AXIAL FAN

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Sileo DC 100
Sileo Design DC 100

USER'S MANUAL

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CONTENTS

This user's manual is a main operating document intended for technical, maintenance, and operating staff.
The manual contains information about purpose, technical details, operating principle, design, and installation of the Sileo DC 100 unit and all its modifications.
Technical and maintenance staff must have theoretical and practical training in the field of ventilation systems and should be able to work in accordance with workplace safety rules as well as construction norms and standards applicable in the territory of the country.

This unit 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 unit by a person responsible for their safety.
Children should be supervised to ensure that they do not play with the unit.

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.
Cleaning and user maintenance shall not be made by children without supervision.
Children shall not play with the appliance.

Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.

The appliance may adversely affect the safe operation of appliances burning gas or other fuels (including those in other rooms) due to back flow of combustion gases. These gases can potentially result in carbon monoxide poisoning. After installation of the unit the operation of flued gas appliances should be tested by a competent person to ensure that back flow of combustion gases does not occur.

Connection to the mains must be made through a disconnecting device, which is integrated into the fixed wiring system in accordance with the wiring rules for design of electrical units, and has a contact separation in all poles that allows for full disconnection under overvoltage category III conditions.

Ensure that the unit is switched off from the supply mains before removing the guard.

Do not attach the product to the support using glue or adhesives. Use only the fastening method specified in the «User's manual».

All operations described in this manual must be performed by qualified personnel only, properly trained and qualified to install, make electrical connections and maintain ventilation units.
Do not attempt to install the product, connect it to the mains, or perform maintenance yourself.
This is unsafe and impossible without special knowledge.
Disconnect the power supply prior to any operations with the unit.
All user's manual requirements as well as the provisions of all the applicable local and national construction, electrical, and technical

norms and standards must be observed when installing and operating the unit.
Disconnect the unit from the power supply prior to any connection, servicing, maintenance, and repair operations.
Connection of the unit to power mains is allowed by a qualified electrician with a work permit for the electric units up to 1000 V after careful reading of the present user's manual.
Check the unit for any visible damage of the impeller, the casing, and the grille before starting installation. The casing internals must be free of any foreign objects that can damage the impeller blades.
While mounting the unit, avoid compression of the casing! Deformation of the casing may result in motor jam and excessive noise.
Misuse of the unit and any unauthorised modifications are not allowed.
Do not expose the unit to adverse atmospheric agents (rain, sun, etc.).
Transported air must not contain any dust or other solid impurities, sticky substances, or fibrous materials.
Do not use the unit in a hazardous or explosive environment containing spirits, gasoline, insecticides, etc.

Do not close or block the intake or extract vents in order to ensure the efficient air flow.
Do not sit on the unit and do not put objects on it.
The information in this user's manual was correct at the time of the document's preparation.
The Company reserves the right to modify the technical characteristics, design, or configuration of its products at any time in order to incorporate the latest technological developments.
Never touch the unit with wet or damp hands.
Never touch the unit when barefoot.
BEFORE INSTALLING ADDITIONAL EXTERNAL DEVICES, READ THE RELEVANT USER MANUALS.

THE PRODUCT MUST BE DISPOSED SEPARATELY AT THE END OF ITS SERVICE LIFE.
DO NOT DISPOSE THE UNIT AS UNSORTED DOMESTIC WASTE.

DELIVERY SET

Fan	1 pc.
Screws and dowels	4 pcs.
Plastic screwdriver (only for the models with a timer)	1 pc.
insulating gasket	1 pc.
User's manual	1 pc.
Packing box	1 pc.

BRIEF DESCRIPTION

The unit described herein is an axial fan for exhaust ventilation of small to medium-sized premises heated during winter. The fan is designed for connection to ø 100 mm. The fan is equipped with a back valve to prevent back air flow during the fan standby.

OPERATION GUIDELINES

The fan is connected to 220...240 V/50 (60) Hz single-phase AC mains depending on the model and is designed for continuous operation without disconnection from the electric mains. The air flow direction must match the arrow on the fan casing.
Ingress protection rating against access to hazardous parts and water ingress is IP45.
The fan is suitable for operation at ambient temperatures ranging from +1 °C to + 40 °C.
The fan is rated as a Class II electrical appliance (220-240 V/50 (60) Hz).

DESIGNATION KEY

Sileo DC 100 T

Additional options:
T: deactivation delay timer
H: humidity sensor and timer
ST: cord-operated switch and timer
SH: cord-operated switch, humidity sensor and timer
IR: motion sensor

Outlet duct diameter [mm]

DC: direct current electric motor

Fan series
Sileo DC 100; Sileo Design DC 100

	T	H	ST	SH	IR
Sileo DC 100	+	+	+	+	+
Sileo Design DC 100	+	+	–	–	–

INSTALLATION AND SET-UP

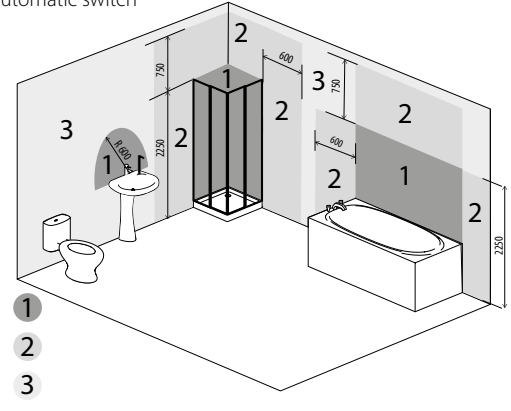
The fan can be mounted to the ceiling or to a wall with air extraction into a ventilation shaft or a matching diameter round air duct (Fig. 2).
Mounting configurations with direct air discharge upwards are not allowed (Fig. 2).

The fan installation steps are as follows:
step 1 — power off the electric mains and make sure that it is completely de-energised (Fig. 3, 12)
step 2 — run the power cable to the vent hole (Fig. 4, 13)
step 3 — remove the face panel of the fan. Then remove the lid which protects the circuit board (Fig. 5, 14)
step 4 — mark and drill fan mounting holes and mount the fan (Fig. 6-8 15-17)
step 5 — connect the fan to the electric mains according to the connections diagram (Fig. 21)
step 6 — replace the lid which protects the circuit board (Fig. 9, 18) and the face panel on the fan casing (Fig. 10, 19)
step 7 — apply electric power to the fan (Fig. 11, 20)

Connection diagram terminal key:

L — phase (220-240 V only)
N — neutral (220-240 V only)
LT (ST) — timer control circuit
S — external switch
QF — automatic switch

Unit mounting is possible in zone 1, provided that the installation and connection are performed in accordance with the requirements of IEC 60364-7-701 (current edition), as well as in accordance with the requirements of the national standards of the country of installation.



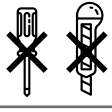
FAN OPTIONS

(S)T — fans are equipped with a deactivation delay timer. The timer activates upon control voltage application to input terminal **LT** by an external switch (e.g. indoor light switch). Upon control voltage removal the fan continues to operate for the period of time set by means of a DIP switch.
ST models are equipped with a cord-operated switch.
IR — fans are equipped with a motion sensor and a deactivation delay timer. The fan operates in one of the four modes set by a DIP switch.
(S)H — fans are equipped with a humidity sensor and a deactivation delay timer. The fan operates in one of the four modes set by a DIP switch.
SH models are equipped with a cord-operated switch.

FAN SETUP

THE TIMER BOARD IS UNDER MAINS VOLTAGE.
MAKE SURE THE FAN IS COMPLETELY DISCONNECTED FROM THE POWER MAINS BEFORE ADJUSTING

The fan is set up by changing the DIP switch position. To access the DIP switch take off the face panel and remove the rubber plug (Fig. 22). The fan is supplied with a special plastic screwdriver to toggle the DIP switch without damaging its components.



