Series

VENTS KSB K2 EC

Centrifugal duct fans in a heat- and sound-insulated casing with air flow up to **7145 m³/h**

Application

The KSB K2 EC fans are designed for supply and exhaust ventilation systems for commercial, office and other public or industrial premises with high requirements to noise level and with limited space for mounting. For example, the unit design includes a possibility of space-restricted installation above suspended ceilings. Compatible with Ø 100-500 mm air ducts.

Design

The fan casing is made of aluzinc. For easy installation and operation, the top cover of the fan is secured with a special lock. The casing is heat- and sound-insulated with a 50 mm layer of non-flammable mineral wool. To ensure better noise absorption, the inner surface of the insulation is made of a perforated metal sheet. The round connecting spigots are rubber sealed.

Motor

The units feature efficient electronically commutated (EC) direct current motors with external rotor and centrifugal impellers with backward curved blades. EC motor is free of friction and wear parts such as a commutator and brushes. These components are replaced by a maintenance-free electronic circuit board. EC motors are characterised with high performance and optimum control across the entire speed range. In addition to that, the efficiency of the electronically commutated motor reaches very impressive levels of up to 90 %.

Built in functions and control

The fan is controlled with the external control signal 0-10 V (capacity control is performed depending on temperature, pressure, smoke level etc.). The fan has low energy consumption at any speed. Maximum fan speed does not depend on the available current frequency and is suitable for operation both at 50 and 60 Hz. Several fans can be integrated into a single computer-driven control system. Custom designed software provides high accuracy control of the fans integrated into a network. The computer display shows all the system parameters and the operation mode can be set individually for each fan in the network.

Installation

Duct fans are intended for mounting to round air ducts. The fans are installed between the air ducts. In case the fan is mounted on flexible joints, attach the fan to a structural unit by means of supports, suspension links or brackets. The fan may be installed in any position in consideration of the air flow direction (as indicated by the arrow on the fan casing). While mounting the fan provide enough access for servicing and repair operations.

Designation key

Series	Duct diameter	Modification	Motor	Options
VENTS KSB	100; 125; 150; 160; 200; 250; 315; 355; 400; 450; 500	**K2**: heat- and sound-insulated casing	**EC**: synchronous electronically commutated motor	**R1**: power cord with a mains plug.

