



AIR SUPPLY UNIT



BLAUBOX E

EN

USER'S MANUAL



BLAUBERG
Ventilatoren

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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 the purpose, technical details, operating principle, design, and installation of the BLAUBOX E unit (-s) and all of its (their) 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.

The information in this user's manual is 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.

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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.



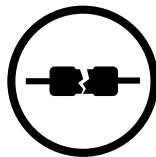
- The unit must be grounded!



- 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.



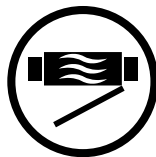
- Do not touch the unit controls with wet hands. Do not carry out the installation and maintenance operations with wet hands.



- Do not allow children to operate the unit.



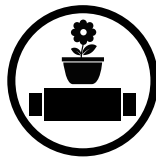
- Do not store any explosive or highly flammable substances in close proximity to the unit.



- 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.



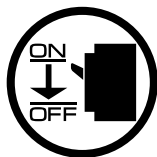
- Do not lay the power cable of the unit in close proximity to heating equipment.



- 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 DOMESTIC WASTE.**

PURPOSE

The unit is intended for filtering, supplying and heating purified intake air in private homes, offices, hotels, cafés, conference halls and other residential and public spaces. The unit is not intended for organizing ventilation in swimming pools, saunas, greenhouses, summer gardens and other spaces with high humidity. 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



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.

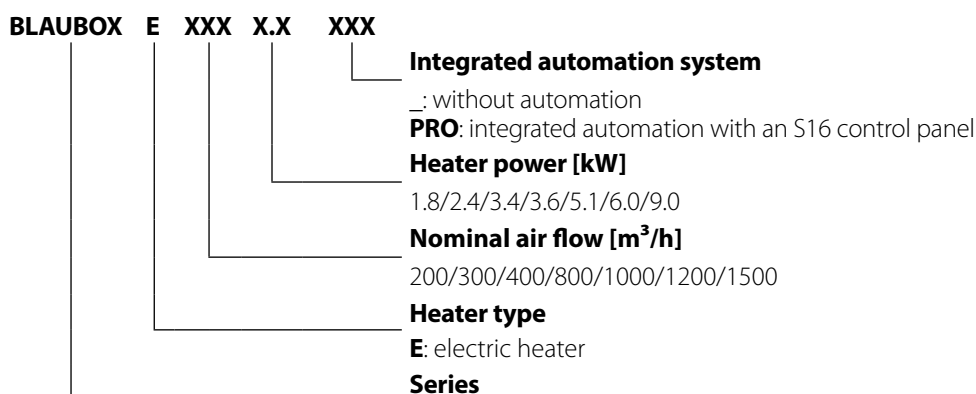
THE CHOICE OF UNIT INSTALLATION LOCATION MUST PREVENT UNAUTHORIZED ACCESS BY UNATTENDED CHILDREN.

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
Air handling unit	1 pc.
Control panel (for models with automation)	1 pc.
Duct temperature sensor	1 pc.
User's manual	1 pc.
Packing box	1 pc.

DESIGNATION KEY



TECHNICAL DATA

The unit is designed for indoor application with the ambient temperature ranging from +1 °C up to +40 °C and relative humidity up to 80 %. In order to prevent condensation on the internal walls of the units, it is necessary that the surface temperature of the casing is 2-3 °C higher than the dew point temperature of the transported air.

The unit is rated as a Class I electrical appliance.

Hazardous parts access and water ingress protection rating:

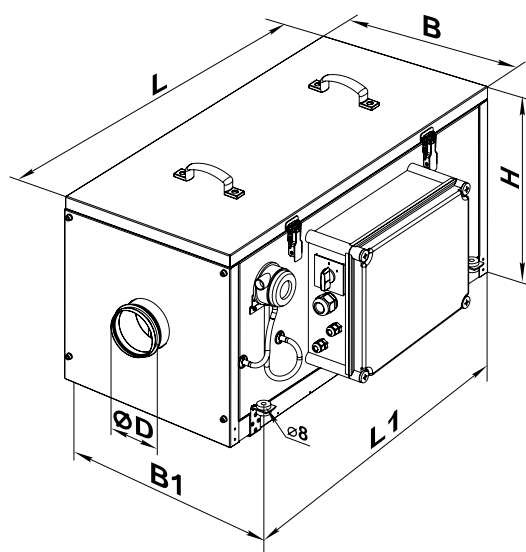
- IP22 for the unit connected to the air ducts
- IP44 for the unit motors

