



CHIMNEY CENTRIFUGAL FAN



KAMIN



OPERATION MANUAL

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BLAUBERG Company is happy to offer your attention the new high-quality chimney centrifugal Kamin fan. The solid team of high-qualified professionals with many years of working experience, technological innovations in design and production, high-quality components and materials from the top worldwide producers have become the precondition for the best fan in its class.

INTRODUCTION

The present operation manual contains the technical description, technical data sheets, operation and mounting guidelines, safety precautions and warnings for safe and correct operation of the fan.

GENERAL

The centrifugal chimney fan BLAUBERG Kamin is not a ready for use product. It is a component unit designed for integration into hot air distribution.

The fan is available for round air ducts from Ø125 up to Ø160 mm.

The fan has IEC Protection Class I and must be grounded.

The fans are allowed for operation only after final mounting, including installation of protecting devices in compliance with DIN EN ISO 13875 (DIN EN ISO 12100) as well as other construction safety equipment.

The fan design is regularly improved, so some models can slightly differ from those ones described in this service instruction.

SAFETY RULES

The fan complies with the requirements according to the EU norms and directives, to the relevant EU-Low Voltage Equipment Directives, EU-Directives on Electromagnetic Compatibility.

Disconnect the fan from power mains before electrical connections, servicing and repair operations.

All mounting and servicing operations are allowed for duly qualified electricians with valid electrical work permit for electric operations at the electric units up to 1000 V after careful study of the present operation manual.

Please follow the safety regulations and working instructions (DIN EN 50 110, IEC 364).

Make sure the impeller and the casing are not damaged before connecting the fan to power mains. The casing internals must be free of any foreign objects which can damage the impeller blades.

Disconnect the fan from power mains prior to any operations related to the fan servicing and repair works. Take measures to prevent contact with the fan to avoid physical damages during the fan stop and start-up.

Misuse of the product or any unauthorized modification are not allowed.

The fan is designed for connection to AC single-phase power mains, see "Technical Data".

The fan is rated for permanent operation during non-stop power supply.

Take steps to prevent ingress of smoke, carbon monoxide and other combustion products into the room through open chimney flues or other fire-protection devices. Sufficient air supply must be provided for proper combustion and exhaust of gases through the chimney of fuel burning equipment to prevent back drafting. The maximum permitted pressure difference per living units is 4 Pa.

The transported air must not contain any dust or other solid impurities,

sticky substances or fibrous materials.

The fan is not designed for use in an inflammable and explosive medium.

The transported medium must not have an aggressive effect on steel at the temperature stated in the table 1 of the section "Technical data".

Do not close or block the fan intake or exhaust vent not to disturb the normal air passage.

Do not sit on the fan and do not put objects on the fan.

Follow the manual guidelines to ensure trouble-free operation and long service life of the product

STORAGE AND TRANSPORTATION RULES

Store the delivered product in the manufacturer's original packing box in a dry ventilated premise with the ambient temperature from +5°C up to +40°C.

Store the fan in an environment with minimized risk of mechanical damages, temperature and humidity fluctuations. Store the fan inside a room or under a shelter.

Transport of the product is allowed by any vehicle in the manufacturer's original packing box. Use hoist machinery for handling and transportation to prevent possible mechanical damages of the product.

Fulfill the requirements for transportation of the specified cargo type during cargo handling operations.

Do not expose the product to extremely low or high temperatures.

MANUFACTURER'S WARRANTY

The fan complies with the requirements according to the EU norms and directives, to the relevant EU-Low Voltage Equipment Directives, EU Directives on Electromagnetic Compatibility.

We hereby declare that the following product complies with the essential protection requirements of Electromagnetic Council Directive 2004/108/EC, 89/336/EEC and Low Voltage Directive 2006/95/EC, 73/23/EEC and CE-marking Directive 93/68/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. This certificate is issued following test carried out on samples of the product referred to above. Assessment of compliance of the product with the requirements relating to electromagnetic compatibility was based on the following standards.

The manufacturer hereby warrants normal operation of the fan over the period of two years from the retail sale date provided observance of the installation and operation regulations.

In case of failure due to faulty equipment during the warranty period the consumer has the right to exchange it.

In case of no confirmation of the sale date, the warranty term shall be calculated from the manufacturing date.

The replacement is offered by the Seller.

The MANUFACTURER shall not be liable for any damage resulting from any misuse of or gross mechanic interference with the fan.

Please follow the operation guidelines always.

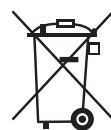


ATTENTION

The product is not allowed for use by children and persons with reduced physical, mental or sensory capacities, without proper practical experience or expertise, unless they are controlled or instructed on the product operation by the person(s) responsible for their safety. Supervise the children and do not let them play with the product.

WARNING

Do not dispose the product in domestic waste.



The product contains in part material that can be recycled and in part substances that should not end up as domestic waste.

Dispose of the product once it has reached the end of its working life according to the regulations valid where you are.

FAN DESIGN

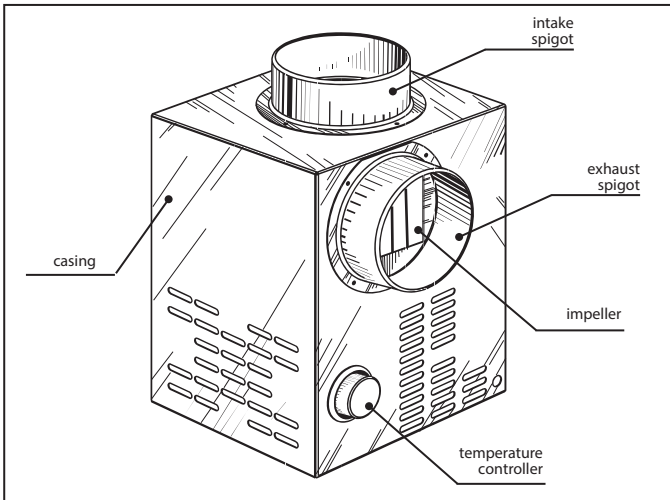


Fig. 1

DELIVERY SET

- ✓ fan - 1 item;
- ✓ operation manual.

MODIFICATIONS AND OPTIONS

AF (special accessory, not included into delivery set).

AF is a special removable filter-box for transported air purification, Filter class G3. The filter fixation with quick-release latches provides easy removal of the filter for cleaning, fig. 2.

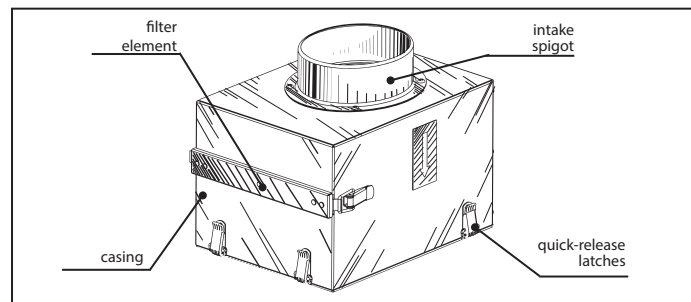


Fig. 2

KF (special accessory, not included into delivery set).

KF is a removable metal mixing chamber with an integrated temperature control damper and a G3 filter for transported air purification. The mixing chamber is fixed to the fan casing with quick-release latches for easy mixing chamber removal for cleaning, fig. 3. KF mixing chamber provides cold air supply when air temperature exceeds +90 °C and hot air removal when the fan is off.

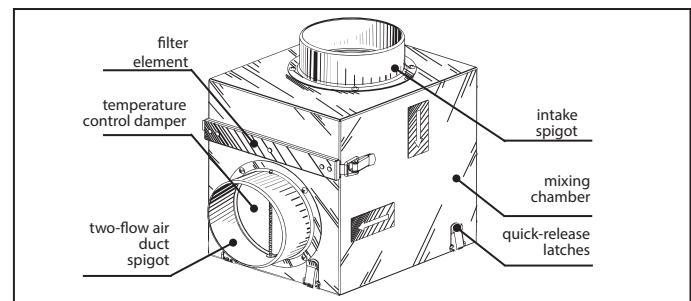


Fig. 3

GF (special accessory, not included into delivery set).

GF is a gravity damper that prevents air back draft into the system, fig. 4. KF mixing chamber and GF gravity damper provide motor overheating protection when the fan is off, e.g. during power supply cut-off.

In case of the fan shutdown the gravity damper is closed and hot air is distributed through the connected air ducts to other rooms (fig. 5).

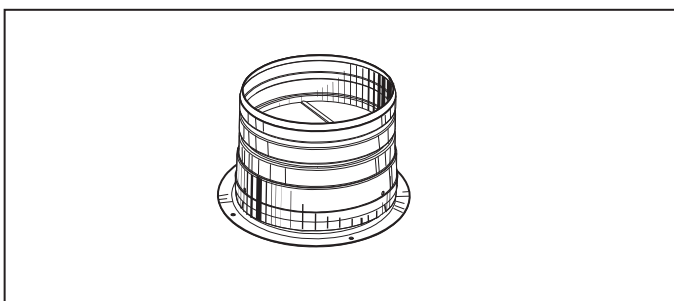


Fig 4

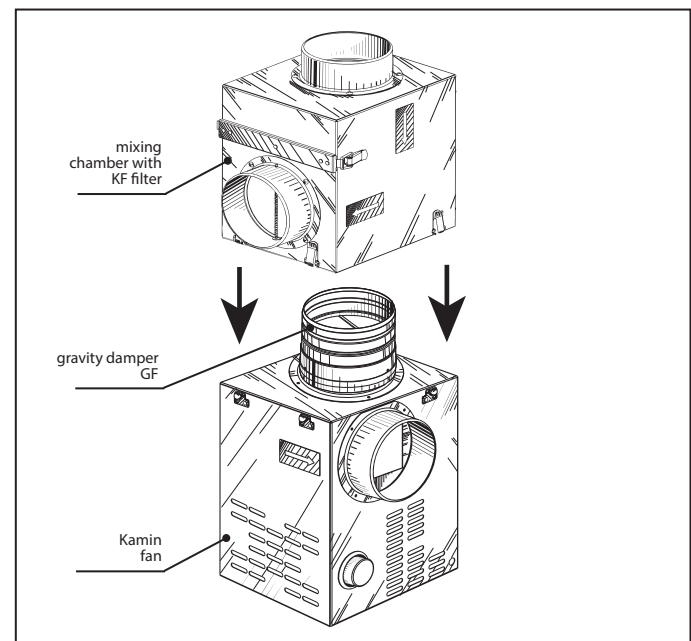


Fig. 5

TECHNICAL DATA

Table 1. Technical data

Parameters	Kamin 125	Kamin 140	Kamin 150	Kamin 160
Voltage, 50 Hz [V]	1~230	1~230	1~230	1~230
Power [W]	108	110	115	116
Current [A]	0.81	0.82	0.84	0.86
Max. air flow [m ³ /h]	400	480	520	540
RPM [min ⁻¹]	1300	1290	1280	1270
Noise level, 3 m [dBA]**	42	42	42	42
Max. transported air temperature [°C]	150	150	150	150
Ingress Protection Rating	IP X2	IP X2	IP X2	IP X2

