A4E450-BG09-51

AC axial fan

sickled blades (S series)

A4E450-BG09-51 ebmpapst Datasheet
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ErP2013 EXCEEDS THE NORM

Nominal data

Type	**A4E450-BG09-51**		
Motor	**M4E094-HA**		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		cs	cs
Valid for approval / standard		CE	CE
Speed	min^{-1}	1330	1400
Power input	W	540	740
Current draw	A	2.67	3.4
Motor capacitor	µF	10	10
Capacitor voltage	VDB	400	400
Max. back pressure	Pa	125	115
Max. ambient temperature	°C	75	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		28.1	27.9	31.9
Efficiency grade N		36.2	36	40
Power input P_e	kW	0.53		
Air flow q_v	m^3/h	4480		
Pressure increase p_{fs}	Pa	120		
Speed n	min^{-1}	1340		

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

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Technical features

Mass	8.1 kg
Size	450 mm
Surface of rotor	Coated in black
Material of terminal box	ABS plastic
Material of blades	Aluminium sheet
Number of blades	5
Blade angle	0°
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box, integrated capacitor connected via terminal box
Motor protection	Thermal overload protector (TOP) brought out
Product conforming to standard	EN 60034-1 (2004); CE

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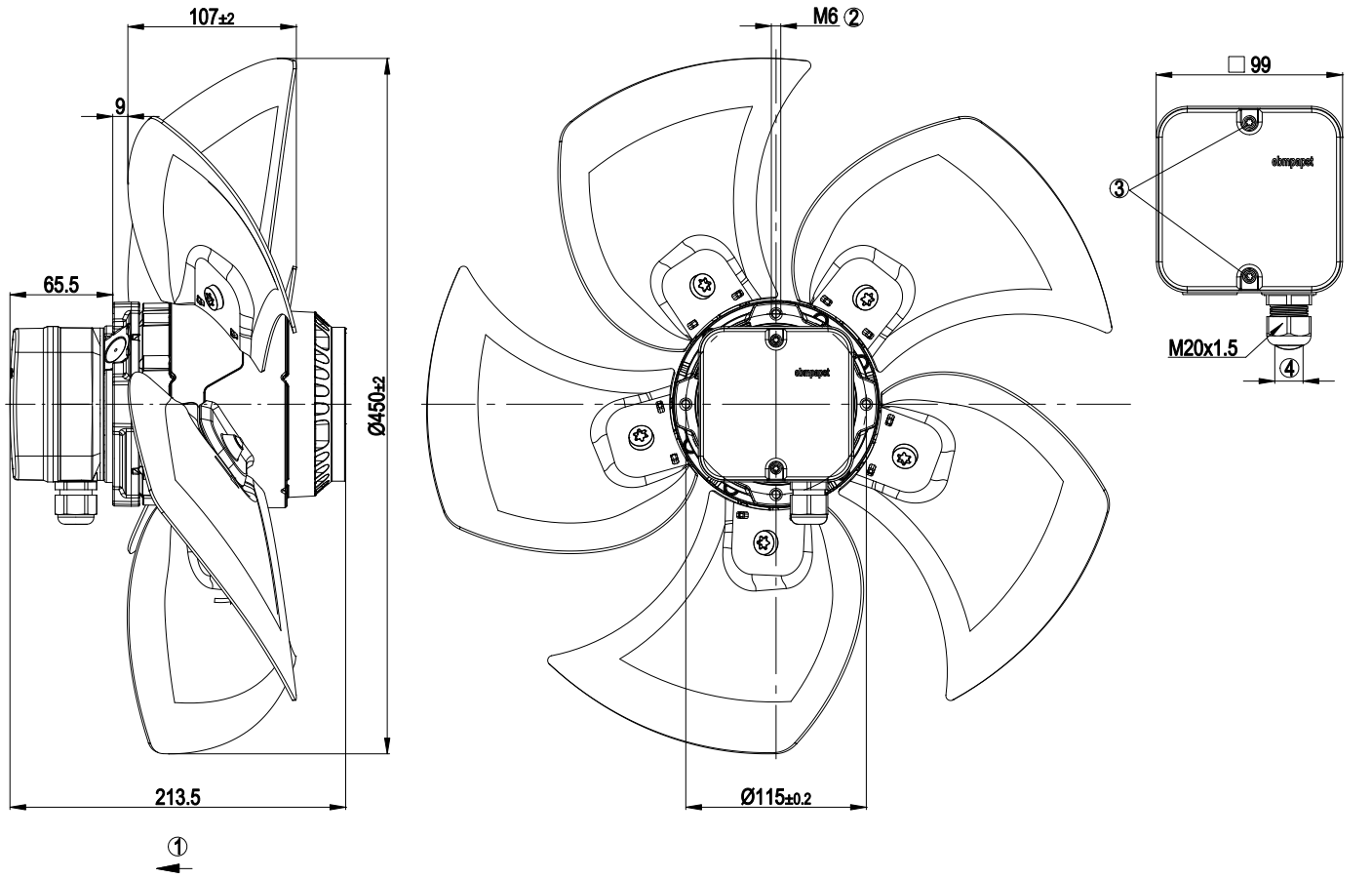
Product drawing



