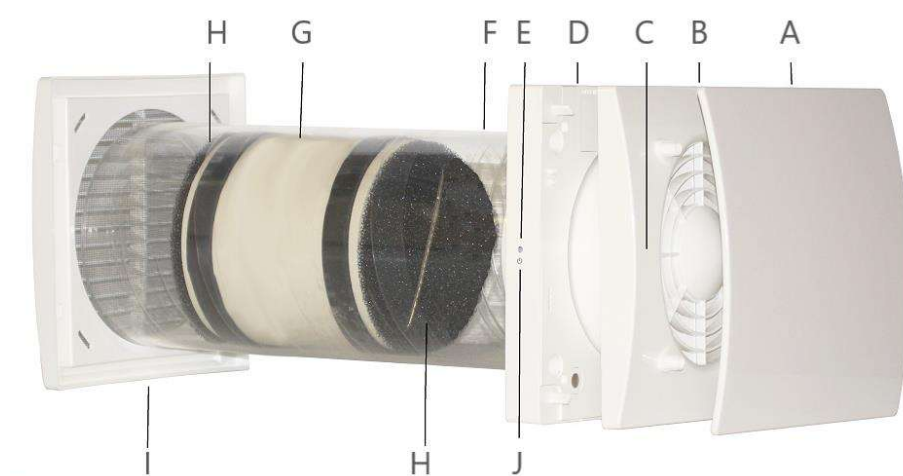
- ✓ The device should not be used for applications other than those specified in this manual.
- ✓ After removing the product from its packaging, verify its condition. In case of doubt, contact a qualified technician. Do not leave packaging within the reach of small children or people with disabilities.
- ✓ 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.
- ✓ 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
- ❖ 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.
- ✓ contact with the Test Finger (test probe “B” of the norm EN61032) in compliance with the current safety regulations.

2.1 Technical specifications

- ✓ Front cover (A) removable for cleaning without the use of tools.
- ✓ Inner ventilation unit (B) and wall support base (D) made of high quality, impact and UV-resistant ABS, colour RAL 9010.
- ✓ Integrated multi-colour led (C) to obtain a visual feedback of 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 building up on the heat exchanger.
- ✓ Wall 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.
- ✓ Highly efficient reversible EC motor with integral thermal protection, mounted on sealed for life high quality ball bearings. Designed for continuous reversible running.

- ✓ Telescopic pipe (F) adaptable to the wall thickness.
- ✓ Anti-mortar cap designed to be used also as template during the installation of the wall support base.
- ✓ Regenerative heat exchanger with ceramic core (G) with high thermal efficiency, equipped with washable anti-dust filters (H).
- ✓ External grille (I) made of high quality, impact and UV-resistant ABS, colour RAL 9010, with anti-insect net and water drip guard.
- ✓ Infra-red remote controller with touch technology, LCD display and wall 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 220-240V~ 50Hz



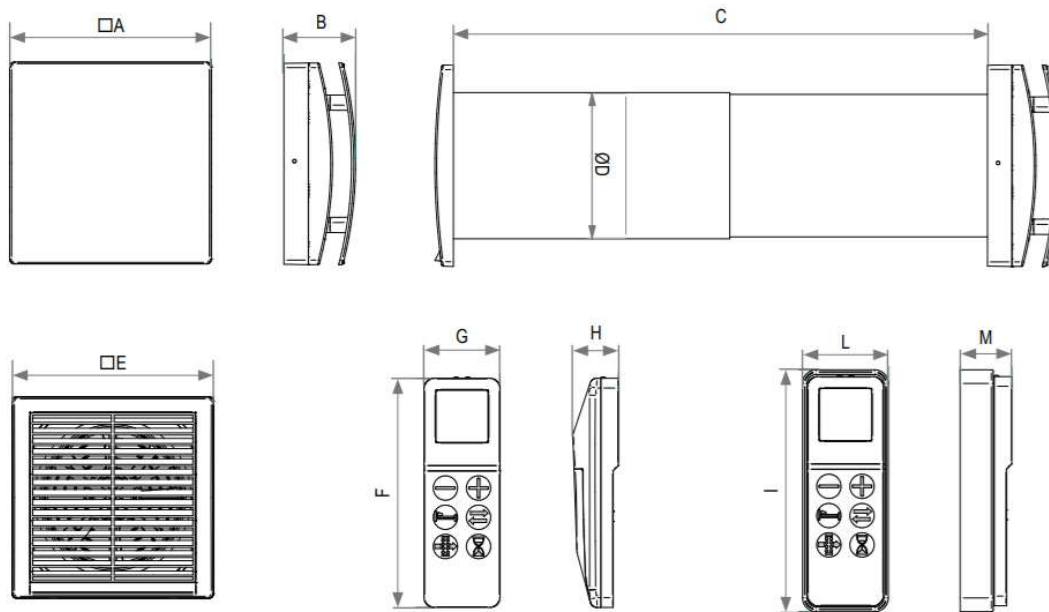
2.2 Responsibility of the Installer

- ✓ Correct Installation, balancing and commissioning of the unit.
- ✓ Compliance to requirements and local additional rules.
- ✓ Explanation of the ventilation system to the user.
- ✓ Warning for the user, to check or replace the air filters on time.

2.3 Responsibility of the Occupant

- ✓ To ensure maintenance of the ventilation unit on a regular basis. Filters should be checked, cleaned or replaced every 6 months. Details can be found on page 17 (maintenance).
- ✓ To ensure that the fan is operating. The aircycle ONE+ ventilation units are designed to operate 24/7.

3.0 Specifications/ Dimensions



Product Version	Weight	A	B	C	D	E	F	G	H	I	L	M
aircycle ONE+ 100	2,3 kg	218	76	270-510	108	164	117,5	39	23	124	44	26,5
aircycle ONE+ 150	3,9 kg	218	76	300-560	158	218	117,5	39	23	124	44	26,5

3.2 Detailed Specification

- ✓ IPX4 protection degree.
- ✓ Aesthetic front cover easily removeable for cleaning without the need for tools.
- ✓ Automatic management of the inversion time (comfort mode) to optimise the acoustic and thermal comfort.
- ✓ Free cooling (single direction flow; extract or intake) to prevent heat exchange when not requested.
- ✓ Integrated multi-colour led to indicate unit status.
- ✓ Simplified synchronisation of up to 10 units: units get automatically synchronised when they are wired to each other.
- ✓ Totally recyclable plastic components.
- ✓ Double insulated: no earth connection is required.
- ✓ Tested to the latest standards: units are tested in the TÜV Rheinland recognised laboratory. Designed and manufactured in accordance with EN60335-2-80 (Low Voltage Directive) and the EMC Directive (Electromagnetic Compatibility).
- ✓ No water drainage required.
- ✓ Multifunctional remote controller with an LCD screen.
- ✓ Back-up touch button at the side of the ventilation unit.
- ✓ Smart humidity control increasing extract speed when needed.
- ✓ Easy and safe maintenance thanks to a magnet system which allows the ventilation unit to be quickly removed from its base.
- ✓ Automatic anti-frost protection.

