



## K Circular Duct Fans

### High Quality radial fan for circular ducts

- Available with AC and EC motors
- Indoor and outdoor installation
- Reliable and airtight
- Mounting bracket included
- Noise and energy optimized impeller

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

### Flexibility

The K 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

The unit's **airtight casing** and corrosion resistance 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**.

### Performance

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

### Accessories

K fans can be selected together with variety types of **accessories** as fast clamps, heaters, filters, dampers, etc.

## Certifications



Ecodesign (ErP) compliant

## Features

### Construction

Casing made of **galvanised sheet steel**, corrosion **class C3** is fully **air tight class C** according to EN1751. The fans are equipped with an external **terminal box with** protection class **IP55**.

### Impeller

K fans use backward curved **radial** impellers. These are from lightweight, hard-wearing fiberglass reinforced **polyamide**, dynamically **balanced** and paired with corresponding external rotor motors.

### Motor

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

### Motor protection

Fans with **AC** motors have **integrated** thermal protection with manual (electrical) reset. Size 100 and 125 has an impedance motor protection.

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.

### Installation

K fans can be installed in **any** position **indoor** and **outdoor** by included **mounting brackets**. All models have a spigot with 25 mm length which is perfectly designed to connect circular duct by **fast clamps preventing vibration** to the duct. Installation can be combined with filter boxes, sound attenuators, and other mechanical accessories from recommended list.

## Technical parameters

### Nominal data

|   |        |     |
|---|--------|-----|
| Voltage (nominal)   | 230    | V   |
| Frequency   | 50     | Hz  |
| Phases  | 1~     |     |
| Input power   | 52     | W   |
| Input current   | 0.227  | A   |
| Impeller speed  | 2,418  | rpm |
| Air flow  | max 79 | L/s |
| Capacitance of capacitor                                  | 1.5    | 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 (20m <sup>2</sup> Sabin) | 45 | dB(A) |
|---|----|-------|

### Protection/Classification

|                        |      |
|------------------------|------|
| Enclosure class, motor | IP44 |
| Insulation class       | B    |

### Data according to ErP

|                            |                    |
|----------------------------|--------------------|
| Energy class, Basic unit   | E                  |
| Energy class, Local demand | C                  |
| ErP ready                  | ErP 2016; ErP 2018 |

### Dimensions and weights

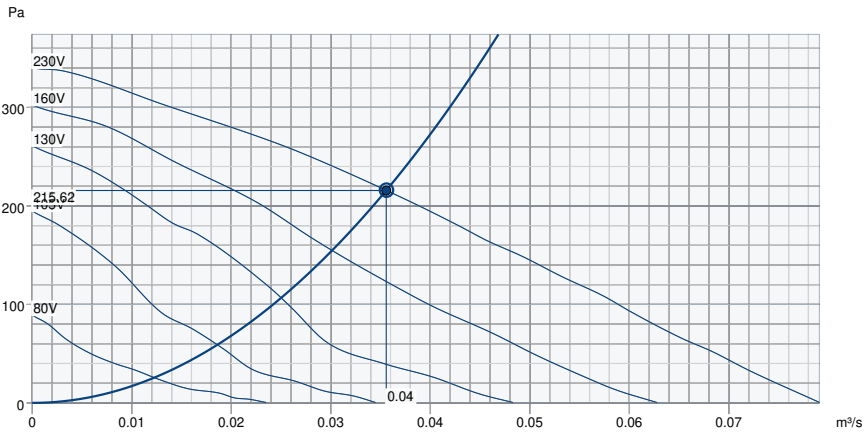
|                                  |     |    |
|----------------------------------|-----|----|
| Duct dimension; Circular, inlet  | 100 | mm |
| Duct dimension; Circular, outlet | 100 | mm |
| Weight                           | 3   | kg |

### Others

|                      |          |
|----------------------|----------|
| Duct connection type | Circular |
| Motor type           | AC       |

Performance

Performance curve



Hydraulic data

|                          |               |
|--------------------------|---------------|
| Required air flow        | 0.04 m³/s     |
| Required static pressure | 216 Pa        |
| Working air flow         | 0.04 m³/s     |
| Working static pressure  | 216 Pa        |
| Air density              | 1.204 kg/m³   |
| Power                    | 46.9 W        |
| Fan control - RPM        | 2,550 rpm     |
| Current                  | 0.20 A        |
| SFP                      | 1.320 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) | 55 | 66  | 63  | 66  | 64 | 60 | 52 | 40 | 72    |
| Outlet                                   | dB(A) | 56 | 65  | 59  | 62  | 62 | 57 | 49 | 37 | 69    |
| Surrounding                              | dB(A) | 29 | 17  | 29  | 49  | 47 | 45 | 39 | 27 | 52    |
| Sound pressure level at 3m (20m² Sabine) | dB(A) | -  | -   | -   | -   | -  | -  | -  | -  | 45    |
| Sound pressure level at 3m free field    | dB(A) | -  | -   | -   | -   | -  | -  | -  | -  | 31    |