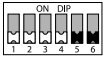
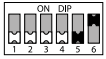
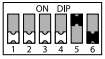
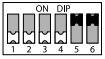
DO NOT USE A METAL SCREWDRIVER, KNIFE, ETC. FOR ADJUSTMENT OPERATIONS NOT TO DAMAGE THE CIRCUIT BOARD

(S)T

Operation mode		Speed	
Operation via an external switch	Continuous fan operation	Low fan speed	High fan speed
			
Deactivation delay timer			
Timer off	5 minute delay	15 minute delay	30 minute delay
			

(S)H, IR

Operation mode			
Upon sensor actuation or switch operation the fan switches to low speed.	Upon sensor actuation or switch operation the fan switches to high speed.	The fan continuously operates at low speed. Upon sensor actuation or switch operation the fan switches to high speed.	The fan is disabled. Upon sensor actuation the fan switches to low speed. Upon sensor actuation while the fan is enabled the fan switches to high speed.
			
Deactivation delay timer			
Timer off The delay for Sileo DC 100 IR is 30 seconds.	5 minute delay	15 minute delay	30 minute delay
			

Humidity threshold			
60 %	70 %	80 %	90 %
			

MAINTENANCE

The fan must undergo technical maintenance at least every 6 months.
Maintenance steps:

- power off the fan and make sure that it is completely de-energised (Fig. 23, 27)
- remove the face panel and clean the fan with a soft dry cloth or a brush (Fig. 24, 28)
- rinse the face panel with tap water (Fig. 25, 29)
- wipe the fan surfaces dry
- replace the face panel onto the fan
- re-connect the electric power (Fig. 26, 30)

WARNING! Avoid water dripping on the electric components.

TROUBLESHOOTING

Problem	Possible reasons	Troubleshooting
When the unit is connected to power mains, the fan does not rotate and does not respond to any controls.	No power supply.	Make sure the power supply line is connected correctly, otherwise troubleshoot a connection error.
	Internal connection fault.	Contact the Seller.
Low air flow.	The ventilation system is clogged.	Clean the ventilation system.
Increased noise, vibration.	The impeller is clogged.	Clean the impeller.
	The fan is not secured well or is not mounted properly.	Troubleshoot the installation error.
	The ventilation system is clogged.	Clean the ventilation system.

STORAGE AND TRANSPORTATION REGULATIONS

- Store the unit in the manufacturer's original packaging box in a dry closed ventilated premise with temperature range from +5 ˚C to +40 ˚C and relative humidity up to 70 %.
- Storage environment must not contain aggressive vapors and chemical mixtures provoking corrosion, insulation, and sealing deformation.
- Use suitable hoist machinery for handling and storage operations to prevent possible damage to the unit.
- Follow the handling requirements applicable for the particular type of cargo.
- The unit can be carried in the original packaging by any mode of transport provided proper protection against precipitation and mechanical damage. The unit must be transported only in the working position.
- Avoid sharp blows, scratches, or rough handling during loading and unloading.
- Prior to the initial power-up after transportation at low temperatures, allow the unit to warm up at operating temperature for at least 3-4 hours.

MANUFACTURER'S WARRANTY

The product is in compliance with EU norms and standards on low voltage guidelines and electromagnetic compatibility. We hereby declare that the product complies with the provisions of Electromagnetic Compatibility (EMC) Directive 2014/30/EU of the European Parliament and of the Council, Low Voltage Directive (LVD) 2014/35/EU of the European Parliament and of the Council and CE-marking Council Directive 93/68/EEC. This certificate is issued following test carried out on samples of the product referred to above.

The manufacturer hereby warrants normal operation of the unit for 60 months after the retail sale date provided the user's observance of the transportation, storage, installation, and operation regulations. Should any malfunctions occur in the course of the unit operation through the Manufacturer's fault during the guaranteed period of operation, the user is entitled to get all the faults eliminated by the manufacturer by means of warranty repair at the factory free of charge. The warranty repair includes work specific to elimination of faults in the unit operation to ensure its intended use by the user within the guaranteed period of operation. The faults are eliminated by means of replacement or repair of the unit components or a specific part of such unit component.