Parameters	Kamin-ER 125	Kamin-ER 140	Kamin-ER 150	Kamin-ER 150 max	Kamin-ER 160
Voltage, 50 Hz [V]	1~230	1~230	1~230	1~230	1~230
Power [W]	32	41	43	127	44
Current [A]	0.14	0.18	0.19	0.55	0.19
Max. air flow [m ³ /h]	350	420	450	740	470
RPM [min ⁻¹]	1335	1250	1165	1310	1110
Noise level, 3 m [dBA]**	37	38	39	45	39
Max. transported air temperature [°C]	150	150	150	150	150
Ingress Protection Rating	IP X2	IP X2	IP X2	IP X2	IP X2

Parameters	Kamin ERD-125		Kamin ERD-140		Kamin ERD-150		Kamin ERD-160	
	min.	max.	min.	max.	min.	max.	min.	max.
Speed								
Voltage, 50 Hz [V]	1~230		1~230		1~230		1~230	
Power [W]	26	32	32	41	34	43	35	44
Current [A]	0.12	0.14	0.14	0.18	0.15	0.19	0.15	0.19
Max. air flow [m ³ /h]	265	350	340	420	360	450	375	470
RPM [min ⁻¹]	1210	1335	1180	1250	1075	1165	1040	1110
Noise level, 3 m [dBA]**	29	37	31	38	31	39	32	39
Max. transported air temperature [°C]	150		150		150		150	
Ingress Protection Rating	IP X2		IP X2		IP X2		IP X2	

* Allowable deviation of the rated voltage: ±10%

**Noise level is measured at 3 m distance from the fan connected to the air ducts, in free space.

Table 2. Overall dimensions

Type	Dimensions [mm]						Weight [kg]
	D	B	H	H1	L	P	
Kamin 125	124	245	350	300	260	50	4.5
Kamin 140	139	285	350	300	300	50	5.7
Kamin 150	149	285	350	300	300	50	5.7
Kamin 160	159	285	350	300	300	50	5.7
Kamin-ER 125	124	245	320	270	260	50	5.6
Kamin-ER 140	139	285	320	270	300	50	6.8
Kamin-ER 150	149	285	320	270	300	50	6.8
Kamin-ER 150 max	149	285	320	270	300	50	6.8
Kamin-ER 160	159	285	320	270	300	50	6.8

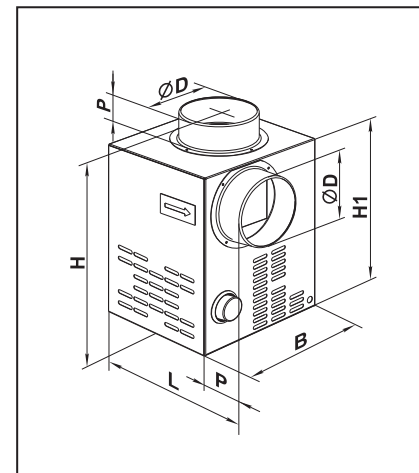


Fig. 6

Type	Extra option	Dimensions [mm]						Weight [kg]
		D	B	H	H1	L	P	
Kamin 125	AF 125	124	245	530	480	260	50	6.7
Kamin 140	AF 140	139	285	540	490	300	50	8.7
Kamin 150	AF 150	149	285	540	490	300	50	8.7
Kamin 160	AF 160	159	285	540	490	300	50	8.7
Kamin-ER 125	AF 125	124	245	500	450	260	50	7.8
Kamin-ER 140	AF 140	139	285	510	460	300	50	9.8
Kamin-ER 150	AF 150	149	285	510	460	300	50	9.8
Kamin-ER 150 max	AF 150	149	285	510	460	300	50	9.8
Kamin-ER 160	AF 160	159	285	510	460	300	50	9.8

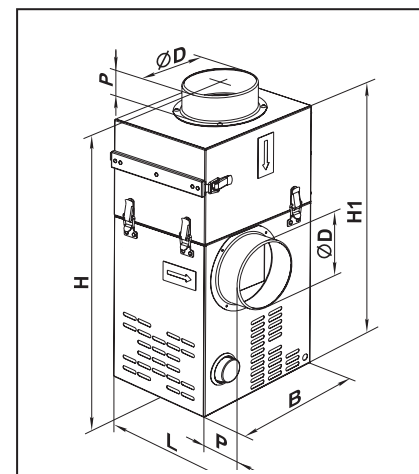


Fig. 7

Type	Extra option	Dimensions [mm]						Weight [kg]
		D	B	H	H1	L	P	
Kamin 125	KF 125 / KF 125 + GF 125 (BY-PASS)	124	245	610	560	260	50	8.3
Kamin 140	KF 140 / KF 140 + GF 140 (BY-PASS)	139	285	650	600	300	50	9.7
Kamin 150	KF 150 / KF 150 + GF 150 (BY-PASS)	149	285	650	600	300	50	9.7
Kamin 160	KF 160 / KF 160 + GF 160 (BY-PASS)	159	285	650	600	300	50	9.7
Kamin-ER 125 Kamin-ERD 125	KF 125 / KF 125 + GF 125 (BY-PASS)	124	245	580	530	260	50	9.4
Kamin-ER 140 Kamin-ERD 140	KF 140 / KF 140 + GF 140 (BY-PASS)	139	285	620	570	300	50	10.8
Kamin-ER 150 Kamin-ERD 150	KF 150 / KF 150 + GF 150 (BY-PASS)	149	285	620	570	300	50	10.8
Kamin-ER 150 max	KF 150 / KF 150 + GF 150 (BY-PASS)	149	285	620	570	300	50	10.8
Kamin-ER 160 Kamin-ERD 160	KF 160 / KF 160 + GF 160 (BY-PASS)	159	285	620	570	300	50	10.8

