

Series
VENTS VKM EC



Series
VENTS VKM 355-400 EC



Inline centrifugal fans with the air flow
up to **4790 m³/h** in steel casing

■ **Application**

Supply and exhaust ventilation systems for commercial, office and other public or industrial premises. EC motors applied in in VKM fans reduce energy demand by about 35 % and ensure high aerodynamic performance and low noise level. Such characteristics are of special importance for ventilation of public premises as banks, supermarkets, restaurants, hotels, installation close to residential buildings and for domestic application, e.g. ventilation of private pools. EC motors enable integration of several fans into a unified networks and their centralized control. The steel casing ensures reliable operation of the fan in case of its outside installation. The fans are designed for connection to Ø 100, 125, 150, 160, 200, 250, 315, 355 and 400 mm air ducts. The casing is made of painted galvanized steel for models VKM 100 EC, 125 EC, 150 EC, 160 EC, 200 EC

■ **Design**

The fan casing is made of polymer coated steel. New technologies for manufacture of the fan components let attain the total casing air tightness.

■ **Motor**

The impellers with backward curved blades are powered with a high efficient electronically commutated (EC) direct current motor with external rotor. As of today, such motor type is the most advanced solution for energy saving. EC motors are featured by high performance and the best speed controllable range. Premium efficiency reaching up to 90 % is the absolute advantage of electronically commutated motors. The motors are equipped with ball bearings for longer service life of the fan (40 000 hours). For precise features, safe operation

and low noise, each turbine is dynamically balanced while assembly. Motor ingress protection rating IP44.

■ **Speed control**

The fan is controlled with the external control signal 0-10 V (air flow control as a function of temperature, pressure, smoke conditions and other parameters). Should the control value get changed, the EC motor adjusts its speed and the fan boosts as much air flow to the ventilation system as required. Maximum speed of the fan does not depend on the current frequency and it can operate at 50 or 60 Hz mains supply. The fans may be integrated into the unified dispatch system. The respective software enables to control all the fan integrated into the system. The computer displays all the system parameters. Each fan in the system may be individually adjusted.

■ **Mounting**

The fans may be installed at any angle. The fixing brackets that are included into the delivery set are used to facilitate the fan mounting to the wall. The fan is connected to power mains through the external terminal box.

Designation key

Series	Air duct diameter	Motor	Options
VENTS VKM VENTS VKMS: High-power version	100; 125; 150; 160; 200; 250; 315; 355, 400	EC: electronically commutated synchronous motor	Un: speed controller with an electronic thermostat and a temperature sensor fixed on a 4-meter cable. Temperature-based operation logic. U2n: speed controller with an electronic thermostat and a temperature sensor fixed on a 4-meter cable. Temperature-based switching on/off. R1: power cord with a mains plug. P: integrated smooth speed controller.

Accessories



Silencer



Filters



Heaters



Backdraft damper



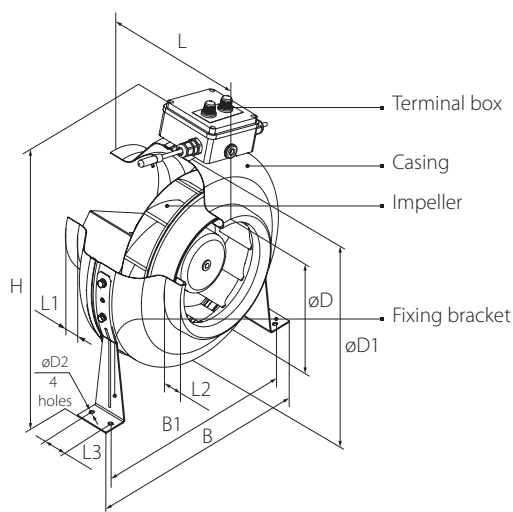
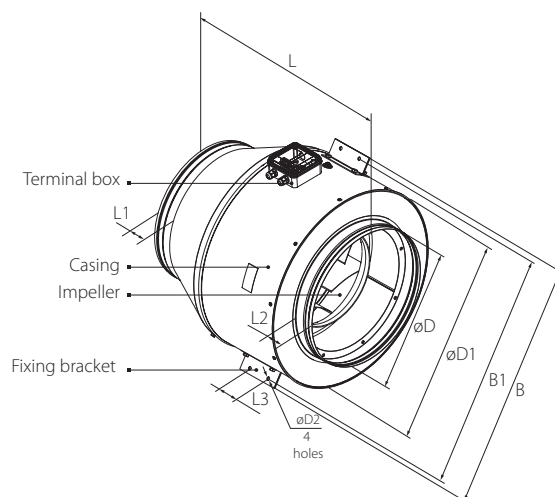
Air shutter



Speed controller R-1/010

Overall dimensions

Model	Dimensions [mm]									Mass [kg]
	ØD	ØD1	H	B	B1	L	L1	L2	L3	
VKM 100 EC	99	245	330	300	260	195	20	20	30	2.7
VKM 125 EC	124	245	330	300	260	190	20	20	30	2.7
VKM 150 EC	149	275	345	330	290	170	20	20	30	3
VKM 160 EC	159	275	345	330	290	170	20	20	30	3
VKM 200 EC	198	345	430	395	355	245	25	25	40	4.3
VKMS 200 EC	198	345	435	395	355	255	25	30	40	5.4
VKM 250 EC	248	345	435	395	355	250	25	30	40	5.8
VKM 315 EC	314	405	465	455	415	260	30	30	40	7.3

**VKM 100 EC, VKM 125 EC, VKM 150 EC,
VKM 160 EC, VKM 200 EC, VKMS 200 EC
VKM 250 EC, VKM 315 EC**

VKMS 315 EC, VKM 355 EC, VKM 400 EC


Model	Dimensions [mm]									Mass [kg]
	ØD	ØD1	ØD2	B	B1	L	L1	L2	L3	
VKMS 315 EC	313	409	9	502	472	462	60	60	50	9.4
VKM 355 EC	353	459	9	552	522	562	60	60	70	15.1
VKM 400 EC	398	568	9	663	633	599	60	60	70	18.6

