



VENTS VK model



CENTRIFUGAL FANS
User's manual



Disconnect the fan from power supply prior to any connection, servicing and repair operations.

Only duly qualified electricians with valid electrical permit for electric operations at the units with operating voltage up to 1000 V are allowed for mounting and maintenance. Read the user's manual carefully prior to any operations!

The single-phase power mains must comply with the acting local electrical norms and standards.

The fixed electrical wiring must be equipped with an automatic circuit breaker.

The fan must be connected to power mains through an automatic circuit breaker QF integrated into the fixed wiring system. The minimum gap between the breaker contacts on all poles must be 3 mm.

Check the fan for any visible damages of the impeller and the casing before starting installation. The casing must be free of any foreign objects that can damage the impeller blades. Due to constant improvements the design of some models may slightly differ from those ones described in this manual. While mounting the fan avoid the casing compression!

Do not use the fan in a hazardous or explosive environment containing spirits, gasoline, insecticides, etc. Do not close or block the fan intake or extract vents in order to ensure the efficient air flow stream. Do not sit on the fan and do not put objects on it. The timer circuit is live. The product is allowed to 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 provided that they have been given supervision or instruction regarding a safe use of the product and understand the risks involved. Do not allow children play with the product. Fan cleaning and maintenance must only be performed by children under adult supervision.



The product must be collected separately at the end of service life.

Do not dispose of as unsorted municipal waste.

Read the user's manual carefully before proceeding with installation works.
Compliance with the manual requirements ensures reliable operation and long service life of the product. Keep the user's manual available as long as you use the product.
You may need to re-read the information on the product servicing.



DELIVERY SET

1. Fan: 1 item
2. Screws and dowels: 4 items
3. Fixing bracket: 2 items
4. User's manual
5. Packing box

BRIEF DESCRIPTION

The products described herein is a centrifugal inline fan for extract or supply ventilation of rooms and premises.

The fan is designed for connection to 100, 125, 150, 200, 250 and 315 mm air ducts.

The model with a connecting diameter 150 mm is compatible both with Ø 150 and 160 mm air ducts.

The fan may be equipped with an energy-efficient and high-performance electronically commutated motor (EC motor).

VENTS VK XXX: basic model.

VENTS VKS XXX: modification with a high-power motor.

VENTS VK XXX Q: low-noise modification with a low-power motor and low energy demand.

VENTS VK XXX R: modification with a power cable and plug (Fig. 10).

VENTS VK XXX U (U1): modification with a speed controller and electronic thermostat, integrated temperature sensor and power cable with a plug (Fig. 11).

VENTS VK XXX Un (U1n): modification with a speed controller and electronic thermostat, external temperature sensor fixed on 4 m cable, a power cable with a plug (Fig. 11).

VENTS VK XXX P: modification with a speed controller and power cable with a plug (Fig.12).

VENTS VK XXX EC: modification with a EC motor.

VENTS VK XXX EC P: modification with a EC motor, integrated speed controller and a power cable with a plug.

XXX: spigot diameter.

The fan design is regularly improved, so some models may slightly differ from those ones described in this manual.

OPERATION GUIDELINES

The fan is rated for connection to single-phase AC power mains 220...240 V / 50/60 Hz, except for the models VK 315 / VKS 315 that must be connected only to 220...240 V / 50 Hz only. VK 315 (230/60) is rated for connection to 220...240 V / 60 Hz power mains. For operation of the VK XXX EC fans it is recommended to use the R-1/010 speed controller with smooth speed control. R-1/010 is not included in the delivery set and is available as a specially ordered accessory. The speed controller must be wired in compliance with the wiring diagram in Fig. 9.

The fan is designed for continuous operation always connected to power supply.

The arrow on the fan casing must match the air direction in the system.

Ingress protection rating against access to hazardous parts and water ingress is IPX4.

The fan is rated for operation at the ambient temperature ranging from +1 °C up to +45 °C.

The transported air temperature:

- for VK (EC) 100/VK 100 Q/VK (EC) 125/VK 125 Q/VK (EC) 150 must be within -25 °C and +55 °C.

- for VK (EC) 200/VK (EC) 250/VK 250 Q/VK (EC) 315 must be within -25 °C and +50 °C.

- for VKS 200/VKS 315 must be within -25 °C and +45 °C.

The unit is rated as a class II electric appliance.

CONTROL LOGIC

VK U (U1) model s equipped with the electronic TSC module (speed controller with electronic thermostat) for automatic speed control (air capacity regulation) depending on air temperature (Fig. 11).

