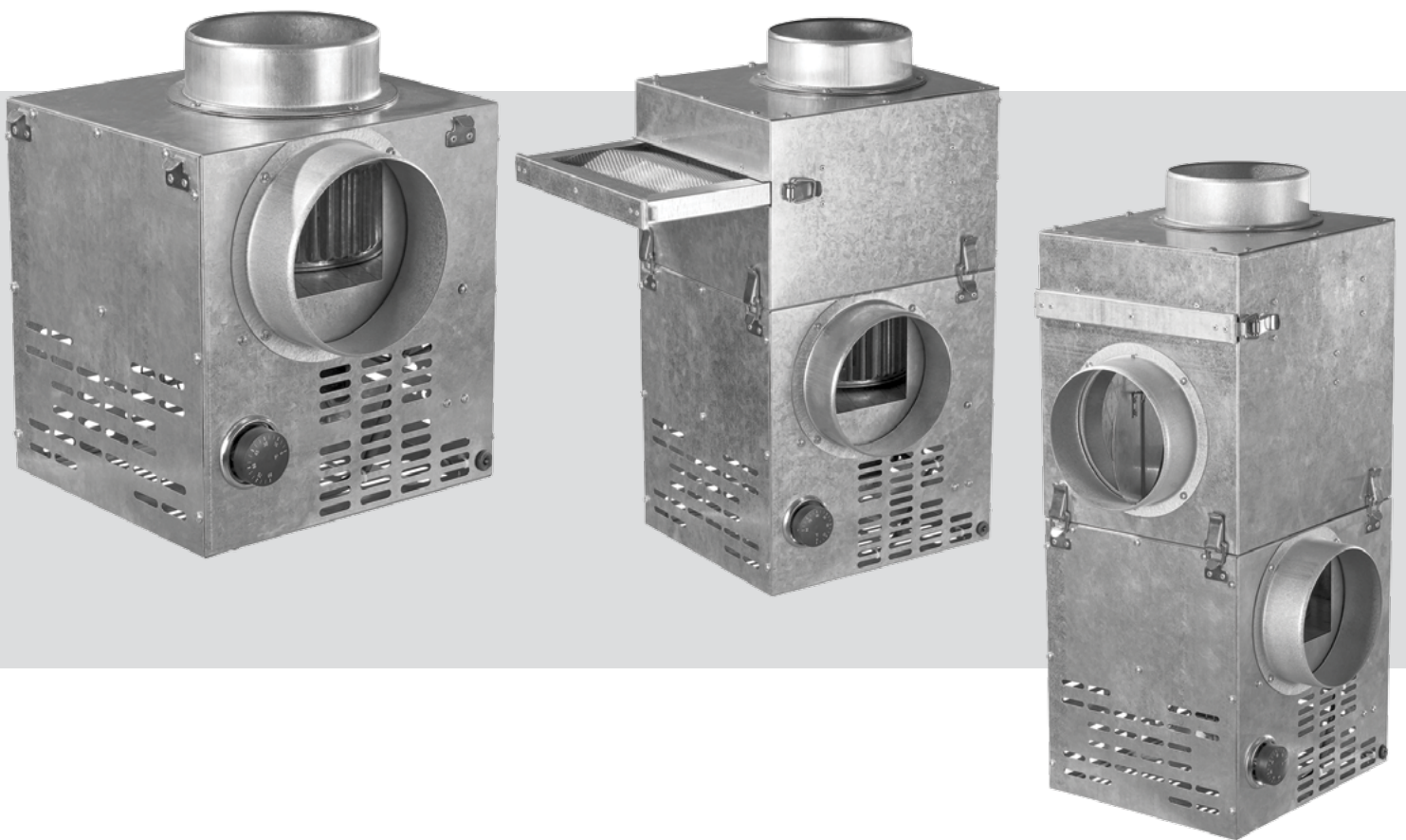


KAM



Chimney centrifugal fan

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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 KAM 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

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 and maintenance. 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 device 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.

This appliance 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 appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

This appliance incorporates an earth connection for functional purposes.

The connection to the supply mains must be made through a means of disconnection, which is incorporated in the fixed wiring in accordance with the wiring rules, and has a contact separation in all poles that allows for full disconnection under overvoltage category III conditions.

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

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 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 KAM electric centrifugal fan in a metal casing with an impeller diameter of 146 to 158 mm, hereinafter referred to as the fan, is an element of the fireplace heating system and is designed to transport warm air with a temperature of up to +150 °C from the space around the fireplace to the ductwork of the building. The fan is mounted according to the instructions and diagrams of this manual and is used both for supply ventilation (for transporting warm air from a heat source when heating rooms) and for exhaust ventilation (for transporting excess warm air when ventilating rooms). The fan is rated for continuous operation.

The fan is easy to maintain and is designed for continuous operation with the transported air temperature ranging from +20 °C to +150 °C and is equipped with a temperature controller (temperature adjustment range from 0 °C to +90 °C).

The fan is rated as a Class I electrical appliance.

Ingress protection rating against access to hazardous parts and water ingress is IPX2.

DELIVERY SET

NAME	NUMBER
Fan	1 pc.
Options	(in compliance with the purchase order)
User's manual	1 pc.
Packing box	1 pc.

OPTIONS FOR KAM, KAM ECO MAX, KAM ECO, KAM ECODUO

FFK – G3 removable metal filter for transported air purification.

Fastening the filter to the fan casing with latches provides easy removal of the filter for cleaning (Fig. 3).

KFK – removable metal mixing chamber with a built-in temperature control damper and G3 filter for transported air purification.

Fastening the mixing chamber to the fan casing with latches provides easy removal of the chamber for cleaning (Fig. 4).

The fan configuration with a KFK mixing chamber provides cold air supply to the mixing chamber when the operating temperature exceeds 90 °C and hot air removal when the fan motor is not running.

GFK – gravity backdraft damper to prevent air back flow in the system.

The fan configuration with a KFK mixing chamber and a GFK backdraft damper protects the fan motor from overheating (BYPASS system) when it is switched off due to lack of electricity.

In fans with the BYPASS system, when the motor is off, the gravity backdraft damper is closed and hot air is released through the ventilation ducts to other rooms.

