

# Installation manual

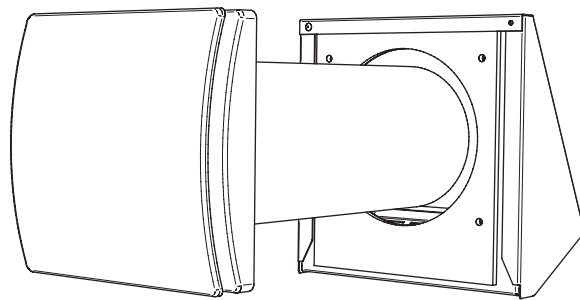
## HRU-WALL

### Introduction

HRU-WALL is a single alternate flow decentralized (single point) residential heat recovery unit, also called «push&pull» unit,

designed to ensure adequate ventilation in enclosed environments without energy losses.

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.



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

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 booklet.

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"), or it is requested to increase the acoustic comfort, or in case of extreme weather conditions (for example with strong wind or exceptionally rigid temperatures), it is recommended to set the unit in extract only mode (eventually at minimum speed) and NOT to switch it off.

### TECHNICAL SPECIFICATIONS

- Inner ventilation unit material: high quality, impact and UV-resistant ABS colour RAL 9010
- Design front cover removable for cleaning without the use of tools
- Easy maintenance installation plate, for easy access to the heat exchanger from inside the room
- Anti-dust filter, easily removable for washing by the user without tools
- Regenerative honeycombs ceramic heat exchanger
- External hood in aluminium, painted in white RAL 9010, acoustically lined
- High efficiency aerodynamic fan with "winglet" blades to optimise quietness and efficiency
- Single phase EC reversible Brushless motor with integral thermal protection
- Motor mounted on high quality ball bearings.
- The unit is double insulated: no earth connection is required
- Trickle speed selectable.
- Boost mode.
- Free-cooling (Bypass) mode.
- IPX4 degree of protection
- Power supply 220V to 240V~ 50Hz

Model	Airflow m3/h	Power W	Weight Kg
HRU-WALL-100-25	10/15/25	1,2/1,7/2,6	2,2
HRU-WALL-150-60	20/40/60	1,4/2,3/3,8	4,5

## PRECAUTIONS FOR INSTALLATION, USE AND MAINTENANCE

- 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.
  - The device is not intended for use by persons (including children) with reduced physical, sensory or mental capacities or those with a lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the device from a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the device.
- 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.



## OPERATION





The unit pulls air out for 70 seconds, then it pushes air in for the same time.

When heated air is pulled (extracted) from inside the room, it warms up the heat exchanger; when the cold air is pushed (supplied) in the room, it gets preheated, recovering most of thermal energy which would be otherwise lost in the ventilation process.

The unit runs at the speed selected by activating the two-position switches "S1", "S2" and "S3" of the HRU-WALL-CONTR (accessory Fig. 60). The same functionality can be achieved with HRU-WALL-CONTR or

"S1"	"S2"	Operation
O	O	OFF
I	O	Speed 1
O	II	Speed 2
I	II	Speed 3

"S3"	Operation
	Heat recovery (Alternate flow)
	Free cooling (Extract only)

S1	S2	S3
		
I	II	

with 3 two-position switches.

S3 switch activates the "Free cooling " (Bypass) mode , which stops alternate flow and keeps the fan in extract mode only, to avoid the heat exchange when necessary. The front cover LED indicates when the Free cooling mode is on.

An automatic "Boost" mode can be achieved through a dedicated switch or room sensors, connecting such switch in parallel to the S2 switch.

Wiring diagram: Fig. 18A and 18B

### WARNING:

Ensure that the electric wiring to L and N is done correctly; an incorrect connection will lead to malfunction or permanent damage of the fan

## SYNCHRONISATION

When the units are installed in pair, they must be synchronised so that when one unit is extracting, the other is supplying, and viceversa.

This is achieved by setting the dedicated jumper. (Fig. 20A-20B)

## MAINTENANCE AND SERVICE

Maintenance can be carried out by the user as indicated at page 12

Service must be performed only by technically qualified personnel in accordance with local rules and regulations. Make sure that the mains supply to the unit is disconnected (page 13).

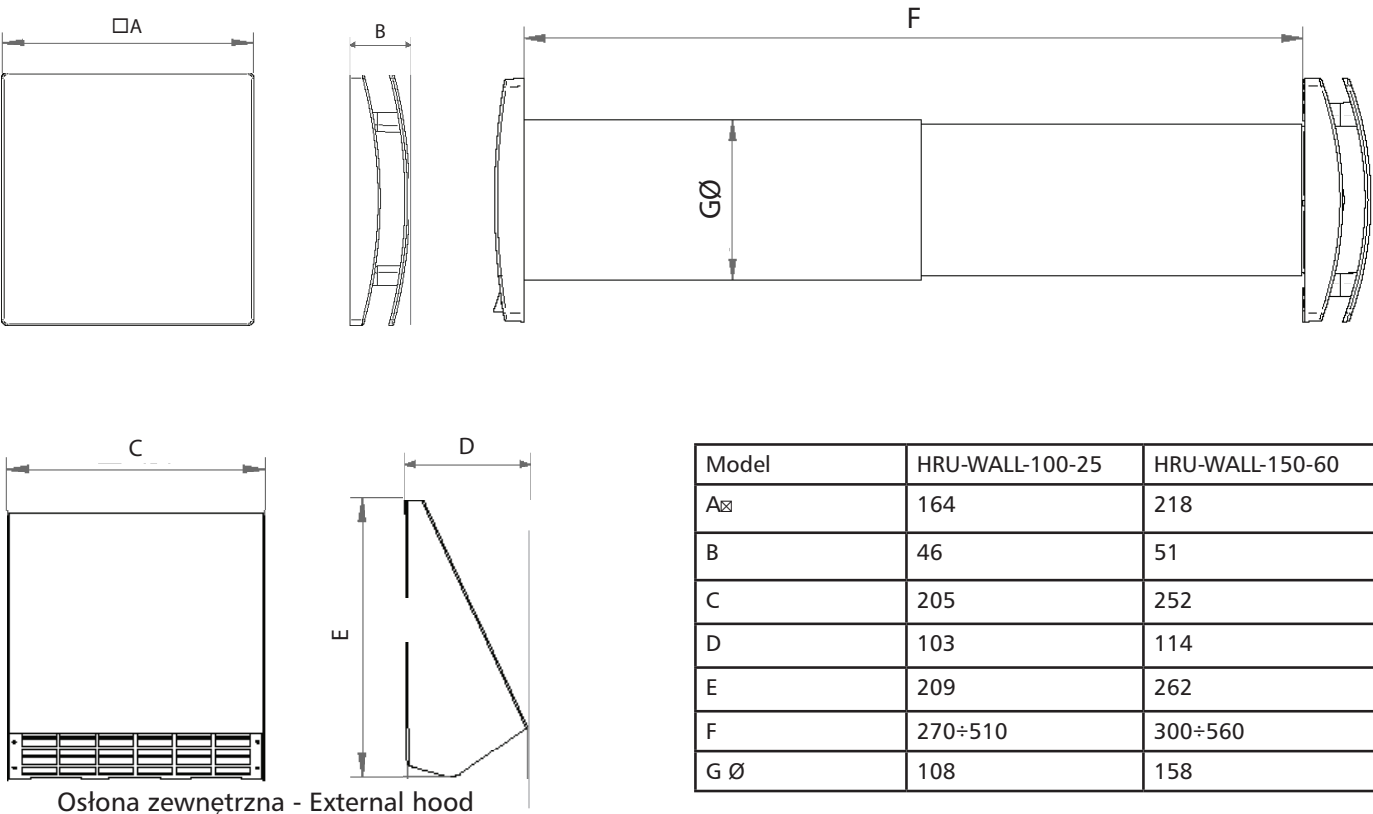
Cleaning of the heat exchanger can be performed from outside as well.

