Series
VENTS KAM

Chimney centrifugal fan for house heating system management using heat of chimney or fireplace. It can be also used as a base for backup heating source.

Application
Chimney fans for hot air distribution allow creating fully-featured air heating system based on a fireplace. Such system is the perfect solution for heating of seasonal houses that serve as a second residence during winter time and provides fast and efficient hot air distribution from chimney to other premises. Used for air distribution with the air tempreature range of 0 °C to +150 °C.

Design
The fan casing is made of galvanized steel and equipped with heat- and sound insulation of fire-resistant mineral wool. The casing is perforated for the internal air circulation and motor cooling. The temperature controller is used for setting the temperature level for the fan switching on and off. Fan startup is effected within the range of 0 °C to +90 °C depending on the air temperature generated inside the fireplace heat exchanger.

Motor
The fans are supplied with single phase motors for operation in 230/50 Hz power supply network.
Insulation Class F. The motors have integrated overheating protection with automatic restart. The motor is placed off-airflow and is equipped with forward curved impeller blades as well as ball bearings for long service life. The fan models marked KAM are equipped with asynchronous motors and an extra impeller for air blowing-off and cooling. The fan motor models marked KAM Eco are equipped with an external rotor. The KAM Eco max fans are equipped with a high powered external rotor motor.

Speed control
Both smooth and step fan control is performed by means of a thyristor or autotransformer (Models KAM, KAM Eco). The fan speed is controlled within the range of 0 to 100 %.

Mounting
The fireplace fans are designed for connection with round air ducts. The fans can be mounted in any position with respect to the airflow direction indicated with a pointer on the casing. Access for the fan maintenance shall be reserved. Air ducts for warm air supply should be mounted from the fan to each heated room. Concealed air duct system with forced warm air circulation allows saving space in the house and blends into house design.

Accessories
FFK – removable G3 metal filter-box for transported air purification. The filter is connected to the fan casing by lock-latches to provide easy removal of the filter for cleaning.

KFK – removable metal mixing chamber with incorporated heat control damper and G3 filter for transported purification. The mixing chamber is fixed to the fan casing by means of lock-latches to ensure easy removal for cleaning. The fan configuration with KFK mixing chamber provides cold air supply to the mixing chamber as the operating temperature exceeds 90 °C and hot air removal as the motor is off.

GFK – gravity backdraft damper to prevent air back draft in the system. Such fan configuration that includes KFK mixing chamber and GFK backdraft damper ensures fan motor overheating protection based on BY-PASS actuation, in particular when the motor is not running due to no power supply. This design enables backdraft damper shutting and hot air distribution to other premises through ventilation ducts when the motor is not running.

Designation key

Series	Air duct diameter	Motor	Modifications
VENTS KAM	125; 150; 160; 200	**Eco**: external rotor **Eco max**: high powered external rotor motor	_: integrated temperature controller T1: no temperature controller

Accessories

Clamps

Accessories

MFK

FFK

KFK

GFK

TS-1-90

1 KAM fan operating logic

When air temperature in the fireplace hood reaches the set point, the fan turns automatically on (fig. 1b) and distributes hot air from the fireplace to other premises. It turns off when the temperature falls down below the set point (fig. 1a).

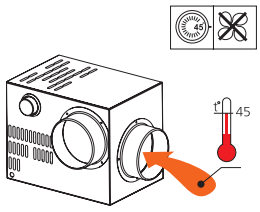


fig.1a

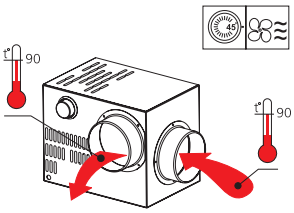
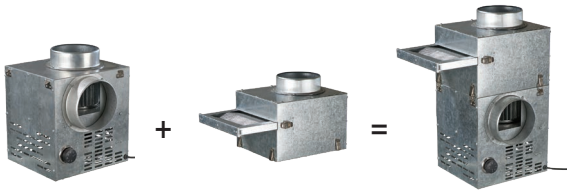


fig.1b

2 Operating logic of KAM fan with FFK filter box



KAM + FFK =

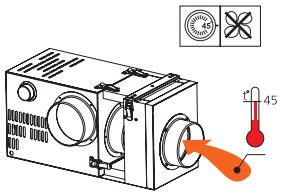


fig.2a

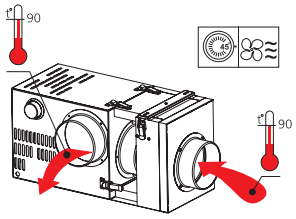


fig.2b

When air temperature in the fireplace hood reaches the set point, the fan turns automatically on (fig. 2b) and distributes hot air (purified by the FFK filter) from the fireplace to other premises. It turns off when the temperature falls down below the set point (fig. 2a).

