

# VKA/VKAS

VKA



VKAS



Circular duct fans

Ventilateurs pour gaines circulaires

Rohrventilatoren

Круглые канальные вентиляторы



## VKA

Circular duct fans are used for air supply or extract in ventilation and air conditioning systems. Are mounted into a system of round air ducts. Can be installed in any position. Not suitable for polluted air, aggressive and explosive gases.

Impeller with backward curved blades.

Motor: external rotor, motor protection with built-in thermal-contact, maintenance free ball bearings.

Mounting bracket LAV including.

## VKAS

Circular duct fans used for air extract in ventilation and air conditioning systems. Are mounted on the walls. Not suitable for polluted air, aggressive and explosive gases.

VKA/VKAS with powder coating finishing RAL 7035.



## VKA

Kanalventilatoren, die für Lüftungs- und Klimaanlage bestimmt sind, werden in das System der runden Luftführungs Kanäle montiert. Sie werden für Zuluft und -Abluft verwendet. Nicht geeignet für die Beförderung von verschmutzter Luft, aggressiven, explosiven Gasen. Laufrad ist rückwärts gekrümmt.

Der Motor: Außenrotor, Direktantrieb, integrierter Thermokontakt-Motorschutz, dauerhafte, keine Pflege erfordernde Lager.

Inklusiv Montage-Konsole LAV.

## VKAS

Kanalventilatoren, die für Lüftungs- und Klimaanlage bestimmt sind, werden an die Wand montiert. Sie werden für Zuluft und Abluft verwendet. Nicht geeignet für die Beförderung von verschmutzter Luft, aggressiven, explosiven Gasen.

VKA/VKAS gehäuse gestrichen RAL 7035.



## VKA

Ventilateurs pour gaines destinés aux systèmes de ventilation et de climatisation en montage direct sur conduits d'air circulaires. Utilisation en apport d'air neuf ou extraction d'air vicié. Le produit n'est pas adapté au transport d'air fortement pollué, de gaz agressifs ou explosifs.

Turbine : réaction (pales incurvées vers l'arrière).

Moteur : rotor extérieur, entraînement direct, protection moteur intégrée par thermocontact, roulements à longue durée de vie ne nécessitant pas d'entretien.

Supports de montage LAV.

## VKAS

Ventilateurs pour gaines destinés aux systèmes de ventilation et de climatisation en montage mural en applique.

Utilisation en apport d'air neuf ou extraction d'air vicié. Le produit n'est pas adapté au transport d'air fortement pollué, de gaz agressifs ou explosifs.

Enveloppe VKA/VKAS peinte avec RAL 7035.



## VKA

Канальные вентиляторы для систем вентиляции и кондиционирования, устанавливаются в систему круглых воздуховодов. Эксплуатируются в целях подачи и вытяжки воздуха. Не используются при транспортировке загрязнённого воздуха, агрессивных, взрывоопасных газов.

Крыльчатка: загнутые назад лопатки.

Двигатель: наружный ротор, прямая передача, встроенная термодатная защита двигателя, не требующие ухода подшипники с длительным сроком службы.







Прилагается монтажный кронштейн LAV.

## VKAS

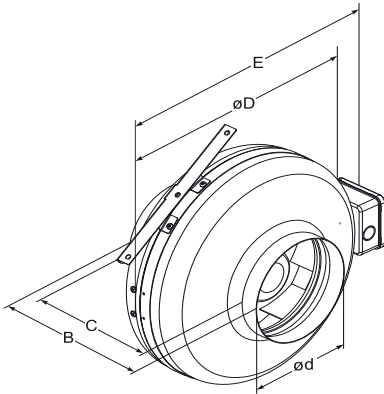
Канальные вентиляторы для систем вентиляции и кондиционирования, настенные. Эксплуатируются в целях подачи и вытяжки воздуха. Не используются при транспортировке загрязнённого воздуха, агрессивных, взрывоопасных газов.

VKA/VKAS окрашенный RAL 7035.

