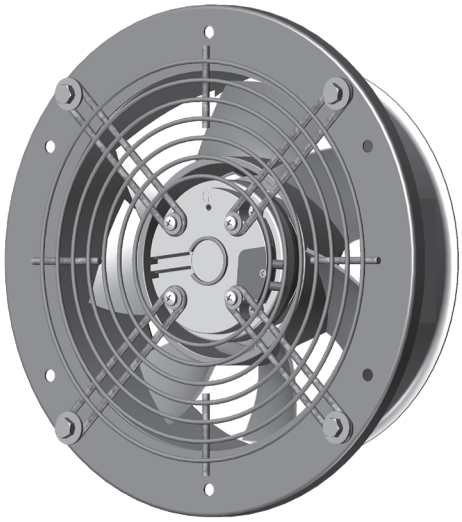
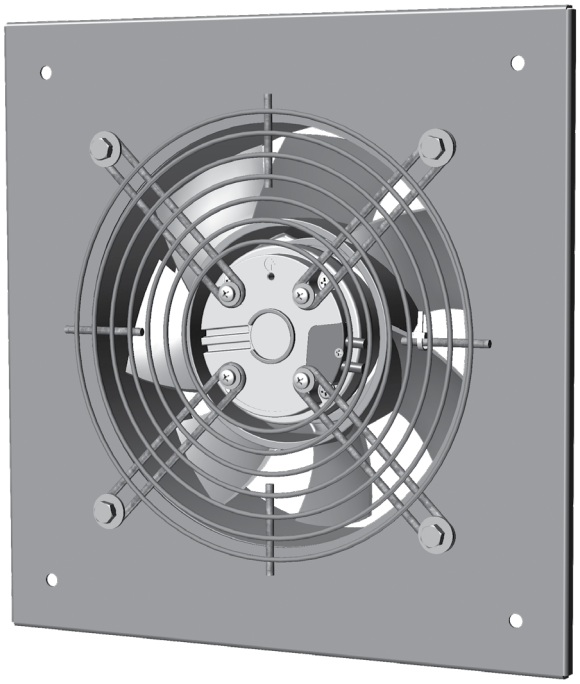




ELECTRIC AXIAL FANS

Axis-Q(R) EC

EN *USER'S MANUAL*

BLAUBERG

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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 Axis-Q(R) EC 200/250/300/350/400/450/500 (max) 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

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 done by children without supervision.
Children shall not play with the appliance.

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.

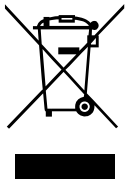
CAUTION: In order to avoid a safety hazard due to inadvertent resetting of the thermal cut-out, this unit must not be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly switched on and off by the utility.

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.

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.
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.
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.
Do not install or use the product until all construction and finishing work has been completed in the room where it is to be installed.
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

The Electric axial fans is designed for supply and exhaust ventilation of domestic, public and industrial premises with high requirements to the noise level and with limited space for mounting.
The unit is rated for continuous operation.
The unit is a component part and is not designed for stand-alone 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 favourable for the formation of hazardous substances (toxic substances, dust, pathogenic germs).

DELIVERY SET

NAME	QUANTITY
Fan	1 pc.
User's manual	1 pc.
Packing box	1 pc.

DESIGNATION KEY

Axis-Q EC 250 max

_ — standard capacity
max — increased capacity

Size

Electronically commutated motor

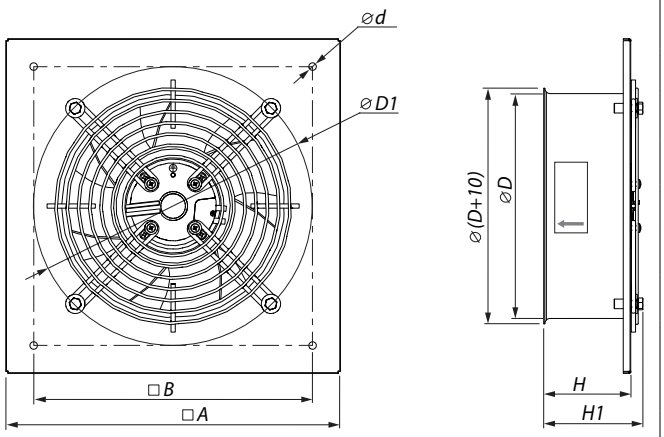
Model
Axis-Q — Axial ventilator with a square plate
Axis-QR — Axial ventilator with a round plate

TECHNICAL DATA

The unit is classified as a class I electrical appliance.