The warranty repair does not include:

- routine technical maintenance
- unit installation/dismantling
- unit setup

To benefit from warranty repair, the user must provide the unit, the user's manual with the purchase date stamp, and the payment paperwork certifying the purchase. The unit model must comply with the one stated in the user's manual. Contact the Seller for warranty service.

The manufacturer's warranty does not apply to the following cases:

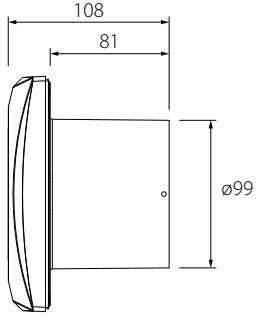
- User's failure to submit the unit with the entire delivery package as stated in the user's manual including submission with missing component parts previously dismounted by the user.
- Mismatch of the unit model and the brand name with the information stated on the unit packaging and in the user's manual.
- User's failure to ensure timely technical maintenance of the unit.
- External damage to the unit casing (excluding external modifications as required for installation) and internal components caused by the user.

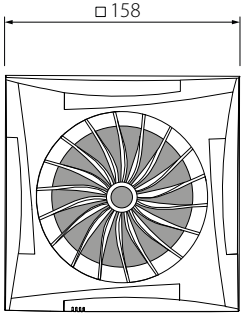
- Redesign or engineering changes to the unit.
- Replacement and use of any assemblies, parts and components not approved by the manufacturer.
- Unit misuse.
- Violation of the unit installation regulations by the user.
- Violation of the unit control regulations by the user.
- Unit connection to power mains with a voltage different from the one stated in the user's manual.
- Unit breakdown due to voltage surges in power mains.
- Discretionary repair of the unit by the user.
- Unit repair by any persons without the manufacturer's authorization.
- Expiration of the unit warranty period.
- Violation of the unit transportation regulations by the user.
- Violation of the unit storage regulations by the user.
- Wrongful actions against the unit committed by third parties.
- Unit breakdown due to circumstances of insuperable force (fire, flood, earthquake, war, hostilities of any kind, blockades).
- Missing seals if provided by the user's manual.
- Failure to submit the user's manual with the unit purchase date stamp.
- Missing payment paperwork certifying the unit purchase.

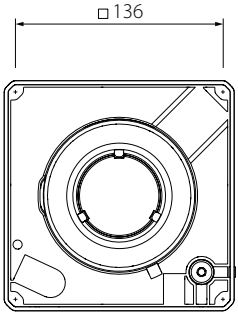
FOLLOWING THE REGULATIONS STIPULATED HEREIN WILL ENSURE A LONG AND TROUBLE-FREE OPERATION OF THE UNIT