OPTIONAL ACCESSORIES FOR FANS

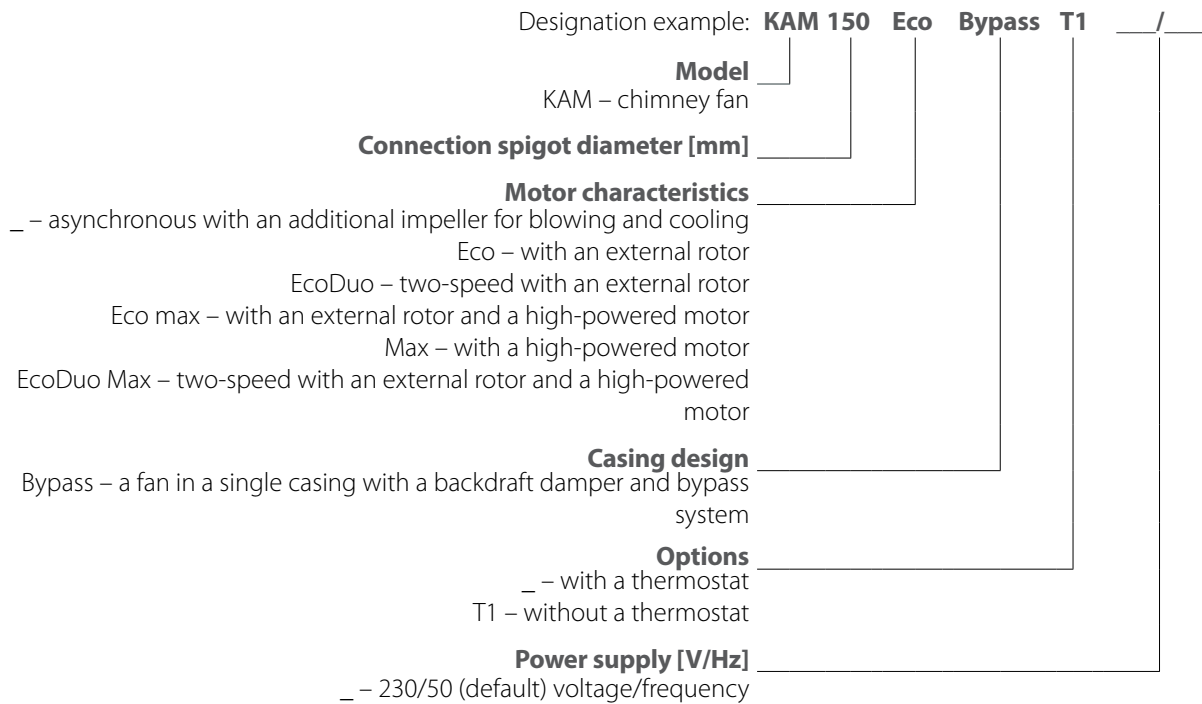
- Air duct on the air inlet side: Aluvent 125, 140, 150 or 160. Fire-resistant (M0) semi-flexible 3 m long air duct.
- Insulated air duct on the air outlet side: 605-ISO (M0/M1) 127, 152 or 182. Fire-resistant (M0/M1) heat and sound insulated flexible air duct. The length varies depending on the length of the duct network.
- Supply disk valves: AM 125 PRF, AM 150 PRF. Metal supply disk valves. At least 1 disk valve must be installed in every heated room.

Connecting and mounting elements of air ducts:

- T-joint: TM 125, TM 140, TM 150, TM 160.
- Y-joint: TMU 125, TMU 140, TMU 150, TMU 160.
- Cross tee: KM 125, KM 140, KM 150, KM 160.
- Reducer: RM 160/150, RM 150/140.
- Couplings: Coupling 125, Coupling 140, Coupling 150, Coupling 160.
- Screw clamp: X 125, X140, X 150, X 160, XB 125, XB 140, XB 150, XB 160.
- Aluminium adhesive tape: ALT 050/10.
- External thermostat: Vents TS-1-90.
- Speed controller: RS-1-300.

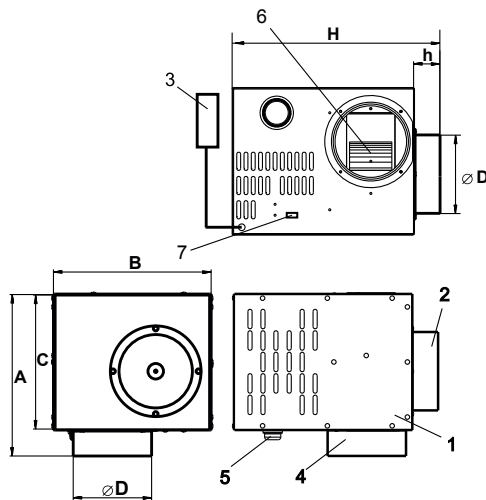
The duct system must be free of plastic parts

DESIGNATION KEY



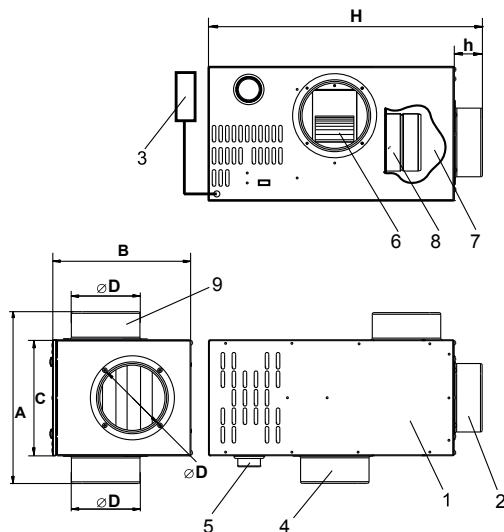
TECHNICAL DATA

KAM, KAM ECO MAX, KAM ECO, KAM ECODUO



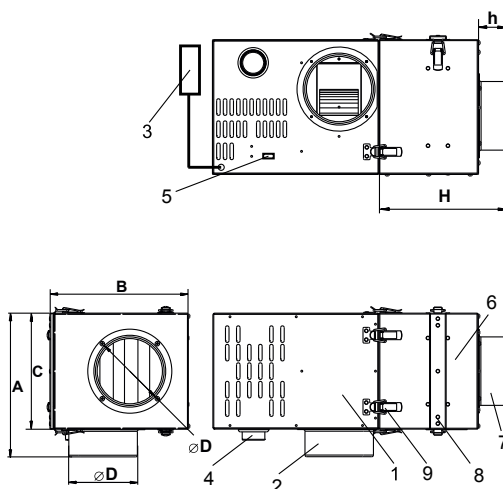
- 1 – fan casing
- 2 – inlet flange
- 3 – terminal box
- 4 – outlet flange
- 5 – temperature controller
- 6 – impeller
- 7 – speed switch (for EcoDuo model)

KAM ECO BYPASS

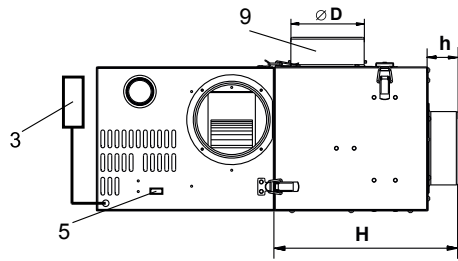


- 1 – fan casing
- 2 – inlet flange
- 3 – terminal box
- 4 – outlet flange
- 5 – temperature controller
- 6 – impeller
- 7 – mixing chamber
- 8 – backdraft damper
- 9 – reverse air duct flange

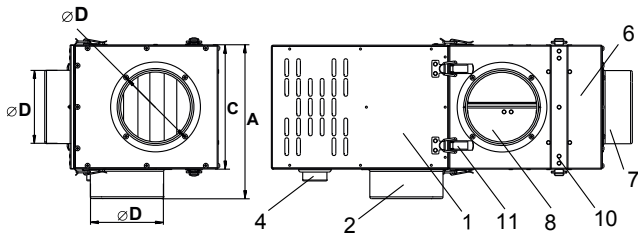
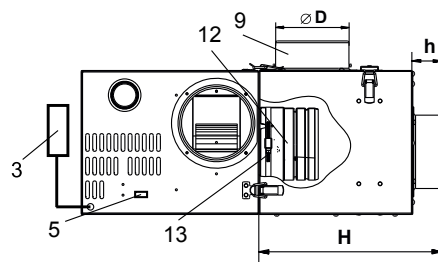
KAM FAN WITH AN FFK FILTER



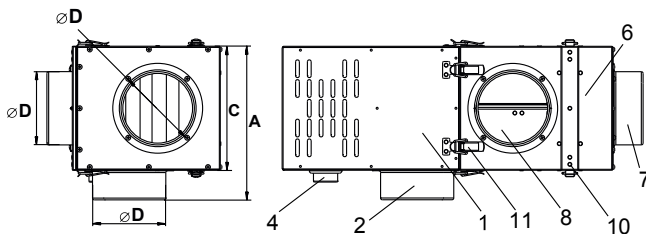
- 1 – KAM fan
- 2 – outlet flange
- 3 – terminal box
- 4 – temperature controller
- 5 – speed switch (for EcoDuo model)
- 6 – filter casing
- 7 – inlet flange
- 8 – filter element
- 9 – latches

