

USER'S MANUAL

OV1 / OVK1 / VKOM



Electric axial fans

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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 OV1 / OVK1 / VKOM 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.

SAFETY REQUIREMENTS

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.

CAUTION: In order to avoid a safety hazard due to inadvertent resetting of the thermal cut-out, this unit must not be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly switched on and off by the utility.

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.

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

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.

Only qualified electricians with a work permit for electrical units up to 1000 V are allowed for installation. The present user's manual should be carefully read before beginning works.

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**

PURPOSE

Electric axial fans are designed for direct extraction of indoor air outdoors and supply of fresh outdoor air into the premises. The unit is a component part and is not designed for stand-alone operation.

The unit is rated for continuous operation.

Transported air must not contain any flammable or explosive mixtures, evaporation of chemicals, sticky substances, fibrous materials, coarse dust, soot and oil particles or environments favorable for the formation of hazardous substances (toxic substances, dust, pathogenic germs).

DELIVERY SET

OV1 / OVK1

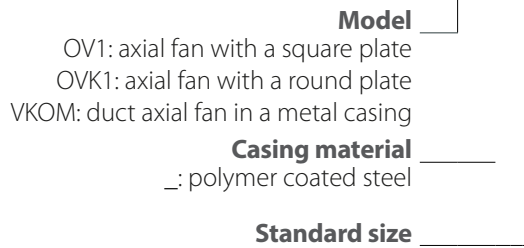
NAME	NUMBER
Fan	1 piece
User's manual	1 piece
Packing	1 piece

VKOM

NAME	NUMBER
Fan	1 piece
Mounting brackets	2 pieces
User's manual	1 piece
Packing	1 piece

DESIGNATION KEY

Designation example: **VKOM 200**



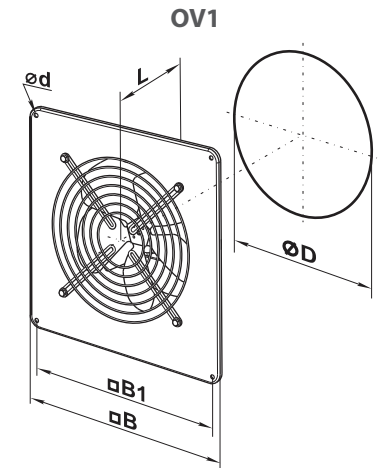
TECHNICAL DATA

The unit is rated as a Class I electrical appliance.

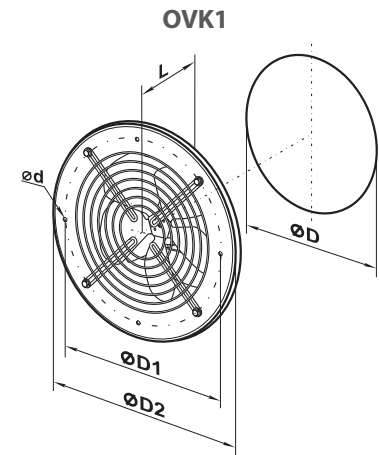
The corrosive aggressiveness of the handled medium to carbon steels of ordinary quality must be equal to that of air at temperatures ranging from -25 °C to +40/60 °C. In addition to that the handled media must be free from dust and other hard impurities as well as sticky substances and fibrous materials.



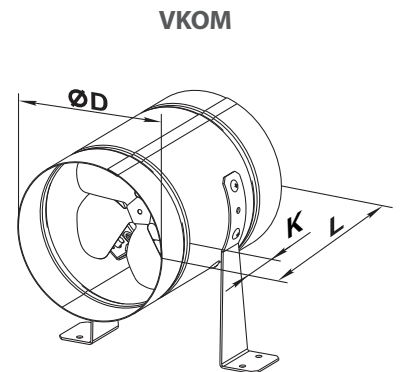
Model	Measurements [in.]				
	Ø D	Ø d	B	B1	L
OV1 200	8 3/16"	1/4"	12 5/16"	10 1/4"	4 3/4"
OV1 250	10 5/16"	1/4"	14 9/16"	12 5/8"	5 1/2"
OV1 315	12 5/16"	3/8"	16 15/16"	14 15/16"	6 11/16"



Model	Measurements [in.]				
	Ø D	Ø D1	Ø D2	Ø d	L
OVK1 200	8 3/16"	10 5/8"	11 13/16"	1/4"	4 3/4"
OVK1 250	10 5/16"	13"	14 3/16"	1/4"	5 1/2"
OVK1 315	12 5/16"	15 3/8"	16 9/16"	3/8"	6 11/16"

