

AC axial fan

sickled blades (S series)

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Nominal data

Type	A4D400-AP12-16				
Motor	M4D074-EI				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400
Connection		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		fa	fa	fa	fa
Valid for approval / standard		CE	CE	CE	CE
Speed	min ⁻¹	1450	1690	1450	1690
Power input	W	135	185	135	185
Current draw	A	0.76	0.68	0.44	0.39
Max. back pressure	Pa	150	120	150	120
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	40	40	40	40
Starting current	A	3.0	3.0	1.7	1.7

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	32.7	25.1	29.1
Efficiency grade N		43.6	36	40
Power input P_e	kW	0.19		
Air flow q_v	m ³ /h	2595		
Pressure increase p_{fs}	Pa	91		
Speed n	min ⁻¹	1415		

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



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Technical features

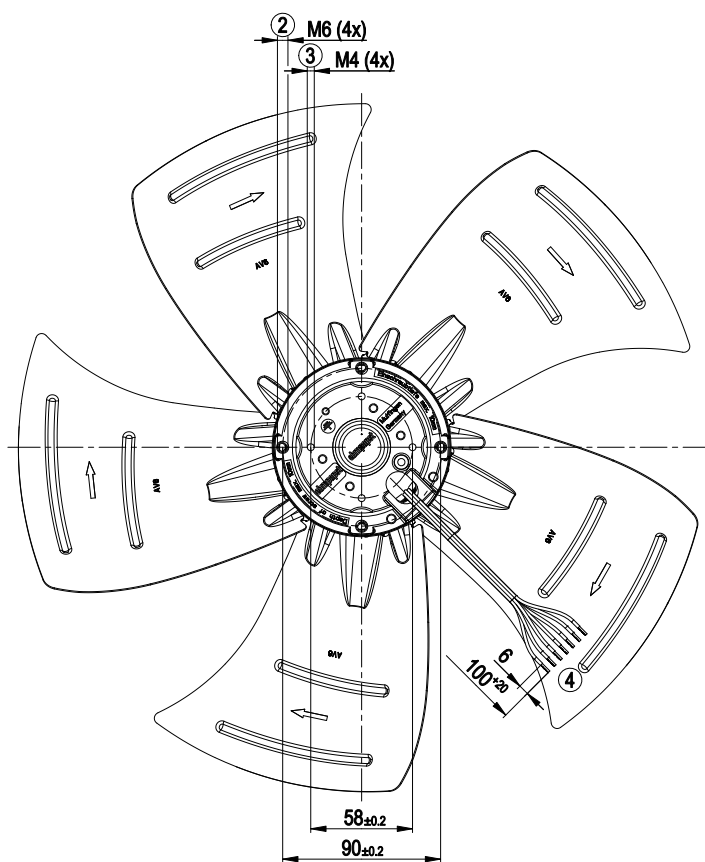
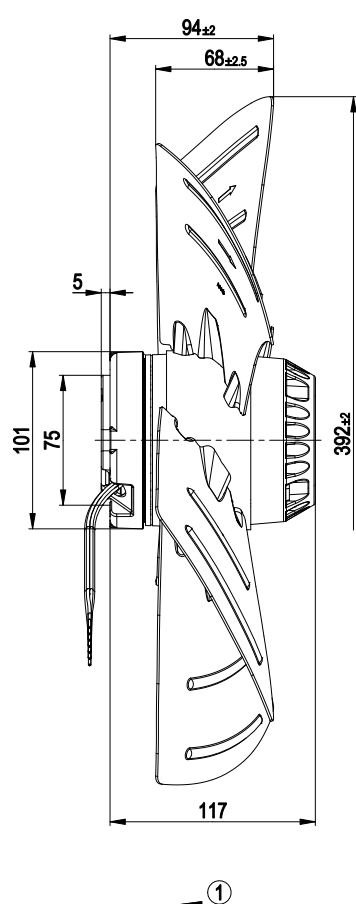
Mass	4.1 kg
Size	400 mm
Surface of rotor	Coated in black
Material of blades	Sheet steel, coated in black
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position as per EN 60034-5 The IP protection is guaranteed only if the provided cable guard and terminal box are installed.
Insulation class	"B"
Humidity class	F1-2
Max. permissible ambient motor temp. (transp./ storage)	+ 70 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Electrical leads	Prepared for terminal box installation/assembly
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1



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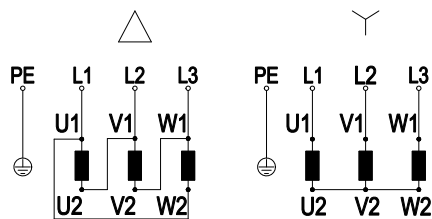
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Product drawing



1	Direction of air flow "V"
2	Depth of screw max. 10 mm
3	Depth of screw max. 10 mm
4	Connection line halogen- and silicone-free 7x 0.5 mm ² , 7x lead tips crimped

