A4D500-AM09-07

AC axial fan - HyBlade®

sickled blades (S series)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A4D500-AM09-07**
Motor	**M4D110-GF**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
Connection		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed	min^{-1}	1350	1100	1590	1250
Power input	W	690	480	1050	690
Current draw	A	1.34	0.81	1.57	0.98
Max. back pressure	Pa	155	105	160	100
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	65	65	60	60
Starting current	A	6.5	2.2	7.5	2.5

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 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		33.4	28.6	32.6
Efficiency grade N		40.8	36	40
Power input P_e	kW	0.67		
Air flow q_v	m^3/h	5950		
Pressure increase p_{fs}	Pa	137		
Speed n	min^{-1}	1355		

Data established at point of optimum efficiency

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Technical features

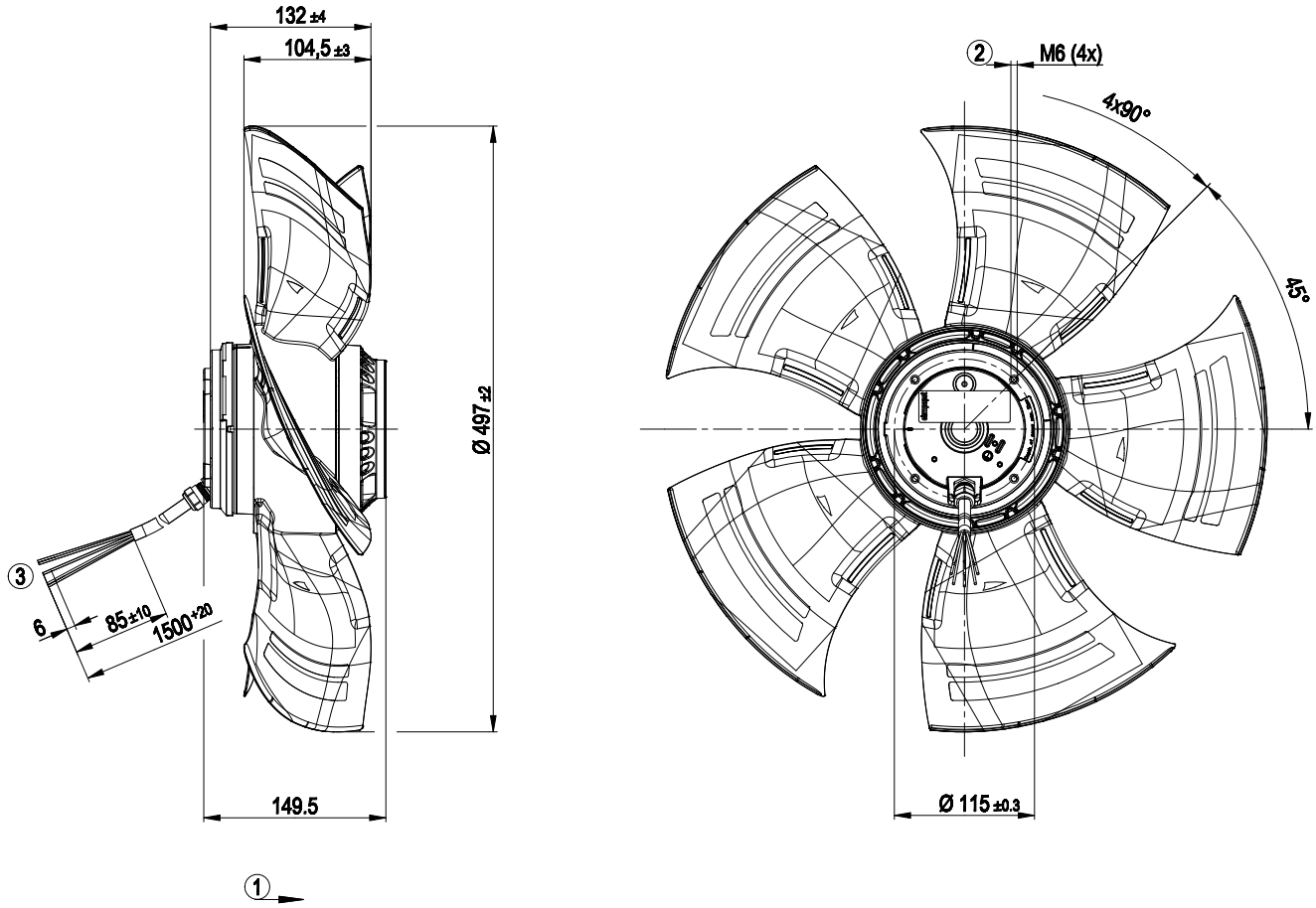
Mass	9.8 kg
Size	500 mm
Surface of rotor	Coated in black
Material of terminal box	PP plastic
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Direction of air flow	"A"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °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 with anti-freezing grease
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	VDE