Accessories

Silencer

Filters

Heaters

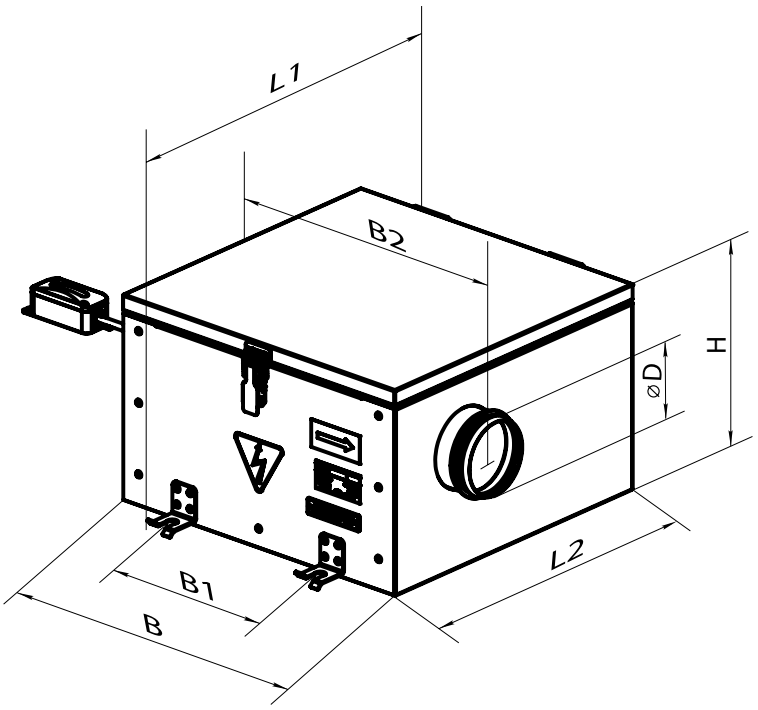
Non-return valve

Air damper

Speed controller R-1/010

Overall dimensions of fans

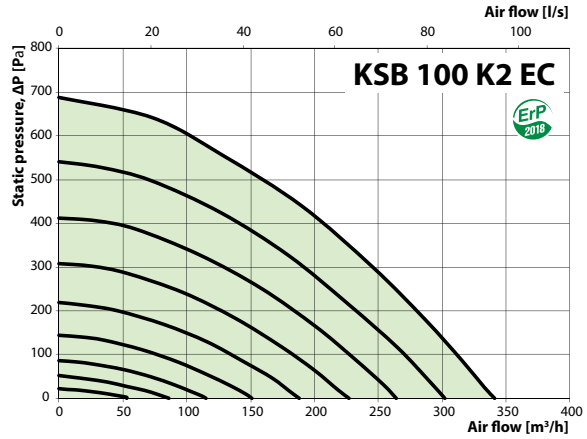
Model	Dimensions [mm]							Weight [kg]
	∅D	B	B1	B2	H	L1	L2	
KSB 100 K2 EC	99	420	228	517	270	507	414	12
KSB 125 K2 EC	124	420	228	517	270	507	414	12
KSB 150 K2 EC	149	420	228	517	270	507	414	12
KSB 160 K2 EC	159	420	228	517	270	507	414	12
KSB 200 K2 EC	198	551	374	648	328	646	553	20
KSB 250 K2 EC	248	665	487	762	371	709	616	27
KSB 315 K2 EC	313	807	600	904	505	818	737	47
KSB 355 K2 EC	354	807	600	904	505	818	737	47
KSB 400 K2 EC	399	807	600	904	505	818	737	47
KSB 450 K2 EC	449	885	670	982	580	886	805	60
KSB 500 K2 EC	499	1049	800	1146	660	1079	998	86

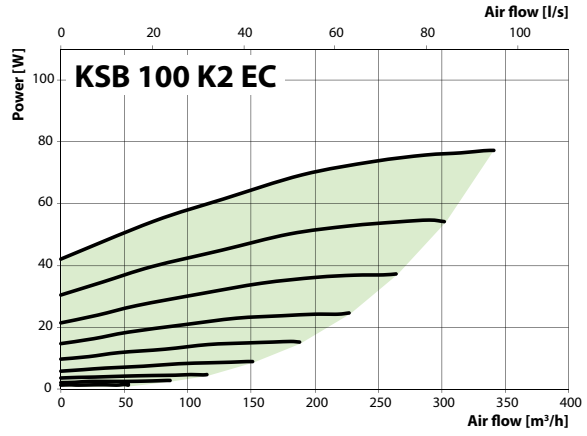


Technical data

	KSB 100 K2 EC	KSB 125 K2 EC
Unit voltage [V/50 (60) Hz]	1~230	1~230
Power [W]	69	78
Current [A]	0.55	0.59
Maximum air flow [m³/h]	341	444
RPM [min⁻¹]	3270	3270
Sound pressure level at 3 m distance [dBA]	37	39
Maximum transported air temperature [°C]	-25...+55	-25...+55
SEC class	B	B
Ingress protection rating	IPX4	IPX4