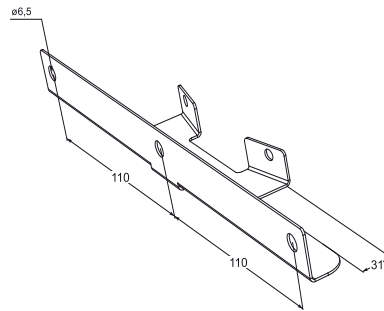
## Accessories

Single phase speed controller	Monophase speed controller	Mounting clamp	Guard grille	Back draft shutter	Circular duct silencer
					
TGRV p. 84	MTY p. 87	AP p. 98	AGO p. 158	RSK p. 151	AKS p. 144

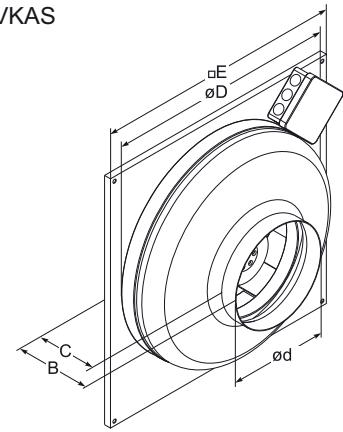
VKA



LAV



VKAS



VKA

Type	Dimensions [mm]				
	B	C	øD	ød	E
VKA 100 MD/LD	206±2	167±2	245	100	287
VKA 125 MD/LD	206±2	175±2	245	125	287
VKA 150 LD	227±2	176±2	345	150	389
VKA 160 MD	202±2	153±2	245	160	287
VKA 160 LD	227±2	176±2	345	160	389
VKA 200 MD	219±2	167±2	345	200	389
VKA 200 LD	227±2	175±2	345	200	389
VKA 250 MD	223±2	163±2	345	250	389
VKA 250 LD	230±2	170±2	345	250	389
VKA 315 MD	247±2	179±2	402	315	446
VKA 315 LD	257±2	189±2	402	315	446

VKAS

Type	Dimensions [mm]				
	B	C	øD	ød	□E
VKAS 100 MD/LD	122	103	242	100	310
VKAS 125 MD/LD	116	101	242	125	310
VKAS 150 LD	129	104	342	150	400
VKAS 160 MD	116	92	242	160	310
VKAS 160 LD	129	104	342	160	400
VKAS 200 MD	123	99	342	200	400
VKAS 200 LD	131	107	342	200	400
VKAS 250 MD	125	100	342	250	400
VKAS 250 LD	131	106	342	250	400
VKAS 315 MD	156	116	400	315	460
VKAS 315 LD	166	126	400	315	460

Type	Accessories										
	TGRV	MTY	AP	AGO	RSK	AKS	FD	FDI	EKA	AVS	AVA
VKA/VKAS 100 MD/LD	1,5	0,5	100	100	100	100	100	100	100	100	100
VKA/VKAS 125 MD/LD	1,5	0,5	125	125	125	125	125	125	125	125	125
VKA/VKAS 150 LD	1,5	0,5	150	150	150	150	-	-	-	-	-
VKA/VKAS 160 MD	1,5	0,5	160	160	160	160	160	160	160	160	160
VKA/VKAS 160 LD	1,5	0,5	160	160	160	160	160	160	160	160	160
VKA/VKAS 200 MD	1,5	0,5	200	200	200	200	200	200	200	200	200
VKA/VKAS 200 LD	1,5	1,5	200	200	200	200	200	200	200	200	200
VKA/VKAS 250 MD	1,5	0,5	250	250	250	250	250	250	250	250	250
VKA/VKAS 250 LD	1,5	1,5	250	250	250	250	250	250	250	250	250
VKA/VKAS 315 MD	1,5	1,5	315	315	315	315	315	315	315	315	315
VKA/VKAS 315 LD	1,5	1,5	315	315	315	315	315	315	315	315	315