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Product drawing



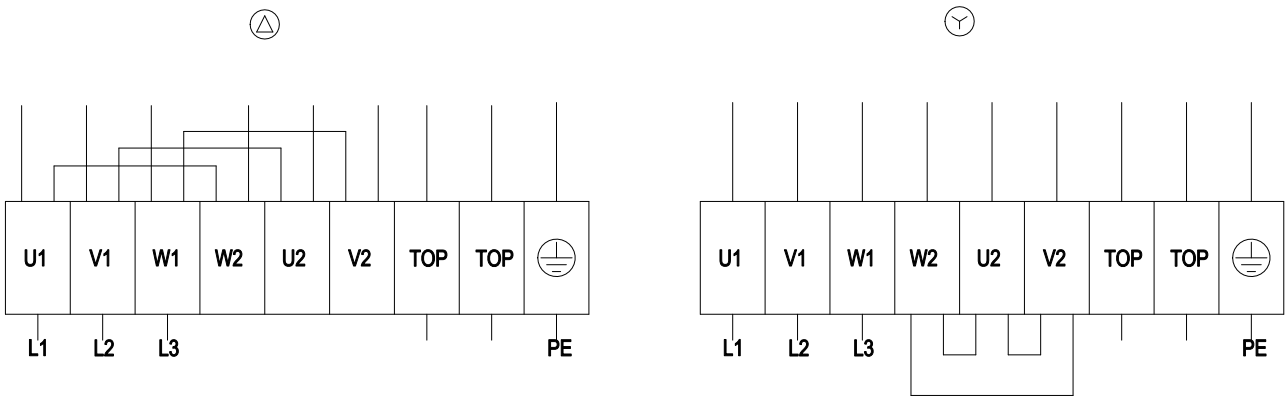
1	Direction of air flow "A"
2	Depth of screw max. 12 mm
3	Connection line silicone 9G 0.75 mm², 9x brass lead tips crimped

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Connection screen



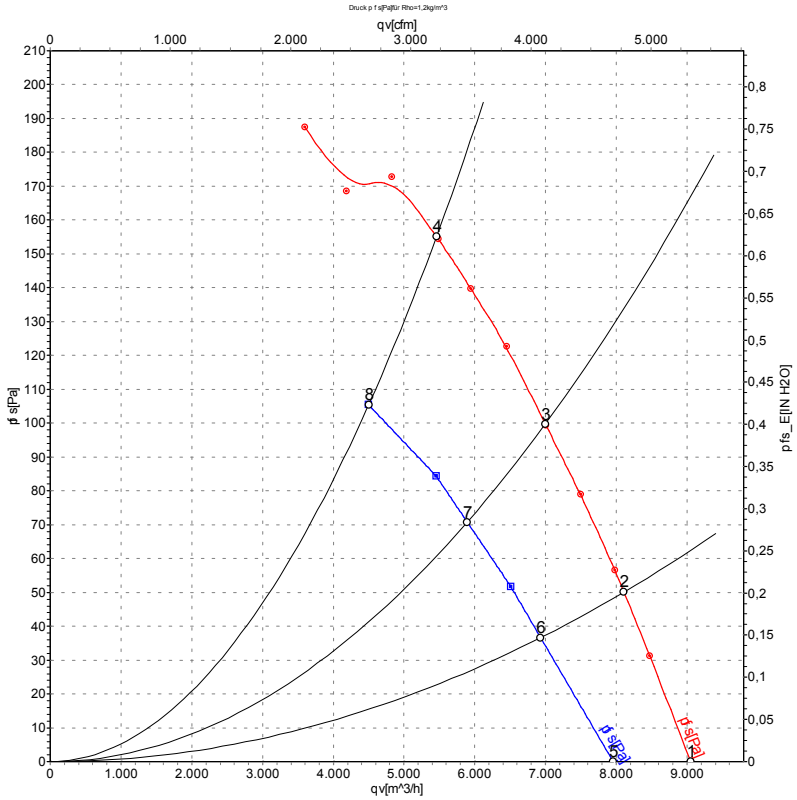
Δ	Delta-connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

