

AC axial fan

sickle-shaped blades (S series)



A4E420-AP02-01 ebmpapst Datasheet

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Nominal data

Type	A4E420-AP02-01		
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	1430	1680
Power consumption	W	200	285
Current draw	A	0.94	1.25
Capacitor	µF	7	7
Capacitor voltage	VDB	400	400
Max. back pressure	Pa	150	90
Max. back pressure	in. wg	0.6	0.36
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	50	30
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}	%	35.6	29.9	09 Power consumption P_e	kW	0.24
02 Measurement category		A		09 Air flow q_v	m ³ /h	3210
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	100
04 Efficiency grade N		45.7	40	10 Speed (rpm) n	min ⁻¹	1400
05 Variable speed drive		No		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-188538



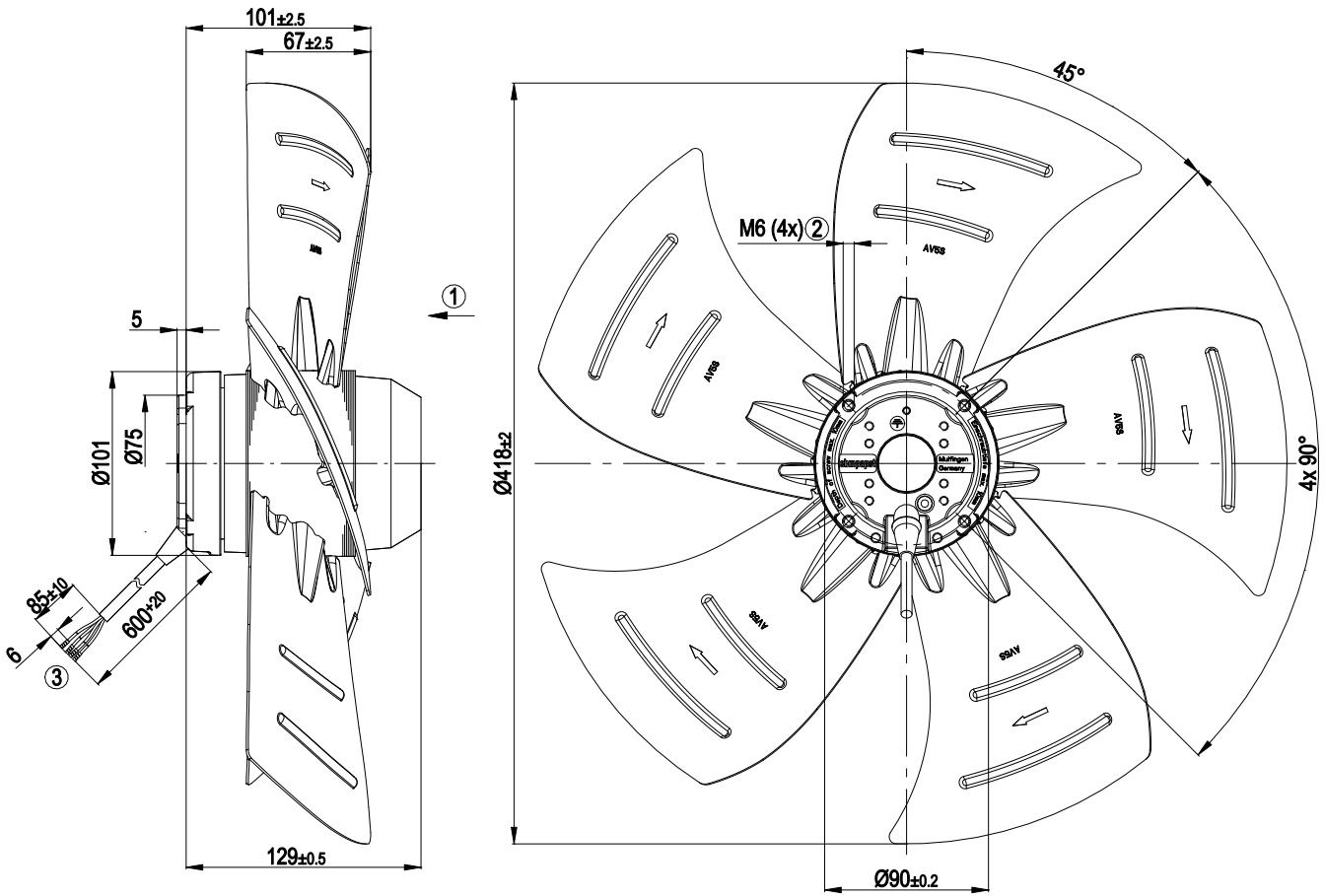
Technical description

Weight	4.83 kg
Size	420 mm
Motor size	74
Rotor surface	Painted black
Impeller 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	"B"
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	CE
Approval	EAC; CCC

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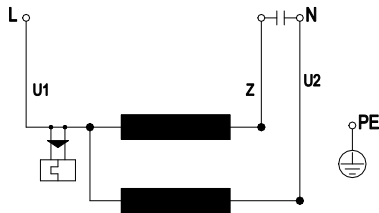
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Product drawing



