AC axial fan - HyBlade

sickle-shaped blades (S series)

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Nominal data

Type	**A8D500-AJ09-01**
Motor	**M8D110-EF**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400	480	480
Wiring		Δ	Y	Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60	60	60
Method of obtaining data		ml	ml	ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE	CE	CE
Speed (rpm)	min^{-1}	665	525	730	480	780	570
Power consumption	W	130	80	170	95	190	120
Current draw	A	0.31	0.15	0.33	0.18	0.34	0.18
Max. back pressure	Pa	40	24	45	21	50	26
Max. back pressure	inH2O	0.16	0.1	0.18	0.08	0.2	0.1
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	80	80	80	80	80	80
Starting current	A	0.75	0.25	0.69	0.23	0.83	0.28

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

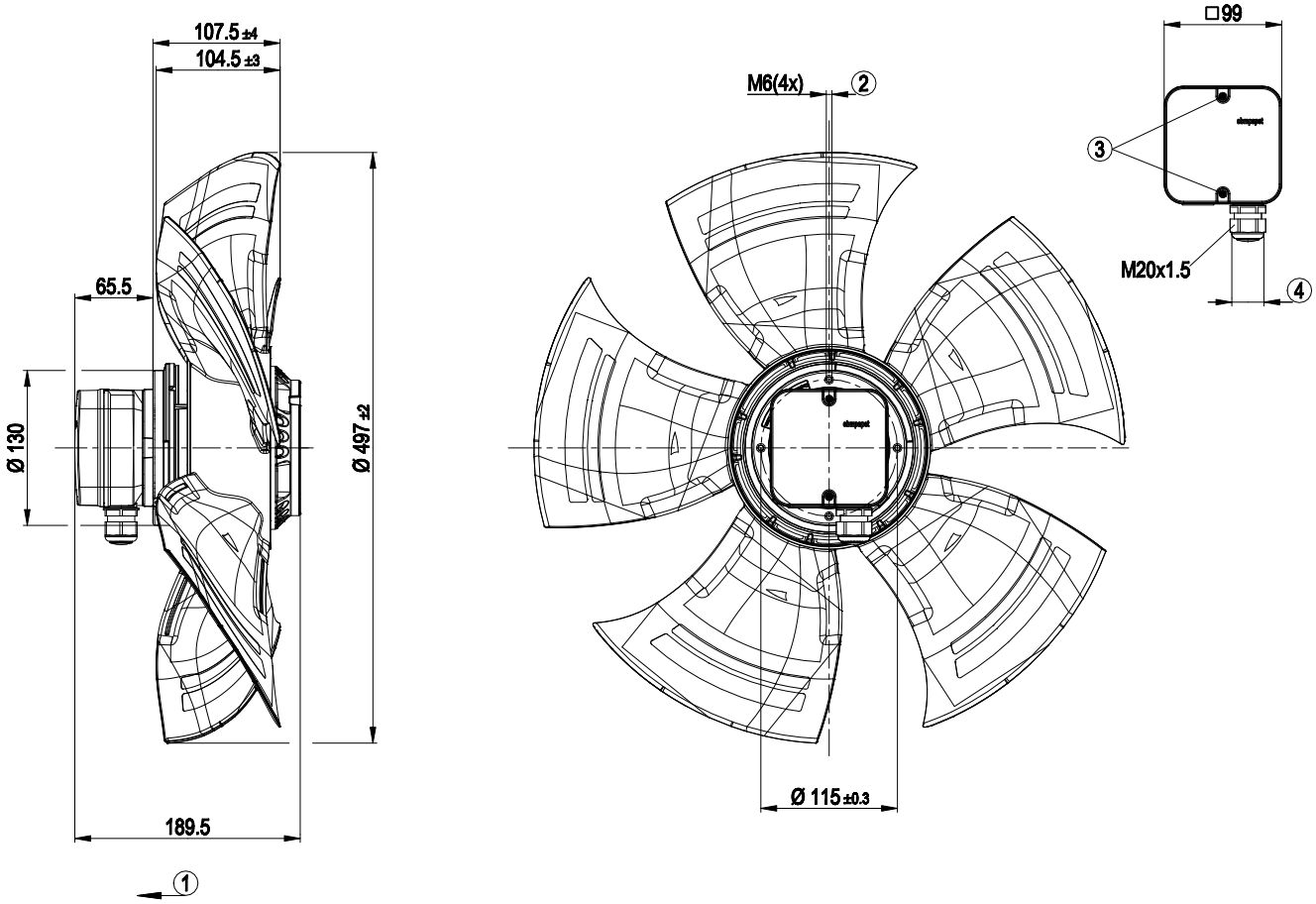
Weight	7.4 kg
Fan size	500 mm
Rotor surface	Painted black
Terminal box material	PP plastic
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-1
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)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	VDE; EAC; CCC

