A4D420-AP02-01

AC axial fan

sickle-shaped blades (S series)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A4D420-AP02-01**
Motor	**M4D074-GA**

Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Y	Y
Frequency	Hz	50	60
Method of obtaining data		fa	fa
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	1430	1660
Power consumption	W	160	235
Current draw	A	0.44	0.45
Max. back pressure	Pa	160	120
Max. back pressure	inH2O	0.64	0.48
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	65	40

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}	%	34.5	29.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		45	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.22
09 Air flow q_v	m^3/h	3540
09 Pressure increase p_{fs}	Pa	81
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-29817

ebmpapst

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Technical description

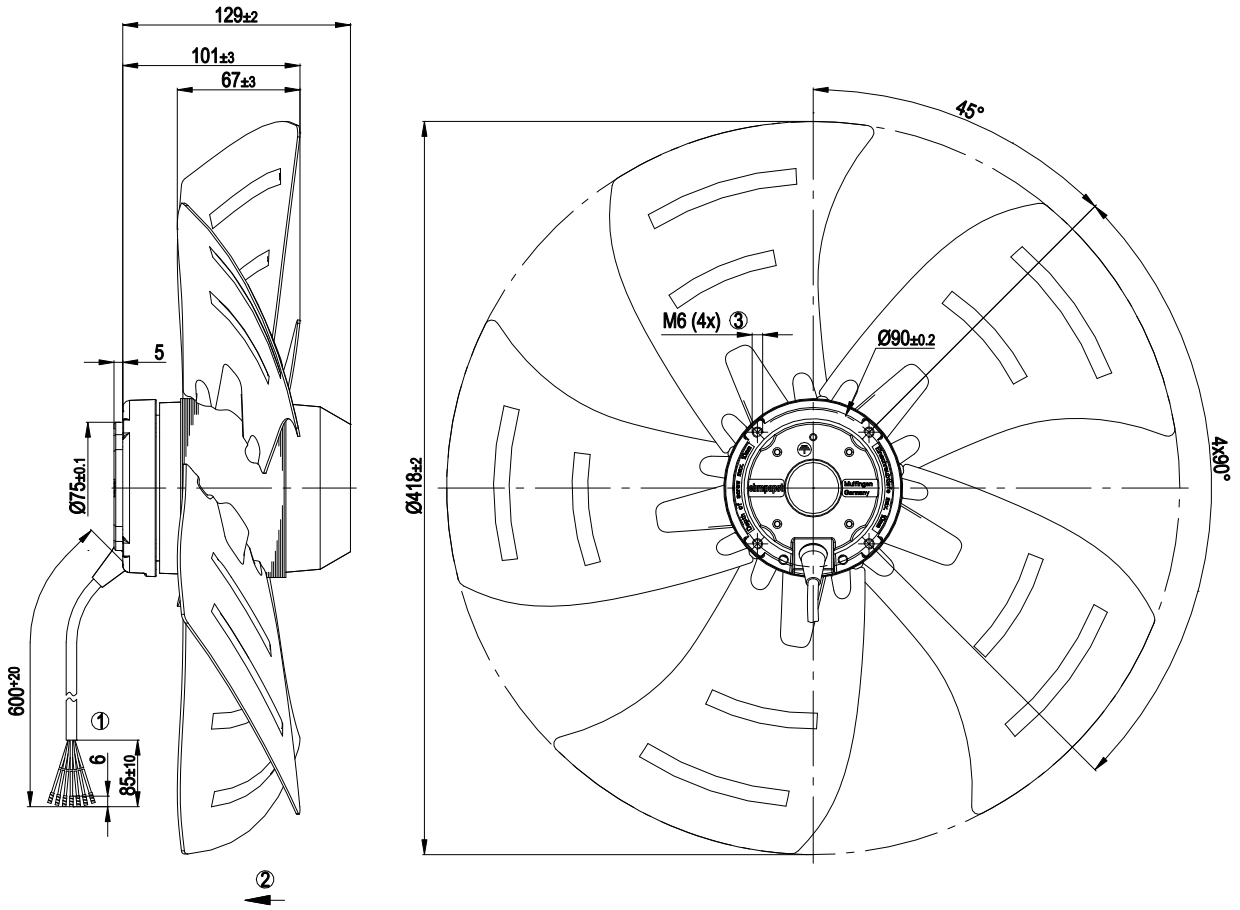
Weight	4.8 kg
Fan size	420 mm
Rotor surface	Painted black
Blade material	Sheet steel, painted black
Number of blades	5
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0+
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
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1
Approval	CCC

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Product drawing



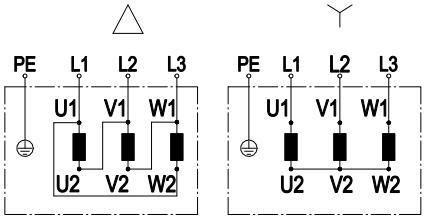
1	Cable PVC 7G 0.5 mm², 7x crimped splices
2	Direction of air flow "V"
3	Max. clearance for screw 10 mm