## STANDARD CONFORMITY

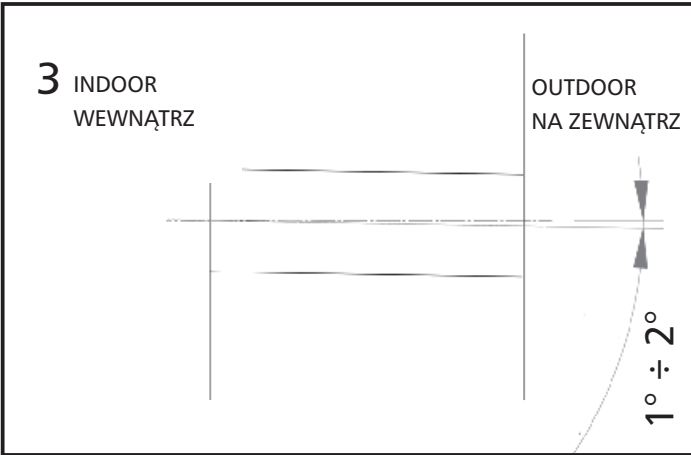
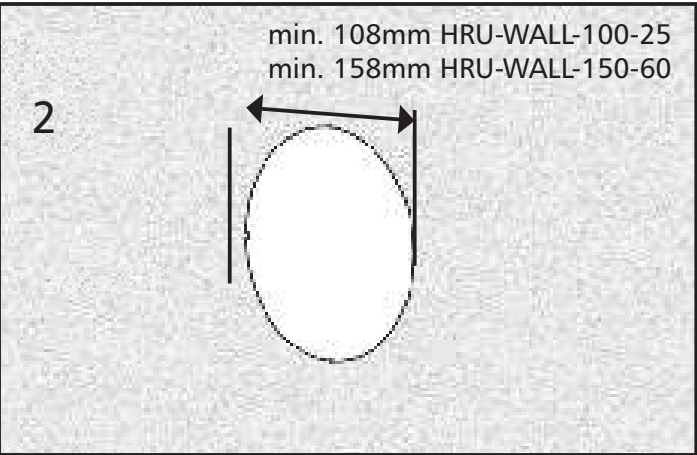
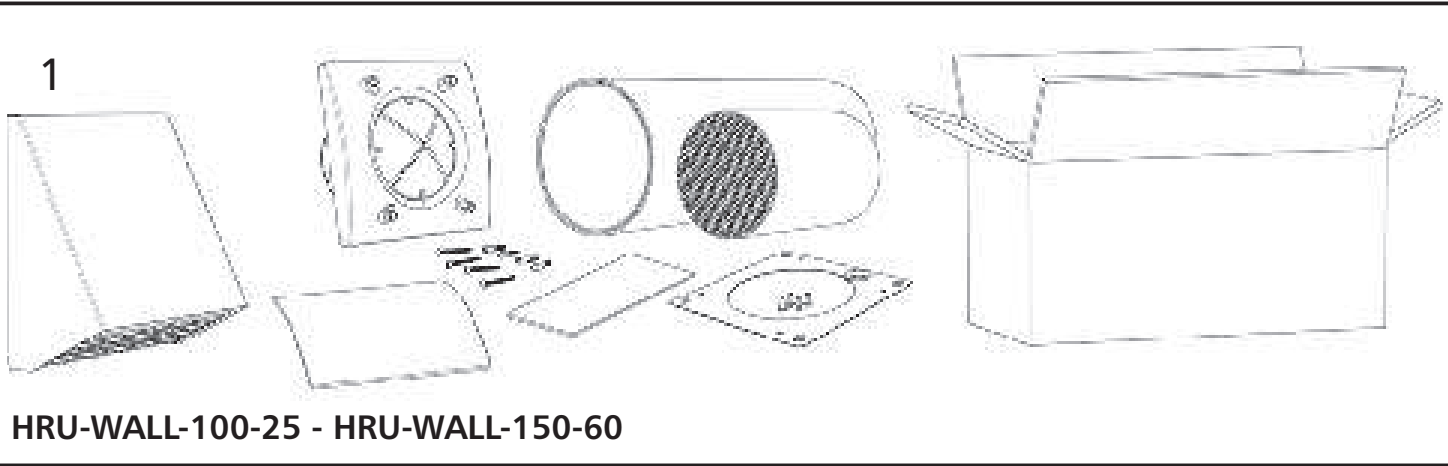
2006/95/EC Low Voltage Directive (LVD) and 2004/108/EC Electromagnetic Compatibility (EMC), in conformity with the following standards:

Electrical Safety EN60335-1(2008); EN 60335-2-80(2005); EN 60335-2-80/A2(2009)

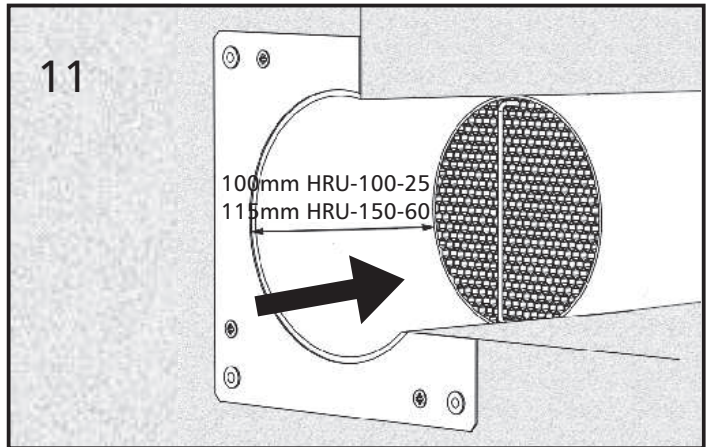
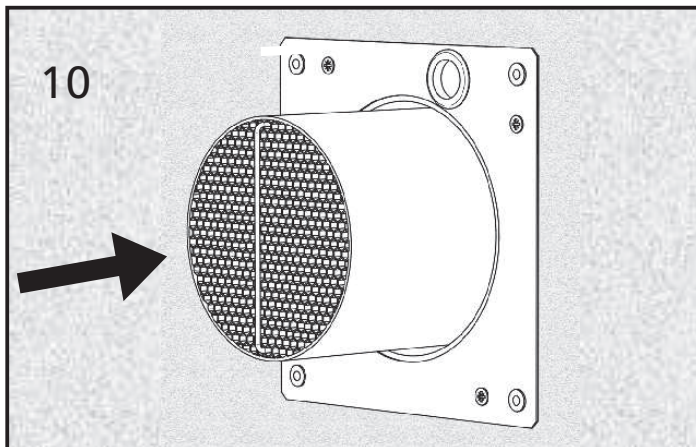
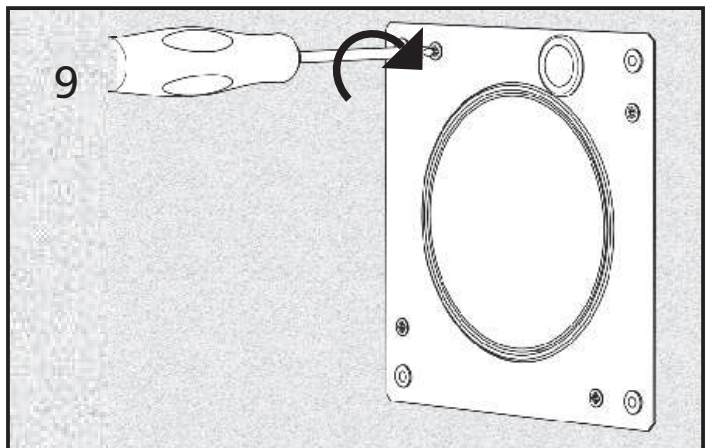
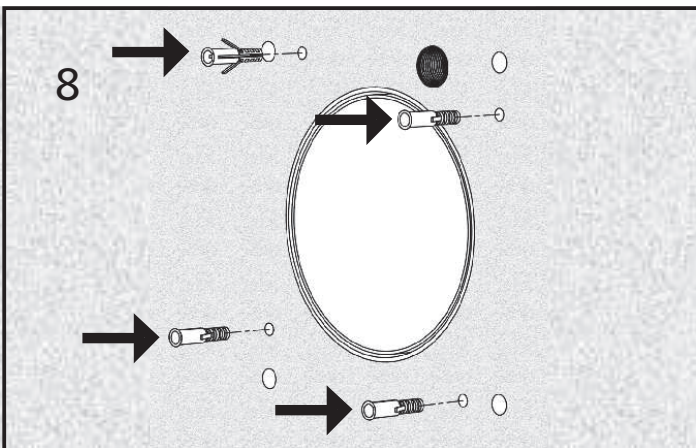
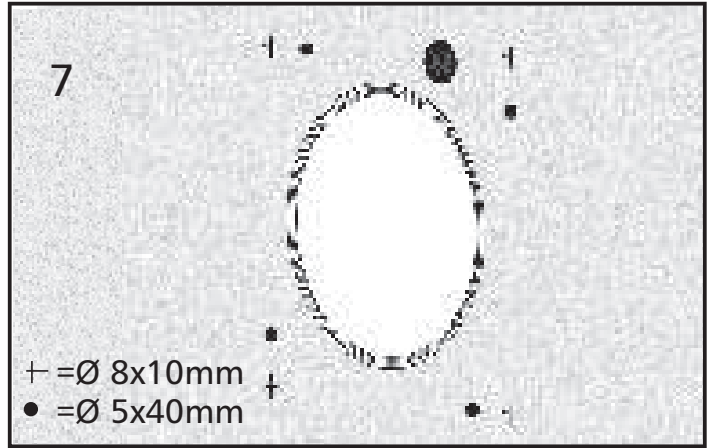
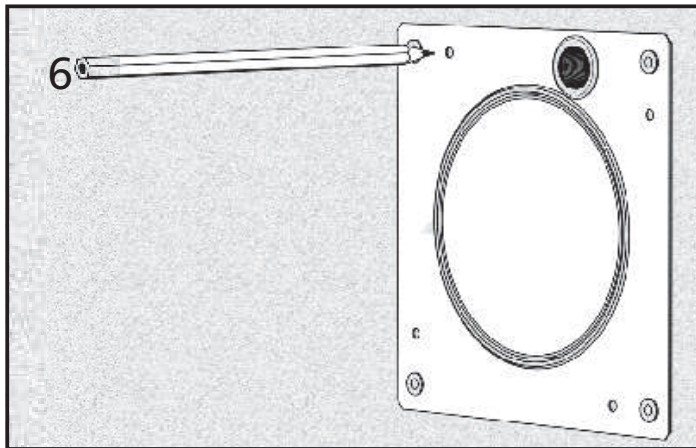
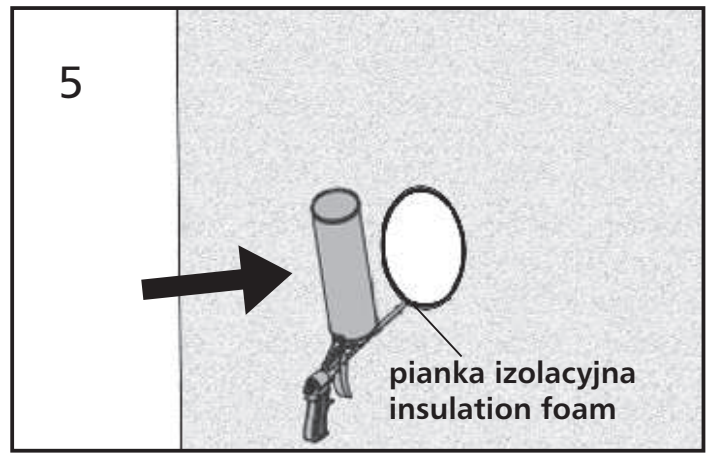
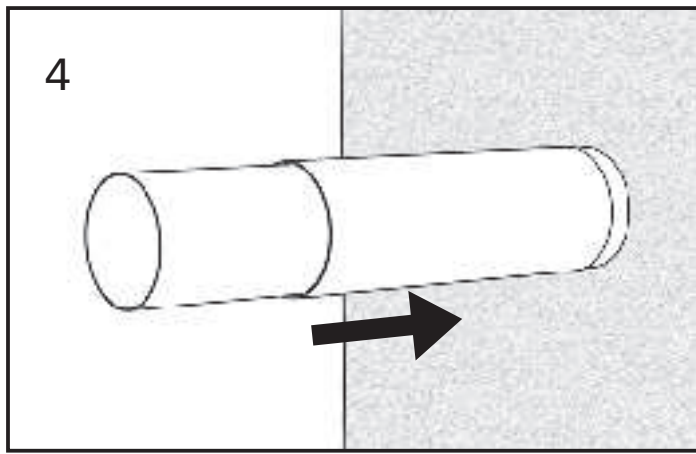
Electromagnetic Compatibility EN 55014-1(2006)+A1+A2; EN 55014-2(1997)+A1(2001)+A2(2008)+IS1(2007), EN 61000-3-2(2006)+A1(2009)+A2(2009); EN 61000-3-3(2008).

