A4E420-AK02-10

AC axial fan

sickle-shaped blades (S series)



ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A4E420-AK02-10**
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	inH2O	0.6	0.36
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	70	50
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 ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	31.5	30
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		41.5	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.26
09 Air flow q_v	m^3/h	3295
09 Pressure increase p_{fs}	Pa	91
10 Speed (rpm) n	min^{-1}	1395
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 Pa

LU-28820

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Technical description

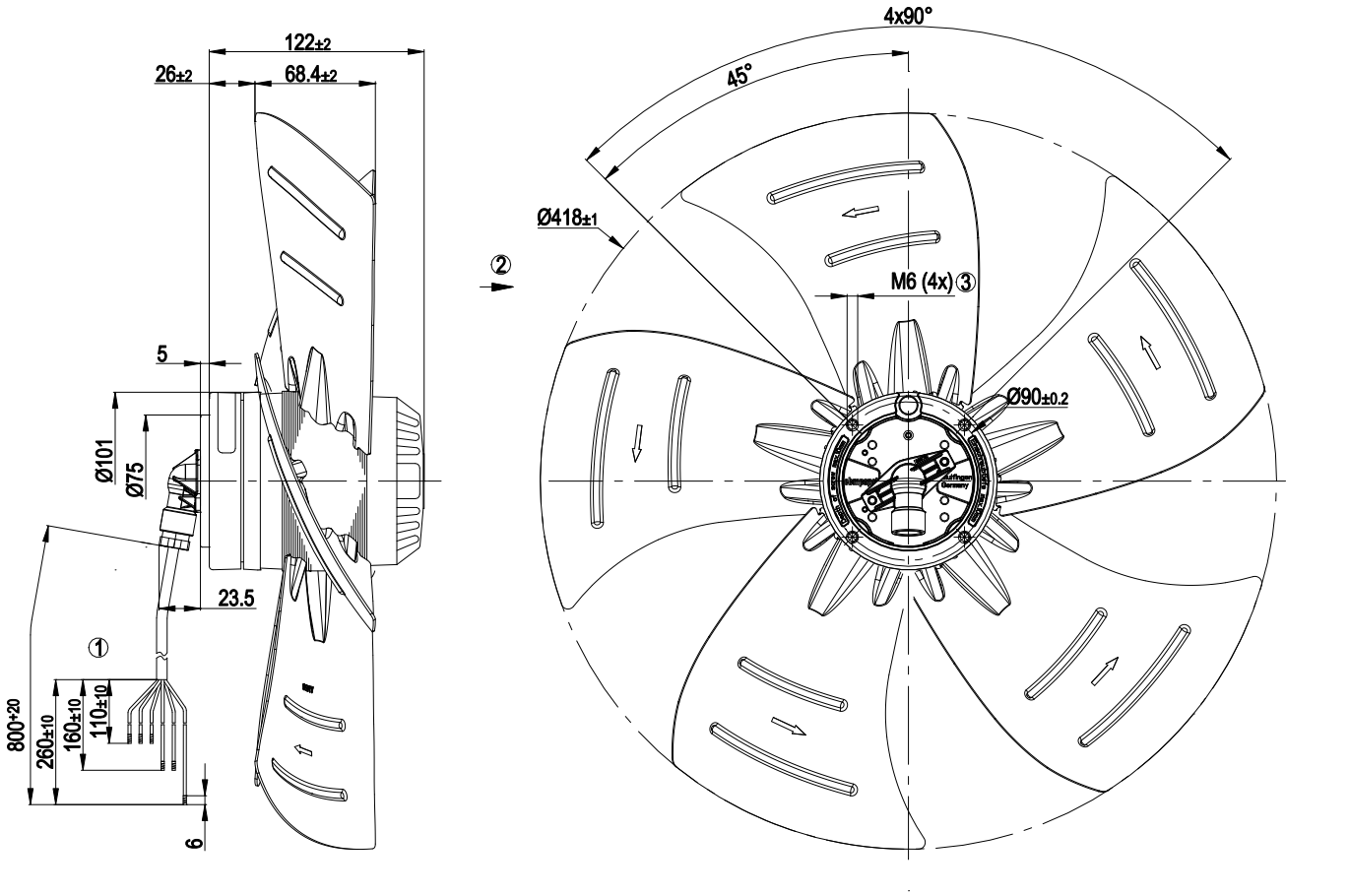
Weight	5 kg
Fan size	420 mm
Rotor surface	Painted black
Blade material	Sheet steel, painted black
Number of blades	5
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-2
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) with basic insulation
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