KAM FAN WITH A KFK DAMPER


- 1 – KAM fan
- 2 – outlet flange
- 3 – terminal box
- 4 – temperature controller
- 5 – speed switch (for EcoDuo model)
- 6 – mixing chamber
- 7 – inlet flange
- 8 – temperature control damper
- 9 – reverse air duct flange
- 10 – filter element
- 11 – latches


KAM FAN WITH KFK AND GFK DAMPERS


- 1 – KAM fan
- 2 – outlet flange
- 3 – terminal box
- 4 – temperature controller
- 5 – speed switch (for EcoDuo model)
- 6 – mixing chamber
- 7 – inlet flange
- 8 – temperature control damper
- 9 – reverse air duct flange
- 10 – filter element
- 11 – latches
- 12 – gravity damper
- 13 – fixing screw



Model	Overall and connecting dimensions [mm]						Weight [kg]
	A, mm	B, mm	C, mm	D, mm	H, mm	h, mm	
KAM 125	260	245	210	125	350	50	4.5
KAM 140	300	285	250	140	350	50	5.7
KAM 150	300	285	250	150	350	50	5.7
KAM 160	300	285	250	160	350	50	5.7
KAM 125 Eco Bypass	310	245	210	125	462	50	7.8
KAM 140 Eco Bypass	350	285	250	140	522	50	9.8
KAM 150 Eco Bypass	350	285	250	150	522	50	9.8
KAM 160 Eco Bypass	350	285	250	160	522	50	9.8
KAM 150 Eco max	300	285	250	150	320	50	7.3
KAM 125 Eco/EcoDuo	260	245	210	125	320	50	5.6
KAM 140 Eco/EcoDuo	300	285	250	140	320	50	6.8
KAM 150 Eco/EcoDuo	300	285	250	150	320	50	6.8
KAM 160 Eco/EcoDuo	300	285	250	160	320	50	6.8

Model	Overall and connecting dimensions [mm]						Weight [kg]
	A, mm	B, mm	C, mm	D, mm	H, mm	h, mm	
FFK 125	260	245	210	125	180	50	2.2
FFK 140	300	285	250	140	190	50	3.0
FFK 150	300	285	250	150	190	50	3.0
FFK 160	300	285	250	160	190	50	3.0
KFK 125	260	245	210	125	260	50	3.8
KFK 140	300	285	250	140	300	50	4.0
KFK 150	300	285	250	150	300	50	4.0
KFK 160	300	285	250	160	300	50	4.0

OPERATING LOGIC

DESIGNATION KEY



Transported air temperature range.



Temperature controller with a set temperature threshold value.



The fan motor is running.



The fan motor is off.



The temperature control damper is open.



The temperature control damper is closed.



The gravity damper is open.



The gravity damper is closed.

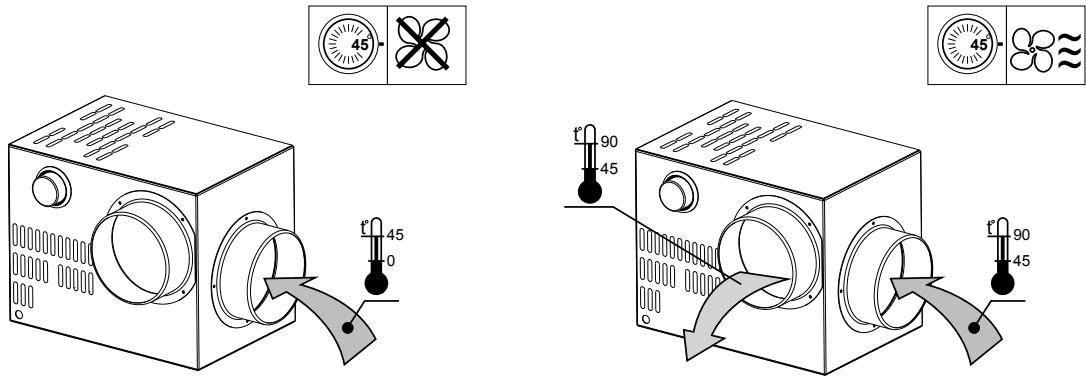


The backdraft damper is open.

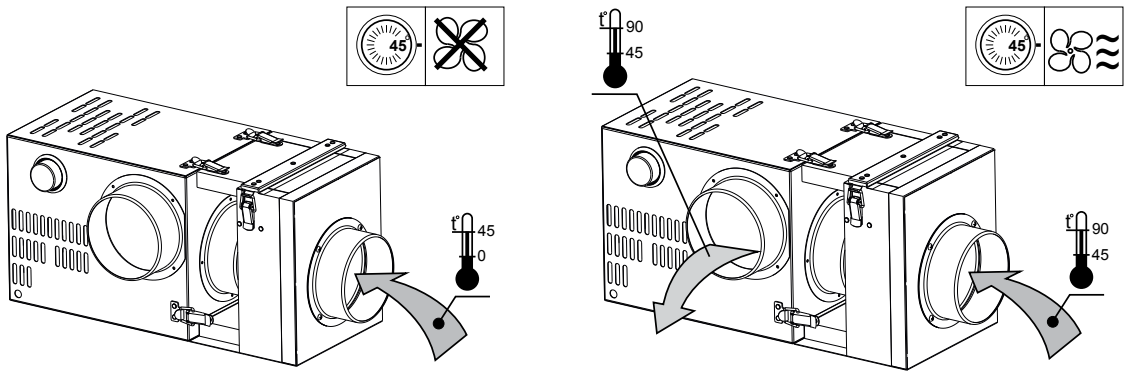


The backdraft damper is closed.

