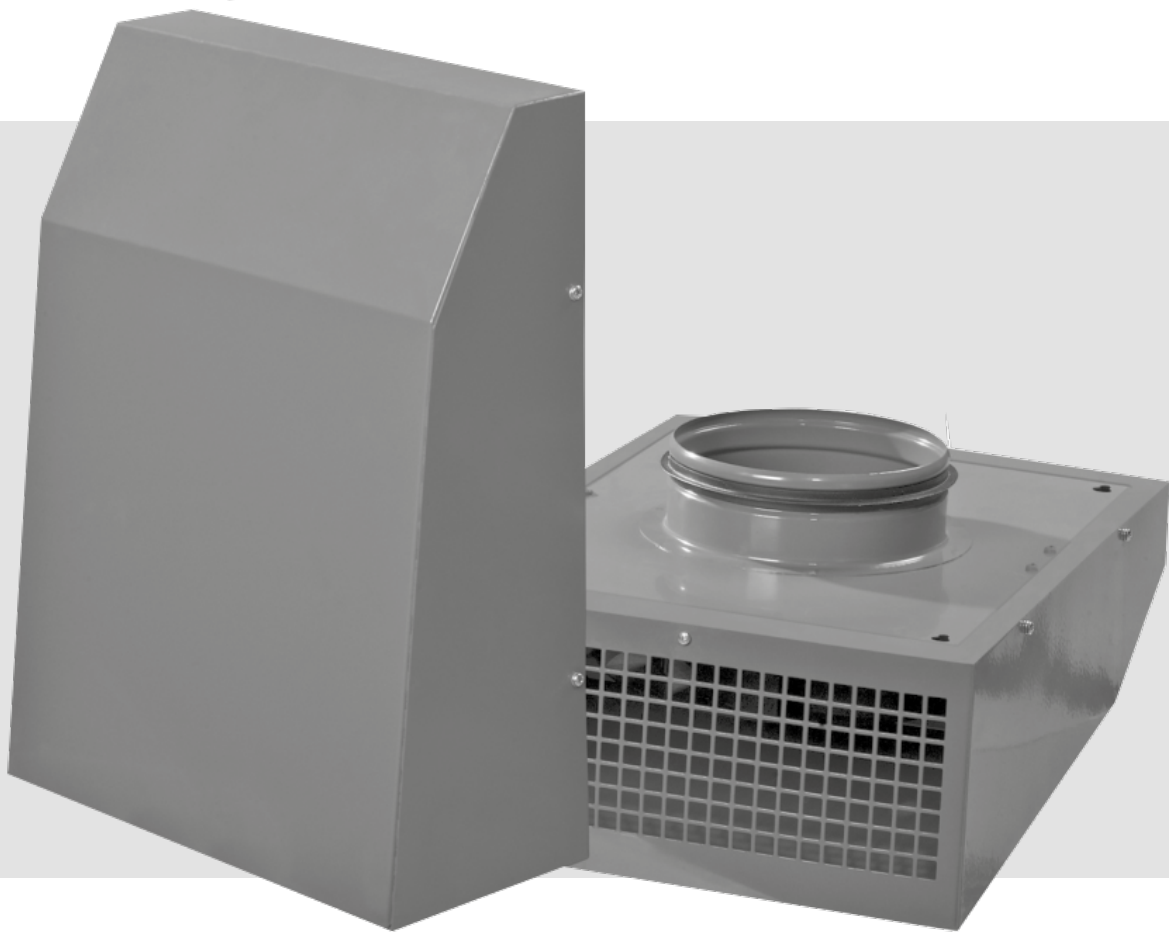


# USER'S MANUAL

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VCN 100  
VCN 100 K  
VCN 100 EC  
VCN 125  
VCN 125 K  
VCN 125 EC  
VCN 100  
VCN 150 K

VCN 150 EC  
VCN 160  
VCN 160 K  
VCN 160 EC  
VCN 200  
VCN 200 K  
VCN 200 EC  
VCN 200 EC S



Centrifugal fan

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This user's manual is the primary operating document intended for technical, maintenance and operations staff.