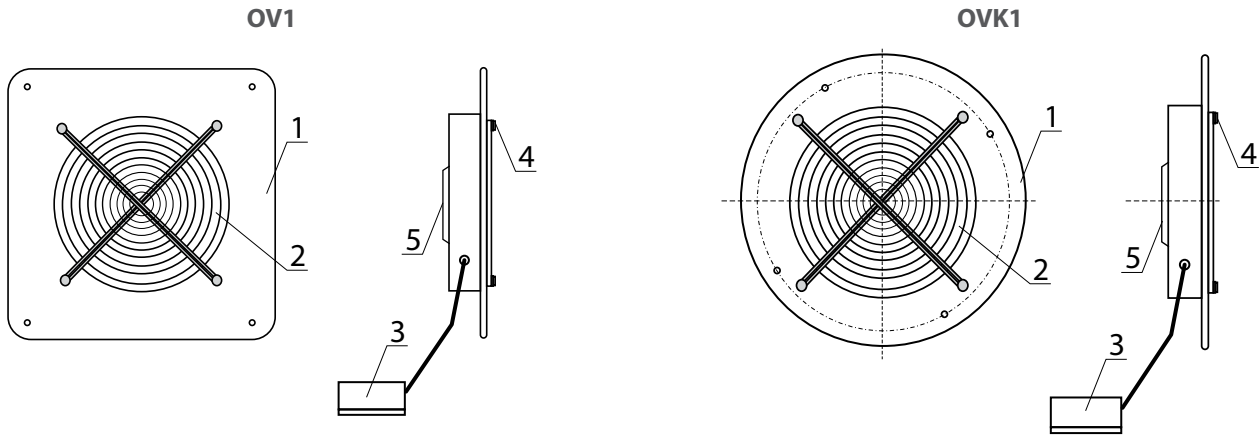


Model	Measurements [in.]		
	Ø D	L	K
VKOM 150	6 5/16"	8 11/16"	1 9/16"
VKOM 200	8 1/8"	8 11/16"	1 9/16"



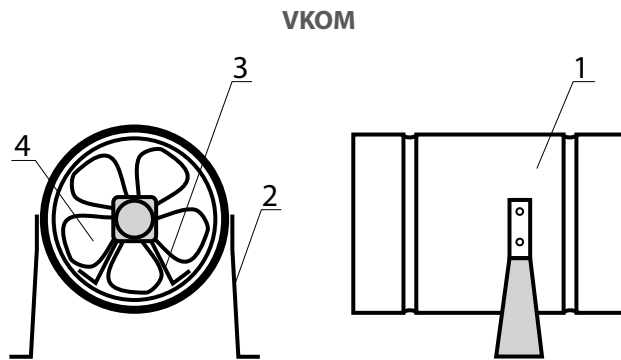
UNIT DESIGN AND OPERATING PRINCIPLE

The **OV1** and **OVK1** fans consist of a casing 1 made of polymer-coated stainless steel with a square (**OV1**) or round (**OVK1**) flange, to which the grille 2 is fastened with bolts 4. The motor and impeller 5 are mounted on a bracket inside the casing. The fans are equipped with a terminal box with a cable for remote connection.



VKOM fan

The brackets 2 are attached to the casing with bolts 1. The electric motor with the impeller 4 is mounted on the bracket 3 inside the casing.



MOUNTING AND SET-UP



BEFORE MOUNTING MAKE SURE THE CASING DOES NOT CONTAIN ANY FOREIGN OBJECTS (E.G. FOIL, PAPER).