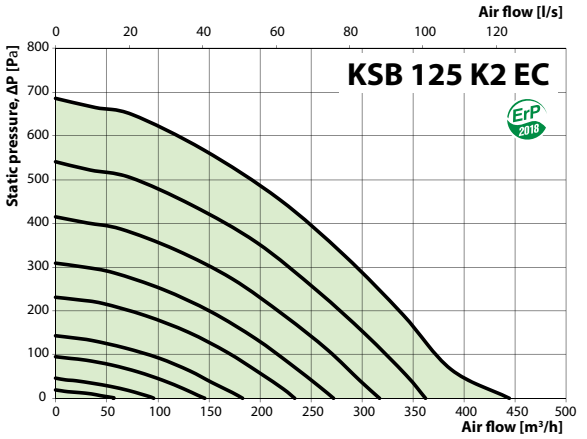
VENTS KSB K2 EC

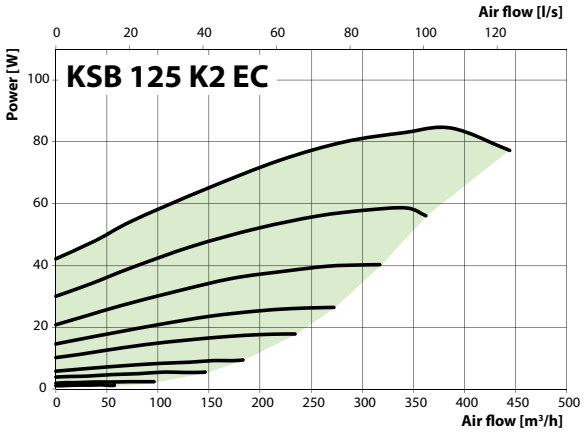




Sound power level		Sound power level [A-filter]									Sound pressure level at a distance of 3 m [A-filter]	Sound pressure level at a distance of 1 m [A-filter]
		General	Octave frequency band [Hz]									
	Hz		63	125	250	500	1000	2000	4000	8000	LpA, 3 m dBA	LpA, 1 m dBA
L_{wA} to inlet	dBA	65	51	59	63	54	50	44	44	34	45	55
L_{wA} to outlet	dBA	83	68	78	80	75	61	53	55	47	63	73
L_{wA} to environment	dBA	57	42	47	53	53	44	43	42	41	37	47

VENTS KSB K2 EC



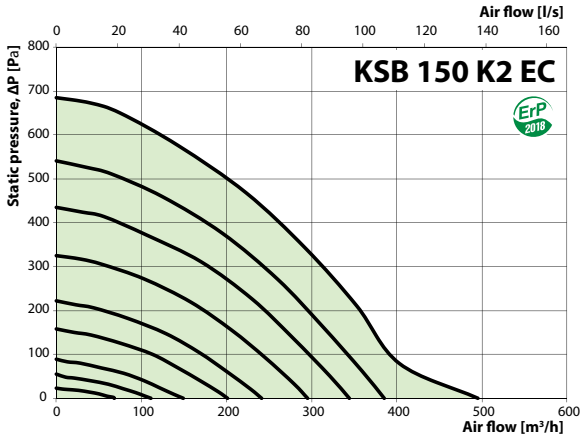


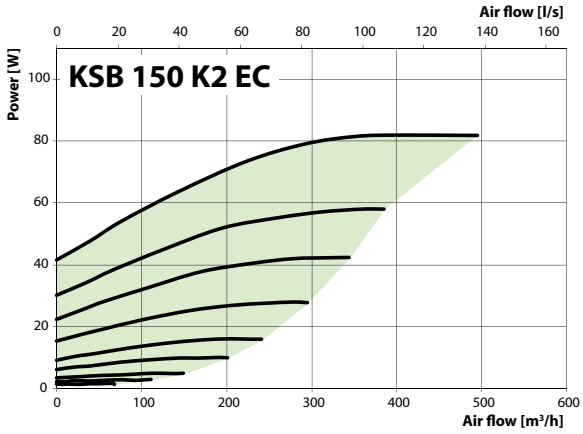
Sound power level		Sound power level [A-filter]									Sound pressure level at a distance of 3 m [A-filter]	Sound pressure level at a distance of 1 m [A-filter]
		General	Octave frequency band [Hz]									
	Hz		63	125	250	500	1000	2000	4000	8000	LpA, 3 m dBA	LpA, 1 m dBA
L_{wA} to inlet	dBA	66	51	60	64	55	51	44	44	34	46	56
L_{wA} to outlet	dBA	85	70	80	82	77	63	54	57	48	65	75
L_{wA} to environment	dBA	59	44	49	55	55	46	45	44	43	39	49

Technical data

	KSB 150 K2 EC	KSB 160 K2 EC
Unit voltage [V/50 (60) Hz]	1~230	1~230
Power [W]	81	85
Current [A]	0.61	0.76
Maximum air flow [m³/h]	495	454
RPM [min⁻¹]	3270	3600
Sound pressure level at 3 m distance [dBA]	40	40
Maximum transported air temperature [°C]	-25...+55	-25...+55
SEC class	B	B
Ingress protection rating	IPX4	IPX4

