Fans series
VENTS VKV

Centrifugal roof fans with the air capacity up to **4700 m³/h** with the vertical exhaust of air

Fans series
VENTS VKH

Centrifugal roof fans with the air capacity up to **4700 m³/h** with the horizontal exhaust of air

Applications
Exhaust ventilation system for various premises suitable for roof mounting. Compatible with Ø 200 to 500 mm air ducts. Suitable for any roof types as well as vertical ventilation shafts.

Design
The fan casing is made of steel with polymeric coating (VKV and VKH models), aluminum (VKVA, VKHA), galvanized steel (VKVz, VKHz).

Motor
The centrifugal impeller with backward-curved blades is mounted directly on the two-, four - or six-pole single- or three-phase asynchronous motor shaft. The motor is equipped with thermal overheating protection with automatic restart as well as ball bearings for long service life. For precise features, safe operation and low noise, each turbine is dynamically balanced while assembly. Motor protection rating IP 44.

Speed control
Both smooth or step speed control is performed by means of the thyristor or autotransformer controller. Several fans can be connected to one controller in case the total power and operating current do not exceed the rated controller values.

Mounting
The fan is mounted on the roof directly above the ventilating duct or shaft and is firmly fixed to the flat surface by means of a connecting plate. While mounting VKH fans directly onto the flat roof a supporting block shall be provided to prevent water and snow drops into the vent of the ventilation shaft. Electrical connection and installation shall beperformed in compliance with the manual and circuit diagram on the terminal box.
For connection of the fans to round air ducts use the following accessories: KKV damper, GVK flexible connector, FKV counter flange (page 186-187). For mounting of the fans to flat surface use the mounting frame RKV (page 187).

Model VKVA (aluminum)

Model VKHA (aluminum)

Designation key:

Series and modification	Casing material	Number of poles	Phase	Turbine standard size
VENTS VKV – vertical air exhaust **VENTS VKH** – horizontal air exhaust	_ steel with polymeric coating A – aluminum z – galvanized steel	**2** – 2 poles; **4** – 4 poles; **6** – 6 poles	**E** – single-phase modification **D** – three-phase modification	220; 225; 250; 280; 310; 355; 400; 450; 500

Accessories

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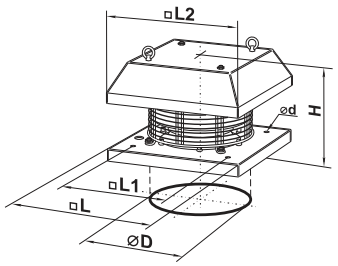
Fan overall dimensions:

Type	Dimensions [mm]						Mass [kg]
	ØD	Ød	H	L	L1	L2	
VKH 2E 220	245	10	228	338	245	338	6,9
VKH 2E 225	210	10	228	338	245	338	7,1
VKH 2E 250	286	10	265	425	330	365	10,1
VKH 2E 280	286	10	265	425	330	365	10,2
VKH 4E 310	286	10	300	438	330	400	10,2
VKH 4D 310	286	10	300	438	330	400	10,2
VKH 4E 355	438	12	348	598	450	550	15,6
VKH 4D 355	438	12	325	598	450	550	15,6
VKH 4E 400	438	12	348	598	450	550	21,0
VKH 4E 450	438	12	400	668	450	640	22,7
VKH 4D 400	438	12	348	598	450	550	22,0
VKH 4D 450	438	12	400	668	450	640	22,7
VKH 6E 500	438	12	465	668	450	640	26,6