1	Direction of air flow "V"
2	Screw depth max. 12 mm
3	Tightening torque 0.8±0.15 Nm
4	Cable diameter: min. 6 mm, max. 12 mm

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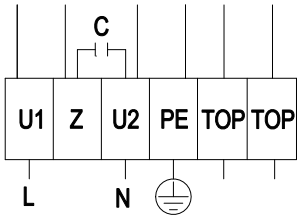
Connection screen



L	= U1 = blue	Z	brown	N	= U2 = black
PE	green / yellow	TOP	grey		

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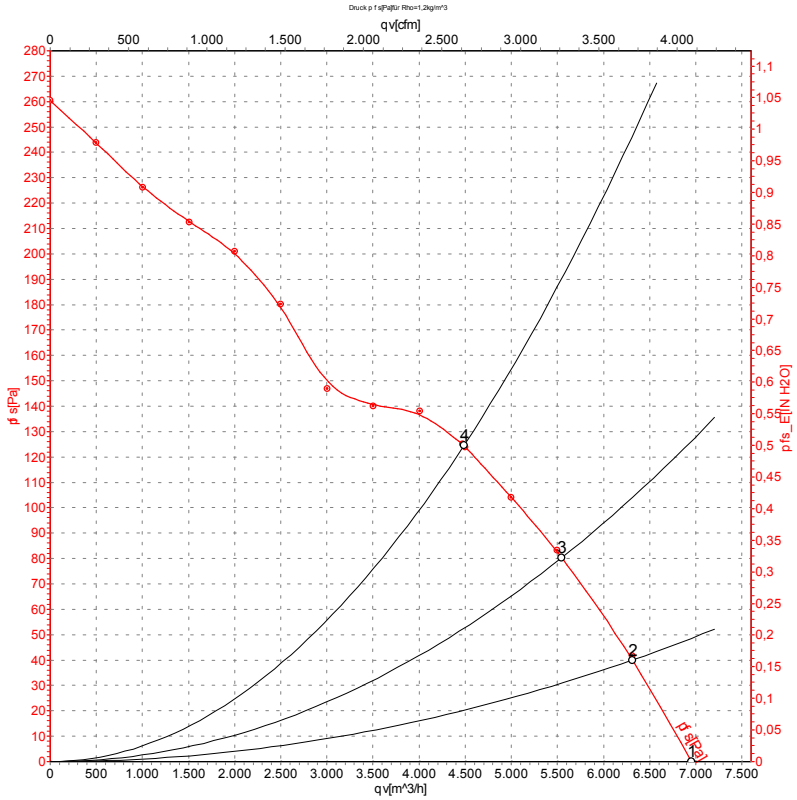
Charts: Air flow 50 Hz



Measurement: LU-58728

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.

Measured values

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	1385	436	2.25	6955	0
2	230	50	1370	466	2.36	6310	40
3	230	50	1355	496	2.49	5545	80
4	230	50	1330	540	2.67	4485	125

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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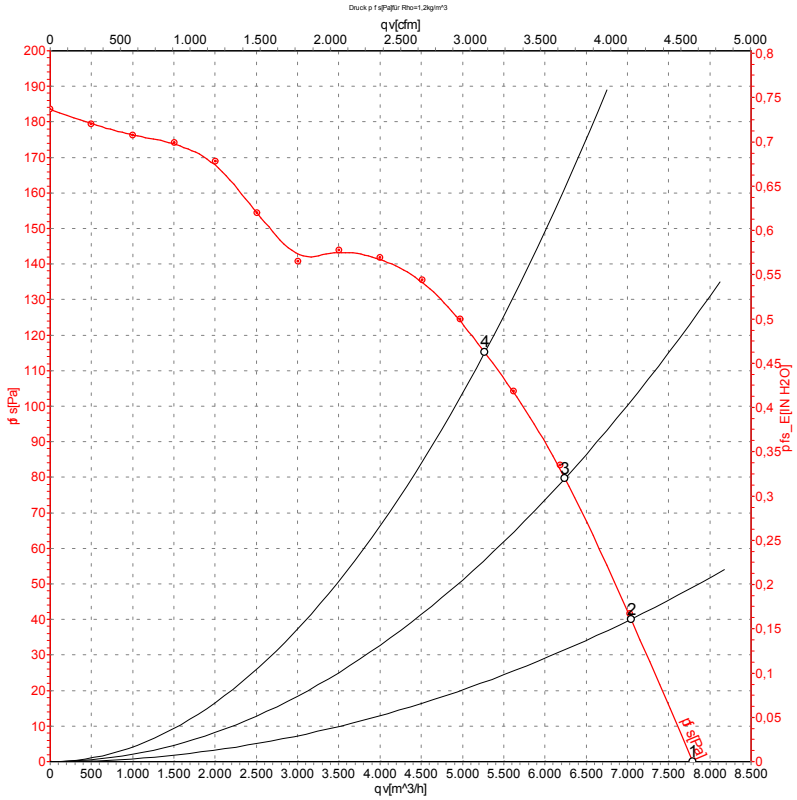
Charts: Air flow 60 Hz



Measurement: LU-58729

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.

Measured values

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	60	1540	626	2.81	7790	0
2	230	60	1500	665	3.01	7045	41
3	230	60	1460	696	3.19	6245	80
4	230	60	1400	740	3.40	5270	115

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase