

KBR Centrifugal Fans

Powerful and efficient exhaust fans for medium temperatures up to 120°C

- Up to 120°C medium temperature, continuous operation
- Acoustic and thermal insulation 50 mm
- Excellent for commercial kitchens and process exhaust systems
- Easy to service and maintain due to the swing-out inspection door

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



Reliability

The KBR box fans are designed for reliable, continuous use with medium temperatures up to 120°C.

The combination of reliable casing and motor construction ensure minimize the need for maintenance of the fans and allows long **continuous operation**.

Performance

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

Noise

The **casing** of **KBR** models have perfect **acoustic** and **thermal** insulation capacity.

Certifications



Green Ventilation

Features

Construction

The KBR casing is manufactured from doubleskinned galvanised sheet steel and is insulated with 50 mm mineral wool. The fan is isolated from the casing via connectors and anti-vibration dampers are incorporated into the base frame. Standard is that the motor is outside the air stream. The KBR fans have a swing-out door for easy inspection and service.

Impeller

The KBR fans use **radial** impeller with **backward curved blades**. These are made out of galvanised steel, dynamically **balanced** and paired with corresponding **IEC motor** with efficiency **IE3 or EC motor**.

Motor

Depending on the type, KBR fans are equipped with **AC** or **EC** external rotor motors. Motors are suitable for **50Hz** and **60Hz**.

Motor protection

Depending on the type, **AC** motors have an **integrated** thermal protection with manual (electrical) reset, prewired integral **thermocontact TK** or **thermistor PTC** with leads to a **motor protection device**. Fans with **EC** motors have an **integrated** electronic **thermal protection** including **locked-rotor protection** and **soft-start**.

Control

EC motors with **built-in potentiometer** to adjust working point can be also controlled by external **signal 0-10V**. **EC motors, depending on the type** are also equipped with **ModBus** communication or **alarm signal**. **AC motors** can be controlled by **5-step, stepless** speed regulator, **D/Y** switch or **frequency converter**.

Installation

The fans can be used **indoor** or with **specific accessories** also **outdoor**. Due to the mounted **base frame the fan** can stand **on floor**. For **preventing vibration** to the duct is recommended to use **flexible connection**.

Technical parameters

Nominal data

Voltage (nominal)	230	V
Frequency	50; 60	Hz
Phases	1~	
Input power	1,268	W
Input power kW	1.268	kW
Input current	5.53	A
Impeller speed	3,025	rpm
Temperature of transported air	max 120	°C
Max temperature of transported air, when speed controlled	120	°C

Sound data

Sound pressure level at 10m (free field)	30	dB(A)
Sound pressure level at 4m (free field)	38	dB(A)

Protection/Classification

Enclosure class, motor	IP55
Insulation class	F

Dimensions and weights

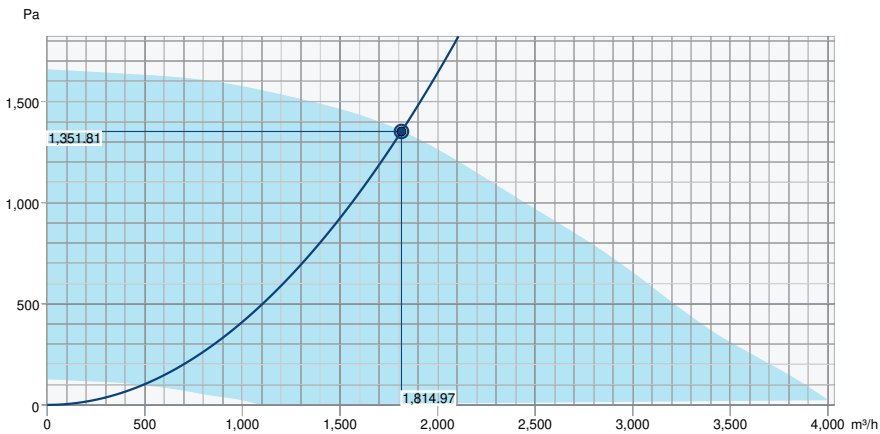
Duct dimension; Circular, inlet	315	mm
Duct dimension; Circular, outlet	315	mm
Weight	54	kg