Connection screen

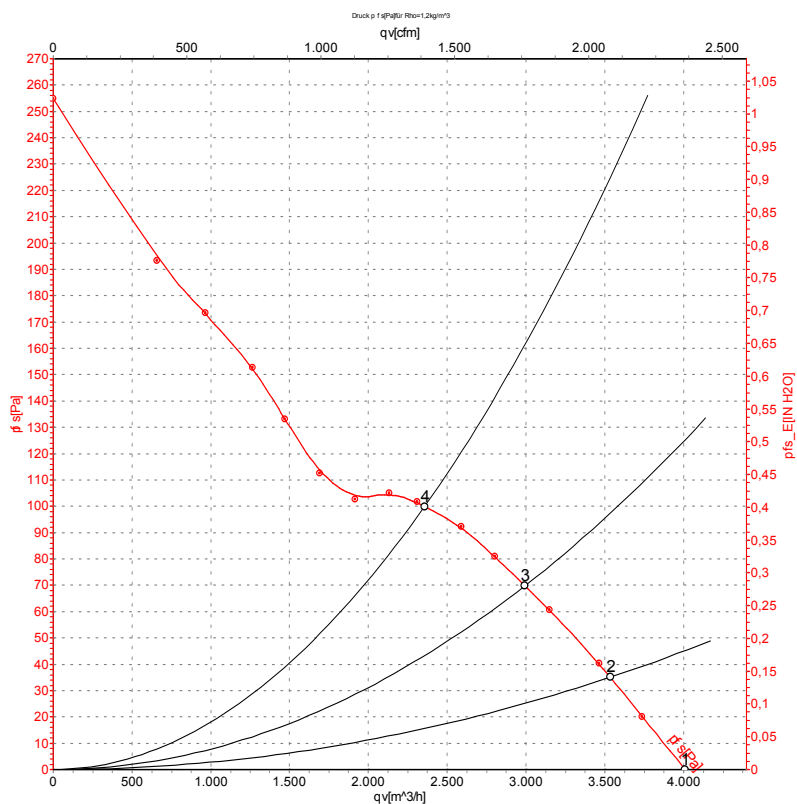


Note: Direction of rotation changes when two phases are reversed

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



Charts: Air flow 50 Hz



Measurement: LU-27622

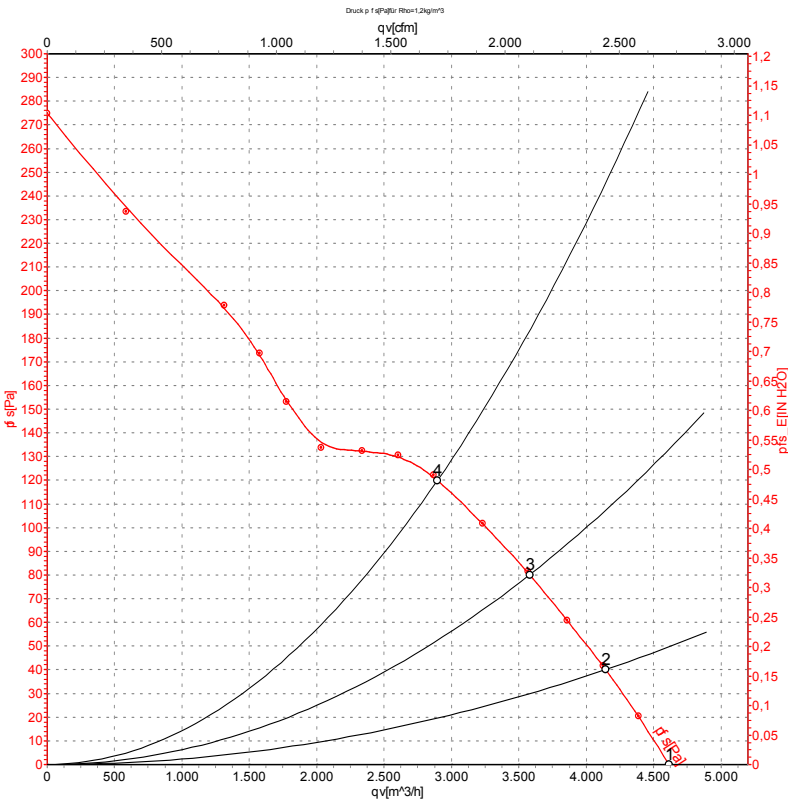
Air performance measured as per ISO 5801
Installation category A. For detailed
information on the measuring set-up, please
contact ebm-papst. Suction-side noise
levels: LwA measured as per ISO 13347 /
LpA measured with 1m distance to fan axis.
The values given are valid under the
measuring conditions mentioned above and
may vary according to the actual installation
situation. With any deviation from the
standard set-up, the specific values have to
be checked and reviewed with the unit
installed.

Measured values

	Conn.	U	f	n	P _e	I	LpA _{in}	LwA _{in}	qv	p _{fs}
		V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	m ³ /h	Pa
1	Y	400	50	1450	135	0.44	65	74	4000	0
2	Y	400	50	1435	161	0.47	65	73	3535	35
3	Y	400	50	1420	182	0.49	65	72	2995	70
4	Y	400	50	1410	203	0.50	67	74	2355	100

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
qv = Air flow · p_{fs} = Pressure increase

Charts: Air flow 60 Hz



Measurement: LU-27623

Air performance measured as per ISO 5801
Installation category A. For detailed
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levels: L_{wA} measured as per ISO 13347 /
L_{pA} measured with 1m distance to fan axis.
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standard set-up, the specific values have to
be checked and reviewed with the unit
installed.

Measured values

	Conn.	U	f	n	P _e	I	L _{pA_{in}}	L _{wA_{in}}	qv	p _{fs}
		V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	m³/h	Pa
1	Y	400	60	1690	185	0.39	69	76	4615	0
2	Y	400	60	1660	223	0.45	70	76	4145	40
3	Y	400	60	1635	256	0.49	69	76	3580	80
4	Y	400	60	1605	290	0.54	70	76	2895	120

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · L_{pA_{in}} = Sound pressure level inlet side · L_{wA_{in}} = Sound power level inlet side
qv = Air flow · p_{fs} = Pressure increase