The user's manual contains information regarding the field of application, delivery package, operating principle, and design of the VCN/VCN EC fan and all its modifications.

Technical and maintenance staff must have proper theoretical knowledge and practical training specific to ventilation systems as well as the necessary skills to carry out the work in accordance with labour safety and construction regulations and standards applicable in the respective territory.

The information provided in the present document is true as at the document preparation.

Due to the continuous product development the company reserves the right to update the technical specifications, design or delivery package of its products.

No part of the present publication may be reproduced, uploaded or saved in reference-providing information systems or translated into other languages in any form whatsoever without the company's prior written consent.

## SAFETY REQUIREMENTS

- Please read the user's manual carefully prior to installing and operating 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.
- The warnings contained in the user's manual must be considered most seriously since they contain vital personal safety information.
- Failure to follow the rules and safety precautions noted in this user's manual may result in an injury or unit damage.
- After a careful reading of the manual, keep it for the entire service life of the unit.
- While transferring the unit control, the user's manual must be turned over to the receiving operator.

### UNIT INSTALLATION AND OPERATION SAFETY PRECAUTIONS



- Disconnect the unit from power mains prior to any installation operations.



- Unpack the unit with care.



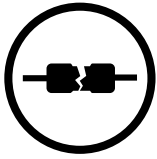
- The unit must be grounded!



- While installing the unit, follow the safety regulations specific to the use of electric tools.



- Do not change the power cable length at your own discretion. Do not bend the power cable. Avoid damaging the power cable. Do not put any foreign objects on the power cable.



- Do not use damaged equipment or cables when connecting the unit to power mains.



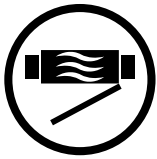
- Do not touch the unit controls with wet hands. Do not carry out the installation and maintenance operations with wet hands.



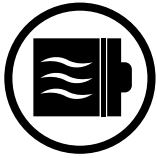
- Do not allow children to operate the unit.



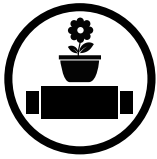
- Do not store any explosive or highly flammable substances in close proximity to the unit.



- Do not open the unit during operation.



- Do not block the air duct when the unit is switched on.



- Do not sit on the unit and avoid placing foreign objects on it.



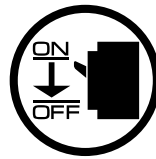
- Do not lay the power cable of the unit in close proximity to heating equipment.



- Do not operate the unit outside the temperature range stated in the user's manual. Do not operate the unit in aggressive or explosive environments.



- Do not wash the unit with water. Protect the electric parts of the unit against ingress of water.



- Disconnect the unit from power mains prior to any technical maintenance.



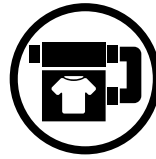
- When the unit generates unusual sounds, odour, or emits smoke, disconnect it from power supply and contact the Seller.



- Do not direct the air flow produced by the unit towards open flame or ignition sources.



- In case of continuous operation of the unit, periodically check the security of mounting.



- Use the unit only for its intended purpose.



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

## PURPOSE



**THE UNIT SHOULD NOT BE OPERATED BY CHILDREN OR PERSONS WITH REDUCED PHYSICAL, MENTAL, OR SENSORY CAPACITIES, OR THOSE WITHOUT THE APPROPRIATE TRAINING. THE UNIT MUST BE INSTALLED AND CONNECTED ONLY BY PROPERLY QUALIFIED PERSONNEL AFTER THE APPROPRIATE BRIEFING.**

**THE CHOICE OF UNIT INSTALLATION LOCATION MUST PREVENT UNAUTHORIZED ACCESS BY UNATTENDED CHILDREN.**



**THE UNIT MUST NOT BE OPERATED IN KITCHEN PREMISES.**

The VCN/VCN EC centrifugal fans are designed for exhaust ventilation of living spaces, offices, shops, garages, kitchens, bathrooms and other residential and public premises.

The unit is not intended for organizing ventilation in swimming pools, saunas, greenhouses, summer gardens, and other spaces with high humidity.

The fans are designed for vertical mounting at ventilation shaft outlets and are rated for continuous operation.