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

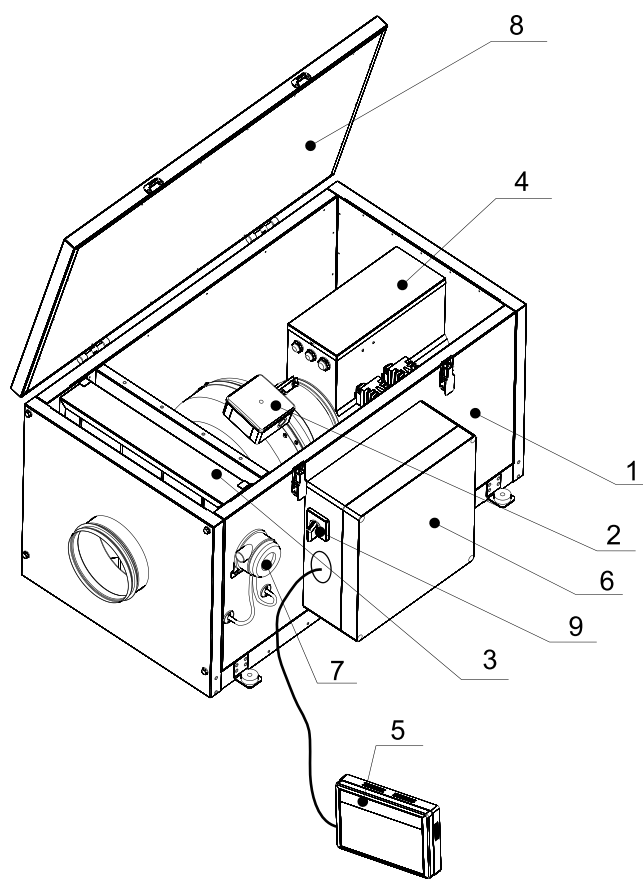
	BLAUBOX E200-1.8	BLAUBOX E300-2.4	BLAUBOX E400-2.4	BLAUBOX E400-3.4	BLAUBOX E400-5.1	BLAUBOX E400-6	BLAUBOX E800-3.4	BLAUBOX E800-5.1	BLAUBOX E800-6
Unit voltage [V/50 Hz]	1~ 230		1~ 230		3~ 400		1~ 230	3~ 400	
Maximum fan power [W]	73	75	98				193		
Fan current [A]	0.32	0.33	0.43				0.84		
Electric heater power [kW]	1.8	2.4	2.4	3.4	5.1	6.0	3.4	5.1	6.0
Electric heater current [A]	7.8	10.4	10.4	14.8	7.4	8.7	14.8	7.4	8.7
Number of electric heating elements	3	3	2	2	3	3	2	3	3
Total unit power [kW]	1.873	2.475	2.498	3.498	5.198	6.098	3.593	5.293	6.193
Total unit current [A]	8.12	10.73	10.83	15.23	7.83	9.13	15.64	8.24	9.54
Maximum air flow [m³/h]	190	285	425				810		
RPM [min ⁻¹]	2830	2800	2705				2780		
Sound pressure level at 3 m distance [dBA]	27	28	29				30		
Transported air temperature [°C]	-25...+40								
Casing material	aluzinc		aluzinc				aluzinc		
Insulation	25 mm mineral wool		25 mm mineral wool				25 mm mineral wool		
Filter	G4		G4				G4		
Connected air duct diameter [mm]	100	125	150				200		
Weight [kg]	50		50				52		

	BLAUBOX E1000-3.6	BLAUBOX E1000-6	BLAUBOX E1000-9	BLAUBOX E1200-6	BLAUBOX E1200-9	BLAUBOX E1500-6	BLAUBOX E1500-9
Unit voltage [V/50 Hz]	3~ 400			3~ 400			
Maximum fan power [W]	194			171		296	
Fan current [A]	0.85			0.77		1.34	
Electric heater power [kW]	3.6	6.0	9.0	6.0	9.0	6.0	9.0
Electric heater current [A]	5.3	8.7	13.0	8.7	13.0	8.7	13.0
Number of electric heating elements	3	3	3	3	3	3	3
Total unit power [kW]	3.794	6.194	9.194	6.171	9.171	6.296	9.296
Total unit current [A]	6.15	9.55	13.85	9.47	13.77	10.04	14.34
Maximum air flow [m ³ /h]	990			1190		1520	
RPM [min ⁻¹]	2790			2600		2720	
Sound pressure level at 3 m distance [dBA]	30			30		30	
Transported air temperature [°C]	-25...+40						
Casing material	aluzinc			aluzinc			
Insulation	25 mm mineral wool			25 mm mineral wool			
Filter	G4			G4			
Connected air duct diameter [mm]	250			315			
Weight [kg]	52			62			

