

# AC axial fan

sickled blades (S series)  
with guard grille for short nozzle

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## Nominal data

Type	S6E450-AP02-06		
Motor	M6E074-GA		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		fa	fa
Valid for approval / standard		CE	CE
Speed	min <sup>-1</sup>	940	1070
Power input	W	165	225
Current draw	A	0.8	0.98
Motor capacitor	µF	4	4
Capacitor voltage	VDB	450	450
Max. back pressure	Pa	70	45
Max. ambient temperature	°C	60	60
Starting current	A	1.5	1.4

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

	Actual	Request 2013	Request 2015
Overall efficiency $\eta_{es}$	25	25	29
Efficiency grade N	36	36	40
Power input $P_e$	kW	0.18	
Air flow $q_v$	m <sup>3</sup> /h	3105	
Pressure increase $p_{fs}$	Pa	51	
Speed n	min <sup>-1</sup>	895	

Data established at point of optimum efficiency



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## Technical features

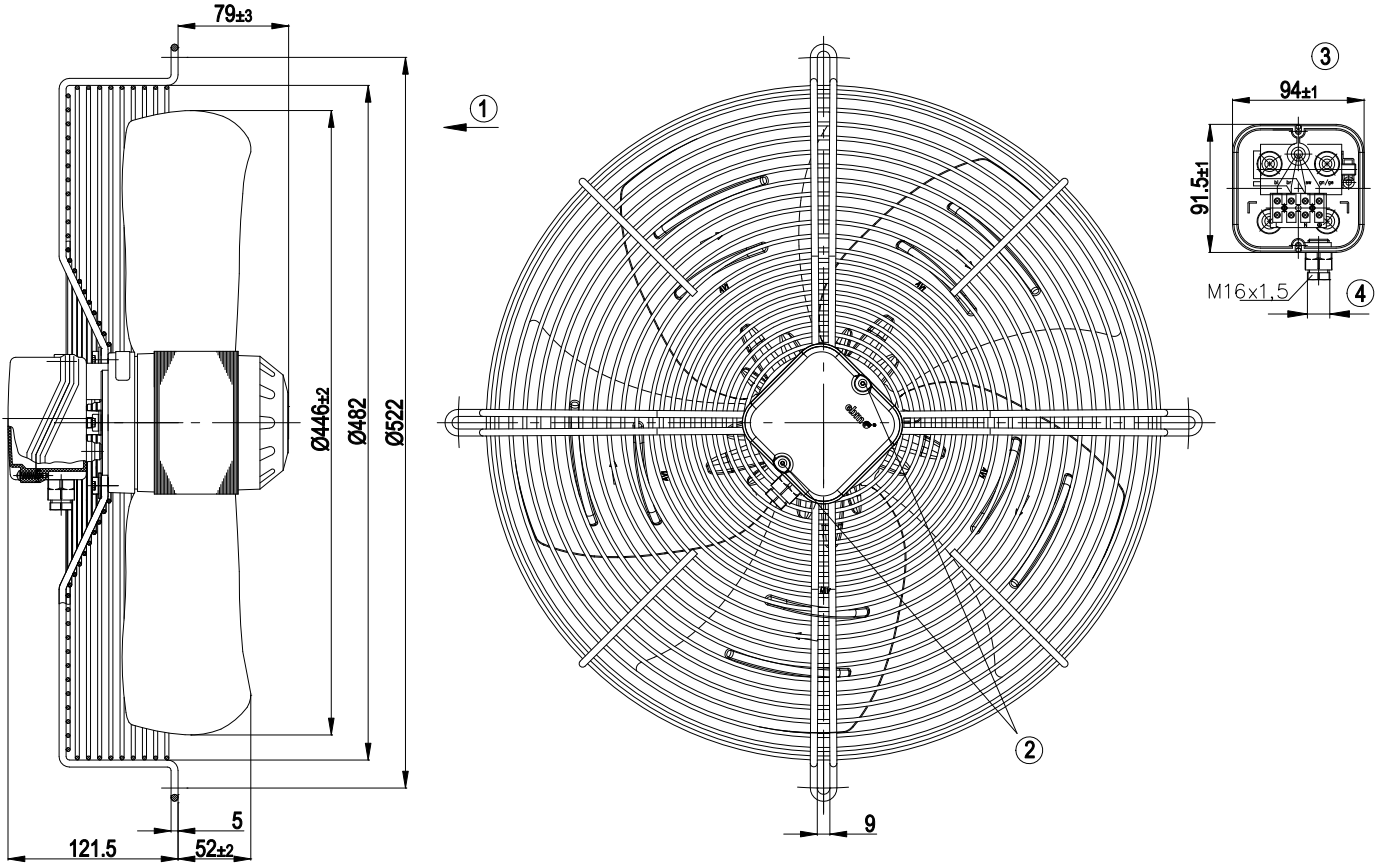
<b>Mass</b>	7.4 kg
<b>Size</b>	450 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of terminal box</b>	ABS plastic, black
<b>Material of blades</b>	Aluminium sheet, coated in black
<b>Material of guard grille</b>	Steel, phosphated and coated in black plastic
<b>Number of blades</b>	5
<b>Direction of air flow</b>	"V"
<b>Direction of rotation</b>	Counter-clockwise, seen on rotor
<b>Type of protection</b>	IP 44; Depending on installation and position as per EN 60034-5
<b>Insulation class</b>	"F"
<b>Humidity class</b>	F2-2
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+ 80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	- 40 °C
<b>Mounting position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	< 0.75 mA
<b>Electrical leads</b>	Via terminal box, integrated capacitor connected via terminal box
<b>Motor protection</b>	Thermal overload protector (TOP) wired internally
<b>Cable exit</b>	Variable
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 60335-1; CE



