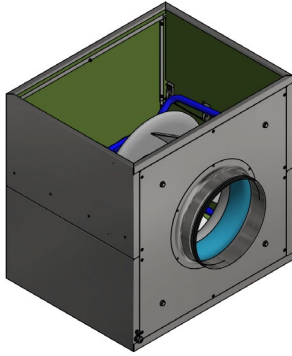


BF900S-500PA2371

## BoxFan

Built-in Radical EC fan  
With square air inlet and outlet



### ebmpapst Denmark ApS

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### Nominal data

Type	BF900S-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 <sup>-1</sup>	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 $\eta_{es}$	68,7%	57,2%	Power input $P_{ed}$	kW	3,46
Installation category	A		Airflow $q_v$	m <sup>3</sup> /h	8740
Efficiency category	Static		Pressure increase $p_{fs}$	Pa	929
Efficiency grade N	73,5%	62%	Speed n	min <sup>-1</sup>	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**

<b>Rotor surface</b>	Painted black
<b>Electronic housing material</b>	Die-cast aluminium
<b>Impeller material</b>	Sheet aluminium
<b>Support plate material</b>	Sheet steel, galvanized
<b>Support bracket material</b>	Steel, painted black
<b>Material of inlet nozzle</b>	Sheet steel, galvanized
<b>Number of blades</b>	5
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP 55
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H1
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+80 °C
<b>Min. permitted ambient motor temp. (transp./storage)</b>	-40 °C
<b>Mounting position</b>	See product drawing
<b>Condensate discharge holes</b>	Rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>-Udgang 10 VDC, maks. 10 mA</li> <li>-Drifts- og fejlmeddelelse</li> <li>-Ekstern 24 V indgang (parametrering)</li> <li>-Ekstern frigivelsesinput</li> <li>-Integreret PID-regulator</li> <li>-Overstrømsbeskyttet</li> <li>-PFC, passiv</li> <li>-RS485 MODBUS-RTU</li> <li>-Softstart</li> <li>-Skrivecyklusser EEPROM maks. 100.000</li> <li>-Styreindgang 0-10 VDC / PWM</li> <li>-Kontrol interface med SELV-potentiale sikkert adskilt fra nettet</li> <li>-Overtemperaturbeskyttelse elektronik / motor</li> <li>-Underspændings- / faseudfaldsregistrering</li> </ul>
<b>EMC interference immunity</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	According to EN 61000-6-4 (industrial environment)
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	≤ 3.5 mA
<b>Electrical hookup</b>	Terminal box
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>Protection class</b>	I (with customer connection of protective earth)

**Physical description**

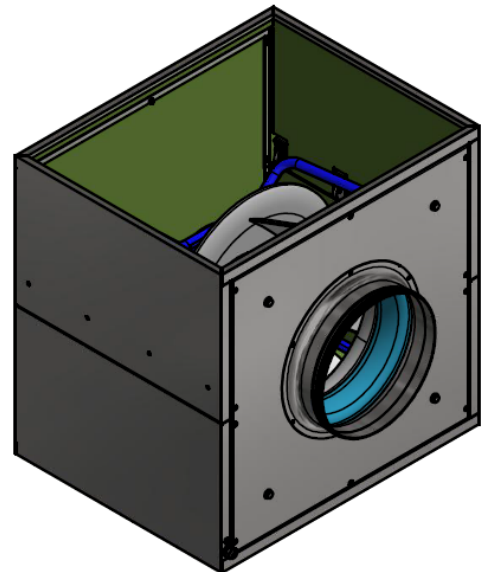
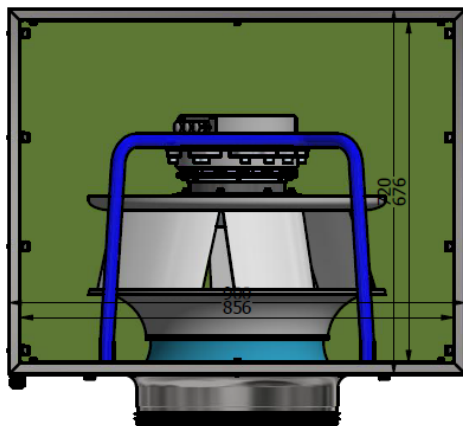
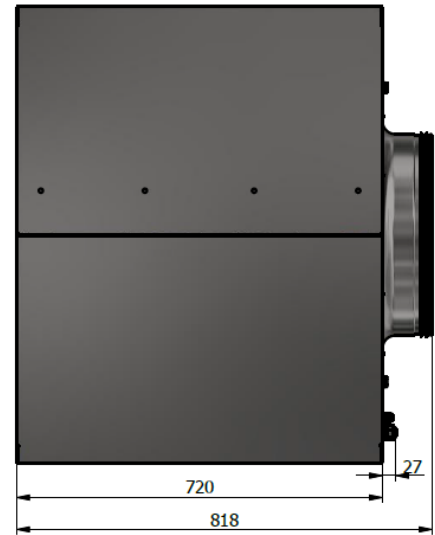
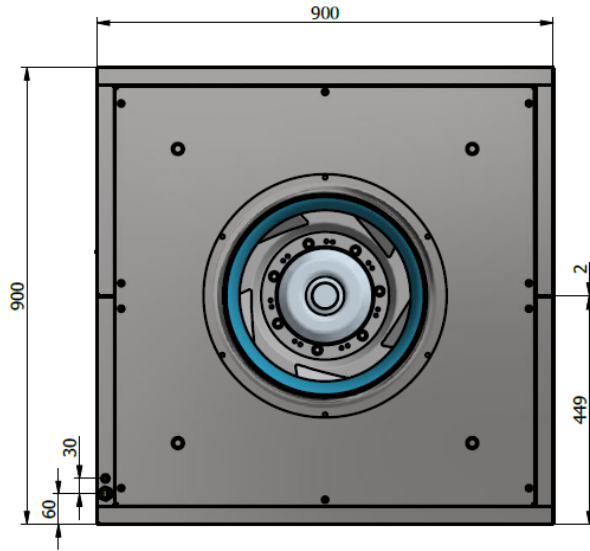
<b>Weight</b>	81,7 kg
<b>Plate thickness, chassis</b>	1 mm
<b>Plate thickness, fan plate and inspection hatch</b>	3 mm
<b>Insulation</b>	Polyethylen Cross Linked PE-Foam - LD-30, Black
<b>Cable glands, PG</b>	M12
<b>Duct connection, ILU</b>	Ø250
<b>Dimensions</b>	See product drawing

