

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)	400	V
Frequency	50; 60	Hz
Phases	3~	
Input power	2,643	W
Input power kW	2.643	kW
Input current	4.04	A
Impeller speed	2,626	rpm
Air flow	max 6,426	m³/h
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)	33	dB(A)
Sound pressure level at 4m (free field)	41	dB(A)

Protection/Classification

Enclosure class, motor	IP55
Insulation class	F

Dimensions and weights

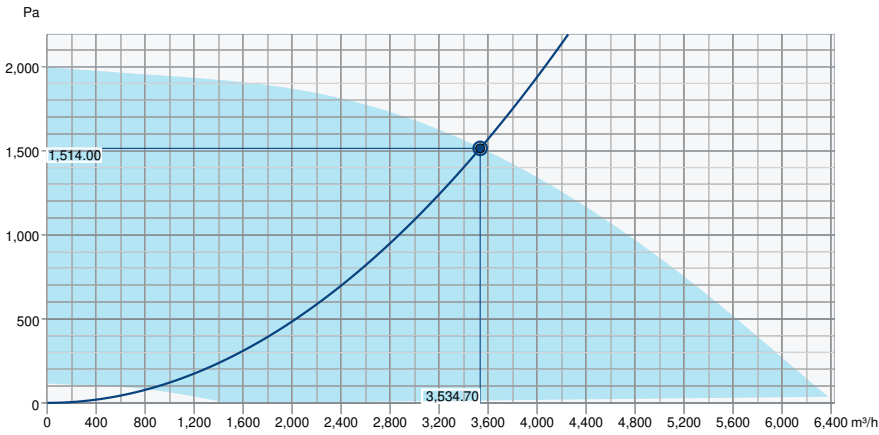
Duct dimension; Circular, inlet	355	mm
Duct dimension; Circular, outlet	355	mm
Weight	79	kg