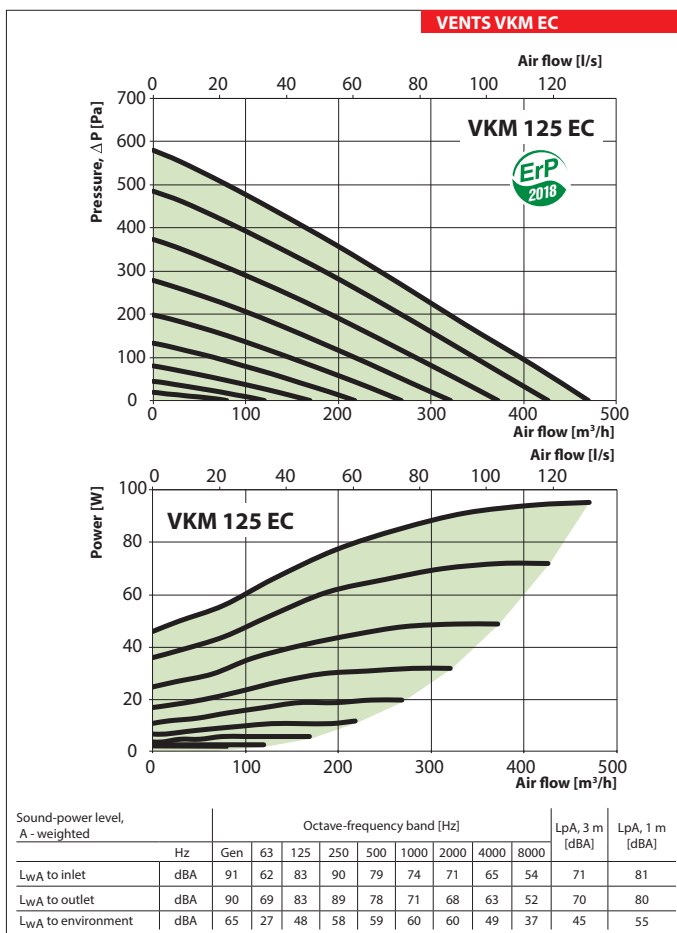
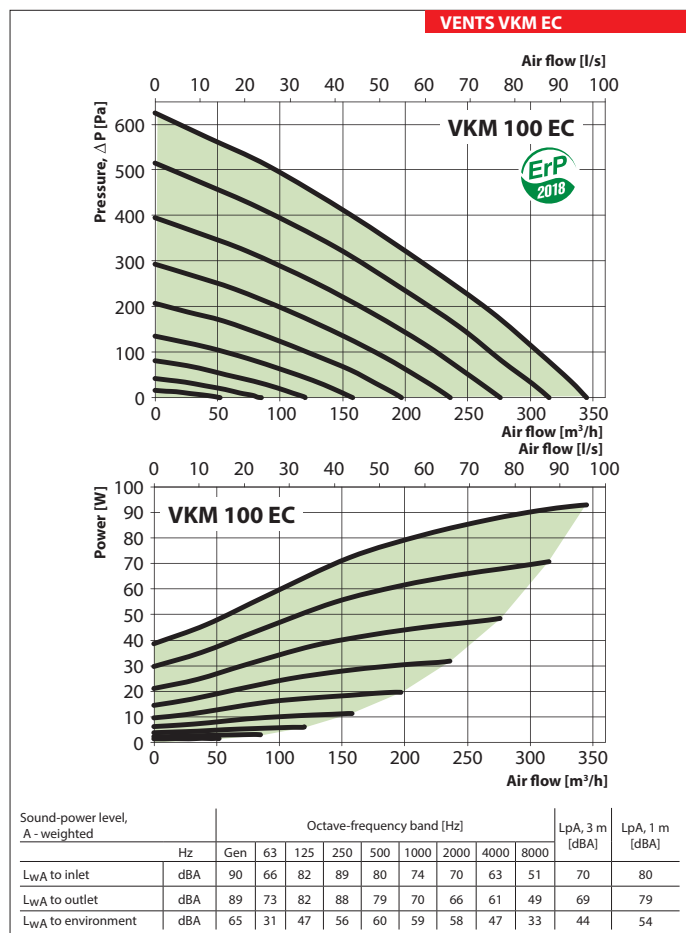
FANS FOR ROUND DUCTS

Technical data

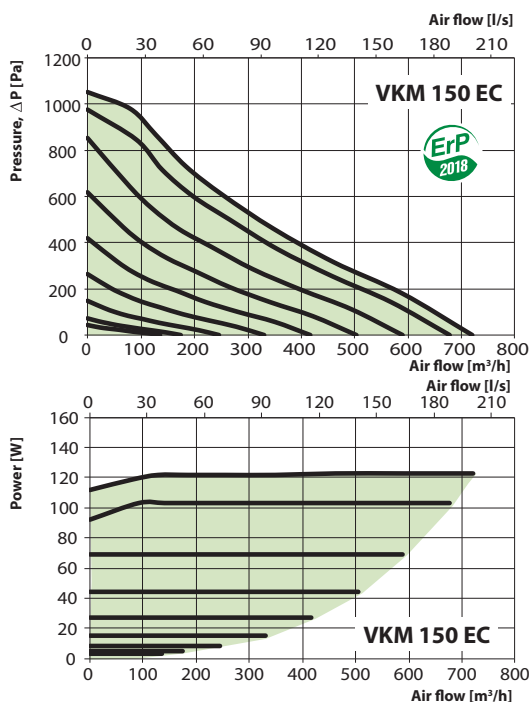
	VKM 100 EC	VKM 125 EC	VKM 150 EC	VKM 160 EC	VKM 200 EC	VKMS 200 EC
Voltage [V/50 (60) Hz]	1~230					
Power [W]	90	95	123	123	116	100
Current [A]	0.70	0.78	1.02	1.02	0.95	0.74
Max. air flow [m³/h]	345	480	720	735	900	1010
RPM [min⁻¹]	3600	3642	4936	5060	3959	2400
Noise level at 3 m [dBA]	44	45	48	48	49	48
Transported air temperature [°C]	-25...+60					
SEC class	B	-	-	-	-	-
Protection rating	IPX4					

