

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**.

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; 60	Hz
Phases	1~	
Input power	60	W
Input current	0.484	A
Impeller speed	2,541	rpm
Air flow	max 0.1444	m³/s
Temperature of transported air	max 60	°C
Max temperature of transported air, when speed controlled	60	°C

Sound data

Sound pressure level at 3m (20m² Sabin)	38	dB(A)
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Protection/Classification

Enclosure class, motor	IP54
Insulation class	B

Data according to ErP

Energy class, Basic unit	E
Energy class, Local demand	B
ErP ready	ErP 2018

Dimensions and weights

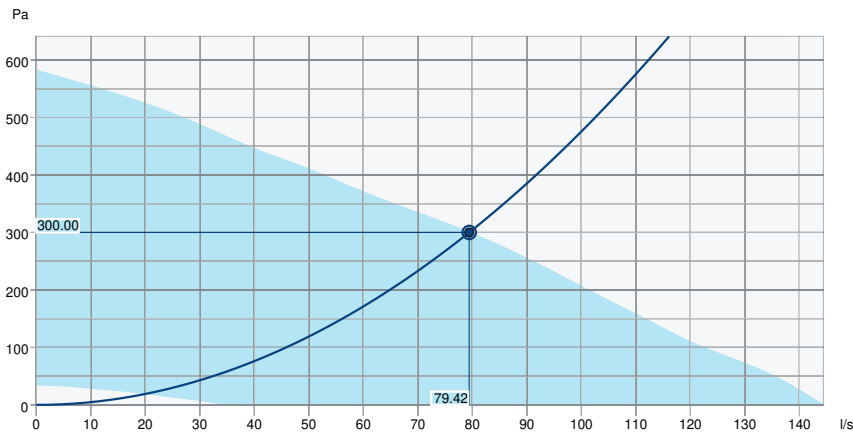
Duct dimension; Circular, inlet	160	mm
Duct dimension; Circular, outlet	160	mm
Weight	16.8	kg

Others

Duct connection type	Circular
Motor type	EC

Performance

Performance curve



Hydraulic data

Required air flow	79.42 l/s
Required static pressure	300 Pa
Working air flow	79.42 l/s
Working static pressure	300 Pa
Air density	1.204 kg/m³
Power	59.4 W
Fan control - RPM	2,540 rpm
Current	0.50 A
SFP	0.748 kW/m³/s
Control voltage	10.0 V
Supply voltage	230 V

Sound power level		63	125	250	500	1k	2k	4k	8k	Total
Inlet	dB(A)	51	48	56	45	40	36	29	24	58
Outlet	dB(A)	57	59	66	63	61	60	51	40	70
Surrounding	dB(A)	15	29	44	35	28	26	19	14	44
Sound pressure level at 3m (20m² Sabine)	dB(A)	-	-	-	-	-	-	-	-	37
Sound pressure level at 3m free field	dB(A)	-	-	-	-	-	-	-	-	23

Accessories

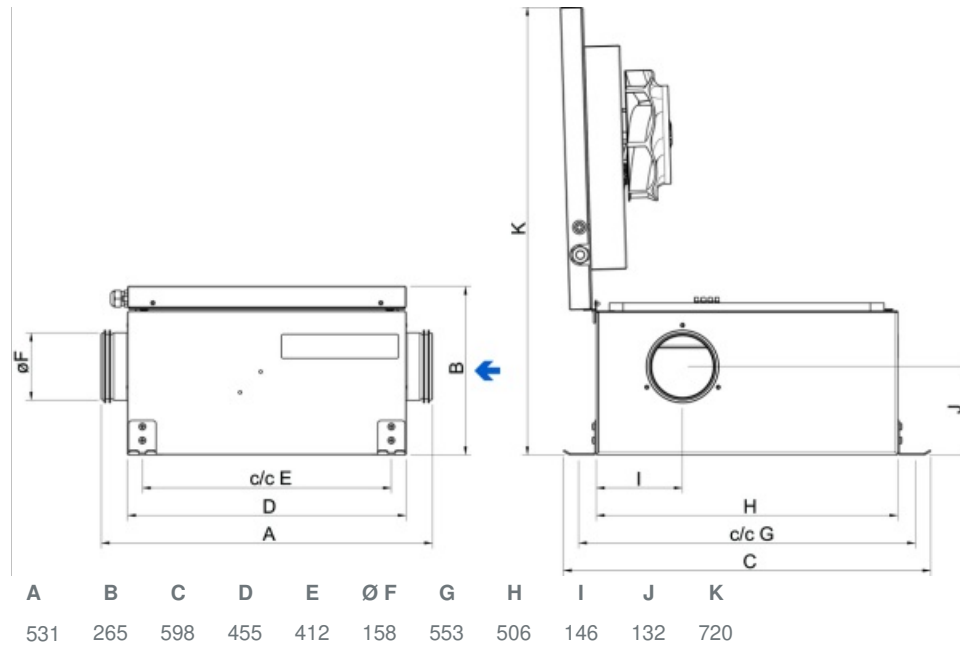
Ecodesign

Product			
Trade name		Systemair	
Product name		KVK Silent 160 EC	
Basic unit			
ErP compliance		2016	
SEC Average		-14.7	kWh/(m².a)
SEC Cold		-30.1	kWh/(m².a)
SEC Warm		-5.3	kWh/(m².a)
SEC Class		E	
Unit category		RVU	
Unit type		UVU	
Drive		Integrated VSD	
Heat recovery type		None	
Temperature ratio (UVU)		Not applicable	
qv max		472	m³/h
P max		58	W
Sound power (LWA)		39	dB(A)
qv ref		0.092	m³/s
Ps ref		50	Pa
SPI		0.079	W/(m³/h)
CTRL		1	
MISC		1.1	
x-value		2	
External Leakage		4.6	%
AEC average		99	kWh
AHS Cold		99	kWh
AEC warm		99	kWh
AHS Average		17	kWh/a
AHS Cold		34	kWh/a
AHS Warm		8	kWh/a