USER'S WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP

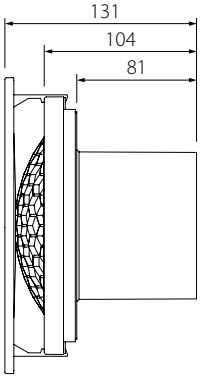
Sileo DC 100

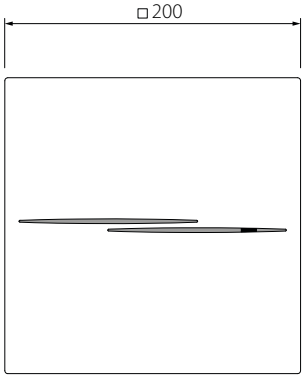






Sileo Design DC 100





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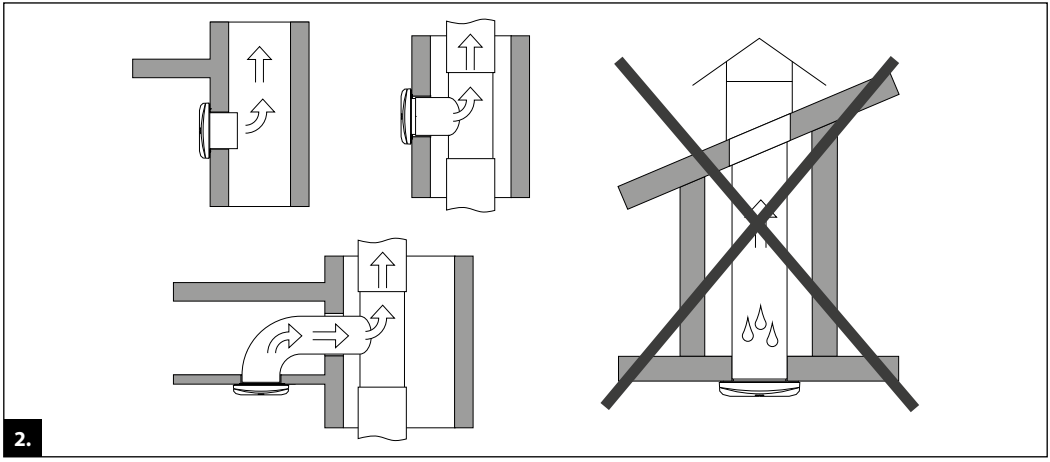