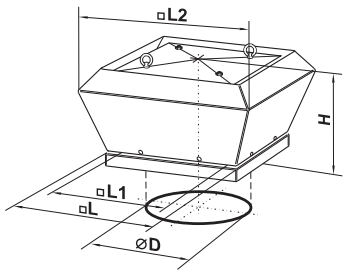
VKH

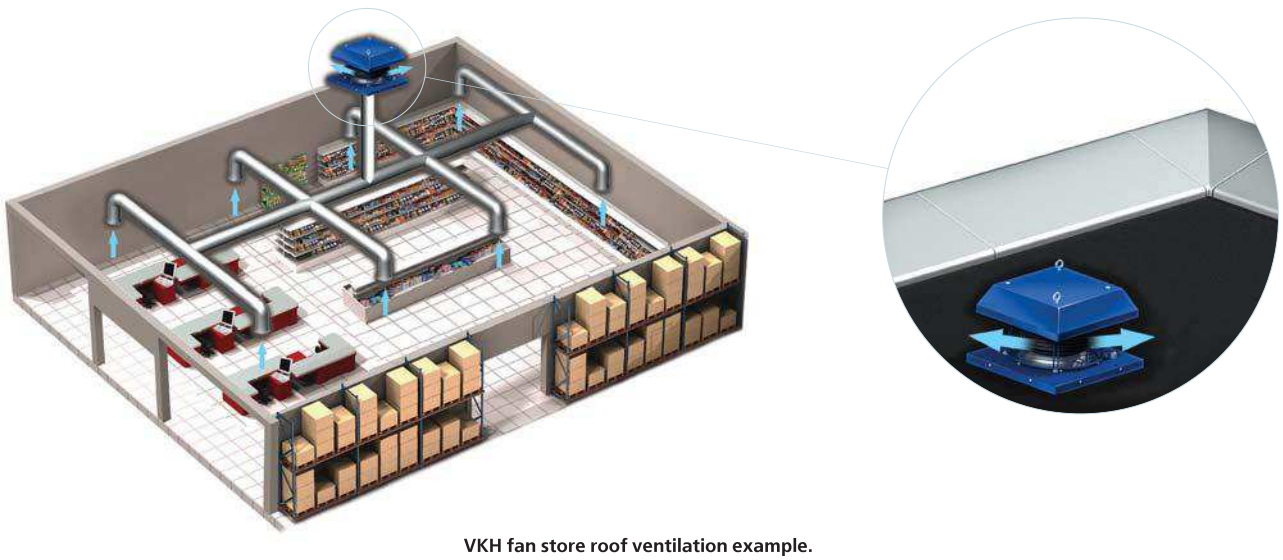


Fan overall dimensions:

Type	Dimensions [mm]					Mass [kg]
	ØD	H	L2	L1	L	
VKV 2E 220	245	275	460	245	338	8,9
VKV 2E 225	210	275	460	245	338	9,6
VKV 2E 250	286	275	520	330	425	12,0
VKV 2E 280	286	275	520	330	425	12,7
VKV 4E 310	286	330	560	330	438	17,8
VKV 4D 310	286	330	560	330	438	17,8
VKV 4E 355	438	420	783	450	598	22,0
VKV 4D 355	438	420	783	450	598	22,0
VKV 4E 400	438	420	783	450	598	27,5
VKV 4E 450	438	454	872	450	668	30,0
VKV 4D 400	438	420	783	450	598	27,5
VKV 4D 450	438	454	872	450	668	30,0
VKV 6E 500	438	454	872	450	668	33,8

VKV





VKH fan store roof ventilation example.

Technical data:

	VKV / VKH 2E 220	VKV / VKH 2E 225	VKV / VKH 2E 250	VKV / VKH 2E 280
Voltage [V / 50 Hz]	230	230	230	230
Power [W]	85	135	155	225
Current [A]	0,38	0,6	0,7	1,0
Maximum air flow [m^3/h]	700	900	1300	1780
RPM [min^{-1}]	2700	2650	2600	2700
Noise level at 3 m [dBA]	49	49	65	66
Maximum operating temperature [°C]	55	55	50	50
Protection rating	IP X4	IP X4	IP X4	IP X4

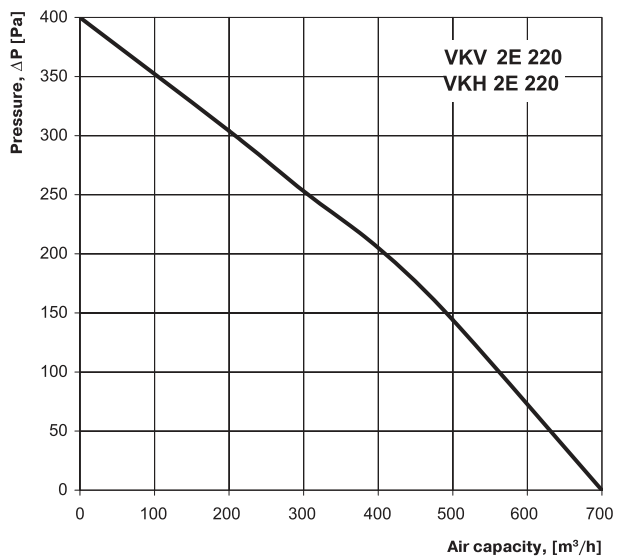
Technical data:

	VKV / VKH 4E 310	VKV / VKH 4D 310	VKV / VKH 4E 355	VKV / VKH 4D 355
Voltage [V / 50 Hz]	230	400	230	400
Power [W]	120	110	245	170
Current [A]	0,54	0,32	1,12	0,52
Maximum air flow [m^3/h]	1820	1950	2800	2350
RPM [min^{-1}]	1370	1400	1420	1400
Noise level at 3 m [dBA]	45	53	46	53
Maximum operating temperature [°C]	85	65	50	70
Protection rating	IP X4	IP X4	IP X4	IP X4

Technical data:

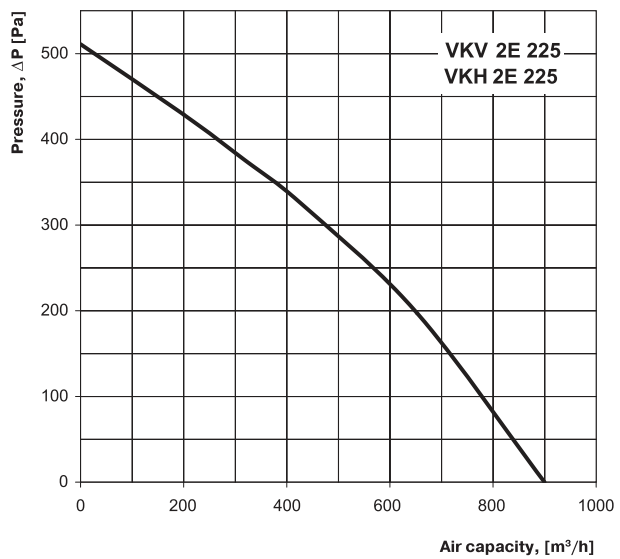
	VKV / VKH 4E 400	VKV / VKH 4D 400	VKV / VKH 4E 450	VKV / VKH 4D 450	VKV / VKH 6E 500
Voltage [V / 50 Hz]	230	400 Y	230	400 Y	230
Power [W]	480	385	640	470	385
Current [A]	2,4	0,7	3,1	0,82	1,82
Maximum air flow [m^3/h]	3400	3800	3850	4300	4700
RPM [min^{-1}]	1400	1430	1350	1430	880
Noise level at 3 m [dBA]	52	52	53	53	47
Maximum operating temperature [°C]	80	60	50	50	50
Protection rating	IP X4	IP X4	IP X4	IP X4	IP X4

VENTS VKV / VKH



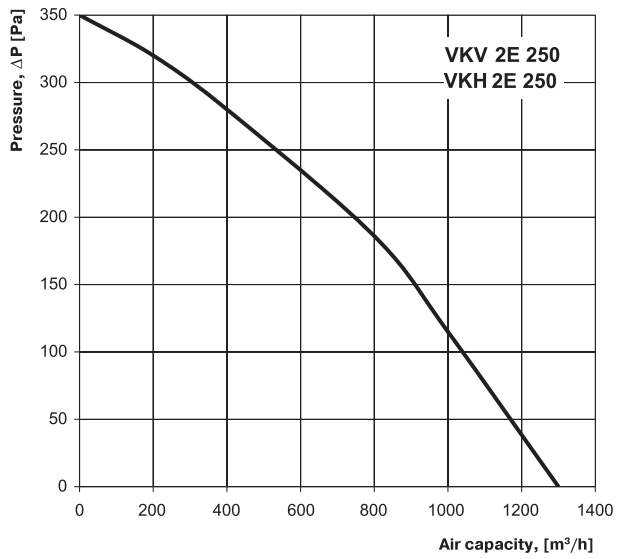
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	69	42	60	65	68	65	61	59	50
L_{wA} to environment	dBA	73	42	60	65	67	67	65	57	50