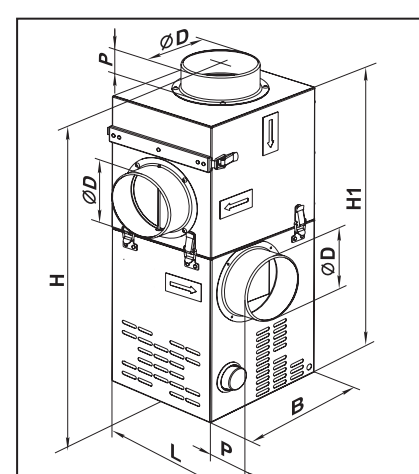


Fig. 8

OPERATING LOGIC

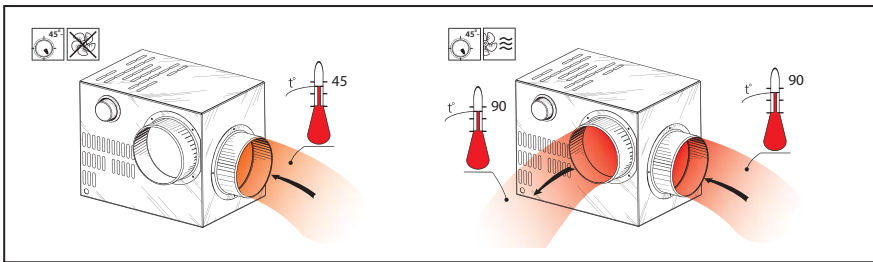


Fig 9 Kamin fan operation

The fan starts when air temperature in the fireplace hood reaches the set point and distributes warm air from the chimney to other rooms. The fan is turned off when air temperature drops down below the set point.

Designation	Description
	Max. transported air temperature
	Temperature controller with the set temperature point
	Fan runs
	Fan does not run

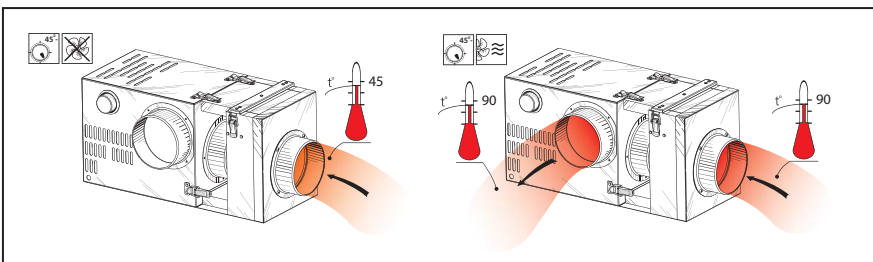


Fig. 10 Operating logic of Kamin fan with AF filter box

When air temperature in the fireplace hood reaches the set point, the fan starts and distributes purified by AF filter box warm air from the chimney to other rooms. The fan is turned off when air temperature drops down below the set point.

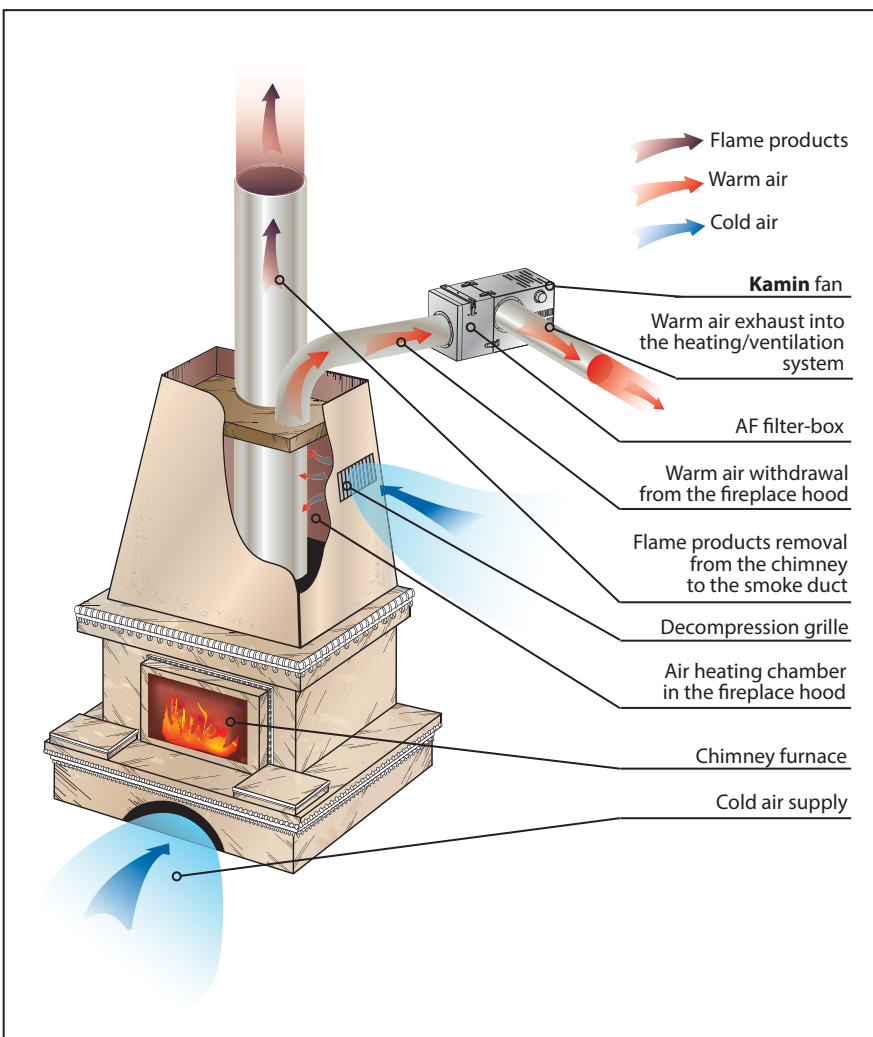


Fig. 11 Operating logic of Kamin fan with AF filter box

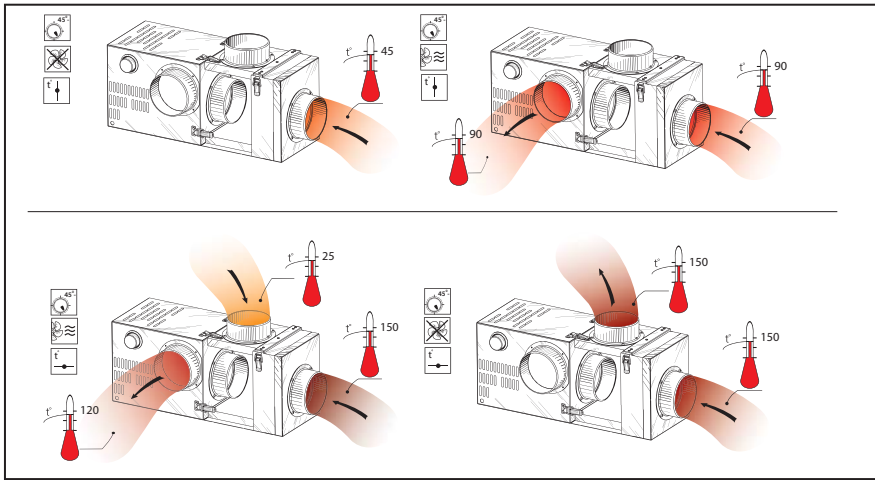


Fig. 12 Operating logic of Kamin fan with KF mixing chamber

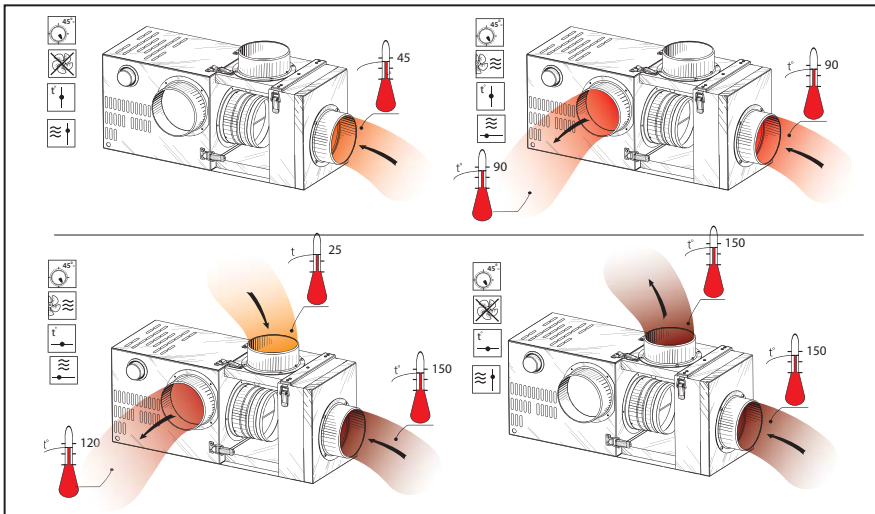


Fig. 13 Operating logic of Kamin fan with KF mixing chamber and GF gravity damper

