

PULSAR



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EN	INSTALLATION, USE AND MAINTENANCE MANUAL.....	6
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EN Installation manual PULSAR

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.

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.
- 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.
- Install the product so that the impeller is not accessible from the air outlet side as verified by contact with the Test Finger (test probe "B" of the norm EN61032) in compliance with the current safety regulations.

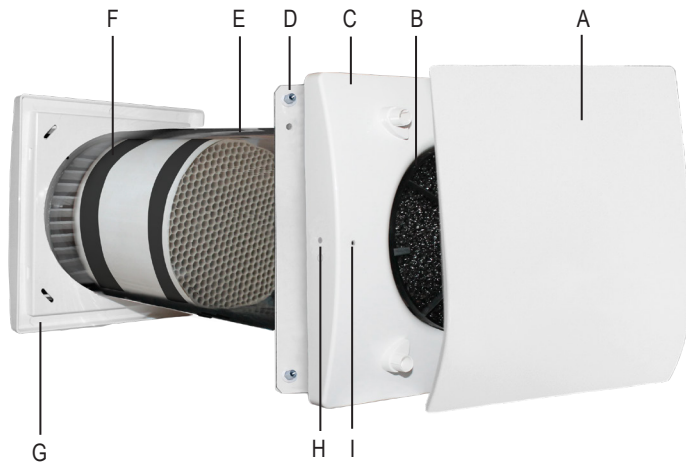
INTRODUCTION

PULSAR 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. For better airflow balance, it is recommended to use it in combination with another unit, with synchronised airflows: when one unit extracts air, the other supplies it. 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 wall.

- ⚠ The unit should operate continuously, and only stopped for maintenance or service. When heat exchange is not useful (for example in mild 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.

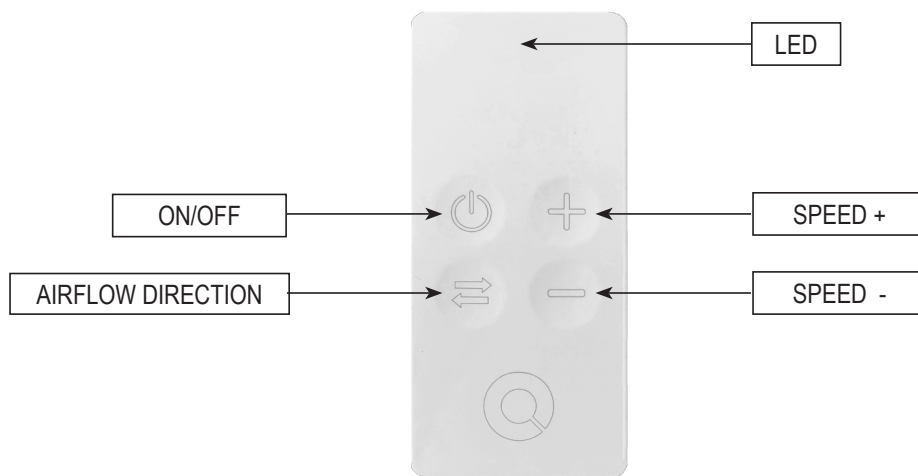
TECHNICAL SPECIFICATIONS

- Design front cover (A) and anti-dust filter (B) removable for cleaning without the use of tools.
- Inner ventilation unit (C) and wall support base (D) made of high quality, impact and UV-resistant ABS, colour RAL 9010.
- Smart humidity control.
- Unique design winglet-type impeller, providing enhanced aerodynamic properties, low noise and increased efficiency.
- High efficient reversible EC motor with integral thermal protection, mounted on sealed for life high quality ball bearings. Designed for continuous reversible running.
- Telescopic pipe (E) adaptable to the wall thickness.
- Regenerative heat exchanger with ceramic core (F) with high thermal efficiency.
- External grille (G) made of high quality, impact and UV-resistant ABS, colour RAL 9010, with anti-insect net and water drip guard.
- Integrated multi-colour led (I).
- Infra-red remote controller with touch technology (J) 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



OPERATION

REMOTE CONTROLLER (J)



The unit is supplied with an infrared remote controller (J) as standard.

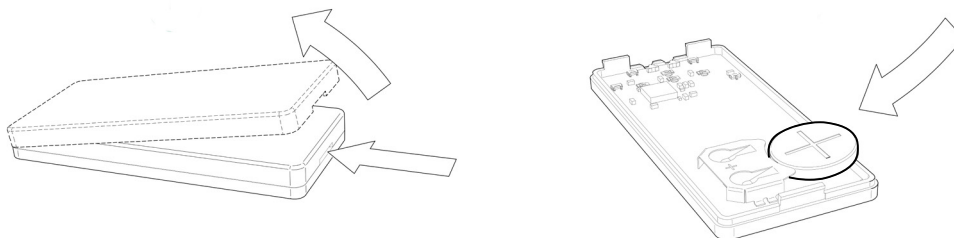
The IR receiver is placed on the left side of the ventilation unit (H): it is recommended to point the controller towards the receiver when any setting needs to be transferred.

The supplied remote control can also individually control other units.

To activate the remote controller it is necessary to insert a CR2032 type battery (not supplied).

If not operated, the remote control automatically enters standby mode to reduce battery consumption. To reactivate it, press and hold any button for a few seconds.

Any time the touch button is pressed, the LED on the remote controller flashes red.



UNIT

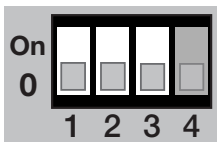
The unit operates in alternating cycles of approximately 70 seconds: it extracts indoor air to the outside, then reverses the airflow direction to supply outdoor air into the room for the same duration.

During the extraction phase, the warm indoor air passes through the ceramic heat exchanger, transferring its thermal energy to it.

In the subsequent supply phase, the cooler outdoor air flows through the preheated exchanger, absorbing part of the stored heat.

This process ensures effective heat recovery, reducing the energy losses typical of traditional ventilation systems.

After connecting the unit to the power supply (fig. 19C), it emits a prolonged sound, and the onboard LED (I) turns green.



The functionalities can be set/enabled through the Dip Switches on the electronic circuit.

⚠ During this operation the unit must be disconnected from the main power supply.

DIP SWITCH		
1	airflow direction	
0	extract	default
On	supply	

DIP SWITCH		
2	LS speed input	
0	speed 3	default
On	speed 2	

DIP SWITCH		
3	acoustic signal	
0	enable	default
On	disable	

Through the IR remote control, the functions described in the next table can be managed:

FUNCTIONALITY	DESCRIPTION	CONTROLLER BUTTON	LED	ACOUSTIC SIGNAL
ON/OFF				
	The unit can be switched on		red, double	short, double
	The unit can be switched off		red, long	long
Continuous running speed				
	PULSAR 100	PULSAR 150		
Night Speed	5m³/h	7m³/h		green short
Speed 1	10m³/h	20m³/h	and	green short
Speed 2	15m³/h	40m³/h	and	green short
Speed 3	25m³/h	60m³/h		green short
Night mode				
	The unit operates at the lowest speed to ensure maximum acoustic comfort. When this function is activated, the smart humidity control is disabled.		-	-
Free cooling				
	The unit runs in “extract only” or “intake only” to avoid heat recovery when not needed. To set the “exhaust only” or “supply only” mode, adjust DIP switch 1. When the free-cooling function is active, the smart humidity control is disabled.		flashing green	-
Smart humidity control				
	When the humidity sensor detects a quick variation of the Relative Humidity level, the running speed automatically increases to an intermediate level between the selected speed and the next one. 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: if speed 3 has been selected, no speed increase happens. To disable/enable this functionality, press the button for 5 seconds: when the function is disabled, the unit emits a long beep; when it is enabled, it emits a double beep.	-	flashing blue	-

ADDITIONAL FUNCTIONALITIES

EXTERNAL CONTROL (LS)

By connecting an external control device (light switch, dedicated switch, or room sensor) as shown in the wiring diagram in Fig.19D, speed level 2 or 3 is activated, depending on the setting of DIP switch 2, maintaining the set airflow direction (alternating or supply/exhaust).

When the control signal is active, the onboard LED turns solid blue.

When the LS control is deactivated, the unit returns to the speed it was operating at previously.

When the LS control is active, the smart humidity control is disabled.

SYNCHRONIZATION

Two or more units (up to 10), connected to the same main power line, can operate with synchronized airflow direction (one extracts and the other supplies, and vice versa) without the need for any electrical wiring between them.

The airflow direction at the first startup of the unit is set by adjusting dip switch 1.

Other functions, including operating speed, remain individually controlled for each unit.

ACOUSTIC SIGNAL

When a command is sent to the unit, an acoustic signal is emitted as indicated in the table. To enable or disable the acoustic signal, adjust DIP switch 3.

ONBOARD LED (H)

The onboard LED (H) lights up in different modes when one of the following functions is active: free-cooling, LS control, or smart humidity control.

To enable or disable the onboard LED (H), press and hold the button for 5 seconds. When disabled, the unit emits a long beep; when enabled, it emits a double beep.







MAINTENANCE

Filter cleaning must be performed by the user every 3 months, following the instructions on fig. 30-39. The filter should be replaced once a year. The frequency may vary depending on indoor and outdoor environmental conditions.

SERVICE

The heat exchanger must be cleaned only by qualified personnel, following applicable local regulations, and with the main power switch turned off (fig.40-55). This operation is recommended at least once a year; frequency may vary according to indoor and outdoor environmental conditions.

