AC axial fan

sickle-shaped blades (S series)

Nominal data

Type	**A6D500-AG03-06**
Motor	**M6D110-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		-	-	-	-	-	-
Speed (rpm)	min^{-1}	920	775	1040	785	1085	890
Power consumption	W	310	220	430	270	480	330
Current draw	A	0.75	0.36	0.81	0.47	0.84	0.48
Max. back pressure	Pa	75	50	90	45	100	60
Max. back pressure	inH2O	0.3	0.2	0.36	0.18	0.4	0.24
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	90	90	75	75	75	75
Starting current	A	2.5	0.85	2.3		2.8	

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	8 kg
Fan size	500 mm
Rotor surface	Painted gray
Terminal box material	PP plastic
Blade material	Sheet aluminum, painted gray
Number of blades	5
Blade pitch	0°
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F5
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 top; rotor on bottom on request
Condensation drainage holes	None
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
Approval	EAC; VDE

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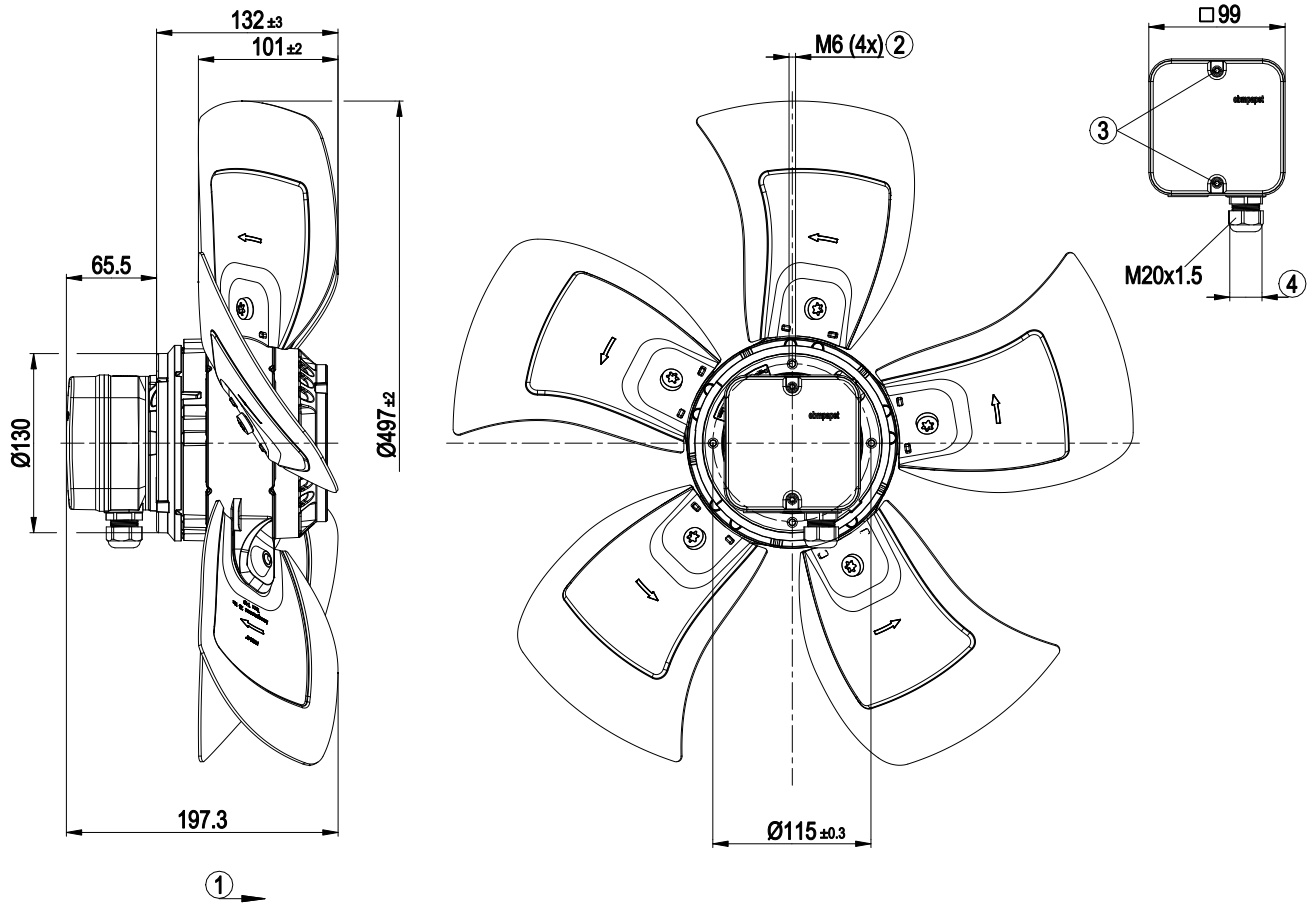
Product drawing