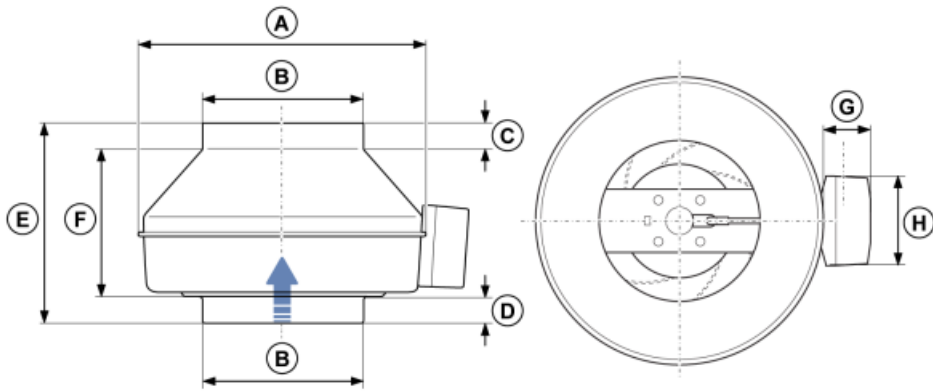
**Ecodesign**

| Product                 |                     |            |
|-------------------------|---------------------|------------|
| Trade name              | Systemair           |            |
| Product name            | K 100 XL Sileo      |            |
| Basic unit              |                     |            |
| ErP compliance          | 2016                |            |
| SEC Average             | -11.4               | kWh/(m².a) |
| SEC Cold                | -27.8               | kWh/(m².a) |
| SEC Warm                | -2                  | kWh/(m².a) |
| SEC Class               | E                   |            |
| Unit category           | RVU                 |            |
| Unit type               | UVU                 |            |
| Drive                   | External MSD or VSD |            |
| Heat recovery type      | None                |            |
| Temperature ratio (UVU) | Not applicable      |            |
| qv max                  | 212                 | m³/h       |
| P max                   | 51                  | W          |
| Sound power (LWA)       | 43                  | dB(A)      |
| qv ref                  | 0.041               | m³/s       |
| Ps ref                  | 50                  | Pa         |
| SPI                     | 0.184               | W/(m³/h)   |
| CTRL                    | 1                   |            |
| MISC                    | 1.1                 |            |
| x-value                 | 2                   |            |
| External Leakage        | 0                   | %          |
| AEC average             | 230.1               | kWh        |
| AHS Cold                | 230.1               | kWh        |
| AEC warm                | 230.1               | 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**

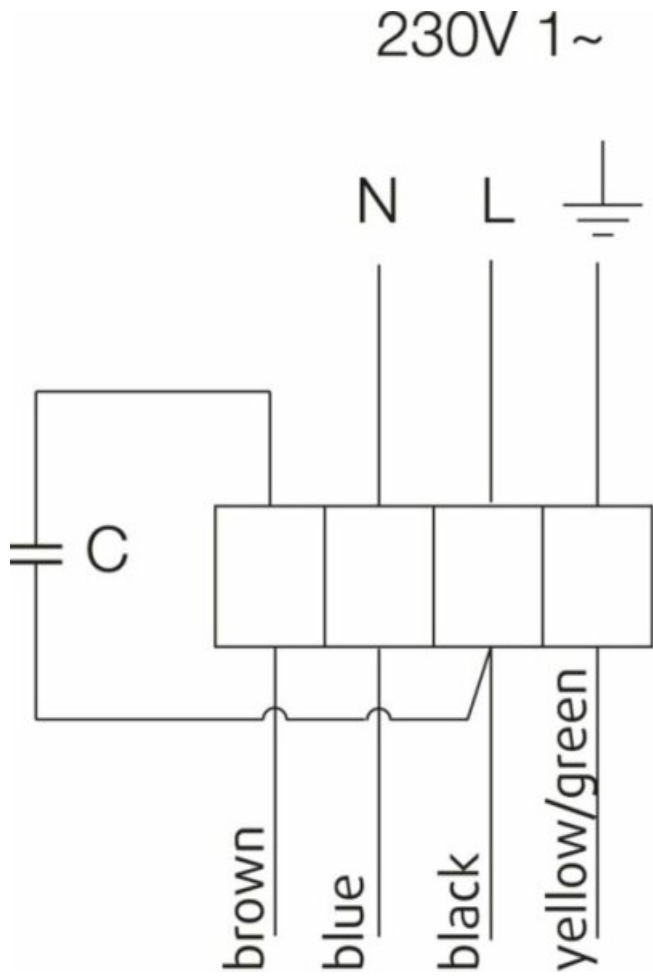
|                         |                     |                         |
|-------------------------|---------------------|-------------------------|
| ErP compliance          | 2018                |                         |
| SEC Average             | -25.9               | kWh/(m <sup>2</sup> .a) |
| SEC Cold                | -52.9               | kWh/(m <sup>2</sup> .a) |
| SEC Warm                | -10.4               | kWh/(m <sup>2</sup> .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                  | 212                 | m <sup>3</sup> /h       |
| P max                   | 51                  | W                       |
| Sound power (LWA)       | 43                  | dB(A)                   |
| qv ref                  | 0.0412              | m <sup>3</sup> /s       |
| Ps ref                  | 50                  | Pa                      |
| SPI                     | 0.184               | W/(m <sup>3</sup> /h)   |
| CTRL                    | 0.65                |                         |
| MISC                    | 1.1                 |                         |
| x-value                 | 2                   |                         |
| External Leakage        | 0                   | %                       |
| AEC average             | 97.2                | kWh                     |
| AEC cold                | 97.2                | kWh                     |
| AEC warm                | 97.2                | kWh                     |
| AHS Average             | 2,830               | kWh/a                   |
| AHS Cold                | 5,536.2             | kWh/a                   |
| AHS Warm                | 1,279.7             | kWh/a                   |