TROUBLE SHOOTING

ANOMALY	POSSIBLE CAUSE	SOLUTION
The unit does not operate	There is no voltage	Check that the unit is correctly wired to the main supply
The remote controller does not operate	Batteries are not present	Check that batteries are in there
	Batteries are wrongly positioned	Position the batteries correctly
	Batteries are dead	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 (H)
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  for 5 seconds (long beep)
Smart humidity control does not operate.	The smart humidity control is disabled	To activate press  for 5 seconds (double beep)
	The free-cooling is active	To deactivate press  , and return to alternate airflow mode
	The LS control is active	Deactivate the LS external control
	The Night speed is active	Press  to change the speed
LED (H) green flashing	The free-cooling function has been activated.	Press  to deactivate it and return to alternating airflow mode
To disable the acoustic signal	-	Adjust DIP switch 3
To disable the onboard LED	-	Press  for 5 seconds (long beep)

DISPOSAL AND RECYCLING



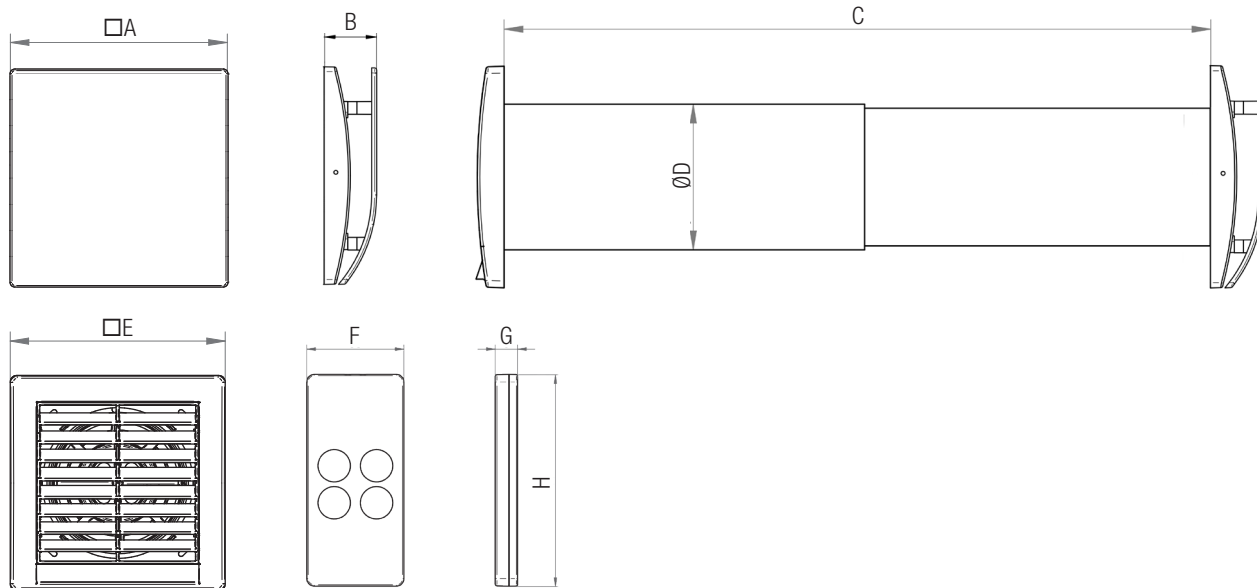
Information on disposal of units at the end of life.

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

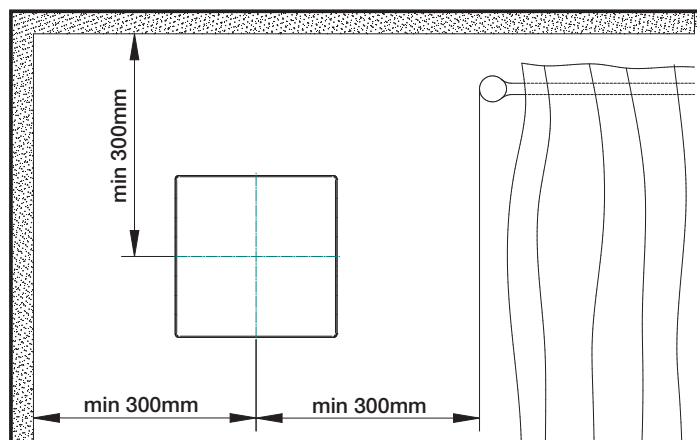
The symbol of the crossed-out dustbin indicates that this product must be collected separately from other waste at the end of its life. The user must, therefore, dispose of the product in question at suitable electronic and electro-technical waste disposal collection centres, or else send the product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

DIMENSIONI - DIMENSIONS (mm) -

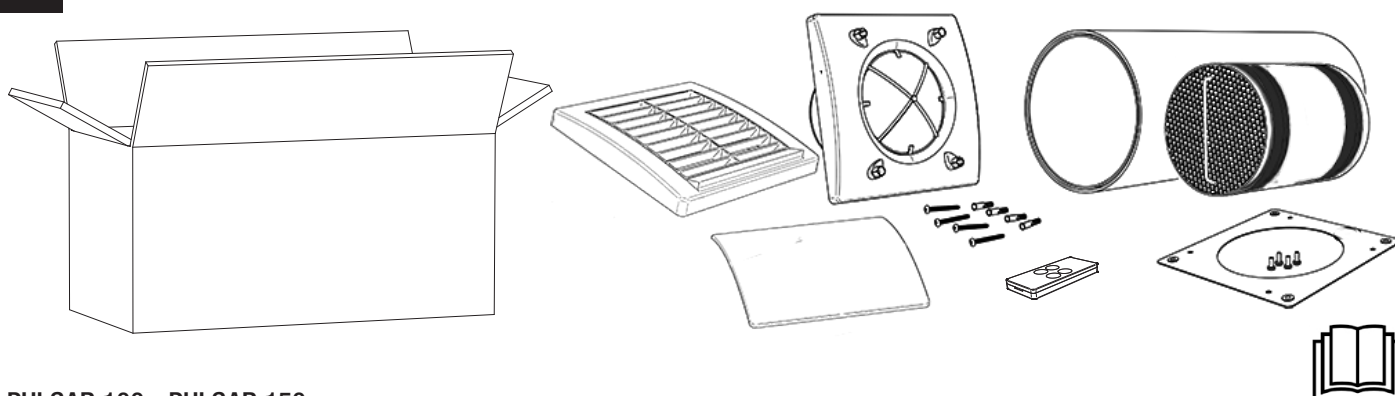


	□A	B	C	ØD	□E	F	G	H
PULSAR 100	164	46	300÷570	110	164	39	9	65
PULSAR 150	218	51	300÷570	159	218	39	9	65



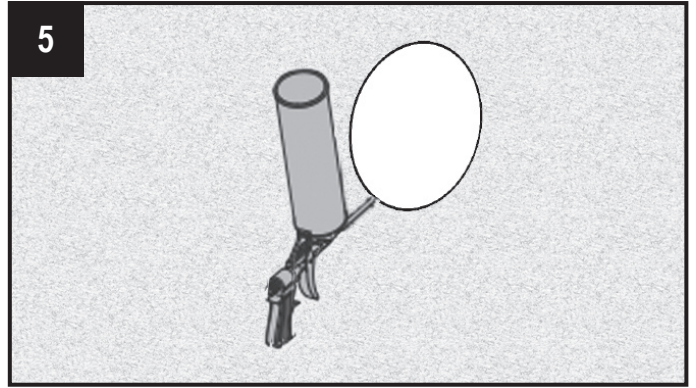
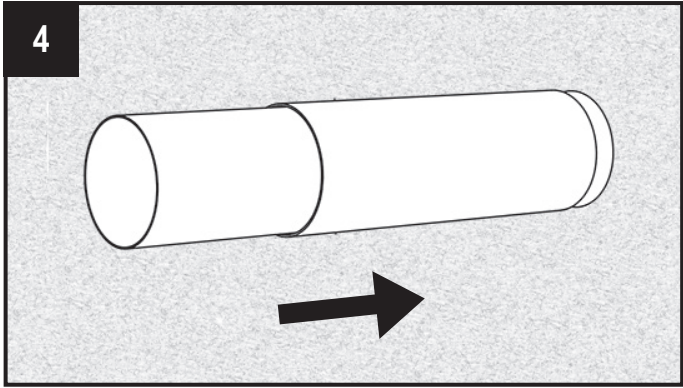
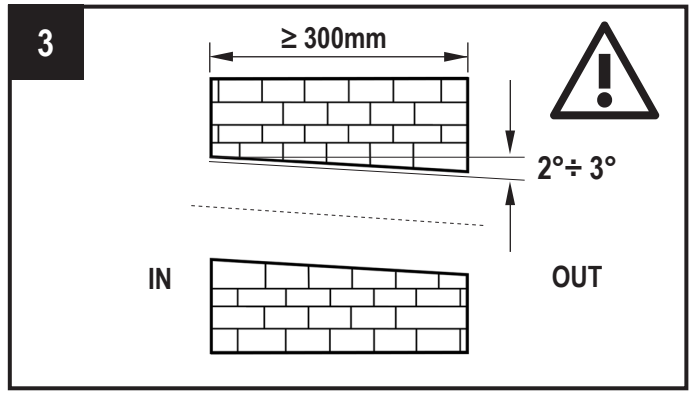
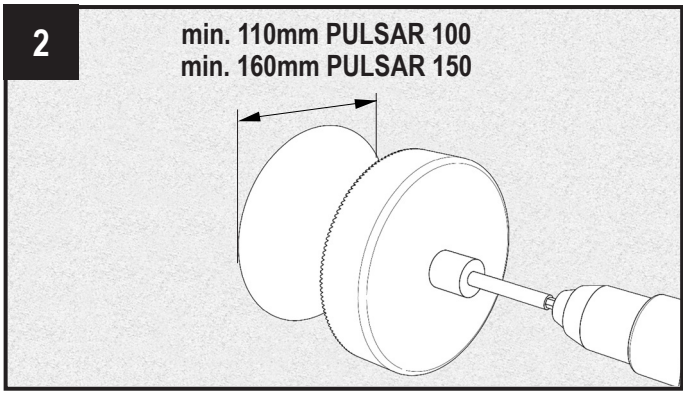
INSTALLAZIONE - INSTALLATION