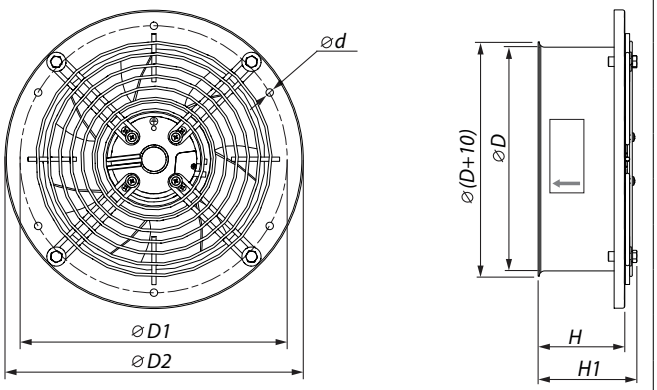
Axis-Q EC…

Model	Overall and connecting dimensions [mm]							Mounting hole diameter [mm]	Weight [kg]
	A	B	d	H	H1	D	D1		
Axis-Q EC 200	312	260	7	81	93	210	260	210	2.04
Axis-Q EC 200 max	312	260	7	81	93	210	260	210	2.04
Axis-Q EC 250	370	320	7	81	93	262	325	260	2.54
Axis-Q EC 250 max	370	320	7	81	93	262	325	260	2.56
Axis-Q EC 300	430	380	9	104	116	317	365	317	3.4
Axis-Q EC 300 max	430	380	9	104	116	317	365	317	3.51
Axis-Q EC 350	485	435	9	117	132	374	420	374	4.77
Axis-Q EC 400	540	490	9	97	157	416	468	416	5.65
Axis-Q EC 450	576	535	11	176	294	470	520	465	7.05
Axis-Q EC 500	655	615	11	180	294	520	568	520	8.31



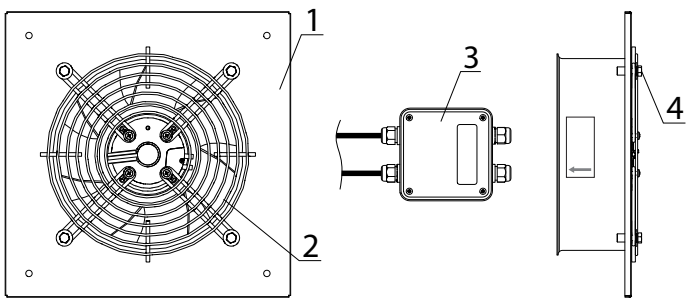
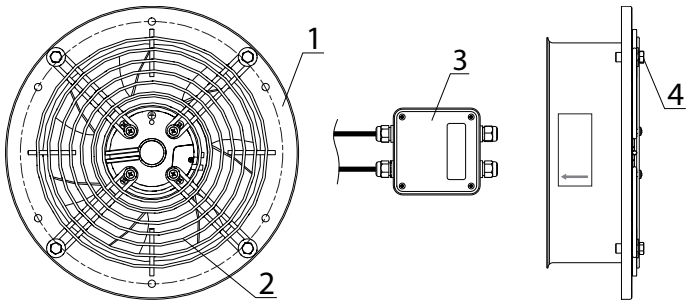
Axis-QR EC…

Model	Overall and connecting dimensions [mm]						Mounting hole diameter [mm]	Weight [kg]
	d	H	H1	D	D1	D2		
Axis-QR EC 200	7	81	93	210	250	280	210	1.6
Axis-QR EC 200 max	7	81	93	210	250	280	210	1.7
Axis-QR EC 250	7	81	93	262	318	340	260	2
Axis-QR EC 250 max	7	81	93	262	318	340	260	2
Axis-QR EC 300	9	104	116	317	380	397	317	2.7
Axis-QR EC 300 max	9	104	116	317	380	397	317	2.8
Axis-QR EC 350	9	117	132	374	442	460	374	3.8
Axis-QR EC 400	9	97	157	416	504	528	417	4.6
Axis-QR EC 450	11	176	294	470	578	607	465	6.3
Axis-QR EC 500	11	180	294	520	590	655	520	7



DESIGN AND OPERATING PRINCIPLE

Axis-Q EC… and **Axis-QR EC…** consist of casing 1 with a square or round flange, to which a grille 2 is attached with bolts 4, assembled with the motor and the impeller. Its rotation direction is determined by the type of the motor that is used with the external rotor. The fans have a terminal box with a cable suitable for external connection.
The motor casing has a threaded M4 hole for connection to the protective grounding circuit.

Axis-Q EC…	Axis-QR EC…
	

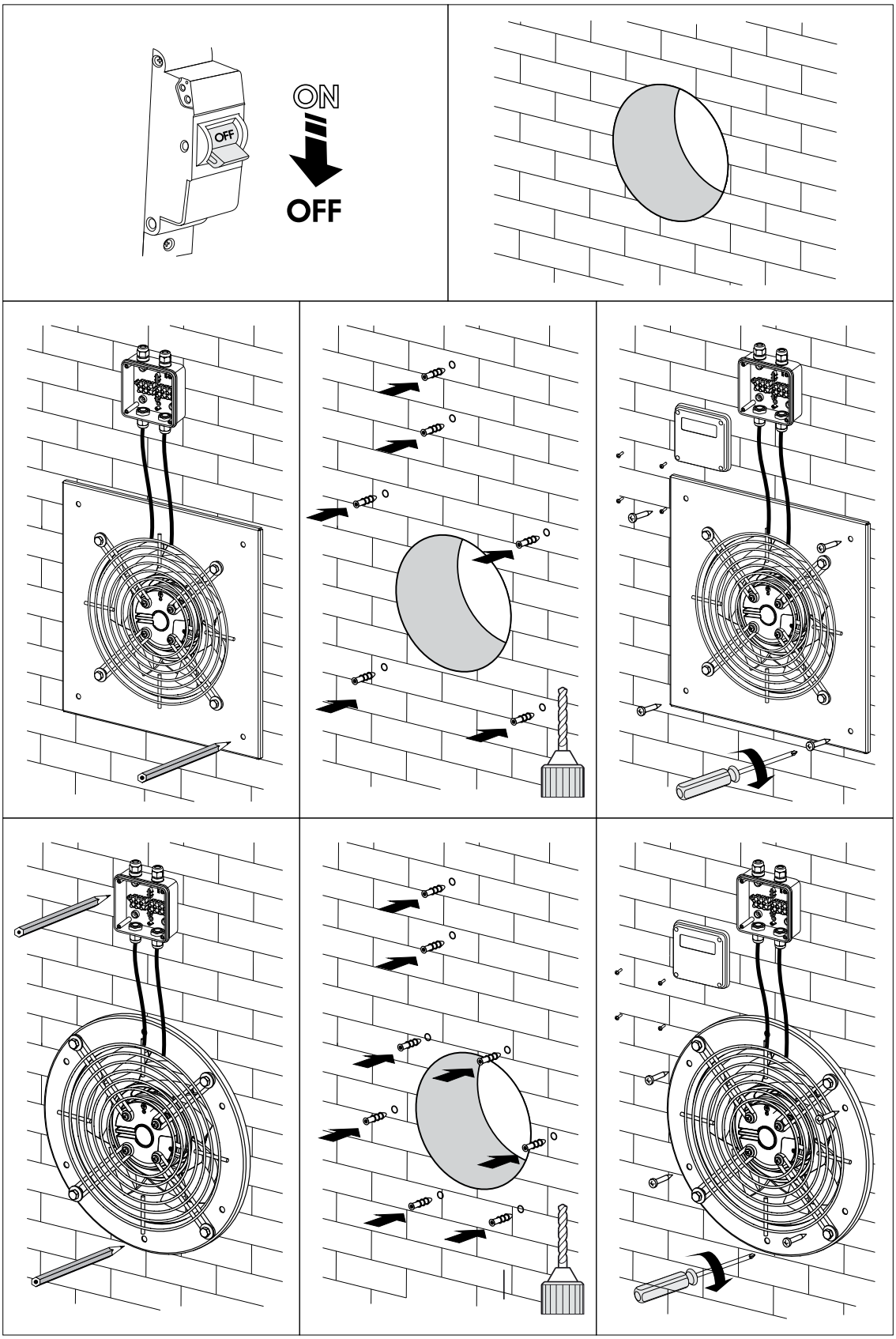
MOUNTING AND SET-UP

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

- Check the electrodes and make sure there are no cuts or cracks in the insulation after unpacking the fan. Check the fan casing and make sure it is not deformed or damaged.
- Make sure the impeller rotates smoothly and never touches the entry flange or casing. Make sure the electric circuit parameters match the technical data specified on the fan's label, which is on the casing, prior to connecting.
- In case the fan is used in conditions where it is exposed to water ingress, it must be protected. A possible protection option may be installing the fan under a hood or a roof.
- Since the unit is classified as a class I electrical appliance, it requires grounding: connect the terminal box ⏚ to the protective grounding circuit.

Fan series **Axis-Q EC…**, **Axis-QR EC…** are wall-mounted using a connecting casing and fastening holes.


OFF
ON
OFF

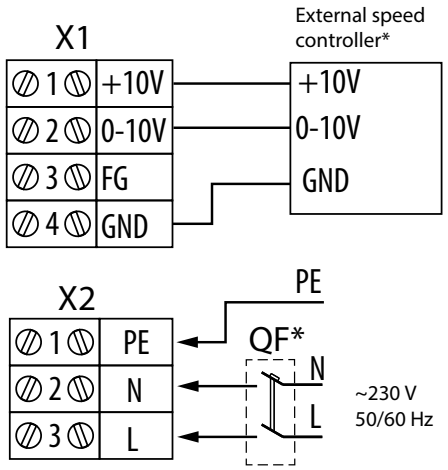
CONNECTION TO POWER MAINS

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.

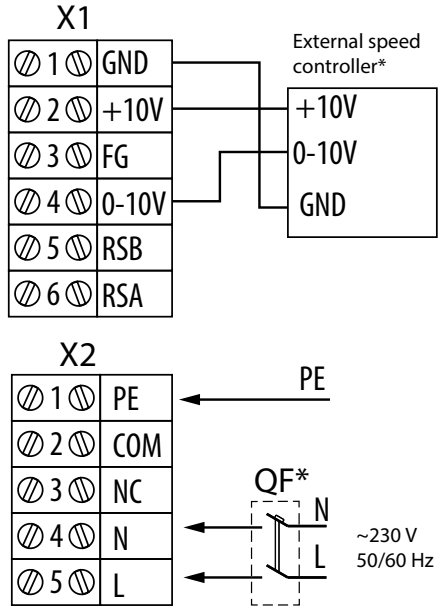
- The unit is rated for connection to power mains with the parameters specified in the «Technical data» section according to the wiring diagram.
- The unit must be connected to power mains using insulated electric conductors (cables, wires). The wire cross section selection must be based on the maximum load current, maximum conductor temperature depending in the wire type, insulation, length and installation method.
- The unit must be connected to power mains following the power connection scheme and the terminal designation.
- The external power input must be equipped with an automatic circuit breaker built into the stationary wiring to open the electric circuit in case of overload or short-circuit. The circuit breaker installation place must provide quick access for emergency shutdown 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). 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.
- The fan is connected to the power mains and additional external devices via the terminal box.
- External speeed controllers that are connected should provide the motor input voltage of 0 to 10 V or PWM-signal with an amplitude of 10 V.