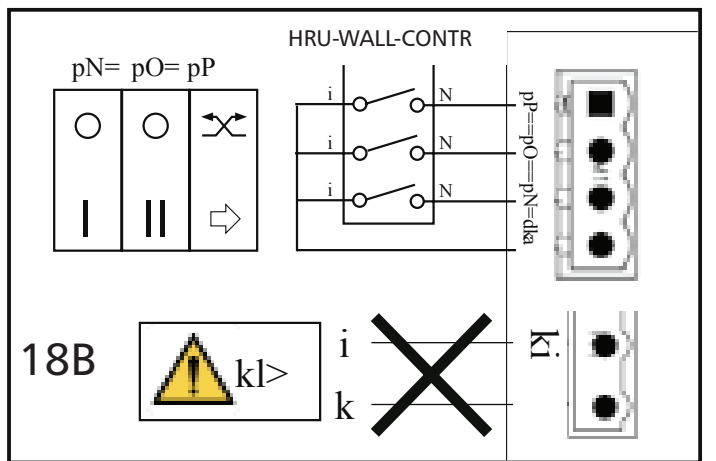
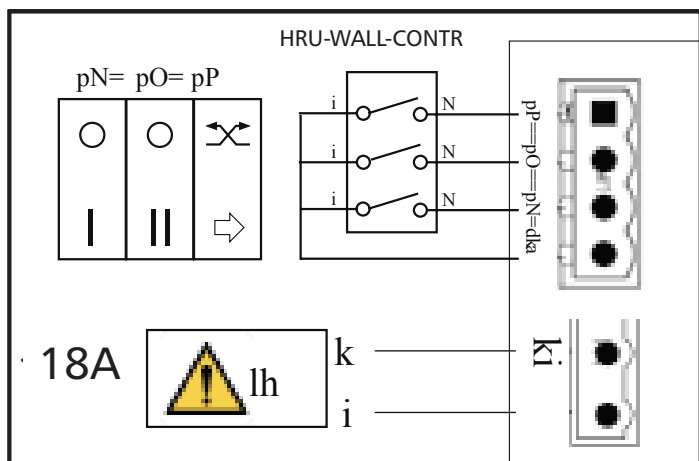
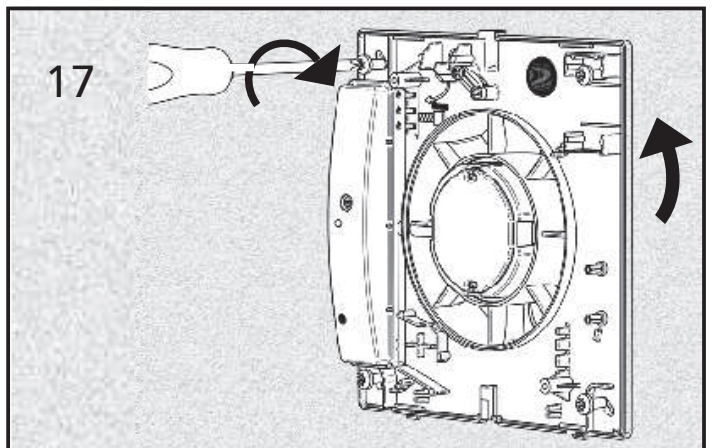
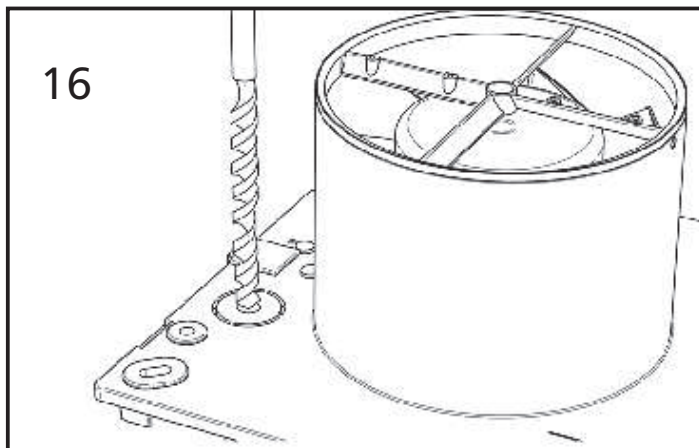
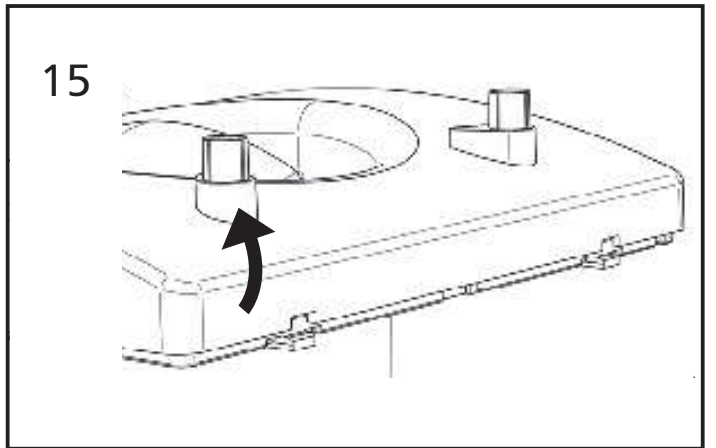
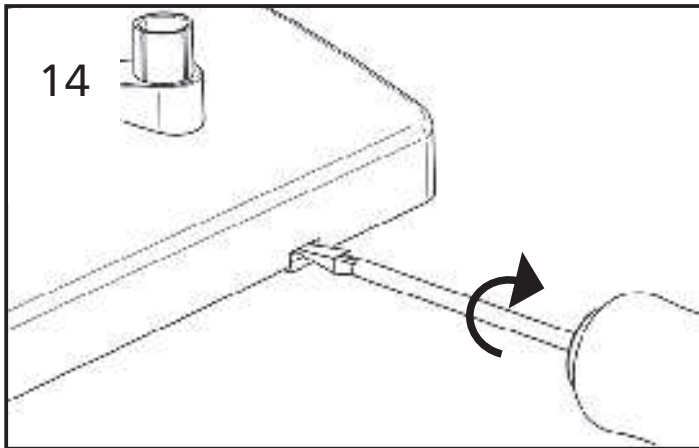
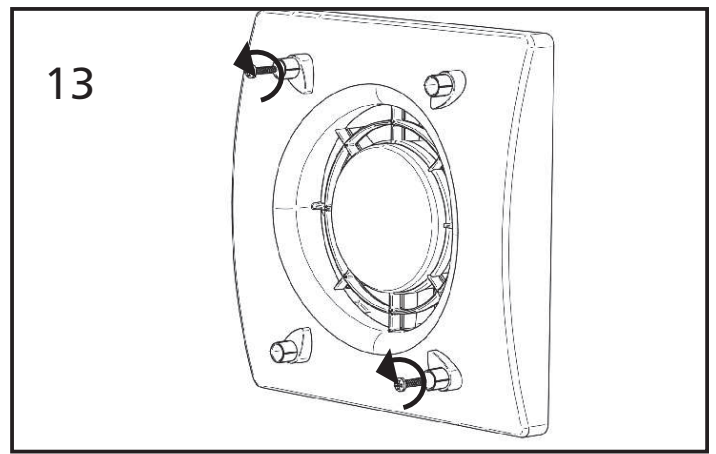
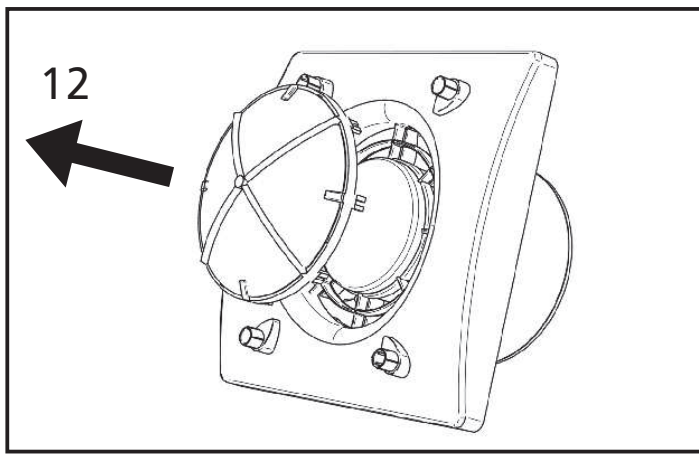