1



PULSAR 100 - PULSAR 150

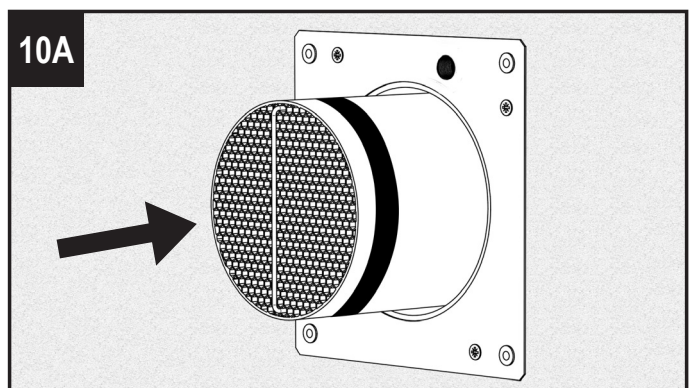
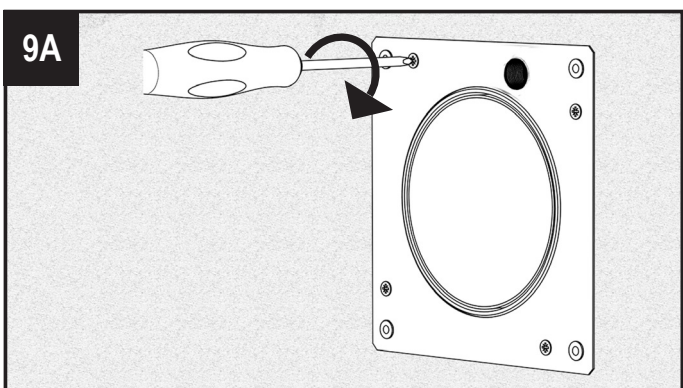
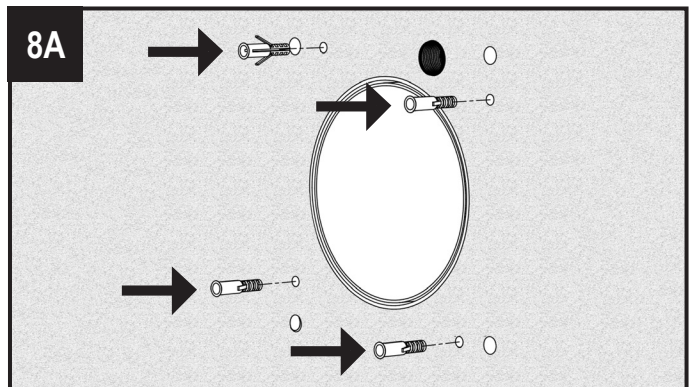
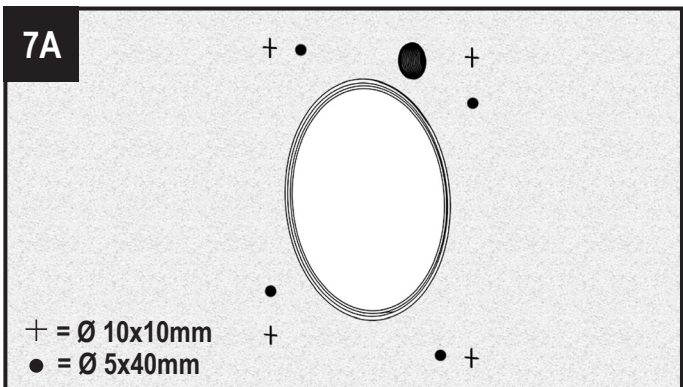
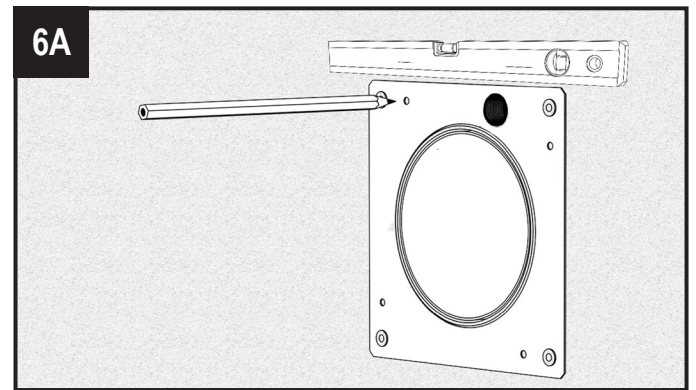


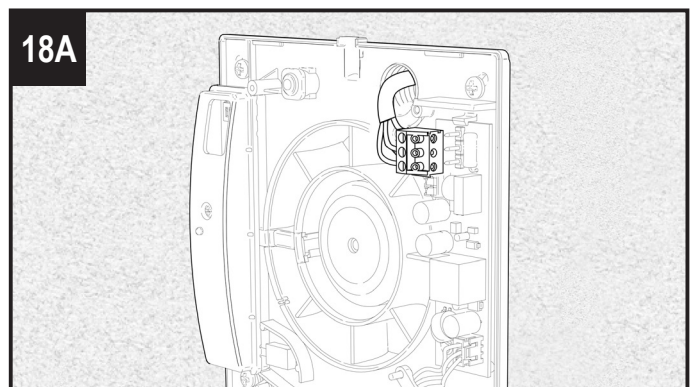
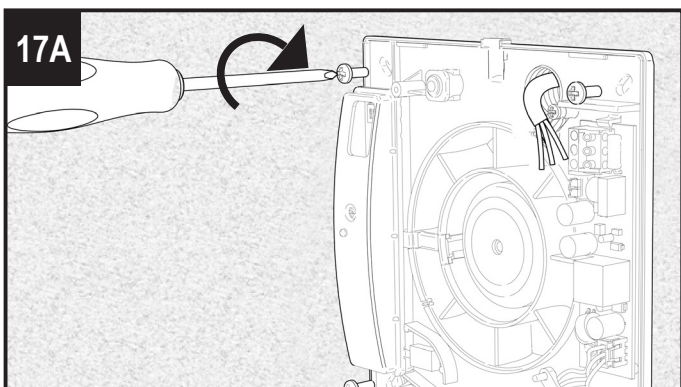
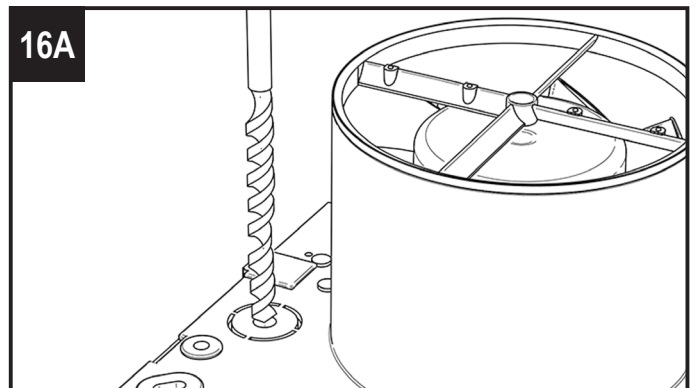
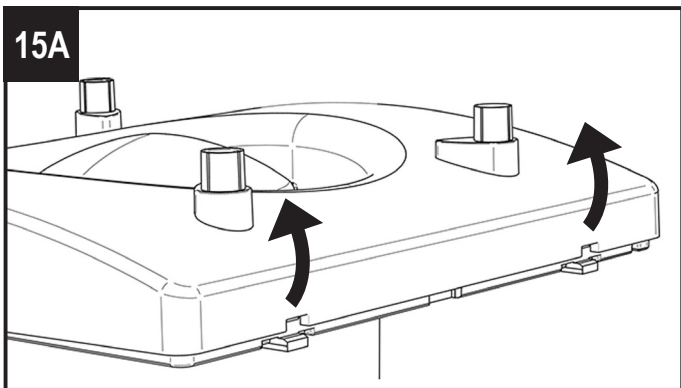
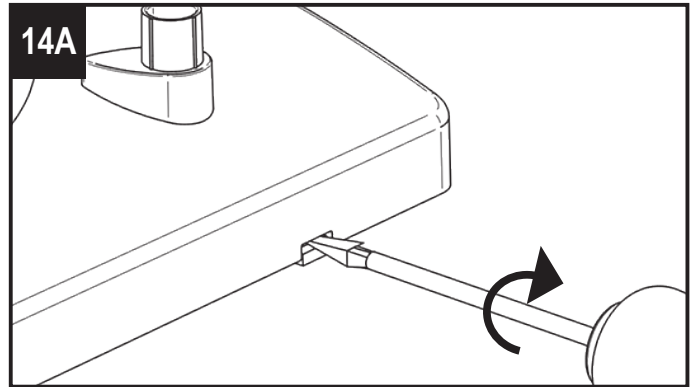
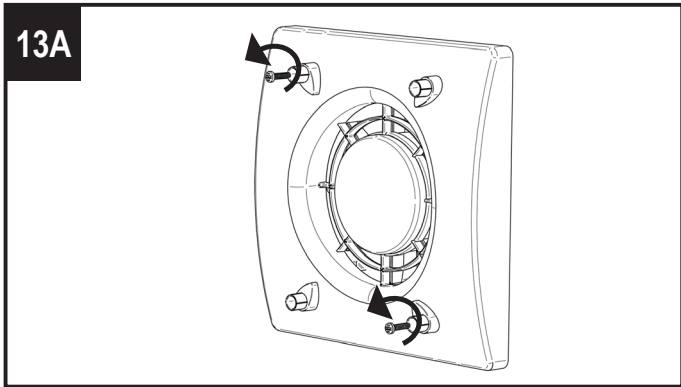
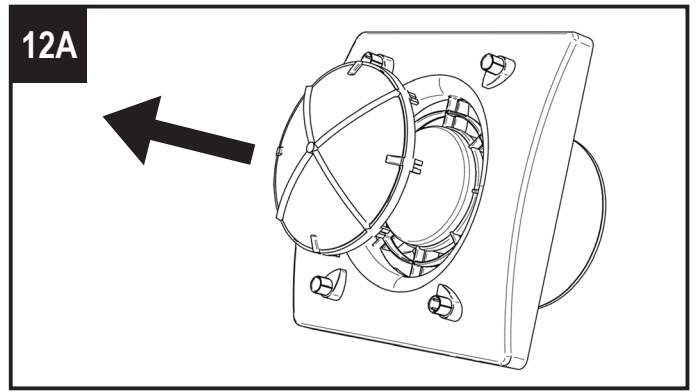
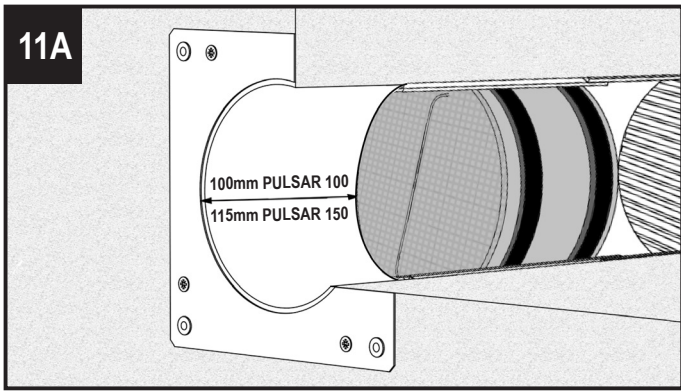