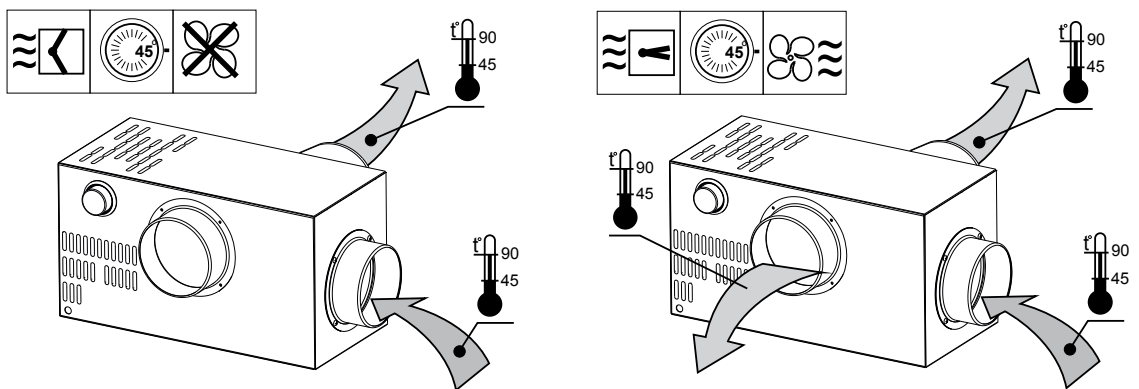
KAM, KAM ECO MAX, KAM ECO, KAM ECODUO

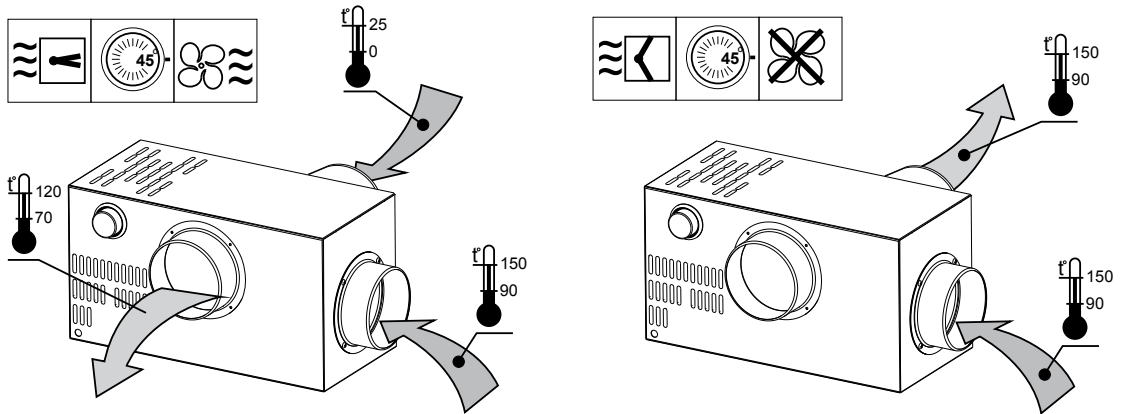


KAM WITH AN FFK FILTER

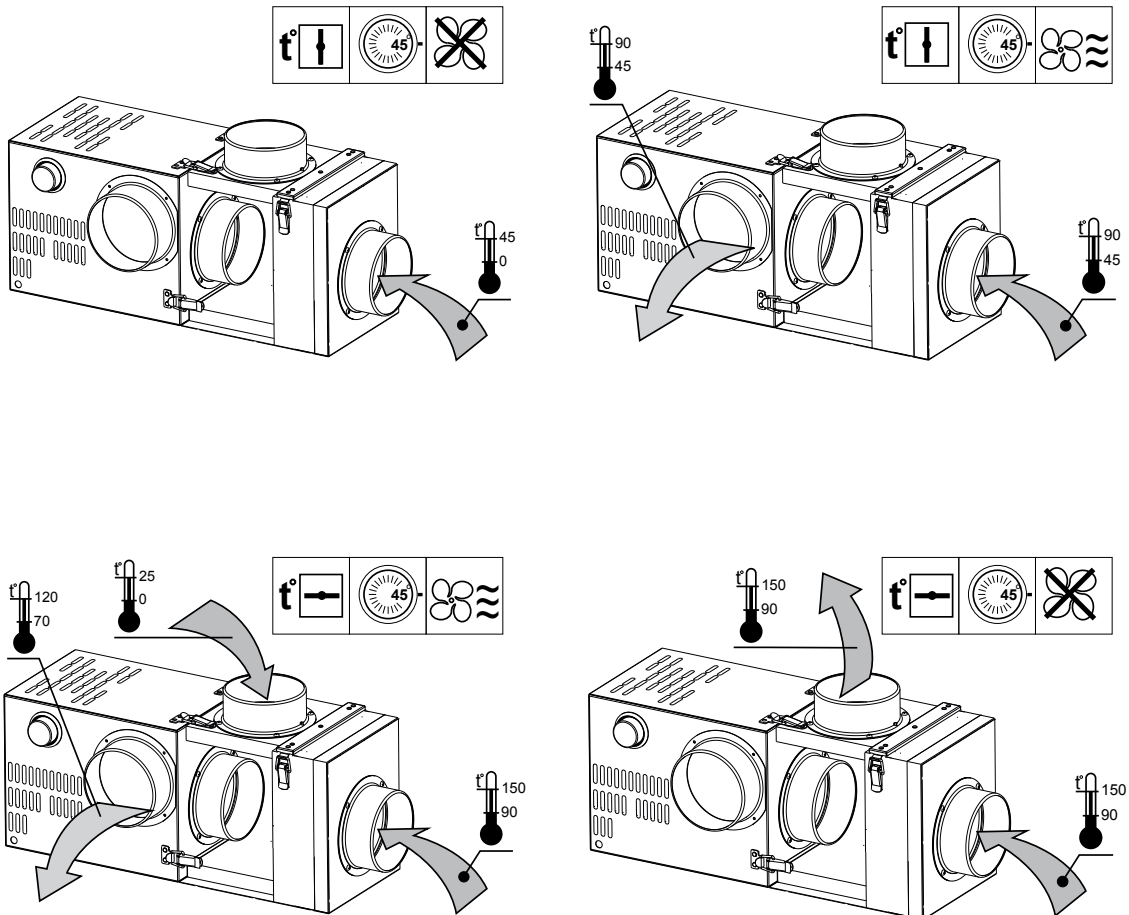


KAM ECO BYPASS

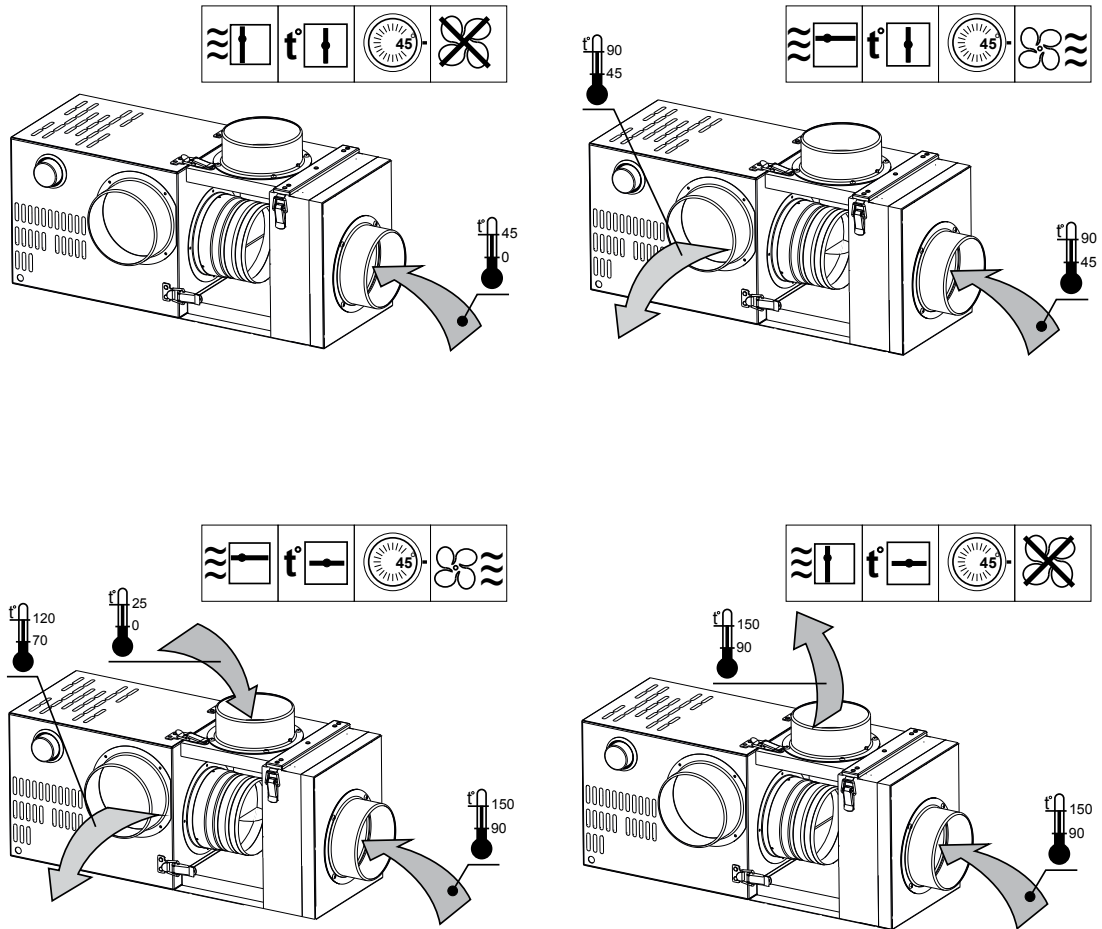




KAM FAN WITH A KFK DAMPER



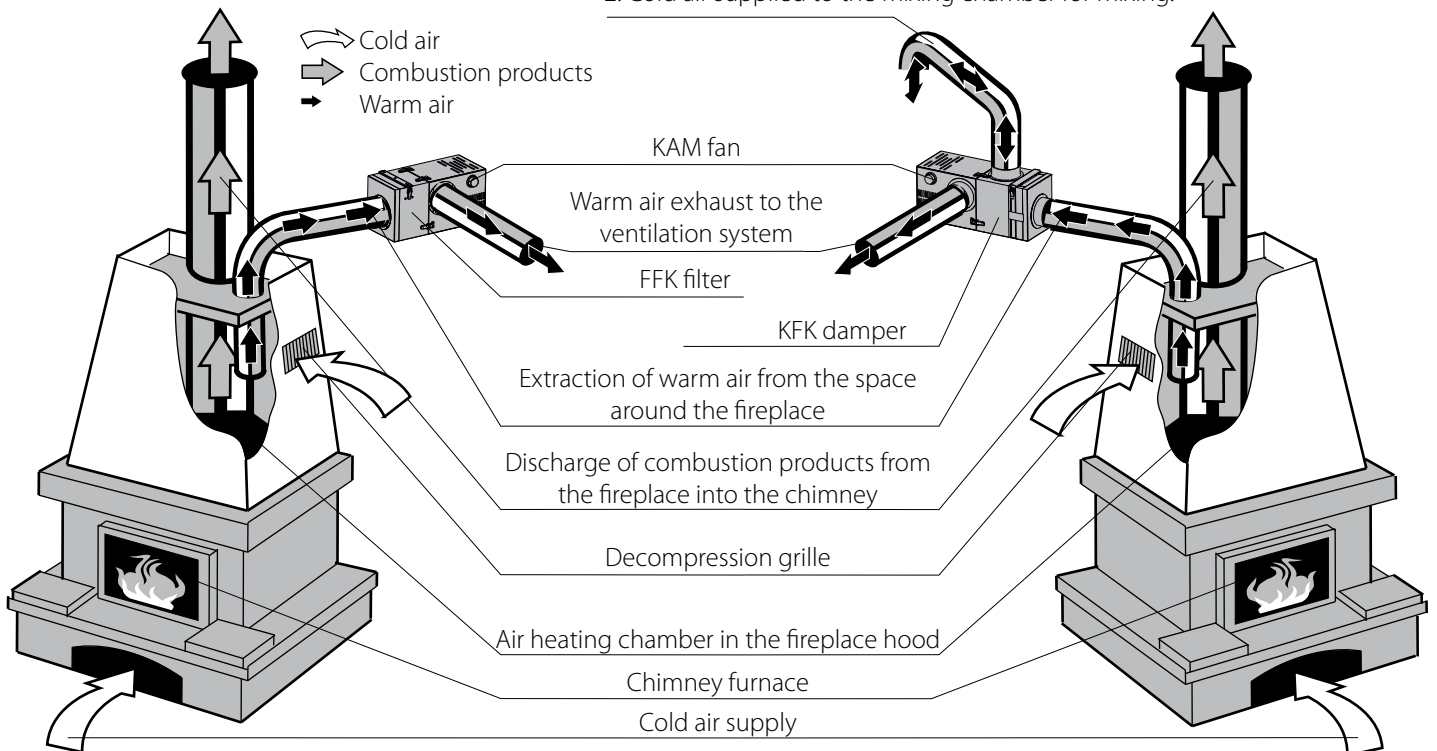
KAM FAN WITH KFK AND GFK DAMPERS (BYPASS SYSTEM)



EXAMPLE OF INSTALLATION AND OPERATION OF FANS WITH AN FFK FILTER AND A KFK DAMPER

Reverse air duct:

1. Hot air removed by the temperature control damper.
2. Cold air supplied to the mixing chamber for mixing.



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.

After unpacking the fan make sure of no damages in the power supply line and no cuts and crack in the cable insulation, check the fan casing for no hollows and other distortions. The impeller shall have smooth rotation and be not in contact with the inlet flange and the casing.

Follow the general and special safety regulations during the preparation of the fan for operation and during its operation.

The fan must be grounded.