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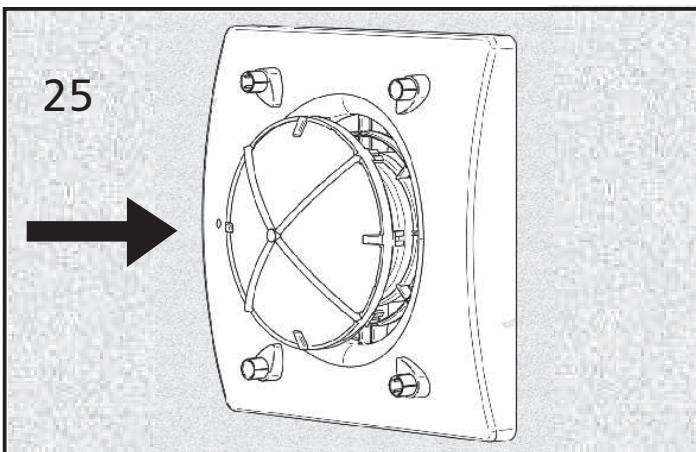
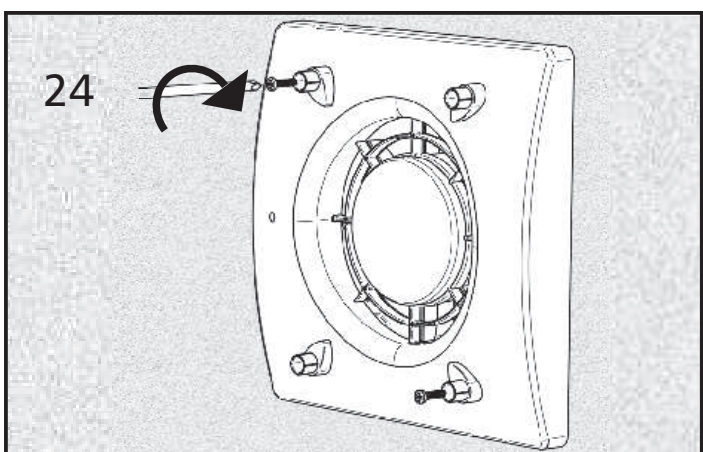
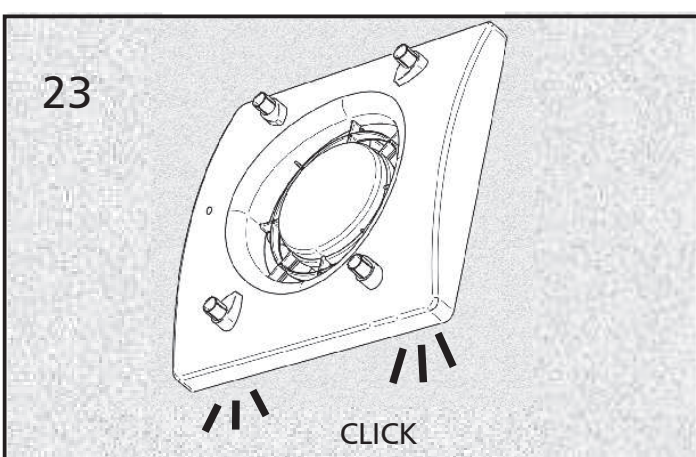
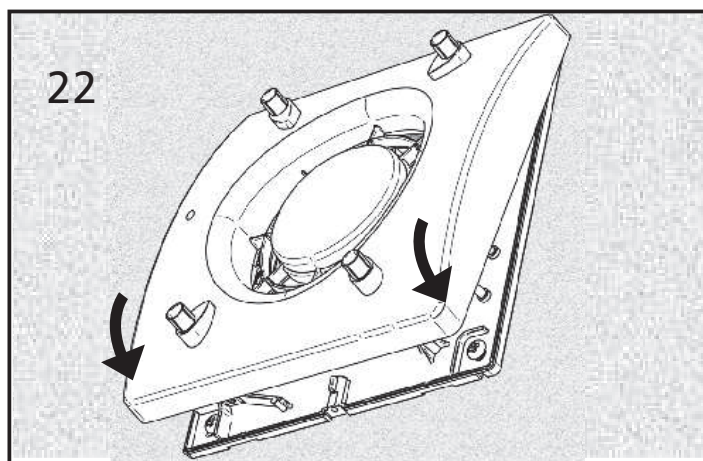
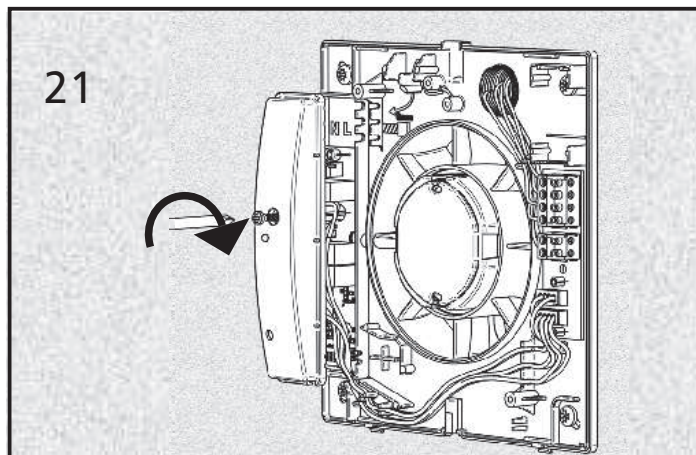
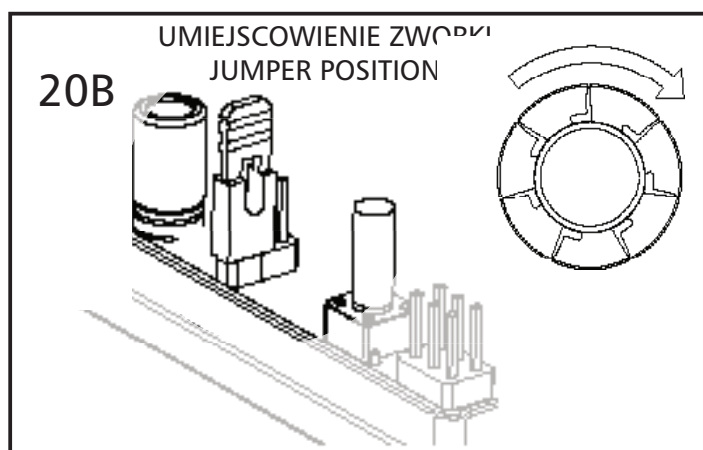
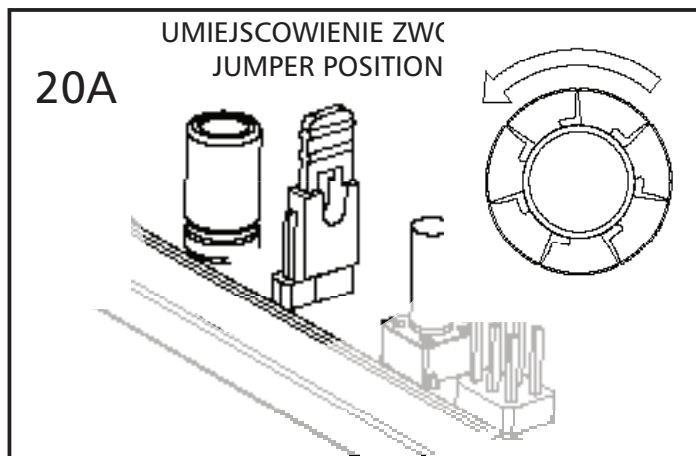
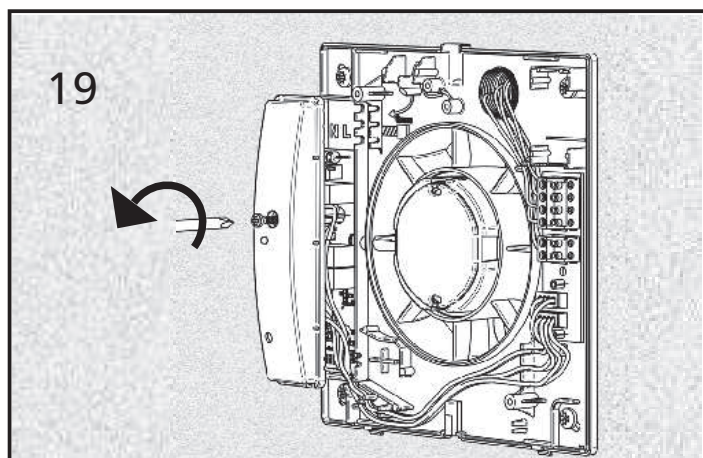


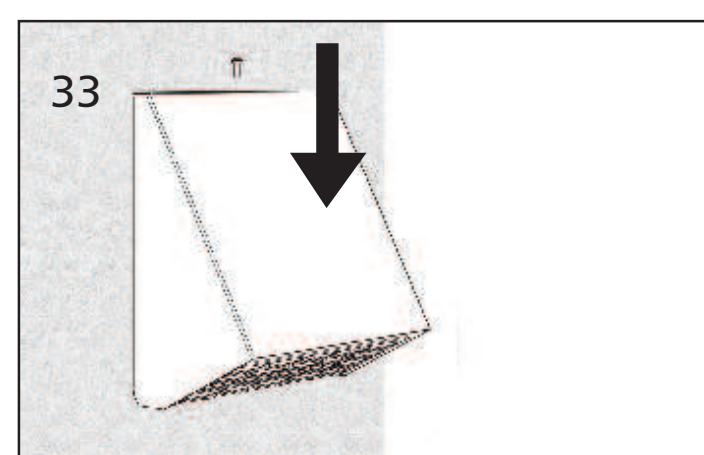
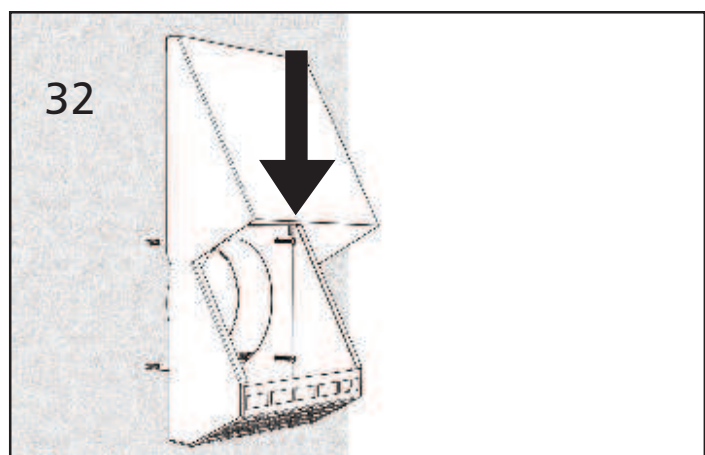
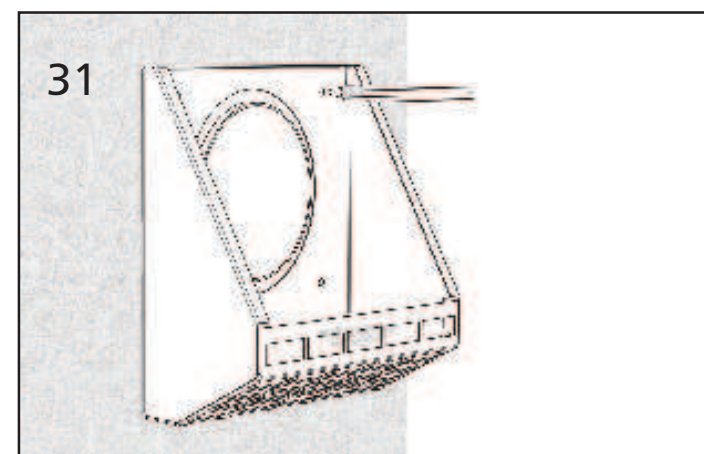
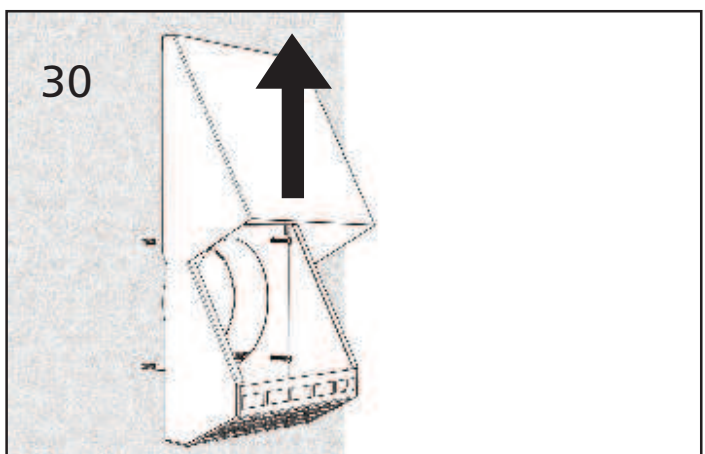
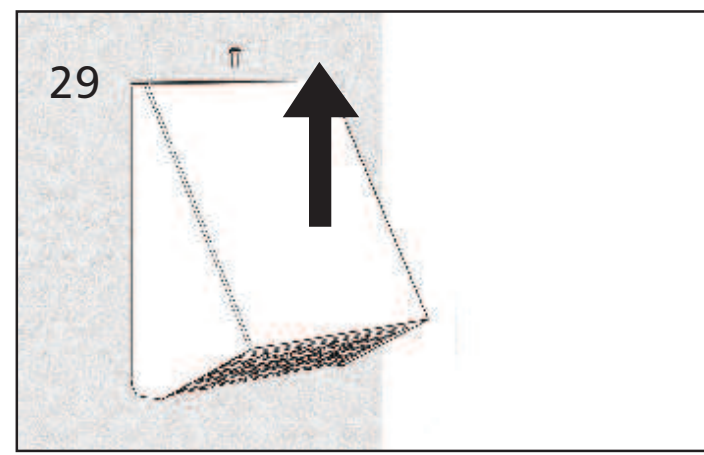
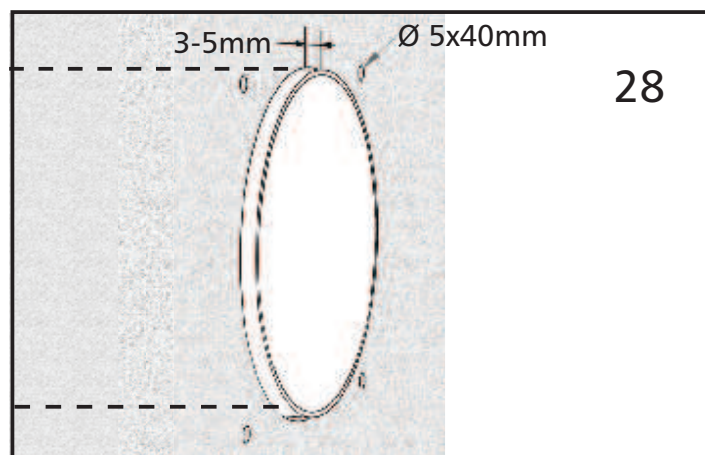
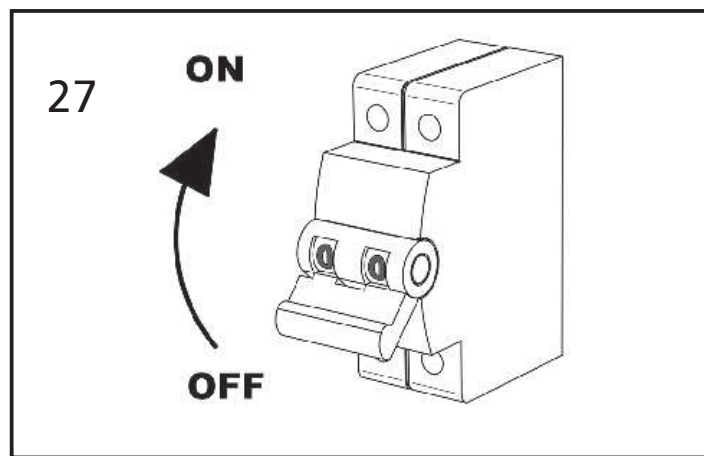
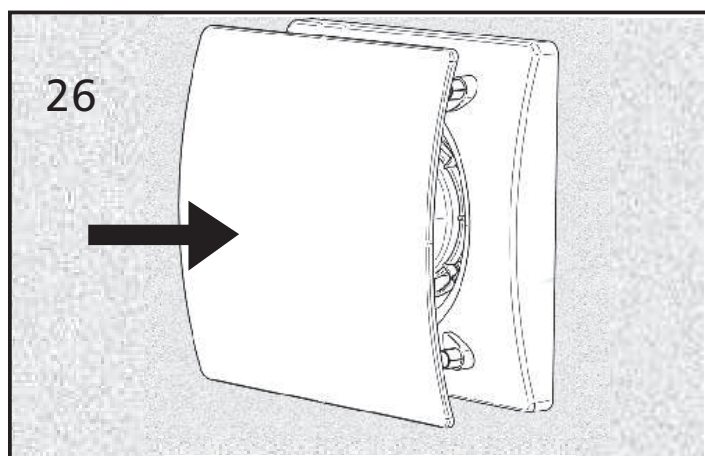










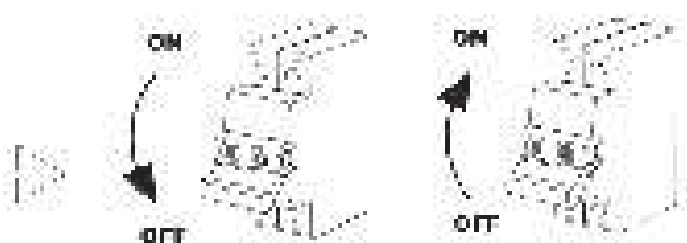
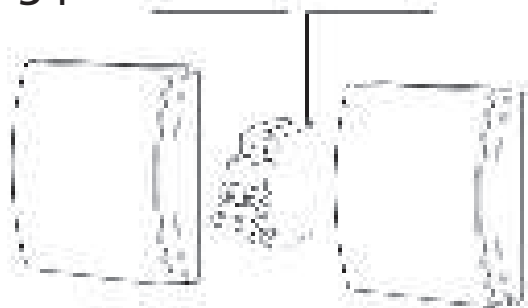