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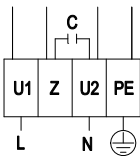
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## Product drawing



1	Direction of air flow "V"
2	Tightening torque $0.8 \pm 0.15$ Nm
3	Illustration without terminal box cover
4	Cable diameter: min. 6 mm, max. 12 mm; tightening torque: $2 \pm 0.15$ Nm

## Connection screen



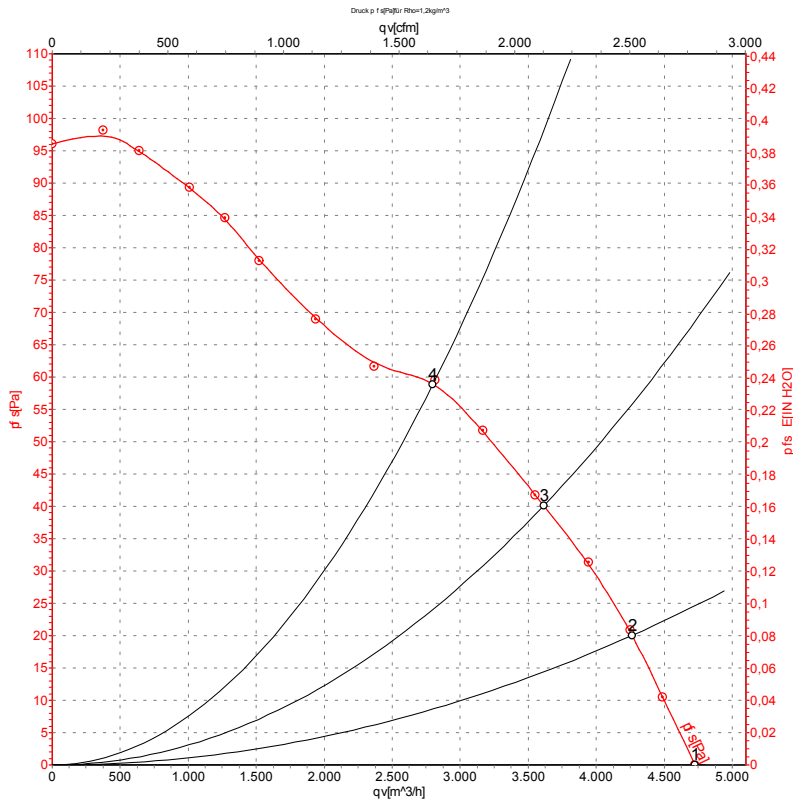
L	= U1 = blue	Z	brown	N	= U2 = black
PE	green/yellow				



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## Charts: Air flow 50 Hz



Measurement: LU-33158

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	Pe	I	qv	Pfs
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	230	50	940	165	0.80	4725	0
2	230	50	925	173	0.82	4265	20
3	230	50	910	180	0.85	3615	40
4	230	50	895	190	0.89	2800	60

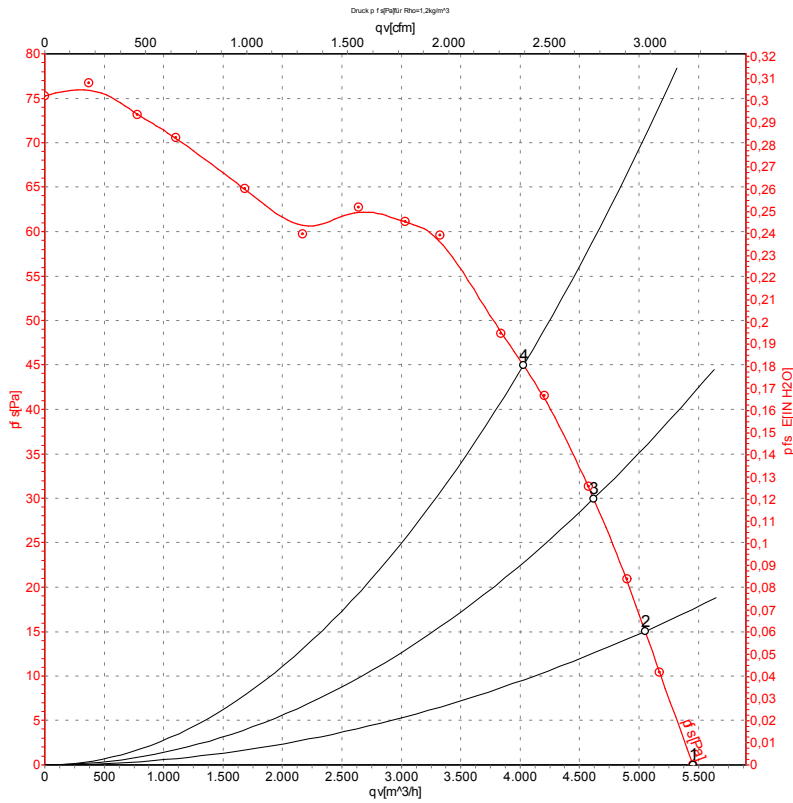
U = Supply voltage · f = Frequency · n = Speed · Pe = Power input · I = Current draw · qv = Air flow · Pfs = Pressure increase



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## Charts: Air flow 60 Hz



Measurement: LU-33159

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: L<sub>wA</sub> measured as per ISO 13347 / L<sub>pA</sub> 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 <sub>e</sub>	I	qv	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	230	60	1070	225	0.98	5455	0
2	230	60	1055	225	1.00	5050	15
3	230	60	1030	231	1.03	4620	30
4	230	60	995	238	1.06	4030	45

U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · P<sub>fs</sub> = Pressure increase