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Product drawing



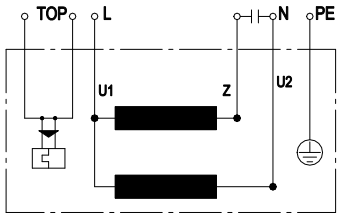
1	Wire H03VV-F4G0.5, 4x crimped splices
2	Direction of air flow "A"
3	Clearance for screw 10 mm

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Connection diagram



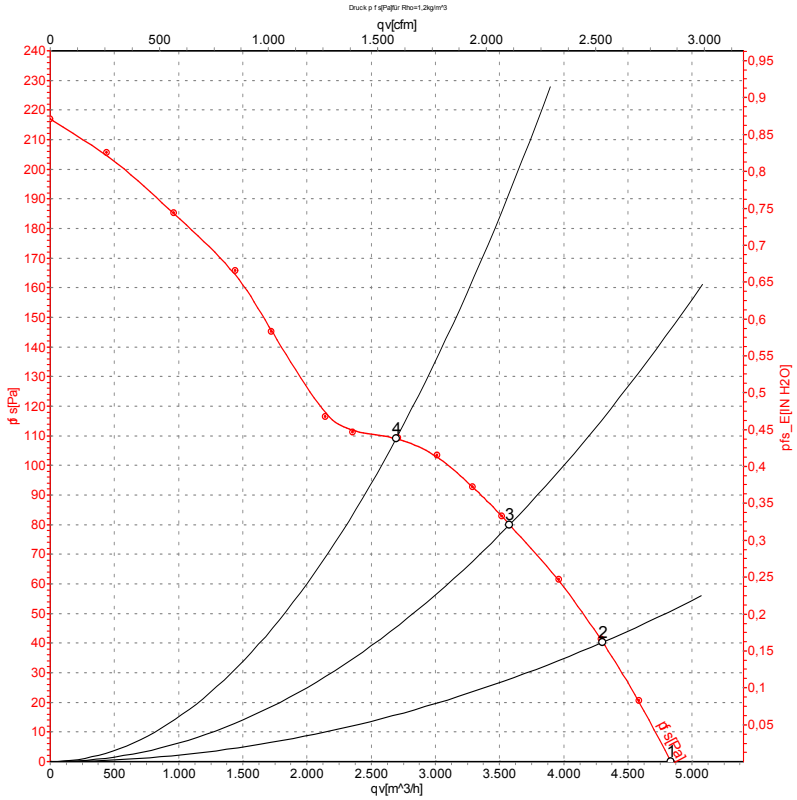
U1	blue	Z	brown	U2	black
PE	green/yellow	TOP	2x gray		

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AC axial fan

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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 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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
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

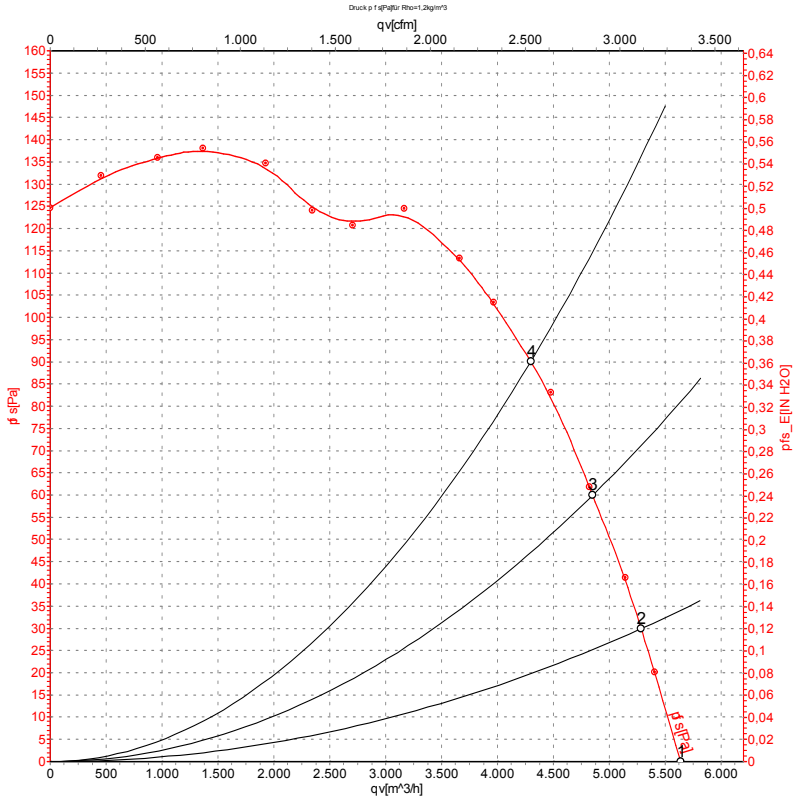
U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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AC axial fan

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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 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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
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 = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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