CAVO SOTTOTRACCIA
RECESSED CABLE ENTRY
ENTRÉE DE CÂBLE ENCASTRÉE

A

H03VV-F ; H05VV-F
2 X 0,5 ÷ 1,5 mm²

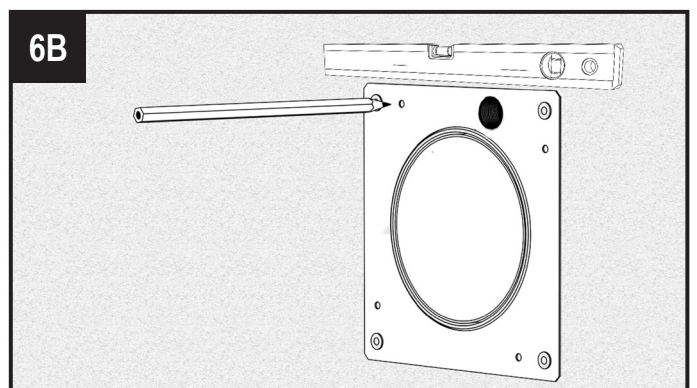


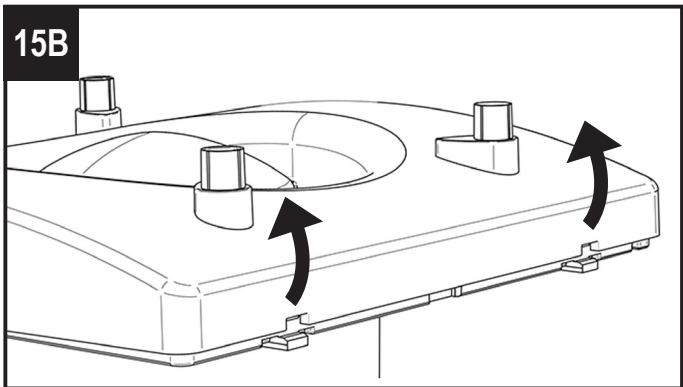
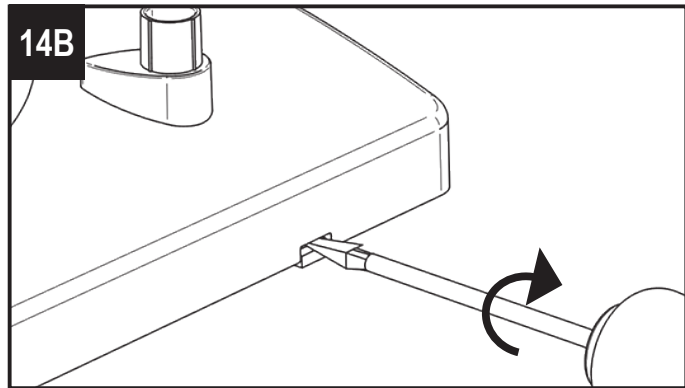
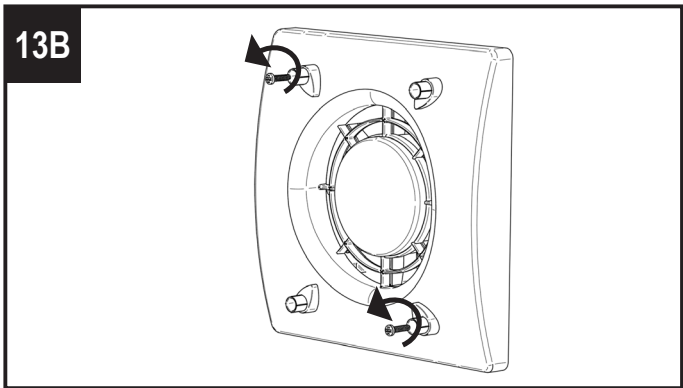
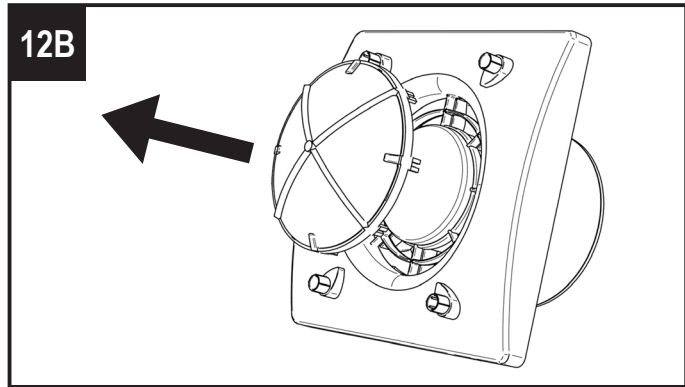
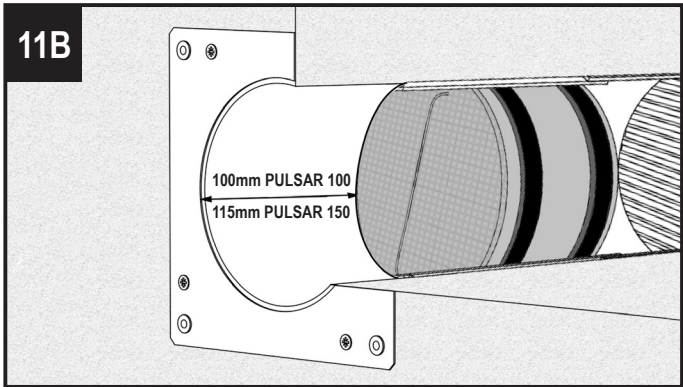
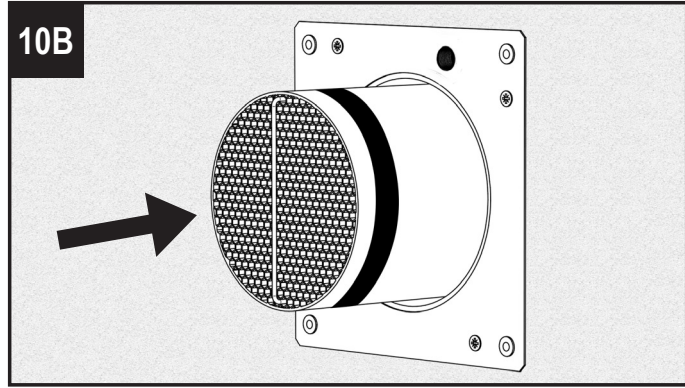
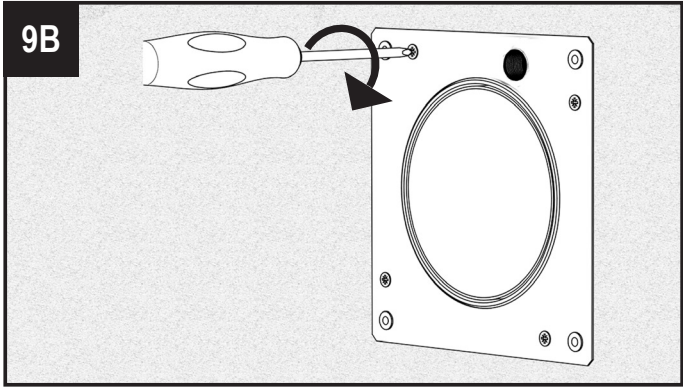
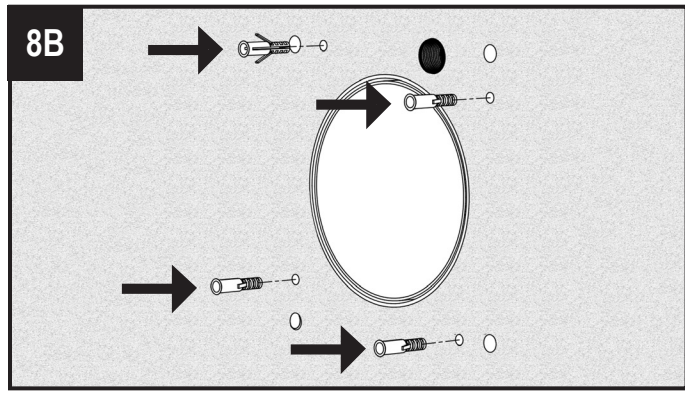
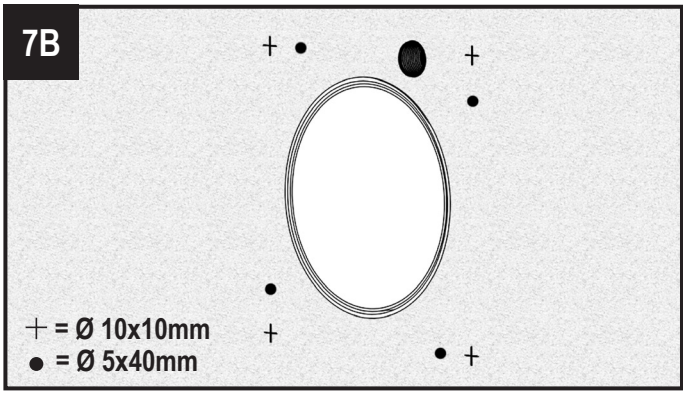