The terminal compartment incorporates 2 control knobs:

- for setting the fan speed;

- for setting the thermostat set point.

The thermostat operating LED light is located on the fan casing. It glows as air temperature exceeds the set point. To set the thermostat set point rotate the temperature control knob clockwise to increase or counter-clockwise to decrease the temperature set point accordingly.

To set the fan speed (air capacity) rotate the speed control knob in the same way.

The fan functioning logic may be based on temperature or timer controls:

- *temperature-based functioning (model VK U)* is used to keep air temperature to within 2 °C. In this case the fan switches are rare. The fan switches to the maximum speed as the room air temperature exceeds the set point.

As the room air temperature drops down 2 °C below the temperature set point or if the initial temperature is below the set point, the fan operates with the set speed.

- *timer-based functioning (model VK U1)* is used for exact air temperature control. The speed switches are more frequent as compared to the temperature-based functioning logic, but one speed interval continues at least 5 minutes. As the room air temperature exceeds the set point, the fan switches to the maximum speed. As the room air temperature drops down below the temperature set point, the timer starts 5 minutes countdown and then the fan switches to the set lower speed. If the initial air temperature is below the set point, the fan operates with the low speed from the start.

VK (EC) P is equipped with a speed controller that enables switching the fan on/off, smooth speed (air flow) control from minimum to maximum value (Fig. 12).

MOUNTING

The fan is designed for horizontal and vertical installation on the floor, on the wall or on the ceiling (Fig. 2).

While mounting provide extra protection against moisture ingress, as shown in Fig. 2:

1. An outer hood to prevent water ingress inside the fan for vertical installation.
2. A straight 1 m air ducts segment on both sides of the fan for any installation of the fan.

The fan mounting steps are shown in Fig. 3–8. The wiring diagrams are shown in Fig. 9.

Designations:

L: live

N: neutral

QF: automatic circuit breaker

S: external speed switch

X: input terminal block

Automatic circuit
breaker designation



External switch
designation



Automatic
circuit breaker



External
switch



MAINTENANCE

Clean the fan surfaces of each 6 months (Fig. 13–20). Disconnect the fan from power supply prior to any maintenance operations. For cleaning the fan use a soft cloth or a brush wetted in a mild detergent solution. Avoid water dripping on the electric components (Fig. 41)! Wipe the fan surfaces dry after cleaning.

TRANSPORTATION AND STORAGE RULES

Transportation with any transportation vehicle in the manufacturer's original package. Store the delivered product in the manufacturer's original packing box in a dry ventilated premise with the temperature from +5 °C up to + 40 °C and relative humidity below 80 %. The storage environment must not contain dust, acid or alkali vapours that may cause corrosion of the product parts.

MANUFACTURER'S WARRANTY

The fan is manufactured at the factory of "Ventilation systems" PrJSC (hereinafter referred to as the manufacturer). 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 Council Directive 2014/30/EU, Low Voltage Directive 2014/35/EU and CE-marking 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 fan for 24 months after the retail sale date provided the user's observance of the transportation, storage, mounting and operation regulations. Should any malfunctions occur in the course of the fan operation through the Manufacturer's fault during the guaranteed period of operation the user is entitled to elimination of faults by the manufacturer by means of warranty repair at the factory free of charge. The warranty repair shall include work specific to elimination of faults in the fan 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 fan components or a specific part of such fan component.

The warranty repair does not include:

- Routine technical maintenance;
- Fan installation / dismantling;
- Fan setup.

To benefit from warranty repair the user must provide the fan, the user's manual with the purchase date stamp and the payment document certifying the purchase. The fan 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:

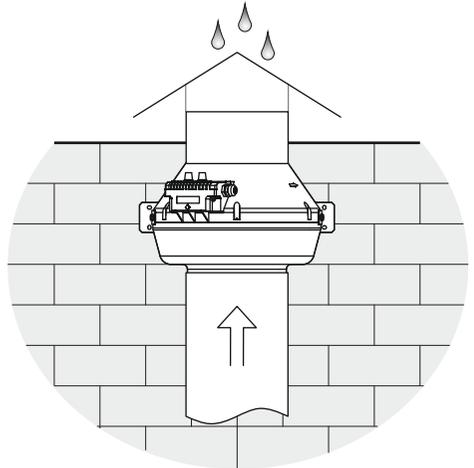
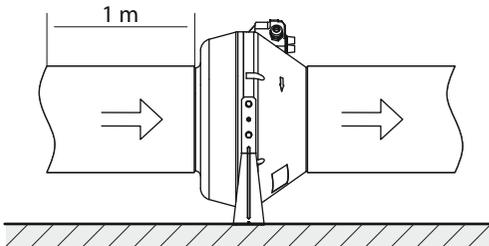
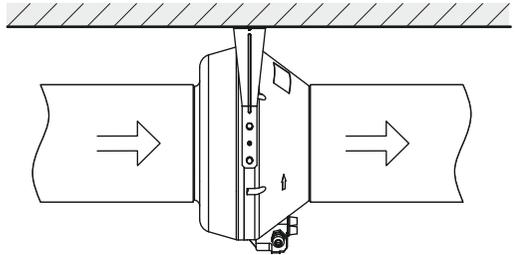
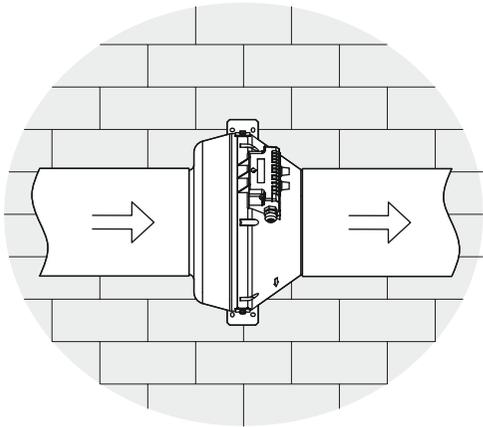
- User's failure to submit the fan with the entire delivery package as stated in the user's manual including submission with missing component parts previously dismounted by the user.
- Mismatch of the fan model and the brand name with the information stated on the fan packing and in the user's manual.
- User's failure to ensure timely technical maintenance of the fan.
- External damage to the fan casing (excluding external modifications as required for installation) and internal components caused by the user.
- Redesign or engineering changes to the fan.
- Replacement and use of any assemblies, parts and components not approved by the manufacturer.
- Fan misuse.
- User's violation of the fan operation regulations.
- Fan connection to the power mains with a voltage different from the one stated in the user's manual.
- Fan breakdown due to voltage surges in the power mains.
- Discretionary repair of the fan by the user.
- Fan repair by any persons without the manufacturer's authorization.
- Expiration of the fan warranty period.
- User's violation of the fan transportation regulations.
- User's violation of the fan storage regulations.
- Wrongful actions against the fan committed by third parties.
- Fan 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 fan purchase date stamp.
- Missing payment document certifying the fan purchase.

The manufacturing company shall be responsible for defects arising through its fault prior to the moment of transferring the product to the ownership of the customer. The manufacturer shall not be responsible for defects arising after transferring the product to the customer and caused by the customer's violating the rules of transportation, storage, assembly and operation of the product, or by actions of third persons, an accident or force majeure circumstances.

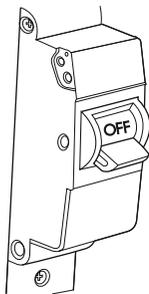
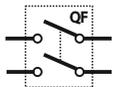
The manufacturer shall not be responsible for damages to health and property of the customer caused by the customer's violating the User Manual or other relevant substituting document; other use of the product by the customer other than its intended use, or by failure of the customer to comply with warnings and other information on the product specified in the User Manual or other relevant substituting document, or by the customer's violating the transportation, storage, mounting, maintenance and operation regulations.

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

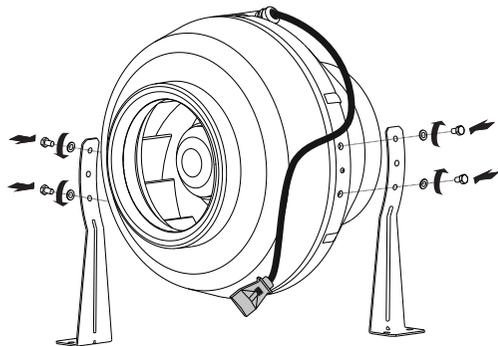
USERS' WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE FAN, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP.



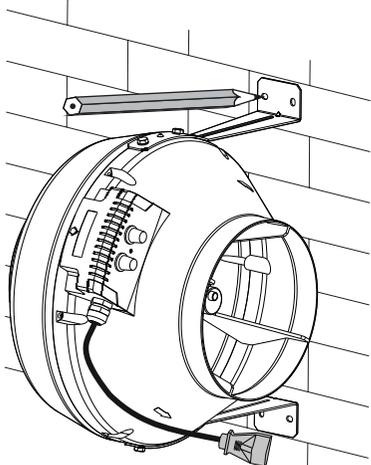
MOUNTING



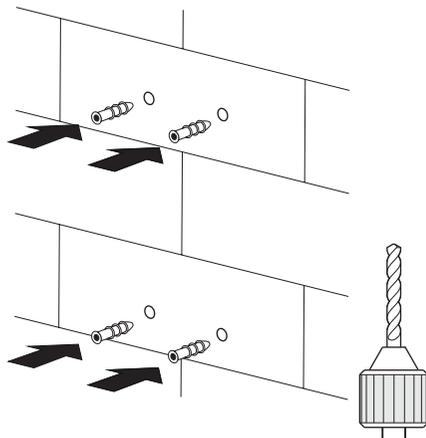
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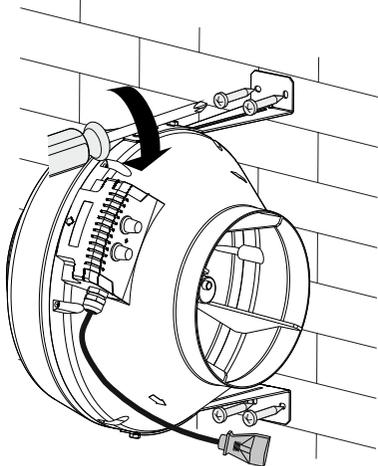
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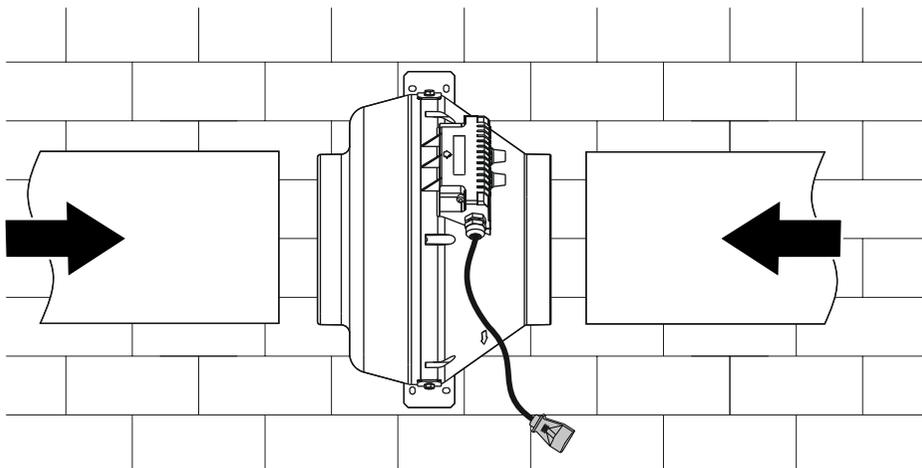
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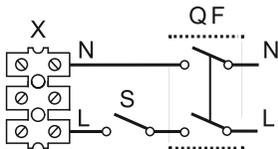
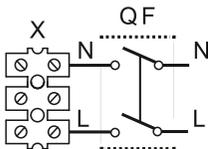


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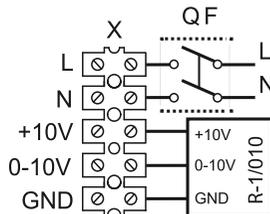