## Accessories

Filter cassette



FD

p. 137

Filter cassette



FDI

p. 138

Electric duct heater



EKA

p. 102

Heating coil



AVS

p. 116

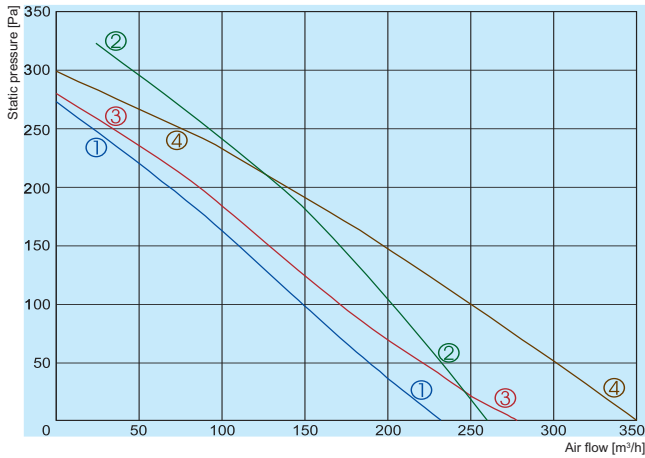
Duct water cooler



AVA

p. 130

# VKA/VKAS



- ① VKA 100 MD
- ② VKA 100 LD
- ③ VKA 125 MD
- ④ VKA 125 LD

		100 MD	100 LD	125 MD	125 LD
Voltage/Frequency	[V/Hz]	230/50	230/50	230/50	230/50
Power consumption	[kW]	0,044	0,063	0,044	0,067
Current	[A]	0,19	0,27	0,19	0,29
Speed	[min <sup>-1</sup> ]	1992	2478	1907	2514
Max. airflow	[m <sup>3</sup> /h]	232	260	278	350
Max. air temperature	[°C]	40	70	40	70
Total sound pressure level at 1 m	[dBA]	56	63	56	62
Weight	[kg]	3 / 2,5	3 / 2,5	3 / 2,5	3 / 2,5
Wiring diagram		No. 2	No. 1	No. 2	No. 1
Protection class:	motor	IP-44	IP-44	IP-44	IP-44
	terminal box	IP-55	IP-55	IP-55	IP-55

## 100 MD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	56	63	41	43	58	51	55	50	39	30	19
Casing breakout	37	44	26	24	25	35	44	41	28	20	3

Measured at 203 m<sup>3</sup>/h, 19 Pa

## 100 LD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	63	70	37	53	60	60	67	65	57	48	35
Casing breakout	43	50	17	33	26	43	55	54	47	36	18

Measured at 260 m<sup>3</sup>/h, 45 Pa

## 125 MD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	56	63	44	42	54	52	53	52	39	31	20
Casing breakout	40	47	24	20	29	35	41	40	28	17	4

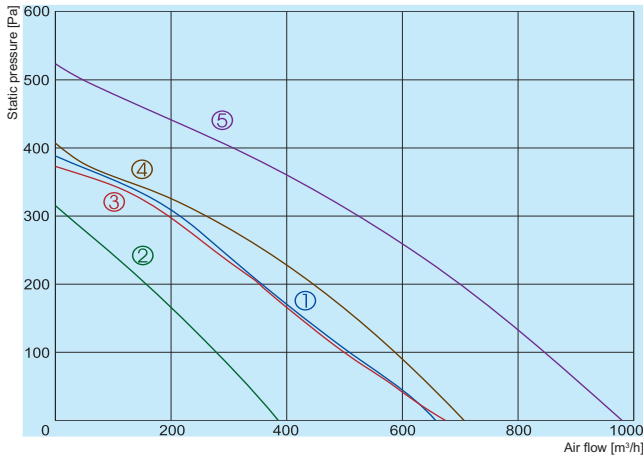
Measured at 251 m<sup>3</sup>/h, 20 Pa

## 125 LD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	62	69	38	49	53	61	65	63	55	46	33
Casing breakout	45	52	18	27	28	44	53	51	43	32	16

Measured at 350 m<sup>3</sup>/h, 0 Pa

The fan characteristic curves were determined in accordance with DIN 24163 resp. ISO 5801. The sound levels were determined in accordance with DIN 45635 resp. ISO 3744 at a distance of 1 m from the fan



- ① VKA 150 LD
- ② VKA 160 MD
- ③ VKA 160 LD
- ④ VKA 200 MD
- ⑤ VKA 200 LD

		150 LD	160 MD	160 LD	200 MD	200 LD
Voltage/Frequency	[V/Hz]	230/50	230/50	230/50	230/50	230/50
Power consumption	[kW]	0,100	0,065	0,100	0,100	0,162
Current	[A]	0,43	0,28	0,43	0,43	0,71
Speed	[min <sup>-1</sup> ]	2503	2409	2503	2503	2518
Max. airflow	[m³/h]	537	413	537	677	980
Max. air temperature	[°C]	60	70	60	60	75
Total sound pressure level at 1 m	[dBA]	67	61	67	63	66
Weight	[kg]	4	3 / 2,8	4	4,5 / 4,1	5 / 4,8
Wiring diagram		No. 1	No. 1	No. 1	No. 1	No. 1
Protection class:	motor	IP-44	IP-44	IP-44	IP-44	IP-44
	terminal box	IP-55	IP-55	IP-55	IP-55	IP-55

### 150 LD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	67	74	40	51	67	67	71	63	62	49	37
Casing breakout	51	58	20	29	48	50	59	51	50	34	20

Measured at 537 m³/h, 0 Pa

### 160 MD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	61	68	36	47	50	56	64	63	62	49	39
Casing breakout	45	52	16	25	20	39	52	51	50	34	22

Measured at 413 m³/h, 0 Pa

### 160 LD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	67	74	40	51	67	67	71	63	62	49	37
Casing breakout	51	58	20	29	48	50	59	51	50	34	20

Measured at 537 m³/h, 0 Pa

### 200 MD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	63	70	34	44	53	60	67	62	64	52	39
Casing breakout	43	50	12	14	23	40	49	42	53	38	26

Measured at 677 m³/h, 0 Pa

### 200 LD

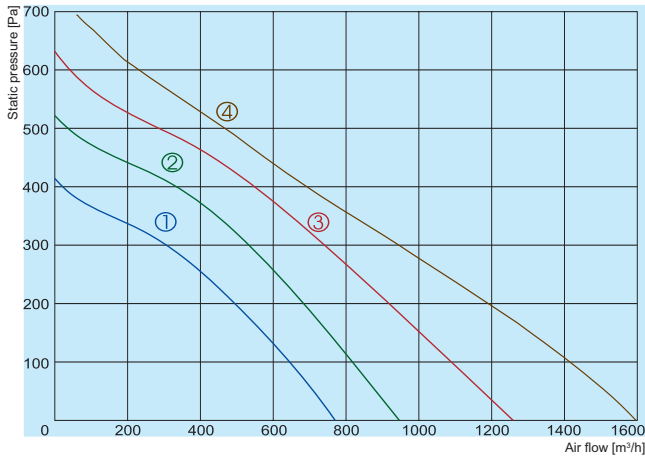
	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	66	73	43	53	61	65	69	66	67	62	50
Casing breakout	46	53	21	23	31	45	51	46	56	48	37

Measured at 980 m³/h, 0 Pa

The fan characteristic curves were determined in accordance with DIN 24163 resp. ISO 5801. The sound levels were determined in accordance with DIN 45635 resp. ISO 3744 at a distance of 1 m from the fan

The company reserves the right to make changes of technical data without prior notice

# VKA/VKAS



- ① VKA 250 MD
- ② VKA 250 LD
- ③ VKA 315 MD
- ④ VKA 315 LD

		250 MD	250 LD	315 MD	315 LD
Voltage/Frequency	[V/Hz]	230/50	230/50	230/50	230/50
Power consumption	[kW]	0,100	0,162	0,217	0,285
Current	[A]	0,43	0,71	0,96	1,23
Speed	[min <sup>-1</sup> ]	2505	2518	2437	2266
Max. airflow	[m <sup>3</sup> /h]	733	1008	1280	1596
Max. air temperature	[°C]	60	75	70	45
Total sound pressure level at 1 m	[dBA]	64	68	71	68
Weight	[kg]	4,5 / 4,1	5 / 4,9	6,5 / 5,6	6,5 / 6,0
Wiring diagram		No. 1	No. 1	No. 1	No. 1
Protection class:	motor	IP-44	IP-44	IP-44	IP-44
	terminal box	IP-55	IP-55	IP-55	IP-55