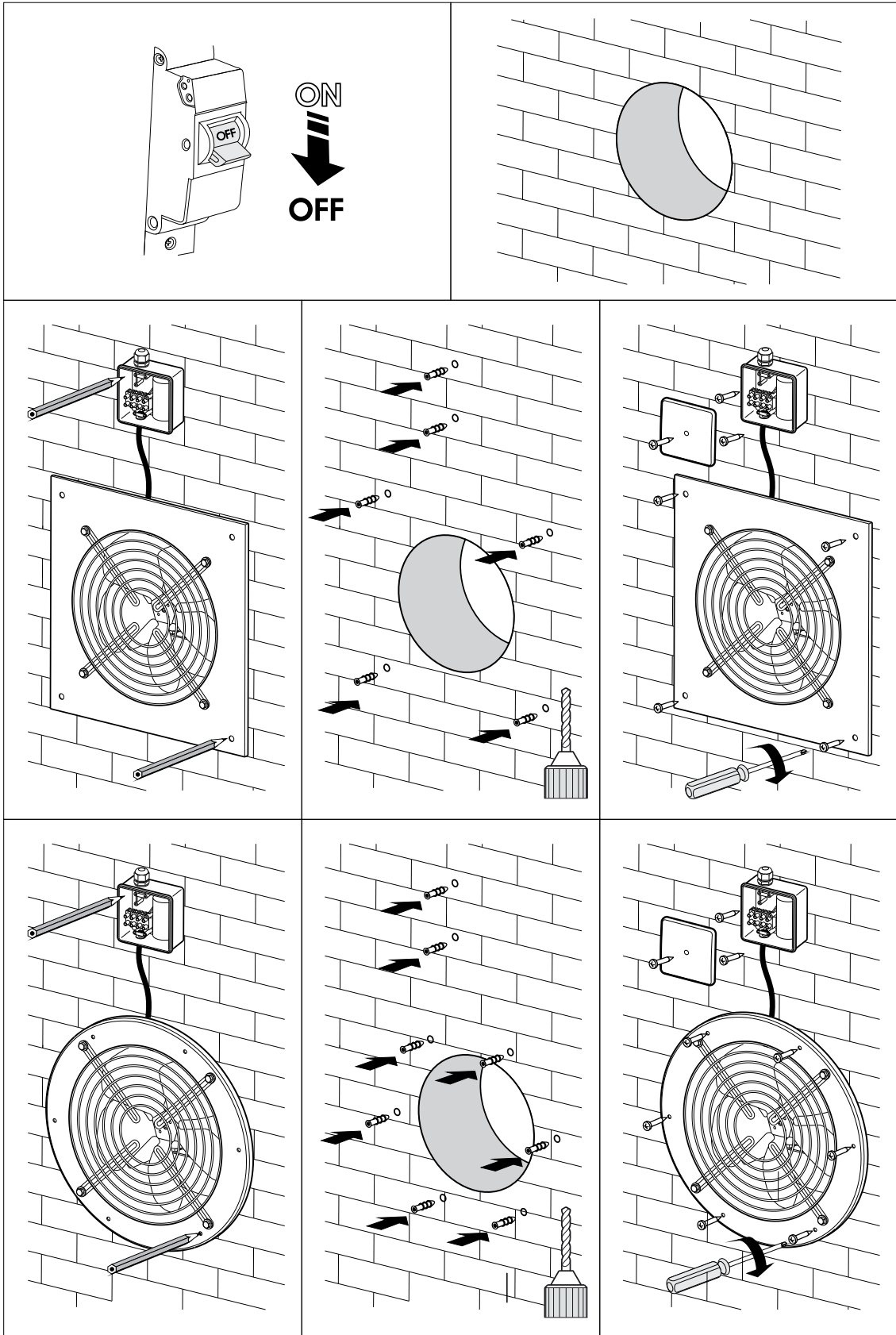
WHILE INSTALLING THE UNIT ENSURE CONVENIENT ACCESS FOR SUBSEQUENT MAINTENANCE AND REPAIR.

- Unpack the fan and check for any cuts in the electric wires and cracks in the insulation. Inspect the fan casing to make sure it is free from any cracks and deformations. Set the impeller in motion and check that it rotates freely without catching against the inlet flange and the casing.
- Prior to powering up the fan make sure that the mains parameters comply with the technical specifications on the fan label attached to the protective casing.
- The fan mounting locations must enable adequate access for maintenance, technical service and replacement operations.
- When the service conditions may lead to water ingress, the fans must be equipped with adequate protection. For example, the fans may be installed under a canopy or a roof.
- Since the fan belongs to Class 1 in terms of electrical hazard protection proper grounding is a must: to ground the equipment, connect the \ominus terminal to the protective ground circuit.

The fans are installed on wall surfaces by means of a mounting casing with attachment holes:

- **OV1**, series with a square casing — 4 holes.
- **OVK1** series with a round casing — 6 holes.