The starting equipment should be installed in places that allow observing the operation of the fan during start-up.

The fan is mounted on a flat surface.

During installation, provide free air access to cool the fan motor.

Install the fan on the mineral wool layer and the rigid fire-resisting plate (gypsum board 0.5x0.5 m) to reduce vibration.

Keep the minimum distance of 1.5 m from the fan to the heating source and the minimum distance of 0.5 m from the fan casing to the neighbouring objects.

Install the required amount of the decompression grilles in the fireplace hood, intake and air distribution ducts and fix them with the clamps.

The air ducts should be insulated with mineral wool.

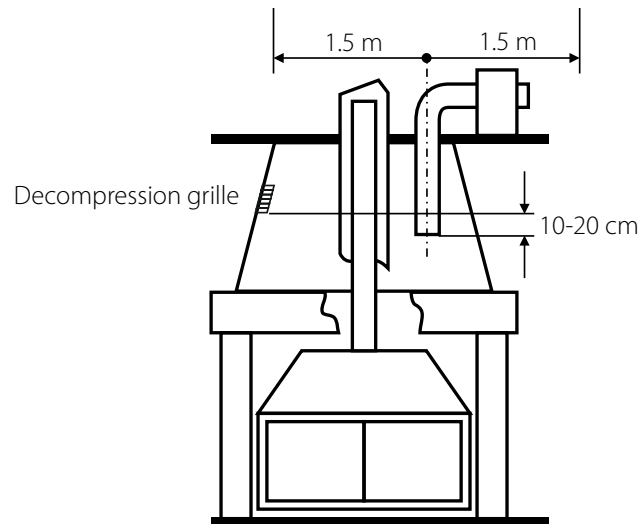
The intake air duct should be installed 10-20 cm below the decompression grilles.

Air flow direction must be in compliance with the direction of the arrow on the fan casing.

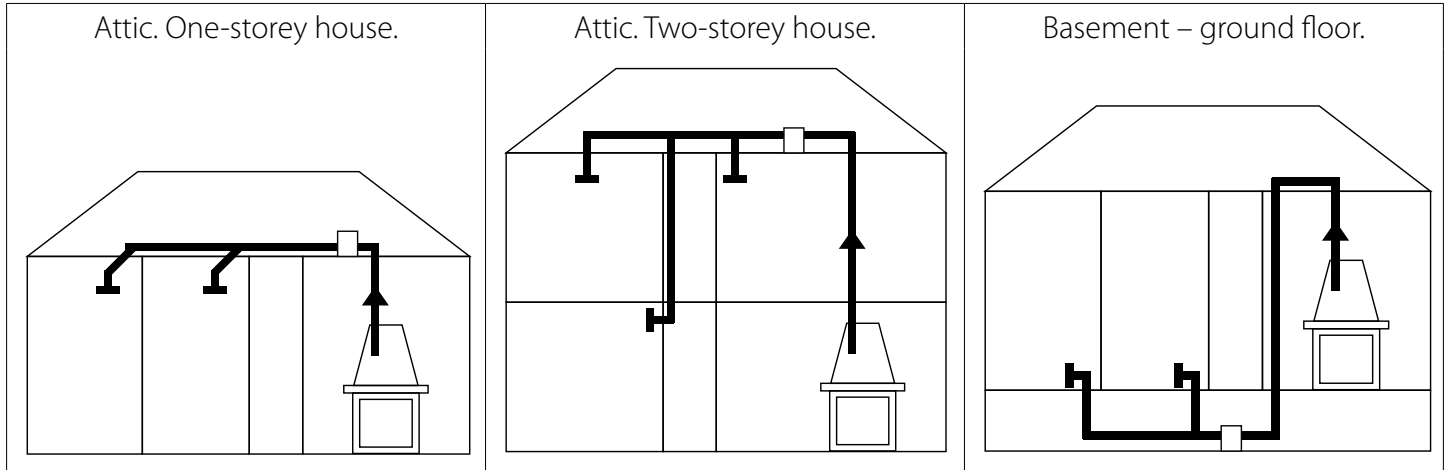
For fans with a backdraft damper, adjust the position of the gravity damper according to the direction of the arrows (the damper must be installed horizontally).