	VKM 250 EC	VKM 315 EC	VKMS 315 EC	VKM 355 EC	VKM 400 EC
Voltage [V/50 (60) Hz]	1~230				
Power [W]	161	164	183	693	704
Current [A]	1.25	1.15	1.44	3.07	3.13
Max. air flow [m³/h]	1300	1370	1820	3450	4790
RPM [min⁻¹]	3820	2900	2780	2768	2206
Noise level at 3 m [dBA]	49	49	49	62	67
Transported air temperature [°C]	-25...+60				
SEC class	-	-	-	-	-
Protection rating	IPX4				

To meet the requirements of ErP 2018, a speed controller and local demand control typology must be applied (connect a sensor).

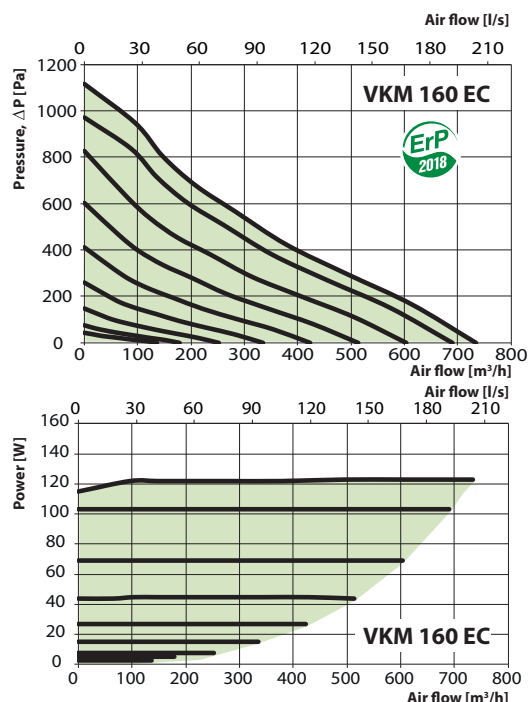


VENTS VKM EC



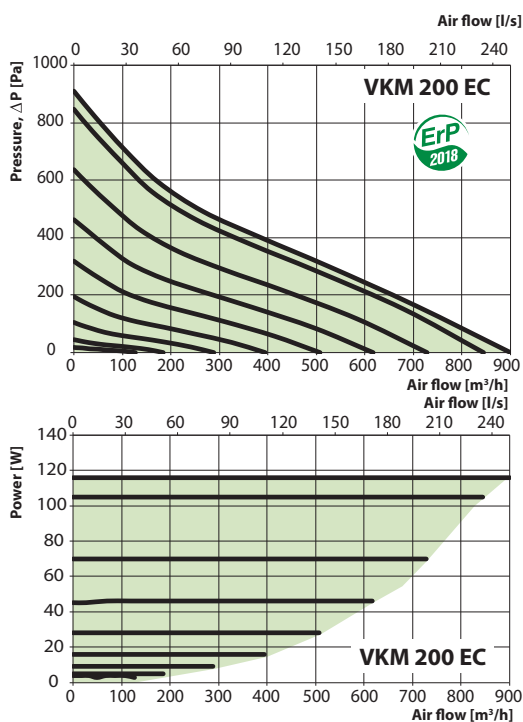
Sound-power level, A - weighted	Hz	Octave-frequency band [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
		Gen	63	125	250	500	1000	2000	4000	8000		
L _{WA} to inlet	dBA	89	52	86	85	74	72	70	67	54	68	78
L _{WA} to outlet	dBA	87	51	85	82	70	68	64	63	51	66	76
L _{WA} to environment	dBA	69	28	50	61	64	63	62	54	41	48	58

