

KBR 315EC-L THERMO FAN

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Description

- EC-motors, high level of efficiency
- 100% speed controllable
- Integrated motor protection
- Low noise level
- Max. temp. of continuous transported air 120°C

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 utilized 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 power electronics are integrated in the motor housing. All models have one potential-free terminal for error message. All motors are suitable to be used for 50/60Hz. The input voltage for single phase units can vary between 200 and 277V and three phase between 380 and 480V. Speed control by a 0-10V signal. Every motor has an output voltage of 10V for an external potentiometer or sensor. The KBR-EC fans have impellers manufactured from galvanized sheet steel with backward-curved blades. The casing is manufactured from double-skinned galvanized sheet steel and is insulated with 50 mm mineral wool. The KBR-EC fans have a swing-out door for easy inspection and service. The fan is isolated from the casing via connectors and anti-vibration dampers are incorporated into the base frame.

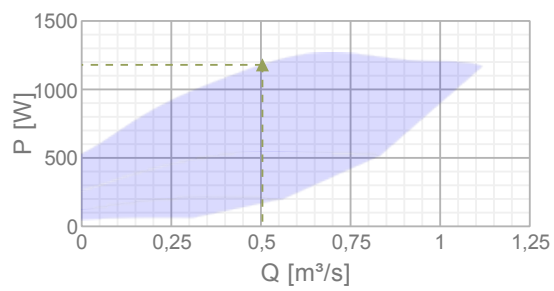
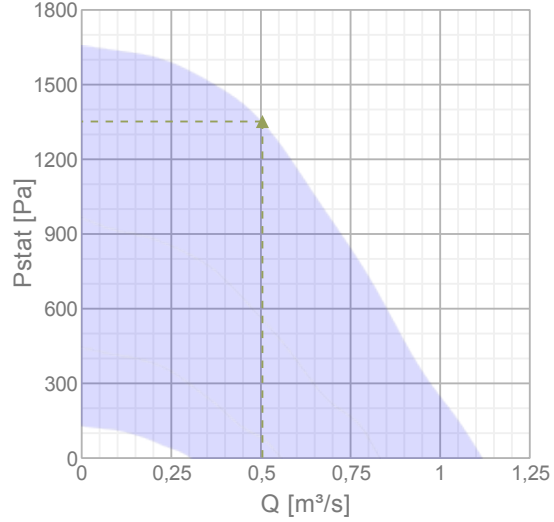


Technical parameters

Nominal data		
Voltage	230	V
Frequency	50/60	Hz
Phase	1	~
Input power (P1)	1268	W
Current	5,53	A
Max. airflow	1,12	m³/s
R.p.m.	3025	r.p.m.
Weight	54	kg
Temperature data		
Max. temperature of transported air	120	°C
Sound data		
Sound pressure level at 4 m	38	dB(A)
Sound pressure level at 10 m	30	dB(A)
Protection / Classification		
Insulation class	F	
Enclosure class, motor	IP55	