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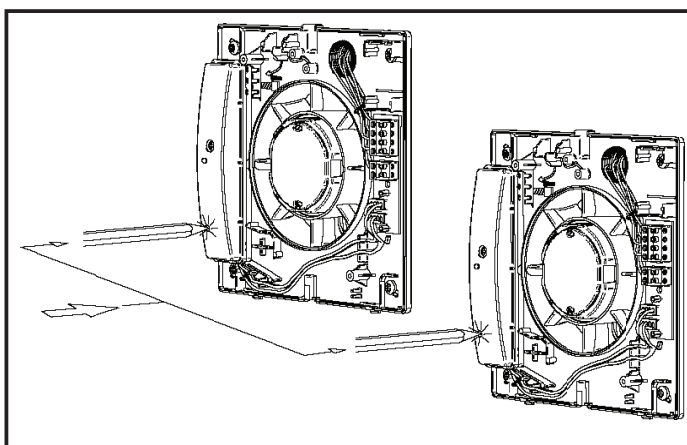
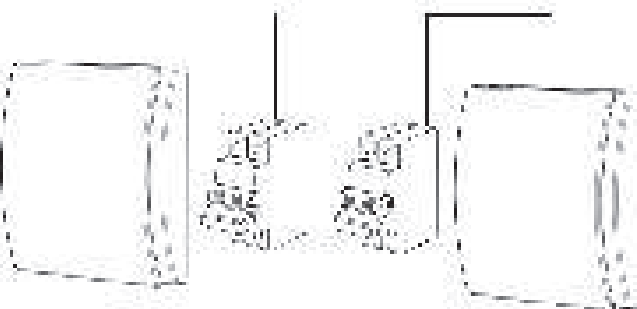
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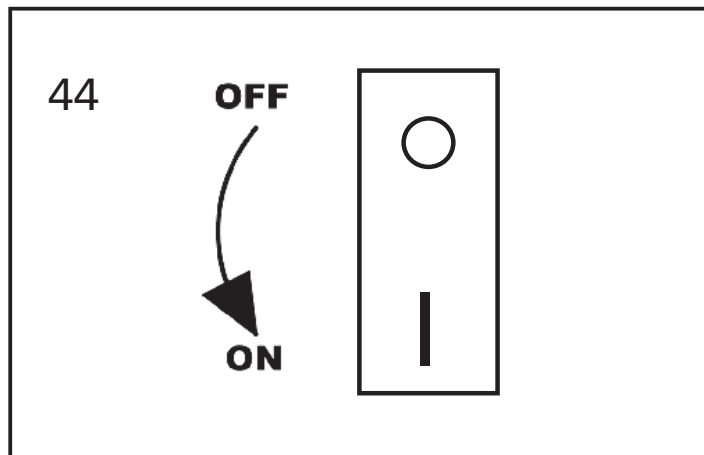
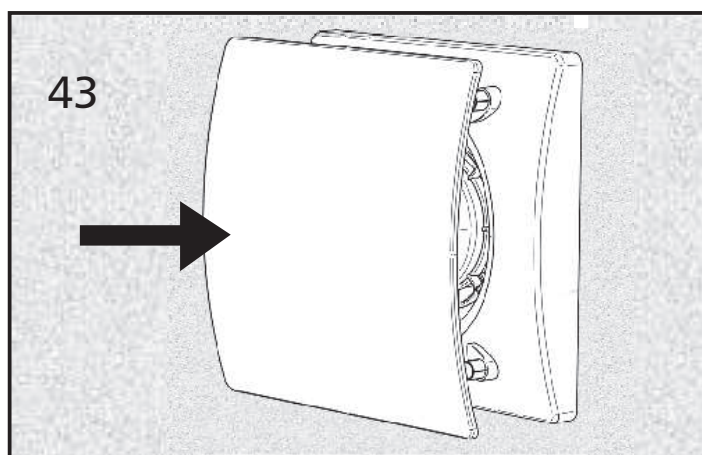
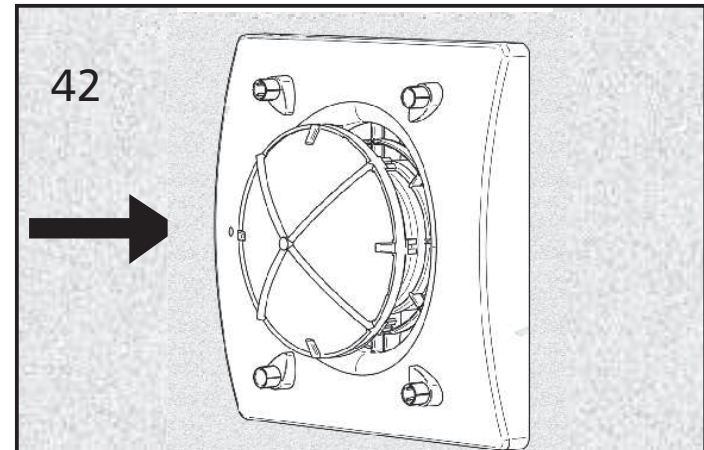
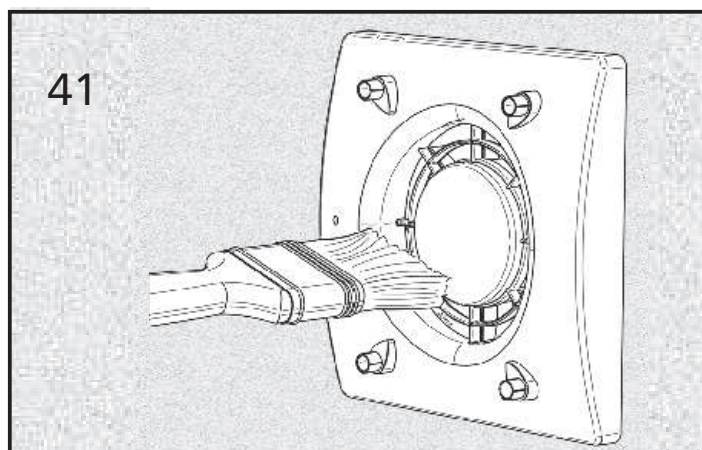
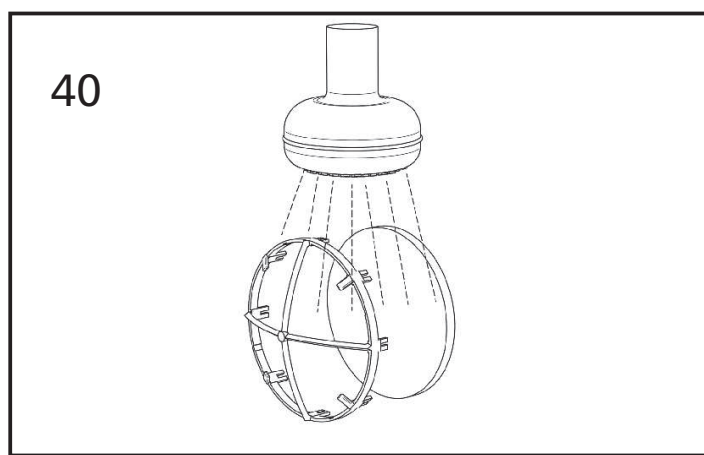
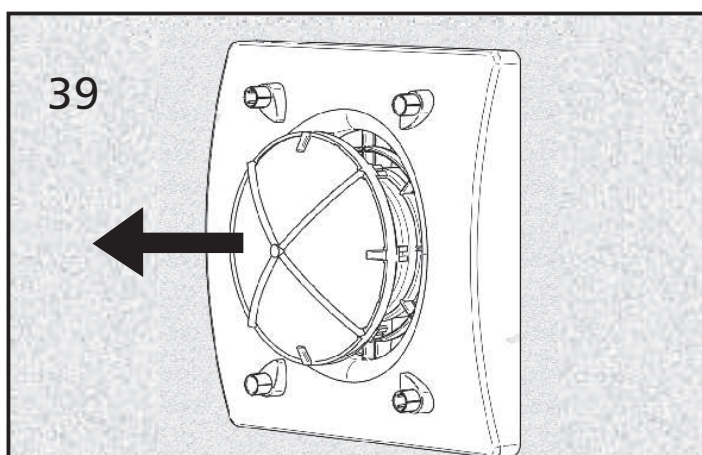
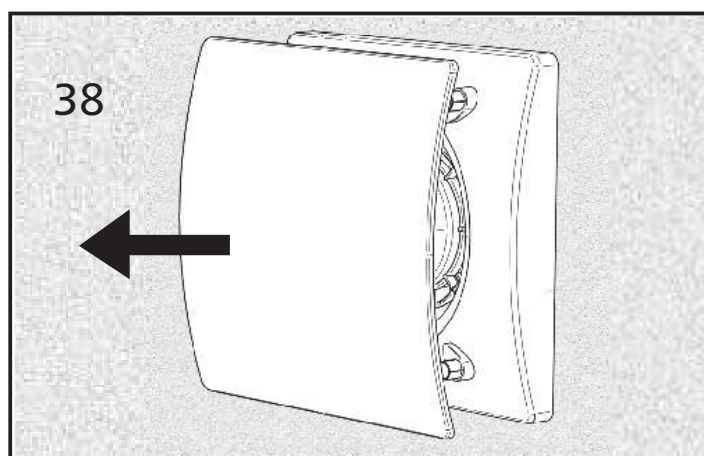