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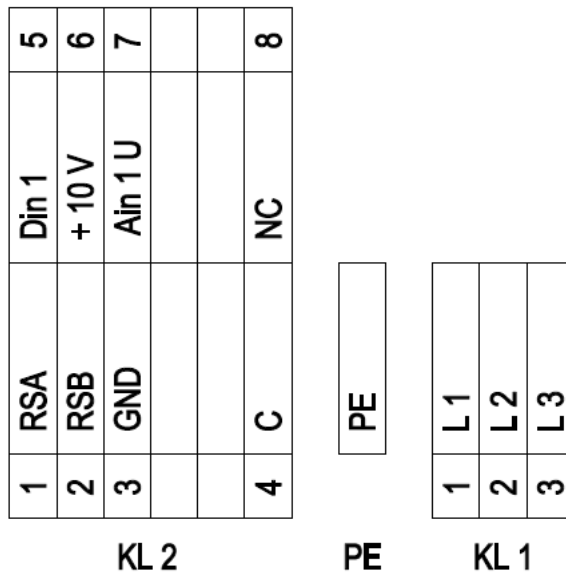
### Product drawing



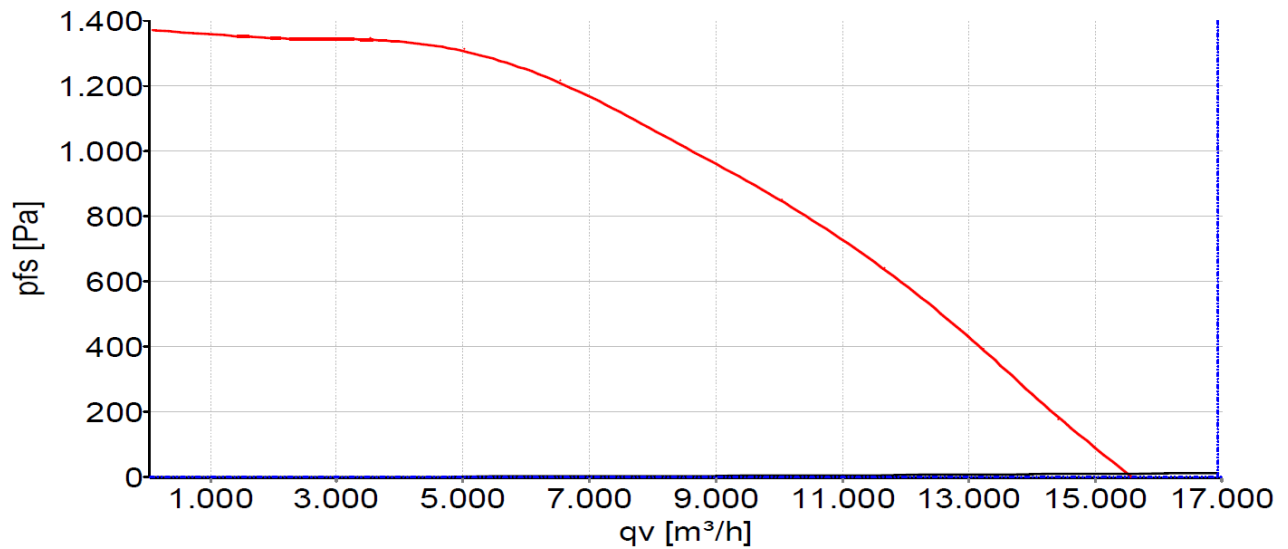


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**Connection diagram**

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

**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 ebmpapst.  
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