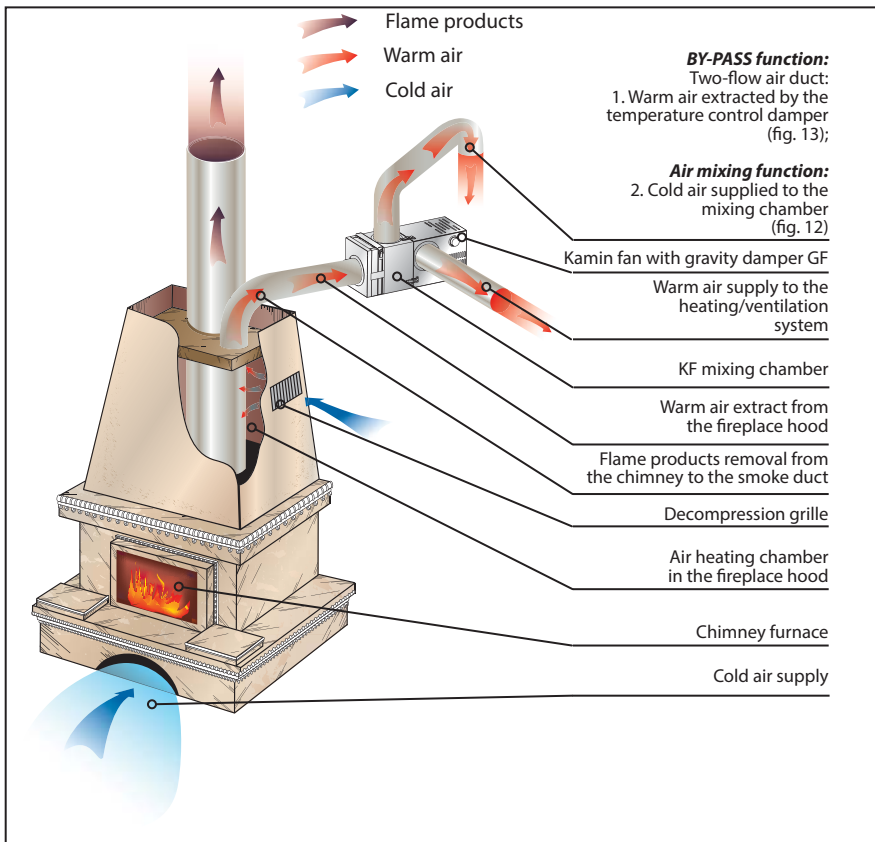


Fig. 14 Operating logic of the Kamin fan with KF filter and GF gravity damper

Designation	Description
	Max. transported air temperature
	Temperature controller with the set temperature point
	Fan runs
	Fan does not run
	Temperature control damper is closed
	Temperature control damper is opened
	Gravity damper is opened
	Gravity damper is closed

Fig.12 Description

When air temperature in the fireplace hood reaches the set point, the fan starts and distributes warm air from the chimney to other rooms and is turned off as temperature drops down below the set point.

The KFK mixing chamber provides cold air supply when the transported air temperature exceeds +90 °C and hot air removal when the fan is off.

Fig.13 Description

When air temperature in the fireplace hood reaches the set point, the fan starts and distributes warm air from the chimney to other rooms. The fan is turned off as temperature drops down below the set point.

The bypass system is designed to prevent the fan overheating if it does not run, for example, in case of power supply cut-off. The damper is closed and air is routed through the plug to another room.

If air supplied to the fan is too hot, the mixing chamber damper is opened to supply cold air and equalize temperature.

MOUNTING AND OPERATION GUIDELINES

The air motion direction in the heating / ventilation system must match the pointer on the fan casing.

Install the fan to ensure sufficient and quick access for servicing and repair operations.

The fan must be grounded.

Do not mount the fan on a flammable material, do not mount the fan directly in the fireplace hood, do not cover the fan casing, do not build the fan into the walls. Decompression grilles must be installed.

Do not operate the fan at the temperatures below 0 °C or above +150 °C as well as in aggressive or explosive environment.

Use only heat-resistant metal air ducts and grilles to integrate the fan into the ventilation system.

Do not operate the fan in an explosive or fire-hazardous environment. Prior to starting mounting make sure that power cable is not damaged, the fan casing is not deformed and the impeller has free rotation and does not touch the flange or the casing.

Follow general and special safety rules during the fan setup and operation. The fan must be grounded.

The fan is designed for top or horizontal mounting depending on the model. Install the fan on the even surface. The fan mounting options are stated in fig. 15-18.

Provide free air circulation to cool down the fan motor.

For vibration attenuation, it is recommended to install the fan on the rigid fire-resistant support made of gypsum plate 0.5 x 0.5 m with mineral wool layer. The minimum distance between the fan and the heating source is 1.5 m, the minimum distance from the fan casing to other objects is 0.5 m.

Install as many decompression grilles as required in the fireplace hood, connect intake and air distribution ducts and fix those with clamps.

Insulate the air ducts with mineral wool.

For the fans with GF option, adjust the gravity damper position in compliance with the pointer direction. The damper must have horizontal installation.

GF damper is used for overheating protection of the heating / ventilation system and the fan during the fan standby. To set the start temperature of the fan from 0 °C up to +90 °C rotate the temperature controller knob.

Make sure that the chimney duct and the flame product removal system are air tight to prevent ingress of combustion products in the room.