## 250 MD

	L <sub>pa</sub> dB(A)	L <sub>wa</sub> total dB(A)	L <sub>wa</sub> , dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	64	71	34	42	52	59	67	64	66	56	40
Casing breakout	44	51	14	19	29	39	47	44	47	38	23

Measured at 733 m<sup>3</sup>/h, 0 Pa

## 250 LD

	L <sub>pa</sub> dB(A)	L <sub>wa</sub> total dB(A)	L <sub>wa</sub> , dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	68	75	44	54	62	66	69	67	67	66	51
Casing breakout	48	55	24	31	39	46	49	47	48	48	34

Measured at 1008 m<sup>3</sup>/h, 0 Pa

## 315 MD

	L <sub>pa</sub> dB(A)	L <sub>wa</sub> total dB(A)	L <sub>wa</sub> , dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	71	78	41	53	62	70	75	68	67	68	50
Casing breakout	50	57	20	32	40	49	54	49	47	44	24

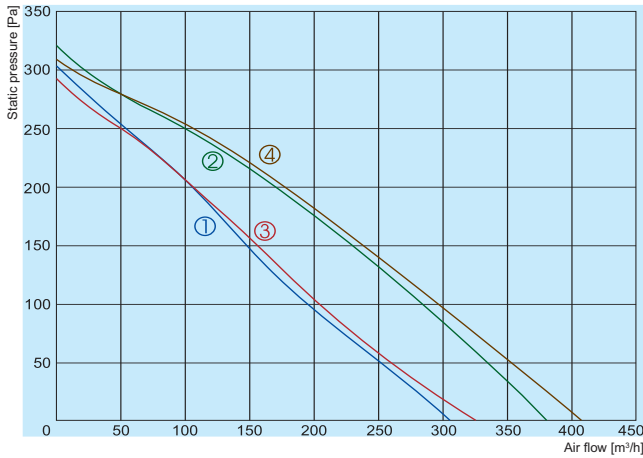
Measured at 1280 m<sup>3</sup>/h, 0 Pa

## 315 LD

	L <sub>pa</sub> dB(A)	L <sub>wa</sub> total dB(A)	L <sub>wa</sub> , dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	68	75	43	51	61	67	67	68	68	69	54
Casing breakout	47	54	22	30	39	46	46	49	48	45	28

Measured at 1596 m<sup>3</sup>/h, 0 Pa

The fan characteristic curves were determined in accordance with DIN 24163 resp. ISO 5801. The sound levels were determined in accordance with DIN 45635 resp. ISO 3744 at a distance of 1 m from the fan



- ① VKAS 100 MD
- ② VKAS 100 LD
- ③ VKAS 125 MD
- ④ VKAS 125 LD

		100 MD	100 LD	125 MD	125 LD
Voltage/Frequency	[V/Hz]	230/50	230/50	230/50	230/50
Power consumption	[kW]	0,045	0,064	0,045	0,066
Current	[A]	0,2	0,28	0,2	0,29
Speed	[min <sup>-1</sup> ]	1992	2478	1907	2514
Max. airflow	[m <sup>3</sup> /h]	232	260	278	350
Max. air temperature	[°C]	70	70	70	70
Total sound pressure level at 1 m	[dBA]	56	63	56	62
Weight	[kg]	3 / 2,5	3 / 2,5	3 / 2,5	3 / 2,5
Wiring diagram		No. 2	No. 1	No. 2	No. 1
Protection class:	motor	IP-44	IP-44	IP-44	IP-44
	terminal box	IP-55	IP-55	IP-55	IP-55