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VK

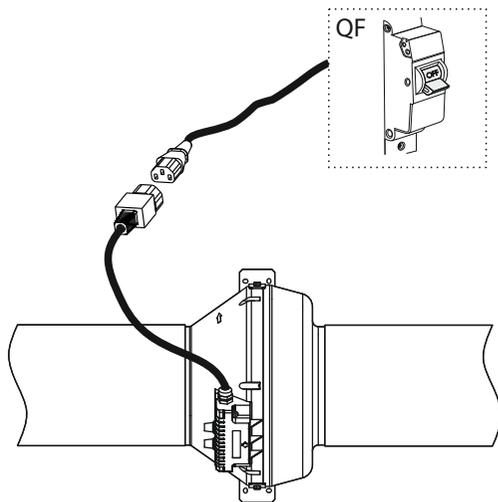


VK EC

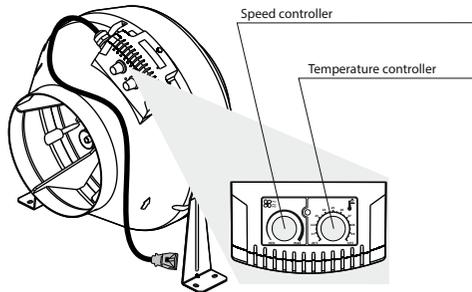


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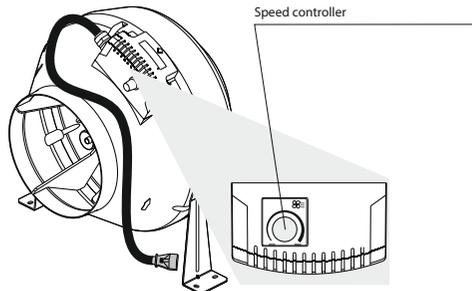
U / U1 / Un / U1n / P / R



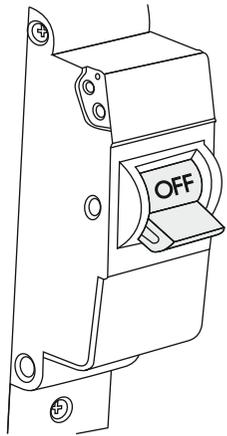
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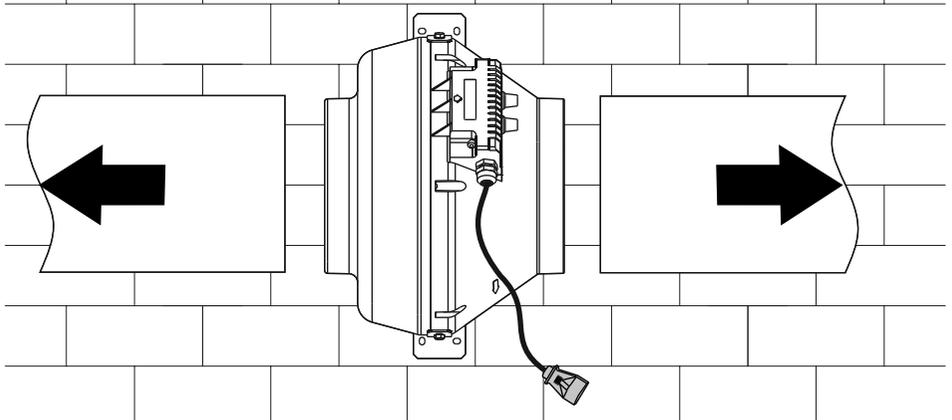


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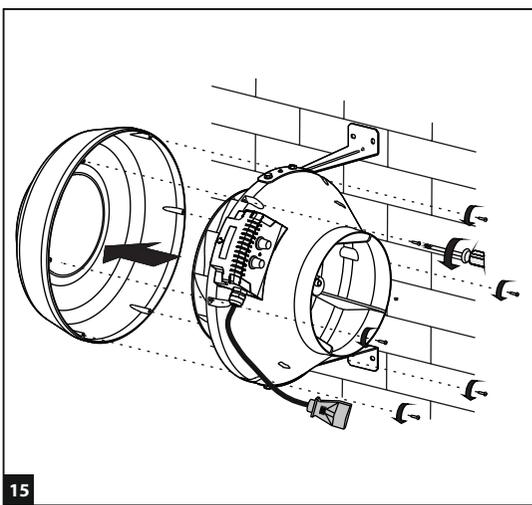