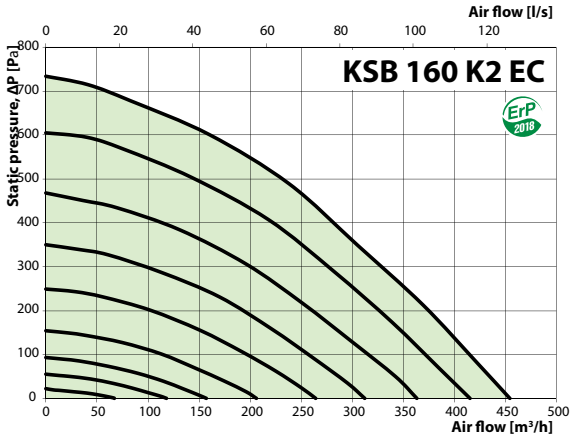
VENTS KSB K2 EC

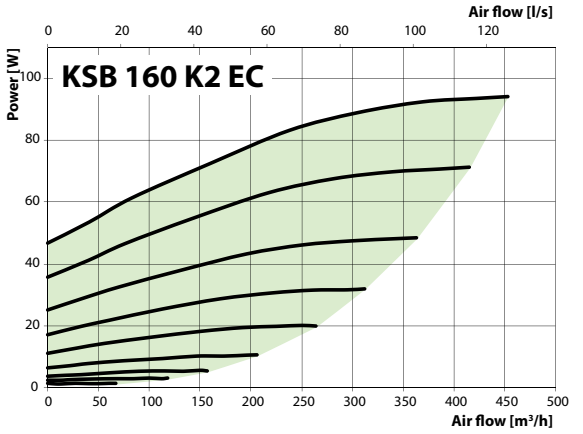




Sound power level			Sound power level [A-filter]								Sound pressure level at a distance of 3 m [A-filter]	Sound pressure level at a distance of 1 m [A-filter]
	Hz	General	Octave frequency band [Hz]									
			63	125	250	500	1000	2000	4000	8000	LpA, 3 m dBA	LpA, 1 m dBA
L_{WA} to inlet	dBA	71	55	65	69	59	55	48	48	37	50	60
L_{WA} to outlet	dBA	87	72	82	84	79	64	56	58	49	67	77
L_{WA} to environment	dBA	60	43	51	58	53	43	42	40	40	40	50

VENTS KSB K2 EC



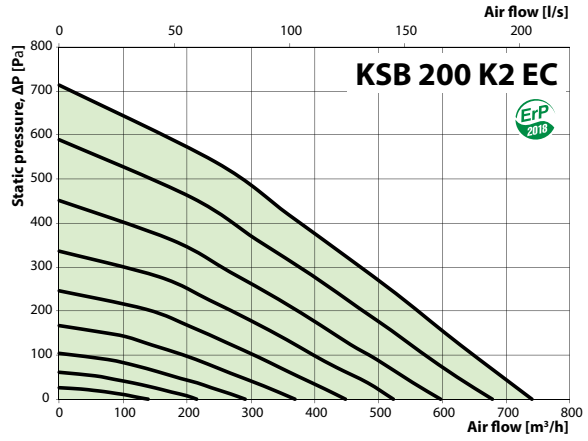


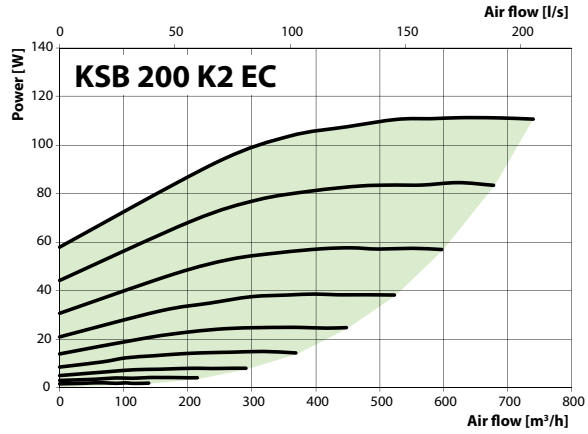
Sound power level			Sound power level [A-filter]								Sound pressure level at a distance of 3 m [A-filter]	Sound pressure level at a distance of 1 m [A-filter]
	Hz	General	Octave frequency band [Hz]									
			63	125	250	500	1000	2000	4000	8000	LpA, 3 m dBA	LpA, 1 m dBA
L_{WA} to inlet	dBA	70	55	64	68	59	54	47	47	37	50	60
L_{WA} to outlet	dBA	90	74	85	87	82	67	58	60	51	69	79
L_{WA} to environment	dBA	60	43	51	58	53	43	42	40	40	40	50

