

K 100E EC

Centrifugal circular duct fan, <125W

Item number: 16955

Variant: 230V 1~ 50/60Hz



EC-motors, high level of efficiency

100% speed controllable

Integrated motor protection

Supplied with mounting bracket

EC technology is intelligent technology; using integral electronic control which eliminates the slip losses in the motor and ensures that the motor always runs at optimal load and guarantees that the proportion of energy utilised effectively is many times higher and the energy usage considerably lower compared with AC motors.

EC fans are notable for their economical use of energy and excellent ease of control. They can be varied in speed to match the airflow demand, and operate at high efficiency levels. For the same air volume, they consume distinctly less energy than AC fan drives.

Another special feature of EC fans is their energy-saving potential not only at full load, but especially at part-load. When operating at part-load, the energy used is much lower than with an asynchronous motor of equivalent output.

Reduced energy usage guarantees a drop in operating costs.

The K EC series is designed for installation in ducts. All the K-fans have minimum 25 mm long spigot connections. The fans have backward-curved blades and external rotor motors (EC). The FK mounting clamp facilitates easy installation and removal, and prevents the transfer of vibration to the duct. The fans are delivered with a pre-wired potentiometer(0-10V) that allows you to easily find the desired working point.

Motor protection is integrated in the electronics of the motor. The casing is manufactured from galvanised sheet steel with the seams folded to give the fan a close to air tight casing.



Technical parameters

Nominal data		
Voltage (nominal)	230	V
Frequency	50; 60	Hz
Phase(s)	1~	
Input power	83	W
Input current	0.69	A
Impeller speed	3,479	r.p.m.
Air flow	max 321	m³/h
Temperature of transported air	max 60	°C
Max temperature of transported air, when speed controlled	60	°C

Sound data

Sound pressure level at 3m (20m ² Sabin)	50 dB(A)
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Protection/Classification

Enclosure class, motor	IP54
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Insulation class	B
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Data according to ErP

Energy class, Basic unit	E
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Energy class, Local demand	B
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ErP ready	ErP 2016; ErP 2018
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Dimensions and weights

Duct dimension; Circular, inlet	100 mm
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Duct dimension; Circular, outlet	100 mm
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Weight	2.9 kg
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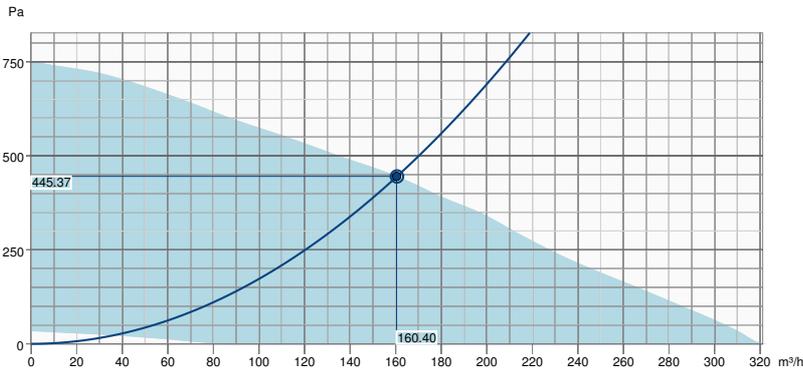
Others

Duct connection type	Circular
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Motor type	EC
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Performance