The unit is rated as a class I electric appliance.

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

The minimum operating temperature of the transported air is -25 °C, for a short time - up to -30 °C, the maximum permissible temperature is up to +50 °C.

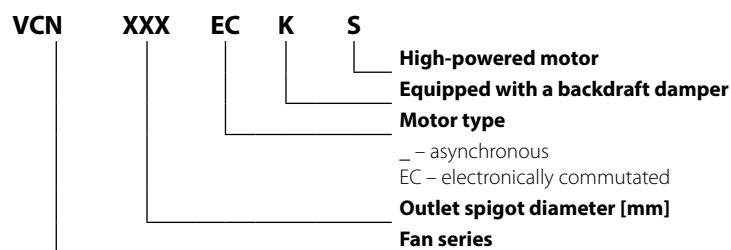
Transported air must not contain dust and other solid impurities, sticky substances and fibrous materials.

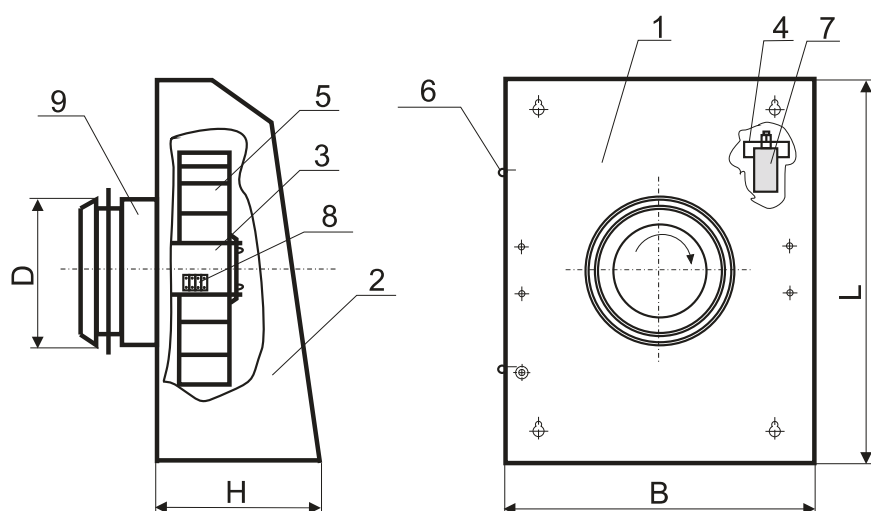
The fan design is constantly being improved, thus some models may be slightly different from those described in this manual.

## DELIVERY SET

Name	Number
Fan	1 pc.
Dowel with a screw	4 pcs.
User's manual	1 pc.
Packing box	1 pc.

## DESIGNATION KEY




**Fan design**

The fan consists of a casing 1 with a cover 2 that is attached by screws 6. The right-hand turbine 5 is installed inside the casing on brackets 3, 4 (not available in VCN EC modifications), a condenser 7 (not available in VCN EC modifications) and a terminal block 8 for connection to single-phase power mains. The casing is equipped with an intake spigot 9 (VCN K modification is equipped with a backdraft damper) for connection to an air duct.

**Overall and connecting dimensions**

	<b>D</b>	<b>L</b>	<b>B</b>	<b>H</b>	<b>Weight [kg]</b>
VCN 100/VCN 100 EC	100	355	260	140	3.60
VCN 125/VCN 125 EC	125	355	260	140	3.60
VCN 150/VCN 150 EC	150	400	300	140	4.70
VCN 160/VCN 160 EC	160	400	300	140	4.70
VCN 200/VCN 200 EC	200	400	300	140	4.70
VCN 200 EC C	200	400	326	182	5.3