3.3 ErP Directive - Regulations 1253/2014 - 1254/2014

a)	Mark	-	BROOKVENT	
b)	Model	-	aircycle ONE+ 100	aircycle ONE+ 150
c)	SEC class	-	A	A
c1)	SEC warm climates	kWh/m ² .a	-17	-18,1
c2)	SEC average climates	kWh/m ² .a	-40,6	-41,6
c3)	SEC cold climates	kWh/m ² .a	-81,8	-82,8
	Energy label	-	Yes	
d)	Unit typology	-	Residential - bidirectional	
e)	Type of drive	-	Multi-speed drive	
f)	Type of Heat Recovery System	-	Heat recovery	
g)	Thermal efficiency of heat recovery	%	74	74
h)	Maximum flow rate	m ³ /h	25	60
i)	Electric power input at maximum flow rate	W	3,5	6
j)	Sound power level (L _{WA})	dBA	39	40
k)	Reference flow rate	m ³ /h	18	41
l)	Reference pressure difference	Pa	10	10
m)	Specific power input (SPI)	W/m ³ /h	0,139	0,80
n1)	Control factor	-	0,65	0,65
n2)	Control typology	-	Local demand control	
o1)	Maximum internal leakage rate	%	N/A	
o2)	Maximum external leakage rate	%	1	1
p1)	Internal mixing rate	%	N/A	
p2)	External mixing rate	%	N/A	
q)	Visual filter warning	-	N/A	
r)	Instructions to install regulated grilles	-	N/A	
s)	Internet address for pre/disassembly instructions	-	www.brookvent.co.uk	
t)	Airflow sensitivity to pressure variations	%	N/A	
u)	Indoor/outdoor air tightness	m ³ /h	18	50
v1)	AEC - Annual electricity consumption - warm climates	kWh	1	0,6
v2)	AEC - Annual electricity consumption - average climates jährlicher	kWh	1	0,6
v3)	AEC - Annual electricity consumption - cold climates jährliche	kWh	1	0,6
w1)	AHS - Annual heating saved - warm climates	kWh	19,5	19,5
w2)	AHS - Annual heating saved - average climates	kWh	43,1	43,1
w3)	AHS - Annual heating saved - cold climates	kWh	84,3	84,3

4.0 Operation

The unit is supplied with an infrared remote controller (K) as standard, as well as its support base (L) which can be wall 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; anytime a touch button is pressed, the setting shown on the LCD display is transferred to the unit. The IR receiver (J) 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 numerous units.

When switched on the fan unit emits a long acoustic signal.

Through the IR controller the following functionalities can be activated/deactivated.

When a setting is transferred to the unit, a short acoustic signal is emitted and a green led flashes.

In case the remote controller gets lost or the batteries are dead, speeds 1, 3 and OFF position can be selected from the unit's touch button (C). The airflow direction is always alternate and the operation mode (either comfort or efficiency) is the last selected from the remote controller.

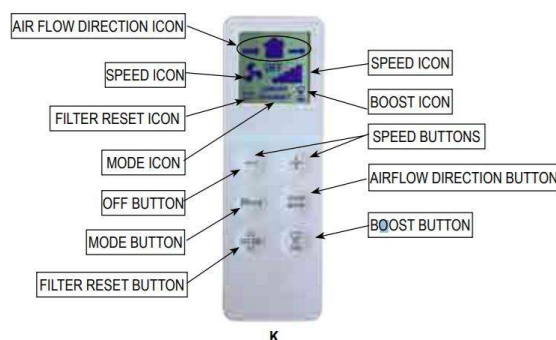
SPEED	LED COLOUR	ACOUSTIC SIGNAL
speed 1	single green led	short, single
speed 3	double green led	short, double
OFF*	red led	long

*press the button for 3 seconds.

It is possible to synchronized 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.

Wiring diagram as per fig. 16B.

4.1 Remote functions



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 (comfort mode).			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 70 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
ON/OFF					
	Unit can be switched on or off		OFF	red	long
			LCD ON	green	short
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
Free cooling					
	The unit runs in "extract only" or "intake only" to avoid heat recovery when not needed.			green	short
Filter reset					
	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	yellow	short
Smart humidity control					
	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	
Antifrost					
	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	
Acoustic signal					
	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

4.2 Alerts and solutions

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 icon ▲ flashes on the LCD display	Low batteries	Change the batteries
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
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.

4.3 Disposal and recycling

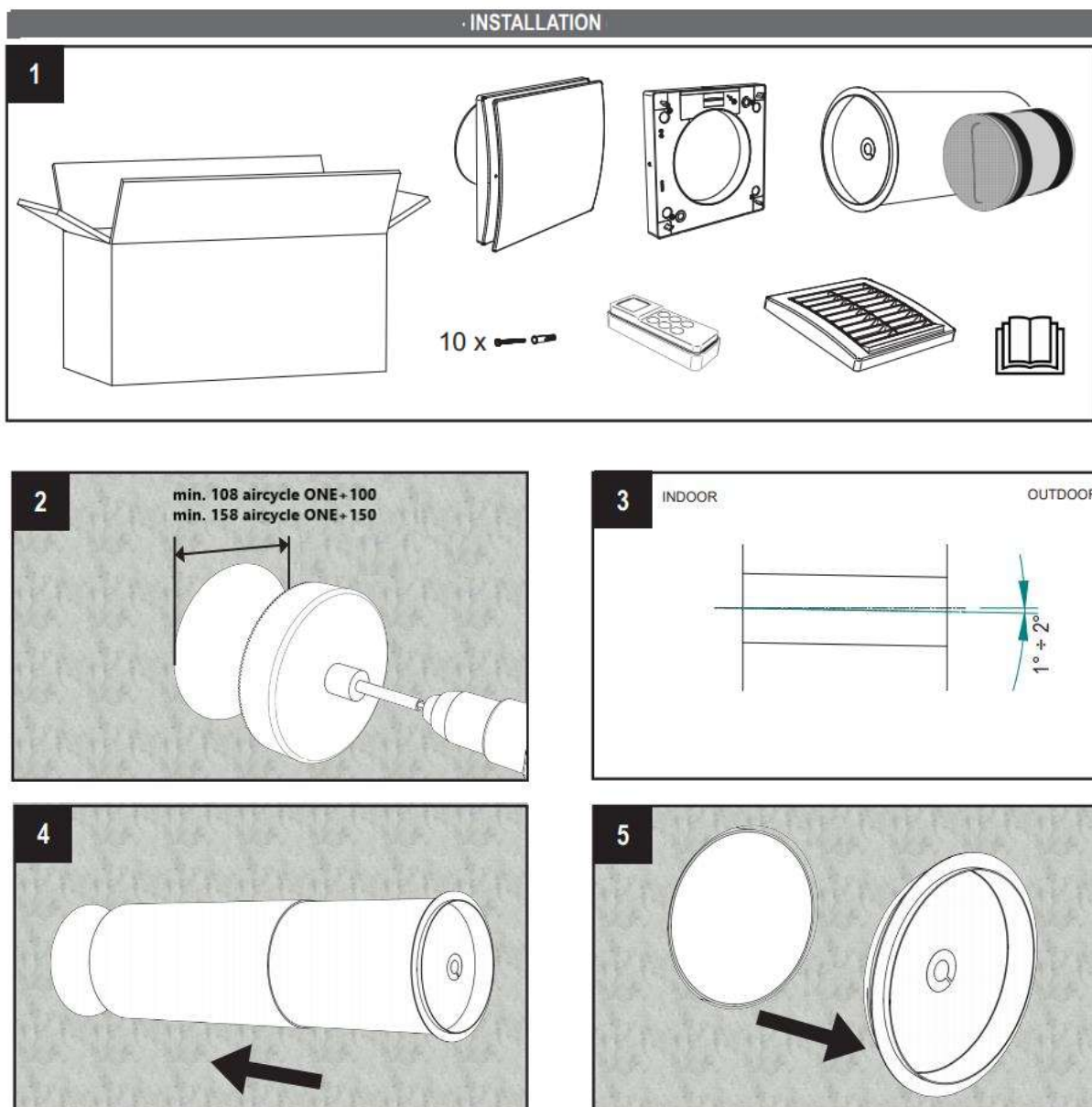
Information on disposal of units at the end of life.