Diagrams

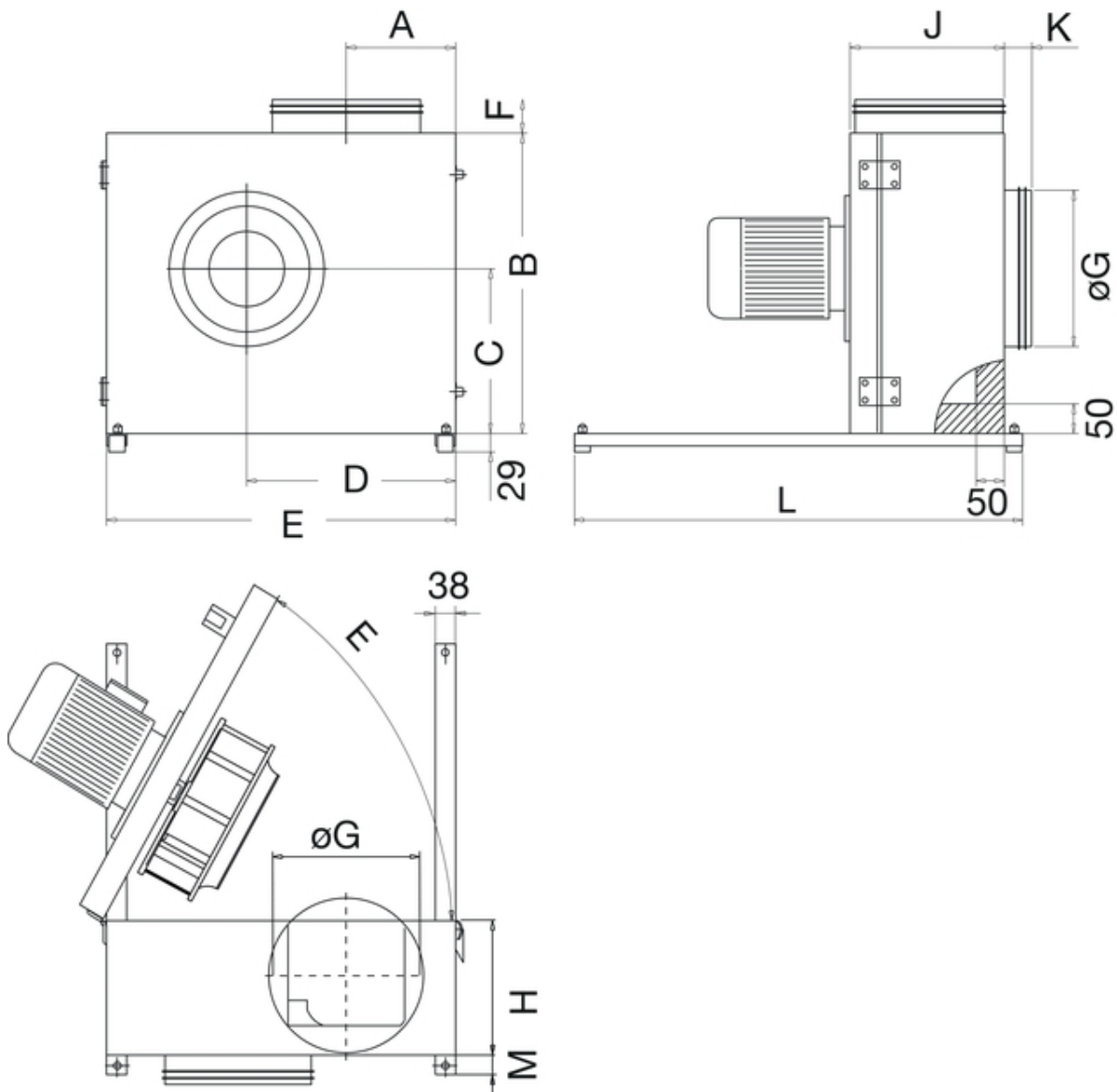
Diagrams



Max efficiency

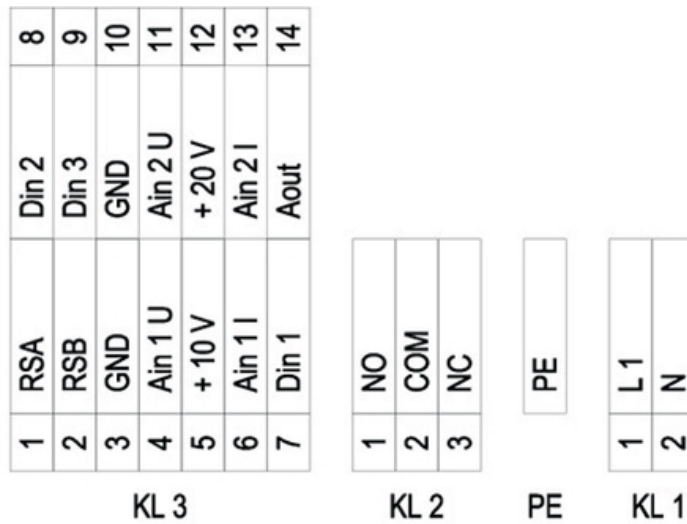
Hydraulic data										
▲ Working air flow										0,504 m³/s
▲ Working static pressure										1352 Pa
▲ Power										1179 W
Speed										3020 r.p.m.
Current										5,16 A
SFP										2,34 W/(l/s)
Voltage										230 V
Sound power level		63	125	250	500	1k	2k	4k	8k	Tot
Inlet	dB(A)	63	74	76	85	74	75	72	67	87
Outlet	dB(A)	64	72	75	88	81	80	71	66	90
Surrounding	dB(A)	41	54	55	56	51	52	48	40	61