**Technical data**

	<b>VCN 100/VCN 100 K</b>	<b>VCN 125/VCN 125 K</b>	<b>VCN 150/VCN 150 K</b>	<b>VCN 160/VCN 160 K</b>	<b>VCN 200/VCN 200 K</b>	<b>VCN 100/VCN 100 K</b>	<b>VCN 125/VCN 125 K</b>	<b>VCN 150/VCN 150 K</b>	<b>VCN 160/VCN 160 K</b>	<b>VCN 200/VCN 200 K</b>
Voltage [V]	1~230 (50 Hz)					1~230 (60 Hz)				
Power [W]	71	75	96	95	96	92	98	100	96	97
Current [A]	0.31	0.33	0.42	0.41	0.42	0.40	0.43	0.44	0.42	0.42
Air flow [m <sup>3</sup> /h]	325 (295*)	485 (450*)	630 (565*)	650 (590*)	700 (640*)	350 (320*)	500 (465*)	650 (595*)	685 (625*)	710 (650*)
RPM [min <sup>-1</sup> ]	2530	2475	2400	2440	2515	2625	2570	2270	2400	2555
Sound pressure level at 3 m distance [dBA]	54	54	58	60	62	54	54	58	60	62
Transported air temperature [°C]	-25...+40									

\*For VCN XXX K models

	VCN 100 EC	VCN 125 EC	VCN 150 EC	VCN 160 EC	VCN 200 EC	VCN 200 EC C
Unit voltage [V (50 (60) Hz)]	1~230					
Power [W]	89	103	92	92	79	102
Current [A]	0,53	0,83	0,75	0,75	0,67	0,86
Air flow [m <sup>3</sup> /h]	313	480	550	585	535	755
RPM [min <sup>-1</sup> ]	3460	3600	2840	2840	2680	2800
Sound pressure level at 3 m distance [dBA]	55	57	56	55	55	58
Transported air temperature [°C]	-25...+40					

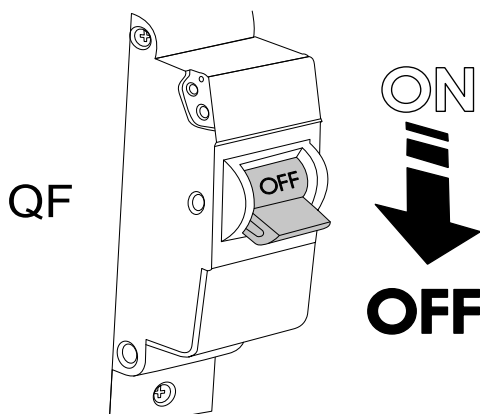
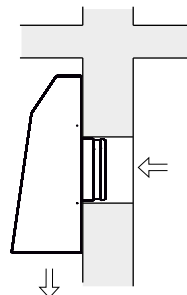
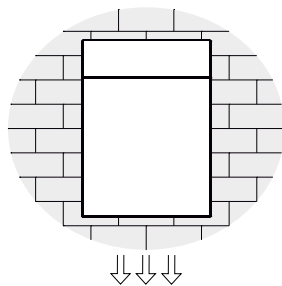
## MOUNTING AND SET-UP



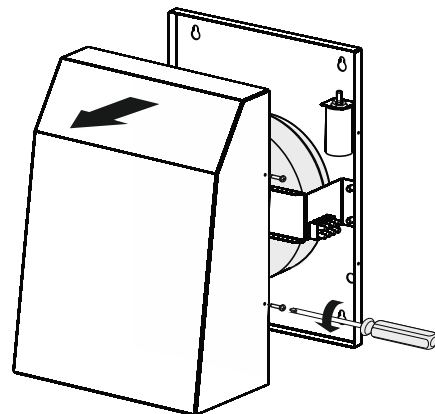
**READ THE USER'S MANUAL BEFORE INSTALLING THE UNIT**

The fans must be mounted vertically. While installing the unit ensure convenient access for subsequent maintenance and repair. The fan must be mounted on a plane wall.

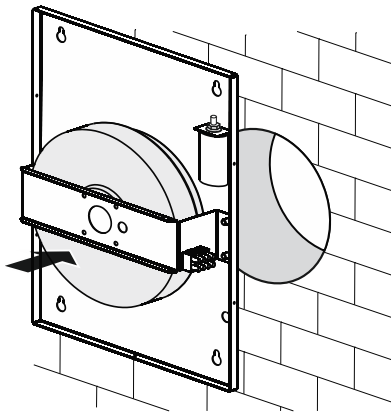
**CAUTION!** When installing outdoors, it is necessary to install a canopy above the fan to protect it against atmospheric influences.