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Product drawing



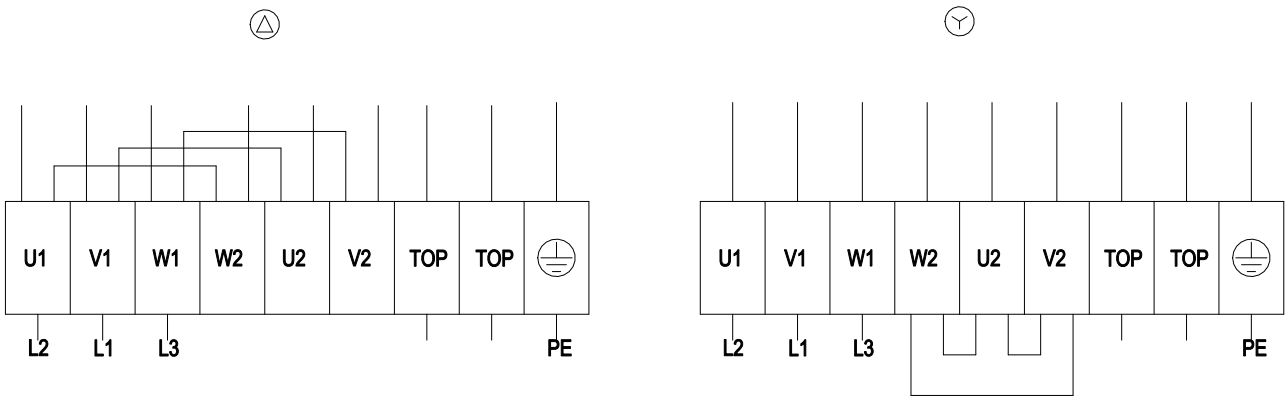
1	Direction of air flow "V"
2	Max. clearance for screw 12mm
3	Tightening torque 1.5 Nm ± 0.2
4	Cable diameter: min. 6 mm, max. 12 mm; tightening torque 2 Nm ±0.3

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Connection diagram



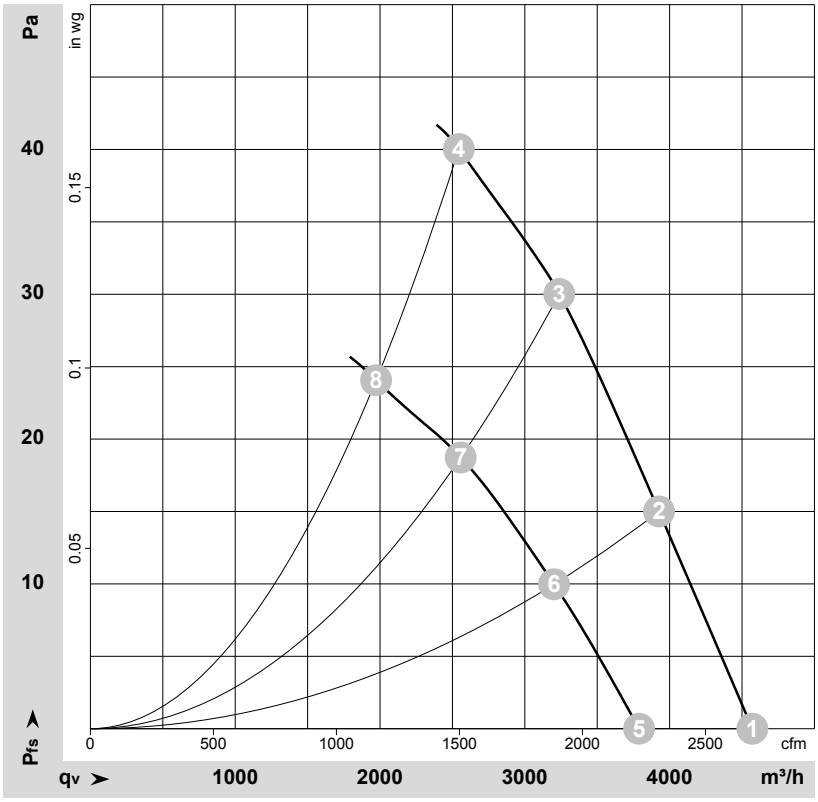
Δ	Delta connection	Y	Star connection	L1	= V1 = blue
L2	= U1 = black	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-152533-1
Measurement: LU-146685-1