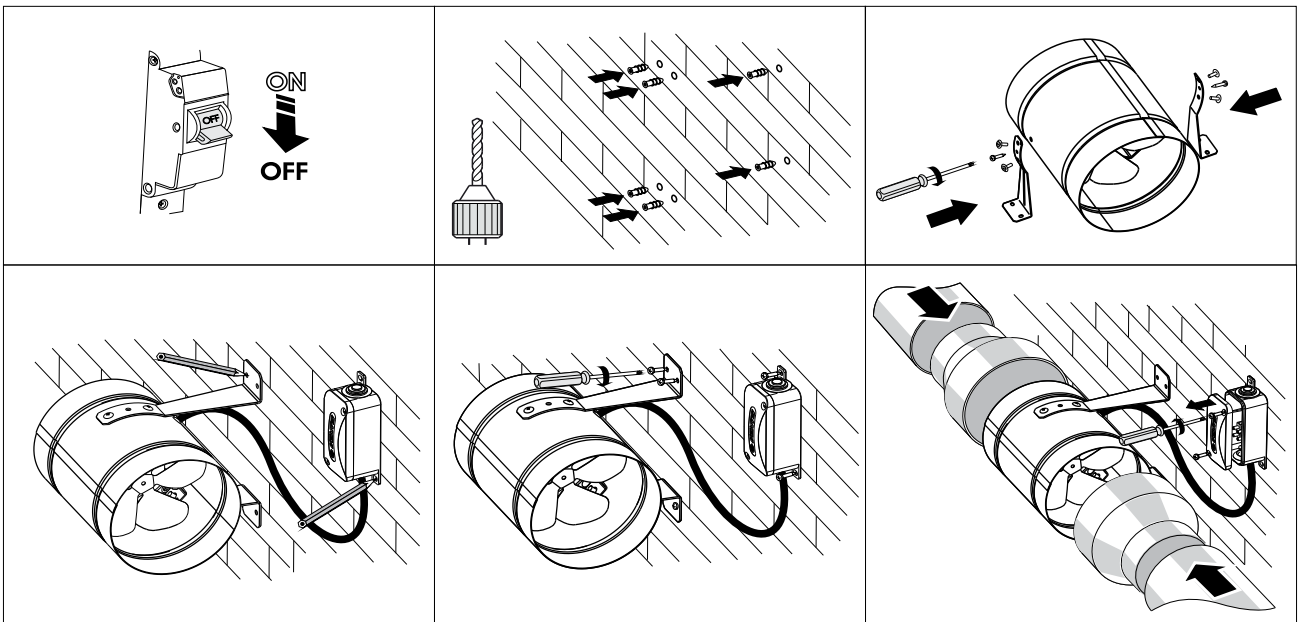
OV1 and OVK1 fan installation



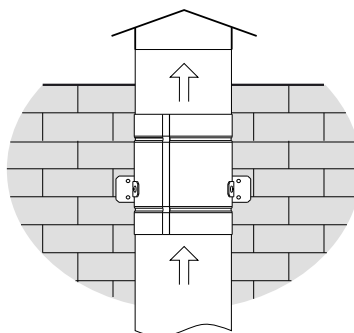
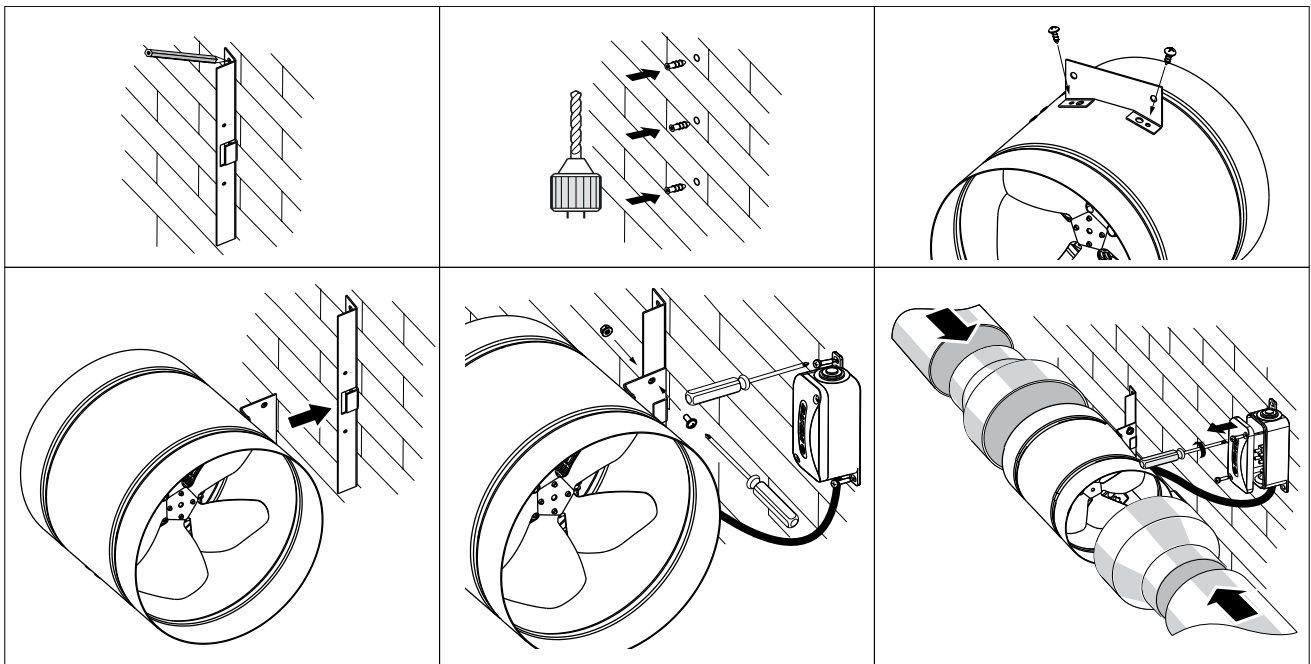
VKOM fan installation