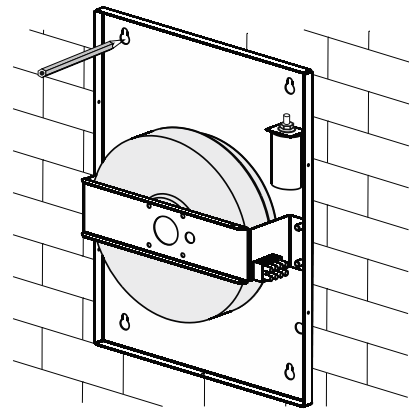
Set the circuit breaker to OFF.



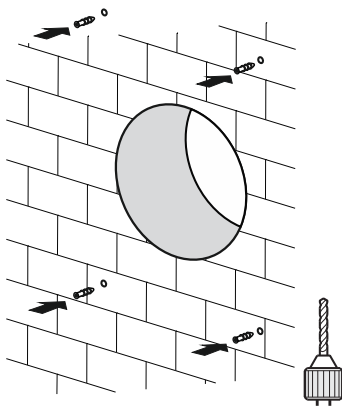
Unscrew self-tapping screws and remove the cover.



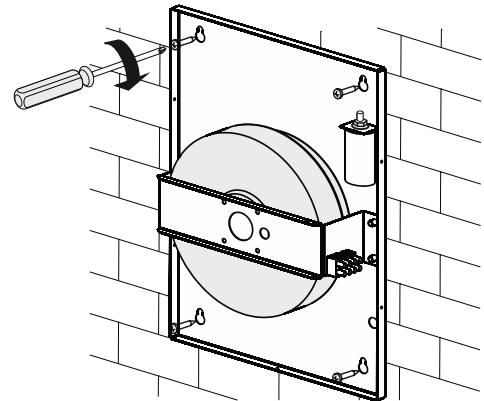
Attach the fan to the installation site.



Mark the mounting holes.



Drill the holes and insert the dowels.



Secure the fan by routing the power cable through the cable gland.

## CONNECTION TO POWER MAINS



**DISCONNECT THE UNIT FROM POWER MAINS PRIOR TO ANY OPERATIONS.  
THE UNIT MUST BE CONNECTED TO POWER MAINS BY A QUALIFIED ELECTRICIAN.  
THE RATED ELECTRICAL PARAMETERS OF THE UNIT ARE SHOWN  
ON THE RATING PLATE.**



**ANY TAMPERING WITH THE INTERNAL CONNECTIONS IS PROHIBITED  
AND WILL VOID THE WARRANTY.**

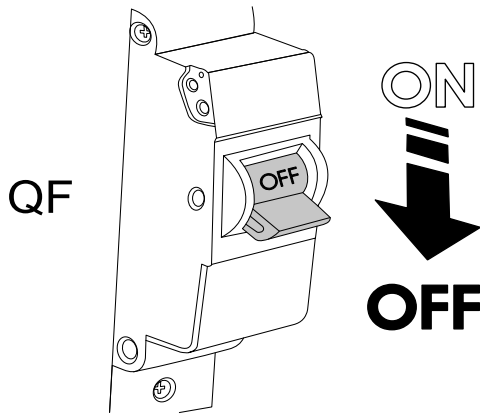
The fan is rated for connection to single-phase AC 220-230 V/50 (60) Hz power mains. For electric installations use insulated durable heat-resistant wires with the minimum wire cross section 1 mm<sup>2</sup>.

The actual conductor cross-section selection must be based on its type, the maximum permissible heating, insulation, length and installation method. The external power input must be equipped with an automatic circuit breaker built into the stationary wiring to open the circuit in the event of overload or short-circuit.

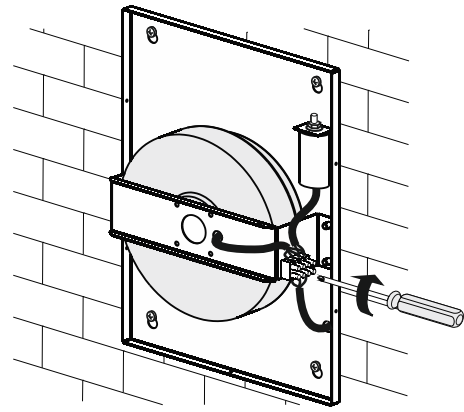
The circuit breaker location must ensure free access for quick shutdown of the fan.