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

	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	Δ	400	50	695	102	0.29	55	62	61	4570	0	2690	0.00
2	Δ	400	50	685	112	0.30	52	59	58	3925	15	2310	0.06
3	Δ	400	50	675	121	0.30	48	54	54	3240	30	1905	0.12
4	Δ	400	50	665	130	0.31	48	55	54	2545	40	1500	0.16
5	Y	400	50	585	67	0.12	52	58	57	3790	0	2230	0.00
6	Y	400	50	560	73	0.13	50	56	56	3200	10	1885	0.04
7	Y	400	50	540	77	0.14	45	52	52	2555	19	1505	0.08
8	Y	400	50	525	80	0.15	44	51	51	1975	24	1160	0.10

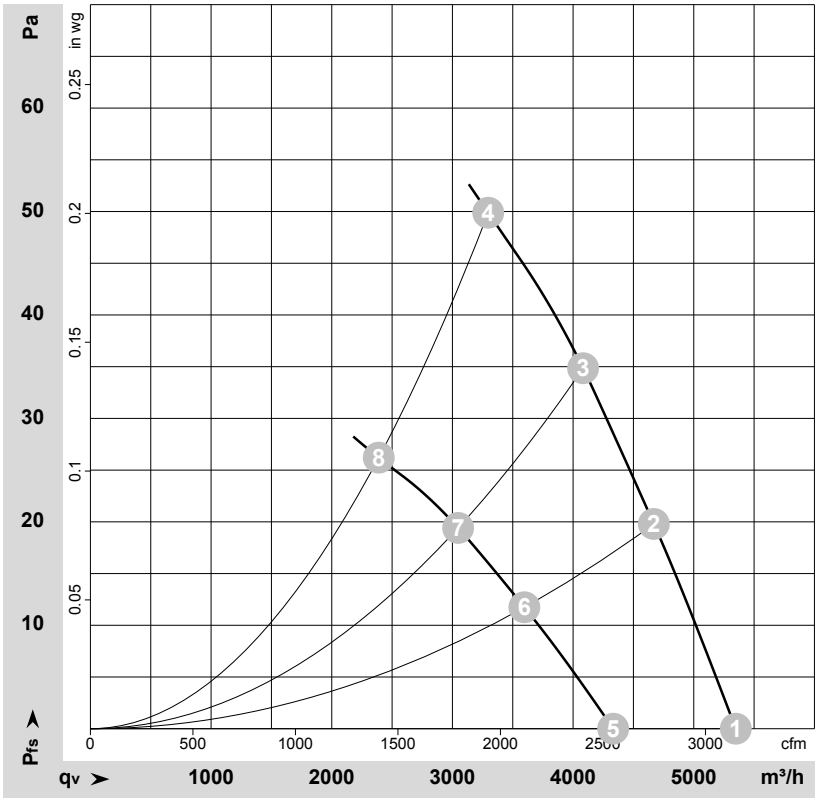
Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-154157-1
Measurement: LU-146673-1

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

	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	Δ	480	60	820	150	0.31	59	65	65	5350	0	3150	0.00
2	Δ	480	60	805	166	0.32	56	62	62	4670	20	2750	0.08
3	Δ	480	60	800	177	0.33	53	60	59	4085	35	2405	0.14
4	Δ	480	60	780	190	0.34	52	59	58	3295	50	1940	0.20
5	Y	480	60	660	101	0.15	54	60	60	4330	0	2550	0.00
6	Y	480	60	625	109	0.16	52	58	58	3595	12	2115	0.05
7	Y	480	60	600	113	0.17	50	56	55	3045	19	1795	0.08
8	Y	480	60	570	120	0.18	47	53	53	2390	26	1405	0.10

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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