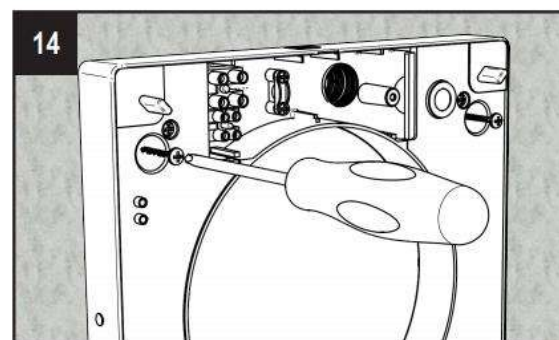
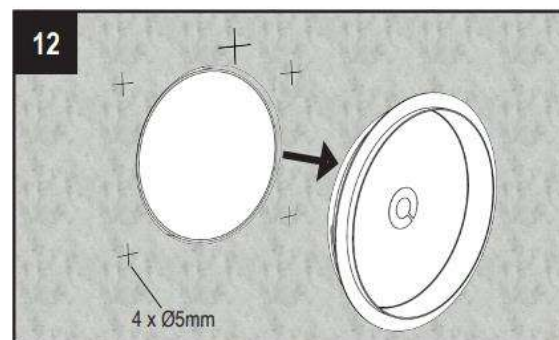
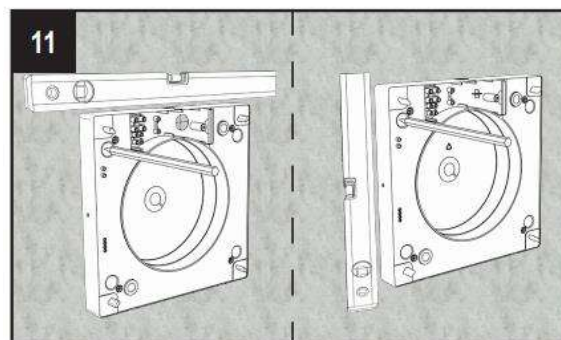
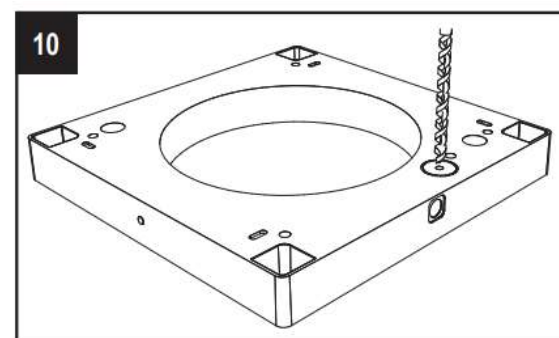
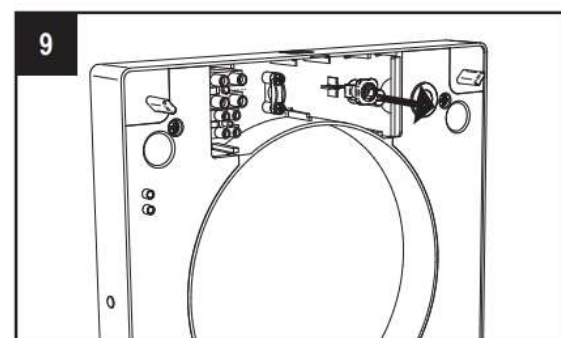
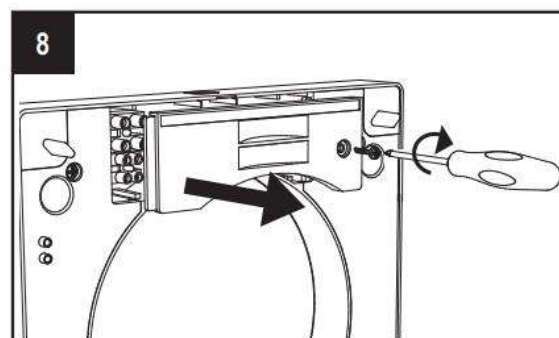
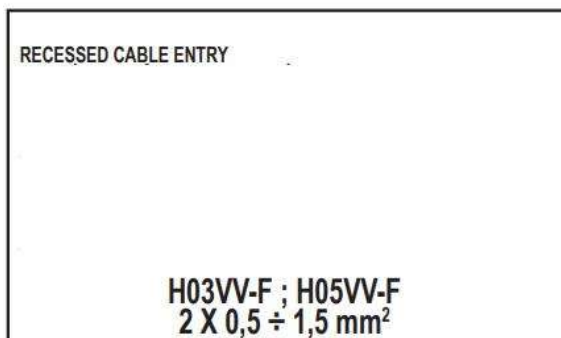
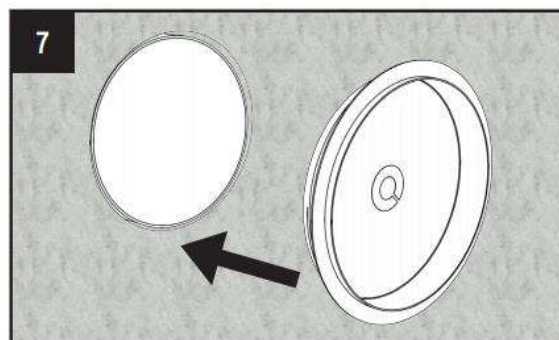
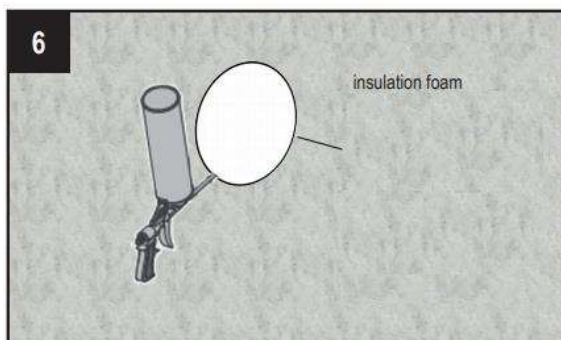
This product complies with EU Directive 2002/96/EC.