Connect the fan to the terminals located inside the fan casing in compliance with the fan wiring diagram and the terminal designation.

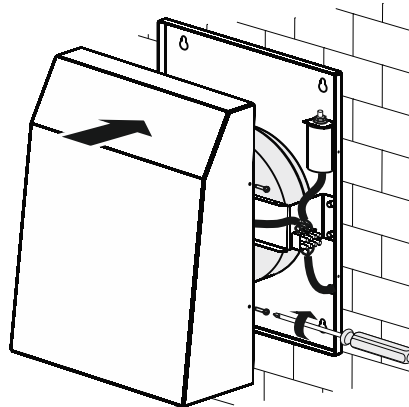
The terminal designations are shown on the sticker inside the fan casing.



Disconnect the fan from power supply.

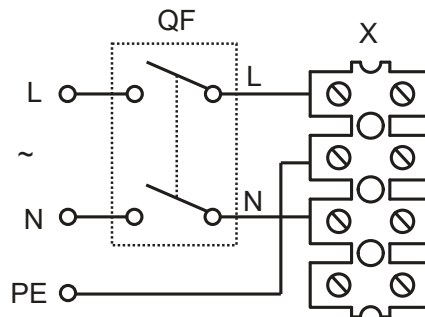


Connect the power cable to the terminal block according to the diagram.

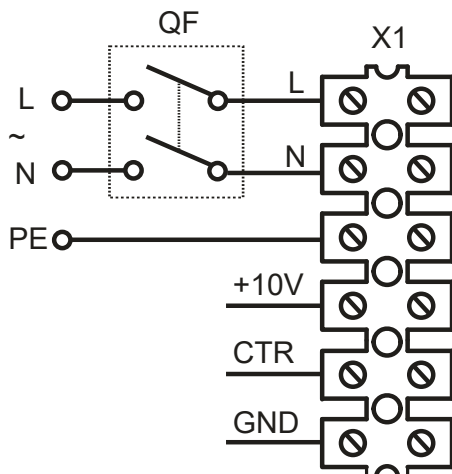


Put on the cover and tighten the screws.

**Wiring diagram of the fan with an asynchronous motor**



**Wiring diagram of the fan with an EC motor**



For the operation of the EC motor, it is necessary to install a speed controller (not included in the delivery set) or to short-circuit the contacts + 10V and CTR (the fan will run at maximum speed).

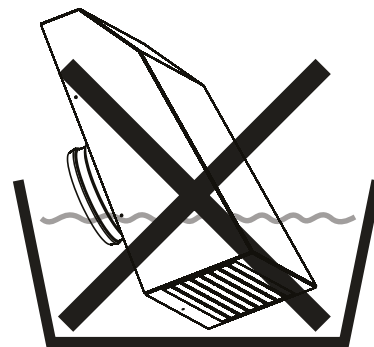
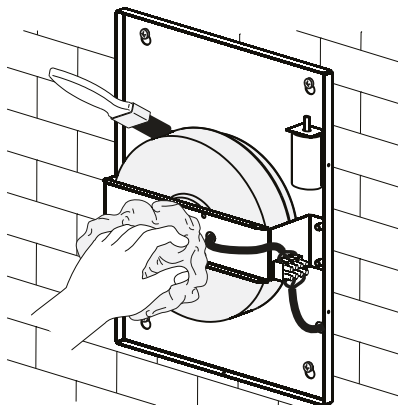
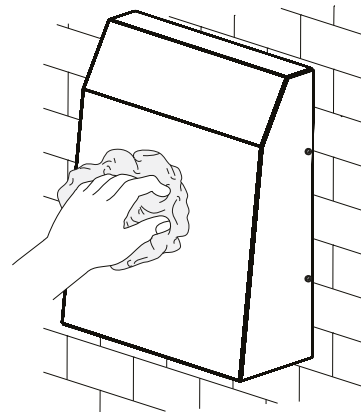
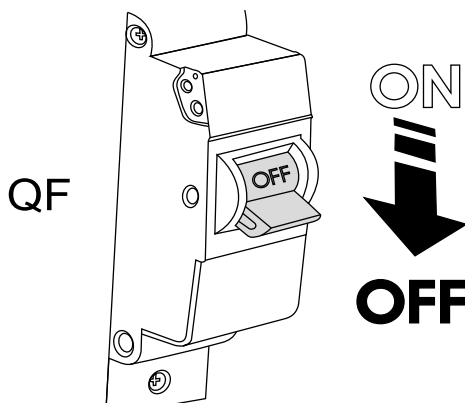