Others

Duct connection type	Circular
Motor type	EC

Performance

Performance curve

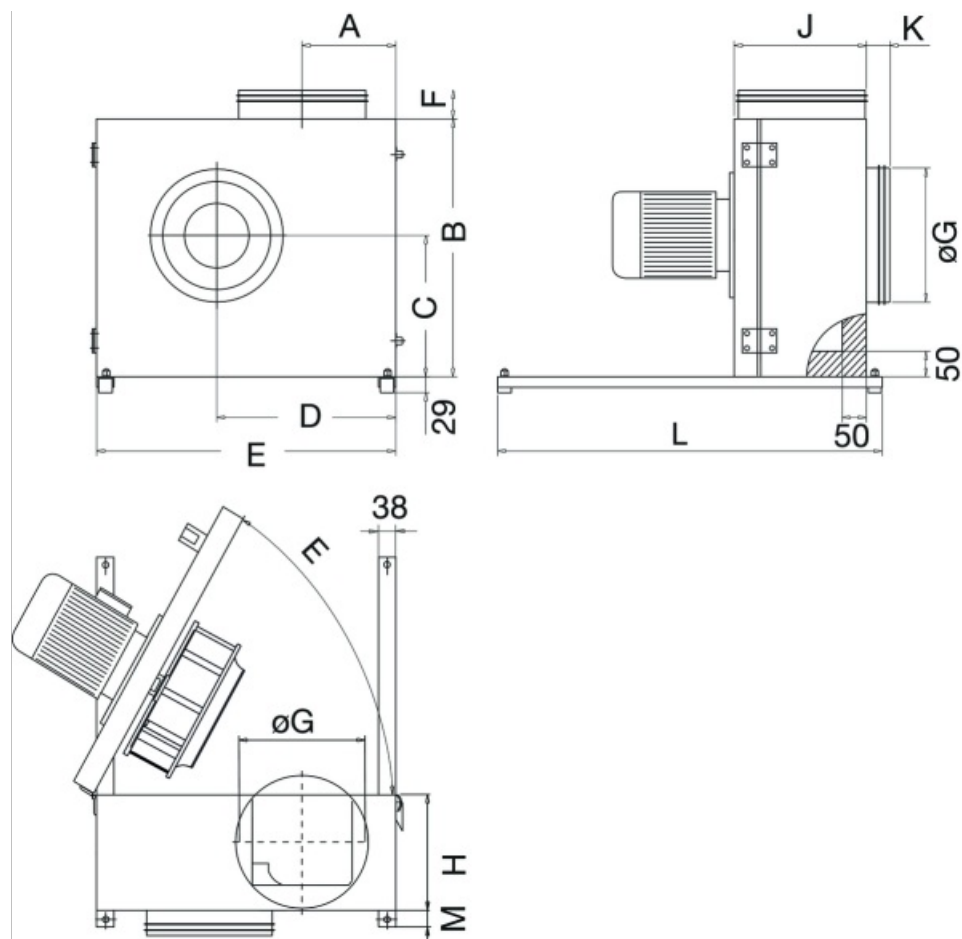


Hydraulic data

Required air flow	1,815 m³/h
Required static pressure	1,352 Pa
Working air flow	1,815 m³/h
Working static pressure	1,352 Pa
Air density	1.204 kg/m³
Power	1,179.4 W
Fan control - RPM	3,020 rpm
Current	5.16 A
SFP	2.339 kW/m³/s
Control voltage	10.0 V
Supply voltage	230 V

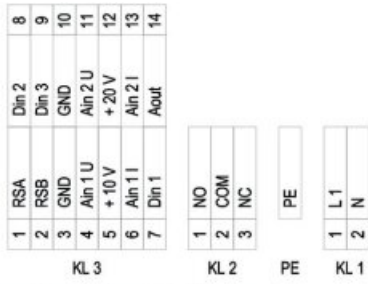
Sound power level		63	125	250	500	1k	2k	4k	8k	Total
Inlet	dB(A)	64	74	77	85	74	75	72	67	87
Outlet	dB(A)	65	73	76	88	81	80	71	66	90
Surrounding	dB(A)	41	54	55	56	51	52	48	40	61
Sound pressure level at 3m (20m² Sabine)	dB(A)	-	-	-	-	-	-	-	-	54
Sound pressure level at 3m free field	dB(A)	-	-	-	-	-	-	-	-	40