Technical data

	KSB 200 K2 EC	KSB 250 K2 EC
Unit voltage [V/50 (60) Hz]	1~230	1~230
Power [W]	111	164
Current [A]	0.88	1.32
Maximum air flow [m³/h]	740	1097
RPM [min⁻¹]	2400	2800
Sound pressure level at 3 m distance [dBA]	42	45
Maximum transported air temperature [°C]	-25...+55	-25...+55
SEC class	B	B
Ingress protection rating	IPX4	IPX4

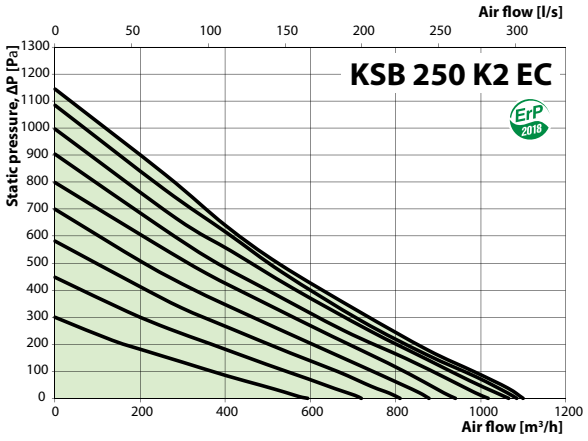
VENTS KSB K2 EC

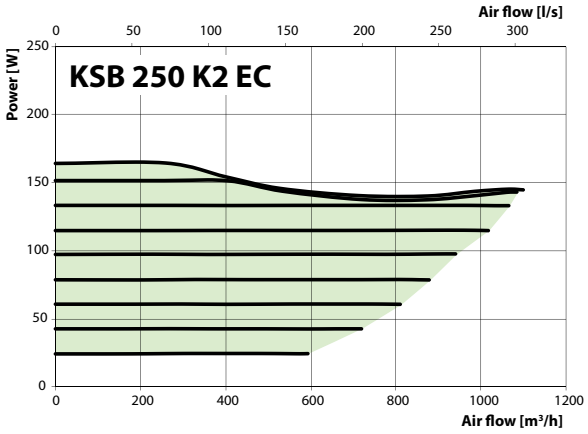




Sound power level		Sound power level [A-filter]									Sound pressure level at a distance of 3 m [A-filter]	Sound pressure level at a distance of 1 m [A-filter]
		General	Octave frequency band [Hz]									
	Hz		63	125	250	500	1000	2000	4000	8000	LpA, 3 m dBA	LpA, 1 m dBA
L_{wA} to inlet	dBA	70	54	64	68	58	54	47	47	36	49	59
L_{wA} to outlet	dBA	80	65	75	77	72	59	51	53	45	60	70
L_{wA} to environment	dBA	63	39	46	62	52	46	45	35	34	42	52