**Dimension**



| ØA  | ØB | C  | D  | E   | F   | G  | H  |
|-----|----|----|----|-----|-----|----|----|
| 246 | 99 | 26 | 26 | 213 | 161 | 40 | 88 |

### Wiring



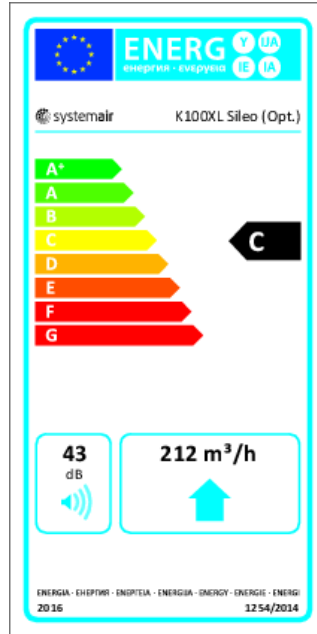


### Energy class label

#### Energy class, Basic unit



#### Energy class, Local demand



## Accessories

- Frequency converter FRQ5SE-6A (37421)
- REE 1 Speed control (5314)
- RETP 6 Temp/Pressure regulator (32293)
- REV-3POL/03-7,5kW R/Y (33978)
- VKK-100 Back draft damper (1623)
- DTV500A (96807)
- HR1 Room Humidistat (215150)
- Presence detector/IR24-P (6995)
- Safety switch 2-pole grey (210679)
- CB 100-0,4 230V/1 Duct heater (5288)
- CBM 100-0,6 230V/1 Duct heater (5479)
- CWK 100-3-2,5 Duct cooler,circ (30019)
- FGR 100 Filter cassette (1802)
- LDC 100-1200 Silencer (5996)
- LDC 100-600 Silencer (5188)
- RSK-100 Back draft damper (5597)
- THB 160 Hood w.cover pl. black (1764)
- THS 160 Hood w.cover pl. black (1839)
- VBC 100-3 Water heating batt (9838)
- RE 1,5 Speed control (5000)
- REPT 6 Digital regulator (5698)
- REU 1.5 Speed control (5004)
- SG 100 Protection guard (5606)
- CO2RT-R-D Transmitter (6993)
- Frequency converter FRQSE-6A (37419)
- IGK-100 Wall Grid (1630)
- RT 0-30 Room Thermostat (5151)
- T 120 Timer (5165)
- CB 100-0,6 230V/1 Duct heater (5376)
- CBMF 100-0,6 230V/1 Duct heater (12241)
- FFR 100 Filter cassette (1766)
- FK 100 Fast clamp (1607)
- LDC 100-300 Silencer (8180)
- LDC 100-900 Silencer (5189)
- THB 160 Hood w. cover pl. Red (2034)
- THS 160 Hood w. cover pl. Red (2044)
- VBC 100-2 Water heating batt (5456)
- VBF 100 Water heating battery (1724)

## Documents

- [INSTALLATION\\_\\_OPERATION\\_AND\\_MAINTENANCE\\_INSTRUCTION\\_K\\_\\_KV\\_\\_PRIO\\_\\_EN\\_009.PDF](#)
- [COMMISSIONING\\_RECORD\\_FANS\\_\\_EN.PDF](#)
- [K fan mounting.wmv](#)