Dimension



	A	B	C	D	E	F	øG	H	J	K	L	M
KBR 315EC	187,5	600	339	398	690	125	315	249	307	70	770	55

Wiring



No.	Pin	Signal	Function / assignment
KL.1	1	L1	Mains supply connection, supply voltage 1-200-277 V AC, 50/60 Hz
KL.1	2	N	Mains supply connection, supply voltage 1-200-277 V AC, 50/60 Hz
PE		PE	Earth connection, PE connection
KL.2	1	NO	Status relay, floating status contact; option 1: close with error; option 2: close with run monitor error message
KL.2	2	COM	Status relay, floating status contact; changeover contact; common connection; contact rating 250 V AC / 2 A (AC-1)
KL.2	3	NC	Status relay, floating status contact; option 1: break with error; option 2: break with error for run monitor error message
KL.3	1	RSA	Bus connection RS485; RSA, MODBUS RTU
KL.3	2	RSB	Bus connection RS485; RSB, MODBUS RTU
KL.3	3	GND	Signal ground for control interface
KL.3	4	Ain1 U	Analog input 1 (set value); 0-10 V; Ri= 100kOhm; parameterizable curve; only usable as alternative to input Ain1 I
KL.3	5	+10 V	Fixed voltage output 10 VDC; +10 V +/-3%; max. 10 mA; short circuit proof; power supply for ext. devices (e.g. potentiometer)
KL.3	6	Ain1 I	Analog input 1 (set value); 4-20 mA; Ri= 100 Ohm; parameterizable curve; only usable as alternative to input Ain1 U
KL.3	7	Din1	Digital input 1: enabling of electronics; enabling open pin or applied voltage 5 to 50 VDC; disabling bridge to GND or applied voltage <0.8 VDC; reset function triggers software reset after a level change to <0.8 V
KL.3	8	Din2	Digital input 2: parameter set switch 1/2; according to EEPROM setting, the valid parameter set is selectable per BUS or per digital input (DIN). Parameter set 1: open pin or applied voltage 5 to 50 VDC; parameter set 2: bridge to GND or applied voltage <0.8 VDC
KL.3	9	Din3	Digital input 3: control characteristic of the integrated controller; according to EEPROM setting, the control characteristic of the integrated controller is normally/inversely selectable per BUS or per digital input; normal: open pin or applied voltage 5 to 50 VDC; inverse: bridge to GND or applied voltage <0.8 VDC
KL.3	10	GND	Signal ground for control interface
KL.3	11	Ain2 U	Analog input 2; actual sensor value 0-10 V; Ri= 100kOhm; parameterizable curve; only usable as alternative to input Ain2 I
KL.3	12	+20 V	Fixed voltage output 20 VDC; +20V +/-3%; max. 50 mA; short circuit proof; power supply for ext. devices (e.g. sensors)
KL.3	13	Ain2 I	Analog input 2; actual sensor value 4-20 mA; Ri= 100 Ohm; parameterizable curve; only alternative to input Ain2 U
KL.3	14	Aout	Analog output 0-10 V; max. 5 mA; output of the actual motor control factor (output voltage of electronics) of the actual motor speed. Parameterizable curve.

Accessories

- ASF 315/KB Flex. connection (2718)
- EC-Basic-CO2 and temperature (24808)
- EC-Basic-T temperature (24805)
- EC-Vent control board (3115)
- MTP 10, 10K, Speed control (32731)
- Potentiometer MTP 20, 0-10V (310220)
- Step switch S-5EC-2, 0-10V (449084)
- HR1 Room Humidistat (215150)
- RT 0-30 Room Thermostat (5151)
- WBK 315/355 Wall bracket (2721)
- CXE/AVC Modbus (37256)
- EC-Basic-H humidity (24807)
- EC-Basic-U universal 0-10V (24806)
- EC-Vent Room Unit (3018)
- MTV-1/010 Controller 0..10V+ (30650)
- REV-3POL/03-7,5kW R/Y (33978)
- WSD KBR-2 Weather roof f.motor (2729)
- Presence detector/IR24-P (6995)
- ALS-KBR drain plug (2727)
- Room hygrostat HR-S (286251)

Documents

- Installation, Operation and Maintenance instruction_005
- EC Declaration of Conformity KBT, KBR, MUB-K, MUB-T, MUB-T-S, DVV
- EU DECLARATION OF CONFORMITY_THERMOFANS_EN_004.PDF