

A4D420-AP02-01 ebmpapst Datasheet

sales@fansco.com

www.fansco.com

## 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 <sup>-1</sup>	1430	1660
Power consumption	W	160	235
Current draw	A	0.44	0.45
Max. back pressure	Pa	160	120
Max. back pressure	in. wg	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 Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency $\eta_{es}$	%	33.7	29.6	09 Power consumption $P_e$	kW	0.22
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	3210
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	86
04 Efficiency grade N		44.1	40	10 Speed (rpm) n	min <sup>-1</sup>	1380
05 Variable speed drive		No		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-188457

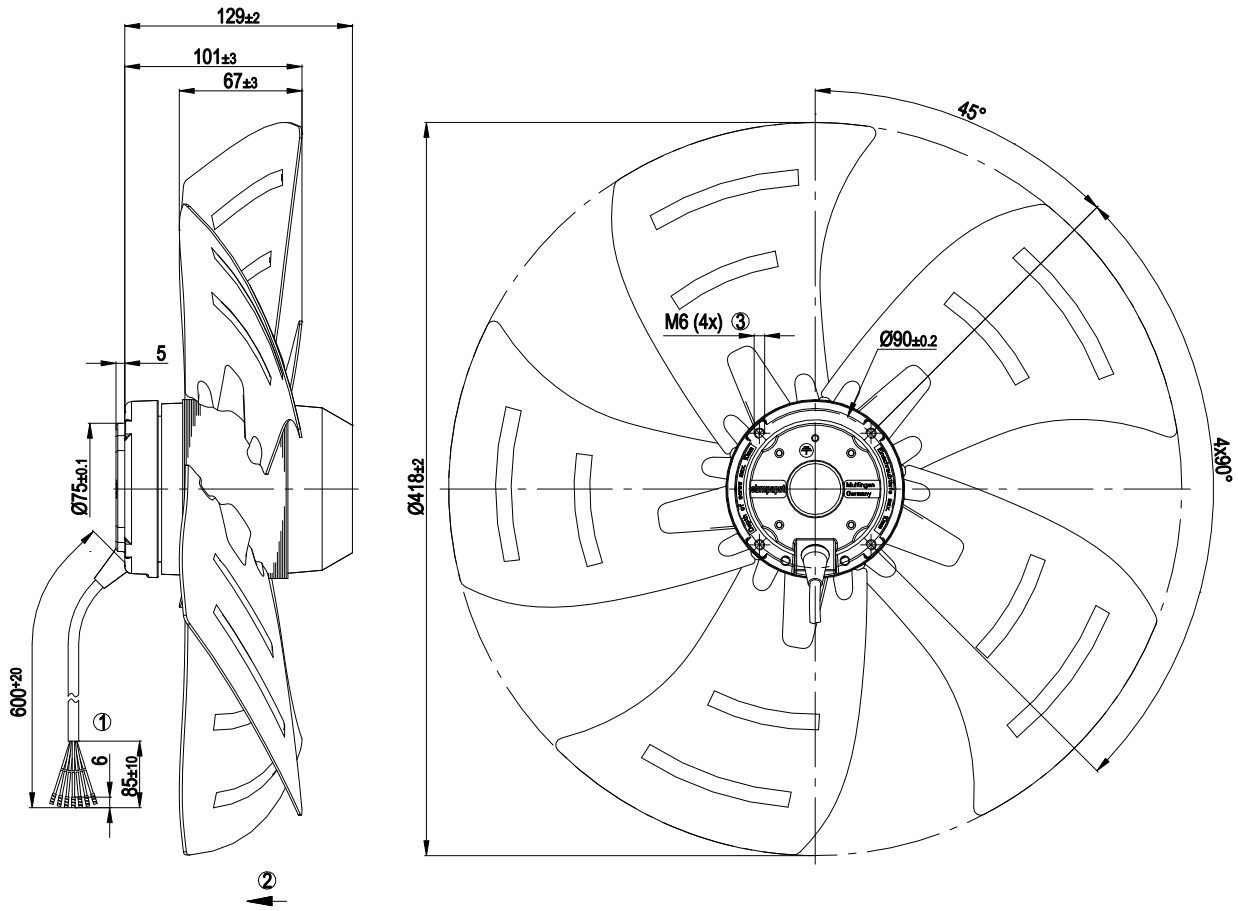
The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).  
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst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



### Technical description

Weight	4.8 kg
Size	420 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	"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
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	CCC