3 Operating logic of KAM filter with KFK mixing chamber and integrated heat control damper

KAM + KFK =

When air temperature in the fireplace hood reaches the set point, the fan turns automatically on (fig. 3b) and distributes purified hot air from the fireplace to other premises. It turns off, when air temperature falls down below the set point (fig. 3a). The fan equipped with a mixing chamber provides cold air supply to the mixing chamber (fig. 3c) if the transported air temperature exceeds +90 °C and hot air removal when the fan is off (fig. 3d).

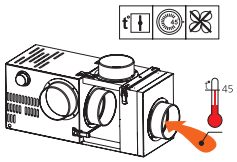


fig.3a

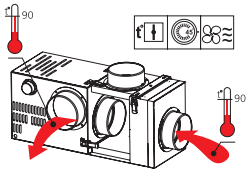


fig.3b

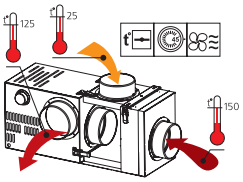


fig.3c

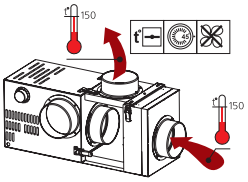
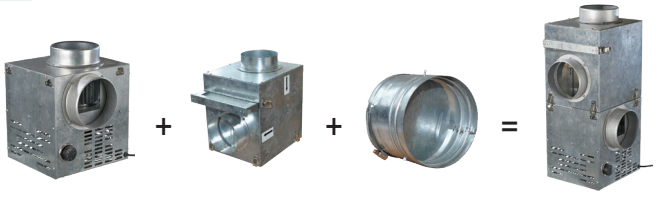


fig.3d

4 Operating logic of KAM filter with KFK mixing chamber and GFK gravity damper



KAM + KFK + GFK =

When air temperature in the fireplace hood reaches the set point, the fan turns automatically on (fig. 4b) and distributes purified hot air from the fireplace to other premises. It turns off, when the temperature falls down below the set point (fig. 4a). The BYPASS system is designed to protect the fan from overheating, for example, during power failure. In this case, the GFK damper is closed and hot air is moved through the bypass air duct past the fan. If the air supplied to the fan is too hot, the mixing chamber damper is opened, and cold air is supplied to the fan (fig. 4c).

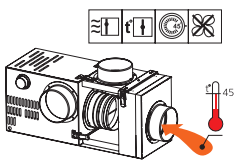


fig.4a

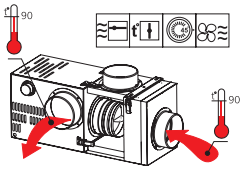


fig.4b

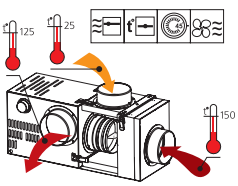


fig.4c

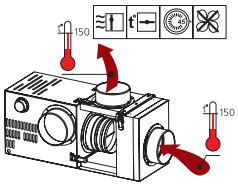
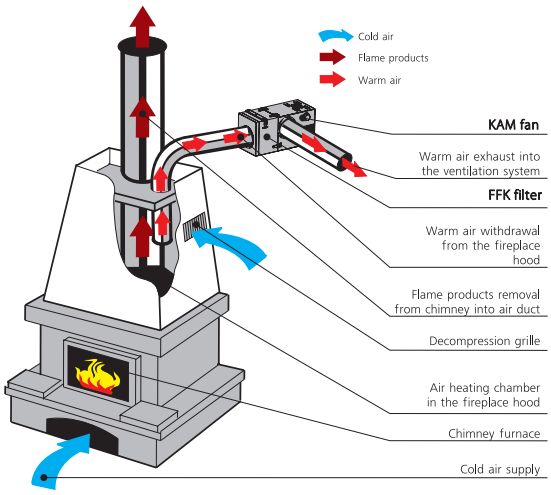
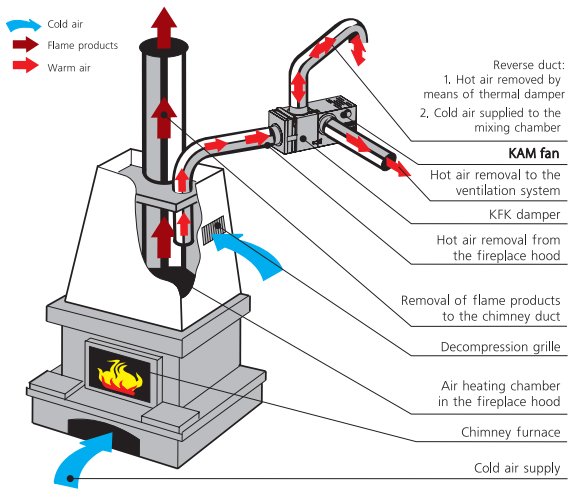