### 100 MD

	L <sub>pa</sub> dB(A)	L <sub>wa</sub> total dB(A)	L <sub>wa</sub> , dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	56	63	41	43	58	51	55	50	39	30	19
Casing breakout	37	44	26	24	25	35	44	41	28	20	3

Measured at 203 m<sup>3</sup>/h, 19 Pa

### 100 LD

	L <sub>pa</sub> dB(A)	L <sub>wa</sub> total dB(A)	L <sub>wa</sub> , dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	63	70	37	53	60	60	67	65	57	48	35
Casing breakout	43	50	17	33	26	43	55	54	47	36	18

Measured at 260 m<sup>3</sup>/h, 45 Pa

### 125 MD

	L <sub>pa</sub> dB(A)	L <sub>wa</sub> total dB(A)	L <sub>wa</sub> , dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	56	63	44	42	54	52	53	52	39	31	20
Casing breakout	40	47	24	20	29	35	41	40	28	17	4

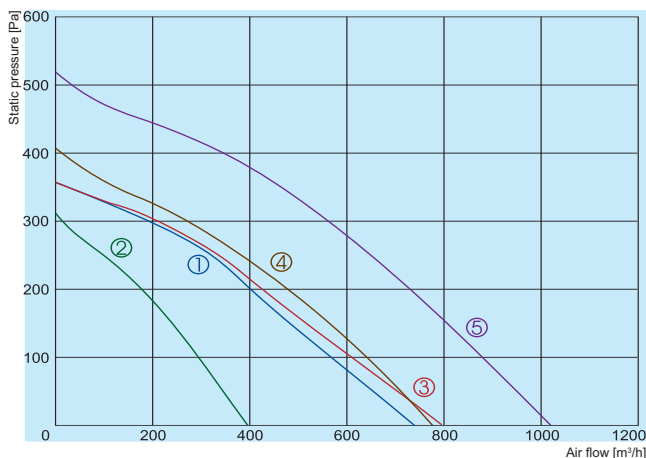
Measured at 251 m<sup>3</sup>/h, 20 Pa

### 125 LD

	L <sub>pa</sub> dB(A)	L <sub>wa</sub> total dB(A)	L <sub>wa</sub> , dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	62	69	38	49	53	61	65	63	55	46	33
Casing breakout	45	52	18	27	28	44	53	51	43	32	16

Measured at 350 m<sup>3</sup>/h, 0 Pa

# VKA/VKAS

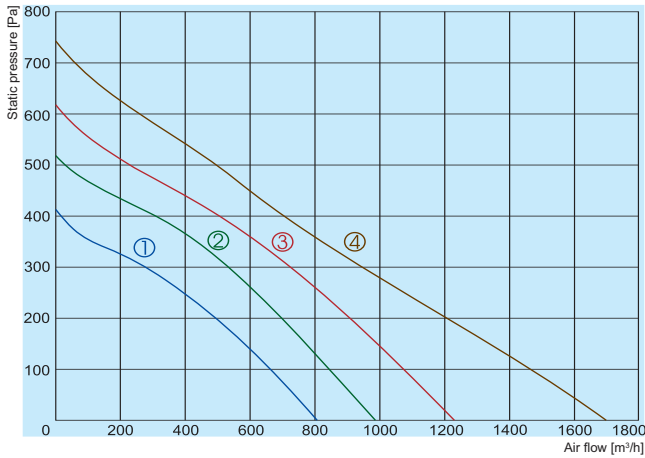


- ① VKAS 150 LD
- ② VKAS 160 MD
- ③ VKAS 160 LD
- ④ VKAS 200 MD
- ⑤ VKAS 200 LD

		150 LD	160 MD	160 LD	200 MD	200 LD
Voltage/Frequency	[V/Hz]	230/50	230/50	230/50	230/50	230/50
Power consumption	[kW]	0,092	0,064	0,095	0,097	0,162
Current	[A]	0,45	0,28	0,43	0,42	0,72
Speed	[min <sup>-1</sup> ]	2503	2409	2503	2503	2518
Max. airflow	[m <sup>3</sup> /h]	537	413	537	677	980
Max. air temperature	[°C]	60	70	60	60	75
Total sound pressure level at 1 m	[dBA]	67	61	67	63	66
Weight	[kg]	4	3 / 2,8	4	4,5 / 4,1	5 / 4,8
Wiring diagram		No. 1	No. 1	No. 1	No. 1	No. 1
Protection class:	motor	IP-44	IP-44	IP-44	IP-44	IP-44
	terminal box	IP-55	IP-55	IP-55	IP-55	IP-55