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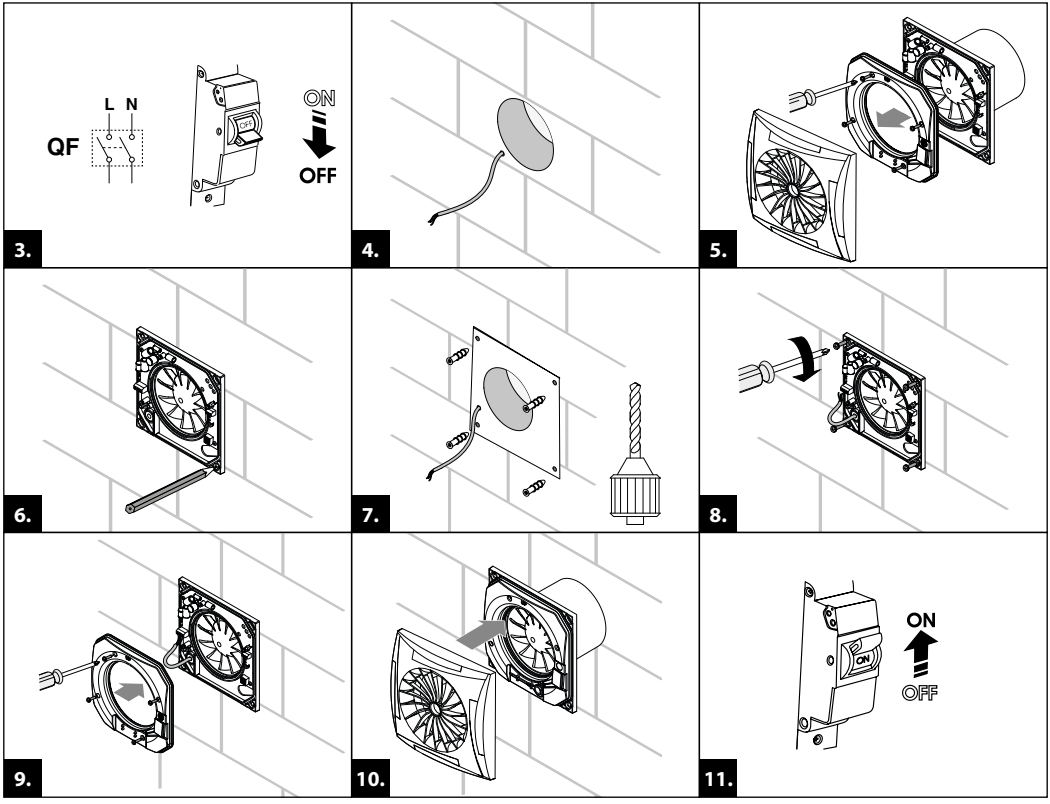
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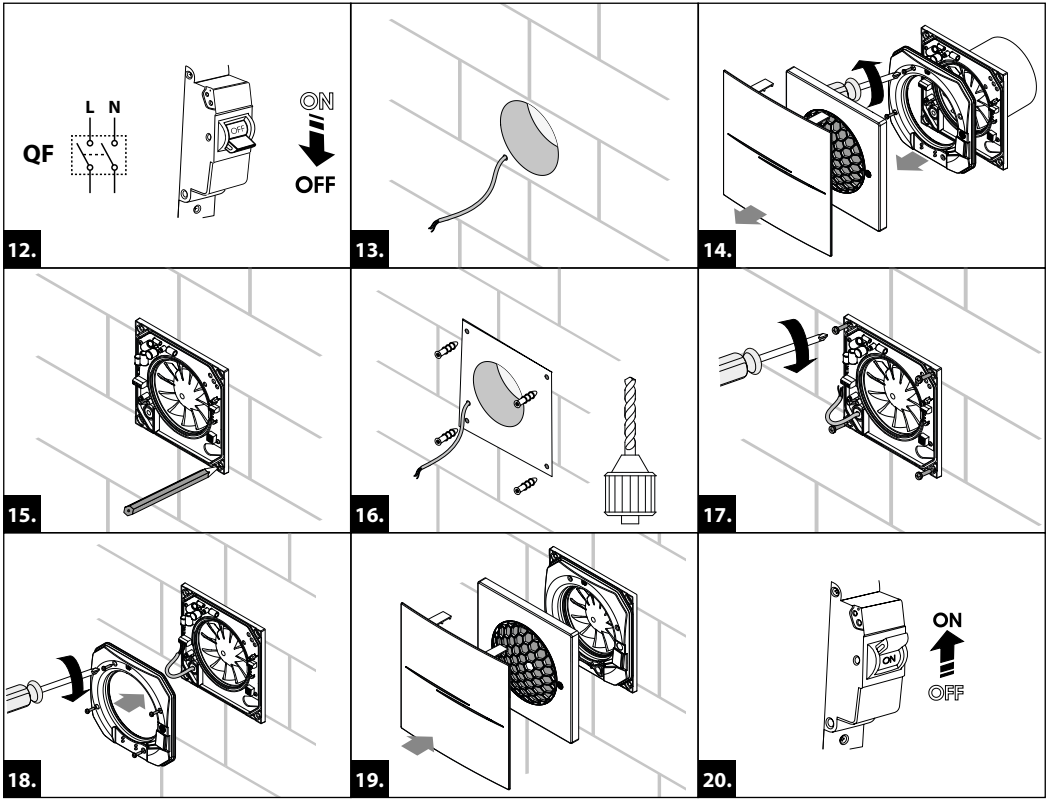
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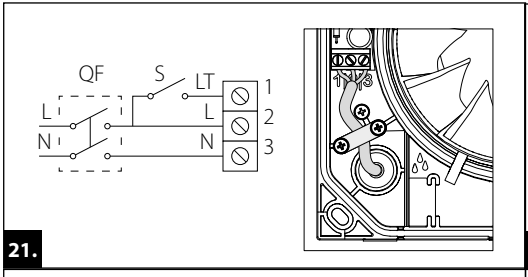
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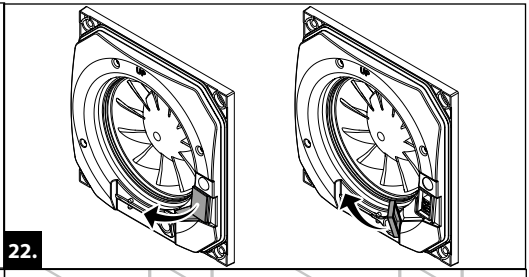
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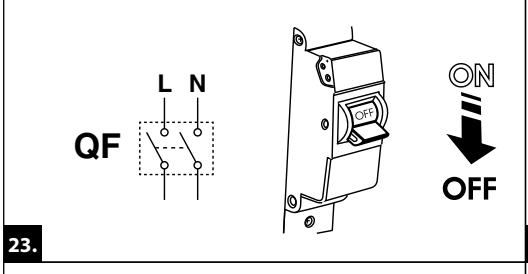
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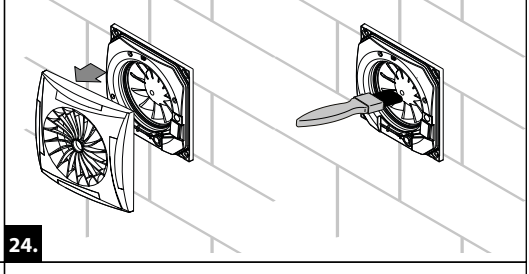
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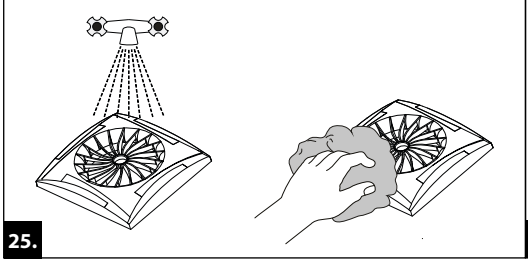
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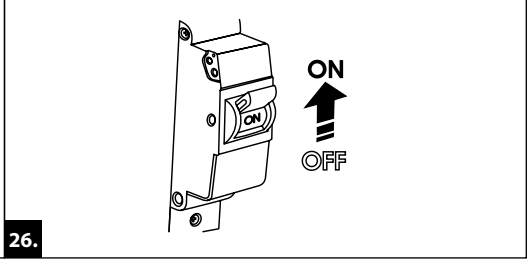
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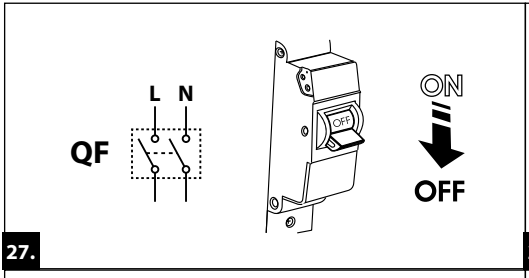

