A4E450-AP01-01

AC axial fan

sickle-shaped blades (S series)



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Amtsgericht (court of registration) Stuttgart · HRA 590344

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**A4E450-AP01-01**		
Motor	**M4E074-GA**		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		fa	fa
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	1400	1600
Power consumption	W	245	355
Current draw	A	1.1	1.55
Capacitor	µF	8	8
Capacitor voltage	VDB	400	400
Capacitor standard		S0 (CE)	S0 (CE)
Max. back pressure	Pa	85	35
Max. back pressure	in. wg	0.34	0.14
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	60	40
Starting current	A	2.8	2.6

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	34.9	30.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		44.4	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.31
09 Air flow q_v	m^3/h	3915
09 Pressure increase p_{fs}	Pa	100
10 Speed (rpm) n	min^{-1}	1345
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-57987

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.

The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

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Technical description

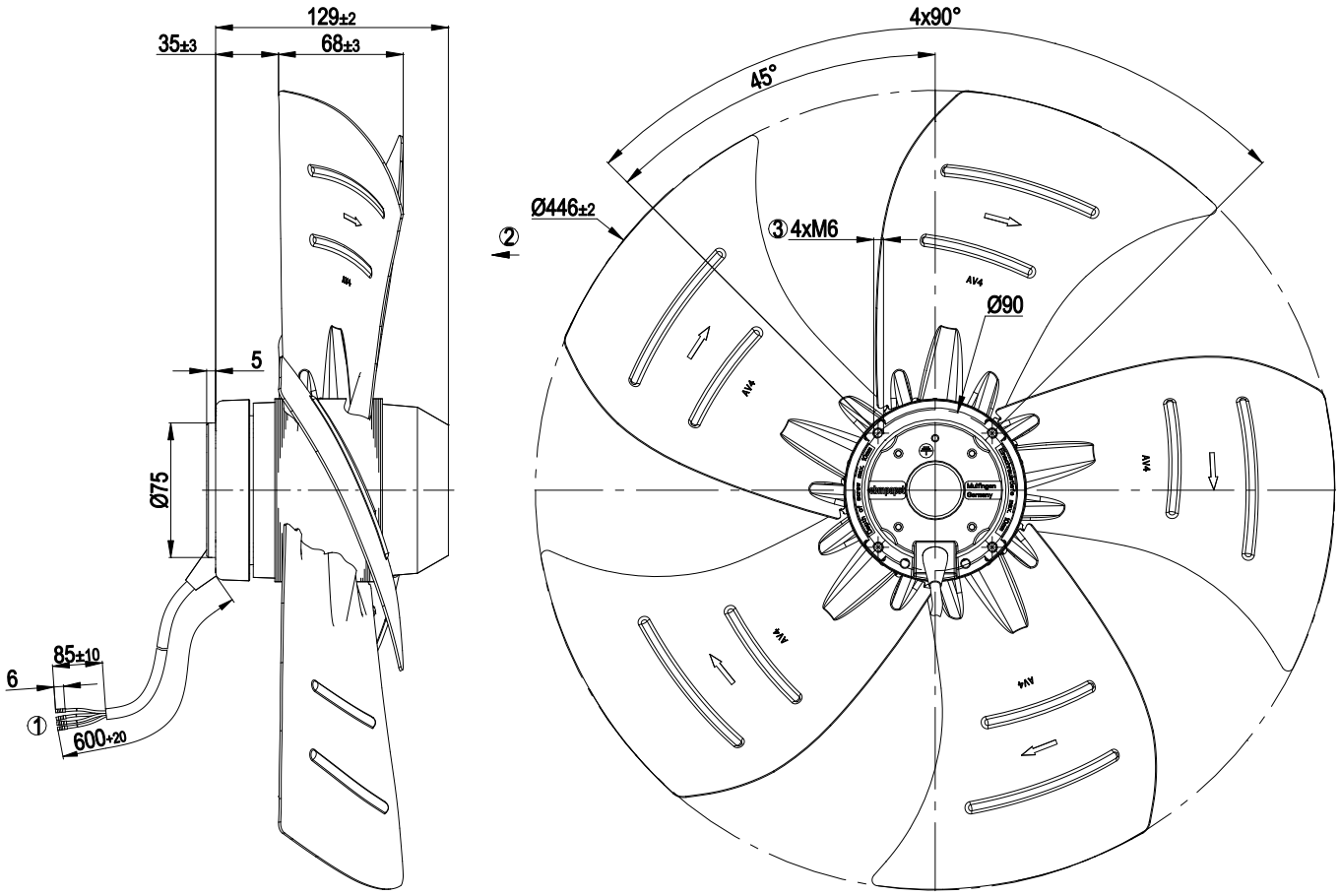
Weight	4.98 kg
Size	450 mm
Motor size	74
Rotor surface	Painted black
Blade material	Sheet steel, painted black
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE; UKCA
Approval	CCC; EAC

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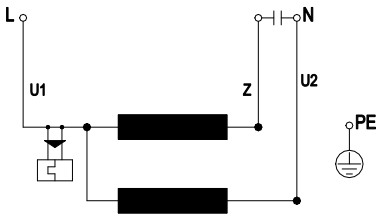
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Product drawing