VENTS VKM EC



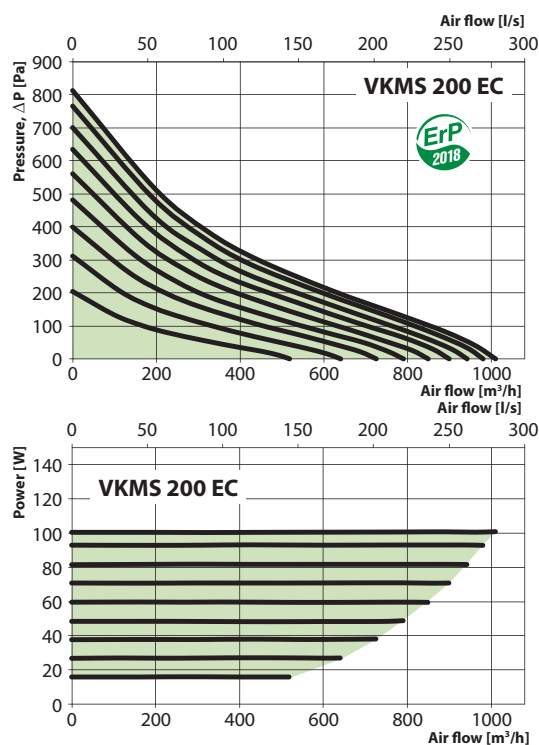
Sound-power level, A - weighted	Hz	Octave-frequency band [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
		Gen	63	125	250	500	1000	2000	4000	8000		
L _{WA} to inlet	dBA	89	81	87	79	72	68	62	50	54	68	78
L _{WA} to outlet	dBA	88	81	86	78	69	65	60	48	51	67	77
L _{WA} to environment	dBA	69	50	59	64	63	61	50	36	41	48	58

VENTS VKM EC



Sound-power level, A - weighted	Octave-frequency band [Hz]										LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Hz	Gen	63	125	250	500	1000	2000	4000	8000		
L _{WA} to inlet	dBA	87	48	76	84	79	79	80	72	61	67	77
L _{WA} to outlet	dBA	85	45	75	79	77	77	80	72	62	64	74
L _{WA} to environment	dBA	67	27	49	60	62	61	60	52	39	47	57

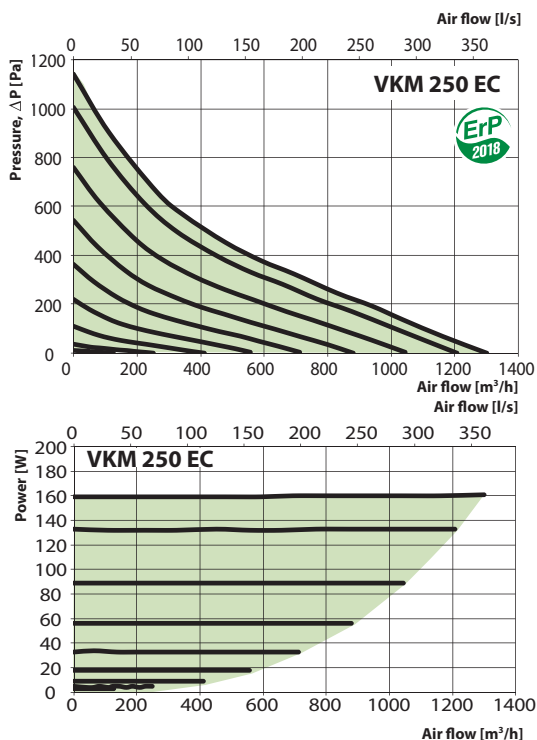
VENTS VKM EC



Sound-power level, A - weighted		Octave-frequency band [Hz]										LpA, 3 m [dBA]	LpA, 1 m [dBA]
		Hz	Gen	63	125	250	500	1000	2000	4000	8000		
L _{WA} to inlet	dBA	93	63	80	88	85	87	84	79	67	72	82	
L _{WA} to outlet	dBA	89	65	77	74	83	84	83	77	64	68	78	
L _{WA} to environment	dBA	68	30	49	58	62	65	61	52	38	48	58	

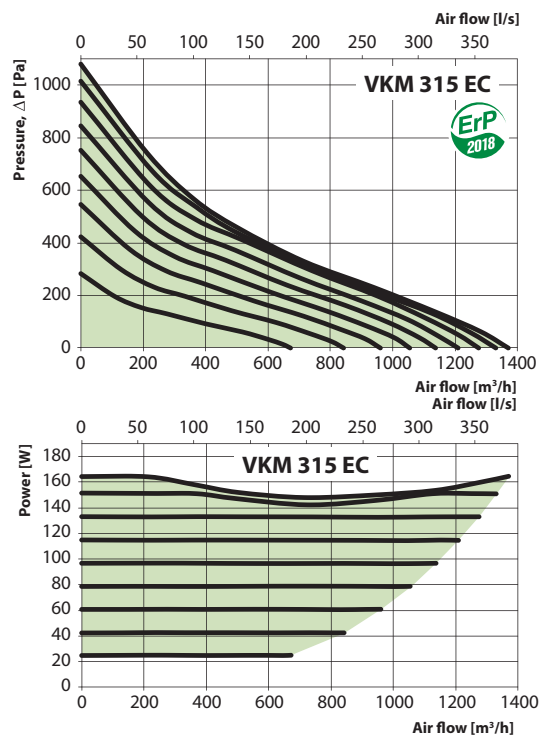
FANS FOR ROUND DUCTS

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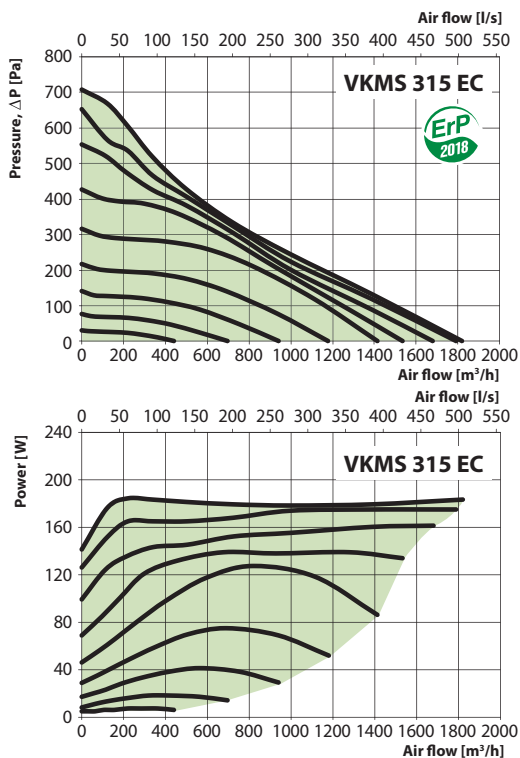
Sound-power level, A - weighted	Hz	Octave-frequency band [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
		Gen	63	125	250	500	1000	2000	4000	8000		
L _{WA} to inlet	dBA	91	72	87	89	80	74	67	56	46	71	80
L _{WA} to outlet	dBA	91	65	80	90	81	66	63	56	45	71	80
L _{WA} to environment	dBA	70	54	67	65	59	57	49	37	31	49	59

VENTS VKM EC



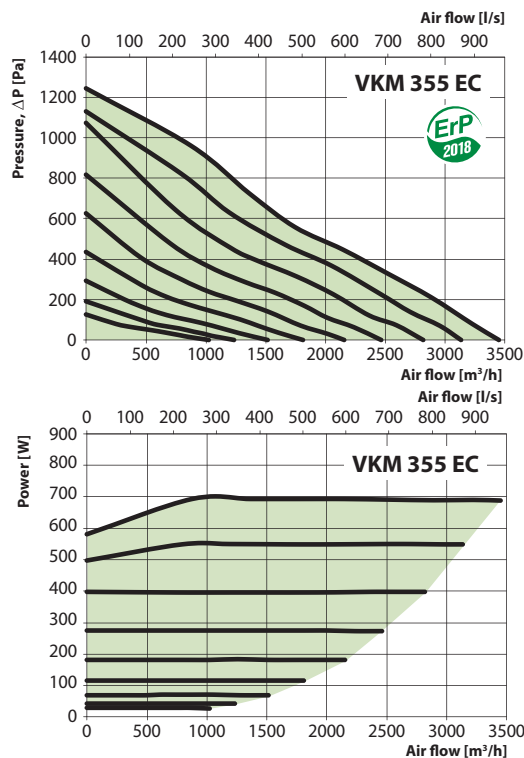
Sound-power level, A - weighted		Octave-frequency band [Hz]										LpA, 3 m [dBA]	LpA, 1 m [dBA]
		Hz	Gen	63	125	250	500	1000	2000	4000	8000		
L _{WA} to inlet	dBA	93	74	89	90	81	75	68	57	47	72	82	
L _{WA} to outlet	dBA	92	65	81	91	82	67	64	57	45	72	81	
L _{WA} to environment	dBA	70	55	67	65	59	57	49	37	31	49	59	

VENTS VKM EC



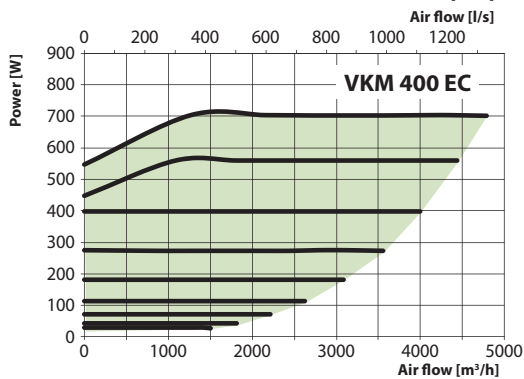
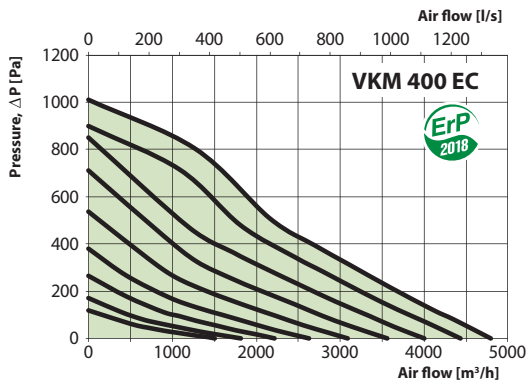
Sound-power level, A - weighted	Octave-frequency band [Hz]										LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Hz	Gen	63	125	250	500	1000	2000	4000	8000		
L _{WA} to inlet	dBA	92	62	79	87	85	86	83	78	66	71	81
L _{WA} to outlet	dBA	90	65	78	74	84	85	84	78	64	69	79
L _{WA} to environment	dBA	69	31	49	59	63	66	62	53	39	49	59

VENTS VKM EC



Sound-power level, A - weighted		Octave-frequency band [Hz]										LpA, 3 m [dBA]	LpA, 1 m [dBA]
		Hz											
L _{WA} to inlet	dBA	90	59	67	79	84	85	83	80	64	69	79	
L _{WA} to outlet	dBA	88	61	70	75	83	84	78	72	57	67	77	
L _{WA} to environment	dBA	83	69	75	70	73	79	72	73	49	62	72	

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Sound-power level, A - weighted	Hz	Octave-frequency band [Hz]								LpA, 3 m		LpA, 1 m
		Gen	63	125	250	500	1000	2000	4000	8000	[dBA]	[dBA]
L _{WA} to inlet	dBA	98	62	73	84	91	94	91	86	73	77	87
L _{WA} to outlet	dBA	94	62	73	79	85	91	86	80	68	73	83
L _{WA} to environment	dBA	87	45	63	81	81	82	80	71	58	67	77