Wiring diagrams

Axis-Q(R) EC 200/250/300/350/400 (max)



Axis-Q(R) EC 450/500 (max)



*Not included in the delivery set

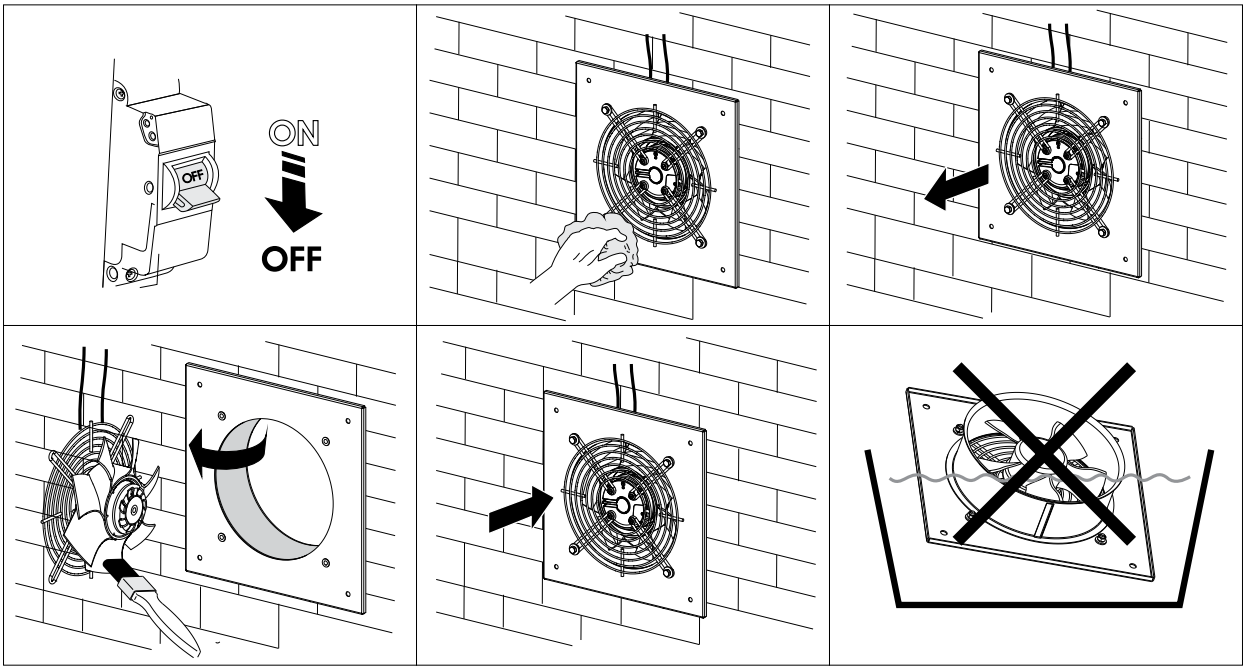
TECHNICAL MAINTENANCE

DISCONNECT THE UNIT FROM POWER SUPPLY BEFORE ANY MAINTENANCE OPERATIONS!

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

Technical maintenance must only be performed after disconnecting the unit. The technical maintenance includes periodic cleaning of the surfaces from accumulated dust and dirt. Use a soft dry brush or compressed air to remove dust from metal surfaces of the fan. Clean the impeller blades once in 6 months with a warm water detergent solution. Avoid liquid dripping on the motor. Wipe the fan surfaces dry afterward.

For technical maintenance of the fans, unscrew 4 bolts and remove the grille and motor from the casing.



TROUBLESHOOTING

Trouble	Possible reasons	Troubleshooting
The fan does not start when turned on.	No power supply.	Check the electric connections and the operation status of the circuit breaker.
	The motor is jammed.	Turn off the fan. Troubleshoot the impeller clogging. Turn the fan on again.
Automatic circuit breaker tripping after the unit start-up.	Overcurrent as a result of short circuit in the electric circuit, triggering the circuit breaker.	Disconnect the fan from the power main and contact the service centre. Do not turn the fan on again.
Low air flow.	Air ducts or other ventilatilation system elements are clogged. The impeller is soiled. Air ducts are damaged. The air dampers are closed.	Clean the air ducts as well as other ventilation system elements, including the impeller. Make sure the air ducts are not damaged. Make sure that the air dampers and shutters are open.

If you struggle to troubleshoot the cause of fault, contact the service centre or the Seller.

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 24 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.
- Damage to the unit casing 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

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	

Seller's Stamp

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:	

Installation Stamp

WARRANTY CARD

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

Seller's Stamp

BLAUBERG

Manufacturer: Ventilation Systems LLC,
Ukraine, Kyiv, 1 M. Kotsyubynskoho Street
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