



**INLINE CENTRIFUGAL FAN
IN SOUND INSULATED CASING**



Box-I EC

EN

USER'S MANUAL

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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 Box-I EC 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.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a safety hazard.

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

WARNING: If there are any unusual oscillating movements, immediately stop using the unit and contact the manufacturer, its service agent or suitably qualified persons.

The replacement of parts of the safety suspension system device shall be performed by the manufacturer, its service agent or suitably qualified persons.

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.

Fixing means for attachment to the ceiling such as hooks or other devices shall be fixed with a sufficient strength to withstand 4 times the weight of the appliance.

The mounting of the suspension system shall be performed by the manufacturer, its service agent or suitably qualified persons.

The appliance is to be installed so that the blades are more than 2.3m (2,1 m AU) above the floor.

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.

BEFORE INSTALLING ADDITIONAL EXTERNAL DEVICES, READ THE RELEVANT USER MANUALS.

The installation site of the fan must have protective elements that prevent foreign objects from entering the fan.

When starting, setting up and operating the fan, the exhaust and supply spigots must be protected to prevent injury from the rotating parts of the fan.



THE PRODUCT MUST BE DISPOSED SEPARATELY AT THE END OF ITS SERVICE LIFE.

DO NOT DISPOSE THE UNIT AS UNSORTED DOMESTIC 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 UNAUTHORISED ACCESS BY UNATTENDED CHILDREN.

The Inline centrifugal fan in sound insulated casing 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	NUMBER
Fan	1 pc.
User's manual	1 pc.
Packing box	1 pc.

DESIGNATION KEY

Designation example: Box-I EC XXxXX - 1 max

Series name

Motor type

EC: synchronous electronically commutated motor

Rectangular duct size [cm]

30x15/40x20/50x25/50x30/
60x30/60x35/70x40/80x50/
90x50/100x50

Phases

1: single-phase
3: three-phase

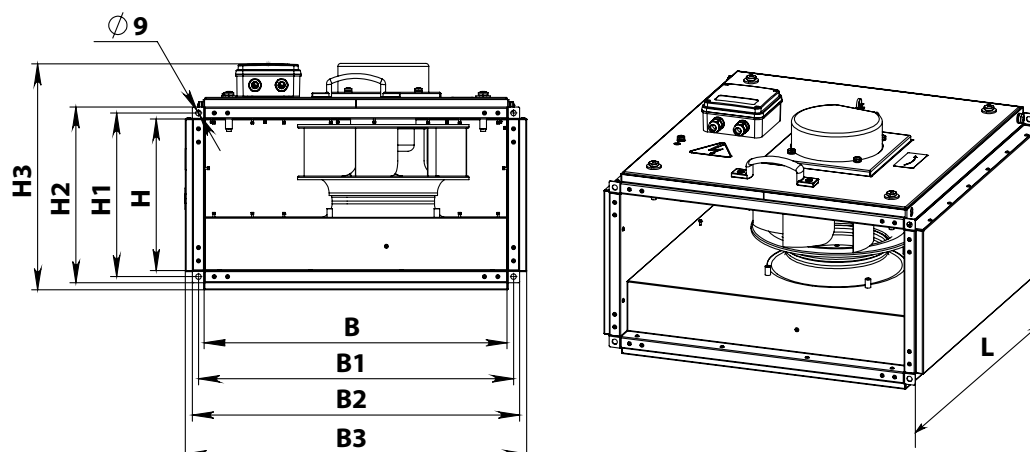
Motor modification

_ : medium pressure motor
max: high pressure motor

TECHNICAL DATA

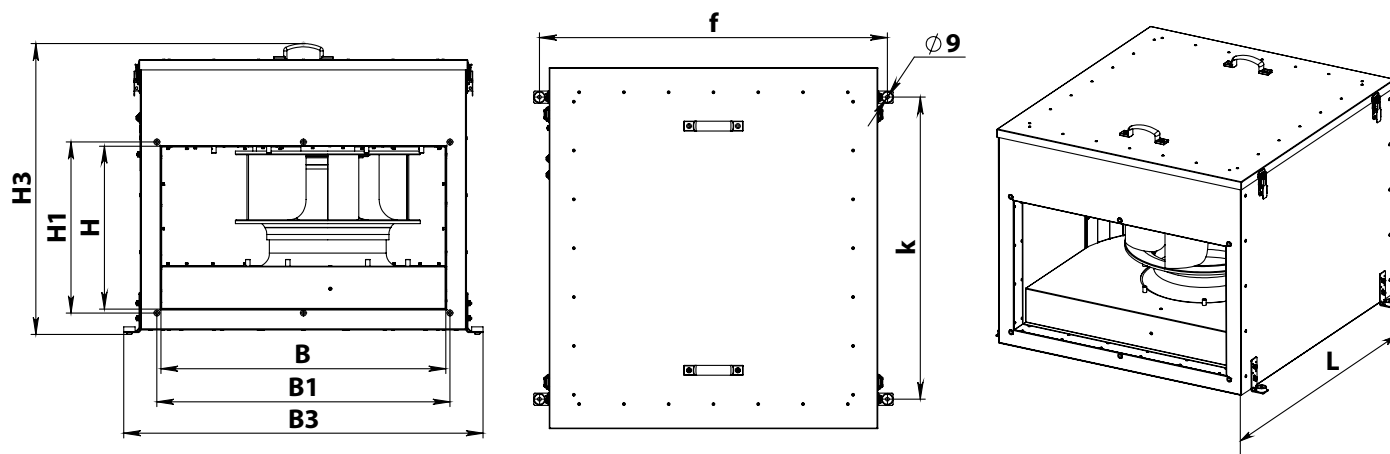
The unit is designed for indoor application with the ambient temperature ranging from 0 °C up to +45 °C and relative humidity up to 80 %. The unit is rated as a Class I electrical appliance. Ingress protection rating against access to hazardous parts and water ingress is IPX4. The unit design is constantly being improved, thus some models may be slightly different from those described in this manual.





OVERALL DIMENSIONS

Model	Dimensions [mm]									Weight [kg]
	B	B1	B2	B3	H	H1	H2	H3	L	
Box-I EC 30x15-1	300	320	340	364	150	170	190	271	370	10.3
Box-I EC 30x15-1 max	300	320	340	364	150	170	190	271	370	10.8
Box-I EC 40x20-1	400	420	440	464	200	220	240	322	460	15.1
Box-I EC 40x20-1 max	400	420	440	464	200	220	240	322	460	16.8
Box-I EC 50x25-1	500	520	540	564	250	270	290	373	560	25.5
Box-I EC 50x25-1 max	500	520	540	564	250	270	290	373	560	27.7
Box-I EC 50x30-1 max	500	520	540	564	300	320	340	424	560	29



OVERALL DIMENSIONS

Model	Dimensions [mm]									Weight [kg]
	B	B1	B3	H	H1	H3	L	f	k	
Box-I EC 60x30-1	600	620	783	300	320	574	752	755	450	52.9
Box-I EC 60x30-1 max	600	620	783	300	320	574	787	755	450	54.4
Box-I EC 60x35-1	600	620	783	350	370	664	752	755	450	56.6
Box-I EC 60x35-3 max	600	620	783	350	370	664	752	750	450	59.3
Box-I EC 70x40-1	700	720	883	400	420	714	882	855	742	82.6
Box-I EC 70x40-3 max	700	720	883	400	420	714	882	855	742	83.4
Box-I EC 80x50-3	800	820	983	500	520	814	937	955	797	108.4
Box-I EC 80x50-3 max	800	820	983	500	520	814	937	955	797	99.8
Box-I EC 90x50-3 max	900	920	1083	500	520	814	1037	1055	800	125.0
Box-I EC 100x50-3 max	1000	1020	1183	500	520	814	1037	1155	800	132.0

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 fan power cables for integrity and make sure the impeller has smooth rotation prior to mounting.

The Box-I EC 30x15-1, Box-I EC 30x15-1 max, Box-I EC 40x20-1, Box-I EC 40x20-1 max, Box-I EC 50x25-1, Box-I EC 50x25-1 max, Box-I EC 50x30-1 max fans are mounted between the rectangular air ducts and do not require special fastening if the connection is made directly to them.