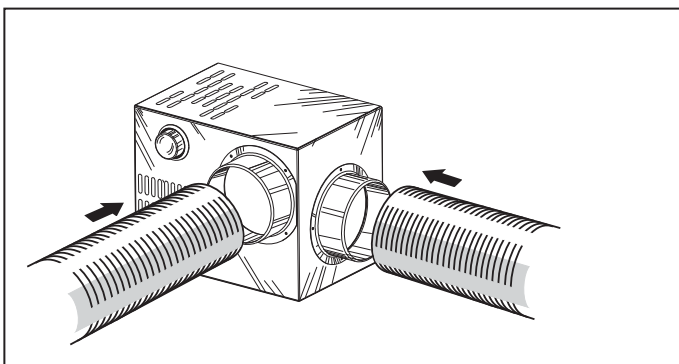


Fig. 15

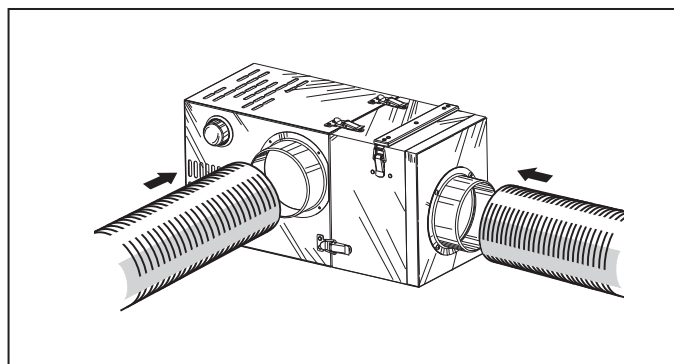


Fig. 16

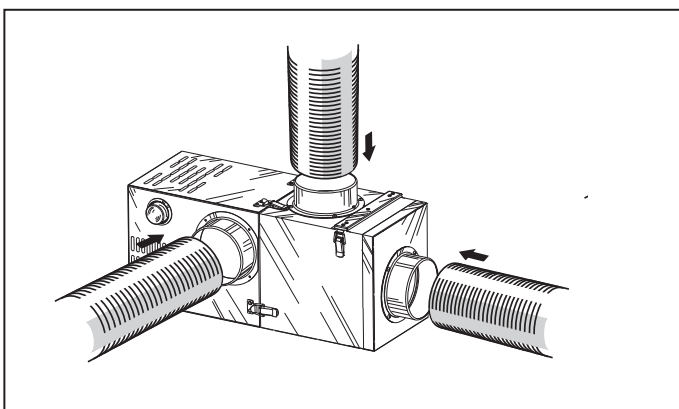


Fig. 17

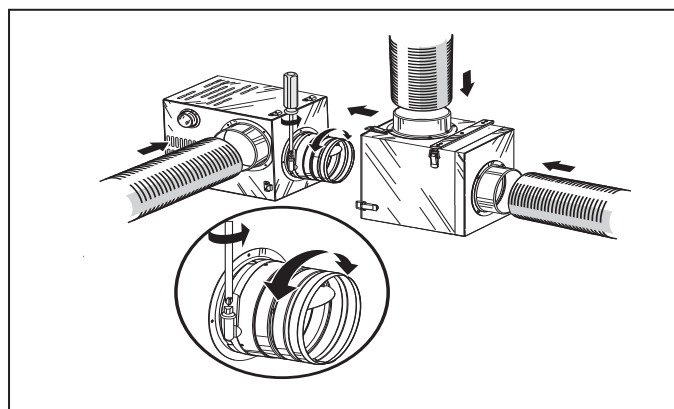


Fig. 18

INSTALLATION AND CONNECTION TO POWER MAINS

Connect the fan to power mains through the automatic switch.

Connection of the fan to power mains is allowed by a qualified electrician only. The rated electrical parameter are stated on the rating plate.

Modifications of internal connections are not allowed and will result in void warranty.

Connect the fan only to power mains with valid electric standards.

For the fan connection use insulated, durable and heat-resistant cables with copper wires, minimum cross section 0.5 mm². The cable cross section may vary depending on the maximum cable temperature depending on the wire and insulation type, the maximum current, the cable length and cable layout type.

The fan is connected to power mains through the terminal block, fig. 19-23, located in the fan terminal box, in compliance with wiring diagram and terminal designation in fig. 19.

The house cabling system must be equipped with an automatic switch at 230 V / 50 Hz external input.

The automatic switch trip current must be in compliance with the fan current consumption (refer Table 1). The contact gap on all poles at least 3 mm. Install the automatic switch to ensure prompt access. The recommended rated automatic switch trip current is 1.6 A.

The integrated thermostat switch closes the fan power supply circuit, when air temperature in the chimney reaches the set point. The fan is started and supplies warm air to the room. When the temperature in the chimney falls down below the set point, the fan turns off.

Cut power supply to the fan off by turning the automatic electric switch QF to OFF position prior to any operations. Take steps to prevent activation of the automatic switch.

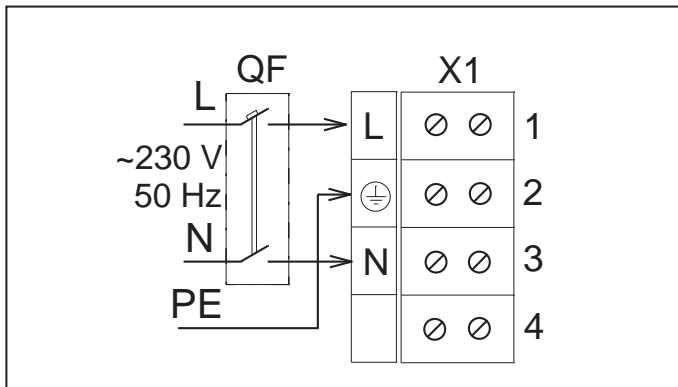


Fig. 19

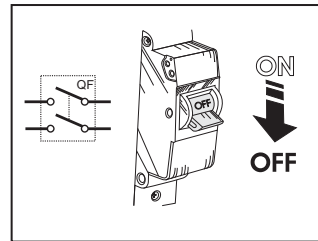


Fig. 20

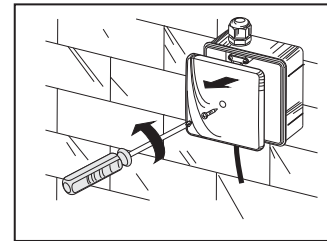


Fig. 21

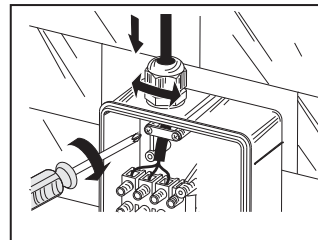


Fig. 22

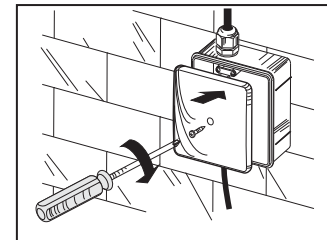


Fig. 23

MAINTENANCE

Regular technical supervision and maintenance of the fan are required to ensure the product long service life and non-stop operation."