Others

Duct connection type	Circular
Motor type	EC

Performance

Performance curve

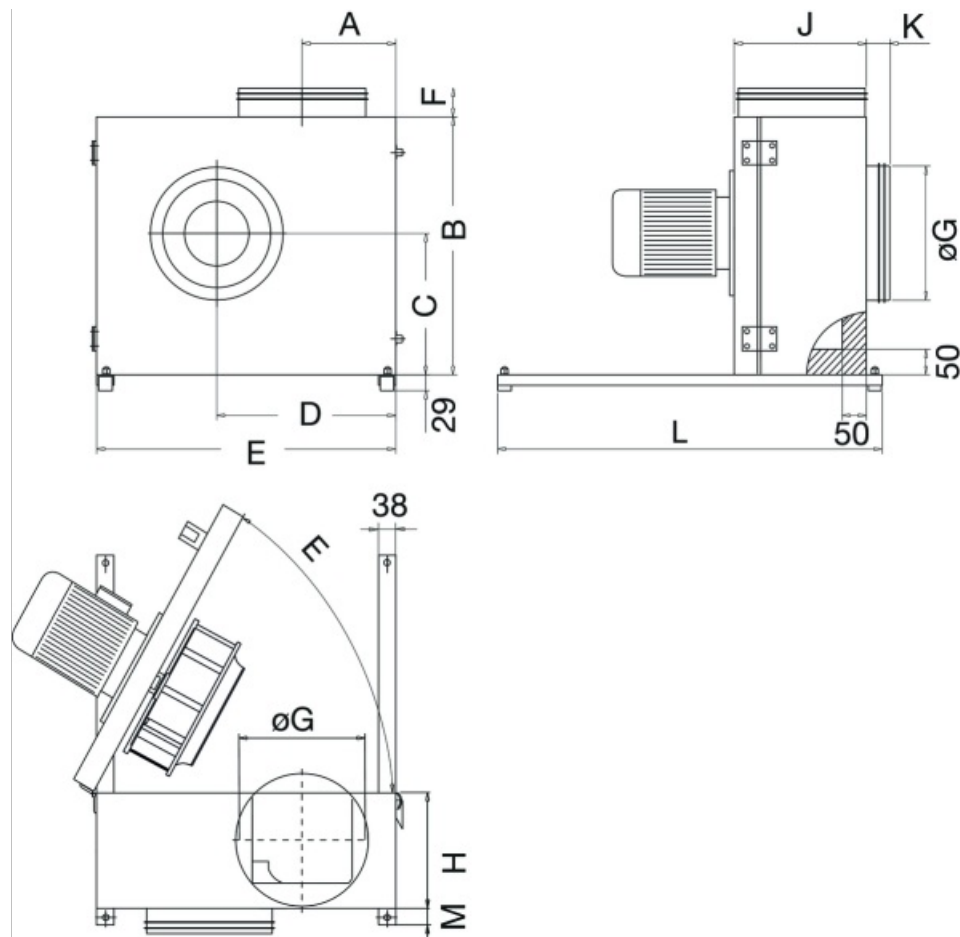


Hydraulic data

Required air flow	3,535 m³/h
Required static pressure	1,514 Pa
Working air flow	3,535 m³/h
Working static pressure	1,514 Pa
Air density	1.204 kg/m³
Power	2,579.4 W
Fan control - RPM	2,627 rpm
Current	3.95 A
SFP	2.627 kW/m³/s
Control voltage	10.0 V
Supply voltage	400 V

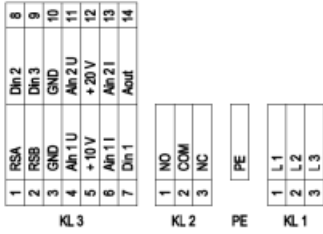
Sound power level		63	125	250	500	1k	2k	4k	8k	Total
Inlet	dB(A)	64	74	84	85	82	81	85	85	92
Outlet	dB(A)	64	74	88	83	83	81	84	84	92
Surrounding	dB(A)	28	46	58	56	56	56	57	54	64
Sound pressure level at 3m (20m² Sabine)	dB(A)	-	-	-	-	-	-	-	-	57
Sound pressure level at 3m free field	dB(A)	-	-	-	-	-	-	-	-	43

Dimension



	A	B	C	D	E	F	øG	H	J	K	L	M
KBR 355EC	206,7	655	372	451	770	125	355	273	331	70	770	55

Wiring



No.	Conn.	Designation	Function/assignment
KL 1	1	L1	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
KL 1	2	L2	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
KL 1	3	L3	Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz
PE	PE		Ground connection, PE connection
KL 2	1	NO	Status relay, floating status contact; make for failure
KL 2	2	COM	Status relay, floating status contact; changeover contact; common connection; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL 2	3	NC	Status relay, floating status contact; break for failure
KL 3	1	RSA	Bus connection RS485, RSA, MODBUS-RTU; SELV
KL 3	2	RSB	Bus connection RS485, RSB, MODBUS-RTU; SELV
KL 3	3 / 10	GND	Reference ground for control interface; SELV
KL 3	4	Ain1 U	Analog input 1, set value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain1 I; SELV
KL 3	5	+10 V	Fixed voltage output 10 VDC, +10 V ±3%, max. 10 mA, short-circuit-proof power supply for external devices (e.g. pot); SELV
KL 3	6	Ain1 I	Analog input 1, set value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain1 U; SELV
KL 3	7	Din1	Digital input 1: enable electronics, enable: pin open or applied voltage 5-50 VDC, disable: bridge to GND or applied voltage < 1 VDC, reset function: triggers software reset after a level change to < 1 VDC; SELV
KL 3	8	Din2	Digital input 2: Switching parameter sets 1/2, according to EEPROM setting, the valid or used parameter set can be selected via bus or via digital input DIN2, Parameter set 1: pin open or applied voltage 5-50 VDC, Parameter set 2: bridge to GND or applied voltage < 1 VDC; SELV
KL 3	9	Din3	Digital input 3: according to EEPROM setting, the integrated controller's direction of action can be selected as normal/inverse via bus or digital input normal: pin open or applied voltage 5-50 VDC, inverse: bridge to GND or applied voltage < 1 VDC; SELV
KL 3	11	Ain2 U	Analog input 2, measured value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain2 I; SELV
KL 3	12	+20 V	Fixed voltage output 20 VDC, +20 V +2%/10%, max. 50 mA, short-circuit-proof power supply for external devices (e.g. sensors); SELV
KL 3	13	Ain2 I	Analog input 2, measured value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain2 U; SELV
KL 3	14	Aout	Analog output 0-10 VDC, max. 5 mA, output of current motor modulation level / motor speed adjustable curve; SELV

Accessories

- ASF 355/KB Flex. connection (2719)
- 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)
- Presence detector/IR24-P (6995)
- ALS-KBR drain plug (2727)
- REV-5POL/05-7,5kW B/G (281745)
- 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-5POL/05-7,5kW R/Y (35757)
- HR1 Room Humidistat (215150)
- RT 0-30 Room Thermostat (5151)
- WBK 315/355 Wall bracket (2721)
- 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