

KVK Insulated duct fans

Insulated radial fan for limited spaces



- Design for limited installation height
- Very low noise, acoustic and thermal insulation
- Corrosion resistance of casing C4
- Indoor and outdoor installation
- Easy maintenance, service cover

[Find more details in our online catalogue.](#)

Flexibility

The KVK Silent fans **combine** a high efficient **fan** and **casing** with perfect **acoustic** and **thermal** insulation capacity. The KVK Silent fans are intended to use for **supply** or **extract** air, designed to be installed in **any position**. This ensures that the fans can be used in a variety of **commercial and domestic** applications.

Reliability

Construction of casing and thermal insulation permits **outdoor** and **indoor** use. The combination of reliable casing and motor construction ensures to minimize the need for maintenance of the fans and allows long **continuous operation**. Thanks to service lid it is **easy to clean**.

Performance

High performance impeller together with **high efficient** external rotor motor are designed to ensure high-level performance to **minimize power consumption** and **maximize efficiency**.

Noise

Partly or fully insulated casing (depends on model) is perfectly designed to **reduce noise** mainly to **surrounding** and partly to **inlet/outlet**.

Certifications



Ecodesign (ErP) compliant

Features

Construction

Casing of all KVK fans made of **AluZinc 185**, corrosion **class C4**. **KVK Slim** has acoustically/thermally **insulated lid**. **KVK Silent** has acoustically/thermally **insulated lid and casing**. Insulation made of **rockwool** and has surface liner that prevents the migration of fibers into the airstream. Casing has connection **spigot** with **rubber seals** and is equipped with an external **terminal box** with protection class **IP54**.

Impeller

KVK Slim/Silent fans use backward curved **radial** impeller. These are from lightweight, hard-wearing fiberglass reinforced **polyamide** (for sizes up to 250) or reinforced **polypropylene**, dynamically **balanced** and paired with corresponding external rotor motors.

Motor

Depending on type, fans are equipped with **AC** or high efficient **EC** external rotor motors. All motors are suitable for **50Hz** and **60Hz**.

Motor protection

Sizes **100-315 mm** with **AC** motors have **integrated** thermal protection with manual (electrical) reset.

Sizes **355-500 mm** with **AC** motors have prewired integral **thermal contacts TK** with leads to external **motor protection device**.

Fans with **EC** motors have an **integrated** electronic **thermal protection**, including **locked-rotor protection** and **soft-start**.

Control

EC motor with **built-in potentiometer** to adjust working point can be also controlled by external **signal 0-10V**.

AC motor can be controlled by **5-step** or **stepless** speed regulator.

KVK fans can be **demand controlled** via additional accessories like sensors and controllers for CO₂, temperature, humidity, presence indication and VAV.

Installation

KVK Slim/Silent fans can be installed in any position **indoor** and **outdoor**. Circular spigot with rubber seals is perfectly designed to connect to the duct by using **fast clamps preventing vibration** to the duct. A service cover with screw connection and hinges with pins make cleaning and service easy.

Technical parameters

Nominal data

Voltage (nominal)	230	V
Frequency	50	Hz
Phases	1~	
Input power	135	W
Input power kW	0.135	kW
Input current	0.59	A
Impeller speed	2,544	rpm
Air flow	max 0.138	m³/s
Capacitance of capacitor	4	µF
Temperature of transported air	max 70	°C
Max temperature of transported air, when speed controlled	70	°C

Sound data

Sound pressure level at 3m (20m² Sabin)	43	dB(A)
---	----	-------

Protection/Classification

Enclosure class, motor	IP44
Insulation class	B

Data according to ErP

Energy class, Basic unit	F
Energy class, Local demand	C
ErP ready	ErP 2018

Dimensions and weights

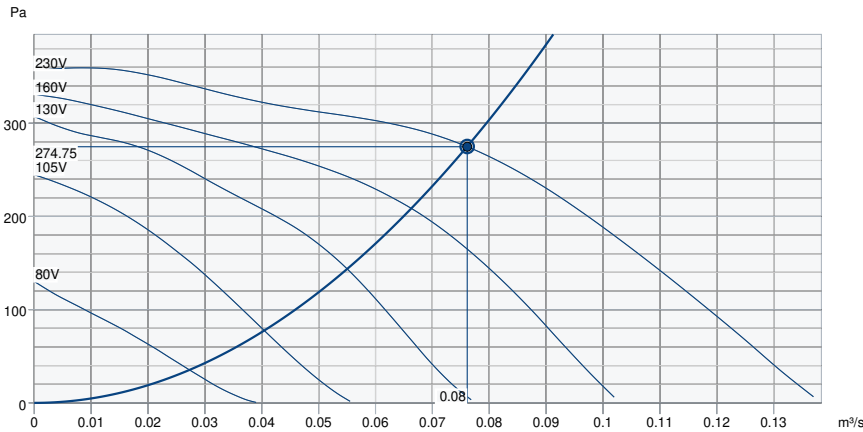
Duct dimension; Circular, inlet	160	mm
Duct dimension; Circular, outlet	160	mm
Weight	6.7	kg

Others

Duct connection type	Circular
Motor type	AC

Performance

Performance curve



Hydraulic data

Required air flow	0.08 m³/s
Required static pressure	275 Pa
Working air flow	0.08 m³/s
Working static pressure	275 Pa
Air density	1.204 kg/m³
Power	106.4 W
Fan control - RPM	2,712 rpm
Current	0.50 A
SFP	1.398 kW/m³/s
Control voltage	230.0 V
Supply voltage	230 V

Sound power level		63	125	250	500	1k	2k	4k	8k	Total
Inlet	dB(A)	53	63	64	61	58	56	56	53	69
Outlet	dB(A)	57	64	69	68	67	69	63	59	75
Surrounding	dB(A)	31	39	45	42	40	41	40	39	50
Sound pressure level at 3m (20m² Sabine)	dB(A)	-	-	-	-	-	-	-	-	43
Sound pressure level at 3m free field	dB(A)	-	-	-	-	-	-	-	-	29

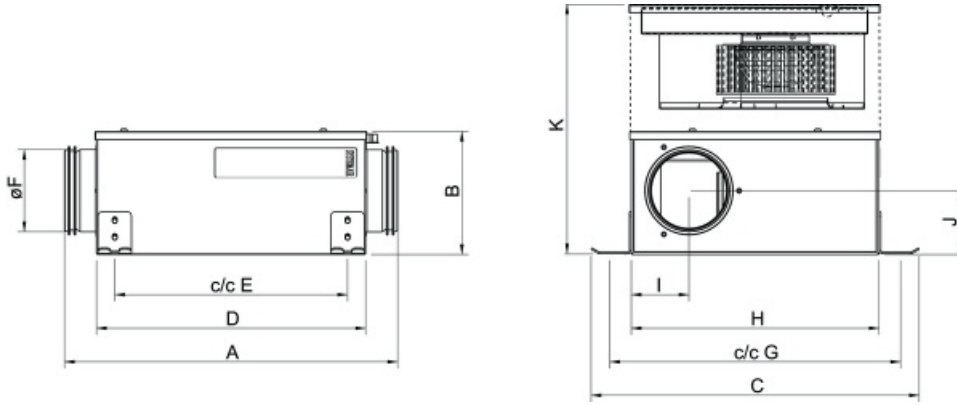
Ecodesign

Product		
Trade name	Systemair	
Product name	KVK Slim 160	
Basic unit		
ErP compliance	2016	
SEC Average	-8.8	kWh/(m ² .a)
SEC Cold	-25.2	kWh/(m ² .a)
SEC Warm	0.5	kWh/(m ² .a)
SEC Class	F	
Unit category	RVU	
Unit type	UVU	
Drive	External MSD or VSD	
Heat recovery type	None	
Temperature ratio (UVU)	Not applicable	
qv max	428	m ³ /h
P max	127	W
Sound power (LWA)	44	dB(A)
qv ref	0.083	m ³ /s
Ps ref	50	Pa
SPI	0.265	W/(m ³ /h)
CTRL	1	
MISC	1.1	
x-value	2	
External Leakage	5	%
AEC average	332.1	kWh
AHS Cold	332.1	kWh
AEC warm	332.1	kWh
AHS Average	1,715.2	kWh/a
AHS Cold	3,355.3	kWh/a
AHS Warm	775.6	kWh/a

Units with local demand control

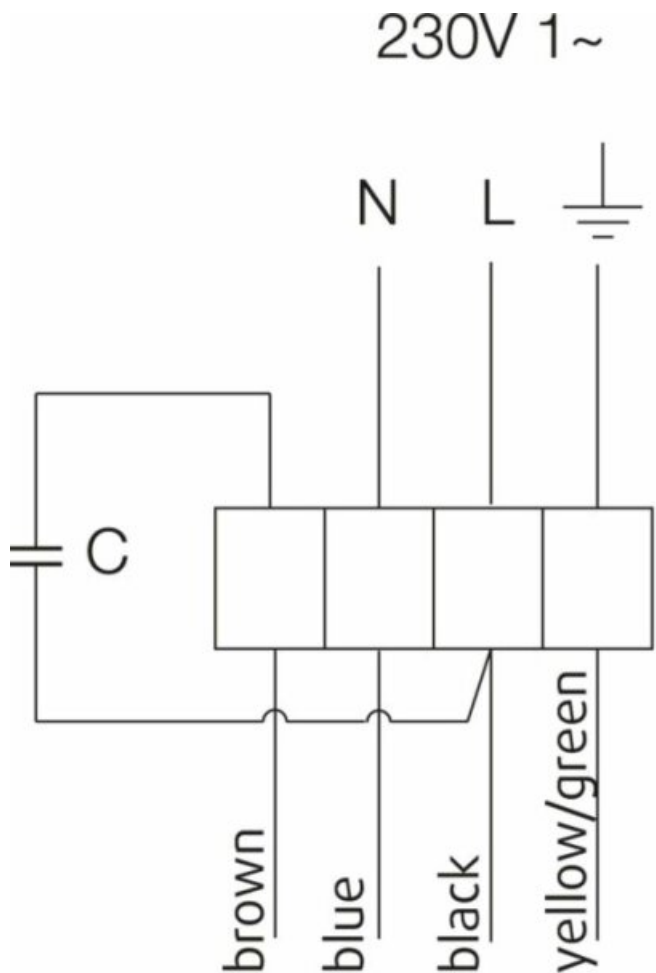
ErP compliance	2018	
SEC Average	-24.8	kWh/(m ² .a)
SEC Cold	-51.9	kWh/(m ² .a)
SEC Warm	-9.3	kWh/(m ² .a)
SEC Class	C	
Unit category	RVU	
Unit type	UVU	
Drive	External MSD or VSD	
Heat recovery type	None	
Temperature ratio (UVU)	Not applicable	
qv max	427	m ³ /h
P max	127	W
Sound power (LWA)	44	dB(A)
qv ref	0.0831	m ³ /s
Ps ref	50	Pa
SPI	0.265	W/(m ³ /h)
CTRL	0.65	
MISC	1.1	
x-value	2	
External Leakage	5	%
AEC average	140.3	kWh
AEC cold	140.3	kWh
AEC warm	140.3	kWh
AHS Average	2,830	kWh/a
AHS Cold	5,536.2	kWh/a
AHS Warm	1,279.7	kWh/a

Dimension



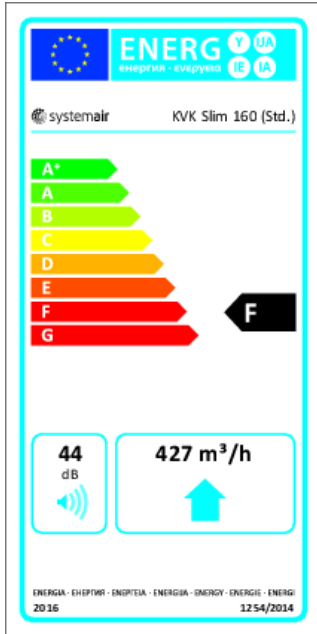
	A	B	C	D	E	øF	G	H	I	J	K
KVK Slim 100	400	150	392	325	278	98	348	300	69	76	300
KVK Slim 125	400	150	392	325	278	123	348	300	84	72	300
KVK Slim 160	400	185	392	325	278	158	348	300	99	90	370
KVK Slim100 EC	400	150	392	325	278	98	348	300	69	76	300
KVK Slim120 EC	400	150	392	325	278	123	348	300	84	72	300
KVK Slim160 EC	400	185	392	325	278	158	348	300	99	90	370

Wiring

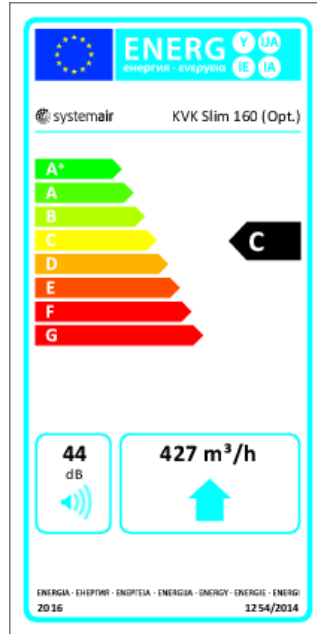


Energy class label

Energy class, Basic unit



Energy class, Local demand



Accessories

- Frequency converter FRQ5SE-6A (37421)
- RE 1,5 Speed control (5000)
- REU 1.5 Speed control (5004)
- SG 160 Protection guard (5608)
- DTV500A (96807)
- CB 160-1,2 230V/1 Duct heater (5291)
- CB 160-2,7 230V/1 Duct heater (5382)
- CBM 160-2,1 230V/1 Duct heater (5482)
- CWK 160-3-2,5 Duct cooler,circ (30022)
- FGR 160 Filter cassette (1809)
- LDC 160-300 Silencer (53108)
- LDC 160-900 Silencer (5193)
- VBC 160-2 Water heating batt (5458)
- VBF 160 Water heating battery (1731)
- IGK-160 Wall Grid (1632)
- REE 1 Speed control (5314)
- REV-3POL/03-7,5kW R/Y (33978)
- VKK-160 Back draft damper (1625)
- Frequency converter FRQSE-6A (37419)
- CB 160-2,1 230V/1 Duct heater (5292)
- CB 160-5,0 400V/2 Duct heater (5383)
- CBMF 160-2,1 230V/1 Duct heater (12244)
- FFR 160 Filter cassette (1770)
- FK 160 Fast clamp (1610)
- LDC 160-600 Silencer (5192)
- RSK-160 Back draft damper (5601)
- VBC 160-3 Water heating batt (9840)

Documents

- [INSTALLATION__OPERATION_AND_MAINTENANCE_INSTRUCTION_KV_DUO__KVK_DUO__KVK_003__EN.PDF](#)
- [COMMISSIONING_RECORD_FANS__EN.PDF](#)