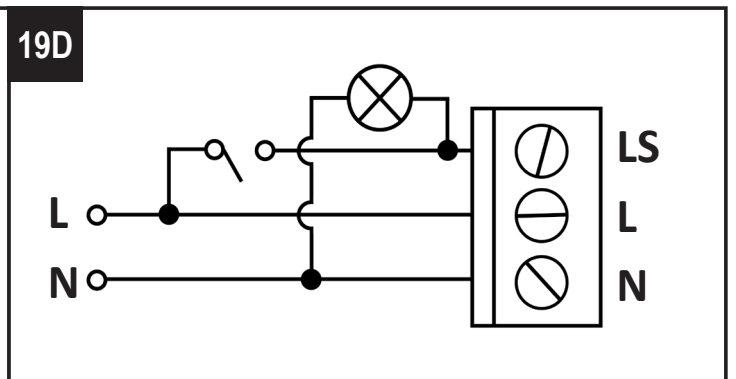
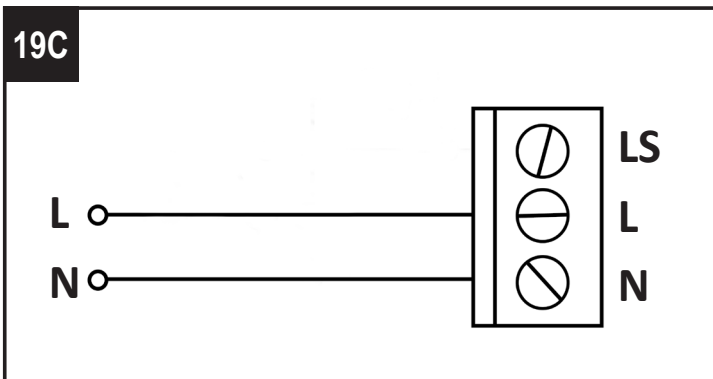
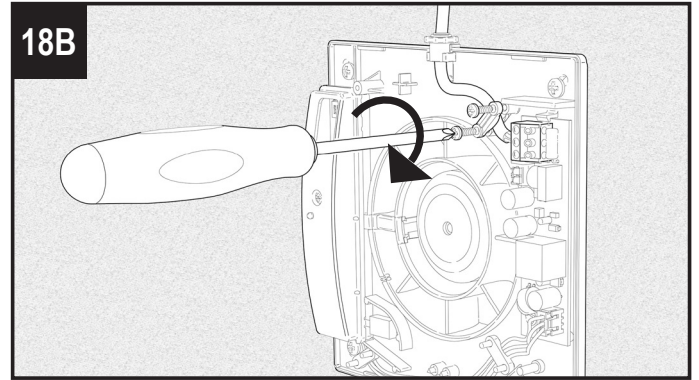
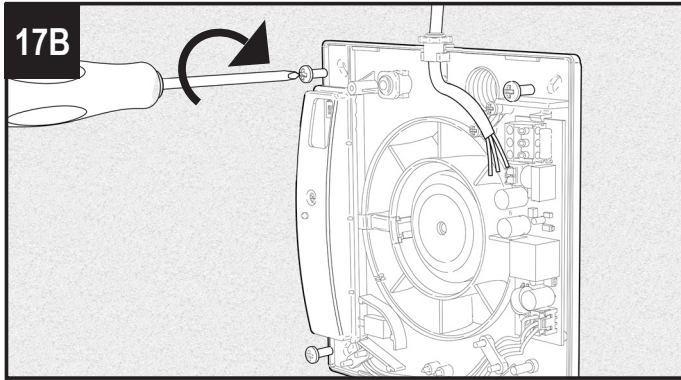
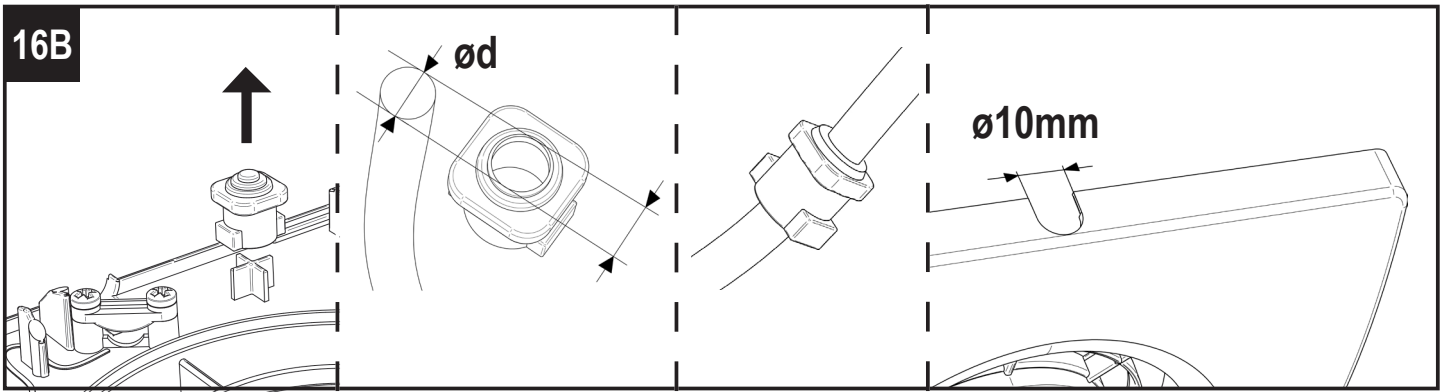
**CAVO A PARETE
SURFACE CABLE
CÂBLE EXTÉRIEUR**

B

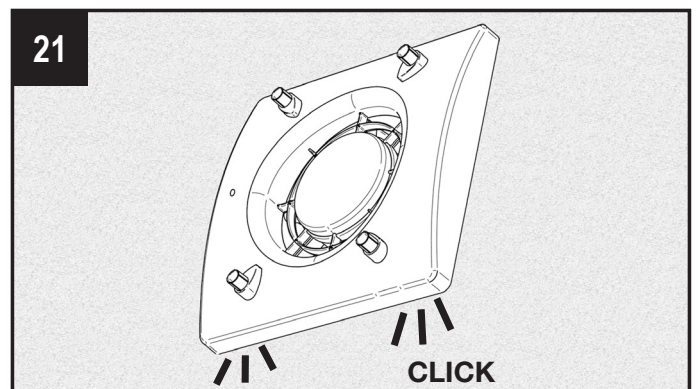
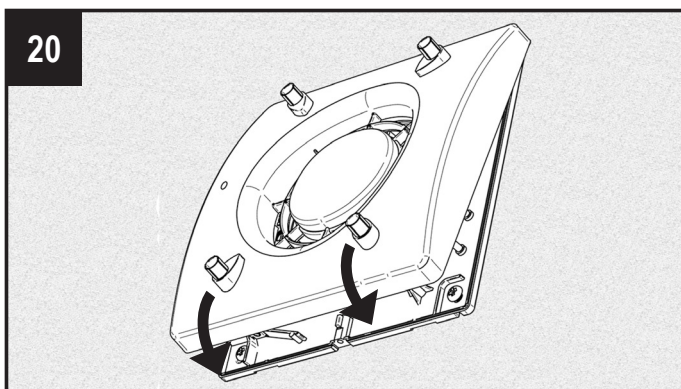
**H03VV-F ; H05VV-F
2 X 0,5 ÷ 1,5 mm²**

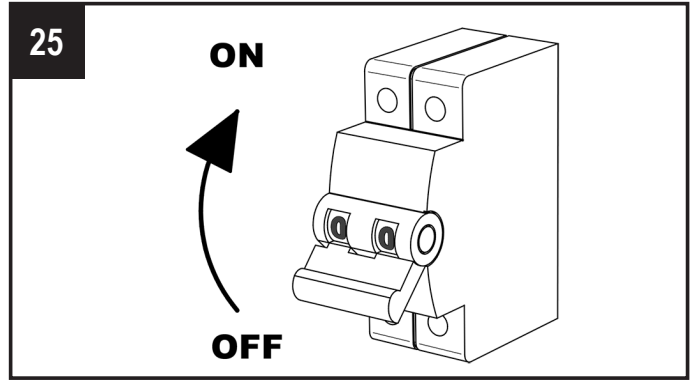
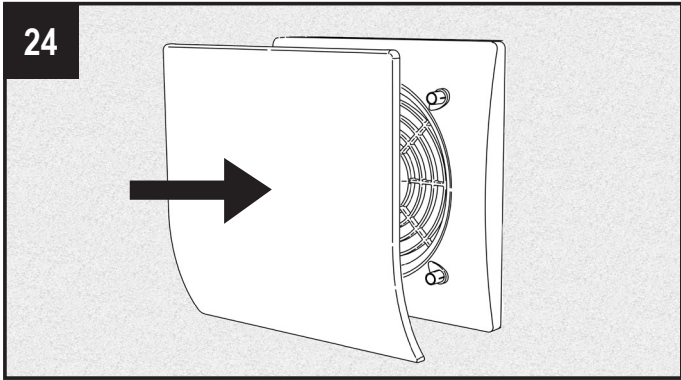
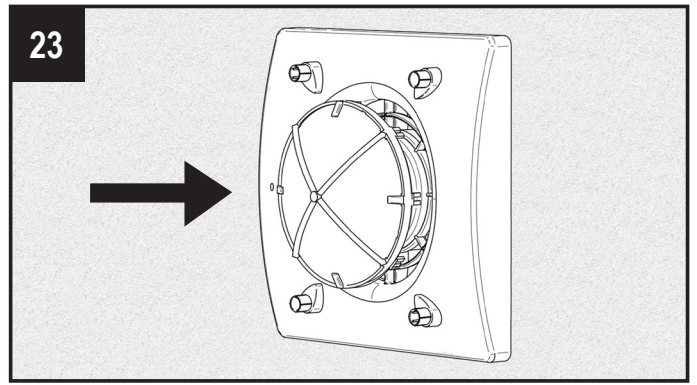
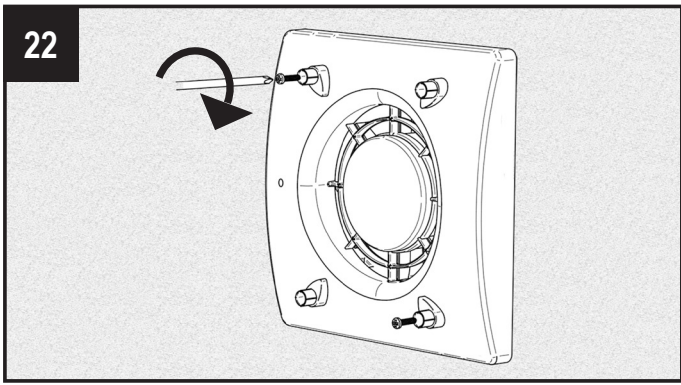




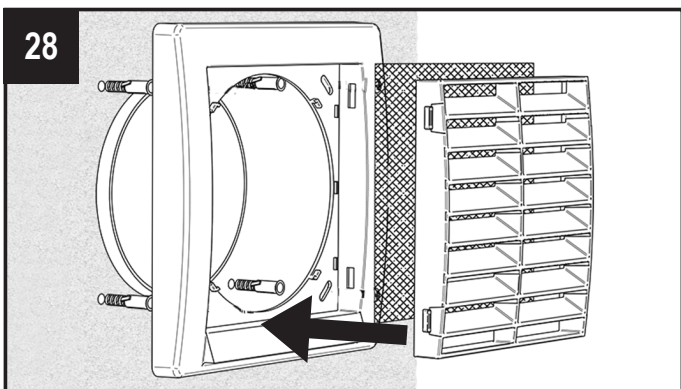
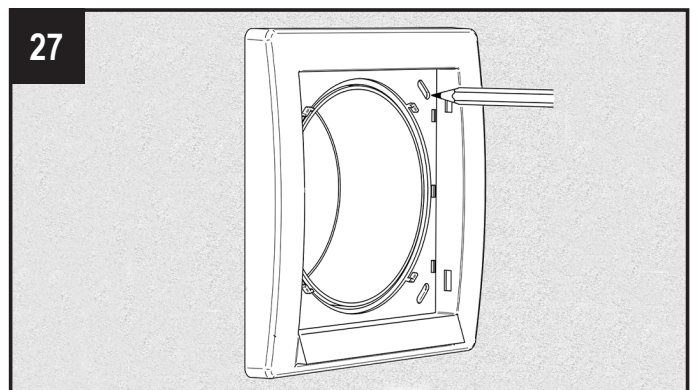
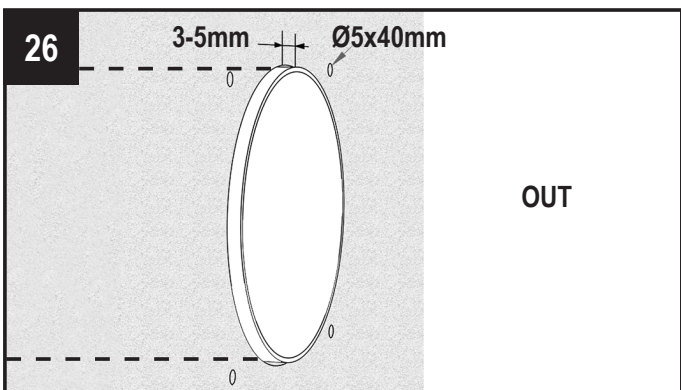