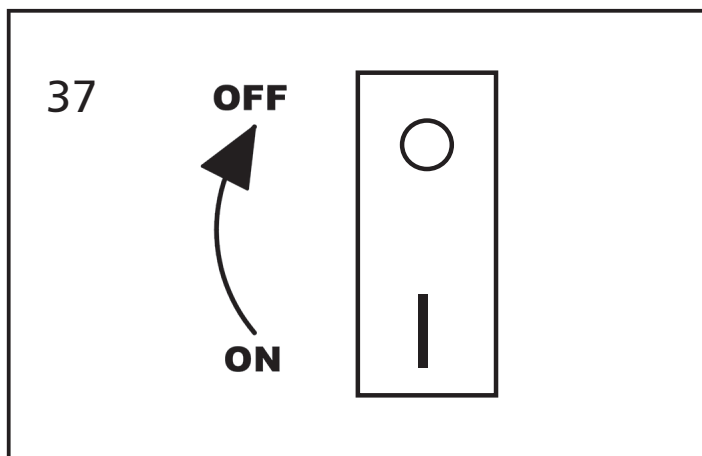
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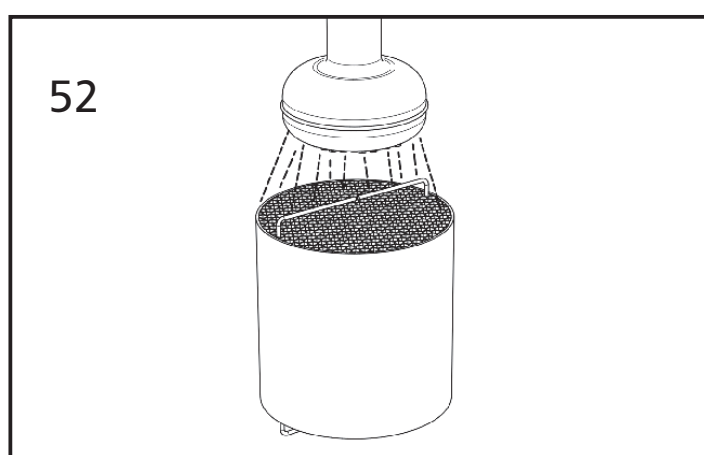
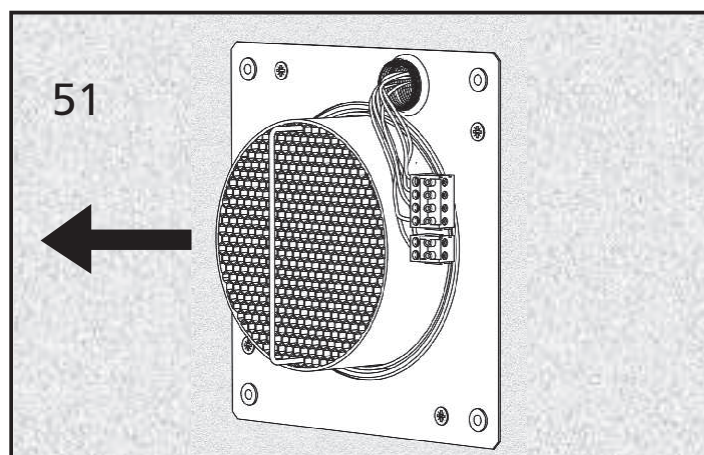
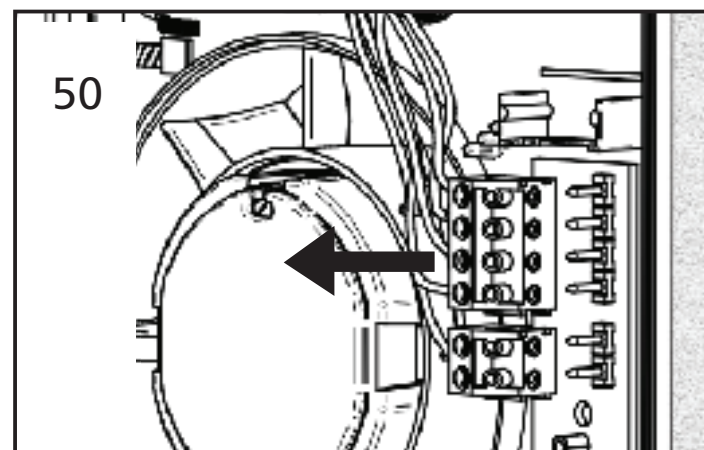
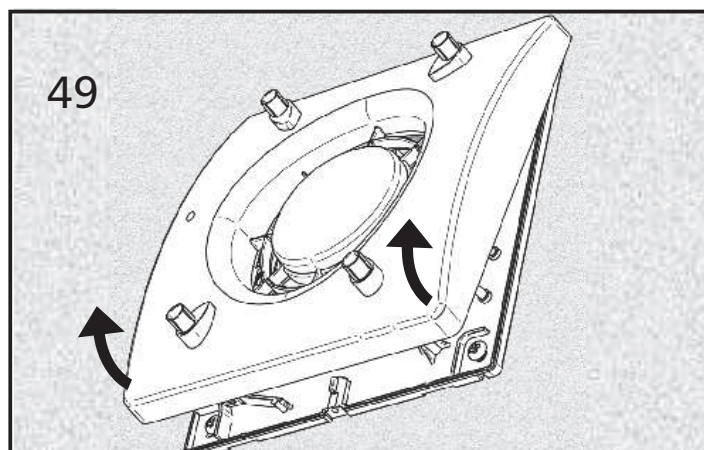
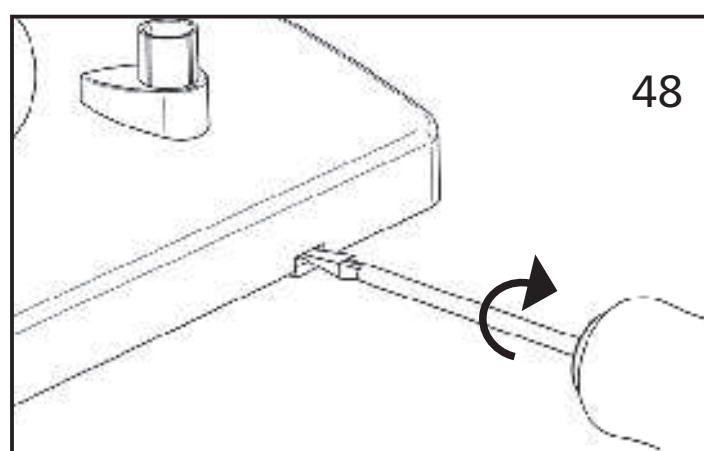
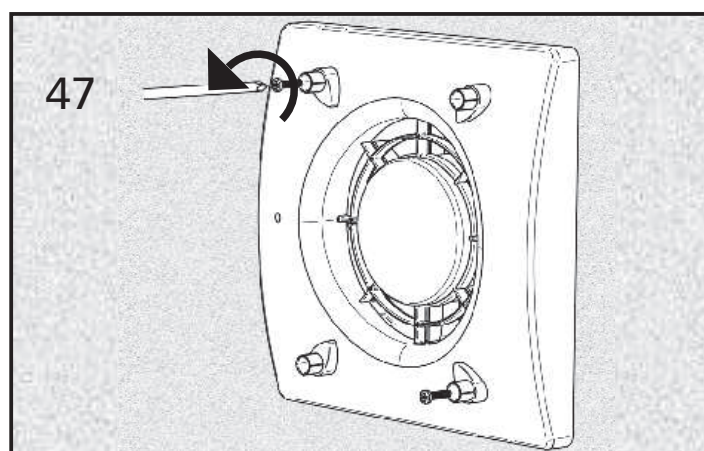
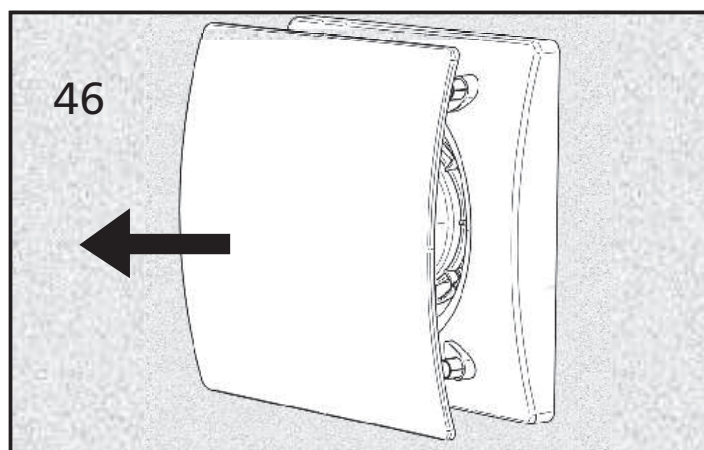
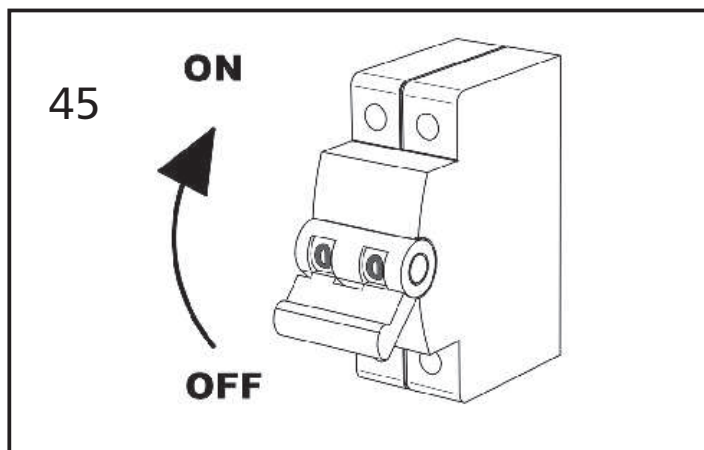
Może być wykonane przez użytkownika