Model	Dimensions [mm]					
	Ø D	B	B1	H	L	L1
BLAUBOX E200	99	382	421.5	408	800	647
BLAUBOX E300	124	382	421.5	408	800	647
BLAUBOX E400	149	455	496.5	438	800	647
BLAUBOX E800	199	487	526.5	513	835	684
BLAUBOX E1000	249	487	526.5	513	835	684
BLAUBOX E1200(1500)	314	527	566.5	548	900	750



DESIGN AND OPERATING PRINCIPLE



- 1 – Casing
- 2 – Fan
- 3 – Filter
- 4 – Electric heater
- 5 – Control panel (BLAUBOX E... Pro)
- 6 – Control unit (BLAUBOX E... Pro)
- 7 – Differential pressure switch
- 8 – Cover
- 9 – Power switch

The BLAUBOX E unit allows controlling the air flow, air temperature (preheating) and air filtering.

The fan with a motor with an external rotor and integrated thermal protection is installed inside the casing. The motor is located inside the operating turbine and doesn't require maintenance.

The air flow rate is controlled by means of the fan speed switch with 3 speeds. The air filter is located on the inlet side.

The duct electric heater with a round air duct is mounted from the outlet side. The electric heater is equipped with overheating protection: Thermal switch with automatic unit restart and emergency shutdown with manual reset:

- Thermostat with response temperature of 50 °C, which turns off the unit automatically, followed by turning it on after cooling the heater casing.

- Thermal switch with response temperature of 90 °C with restart with manual reset.

The thermal switch sensors turn off heating and do not put the unit back into operation. Press the manual reset button **"RESET"** to put the unit back into operation. The unit is equipped with an air duct temperature sensor for temperature monitoring and maintenance. A circuit breaker is located on the control unit for disconnecting the unit from mains.

The unit is connected to standard round air ducts.

MOUNTING AND SET-UP

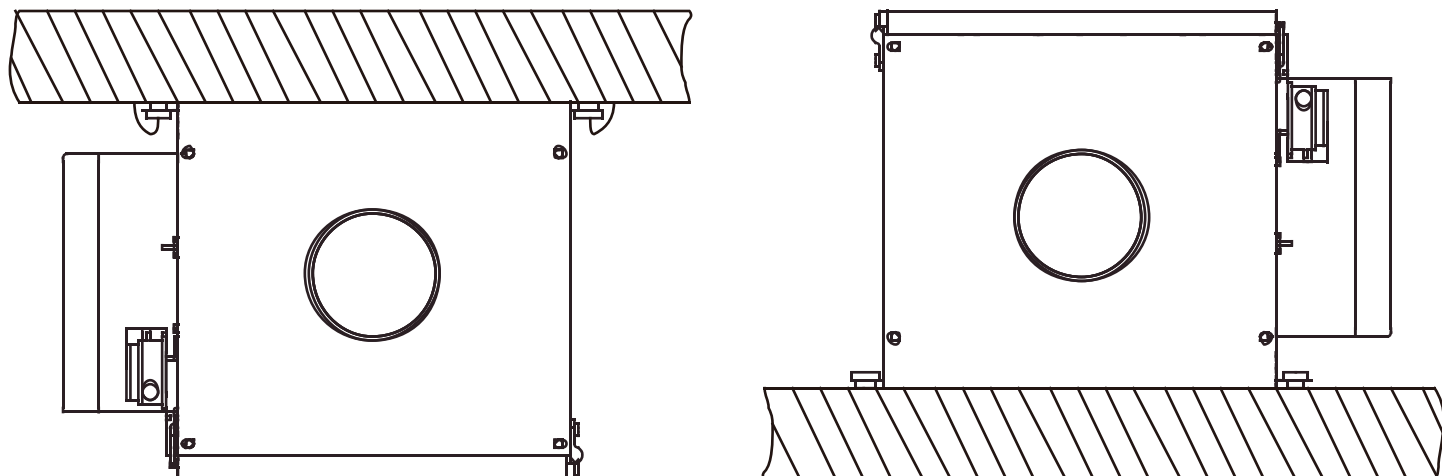


READ THE USER'S MANUAL BEFORE INSTALLING THE UNIT.