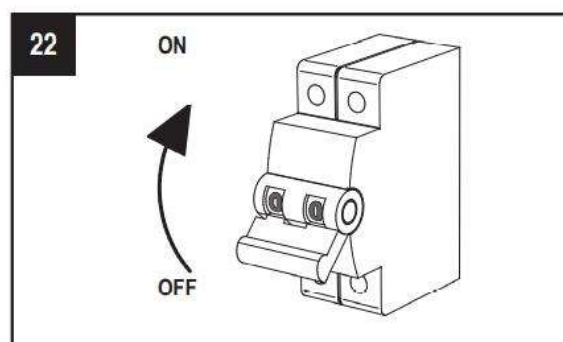
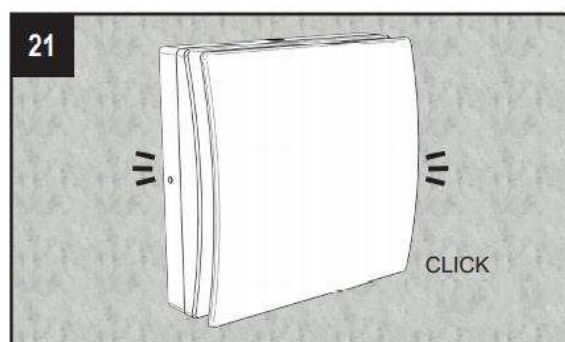
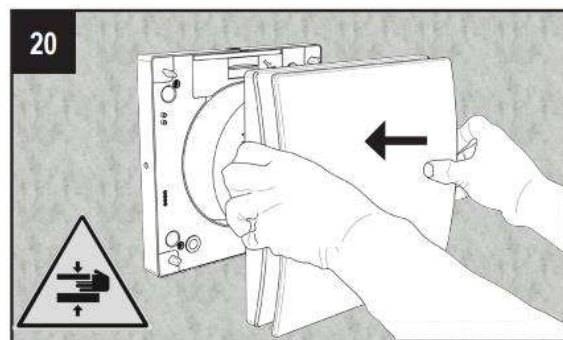
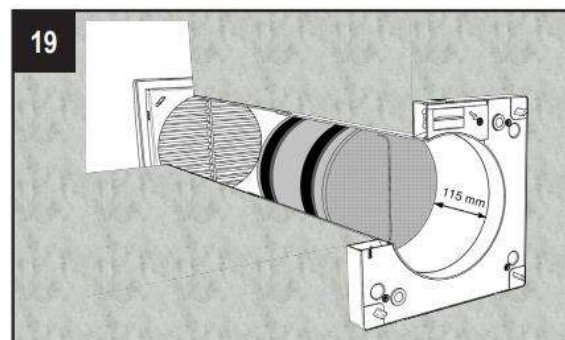
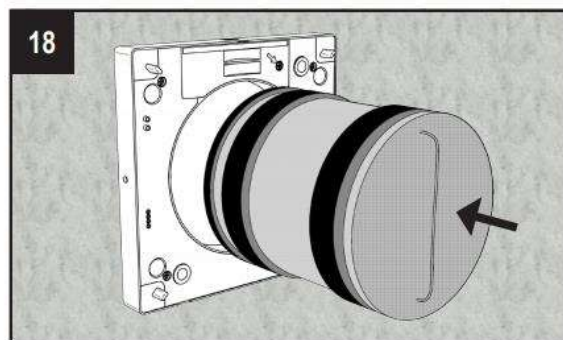
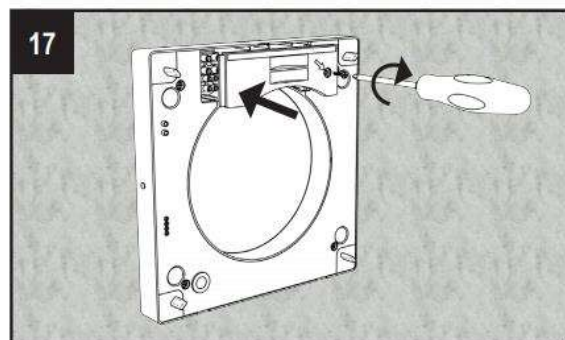
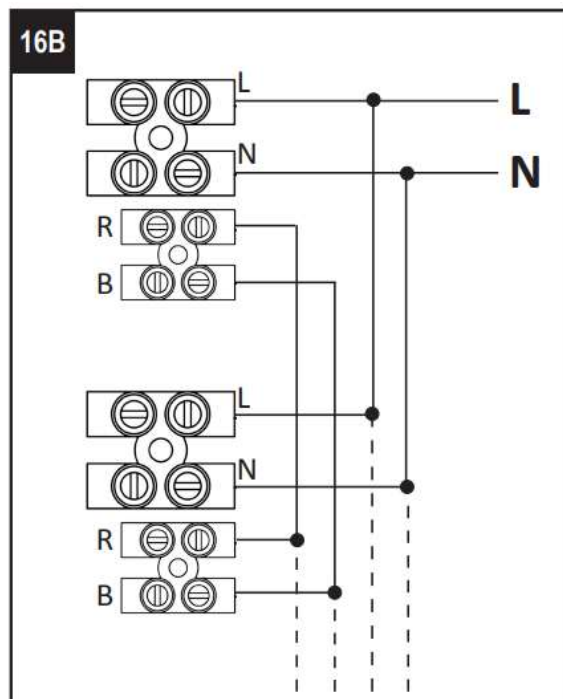
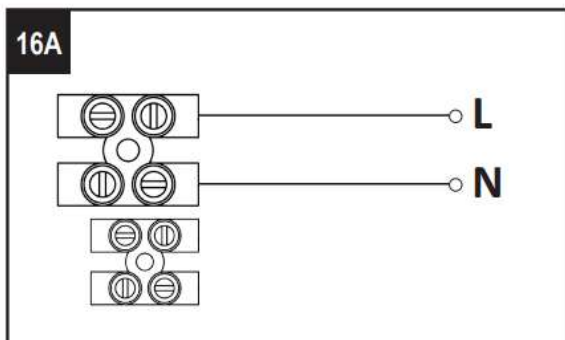
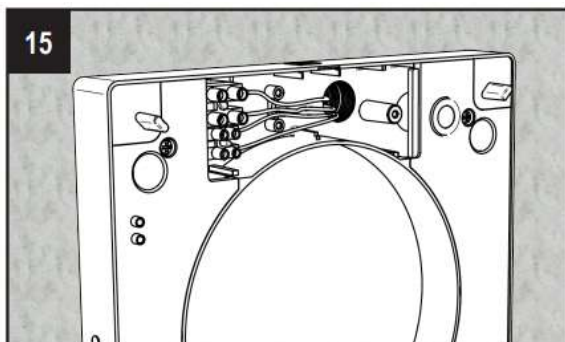
The symbol of the crossed-out dustbin indicates that this product must be collected separately from other waste at the end of its life. The user must, therefore, dispose of the product in question at suitable electronic and electro-technical waste disposal collection centres, or else send the product 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.