## TECHNICAL MAINTENANCE



**DISCONNECT THE UNIT FROM POWER SUPPLY BEFORE ANY MAINTENANCE OPERATIONS!**

Maintenance means regular cleaning of the fan surfaces from dust and dirt. Use a soft dry brush or a vacuum cleaner to remove dust. The blades require thorough cleaning once in 6 months. The filter prevents the fan soiling and reduces the cleaning periodicity. To clean the fan undo the self-tapping screws and remove the fan cover. Clean the impeller blades with a cloth wetted in water and mild detergent solution. Avoid liquid dripping on the motor! After cleaning the impeller, install the cover back and tighten the screws.



## STORAGE AND TRANSPORTATION REGULATIONS

- Store the unit in the manufacturer's original packaging box in a dry closed ventilated premise with temperature range +5 °...+40 °C and relative humidity up to 70 %.
- Storage environment must not contain aggressive vapours 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 room 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 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 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 dismantled 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.**



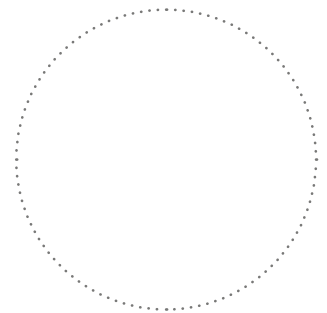
**USER'S WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP.**

### CERTIFICATE OF ACCEPTANCE

<b>Unit Type</b>	Centrifugal fan
<b>Model</b>	VCN _____
<b>Serial Number</b>	
<b>Manufacture Date</b>	
<b>Quality Inspector's Stamp</b>	

### SELLER INFORMATION

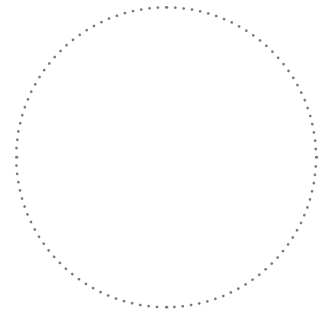
<b>Seller</b>	
<b>Address</b>	
<b>Phone Number</b>	
<b>E-mail</b>	
<b>Purchase Date</b>	
This is to certify acceptance of the complete unit delivery with the user's manual. The warranty terms are acknowledged and accepted.	
<b>Customer's Signature</b>	



Seller's Stamp

### INSTALLATION CERTIFICATE

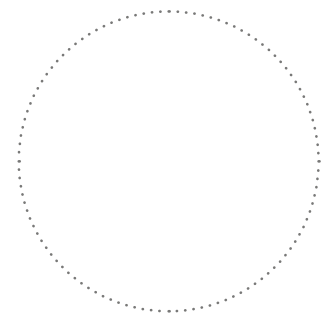
The VCN _____ unit has been connected to power mains pursuant to the requirements stated in the present user's manual.	
<b>Seller</b>	
<b>Address</b>	
<b>Phone Number</b>	
<b>Installation Technician's Full Name</b>	
<b>Installation Date:</b>	<b>Signature:</b>
The unit has been installed in accordance 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.	
<b>Signature:</b>	



Installation Company Stamp

### WARRANTY CARD

<b>Unit Type</b>	Centrifugal fan
<b>Model</b>	VCN _____
<b>Serial Number</b>	
<b>Manufacture Date</b>	
<b>Purchase Date</b>	
<b>Warranty Period</b>	
<b>Seller</b>	



Seller's Stamp