1	Direction of air flow "V"
2	Clearance for screw 8 - 10 mm
3	Wire H03VV-F4G0.5, 4x crimped splices

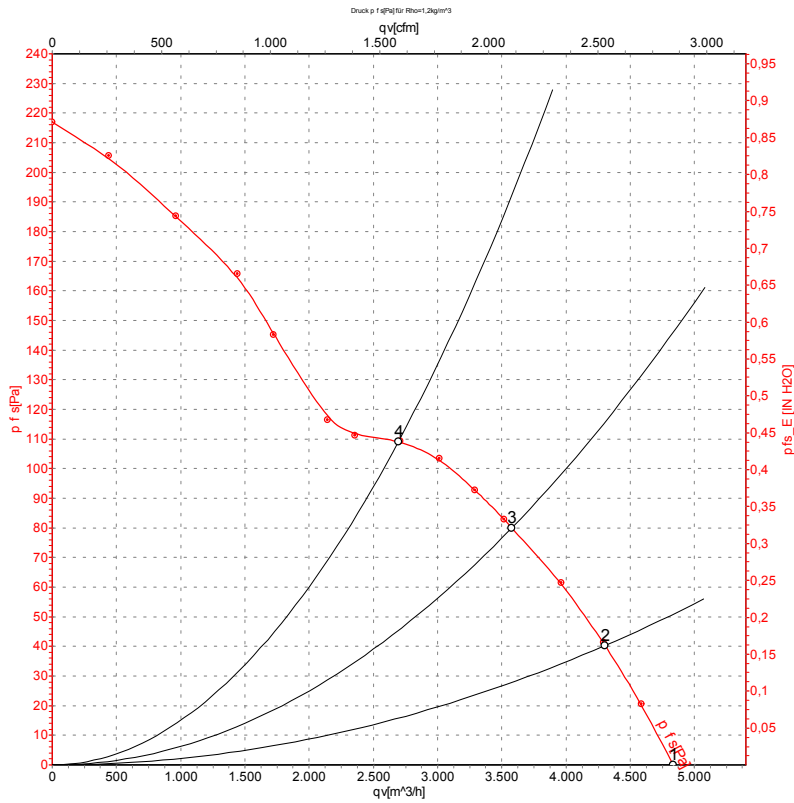
Connection diagram



U1	blue	Z	brown	U2	black
PE	green/yellow				



Curves: Air performance 50 Hz



Measurement: LU-28820-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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.

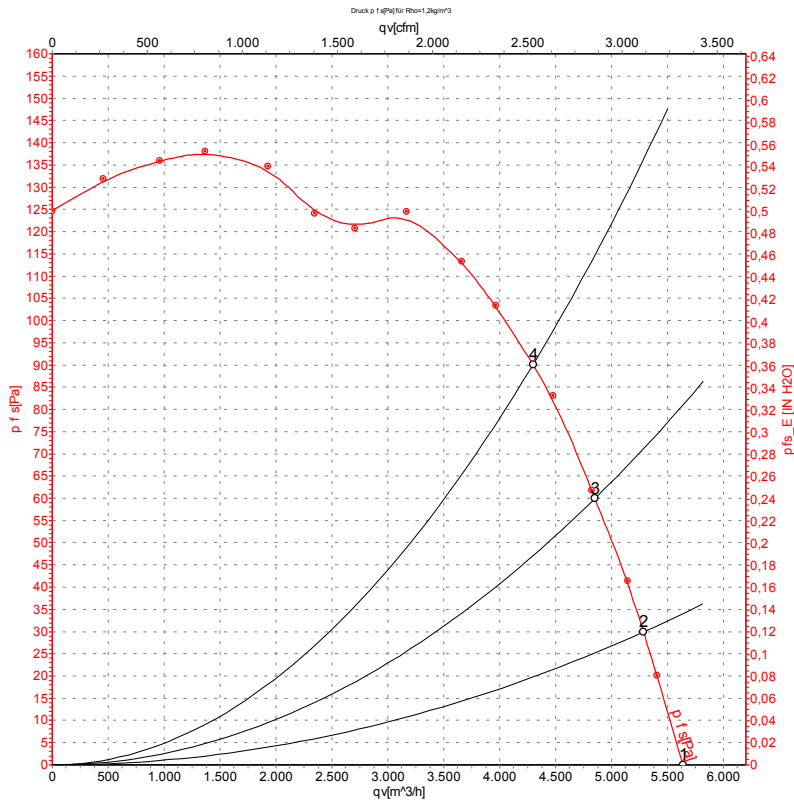
Measured values

	U	f	n	P _e	I	q _V	P _{fs}	q _V	P _{fs}
	V	Hz	min ⁻¹	W	A	m³/h	Pa	cfm	in. wg
1	230	50	1430	200	0.94	4835	0	2845	0.00
2	230	50	1420	225	1.03	4305	40	2535	0.16
3	230	50	1400	252	1.14	3580	80	2105	0.32
4	230	50	1380	277	1.24	2695	110	1585	0.44

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



Curves: Air performance 60 Hz



Measurement: LU-28821-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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 _{is}	q _v	P _{is}
	V	Hz	min ⁻¹	W	A	m³/h	Pa	cfm	in. wg
1	230	60	1680	285	1.25	5635	0	3320	0.00
2	230	60	1660	304	1.33	5285	30	3110	0.12
3	230	60	1625	330	1.45	4850	60	2855	0.24
4	230	60	1590	356	1.55	4295	90	2530	0.36

U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · P_{is} = Pressure increase