VENTS KSB K2 EC



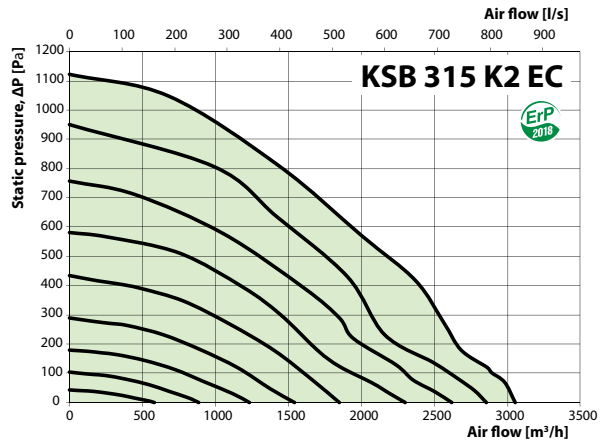


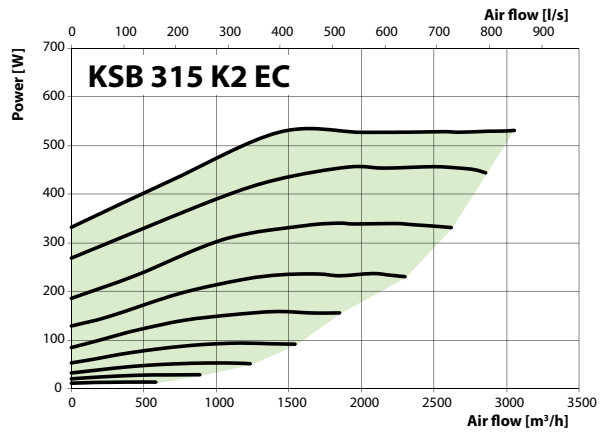
Sound power level		Sound power level [A-filter]									Sound pressure level at a distance of 3 m [A-filter]	Sound pressure level at a distance of 1 m [A-filter]
		General	Octave frequency band [Hz]									
	Hz		63	125	250	500	1000	2000	4000	8000	LpA, 3 m dBA	LpA, 1 m dBA
L_{wA} to inlet	dBA	77	60	70	75	64	59	52	52	40	56	66
L_{wA} to outlet	dBA	81	67	77	79	74	60	52	55	46	61	71
L_{wA} to environment	dBA	65	46	60	63	55	48	33	33	34	45	55

Technical data

	KSB 315 K2 EC	KSB 355 K2 EC
Unit voltage [V/50 (60) Hz]	1~230	1~230
Power [W]	531	527
Current [A]	2.32	2.31
Maximum air flow [m³/h]	3053	3417
RPM [min⁻¹]	2360	2360
Sound pressure level at 3 m distance [dBA]	47	50
Maximum transported air temperature [°C]	-25...+55	-25...+55
SEC class	-	-
Ingress protection rating	IPX4	IPX4

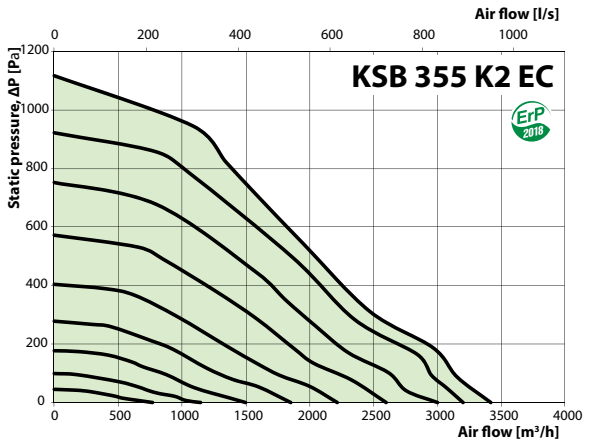
VENTS KSB K2 EC

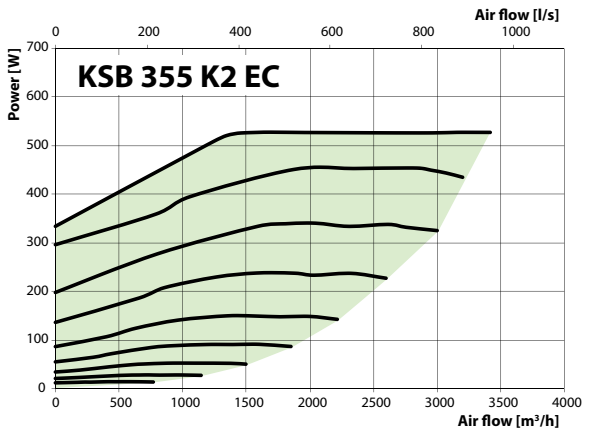




Sound power level		Sound power level [A-filter]									Sound pressure level at a distance of 3 m [A-filter]	Sound pressure level at a distance of 1 m [A-filter]
		General	Octave frequency band [Hz]									
	Hz		63	125	250	500	1000	2000	4000	8000	LpA, 3 m dBA	LpA, 1 m dBA
L_{wA} to inlet	dBA	84	77	80	79	75	68	64	62	60	64	74
L_{wA} to outlet	dBA	89	79	79	78	82	80	82	79	75	68	78
L_{wA} to environment	dBA	67	54	55	66	57	50	52	51	52	47	57