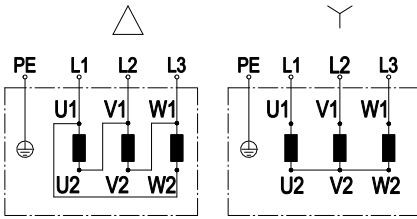
Product drawing



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



## Connection diagram

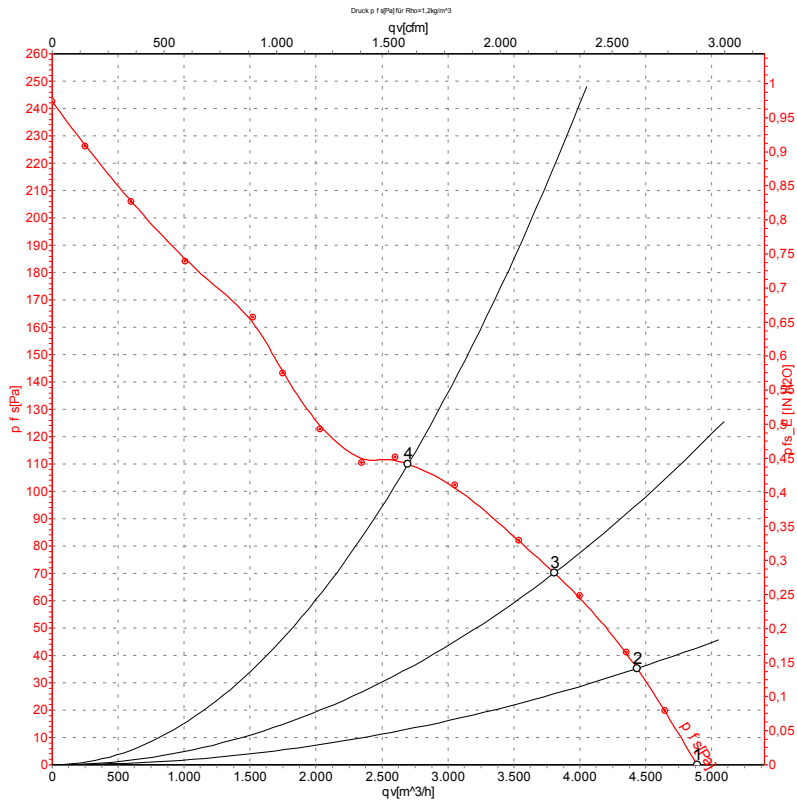


Change of rotation direction by reversing two phases

	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				



## 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.

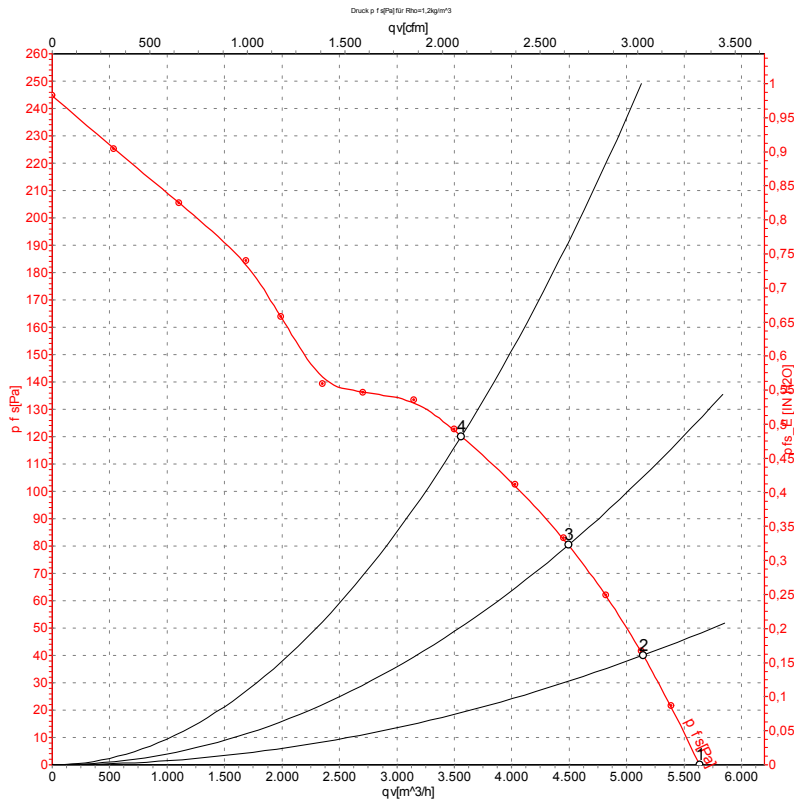
## Measured values

	U	f	n	P <sub>e</sub>	I	q <sub>v</sub>	P <sub>is</sub>	q <sub>v</sub>	P <sub>is</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	in. wg
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 = Voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · P<sub>is</sub> = Pressure increase



## 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 <sub>e</sub>	I	q <sub>V</sub>	P <sub>fs</sub>	q <sub>V</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	in. wg
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 = Voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>V</sub> = Air flow · P<sub>fs</sub> = Pressure increase