VENTS VKV / VKH



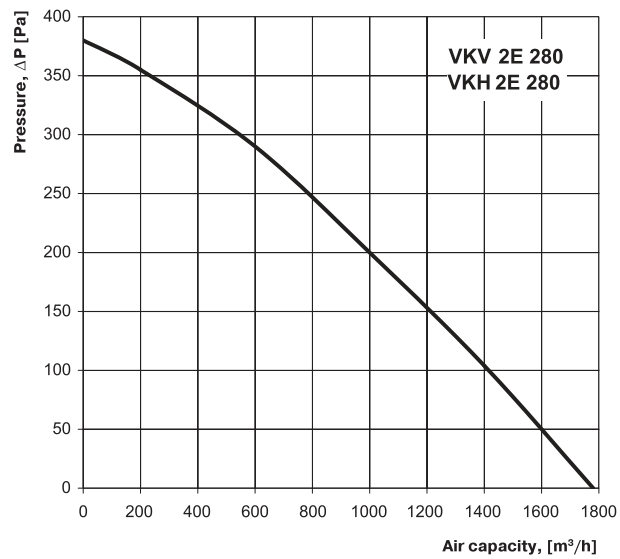
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	72	41	59	66	68	66	61	57	49
L_{wA} to environment	dBA	72	42	60	67	69	66	63	58	51

VENTS VKV / VKH



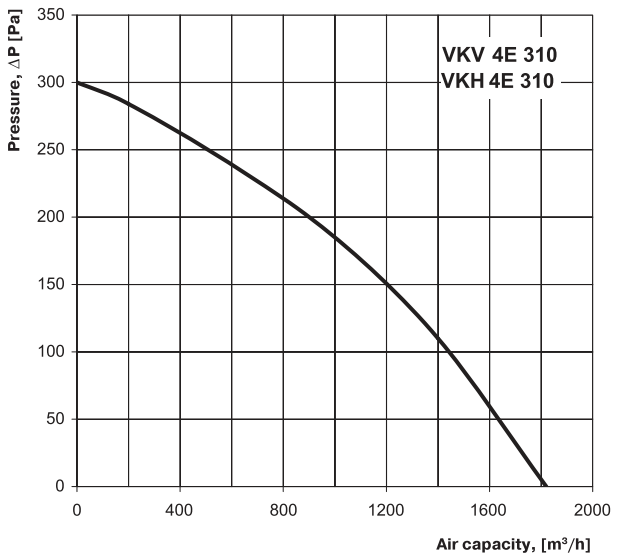
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	69	40	62	65	66	66	64	57	49
L_{wA} to environment	dBA	71	44	59	65	68	66	62	60	53

VENTS VKV / VKH



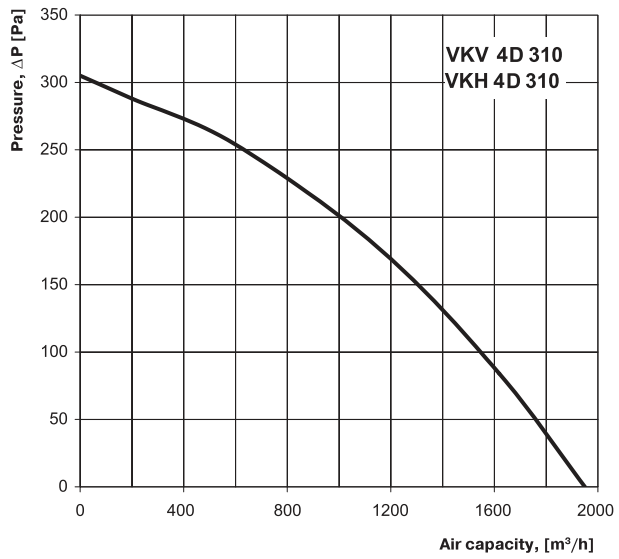
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	72	42	58	62	64	65	63	56	49
L_{wA} to environment	dBA	72	45	61	63	66	66	61	60	53