VENTS KSB K2 EC



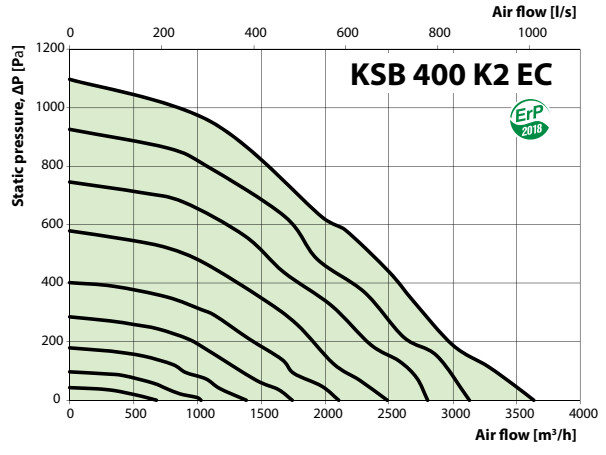


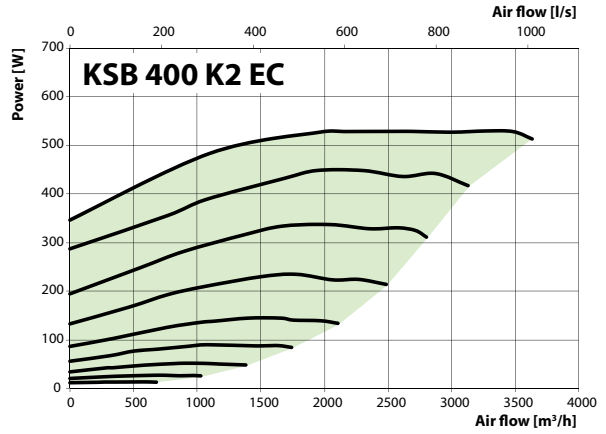
Sound power level		Sound power level [A-filter]									Sound pressure level at a distance of 3 m [A-filter]	Sound pressure level at a distance of 1 m [A-filter]
		General	Octave frequency band [Hz]									
	Hz		63	125	250	500	1000	2000	4000	8000	LpA, 3 m dBA	LpA, 1 m dBA
L_{wA} to inlet	dBA	89	82	85	84	80	72	68	66	64	69	79
L_{wA} to outlet	dBA	91	81	81	80	84	82	84	81	77	70	80
L_{wA} to environment	dBA	70	57	58	69	60	53	55	54	55	50	60

Technical data

	KSB 400 K2 EC	KSB 450 K2 EC
Unit voltage [V/50 (60) Hz]	1~230	3~400
Power [W]	513	1200
Current [A]	2.25	1.95
Maximum air flow [m³/h]	3633	5620
RPM [min⁻¹]	2360	2580
Sound pressure level at 3 m distance [dBA]	51	54
Maximum transported air temperature [°C]	-25...+55	-25...+55
SEC class	-	-
Ingress protection rating	IPX4	IPX4