Dimensions



	A	B	C	D	E	F	$\varnothing G$	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
KL1	1	L1	Mains supply connection, supply voltage 1~200-277 V AC; 50/60 Hz
KL1	2	N	Mains supply connection, supply voltage 1~200-277 V AC; 50/60 Hz
PE		PE	Earth connection, PE connection
KL2	1	NO	Status relay, floating status contact; option 1: close with error; option 2: close with run monitor error message
KL2	2	COM	Status relay; floating status contact; changeover contact; common connection; contact rating 250 V AC / 2 A (AC1)
KL2	3	NC	Status relay, floating status contact; option 1: break with error; option 2: break with error for run monitor error message
KL3	1	RSA	Bus connection RS485; RSA; MODBUS RTU
KL3	2	RSB	Bus connection RS485; RSB; MODBUS RTU
KL3	3	GND	Signal ground for control interface
KL3	4	Ain1 U	Analog input 1 (set value); 0-10 V; Ri= 100kOhm; parametrisable curve; only usable as alternative to input Ain1 I
KL3	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)
KL3	6	Ain1 I	Analog input 1 (set value); 4-20 mA; Ri= 100 Ohm; parametrisable curve; only usable as alternative to input Ain1 U
KL3	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
KL3	8	Din2	Digital input 2: parameter set switch 1/2; according to EEPROM setting, the valid/used parameter set is selectable per BUS or per digital input DIN2. Parameter set 1: open pin or applied voltage 5 to 50 VDC; parameter set 2: bridge to GND or applied voltage < 0.8 VDC
KL3	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
KL3	10	GND	Signal ground for control interface
KL3	11	Ain2 U	Analog input 2; actual sensor value 0-10 V; Ri= 100kOhm; parametrisable curve; only usable as alternative to input Ain2 I
KL3	12	+20 V	Fixed voltage output 20 VDC; + 20V +/-25/-10%; max. 50 mA; short circuit proof; power supply for ext. devices (e.g. sensors)
KL3	13	Ain2 I	Analog input 2; actual sensor value 4-20 mA; Ri= 100 Ohm; parametrisable curve; only alternative to input Ain2 U
KL3	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. Parametrisable curve.

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Accessories


Electric accessories


[RT 0-30 Room Thermostat \(5151\)](#)
[CO2RT-R-D Transmitter \(6993\)](#)
[Presence detector/IR24-P \(6995\)](#)
[MTV-1/010 Controller 0..10V+ \(30650\)](#)
[MTP 10, 10K, Speed control \(32731\)](#)
[EC-Vent Room Unit \(3018\)](#)
[EC-Vent control board \(3115\)](#)
[REV-3POL/03 ON/OFF \(33978\)](#)
[MTP 20, on/off, 3-step \(310220\)](#)
[EC-Basic-H humidity \(24807\)](#)
[EC-Basic-T temperature \(24805\)](#)
[EC-Basic-U universal 0-10V \(24806\)](#)
[EC-Basic-CO2 and temperature \(24808\)](#)
[CXE/AVC Modbus \(37256\)](#)
[S-5EC/FRQ \(76738\)](#)

Accessories

[ASF 315/KB Flex. connection \(2718\)](#)
[WBK 315/355 Wall bracket \(2721\)](#)
[ALS-KBR drain plug \(2727\)](#)
[WSD KBR-2 Weather roof f.motor \(2729\)](#)

Documentation

 [manual_kbr_en_\[003\].pdf \(3,41MB\)](#)

 [eu declaration of conformity_thermofans_en_\[002\].pdf \(46,39kB\)](#)

Specification text

Kitchen exhaust fan for medium temperatures up to 120 °C in continuous operation, reliable, swing-out service door incl. motor section, motor outside air flow. Casing made of double-skinned galvanised steel sheet, insulated with 50 mm rock wool, non-combustible according to A1 DIN 4102. Swing-out door for easy inspection and service of impeller and motor, completely swing out to the outside. Backward curved centrifugal impeller made of aluminium. Impeller acc. to VDI 2060, balancing quality Q 6.3, dynamically balanced in two planes acc. to ISO 1940 T1. Energy-saving, energy-efficient EC compact motor, maintenance-free, outside the air flow. Integrated, electronic motor protection. Terminal box fitted on the motor. Suction and discharge sided duct connection with rubber-lip seal. Top discharge. With protection plate to avoid condensate leakage. Low sound level. Indoor installation, outdoor installation with weather roof (WSD). Delivery with mounting rails and rubber vibration dampers.