The fans are installed into air duct by means of an **RM(z)** reducer which enables joining different diameter ducts. Once done, the assembly is secured with clamps. The power is supplied via terminal box on the fan casing. The **VKOM(z)** delivery set includes mounting brackets for attaching the unit to the mounting surface. Depending on a delivery set, two mounting options are possible:

1.



2. Note: the mounting bracket fixing point on the fan casing must be selected so that the screws do not interfere with the free rotation of the impeller.



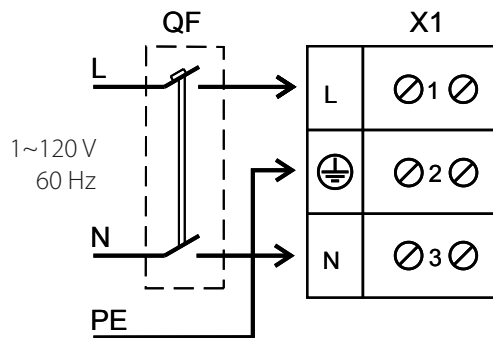
CONNECTION TO POWER MAINS



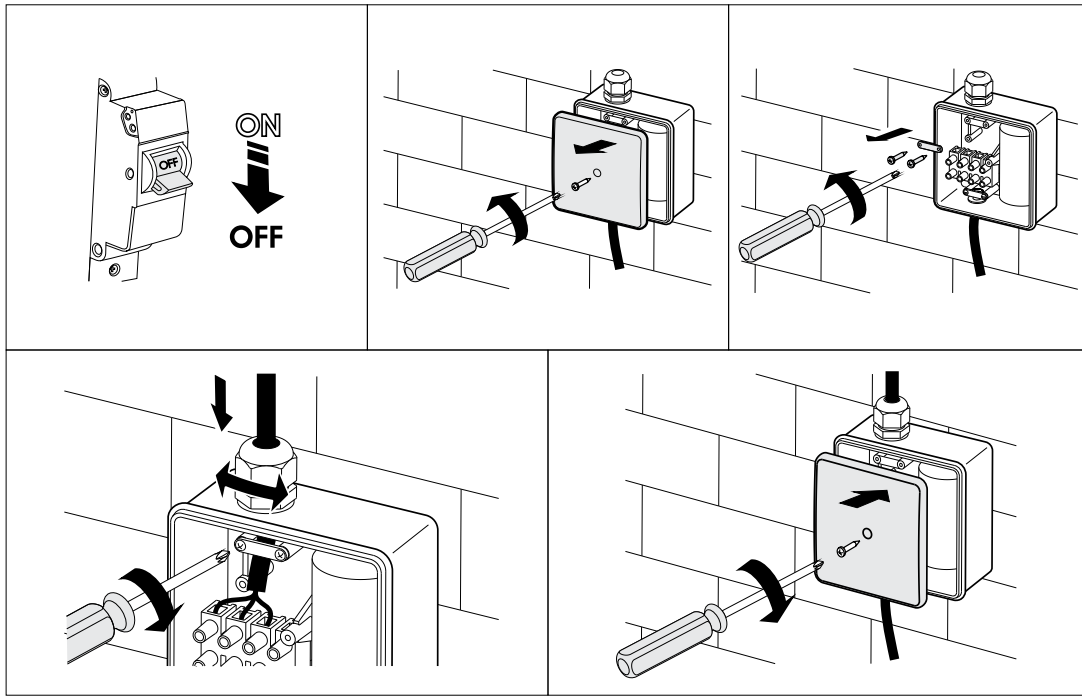
**POWER OFF THE POWER SUPPLY PRIOR TO ANY OPERATIONS WITH THE UNIT.
THE UNIT MUST BE CONNECTED TO POWER SUPPLY BY A QUALIFIED ELECTRICIAN.
THE RATED ELECTRICAL PARAMETERS OF THE UNIT ARE GIVEN ON THE
MANUFACTURER'S LABEL.**

- The unit is rated for connection to power mains with the parameters specified in the «Technical data» section, according to the wiring diagram.
- The connection must be made using durable, insulated and heat-resistant conductors (cables, wires). The actual wire cross section selection must be based on the maximum load current, maximum conductor temperature depending on the wire type, insulation, length and installation method.
- Connect the unit to power mains in accordance with the wiring diagram and terminal designations.
- The external power input must be equipped with an automatic circuit breaker (QF) built into the stationary wiring to open the circuit in the event of overload or short-circuit. The position of the external automatic circuit breaker must ensure free access for quick power-off of the unit. The trip current of the automatic circuit breaker must exceed the maximum current consumption of the unit (refer to the «Technical data» section or to the unit label). The recommended trip current of the circuit breaker is the next current in the standard trip current row following the maximum current of the connected unit. The circuit breaker is not included in the delivery set and can be ordered separately.

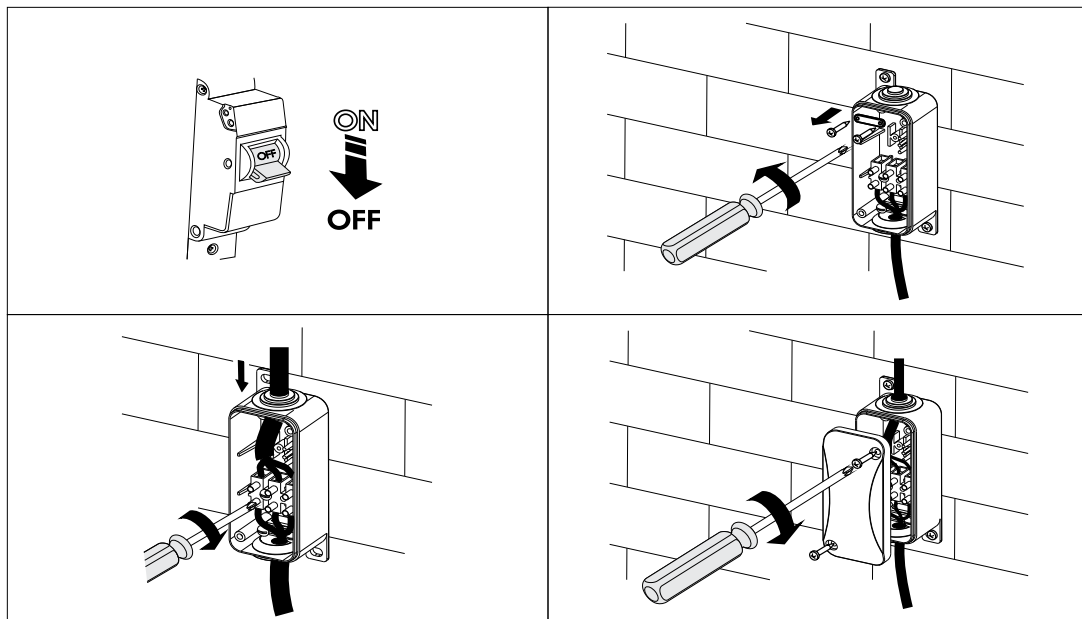
**Connection of
OV1, OVK1, VKOM
fans with single-phase motor**