fig.4d

Installation and operation of KAM fans with FFK filter in the chimney system

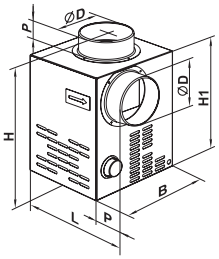


Installation and operation of KAM fans with KFK damper, KAM fans with KFK and GFK dampers with BY-PASS system in the chimney system



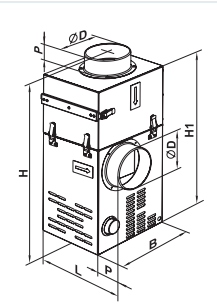
Fan overall dimensions

Model	Dimensions [mm]						Weight [kg]
	ØD	B	H	H1	L	P	
KAM 125	124	245	350	300	260	50	5.82
KAM 150	149	285	350	300	300	50	6.9
KAM 160	159	285	350	300	300	50	6.9
KAM 125 Eco	124	245	320	270	260	50	5.82
KAM 150 Eco/Eco max	149	285	320	270	300	50	6.9
KAM 160 Eco	159	285	320	270	300	50	6.9

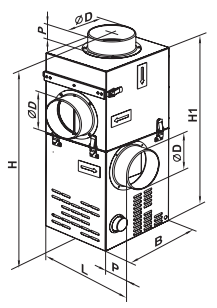


Overall dimensions of fans with additional equipment

Model	Additional equipment	Dimensions [mm]						Weight [kg]
		ØD	B	H	H1	L	P	
KAM 125	FFK	124	245	530	480	260	50	6.7
KAM 150	FFK	149	285	540	490	300	50	8.7
KAM 160	FFK	159	285	540	490	300	50	8.7
KAM 125 Eco	FFK	124	245	500	450	260	50	7.8
KAM 150 Eco/Eco max	FFK	149	285	510	460	300	50	9.8
KAM 160 Eco	FFK	159	285	510	460	300	50	9.8



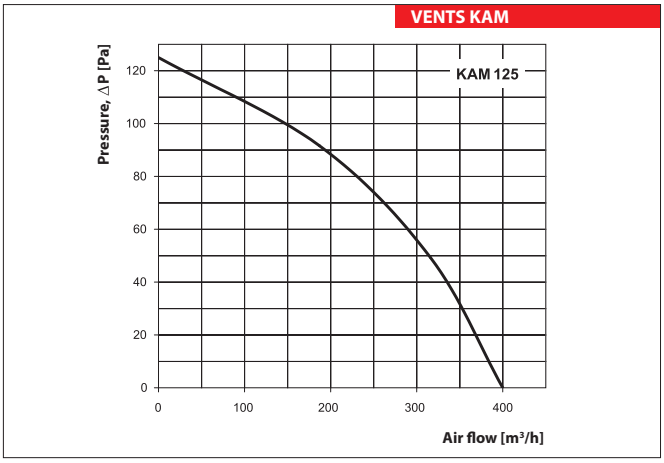
Model	Additional equipment	Dimensions [mm]						Weight [kg]
		ØD	B	H	H1	L	P	
KAM 125	KFK/KFK+GFK	124	245	610	560	260	50	8.5
KAM 150	KFK/KFK+GFK	149	285	650	600	300	50	9.7
KAM 160	KFK/KFK+GFK	159	285	650	600	300	50	9.7
KAM 125 Eco	KFK/KFK+GFK	124	245	580	530	260	50	9.4
KAM 150 Eco/Eco max	KFK/KFK+GFK	149	285	620	570	300	50	10.8
KAM 160 Eco	KFK/KFK+GFK	159	285	620	570	300	50	10.8