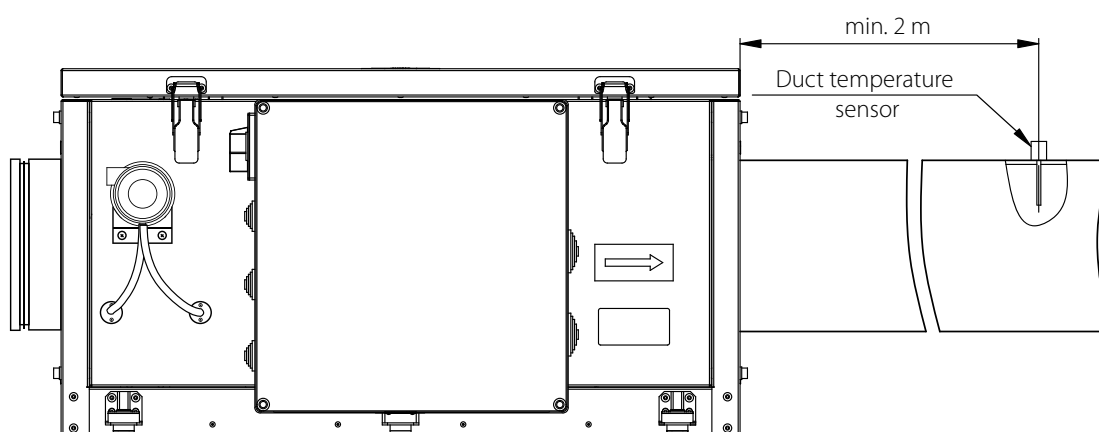


WHILE INSTALLING THE UNIT ENSURE CONVENIENT ACCESS FOR SUBSEQUENT MAINTENANCE AND REPAIR.

The unit should be mounted so that the arrow on the cover coincides with air flow direction in the system and access for maintenance, service or replacement is provided. The unit can be mounted on flat surface or suspended on a threaded rod ensuring a secure fixation to prevent unit detachment or falling down. While choosing fasteners consider the material of the mounting surface as well as the weigh of the unit (refer to the Technical data section). Fasteners for unit mounting should be selected by the service technician! The duct should be connected via a flexible connection to eliminate transfer of noise and random vibrations.



The air duct temperature sensor is installed at a distance of not less than 2 m from the outlet spigot of the unit.



CONNECTION TO POWER MAINS

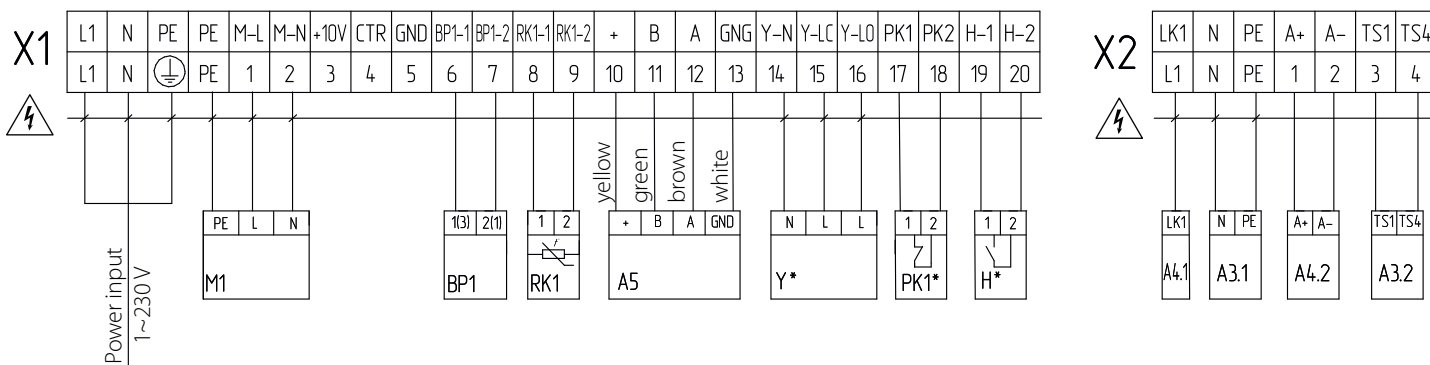


**POWER OFF THE POWER SUPPLY PRIOR TO ANY OPERATIONS WITH THE UNIT.
THE UNIT MUST BE CONNECTED TO POWER SUPPLY BY A QUALIFIED ELECTRICIAN.
THE RATED ELECTRICAL PARAMETERS OF THE UNIT ARE GIVEN ON THE
MANUFACTURER'S LABEL.**