150 LD	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	67	74	40	51	67	67	71	63	62	49	37
Casing breakout	51	58	20	29	48	50	59	51	50	34	20
Measured at 537 m <sup>3</sup> /h, 0 Pa											
160 MD	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	61	68	36	47	50	56	64	63	62	49	39
Casing breakout	45	52	16	25	20	39	52	51	50	34	22
Measured at 413 m <sup>3</sup> /h, 0 Pa											
160 LD	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	67	74	40	51	67	67	71	63	62	49	37
Casing breakout	51	58	20	29	48	50	59	51	50	34	20
Measured at 537 m <sup>3</sup> /h, 0 Pa											
200 MD	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	63	70	34	44	53	60	67	62	64	52	39
Casing breakout	43	50	12	14	23	40	49	42	53	38	26
Measured at 677 m <sup>3</sup> /h, 0 Pa											
200 LD	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	66	73	43	53	61	65	69	66	67	62	50
Casing breakout	46	53	21	23	31	45	51	46	56	48	37
Measured at 980 m <sup>3</sup> /h, 0 Pa											

The fan characteristic curves were determined in accordance with DIN 24163 resp. ISO 5801. The sound levels were determined in accordance with DIN 45635 resp. ISO 3744 at a distance of 1 m from the fan



- ① VKAS 250 MD
- ② VKAS 250 LD
- ③ VKAS 315 MD
- ④ VKAS 315 LD

		250 MD	250 LD	315 MD	315 LD
Voltage/Frequency	[V/Hz]	230/50	230/50	230/50	230/50
Power consumption	[kW]	0,099	0,154	0,210	0,303
Current	[A]	0,43	0,68	0,92	1,33
Speed	[min <sup>-1</sup> ]	2505	2518	2437	2266
Max. airflow	[m <sup>3</sup> /h]	733	1008	1280	1596
Max. air temperature	[°C]	75	75	70	45
Total sound pressure level at 1 m	[dBA]	64	68	71	68
Weight	[kg]	4,5 / 4,1	5 / 4,9	6,5 / 5,6	6,5 / 6,0
Wiring diagram		No. 1	No. 1	No. 1	No. 1
Protection class:	motor	IP-44	IP-44	IP-44	IP-44
	terminal box	IP-55	IP-55	IP-55	IP-55

### 250 MD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	64	71	34	42	52	59	67	64	66	56	40
Casing breakout	44	51	14	19	29	39	47	44	47	38	23

Measured at 733 m<sup>3</sup>/h, 0 Pa

### 250 LD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	68	75	44	54	62	66	69	67	67	66	51
Casing breakout	48	55	24	31	39	46	49	47	48	48	34

Measured at 1008 m<sup>3</sup>/h, 0 Pa

### 315 MD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	71	78	41	53	62	70	75	68	67	68	50
Casing breakout	50	57	20	32	40	49	54	49	47	44	24

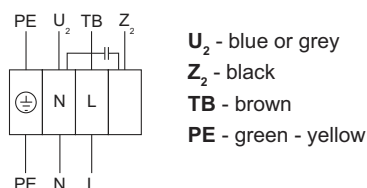
Measured at 1280 m<sup>3</sup>/h, 0 Pa

### 315 LD

	Lpa dB(A)	Lwa total dB(A)	Lwa, dB(A)								
			63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
In duct	68	75	43	51	61	67	67	68	68	69	54
Casing breakout	47	54	22	30	39	46	46	49	48	45	28

Measured at 1596 m<sup>3</sup>/h, 0 Pa

### Wiring diagram No. 1 (1~230V)



### Wiring diagram No. 2 (1~230V)