Can be carried out by the user

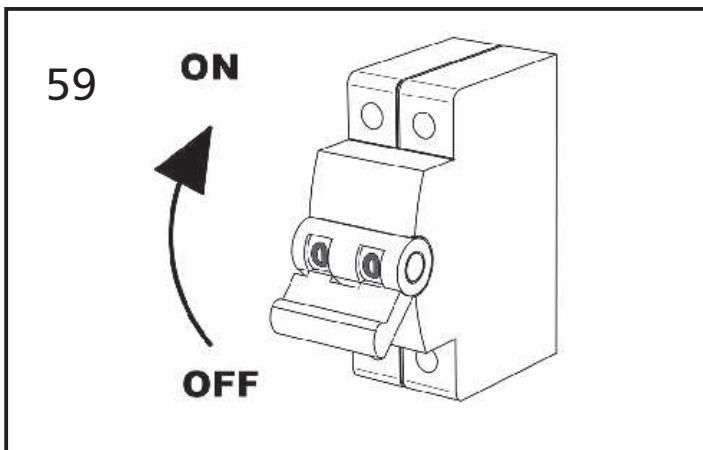
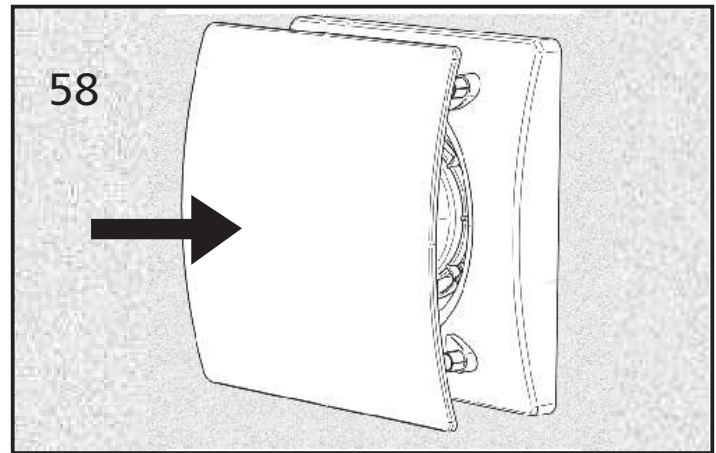
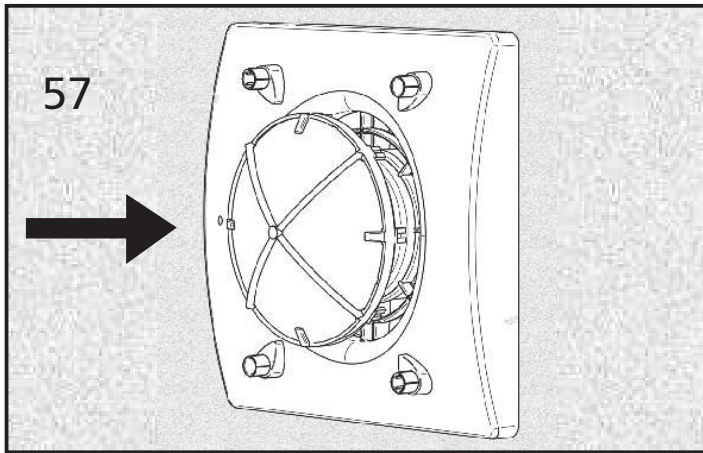
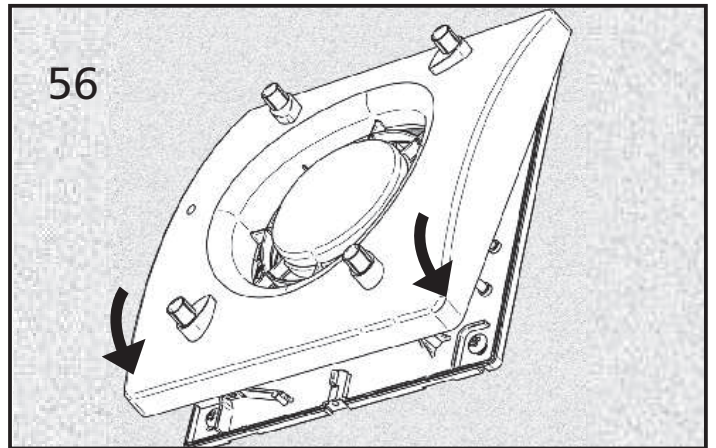
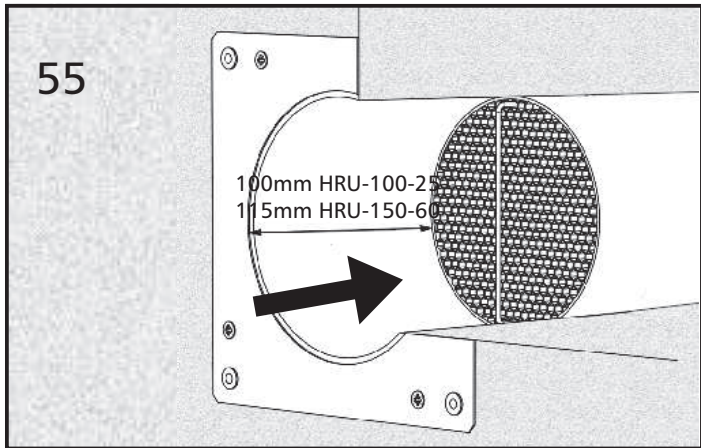
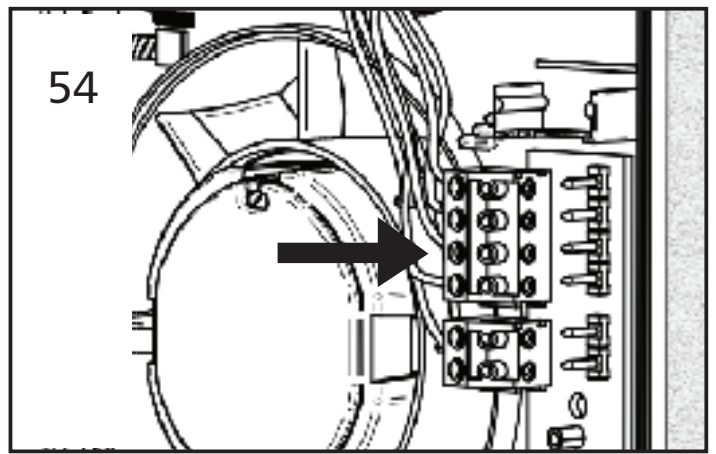
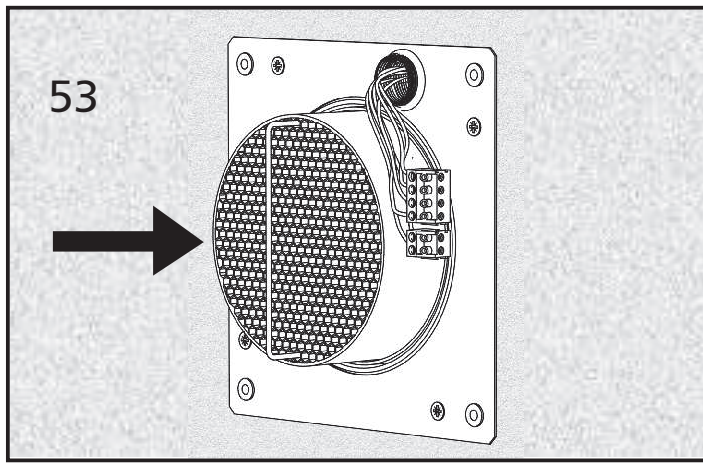


Musi zostać wykonany przez uprawnionego instalatora

Must be carried out only by technically qualified personnel









Rys. 60 HRU-WALL-CONTR

Fig. 60 HRU-WALL-CONTR

## UTYLIZACJA I RECYKLING



Informacje o utylizacji urządzeń pod koniec okresu ich użytkowania.

Produkt jest zgodny z Dyrektywą UE 2002/96/WE.

Symbol przekreślonego pojemnika na śmieci wskazuje, że po zakończeniu okresu użytkowania produktu nie należy go wyrzucać razem z innymi odpadami. W związku z tym użytkownik jest zobowiązany dokonać utylizacji przedmiotowego produktu w odpowiednich punktach zbiórki i utylizacji odpadów elektronicznych i elektrotechnicznych lub odesłać produkt do sprzedawcy detalicznego przy zakupie nowego równoważnego urządzenia.

Selektywna zbiórka wycofanego z użycia urządzenia w celu recyklingu, przetwarzania i unieszkodliwiania przyjaznego dla środowiska pomaga zapobiegać niekorzystnemu oddziaływaniu na środowisko oraz zdrowie i promuje recykling materiałów, z których wykonane jest urządzenie.

Niewłaściwa utylizacja produktu przez użytkownika może skutkować sankcjami administracyjnymi przewidzianymi przepisami prawa.

## 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.