The damper protects the system and the fan from overheating when the fireplace is running and the fan is switched off.

Set the fan switching on temperature with the temperature control knob (temperature adjustment range – from 0 °C to +90 °C).

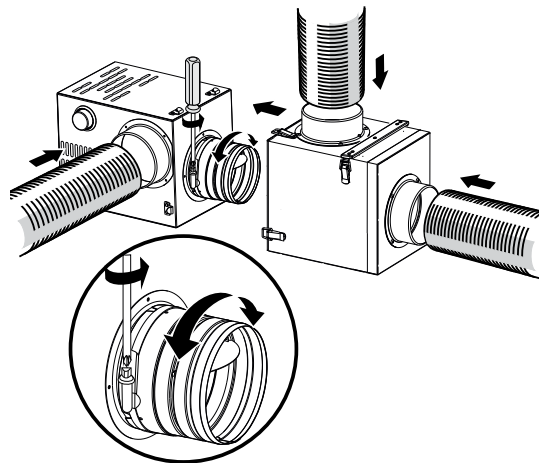


POSSIBLE OPTIONS OF INSTALLING THE FAN AND CONNECTING IT INTO THE SYSTEM



The fan can also be installed in a garage, bathroom, etc.

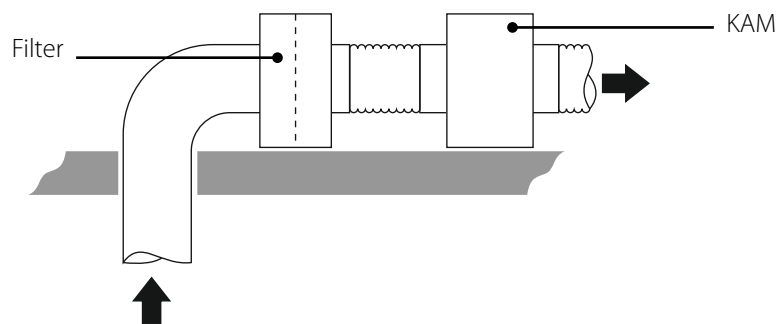
FIXING FLEXIBLE AIR DUCTS TO CONNECTING ELEMENTS



Slide out about 5 cm of the heat and sound insulation layer and the external contour of the duct.
 Slide the internal duct over the fan spigot or over the connecting elements of the duct system and tighten it with a worm clamp.
 Straighten the heat and sound insulation layer and the external contour of the duct to their original position.
 For best sealing, wrap the outdoor duct with aluminium tape.

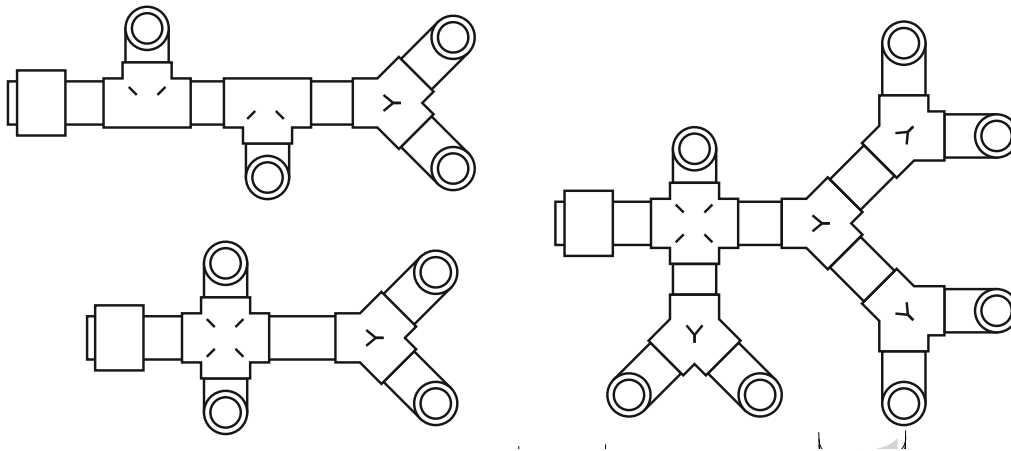
FILTER INSTALLATION

The filter must be installed on the side of the air inlet to the fan. Connect the filter to the fan using a heat and sound insulated air duct (20 cm long). The filter reduces the flow of warm air through the entire system.
 Therefore, when using a filter, the thermostat set point must be reduced by 30 °C to obtain the same efficiency.



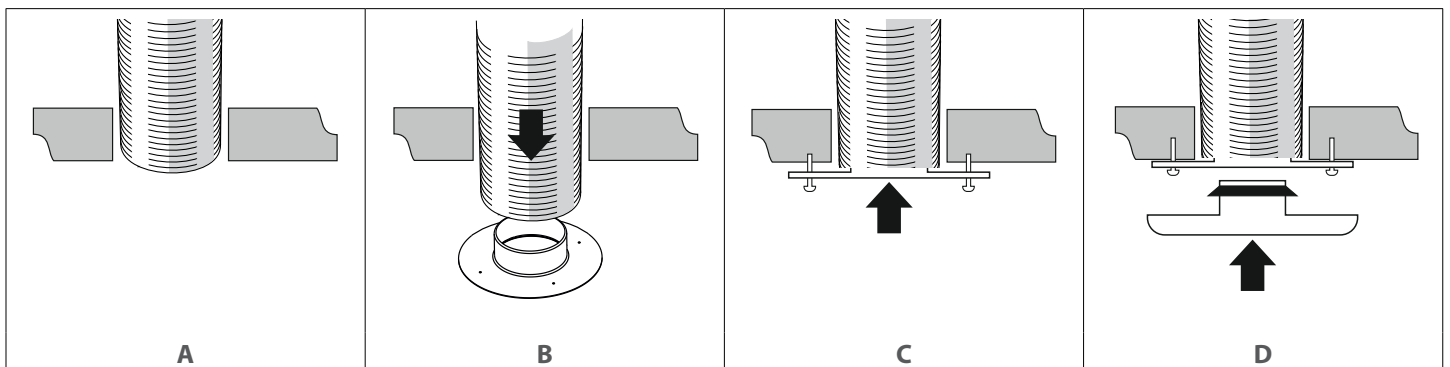
It is most preferable to use Y-joints instead of T-joints. This will reduce the air resistance of the duct system. During installation, the air ducts should be straightened and stretched as much as possible. Do not allow duct deflection. Reduce the number of turns, this will reduce the air resistance of the duct system. The optimal solution would be to place the duct system in a heated or insulated attic.

EXAMPLES OF STANDARD INSTALLATION



CONNECTION AND INSTALLATION OF VENTILATION DIFFUSERS

It is recommended to install the ventilation diffuser opposite the door of the room you are going to heat. Typically, diffusers are mounted on a wall or ceiling, but they are also available for floor installation. Make a hole in the ceiling with a diameter slightly larger than 125 mm or 160 mm (depending on the diameter of your diffuser) (Fig. A). Pass the duct through the hole, then attach the diffuser ring to the duct (Fig. B). Fix the diffuser ring to the ceiling (Fig. C). Install the main body of the diffuser into the ring (Fig. D).