VENTS VKV / VKH



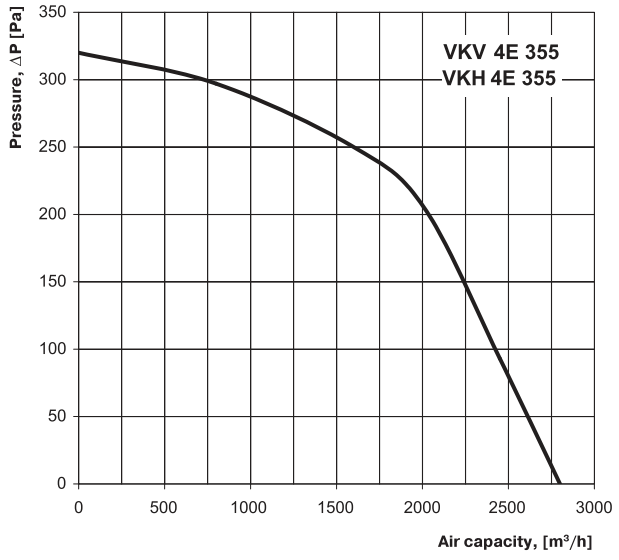
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	57	44	45	50	53	52	51	43	36
L_{wA} to environment	dBA	60	47	50	53	56	57	51	45	39

VENTS VKV / VKH



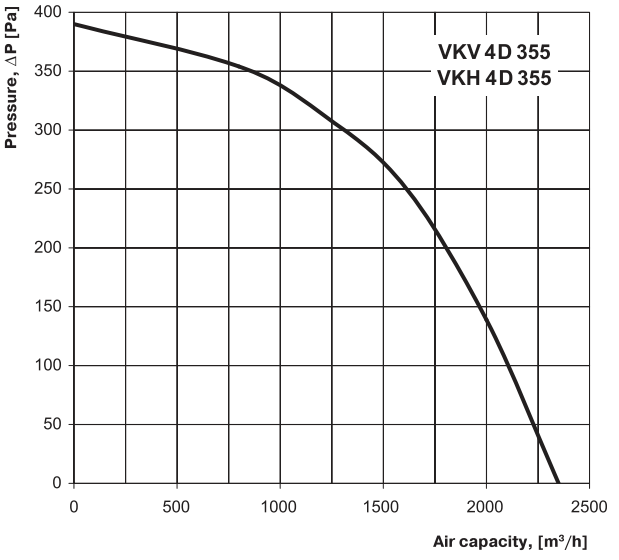
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	58	45	46	51	55	53	49	45	37
L_{wA} to environment	dBA	60	48	51	52	54	56	49	44	38

VENTS VKV / VKH



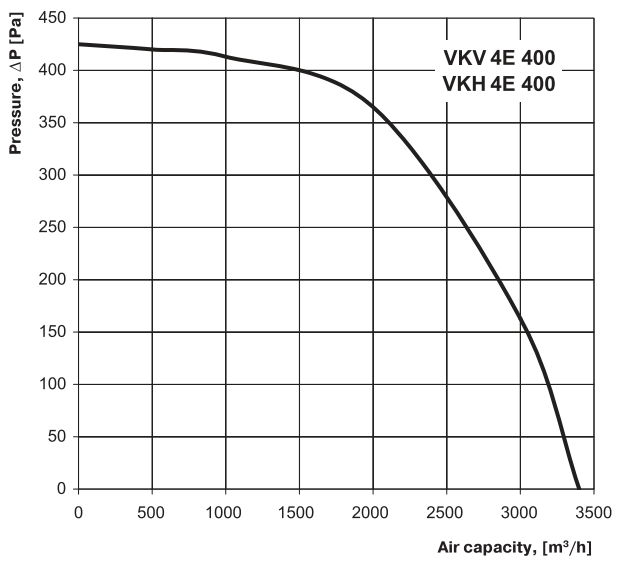
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	69	53	58	61	62	63	59	54	45
L_{wA} to environment	dBA	72	57	60	63	65	64	61	55	49