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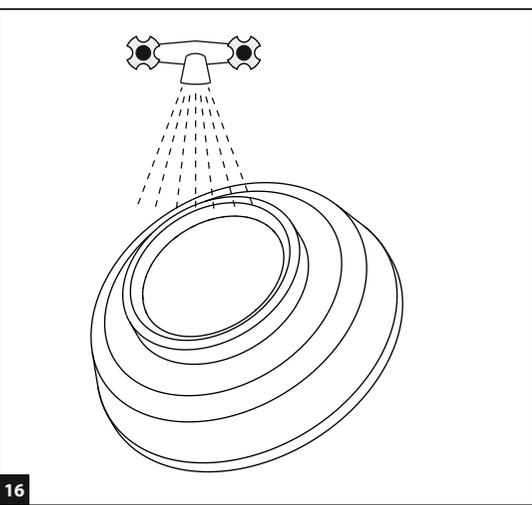
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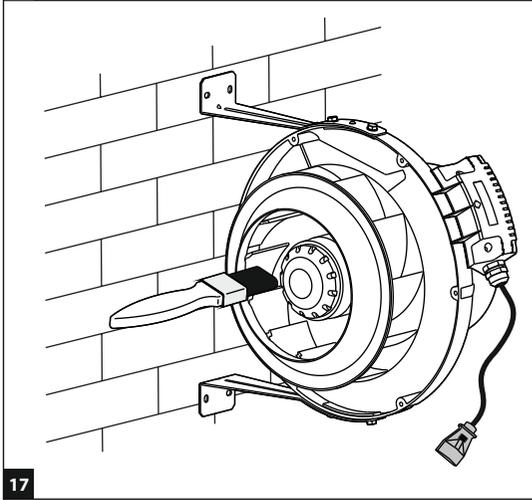
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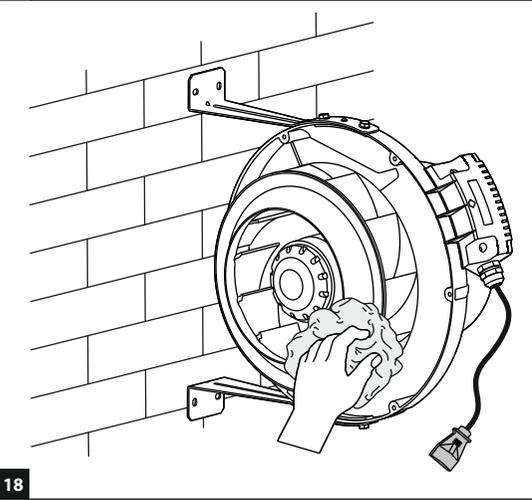
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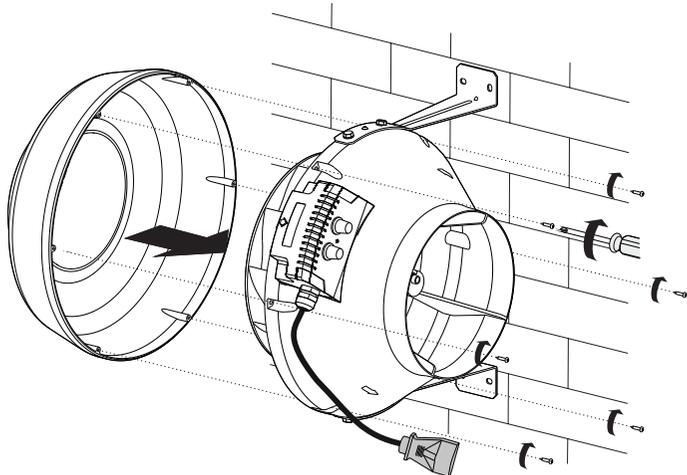
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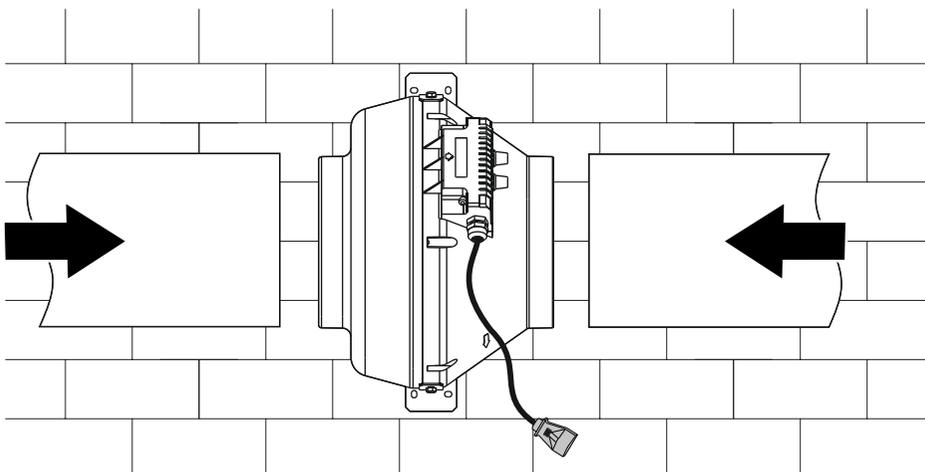
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ACCEPTANCE CERTIFICATE

100

125

VK 150

U

Q U1 n R EC

VKS 200

250

p

315

Approval mark

Sold

(name and stamp of the seller)

Manufacture date

Sales date

The fan is recognized as serviceable.