Before starting the fan for the first time, open all diffusers 50%. Adjust the degree of opening or closing of each diffuser depending on the room temperature. Never completely cover the diffuser.

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.



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

The fan is rated for connection to single-phase AC 230 V/50 Hz power mains.

The unit must be connected to power mains using durable, insulated and heat-resistant conductors (cables and wires) with minimum cross section not less than 0.5 mm² (the given wire sections are for reference only).

The actual conductor cross-section selection must be based on its type, the maximum permissible heating, insulation, length and installation method (in the air, pipes or inside walls).

The fan must be grounded. The fan must be connected to the terminal block installed in the fan terminal box in accordance with the wiring diagram and terminal designation according to the corresponding diagrams.

The external lead-in (230 V/50 Hz) must be equipped with a circuit breaker built into the stationary wiring to disconnect all the mains phases. The fans must be connected to power mains through a circuit breaker with at least 3 mm gap between contacts on all poles.

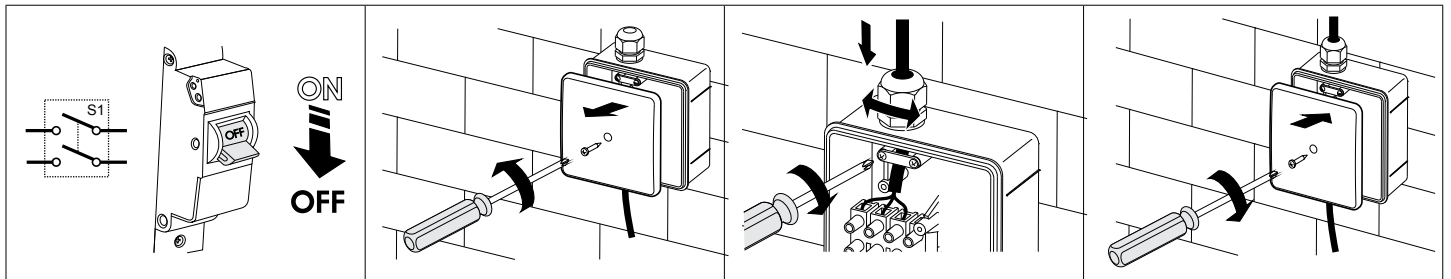
The S1 external circuit breaker location must ensure free access for quick shutdown of the unit.

The protection operation current should be selected depending on the fan current consumption.

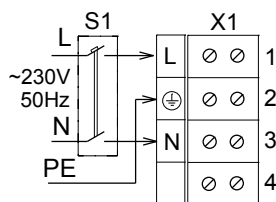
The recommended rated current of the automatic circuit breaker is 1.6 A.

The KAM, KAM Eco, KAM EcoDuo fans have a built-in thermostat relay, which closes the fan power circuit when the set temperature of the hot air in the fireplace is reached (the fan automatically turns on and the warm air enters the room).

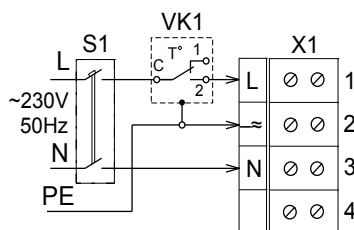
As the temperature drops below the set value the fan switches automatically off.



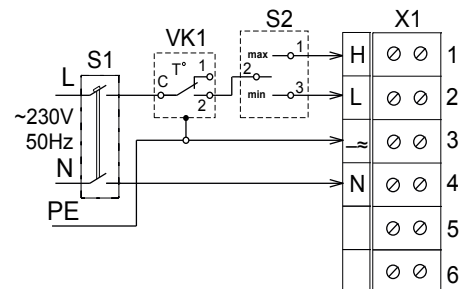
**KAM, KAM ECO MAX,
KAM ECO, KAM ECODUO**



KAM T1



KAM ECODUO T1



Designation:

S1 – automatic circuit breaker; S2 – three-position speed switch;

X1 – terminal block; VK1 – temperature controller (S1, S2, VK1 are not included in the delivery set).

SETTING THE THERMOSTAT (0-90 °C)

Run the heating unit (fireplace) with medium flame intensity (at medium temperature) for some time.

The factory setting of the thermostat is +45 °C.

The fan will start running when the air temperature passing through the fan reaches +45 °C.

At a lower thermostat setting (e.g. +30 °C), the fan will start earlier.

At a higher thermostat setting (e.g. + 60 °C), the fan will start later, but the air supplied through the diffusers may be too hot.

When the fire in the fireplace goes out, the temperature of the air passing through the fan drops below the value set on the thermostat, and the fan turns off automatically.

TECHNICAL MAINTENANCE



DISCONNECT THE UNIT FROM POWER SUPPLY BEFORE ANY MAINTENANCE OPERATIONS!



PRIOR TO COMMENCING ANY TECHNICAL MAINTENANCE PUT UP A PROHIBITORY SIGN ON THE FAN STARTING PANEL:

“DO NOT SWITCH ON! MEN AT WORK!”



AVOID LIQUID SPILLS ON THE MOTOR! DO NOT USE AGGRESSIVE SOLVENTS AND SHARP OBJECTS FOR CLEANING!

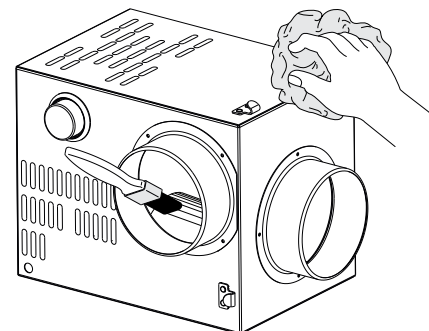
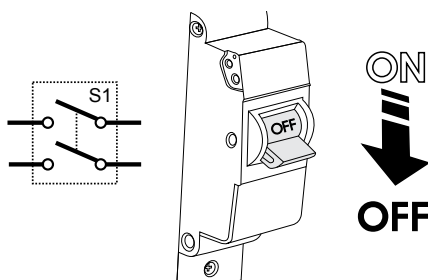
PRIOR TO PERFORMING ANY TECHNICAL MAINTENANCE AND REPAIR DISCONNECT THE FAN FROM THE POWER MAINS AND WAIT UNTIL ITS ROTATING PARTS COME TO A COMPLETE STOP.

The technical maintenance includes periodic cleaning of the surfaces from accumulated dust and dirt.

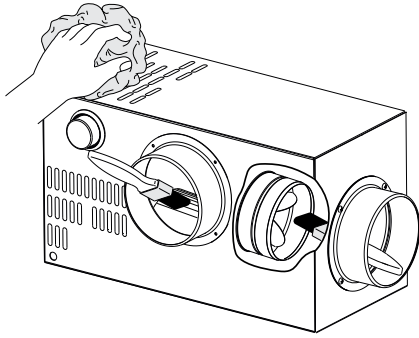
Use a soft dry brush or a vacuum cleaner to remove dust. The impeller blades require thorough cleaning once in 6 months.

Detach air ducts from the fan before starting maintenance works. Clean the impeller blades with a soft cloth wetted in mild water detergent solution. Avoid liquid dripping on the motor and the temperature controller. In case of any problems related to the fan switching or operation, it is recommended to use a troubleshooting table to eliminate the faults.

