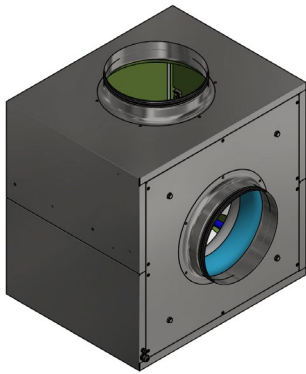


BF900R-500PA2371

BoxFan

Built in RadiPac EC fan
With round air inlet and outlet



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Nominal data

Type	BF900R-500PA2371	
EC Ventilator	K3G500-PA23-71	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380...480
Frequency	Hz	50/60
Type of data definition		ml
Speed	min ⁻¹	1910
Power input	W	3450
Current draw	A	5,3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

ml = Max. load · me = Max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Data in accordance with the EU environment design regulation 327/2011 for built-in fan units.

	Actual	Request 2015			
Overall efficiency η_{es}	68,7%	57,2%	Power input P_{ed}	kW	3,46
Installation category	A		Airflow q_v	m ³ /h	8740
Efficiency category	Static		Pressure increase p_{fs}	Pa	929
Efficiency grade N	73,5%	62%	Speed n	min ⁻¹	1910
Variable speed drive	Yes		Specific ratio*		1.01

*Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup

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Technical features

Rotor surface	Painted black
Electronic housing material	Die-cast aluminium
Impeller material	Sheet aluminium
Support plate material	Sheet steel, galvanized
Support bracket material	Steel, painted black
Material of inlet nozzle	Sheet steel, painted black
Number of blades	5
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP 55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient motor temp. (transp./storage)	-40 °C
Mounting position	See product drawing
Condensate discharge holes	Rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> - Output 10 VDC, max. 10 mA - Operation and alarm display - External 24 V input (programming) - External release input - Integrated PID controller - Motor current limit - PFC, passive - RS485 MODBUS RTU - Soft start - Maximum EEPROM write cycles 100,000 - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	≤ 3.5 mA
Electrical hookup	Terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (with customer connection of protective earth)

Physical description

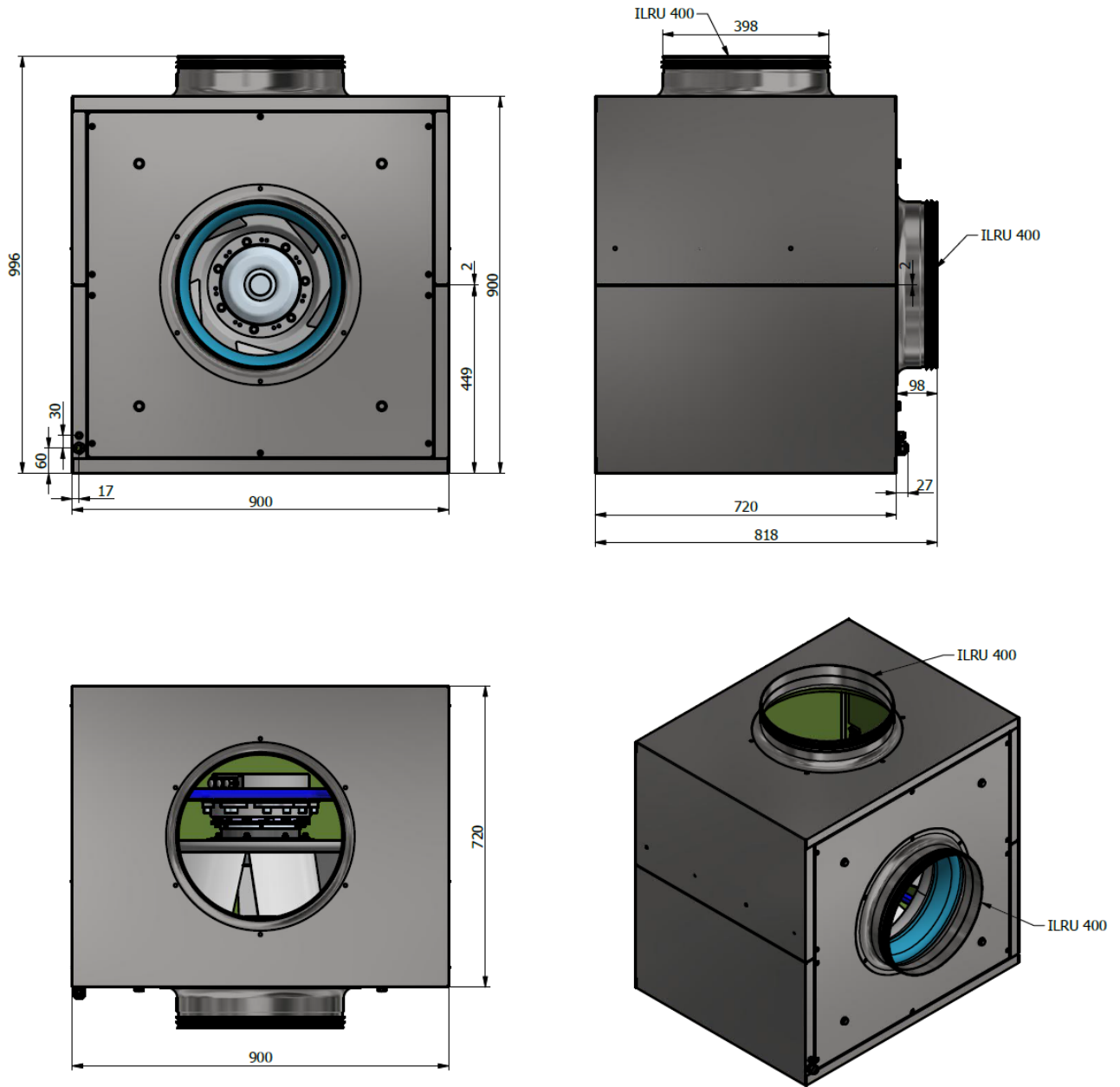
Weight	85.7 kg
Plate thickness, chassis	1 mm
Plate thickness, fan plate and inspection hatch	3 mm
Insulation	20 mm foam
Cable glands, PG	M12 og M20
Duct connection, ILU	Ø400
Dimensions	See product drawing

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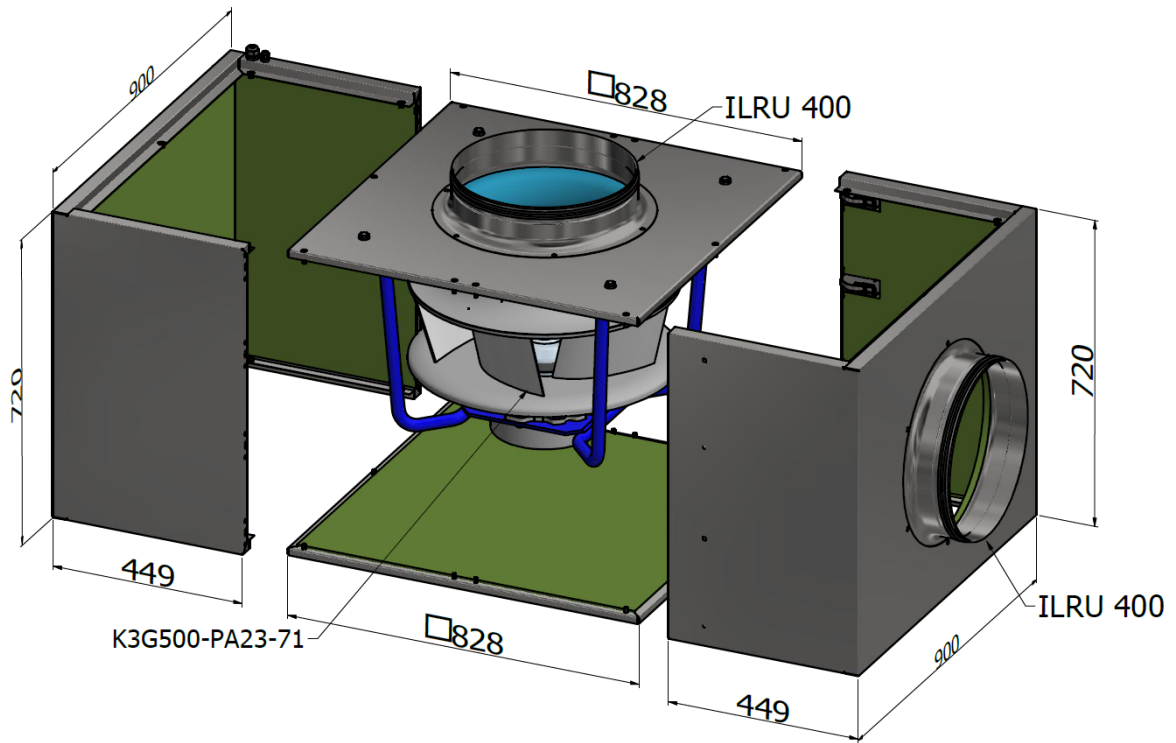
Product drawing



BF900R-500PA2371

BoxFan

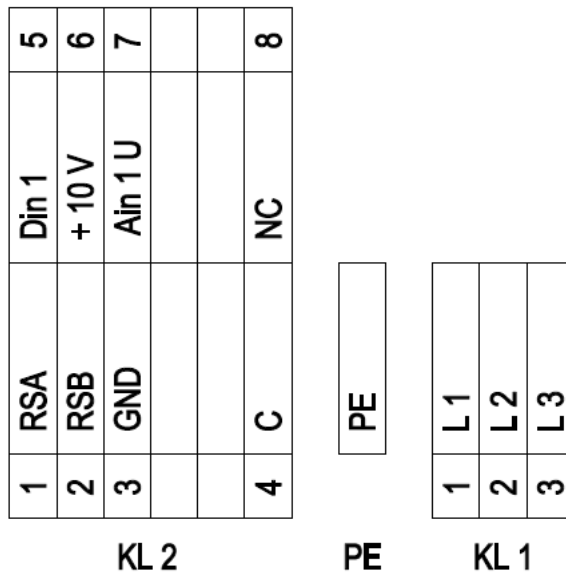
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1	Installed position: shaft horizontal (install support struts only vertically as illustrated) or rotor on bottom; rotor on top on request
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
3	Tightening torque 3.5 ± 0.5 Nm
4	Inlet ring with pressure tap (k-factor: 188)

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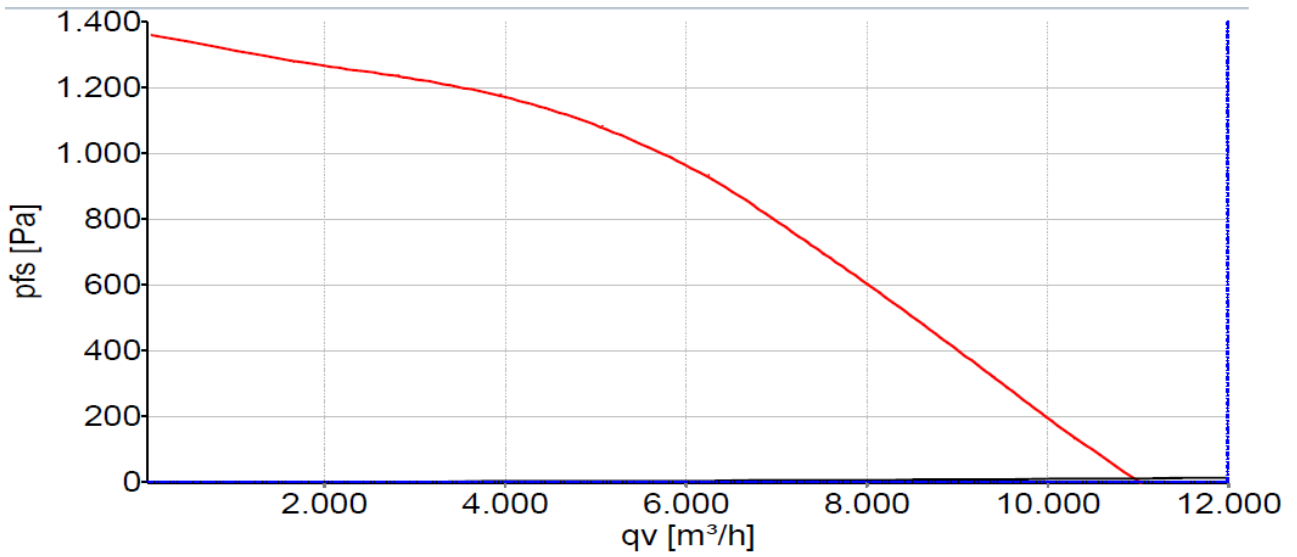
Connection diagram

No.	Conn.	Designation	Function/assignment
KL 1	1	L1	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
KL 1	2	L2	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
KL 1	3	L3	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
PE		PE	Earth connection, PE connection
KL 2	1	RSA	Bus connection RS-485, RSA, MODBUS RTU; SELV
KL 2	2	RSB	Bus connection RS-485, RSB, MODBUS RTU; SELV
KL 2	3	GND	Signal ground for control interface; SELV
KL 2	4	C	Status relay; floating status contact; break for failure; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL 2	5	Din1	Digital input 1 enabling of electronics, enabling: open pin or applied voltage 5-50 VDC disabling: bridge to GND or applied voltage
KL 2	6	+ 10 V	Fixed voltage output 10 VDC; +10 V -3 %, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. potentiometer); SELV Alternative: +24 VDC input for parametrisation via MODBUS without mains power
KL 2	7	Ain1 U	Analogue input 1 (set value) 0-10 V, Ri=100 kΩ, parametrisable curve; SELV
KL 2	8	NC	Status relay, floating status contact; break for failure

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Curves: Air performance 50 Hz



Measurement: LU-173866-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