- The unit is rated for connection to 1~ 230 V/50 Hz 3~ 400 V/50 Hz power mains.
- The unit must be connected to power mains using insulated electric 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 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 **QF** must exceed the maximum current consumption of the unit (refer to the technical data table). 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 automatic circuit breaker is not included in the delivery set.

EXTERNAL WIRING DIAGRAM

For single-phase current

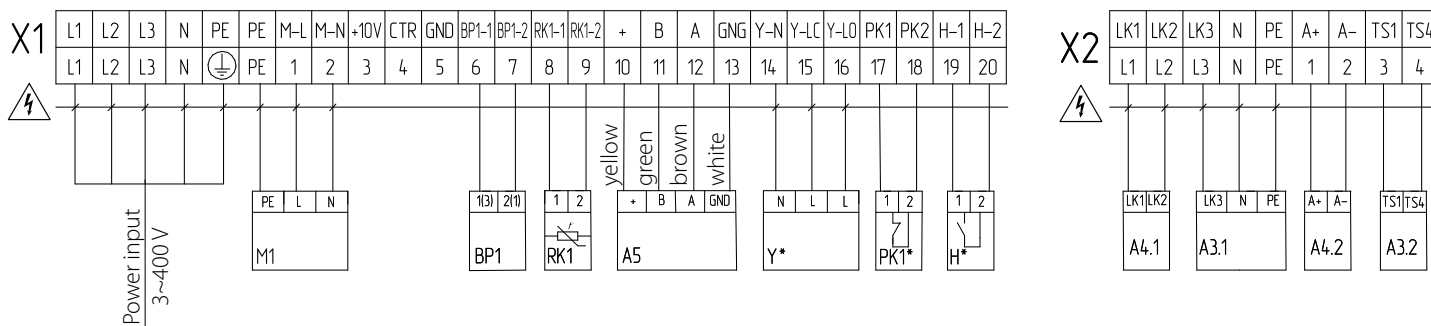


Designation	Name	Cable type	Contact type	Note
M1	Electric motor	3x0.75		
BP1	Differential pressure sensor	2x0.5	NC	
RK1	Duct temperature sensor	4x0.25		NTC 10k0m
A5	Control panel	2x0.75		
Y*	Damper actuator	2x0.75		
PK1	Fire alarm panel	2x0.75	NC	
H*	Humidistat	2x0.75	NO	
A3.1	Heater	2.5		SIF
A3.2		1.5		
A4.1	Heater triac module	2.5		SIF
A4.2		0.75		

- Electric shock hazard!

*The unit is not included in the delivery set.

For three-phase current



Designation	Name	Cable type	Contact type	Note
M1	Electric motor	3x0.75		
BP1	Differential pressure sensor	2x0.5	NC	
RK1	Duct temperature sensor	4x0.25		NTC 10k0m
A5	Control panel	2x0.75		
Y*	Damper actuator	2x0.75		
PK1	Fire alarm panel	2x0.75	NC	
H*	Humidistat	2x0.75	NO	
A3.1	Heater	2.5		SIF
A3.2		1.5		
A4.1	Heater triac module	2.5		SIF
A4.2		0.75		

 - Electric shock hazard!

*The unit is not included in the delivery set.

TECHNICAL MAINTENANCE

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

The unit must undergo technical maintenance 3 to 4 times a year.

Maintenance includes general cleaning of the unit and the following operations:

1. Filter maintenance (3-4 times per year).

Dirty filters increase air resistance in the system and reduce supply air volume.

Replace the filters when they get dirty but not less than 3-4 times per year.

To replace the filters, open the hinged cover and remove the dirty filters. Then install the new filters and the cover in the reverse order.

For new filters contact the Seller.

2. Fan maintenance (once a year).

Even in case of regular maintenance of the filters, some dust may accumulate inside the fans and reduce the fan performance and supply air flow.

Clean the fans with a soft brush or cloth.