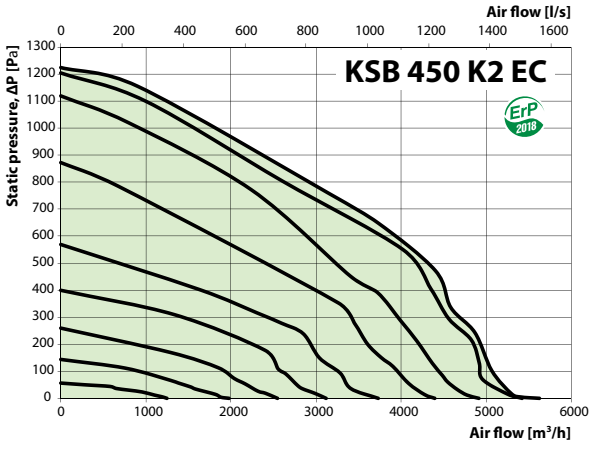
VENTS KSB K2 EC

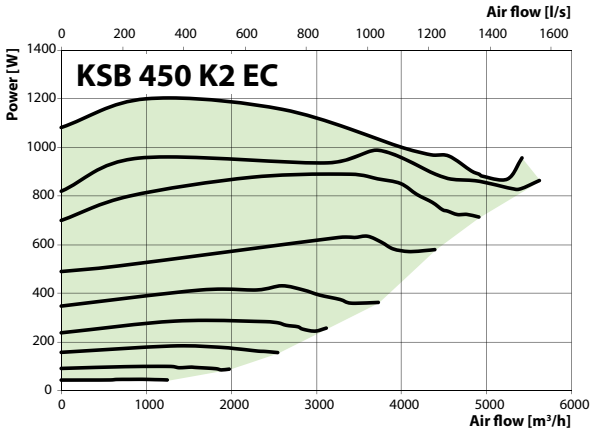




Sound power level			Sound power level [A-filter]									
			General	Octave frequency band [Hz]								
	Hz			63	125	250	500	1000	2000	4000	8000	
L_{wA} to inlet	dBA	86	67	79	84	72	67	58	58	45	65	75
L_{wA} to outlet	dBA	90	74	85	87	82	66	58	60	51	69	79
L_{wA} to environment	dBA	72	66	68	66	57	48	35	37	37	51	61

VENTS KSB K2 EC



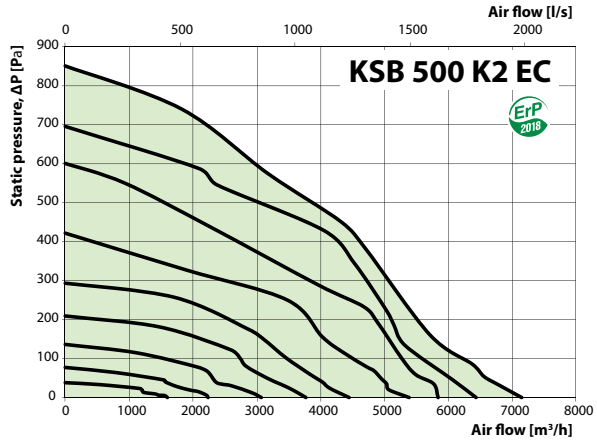


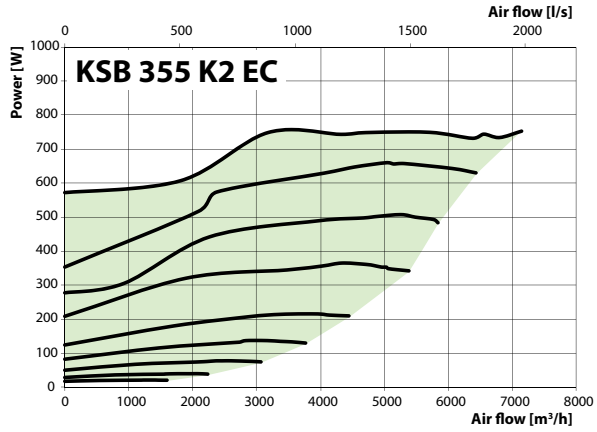
Sound power level			Sound power level [A-filter]									
			General	Octave frequency band [Hz]								
	Hz			63	125	250	500	1000	2000	4000	8000	
L_{wA} to inlet	dBA	85	66	78	83	71	66	57	57	44	64	74
L_{wA} to outlet	dBA	92	76	87	89	84	69	59	62	52	71	81
L_{wA} to environment	dBA	75	61	71	72	58	55	46	44	39	54	64

Technical data

	KSB 500 K2 EC
Unit voltage [V/50 (60) Hz]	1~230
Power [W]	752
Current [A]	3.42
Maximum air flow [m³/h]	7145
RPM [min⁻¹]	1440
Sound pressure level at 3 m distance [dBA]	56
Maximum transported air temperature [°C]	-25...+55
SEC class	-
Ingress protection rating	IPX4

VENTS KSB K2 EC





Sound power level		Sound power level [A-filter]									Sound pressure level at a distance of 3 m [A-filter]	Sound pressure level at a distance of 1 m [A-filter]
		General	Octave frequency band [Hz]									
	Hz		63	125	250	500	1000	2000	4000	8000	LpA, 3 m dBA	LpA, 1 m dBA
L_{WA} to inlet	dBA	88	69	81	86	74	68	59	59	46	67	77
L_{WA} to outlet	dBA	94	78	89	91	86	70	61	63	53	73	83
L_{WA} to environment	dBA	77	62	73	74	60	57	47	45	40	56	66