5.0 Installation and figures



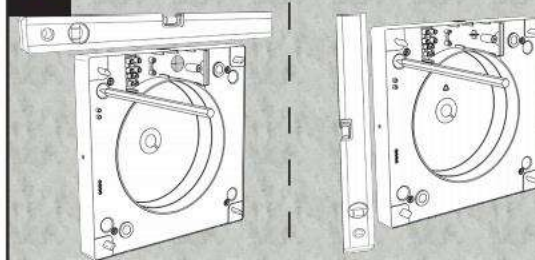




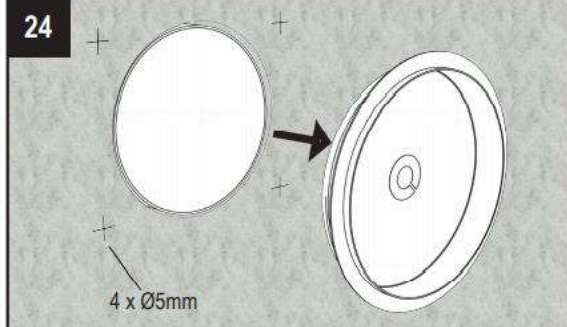
SURFACE CABLE (for one unit wiring)

H03VV-F ; H05VV-F
2 X 0,5 ÷ 1,5 mm²

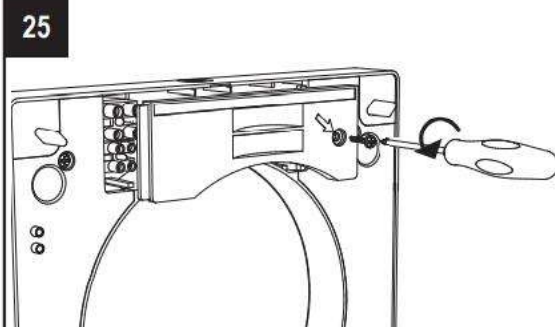
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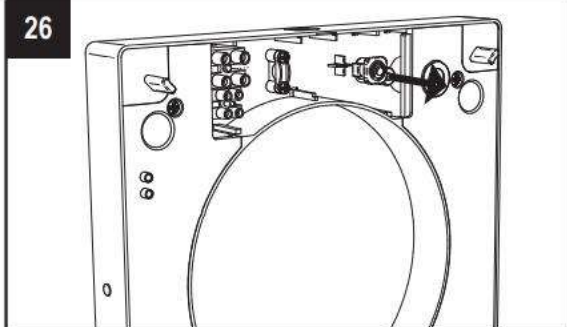
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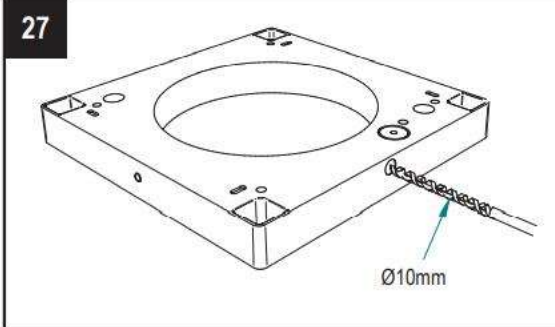
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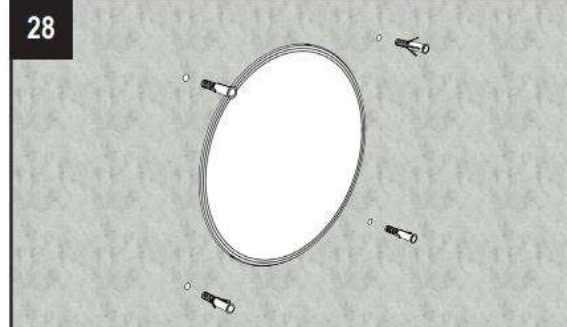
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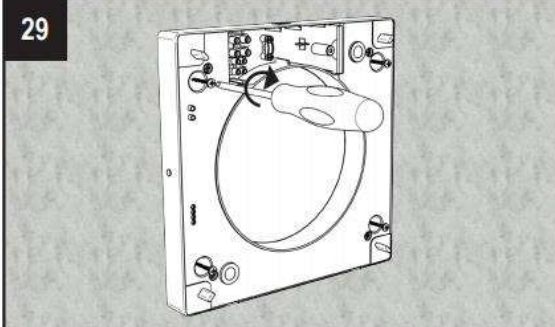
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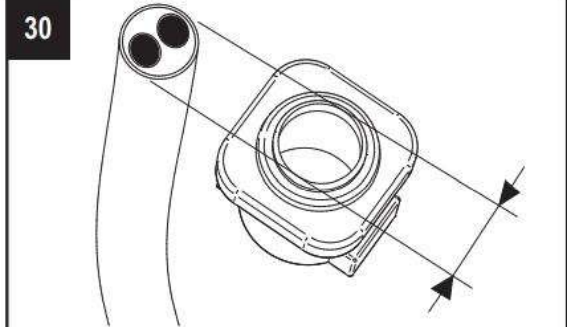
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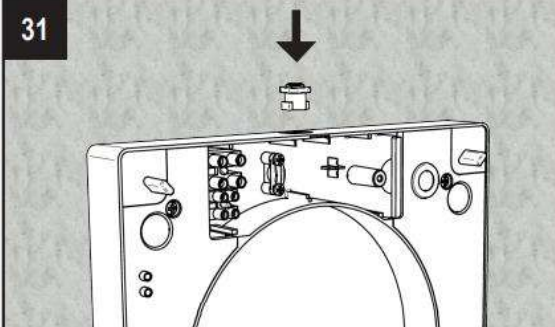
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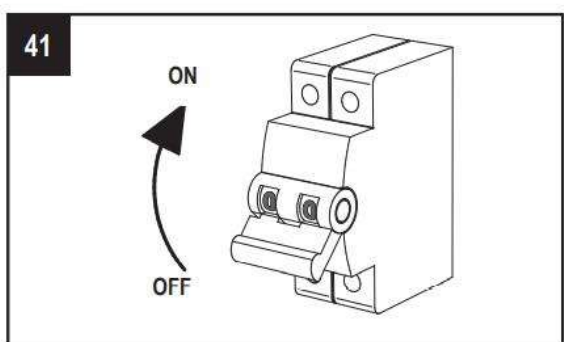
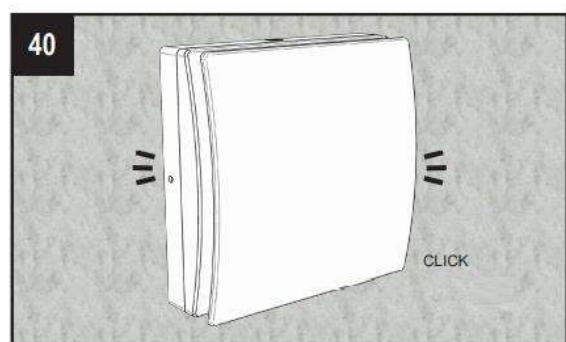
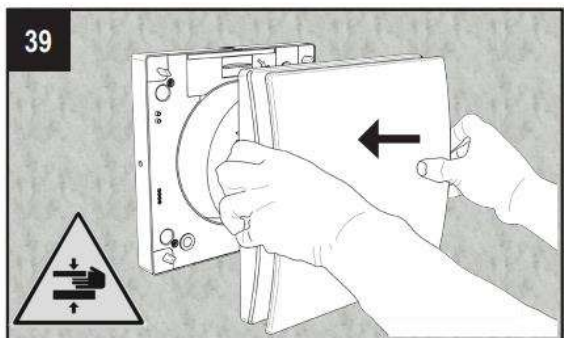
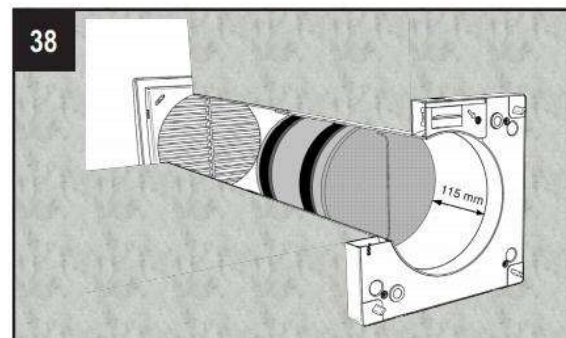
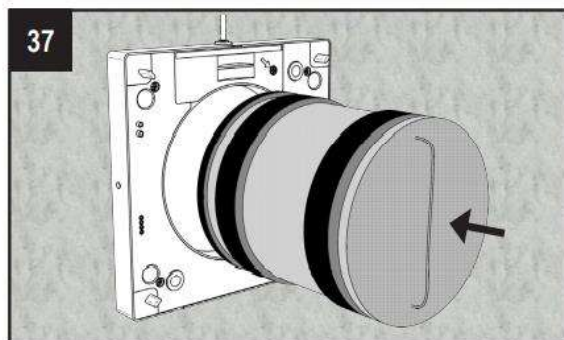
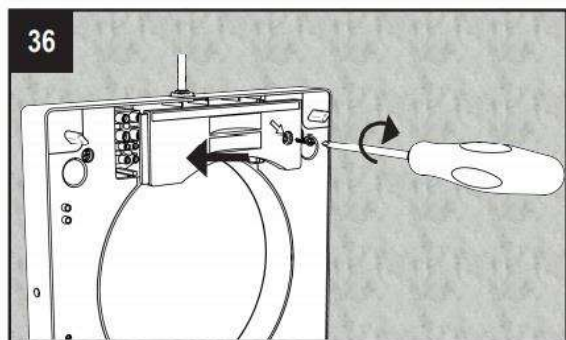
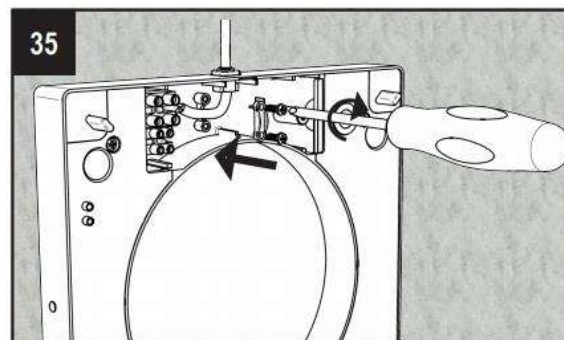
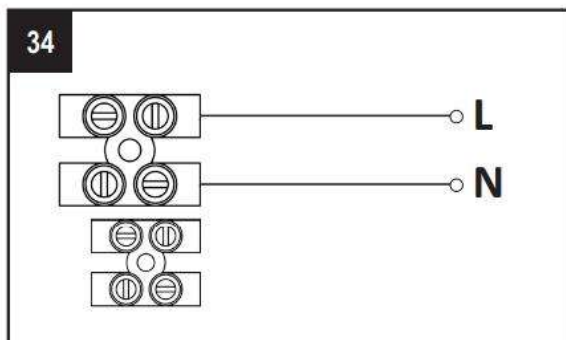
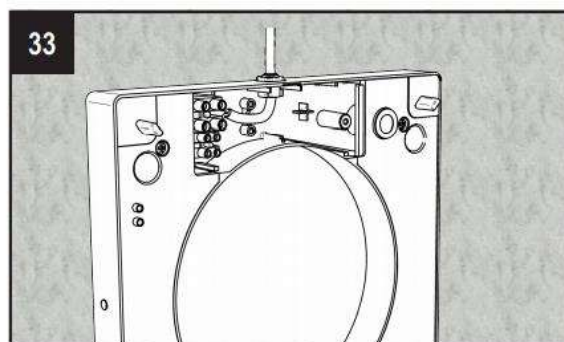
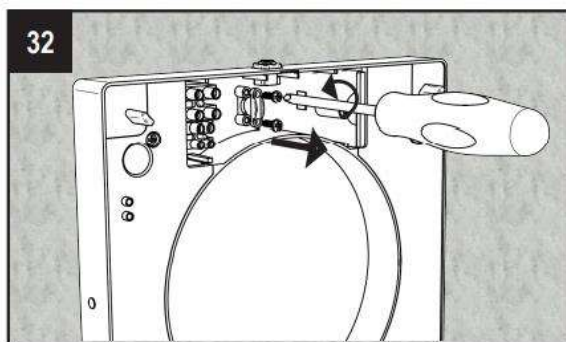