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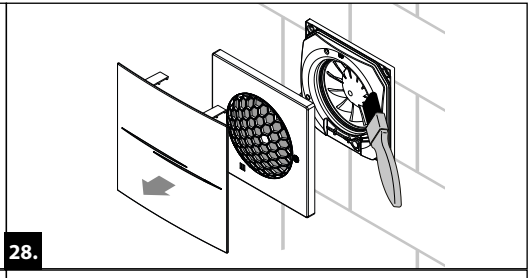

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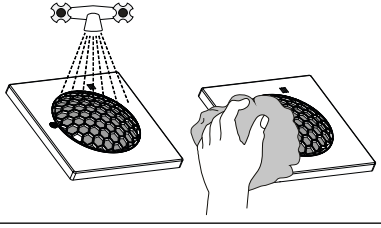

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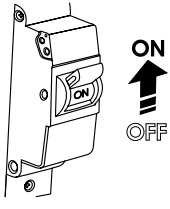

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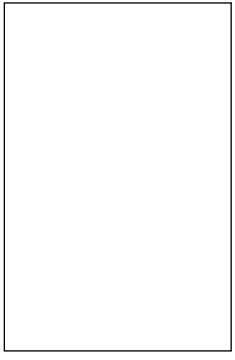
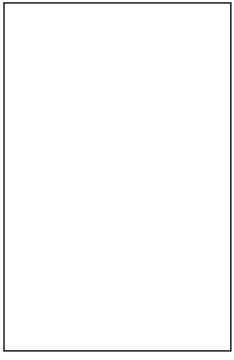
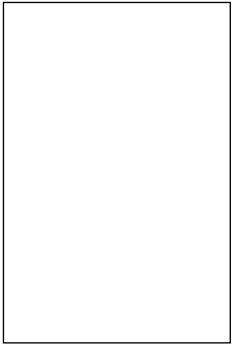
Approval mark



Sold
(name and stamp of the seller)



Manufacturing date



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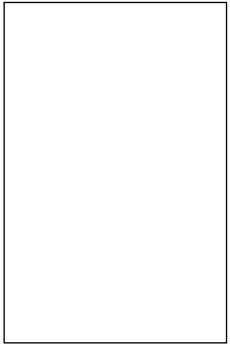

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