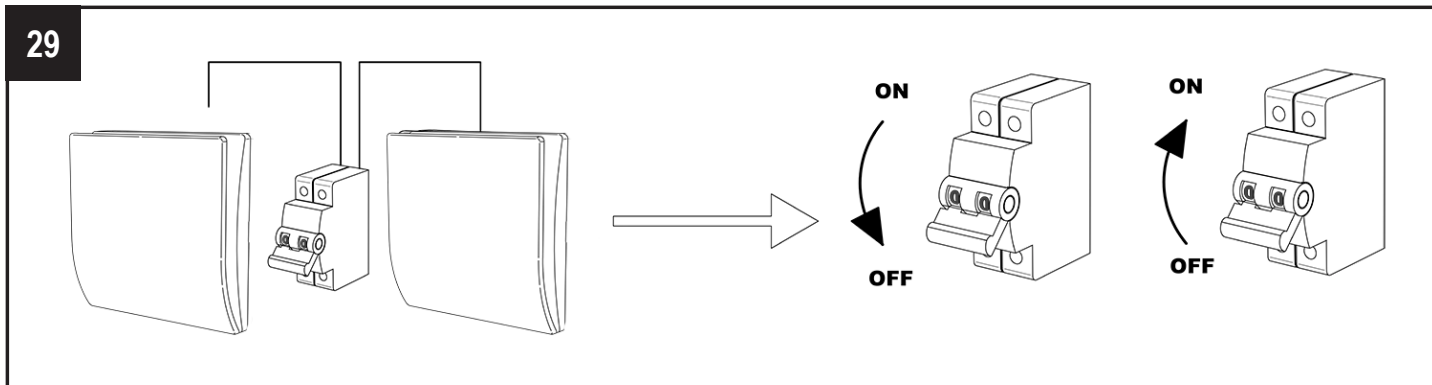
- Non avvitare troppo le viti: coppia massima 0,15Nm.
- Do not overtighten the screws: maximum torque 0,15Nm.
- Ne serrez pas trop les vis : couple maximal 0,15 Nm.





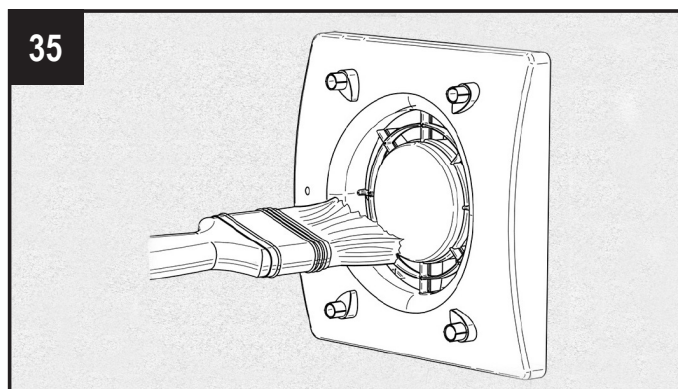
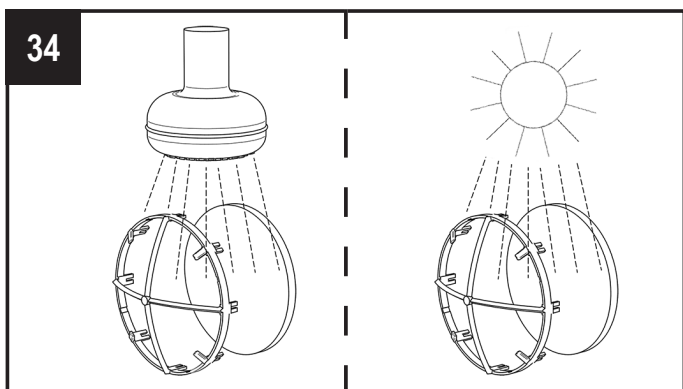
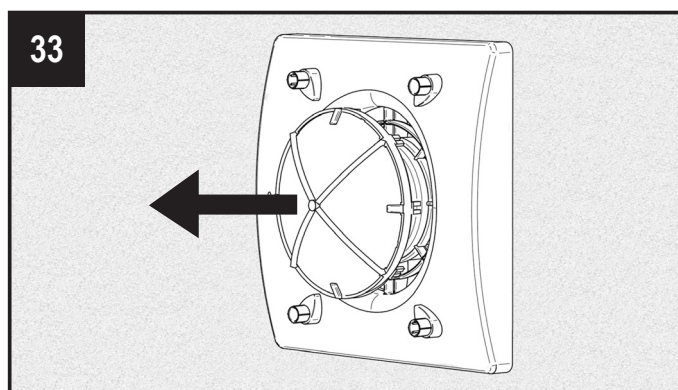
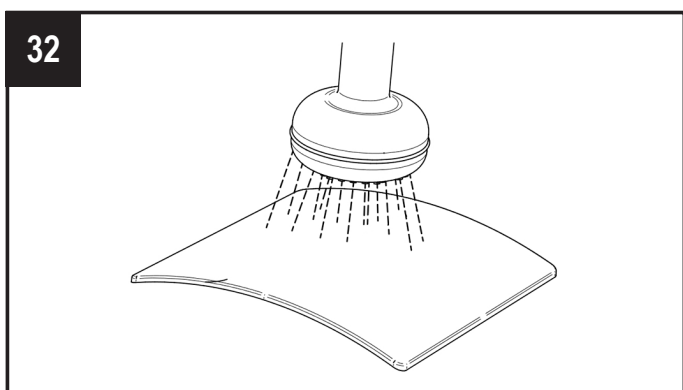
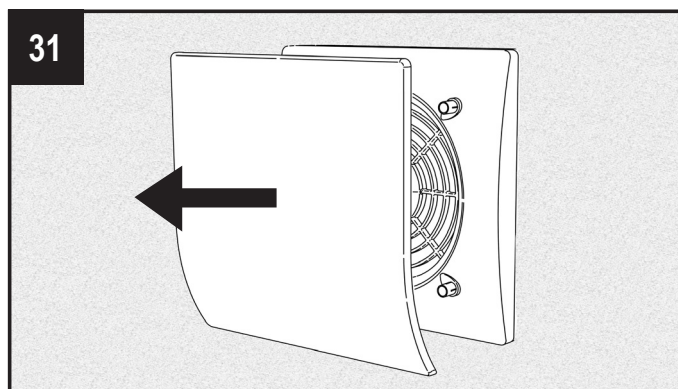
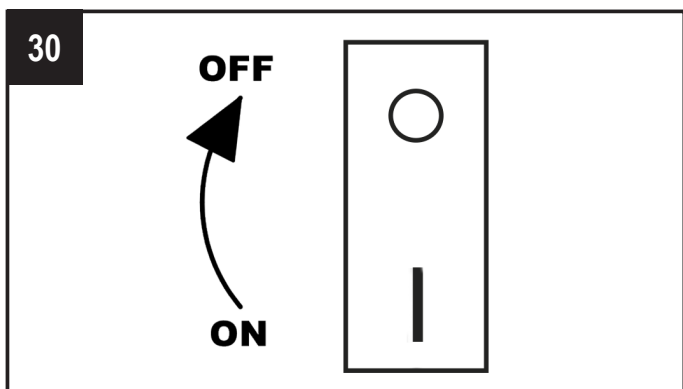
GRIGLIA ESTERNA - EXTERNAL GRILLE - GRILLE EXTERNE

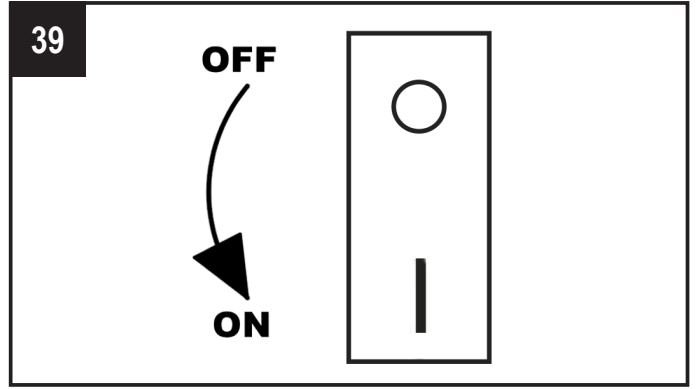
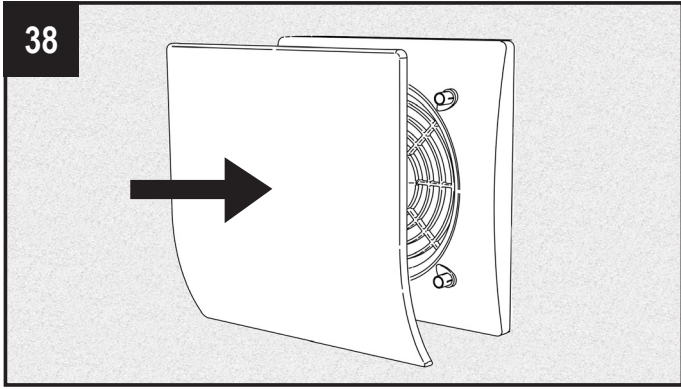
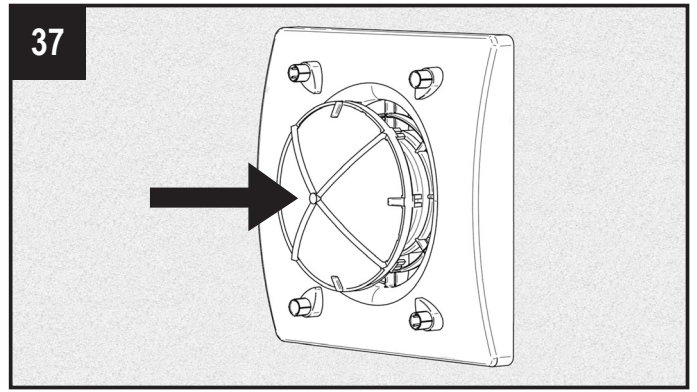
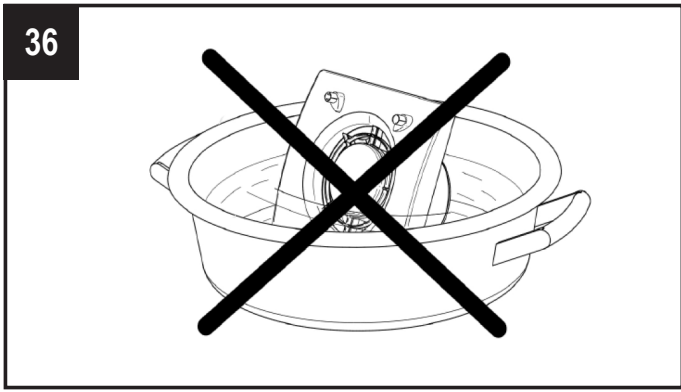




MANUTENZIONE ORDINARIA - MAINTENANCE - ENTRETIEN ORDINAIRE

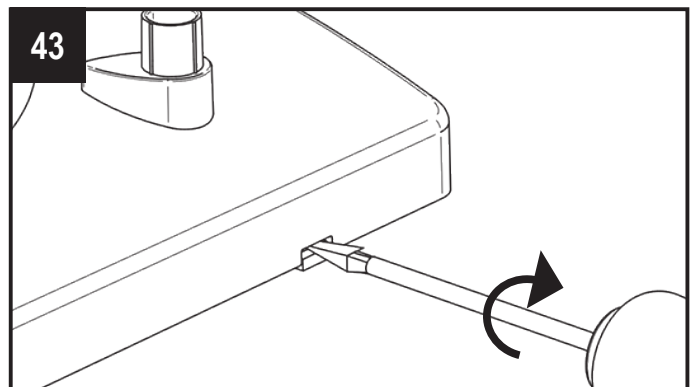
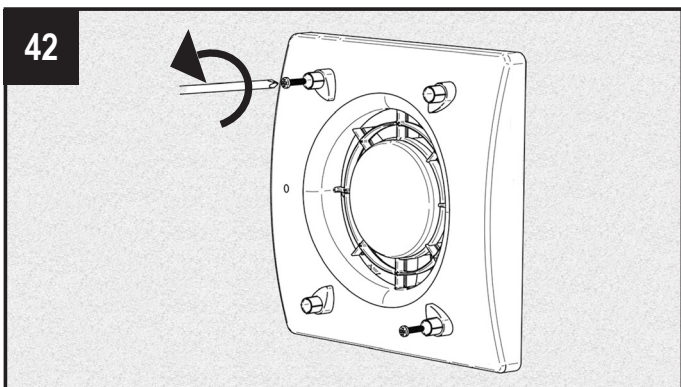
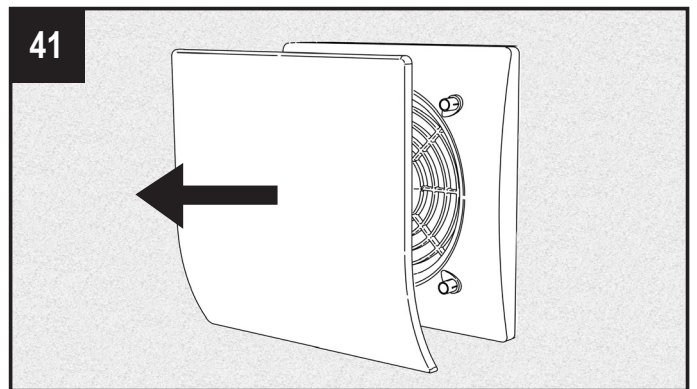
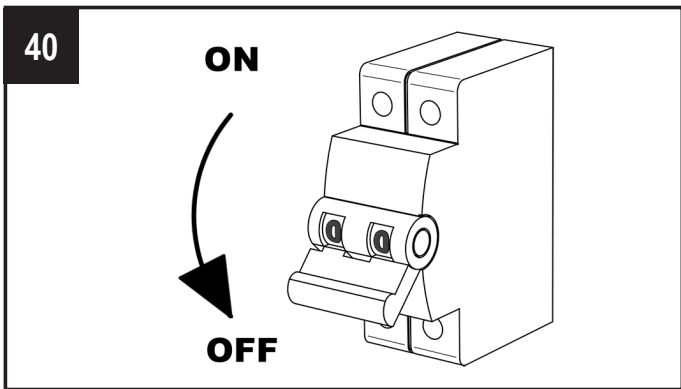
- ⚠ La pulizia del filtro può essere effettuata dall'utente. Pulire il filtro ogni 3 mesi e sostituirlo ogni anno con ricambio originale. La frequenza di intervento può variare a seconda delle condizioni ambientali interne ed esterne.
- ⚠ Filter cleaning can be carried out by the user. Clean the filter every 3 months and replace it every year with original spare parts. The frequency of operation may vary depending on indoor and outdoor environmental conditions.
- ⚠ Le nettoyage du filtre peut être effectué par l'utilisateur. Nettoyez le filtre tous les 3 mois et remplacez-le chaque année par une pièce de rechange d'origine. La fréquence d'intervention peut varier en fonction des conditions environnementales internes et externes.

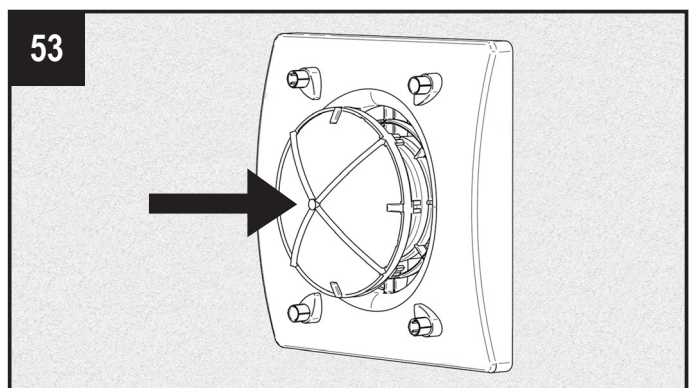
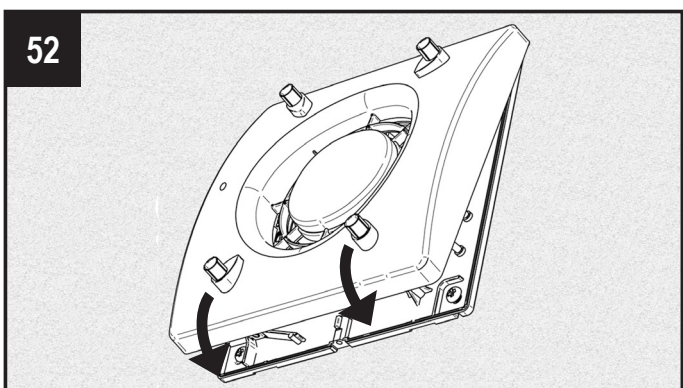
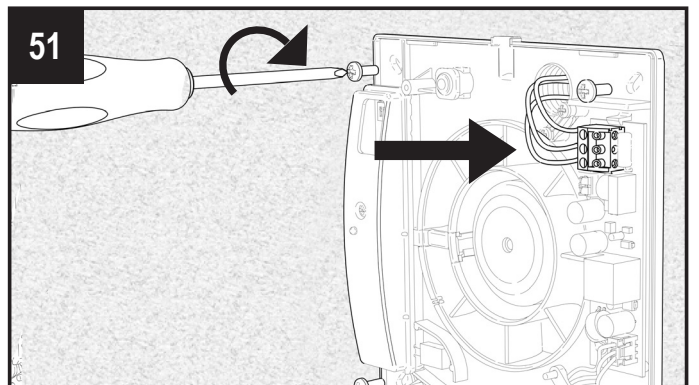
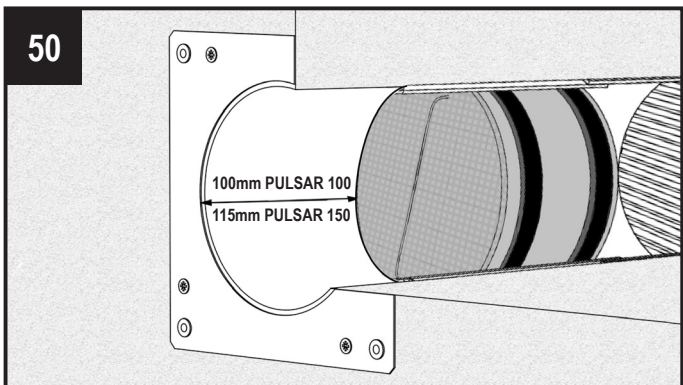
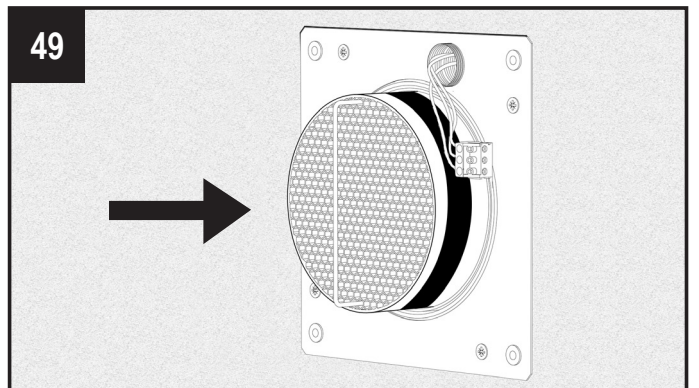
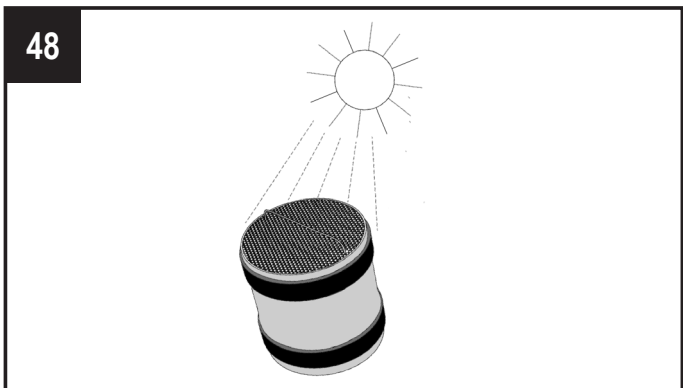
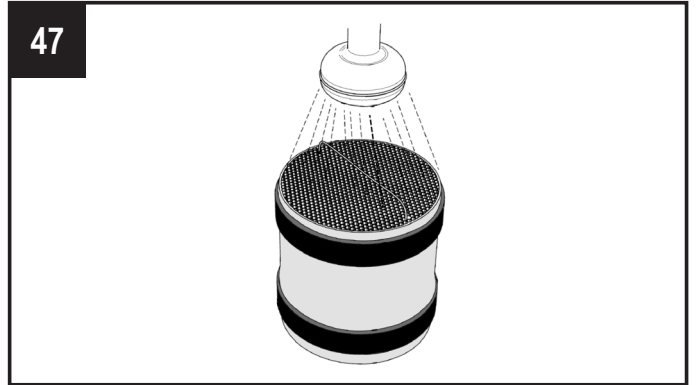
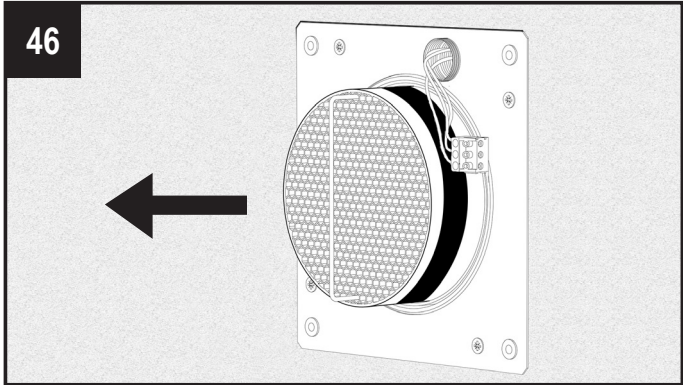
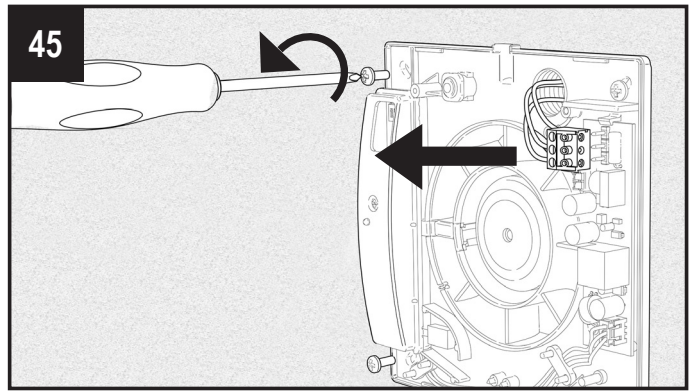
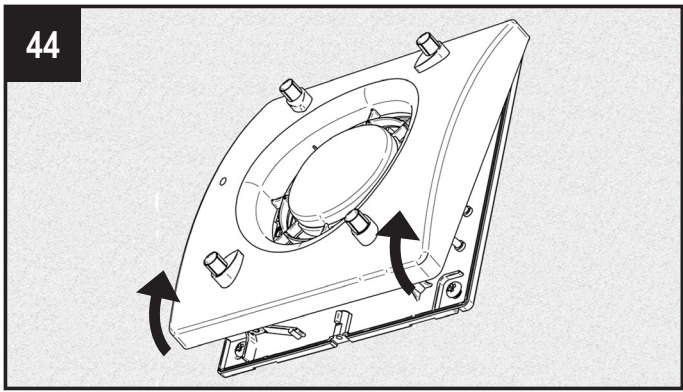