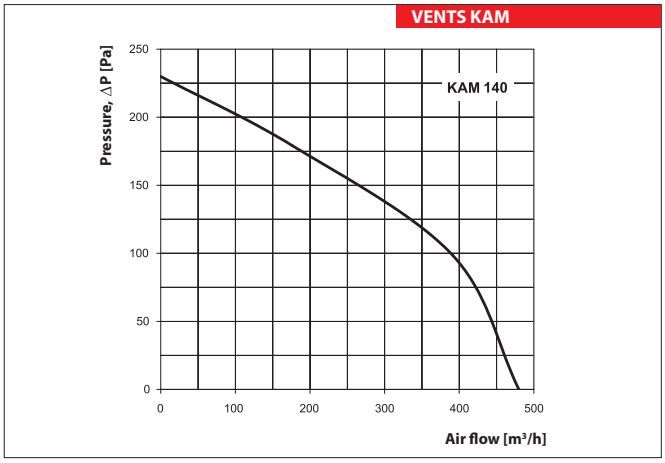


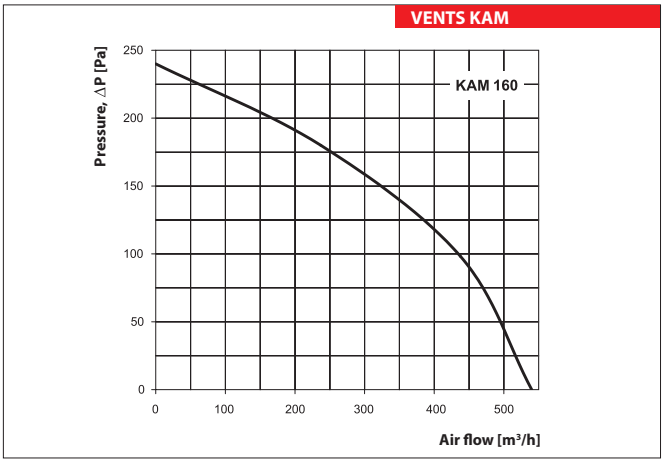
Technical data

	KAM 125	KAM 150	KAM 160
Voltage [V/50 Hz]	1~230	1~230	1~230
Power [W]	108	115	116
Current [A]	0.81	0.84	0.86
Maximum air flow [m³/h]	400	520	540
RPM [min⁻¹]	1300	1280	1270
Noise level at 3 m [dBA]	42	42	42
Transported air temperature [°C]	150	150	150
Protection rating	IPX2	IPX2	IPX2

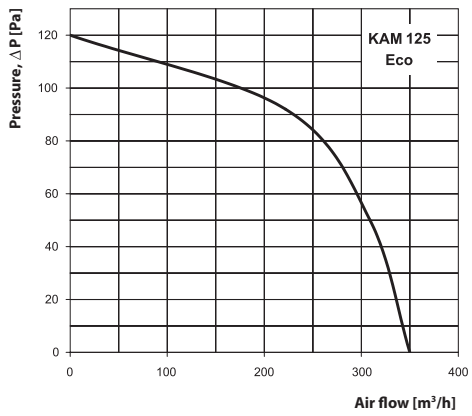
	KAM 125 Eco	KAM 150 Eco	KAM 150 Eco max	KAM 160 Eco
Voltage [V/50 Hz]	1~230	1~230	1~230	1~230
Power [W]	32	43	115	44
Current [A]	0.14	0.19	0.51	0.19
Maximum air flow [m³/h]	350	450	613	470
RPM [min⁻¹]	1335	1165	1296	1110
Noise level at 3 m [dBA]	37	39	45	39
Transported air temperature [°C]	150	150	150	150
Protection rating	IPX2	IPX2	IPX2	IPX2