Units with local demand control

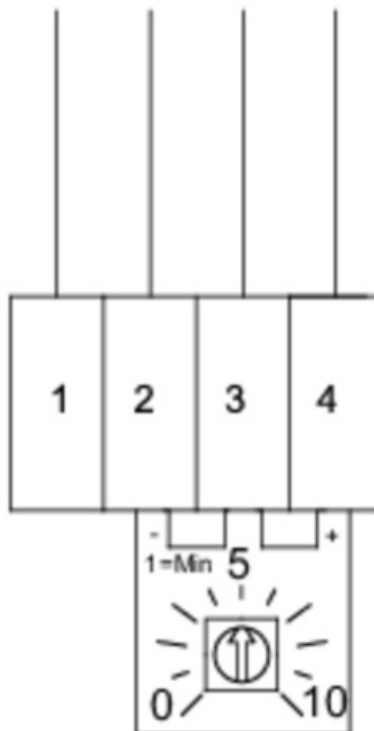
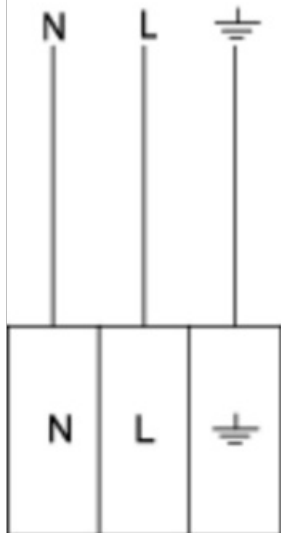
ErP compliance	2018	
SEC Average	-27.3	kWh/(m².a)
SEC Cold	-54.3	kWh/(m².a)
SEC Warm	-11.8	kWh/(m².a)
SEC Class	B	
Unit category	RVU	
Unit type	UVU	
Drive	Integrated VSD	
Heat recovery type	None	
Temperature ratio (UVU)	Not applicable	
qv max	472	m³/h
P max	58	W
Sound power (LWA)	39	dB(A)
qv ref	0.092	m³/s
Ps ref	50	Pa
SPI	0.079	W/(m³/h)
CTRL	0.65	
MISC	1.1	
x-value	2	
External Leakage	4.6	%
AEC average	42	kWh
AEC cold	42	kWh
AEC warm	42	kWh
AHS Average	28	kWh/a
AHS Cold	55	kWh/a
AHS Warm	13	kWh/a

Dimension



Wiring

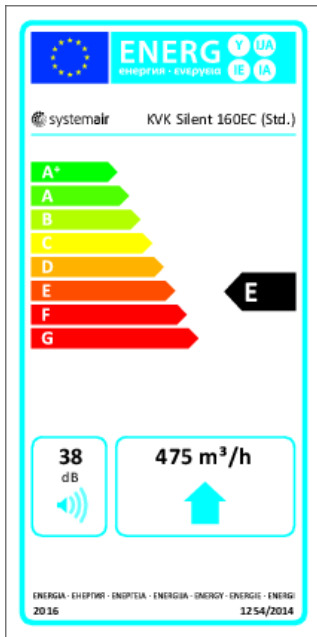
230V 1~



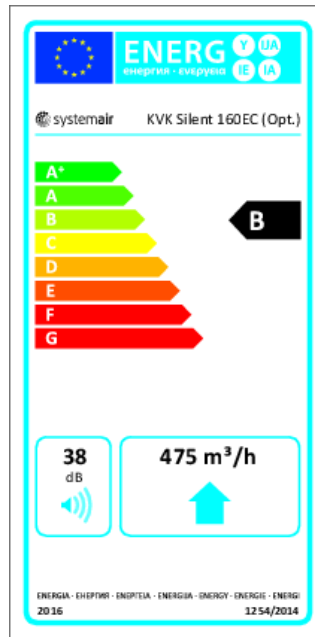
- A White
- B Blue
- C Yellow
- D Red

Energy class label

Energy class, Basic unit



Energy class, Local demand



Accessories

- CXE/AVC Modbus (37256)
- EC-Basic-CO2 and temperature (24808)
- EC-Basic-T temperature (24805)
- EC-Selector (9908)
- EC-Vent Room Unit (3018)
- MTP 10, 10K, Speed control (32731)
- Potentiometer MTP 20, 0-10V (310220)
- SG 160 Protection guard (5608)
- VKK-160 Back draft damper (1625)
- Presence detector/IR24-P (6995)
- 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)
- DMD-C Pressure controller (15793)
- EC-Basic-H humidity (24807)
- EC-Basic-U universal 0-10V (24806)
- EC-Vent control board (3115)
- IGK-160 Wall Grid (1632)
- MTV-1/010 Controller 0..10V+ (30650)
- REV-3POL/03-7,5kW R/Y (33978)
- Step switch S-5EC, 0-10V (76738)
- HR1 Room Humidistat (215150)
- RT 0-30 Room Thermostat (5151)
- 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)
- BMS Trickle & Boost Switch (120363)

Documents

- INSTALLATION__OPERATION_AND_MAINTENANCE_INSTRUCTION_KV_DUO__KVK_DUO__KVK_003__EN.PDF
- COMMISSIONING_RECCORD_FANS__EN.PDF