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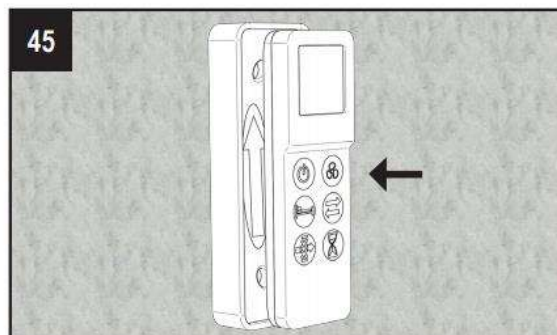
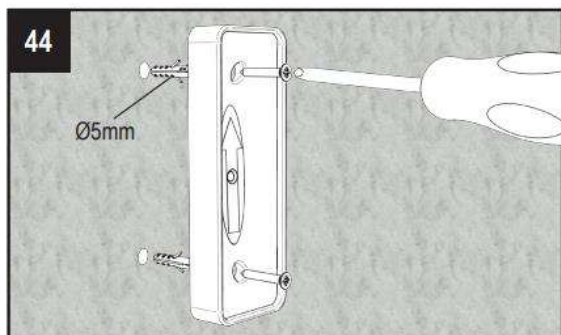
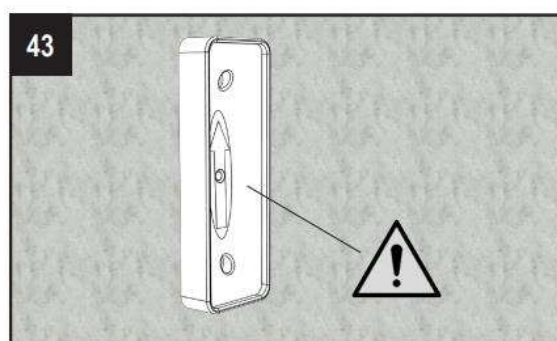
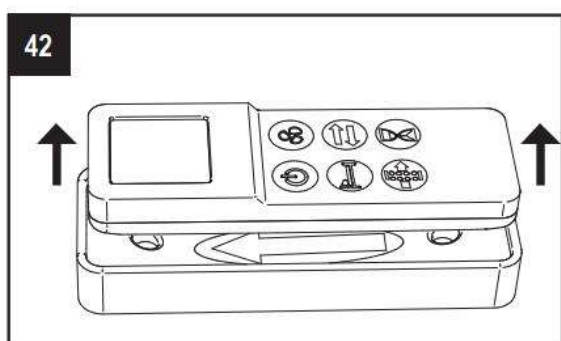