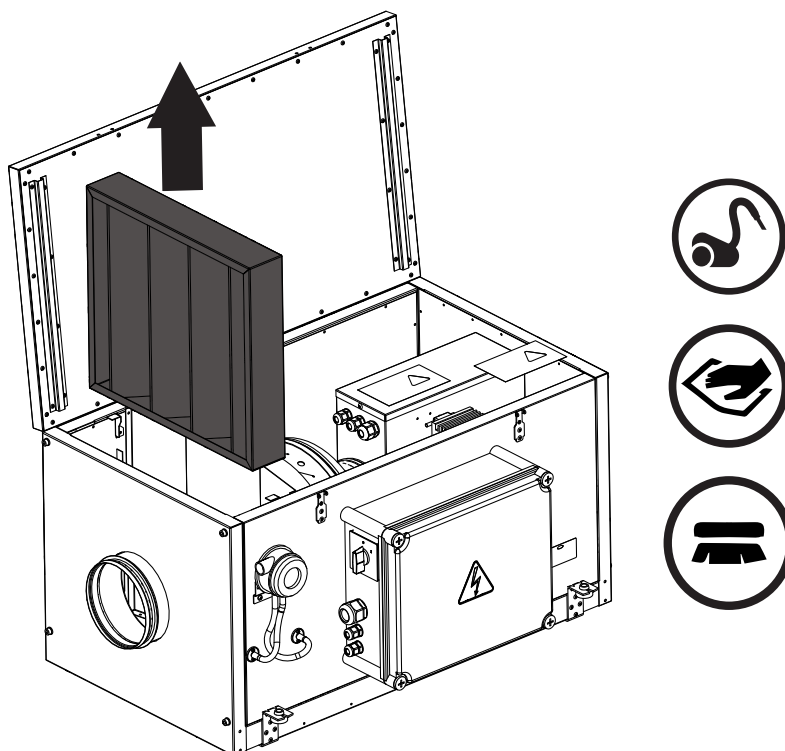
Do not use water, aggressive solvents, or sharp objects as they may damage the impeller.

3. Technical maintenance of air duct system (every 5 years).

Even regular fulfilling of all the maintenance operations prescribed above may not completely prevent dirt accumulation in the air ducts, which reduces the unit capacity.

Duct maintenance means regular cleaning or replacement.

4. Control unit maintenance (if necessary).



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 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.



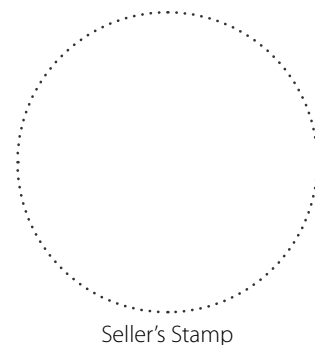
USER'S WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP.

CERTIFICATE OF ACCEPTANCE

Unit Type	Air supply unit
Model	BLAUBOX E_____
Serial Number	
Manufacture Date	
Quality Inspector's Stamp	

SELLER INFORMATION

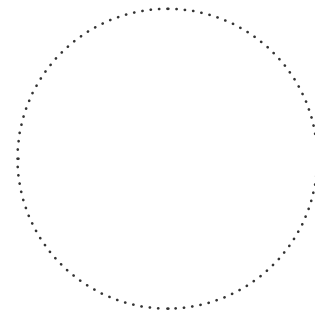
Seller	
Address	
Phone Number	
E-mail	
Purchase Date	
This is to certify acceptance of the complete unit delivery with the user's manual. The warranty terms are acknowledged and accepted.	
Customer's Signature	



Seller's Stamp

INSTALLATION CERTIFICATE

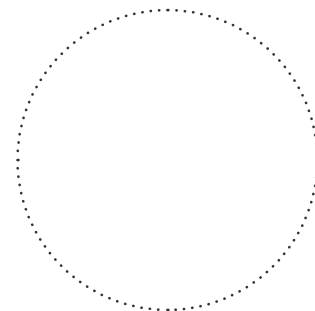
The BLAUBOX E_____ unit is installed pursuant to the requirements stated in the present user's manual.	
Seller	
Address	
Phone Number	
Installation Technician's Full Name	
Installation Date:	Signature:
The unit has been installed in accordance with the provisions of all the applicable local and national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



Installation Stamp

WARRANTY CARD

Unit Type	Air supply unit
Model	BLAUBOX E_____
Serial Number	
Manufacture Date	
Purchase Date	
Warranty Period	
Seller	



Seller's Stamp



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