Disconnect the fan from power mains prior to any maintenance operations, fig. 24-29. The fan maintenance consists in regular cleaning of the fan surfaces of dust and dirt. Maintenance includes regular cleaning, control of the impeller, motor, impeller blades.

Clean the impeller blades with a soft cloth or a brush wetted in a mild soap solution. Clean the impeller blades at least once in 6 months.

Operation recommendations:

1. Clean the fan regularly from dust, dirt and foreign objects.
2. Check all fastening connections periodically.
3. Control generated noise and vibration. High vibration may indicate the bearing wear, sticking of the dirt particles contained in the transported air, the impeller blades wear, loose connection between the fan and the air duct.
4. Check periodically the fastening connections, impeller for possible blade damages, check connection of the fan to the air duct and coating.

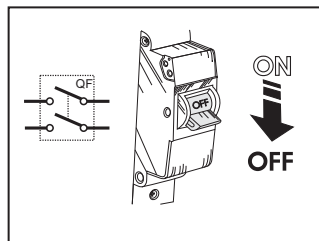


Fig. 24

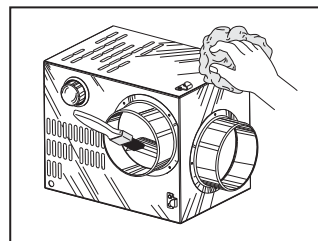


Fig. 25

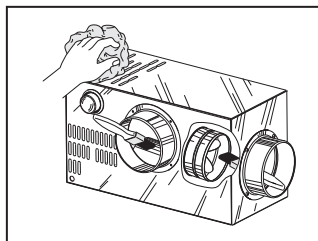


Fig. 26

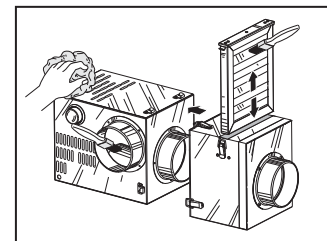


Fig. 27

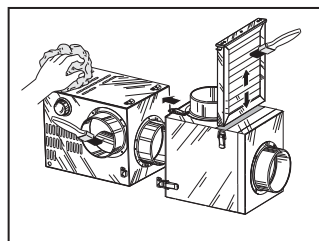


Fig. 28

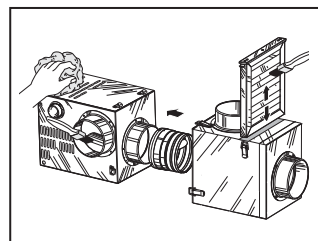


Fig. 29

Table 3. Troubleshooting

Problem	Possible reasons	Troubleshooting
The fan does not start	Wrong electrical connection. No power supply to the fan terminal block.	Check power supply with a multimeter at the terminal block. Disconnect the fan from power mains. Check electrical connection reliability in the terminal block, automatic switch, power socket. Connect the fan following the wiring diagram.
	The motor/impeller is slow or jammed.	Turn the automatic switch off. Rotate the impeller manually, make sure of no foreign objects that may prevent the impeller free rotation. Turn the impeller locking screw and adjust the impeller position on the shaft to prevent the motor jam. Tighten the locking screw.
	The temperature of the air flow from the chimney to the fan is below the temperature controller set point. The temperature set point at the temperature controller is too high. The temperature controller sends no closing signal to turn the fan on. Wrong selected air ductworks from the chimney to the fan.	Decrease the temperature set point at the temperature controller or make steps to increase temperature of the air flow from the chimney. Place the fan closer to the chimney.
Automatic switch tripping during the fan start.	Overcurrent as a result of short circuit in power mains leads to automatic switch tripping.	Turn the fan off. Remove an overcurrent. Check the automatic switch operability, check automatic switch trip current. Turn the automatic switch off/on. Restart the fan.
Low air flow	Soiled filter. Soiled diffusers, grilles and air ducts. Soiled impeller, flange and other fan components. Soiled air ducts, closed air dampers and diffusers.	Clean or replace the filter. Clean or replace the diffusers, grilles, air ducts and other ventilation components. Clean or replace the impeller, the fan and other fan components. Make sure that the air ducts are not damaged, the air dampers and the diffusers are closed.
High noise and vibration	Soiled fan. Loose screws.	Clean the fan Check and tighten the screws.
	Wrong fan installation. No anti-vibration dampers. The fan is installed on metal surfaces.	Install the fan on the anti-vibration dampers (special accessory). Fix mounting brackets to the fan with screws. Connect the anti-vibration dampers and the mounting brackets. Install the fan on a non-metal surface.
	Loose fixation of supply air ducts. The supply air ducts are made of a rigid metal.	Replace the rigid air ducts with the flexible and heat-resistant air ducts. Tighten the clamp screws to ensure the air duct tight fixation.

WARRANTY CARD

BLAUBERG KAMIN

MANUFACTURE DATE

SELLER

SALES DATE

REPRESENTATIVE IN EU

Blauberg Ventilatoren GmbH
Aidenbachstr. 52a,
D-81379 München, Germany



BLAUBERG
Ventilatoren