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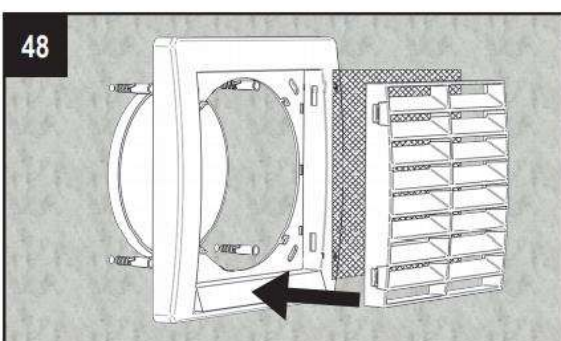
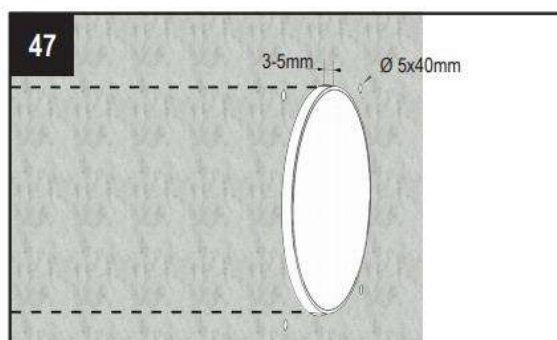
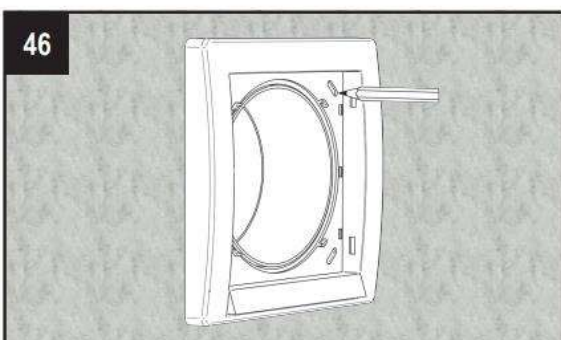




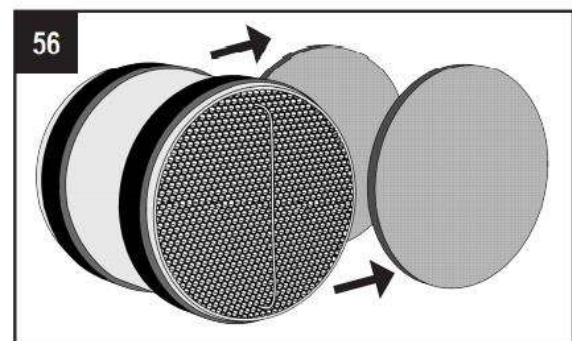
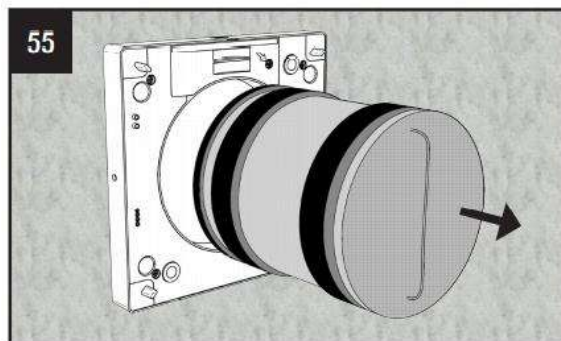
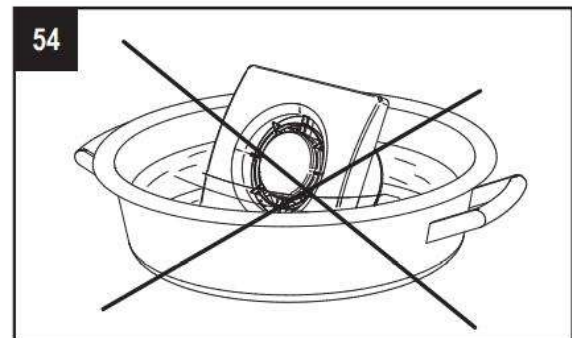
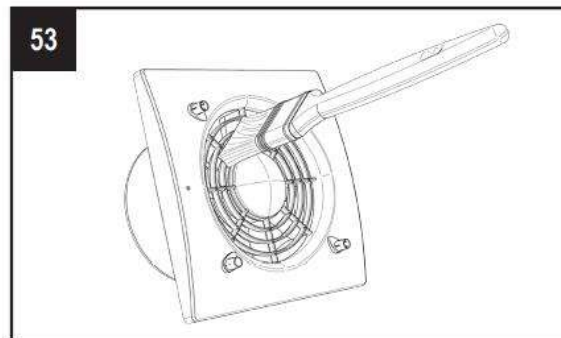
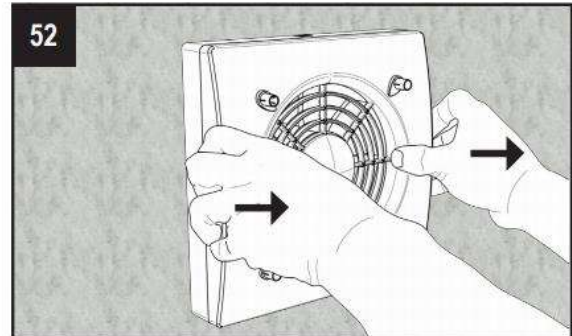
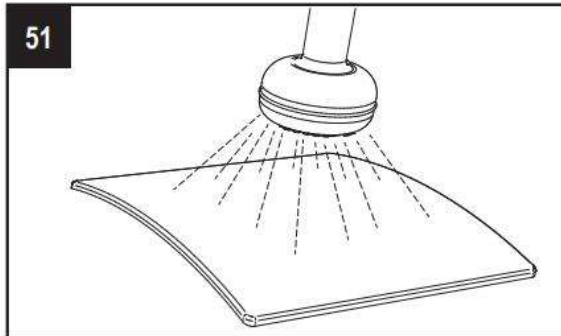
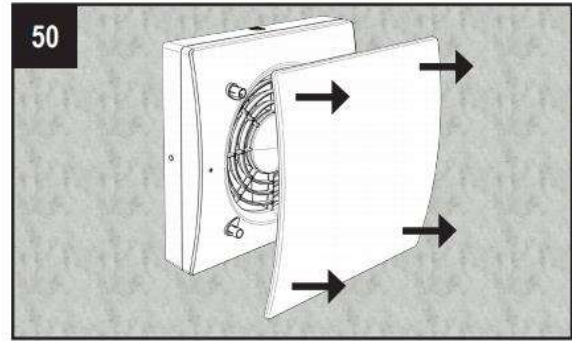
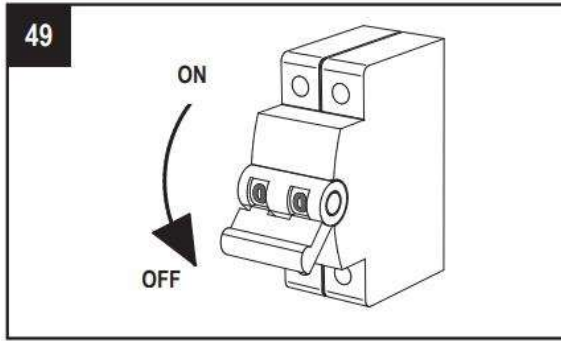
- REMOTE CONTROLLER WALL MOUNTING -