OV1, OVK1 fan connection



VKOM fan connection



TECHNICAL MAINTENANCE



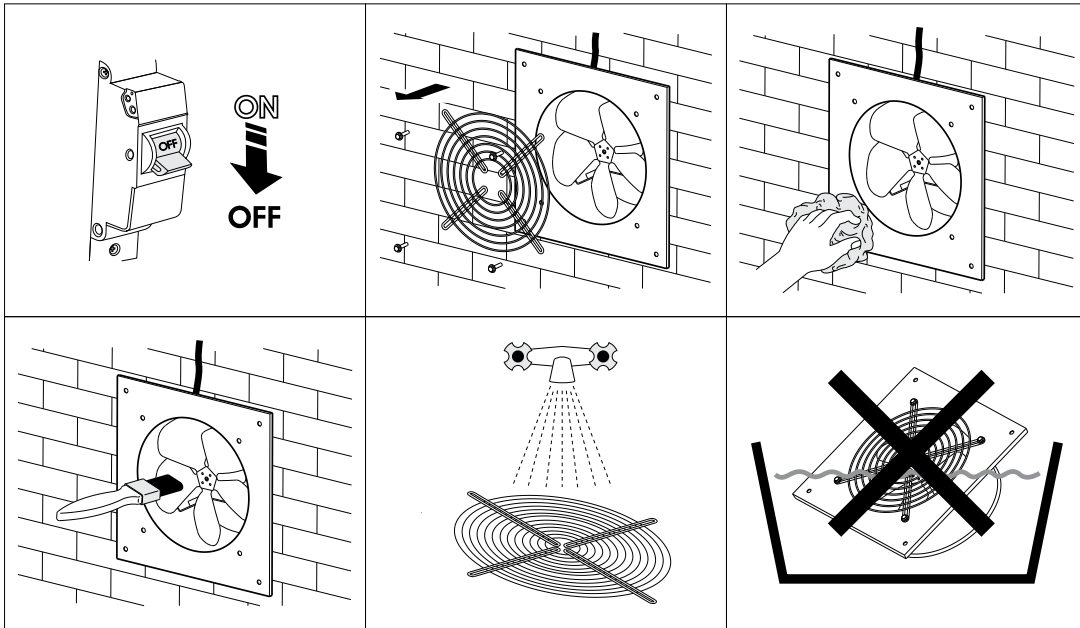
DISCONNECT THE UNIT FROM POWER SUPPLY BEFORE ANY MAINTENANCE OPERATIONS!

MAKE SURE THE UNIT IS DISCONNECTED FROM POWER MAINS BEFORE REMOVING THE PROTECTION

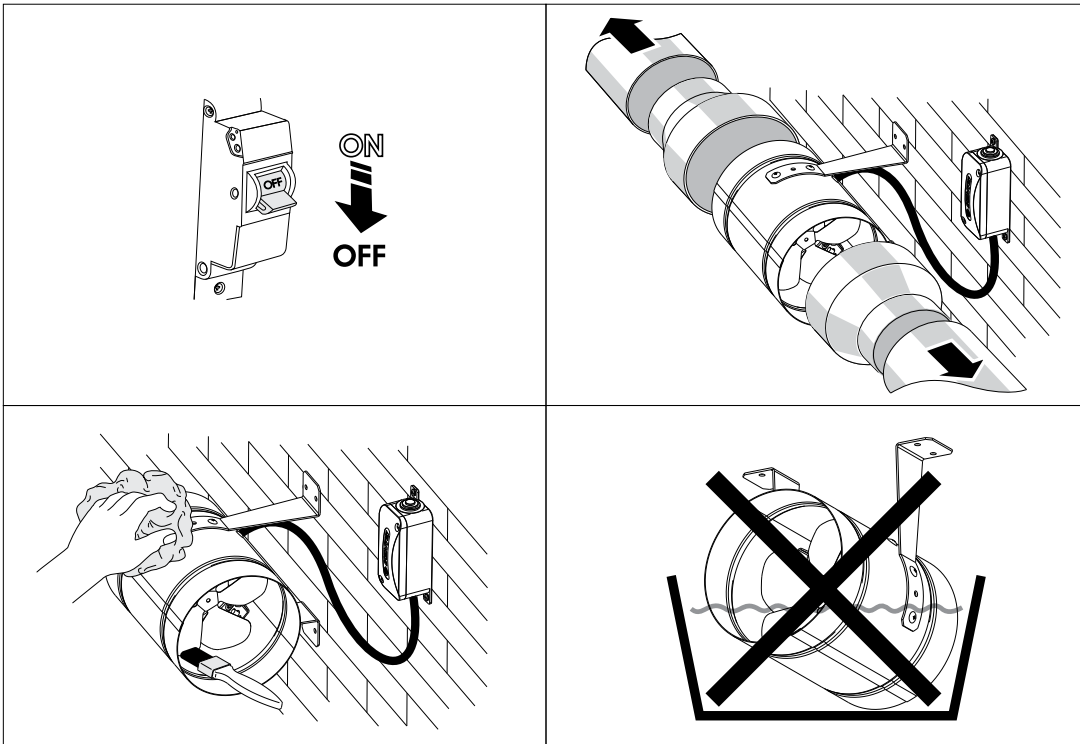
All the operations specific to the technical maintenance must be performed upon disconnecting the fan from power mains. The technical maintenance includes periodic cleaning of the fan surfaces from dust and dirt. To dust off the metal parts of the fan, use a dry soft brush or a stream of compressed air. Every 6 months clean the impeller with a warm detergent solution while avoiding water penetration onto the electric motor. Wipe the cleaned surfaces dry.

To carry out technical maintenance of the **VKOM** fans, remove the fans from the duct by undoing the retaining bolts on the units or disconnecting the mounting clamps on the **VKOM** units. To carry out work on the **OV1, OVK1** units, undo the bolt 4 and disconnect the grille and electric motor assembly from the casing.

OV1 and OVK1 technical maintenance



VKOM technical maintenance



TROUBLESHOOTING

PROBLEM	POSSIBLE REASONS	TROUBLESHOOTING
The fan will not start on power-up.	No electric power.	Check the electrical connections and the power switch status.
	Motor jamming.	Switch off the fan. Eliminate the cause for the impeller clogging. Switch the fan back on.
The automatic breaker activates upon the unit power-up.	The automatic circuit breaker is triggered by abnormally high current consumption due to a short circuit.	Disconnect the fan from the power mains and contact the Seller. Do not switch on the fan again!
Low air flow.	Clogging of air ducts or other ventilation system elements due to contamination. Impeller contamination. Damaged air ducts. Closed air dampers.	Clean the air ducts and other ventilation system elements as well as the impeller. Check the air ducts for damage. Make sure that the air dampers and louvers are open.

If the malfunction is too complex to be eliminated on the spot, contact the fan Seller.

STORAGE AND TRANSPORTATION REGULATIONS

- Store the unit in the manufacturer's original packaging box in a dry closed ventilated premise with temperature range +41°F...+104 °F 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

Production meets standard operating requirements in the USA and Canada.

Vents US warrants to the original purchaser of the unit that it will be free from defects in materials or workmanship for a period of 24 months from the date of original purchase. The Vents US warrants to the original purchaser of the unit that the integrated control unit will be free from defects in materials and workmanship for a period of 24 months from the date of original purchase.

THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

During the stated warranty period, Vents US will, at its option, repair or replace, without charge, any product or part which is found to be defective under normal use and service. This warranty does not cover (a) normal maintenance and normal service or (b) any products or parts which have been subject to misuse, negligence, accident, improper maintenance or repair (other than by Vents US), faulty installation or installation contrary to recommended installation instructions. Labor to remove and replace products is not covered. The duration of any implied warranty is limited to the time period specified for the express warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

VENTS US OBLIGATION TO REPAIR OR REPLACE, AT VENTS US OPTION, SHALL BE THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY. VENTS US SHALL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH PRODUCT USE OR PERFORMANCE.

Some states do not allow the exclusion or limitations of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This warranty supersedes all prior warranties. If proof of sales date is absent, warranty period is calculated from the production date. The unit can be exchanged at the following address:

Vents-US
 400 Murray Road, Cincinnati, OH 45217, USA
 Tel: 1-888-640-0925, 513-583-5786, Fax: 513-268-4597
 E-mail: support@ventsus.com
 www.vents-us.com

Please follow guidelines in this manual for product problem-free operation.



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



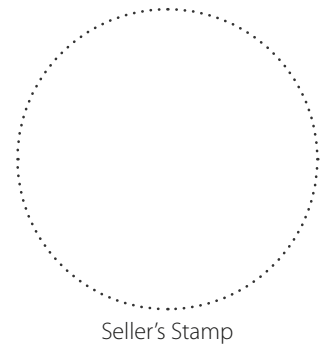
USER'S WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP.

CERTIFICATE OF ACCEPTANCE

Unit Type	Electric axial fans
Model	
Serial Number	
Manufacture Date	
Quality Inspector's Stamp	

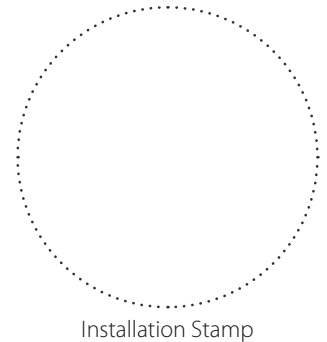
SELLER INFORMATION

Seller	
Address	
Phone Number	
E-mail	
Purchase Date	
This is to certify acceptance of the complete unit delivery with the user's manual. The warranty terms are acknowledged and accepted.	
Customer's Signature	



INSTALLATION CERTIFICATE

The _____ unit is installed pursuant to the requirements stated in the present user's manual.	
Company name	
Address	
Phone Number	
Installation Technician's Full Name	
Installation Date:	Signature:
The unit has been installed in accordance with the provisions of all the applicable local and national construction, electrical and technical codes and standards. The unit operates normally as intended by the manufacturer.	
Signature:	



WARRANTY CARD

Unit Type	Electric axial fans
Model	
Serial Number	
Manufacture Date	
Purchase Date	
Warranty Period	
Seller	