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

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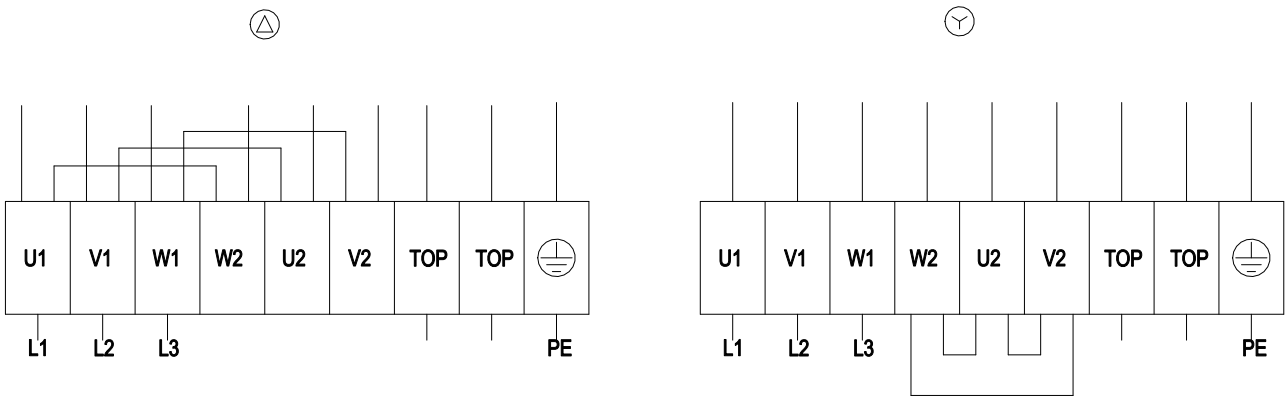
Connection diagram



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

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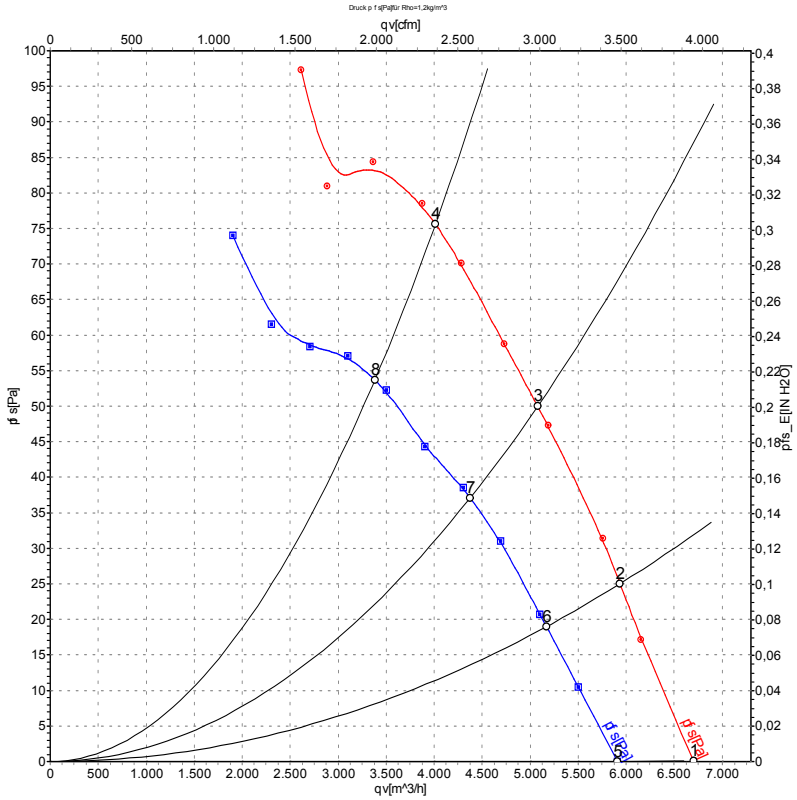
Curves: Air performance 50 Hz