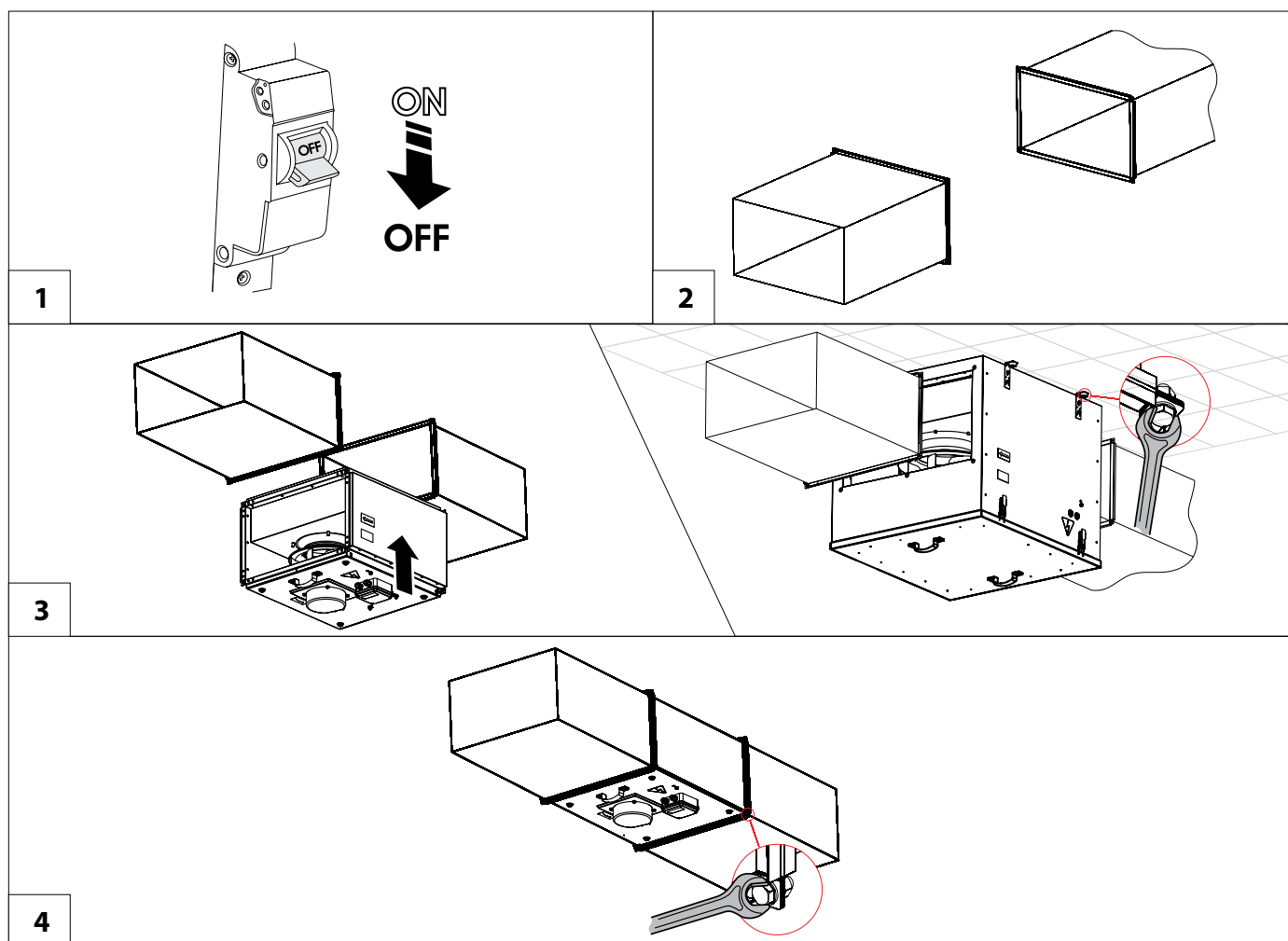
Connect the fan to air ducts with M8 bolts and nuts.

The Box-I EC 60x30-1, Box-I EC 60x35-1, Box-I EC 60x35-3 max, Box-I EC 70x40-1, Box-I EC 70x40-3 max, Box-I EC 80x50-3, Box-I EC 80x50-3 max, Box-I EC 90x50-3 max, Box-I EC 100x50-3 max fans are attached to the ceiling on anchors/studs or suspension brackets.

The fan may be installed in any position in consideration of the air flow direction (as indicated by the arrow on the fan casing).

Access for the fan maintenance shall be provided.

The casing is equipped with a removable access cover for maintenance purposes.



CONNECTION TO POWER MAINS



DISCONNECT THE POWER SUPPLY PRIOR TO ANY OPERATIONS WITH THE UNIT.

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.

THE RATED ELECTRICAL PARAMETERS OF THE UNIT ARE GIVEN ON THE MANUFACTURER'S LABEL

The unit is rated for connection to 1~230 V/50 (60) Hz or 3~400 V/50 (60) Hz power mains 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.

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.

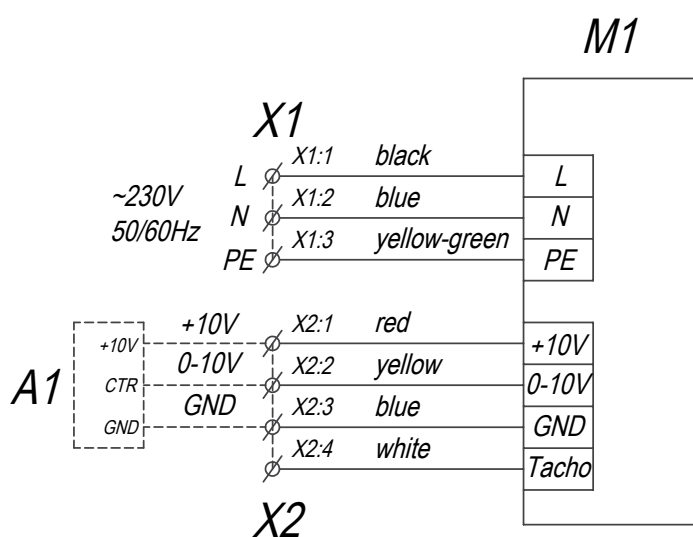
The position of the external automatic circuit breaker must ensure free access for quick power-off of the unit.

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).

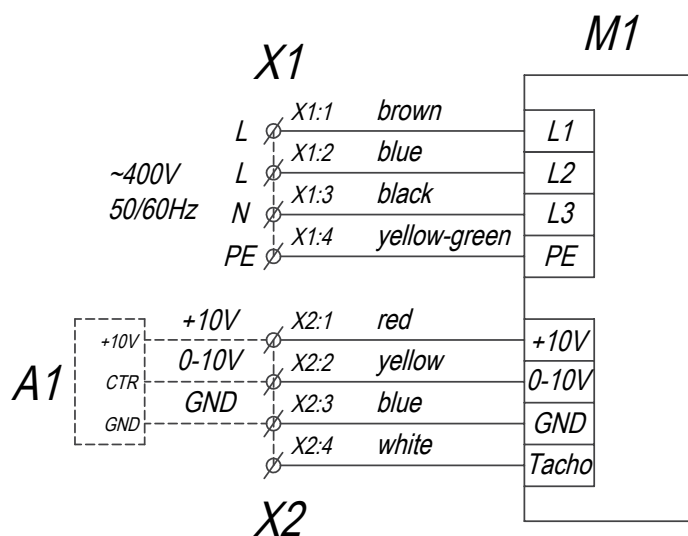
It is recommended to select the nominal current of the circuit breaker from the standard series, following the maximum current of the connected unit.

The circuit breaker is not included in the delivery set and can be ordered separately.

Wiring diagram of the fan with a single-phase motor



Wiring diagram of the fan with a three-phase motor



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.

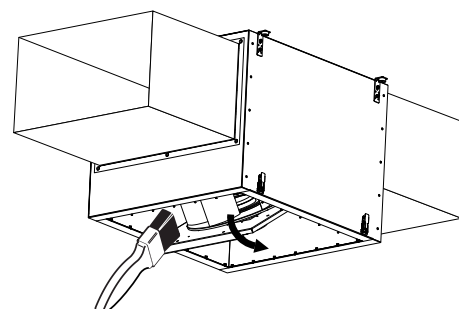
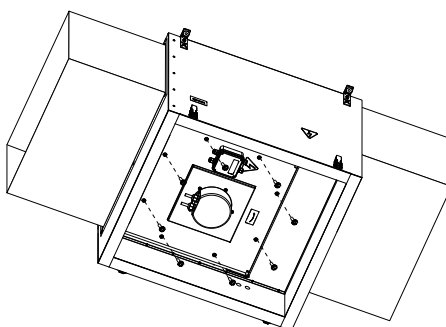
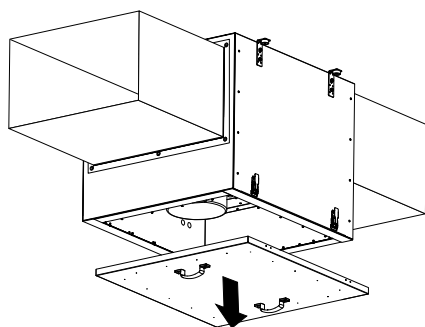
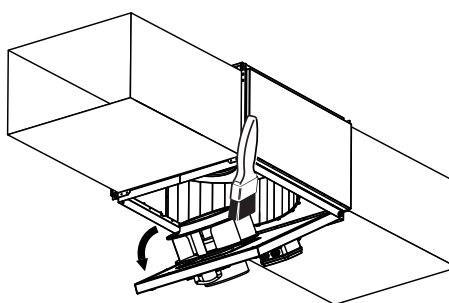
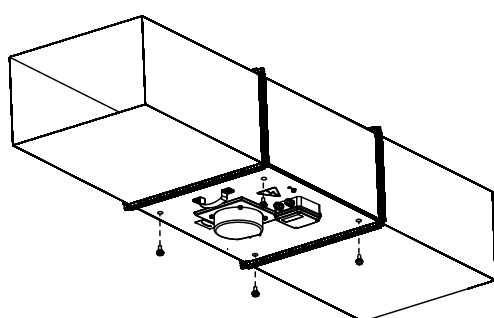
The technical maintenance includes periodic cleaning of the surfaces from accumulated dust and dirt. Use a soft brush or compressed air to remove dust from metal surfaces of the fan. Use a vacuum cleaner to remove dust from the sound insulating surface.

The impeller blades require thorough cleaning once in 6 months.

Clean the impeller blades with a soft cloth wetted in mild water detergent solution. Avoid liquid dripping on the motor.

Wipe the fan surfaces dry after cleaning.

While cleaning the fan make sure the balance counterweights are not shifted and the impeller is not misaligned.



TROUBLESHOOTING

Problem	Possible reasons	Troubleshooting
The fan does not run.	No power supply.	Check the automatic circuit breaker. Check the electric connections.
Noisy operation.	Impeller imbalance.	Clean the impeller.

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 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.
- 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



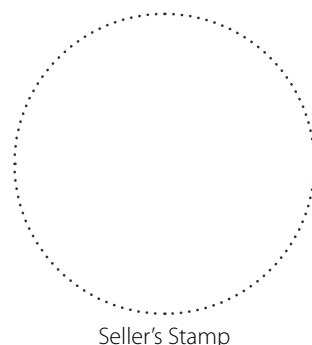
USER'S WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP

CERTIFICATE OF ACCEPTANCE

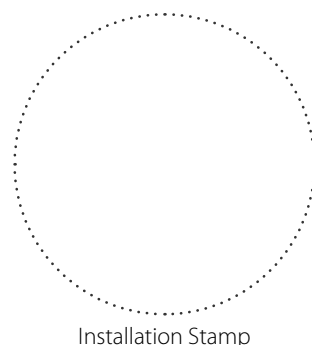
Unit Type	Inline centrifugal fan in sound insulated casing
Model	
Serial Number	
Manufacture Date	
Quality Inspector's Stamp	

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	Inline centrifugal fan in sound insulated casing
Model	
Serial Number	
Manufacture Date	
Purchase Date	
Warranty Period	
Seller	