VENTS VKV / VKH



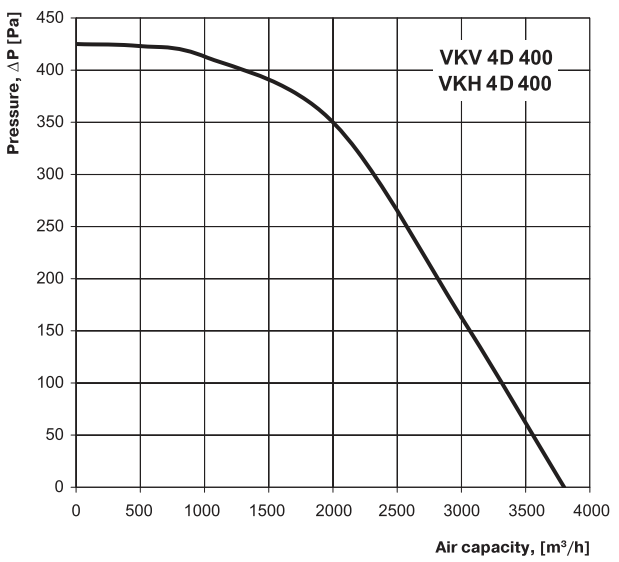
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	67	56	57	63	65	64	59	54	47
L_{wA} to environment	dBA	72	56	60	62	66	62	63	55	49

VENTS VKV / VKH



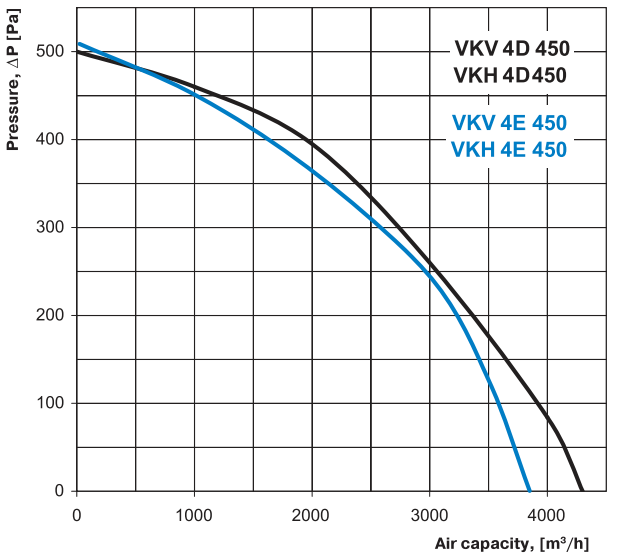
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	72	58	62	67	69	68	63	58	52
L_{wA} to environment	dBA	76	61	63	68	70	68	65	60	53

VENTS VKV / VKH



Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	72	59	63	65	67	68	63	58	51
L_{wA} to environment	dBA	74	59	62	65	69	69	66	59	53

VENTS VKV / VKH



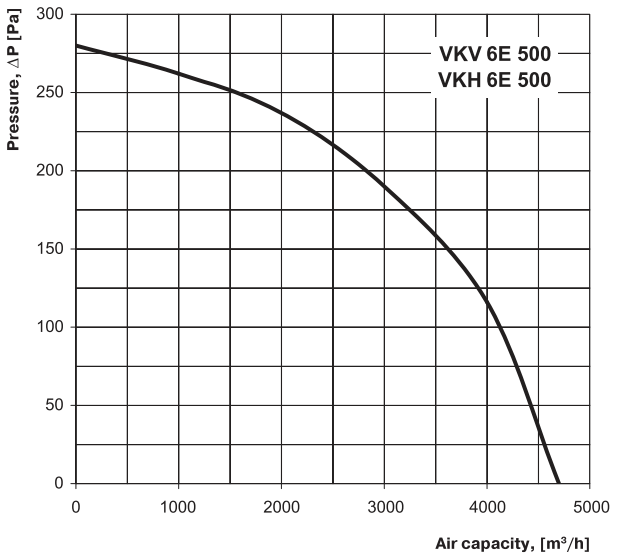
VKV 4E 450/VKH 4E 450

Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	63	51	54	58	59	61	56	50	41
L_{wA} to environment	dBA	68	51	53	60	61	61	58	52	43

VKV 4D 450/VKH 4D 450

Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	64	49	55	59	60	60	56	48	42
L_{wA} to environment	dBA	66	51	56	58	61	61	56	52	46

VENTS VKV / VKH



Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	67	54	55	59	61	64	59	55	46
L_{wA} to environment	dBA	70	56	56	62	64	63	60	56	45