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Connection diagram



Change of rotation direction by reversing two phases

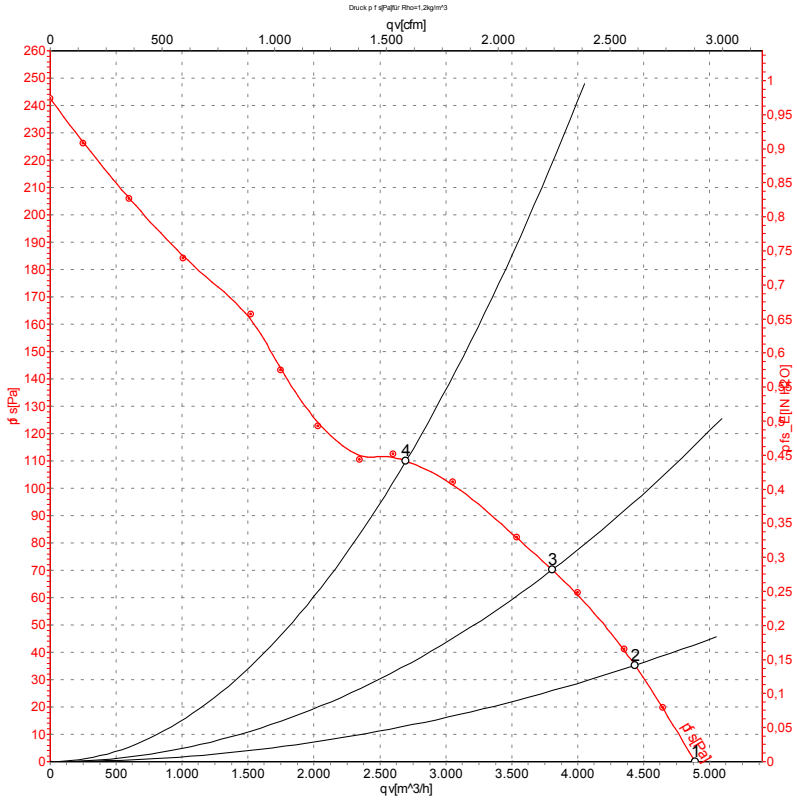
	Three-phase motor	Δ	Delta connection	Y	Star connection
L1	= U1 = black	L2	= V1 = blue	L3	= W1 = brown
U2	green	V2	white	W2	yellow
PE	green/yellow				

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AC axial fan

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Curves: Air performance 50 Hz



Measurement: LU-29817-1

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	400	50	1430	160	0.44	4890	0	2880	0.00
2	400	50	1420	188	0.48	4435	35	2610	0.14
3	400	50	1400	218	0.51	3805	70	2240	0.28
4	400	50	1375	256	0.55	2700	110	1590	0.44

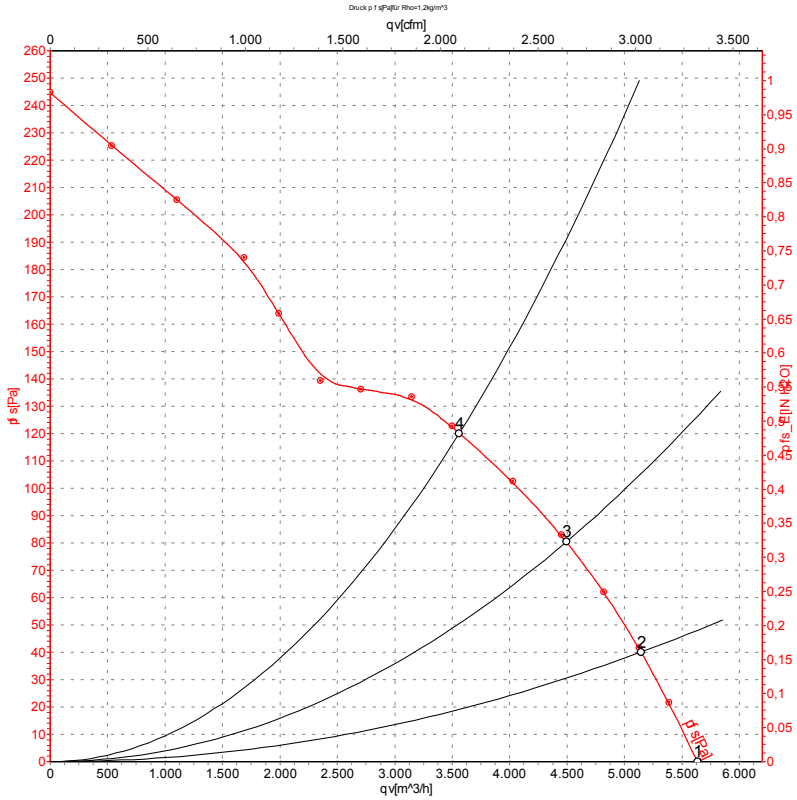
U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Curves: Air performance 60 Hz



Measurement: LU-29818-1

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	400	60	1660	235	0.45	5635	0	3315	0.00
2	400	60	1635	271	0.52	5145	40	3025	0.16
3	400	60	1595	315	0.57	4495	80	2645	0.32
4	400	60	1550	365	0.65	3560	120	2095	0.48

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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