1	Cable silicone, 4x crimped splices
2	Airflow direction V
3	Max. clearance for screw 10 mm

Connection diagram



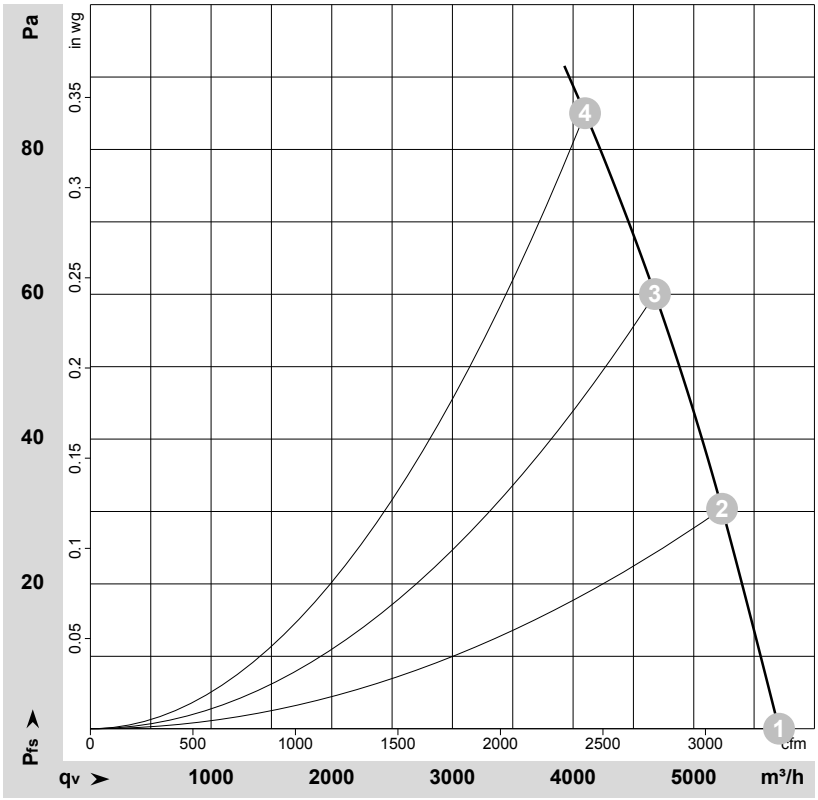
U1	blue	Z	brown	U2	black
PE	green/yellow				

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AC axial fan

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-33262-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	230	50	1400	245	1.10	5705	0	3360	0.00
2	230	50	1385	265	1.19	5235	30	3080	0.12
3	230	50	1365	286	1.28	4680	60	2755	0.24
4	230	50	1340	306	1.36	4100	85	2415	0.34

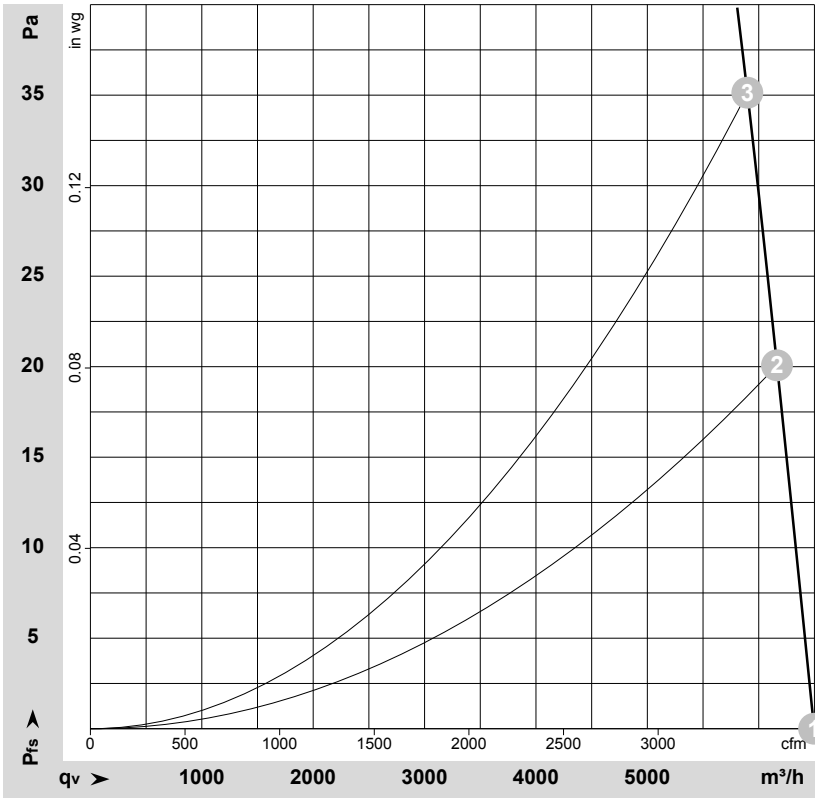
U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-33263-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	230	60	1600	355	1.55	6495	0	3825	0.00
2	230	60	1580	364	1.58	6165	20	3630	0.08
3	230	60	1555	377	1.64	5900	35	3470	0.14

U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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