Performance curve



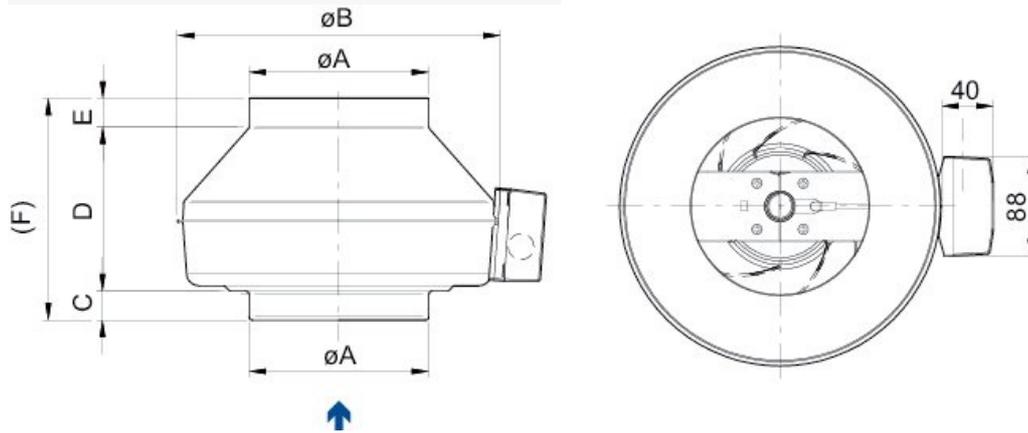
Hydraulic data

Required air flow	161 m³/h
Required static pressure	445 Pa
Working air flow	160 m³/h
Working static pressure	445 Pa
Air density	1.204 kg/m³
Power	80.0 W
Fan control - RPM	3608 rpm
Current	0.65 A
SFP	1.795 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)	54	70	70	75	71	66	60	50	78
Outlet	dB(A)	55	71	68	71	71	67	60	50	77
Surrounding	dB(A)	14	19	34	52	52	49	46	34	57
Sound pressure level at 3m (20m² Sabine)	dB(A)	-	-	-	-	-	-	-	-	50
Sound pressure level at 3m free field	dB(A)	-	-	-	-	-	-	-	-	36

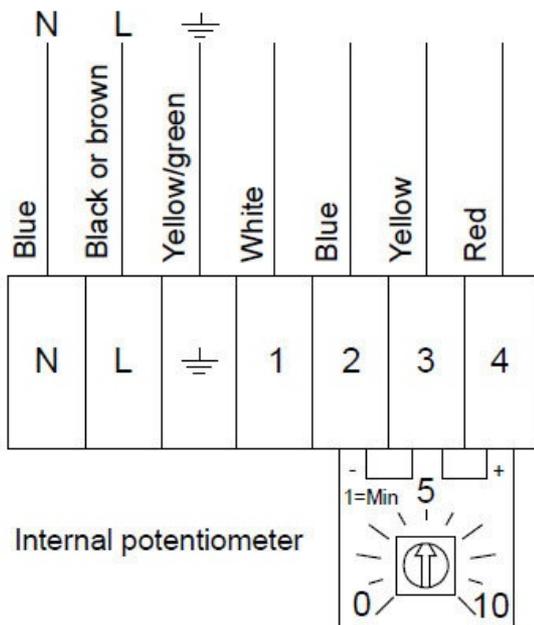
Dimension

	$\varnothing A$	$\varnothing B$	C	D	E	(F)
K 100 EC	99	246	26	161	26	213
K 125 EC	124	246	26	151	26	203
K 150 EC	149	286	25	152	25	202
K 160 EC	159	286	25	147	26	198
K 200 EC	199	336	30	148	27	205
K 250 EC	249	336	30,5	144,5	27	202
K 315 M EC	314	408	32,5	160,5	27	220
K 315 L EC	314	408	37,5	160,5	27	225



Wiring

230V 1~



Terminal	Cable	Description
1	White	Tacho output, Isink max 10mA
2	Blue	GND
3	Yellow	Control input 0-10 VDC/PWM
4	Red	Output 10 VDC max 1.1 mA

Internal potentiometer is mounted (removable) on the terminal block from the factory.

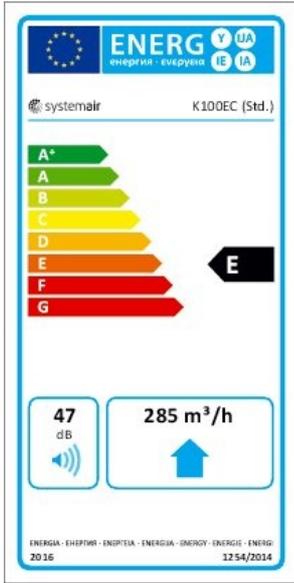
Ecodesign

Product		
Trade name	Systemair	
Product name	K 100 EC Circular duct fan	
Basic unit		
ErP compliance	2016	
SEC Average	-12.9	kWh/(m ² .a)
SEC Cold	-29.3	kWh/(m ² .a)
SEC Warm	-3.5	kWh/(m ² .a)
SEC Class	E	
Unit category	RVU	
Unit type	UVU	
Drive	Integrated VSD	
Heat recovery type	None	
Temperature ratio (UVU)	Not applicable	
qv max	284	m ³ /h
P max	82	W
Sound power level LWA	47	dB(A)
qv ref	0.055	m ³ /s
Ps ref	50	Pa
SPI	0.135	W/(m ³ /h)
CTRL	1	
MISC	1.1	
x-value	1.5	
External Leakage	0	%
AEC average	168.9	kWh
AHS Cold	168.9	kWh
AEC warm	168.9	kWh
AHS Average	1,715.2	kWh/a
AHS Cold	3,355.3	kWh/a
AHS Warm	775.6	kWh/a

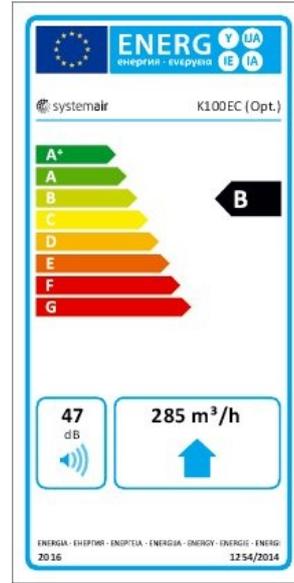
Units with local demand control		
ErP compliance		2018
SEC Average	-26.1	kWh/(m ² .a)
SEC Cold	-53.1	kWh/(m ² .a)
SEC Warm	-10.6	kWh/(m ² .a)
SEC Class		B
Unit category		RVU
Unit type		UVU
Drive		Integrated VSD
Heat recovery type		None
Temperature ratio (UVU)		Not applicable
qv max	285	m ³ /h
P max	82	W
Sound power level LWA	47	dB(A)
qv ref	0.0555	m ³ /s
Ps ref	50	Pa
SPI	0.135	W/(m ³ /h)
CTRL	0.65	
MISC	1.1	
x-value	1.5	
External Leakage	0	%
AEC average	88.5	kWh
AEC cold	88.5	kWh
AEC warm	88.5	kWh
AHS Average	2,830	kWh/a
AHS Cold	5,536.2	kWh/a
AHS Warm	1,279.7	kWh/a

Energy class label

Energy class, Basic unit



Energy class, Local demand



Accessories

- CXE/AVC Modbus (37256)
- EC-Basic-H humidity (24807)
- EC-Basic-U universal 0-10V (24806)
- EC-Vent control board (3115)
- MTP 10, 10K, Speed control (32731)
- MTV-1/010 Controller 0..10V+ (30650)
- S-5EC/FRQ (76738)
- VKK-100 Back draft damper (1623)
- HR1 Room Humidistat (215150)
- Presence detector/IR24-P (6995)
- Safety switch 2-pole grey (210679)
- CB 100-0,6 230V/1 Duct heater (5376)
- CWK 100-3-2,5 Duct cooler,circ (30019)
- FGR 100 Filter cassette (1802)
- LDC 100-300 Silencer (8180)
- LDC 100-900 Silencer (5189)
- VBC 100-2 Water heating batt (5456)
- VBF 100 Water heating battery (1724)
- EC-Basic-CO2 and temperature (24808)
- EC-Basic-T temperature (24805)
- EC-Selector (9908)
- EC-Vent Room Unit (3018)
- MTP 20, on/off, 3-step (310220)
- REV-3POL/03 ON/OFF (33978)
- SG 100 Protection guard (5606)
- CO2RT-R-D Transmitter (6993)
- IGK-100 Wall Grid (1630)
- RT 0-30 Room Thermostat (5151)
- CB 100-0,4 230V/1 Duct heater (5288)
- CBM 100-0,6 230V/1 Duct heater (5479)
- FFR 100 Filter cassette (1766)
- FK 100 Fast clamp (1607)
- LDC 100-600 Silencer (5188)
- RSK-100 Back draft damper (5597)
- VBC 100-3 Water heating batt (9838)

Documents

- EC-fans_Operating_and_Maintenance_instr_206268_CE_multilingual.pdf