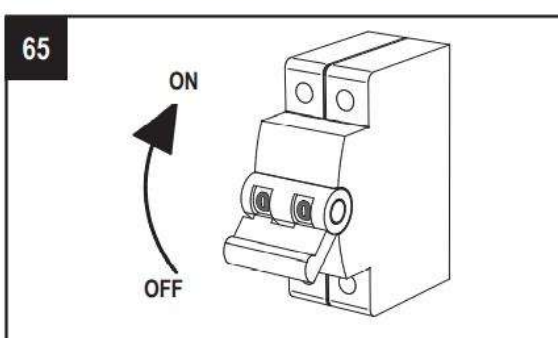
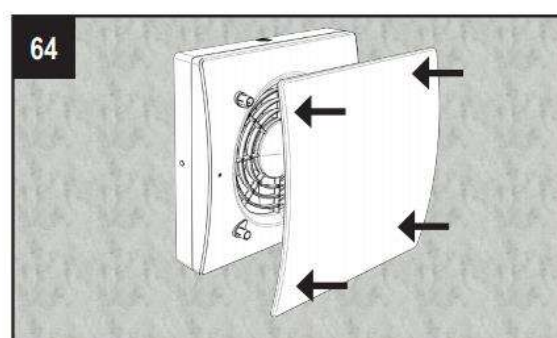
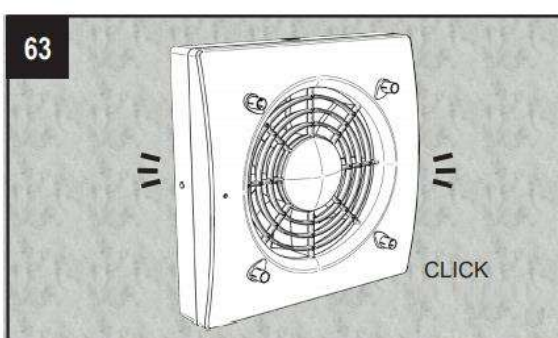
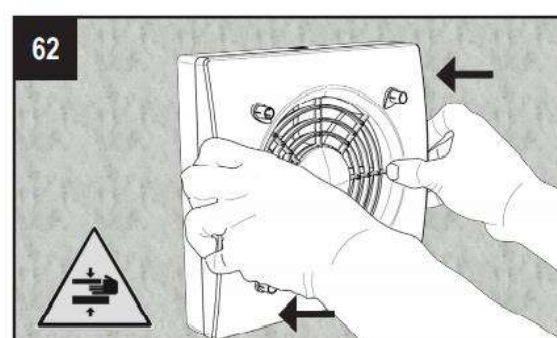
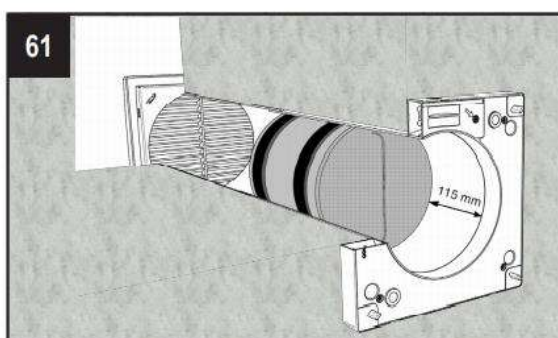
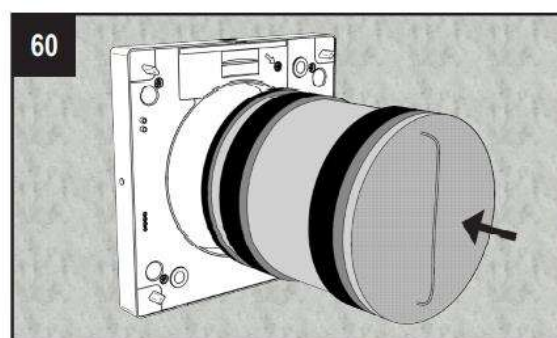
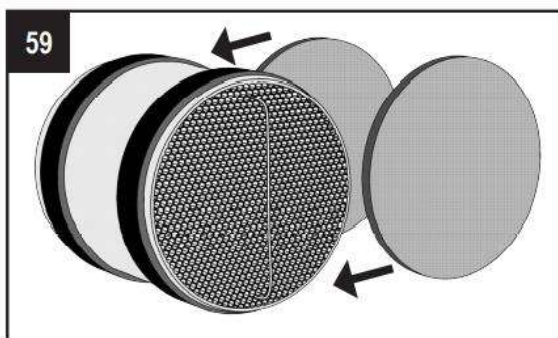
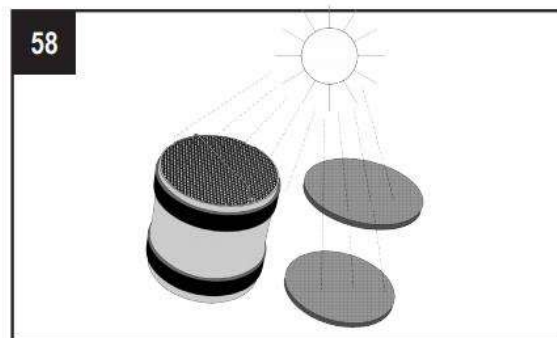
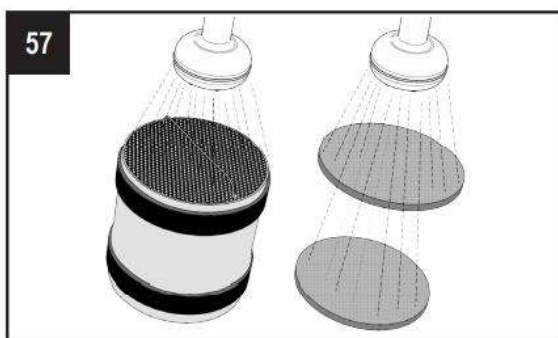


EXTERNAL GRILLE



MAINTENANCE





Notes

Notes

Customer Support

At Brookvent we pride ourselves on providing Gold Standard after sales and support to all customers. Please feel free to contact one of our specialist team about any query you may have and we will be more than happy to assist you.

Brookvent
Brook House,
Dunmurry Industrial Estate,
Dunmurry,
Belfast
Northern Ireland, BT17 9HU

T: +44 (0) 28 9061 6505

It is important to retain this manual and make a copy available to any person using or working with (maintaining) the system.

Brookvent operate a policy of continuous innovation and improvement and thus reserve the right to alter product specifications and appearances without notice.