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Charts: Air flow 50 Hz



Measurement: LU-105632
Measurement: LU-106081

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}	LwA_{out}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	400	50	1395	504	1.13	68	75	75	9050	0
2	Δ	400	50	1380	570	1.19	65	72	72	8110	50
3	Δ	400	50	1365	628	1.26	64	71	71	6995	100
4	Δ	400	50	1350	690	1.34	65	72	72	5460	155
5	Y	400	50	1220	386	0.65	65	72	72	7955	0
6	Y	400	50	1180	418	0.70	62	69	69	6930	37
7	Y	400	50	1140	449	0.75	60	67	67	5895	71
8	Y	400	50	1100	480	0.81	59	67	66	4500	105

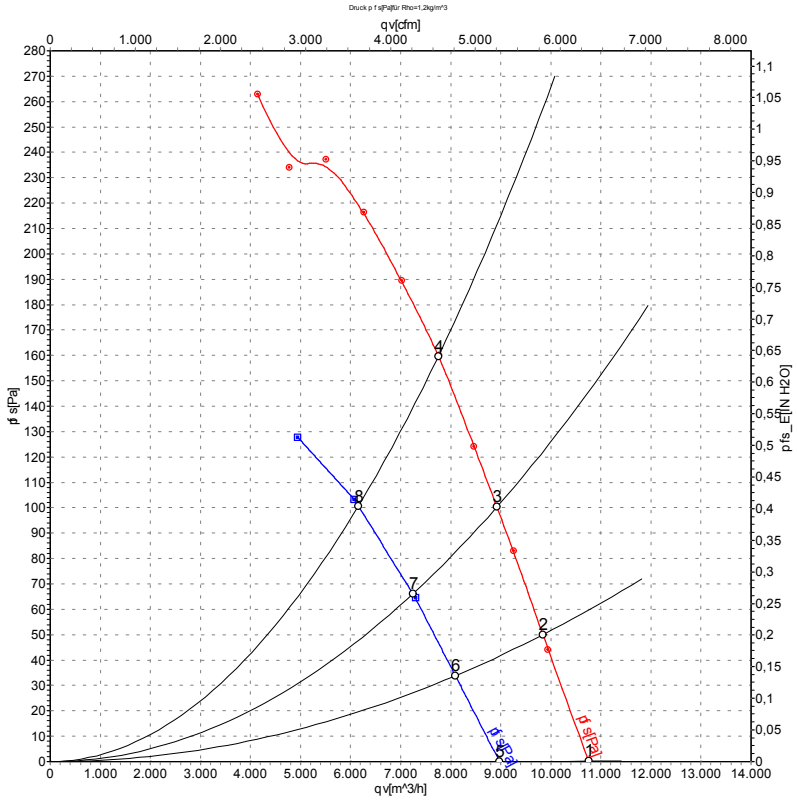
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



Measurement: LU-105633
Measurement: LU-106114

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}	LwA_{out}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	480	60	1645	824	1.32	71	78	79	10760	0
2	Δ	480	60	1630	895	1.39	69	76	77	9840	50
3	Δ	480	60	1610	969	1.47	68	75	75	8925	100
4	Δ	480	60	1590	1050	1.57	67	75	75	7755	160
5	Y	480	60	1375	599	0.84	67	74	75	8975	0
6	Y	480	60	1330	632	0.89	65	72	72	8095	34
7	Y	480	60	1290	662	0.93	63	70	70	7245	66
8	Y	480	60	1250	690	0.98	62	69	68	6160	100

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