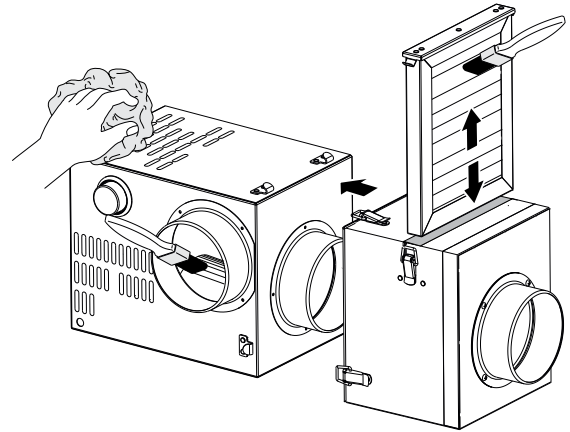
KAM, KAM ECO MAX, KAM ECO, KAM ECODUO



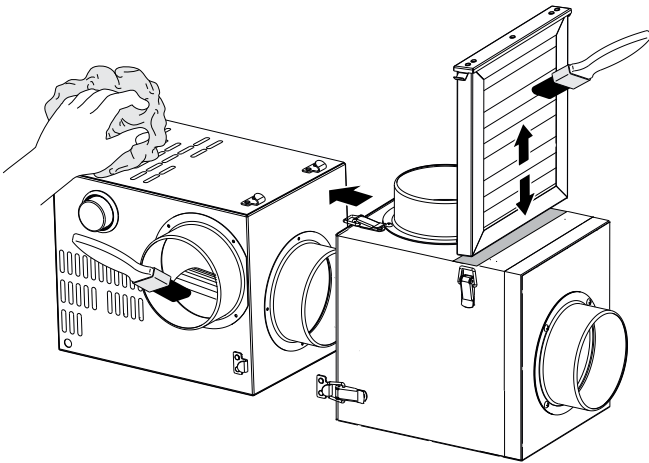
KAM ECO BYPASS



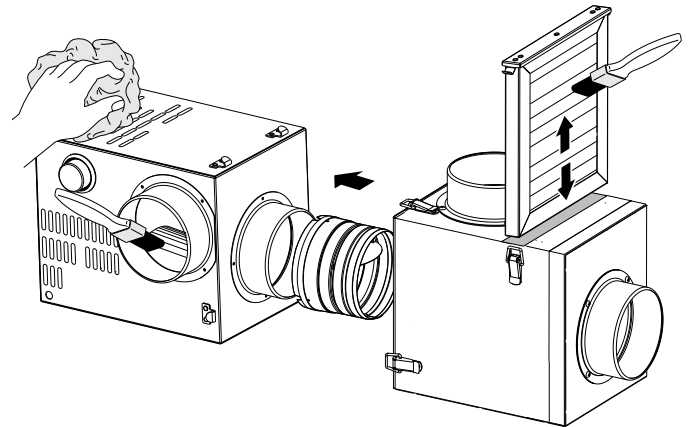
KAM WITH AN FFK FILTER



KAM FAN WITH A KFK DAMPER



KAM FAN WITH KFK AND GFK DAMPERS



POSSIBLE MALFUNCTIONS AND THEIR ELIMINATION

Problem	Possible reasons	Elimination
The fan will not start.	No power supply.	Check the mains switch. Check the electrical connections against the wiring diagram.
	Jammed motor.	Carefully check the fan impeller for possible seizure and eliminate it, if necessary. If the impeller is in order, replace the electric motor.
The switching equipment activates upon fan start-up.	Short circuit in the fan or the electric circuit between the fan and the switching equipment.	Eliminate the cause of a short circuit.
	Excessive current consumption due to an overload in the electric mains.	Eliminate the cause of excessive current consumption.
	Improper switching equipment.	Re-select the switching equipment in accordance with the current regulations and equipment specifications.
	The installed switching equipment is of poor quality or its actual performance falls short of the rated values stated by the manufacturer.	Re-select the switching equipment by choosing a unit which successfully passed commutation and load tests and has a technical compliance certificate. The selection should be limited to the top five foreign switching equipment manufacturers.
The fan fails to reach the required rotation speed due to serious overheating of the fan motor.	Fan motor overloaded.	Eliminate the overload.
The fan motor runs at overload capacity with current consumption in excess of the rated value.	The fan supplies more air than expected upon motor capacity selection.	Measure network resistance. Throttle down the network (add aerodynamic resistance to the air duct network).
	Wrong motor phasing. The impeller rotates in the opposite direction of the arrow on the fan casing.	If necessary, change the impeller rotation direction by changing the phase sequence on the electric motor terminals.
	Air ducts clogged.	Clean the air duct or the impeller.
The fan supplies more air than expected.	The resistance values used during the ventilation network calculations are too conservative.	Check the air ducts for proper shape and cross section as well as for any dampers present.
	The cross section of air ducts increased and their number reduced during the installation.	Throttle down the network (add aerodynamic resistance to the air duct network).
	Wrong choice of the fan.	Replace the fan with a unit of proper standard size.



DISCONNECT THE UNIT FROM POWER SUPPLY BEFORE ANY MAINTENANCE OPERATIONS!

The fan supplies less air than expected.	Wrong calculation of the ventilation network and wrong selection of the fan.	Re-calculate the network parameters and select a matching fan.
	The network resistance exceeds the design calculations.	Re-arrange the ventilation network to decrease its aerodynamic resistance.
	Wrong direction of the impeller rotation.	If necessary, change the impeller rotation direction by changing the phase sequence on the electric motor.
	Air leak through a loose air duct connection.	Eliminate the air leak. Seal the air duct connection.
	Impeller or air duct contamination with foreign objects or debris.	Clean the impeller or the air ducts from foreign objects or debris.
Excessive noise or vibration both inside the fan and in the circuit.	Loose screw connections.	Check the screw connections for proper tightness.
	No flexible joints between the fan and the ventilation network on the suction and discharge sides.	Install flexible joints.
	Loose connection of valves and dampers to the air ducts.	Tighten up the fasteners of valves and dampers.
	Impeller or air duct contamination with foreign objects or debris.	Clean the impeller or the air ducts from foreign objects or debris.
	Worn bearings.	Replace the bearings.
	Unstable power supply, unstable motor operation.	Check the stability of power supply parameters and electric motor operation.

 **PRIOR TO COMMENCING ANY TECHNICAL MAINTENANCE PUT UP A PROHIBITORY SIGN ON THE FAN STARTING PANEL: "DO NOT SWITCH ON! MEN AT WORK!"**

 **AVOID LIQUID SPILLS ON THE MOTOR! DO NOT USE AGGRESSIVE SOLVENTS AND SHARP OBJECTS FOR CLEANING!**

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.
- 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.



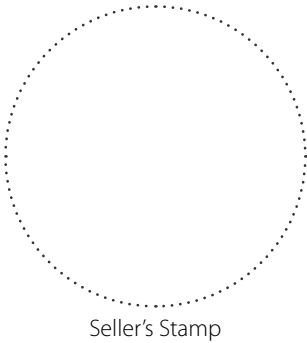
USER'S WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP.

CERTIFICATE OF ACCEPTANCE

Unit Type	Chimney centrifugal fan
Model	KAM _____
Serial Number	
Manufacture Date	
Quality Inspector's Stamp	

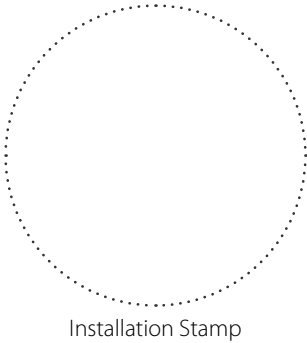
SELLER INFORMATION

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 KAM _____ 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	Chimney centrifugal fan
Model	KAM _____
Serial Number	
Manufacture Date	
Purchase Date	
Warranty Period	
Seller	