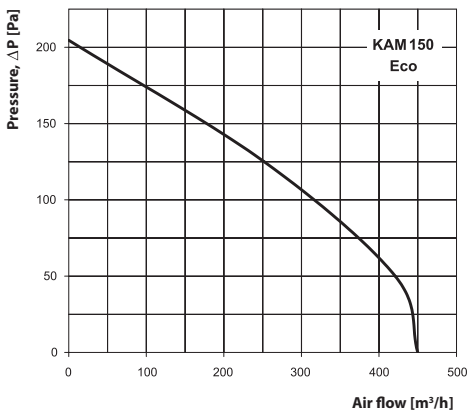




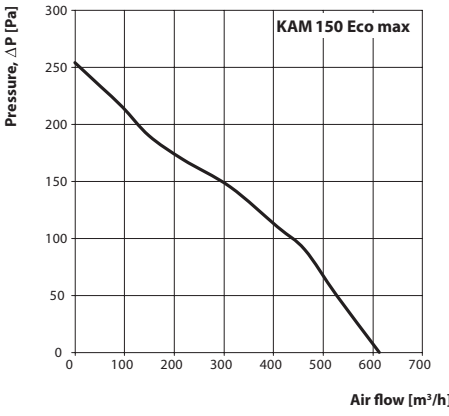
VENTS KAM Eco



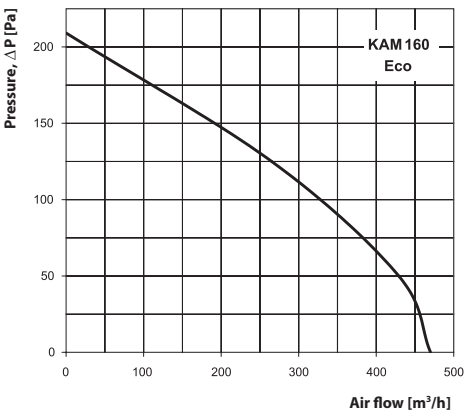
VENTS KAM Eco



VENTS KAM Eco max



VENTS KAM Eco



ELECTRICAL ACCESSORIES COMPATIBILITY

	KAM 125	KAM 150	KAM 160	KAM 125 Eco	KAM 150 Eco	KAM 150 Eco max	KAM 160 Eco
Thyristor speed controllers							
RS-1-300	•	•	•	•	•	•	•
RS-1-400	•	•	•	•	•	•	•
RS-1 N (V)	•	•	•	•	•	•	•
RS-1,5 N (V)	•	•	•	•	•	•	•
RS-2 N (V)	•	•	•	•	•	•	•
RS-2,5 N (V)	•	•	•	•	•	•	•
RS-0,5-PS				•	•		•
RS-1,5-PS	•	•	•			•	
RS-2,5-PS	•	•	•			•	
RS-4,0-PS	•	•	•			•	
RS-3,0-T	•	•	•			•	
RS-5,0-T	•	•	•			•	
RS-10,0-T							
RS-3,0-TA	•	•	•			•	
RS-5,0-TA	•	•	•			•	
RS-10,0-TA							
Transformer speed controllers							
RSA5E-2-P	•	•	•	•	•	•	•
RSA5E-2-M	•	•	•	•	•	•	•
RSA5E-3-M	•	•	•	•	•	•	•
RSA5E-4-M	•	•	•	•	•	•	•
RSA5E-12-M	•	•	•	•	•	•	•
RSA5E-1,5-T	•	•	•	•	•	•	•
RSA5E-3,5-T	•	•	•	•	•	•	•
RSA5E-5,0-T	•	•	•	•	•	•	•
RSA5E-8,0-T	•	•	•	•	•	•	•
RSA5E-10,0-T	•	•	•	•	•	•	•
RSA5D-1,5-T							
RSA5D-3,5-T							
RSA5D-5-M							
RSA5D-8-M							
RSA5D-10-M							
RSA5D-12-M							
Frequency speed controllers							
VFED-200-TA							
VFED-400-TA							
VFED-750-TA							
VFED-1100-TA							
VFED-1500-TA							
Temperature controllers							
RTS-1-400							
RTSD-1-400							
TST-1-300							
TSTD-1-300							
RT-10	•	•	•	•	•	•	•
Multi-speed fan switches							
P2-5,0							
P3-5,0							
P5-5,0							
P2-1-300							
P3-1-300							
SP3-1							
EC motor controllers							
R-1/010							
Sensors							
T-1,5 N	•	•	•	•	•	•	•
TH-1,5 N	•	•	•	•	•	•	•
TF-1,5 N	•	•	•	•	•	•	•
TP-1,5 N	•	•	•	•	•	•	•

• recommended
• suitable