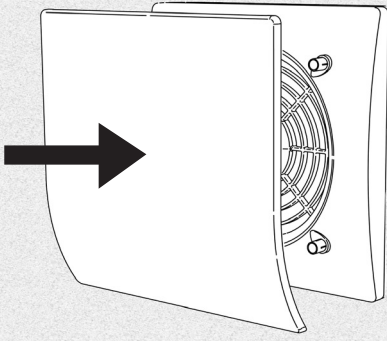
MANUTENZIONE STRAORDINARIA - SERVICE - ENTRETIEN EXTRAORDINAIRE

- ⚠ La pulizia dello scambiatore ceramico deve essere eseguita unicamente da personale tecnicamente qualificato, assicurandosi che l'interruttore generale dell'impianto sia spento. Eseguire la pulizia dello scambiatore almeno una volta all'anno: la frequenza di intervento può variare a seconda delle condizioni ambientali interne ed esterne.
- ⚠ Cleaning of the ceramic exchanger should be carried out only by technically qualified personnel, making sure that the main supply switch is turned off. Perform the cleaning at least once a year: the frequency may vary depending on indoor and outdoor environmental conditions.
- ⚠ Le nettoyage de l'échangeur céramique doit être effectué uniquement par du personnel techniquement qualifié, en s'assurant que l'interrupteur général est éteint. Nettoyer l'échangeur au moins une fois par an : la fréquence d'intervention peut varier en fonction des conditions environnementales internes et externes.

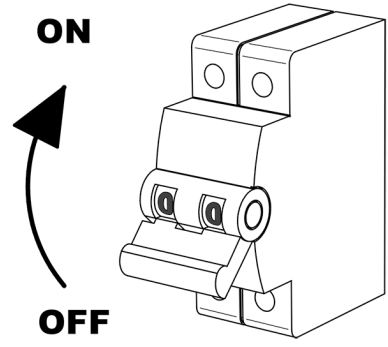




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**Direttiva ErP - Regolamenti 1253/2014 - 1254/2014 --- ErP Directive - Regulations 1253/2014 - 1254/2014 ---
Directive Erp (Règlements 1253/2014 - 1254/2014)**

a)	Marchio - Mark - Marque	-	AERAULIQA	
b)	Modello - Model	-	PULSAR 100	PULSAR 150
c)	Classe SEC - SEC class	-	A	A+
c1)	SEC climi caldi - SEC warm climates	kWh/m ² .a	-17,9	-18,4
c2)	SEC climi temperati - SEC average climates - SEC climat chaud	kWh/m ² .a	- 41,5	- 42,1
c3)	SEC climi freddi - SEC cold climates - SEC climat moyen	kWh/m ² .a	- 82,7	- 83,3
	Etichetta energetica - Energy label - Étiquette énergétique	-	Sì; Yes; Oui	
d)	Tipologia unità - Unit typology - Typologie	-	Residenziale - bidirezionale Residential - bidirectional Résidentiel - double flu	
e)	Tipo azionamento - Type of drive - Type de motorisation	-	Azionamento a velocità multiple Multi-speed drive Fonctionnement à plusieurs vitesses	
f)	Sistema di recupero calore - Type of Heat Recovery System - Type de système de récupération de chaleur	-	A recupero Heat recovery Récupération	
g)	Efficienza termica - Thermal efficiency of heat recovery - Rendement thermique	%	74	
h)	Portata massima - Maximum flow rate - Débit maximal	m ³ /h	25	60
i)	Potenza elettrica (alla portata massima) - Electric power input at maximum flow rate - Puissance électrique absorbée au débit maximal	W	2,5	3,5
j)	Livello potenza sonora (L _{WA}) - Sound power level (L _{WA}) - Niveau de puissance acoustique (L _{WA})	dBA	32	37
k)	Portata di riferimento - Reference flow rate - Débit de référence	m ³ /h	17	42
l)	Differenza di pressione di riferimento - Reference pressure difference - Différence de pression de référence	Pa	0	0
m)	Potenza assorbita specifica (SPI) - Specific power input (SPI) - Puissance absorbée spécifique (SPI)	W/m ³ /h	0,088	0,060
n1)	Fattore di controllo - Control factor - Facteur de régulation	-	0,65	0,65
n2)	Tipologia di controllo - Control typology - Typologie de régulation	-	Controllo ambientale locale Local demand control Régulation modulée locale	
o1)	Trafilamento interno massimo - Maximum internal leakage rate - Taux de fuites internes maximaux	%	1,4	1,2
o2)	Trafilamento esterno massimo - Maximum external leakage rate - Taux de fuites externes maximaux	%	1	1
p1)	Tasso di miscela interno - Internal mixing rate - Taux de mélange interne	%	N/A	
p2)	Tasso di miscela esterno - External mixing rate - Taux de mélange externe	%	N/A	
q)	Segnale avvertimento filtro - Visual filter warning - Alarme visuelle des filtres	-	N/A	
r)	Istruzioni installazione griglie - Instructions to install regulated grilles - Instructions de l'installation de grilles réglementées	-	N/A	
s)	Indirizzo Internet istruzioni di pre/disassemblaggio - Internet address for pre/disassembly instructions - Adresse internet concernant les instructions de pré/démontage	-	www.aerauliqua.com	
t)	Sensibilità del flusso alle variazioni di pressione - Airflow sensitivity to pressure variations - Sensibilité du flux d'air aux variations de pression	%	N/A	
u)	Tenuta all'aria interna/esterna - Indoor/outdoor air tightness - Étanchéité à l'air intérieur/extérieur	m ³ /h	21	60
v1)	Consumo annuo di energia (AEC) climi caldi - AEC Annual electricity consumption, warm climates - Consommation d'électricité annuelle (CEA) en climat chaud		0,6	0,4
v2)	Consumo annuo di energia (AEC) climi temperati - AEC Annual electricity consumption average climates - Consommation d'électricité annuelle (CEA) en climat moyen		0,6	0,4
v3)	Consumo annuo di energia (AEC) climi freddi - AEC Annual electricity consumption cold climates - Consommation d'électricité annuelle (CEA) en climat froid		0,6	0,4
w1)	Risparmio di riscaldamento annuo (AHS) climi caldi - AHS Annual heating saved, warm climates - Economie annuelle de chauffage (EAC) en climat chaud		19,5	19,5
w2)	Risparmio di riscaldamento annuo (AHS) climi temperati - AHS - Annual heating saved, average climates - Economie annuelle de chauffage (EAC) en climat moyen		43,1	43,2
w3)	Risparmio di riscaldamento annuo (AHS) climi freddi - AHS Annual heating saved, cold climates - Economie annuelle de chauffage (EAC) en climat froid		84,3	84,4



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