Measurement: LU-104095-1
Measurement: LU-104099-1

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}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	Δ	400	50	945	242	0.68	63	69	69	6700	0	3945	0.00
2	Δ	400	50	935	263	0.68	64	70	70	5935	25	3495	0.10
3	Δ	400	50	930	283	0.69	64	70	69	5080	50	2990	0.20
4	Δ	400	50	920	310	0.75	64	71	71	4015	75	2360	0.30
5	Y	400	50	835	174	0.31	61	67	66	5910	0	3475	0.00
6	Y	400	50	815	189	0.33	61	67	67	5170	19	3045	0.08
7	Y	400	50	795	201	0.34	60	66	66	4375	37	2575	0.15
8	Y	400	50	775	220	0.36	60	66	66	3380	54	1990	0.22

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 · q_V = Air flow · p_{fs} = Pressure increase

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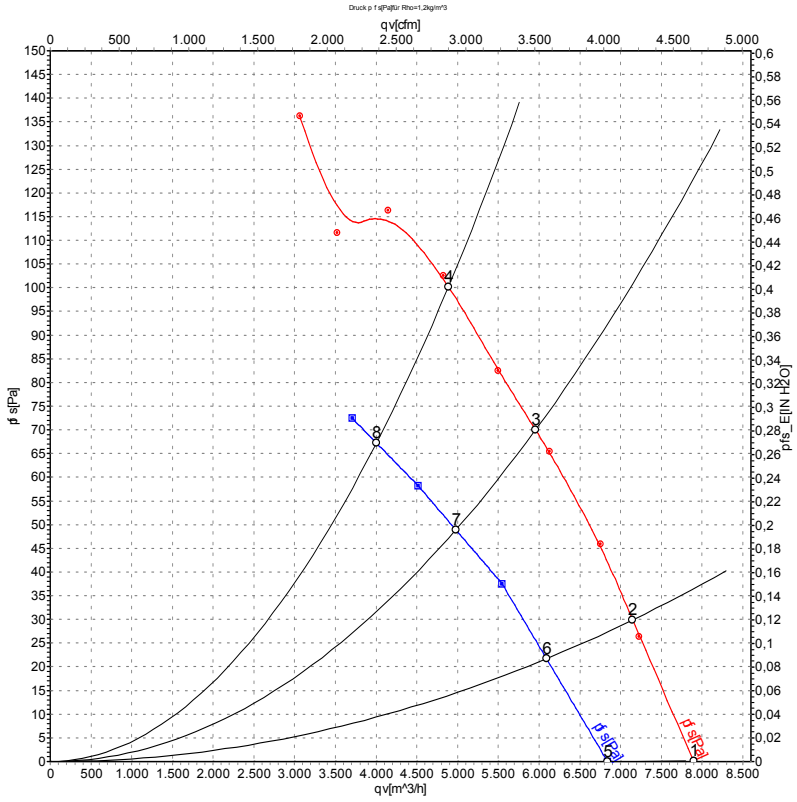
Curves: Air performance 60 Hz



Measurement: LU-104098-1
Measurement: LU-104979-1

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}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	Δ	480	60	1115	375	0.72	67	73	72	7900	0	4650	0.00
2	Δ	480	60	1110	403	0.74	67	73	73	7145	30	4205	0.12
3	Δ	480	60	1095	442	0.77	67	73	73	5955	70	3505	0.28
4	Δ	480	60	1085	480	0.84	68	74	74	4885	100	2875	0.40
5	Y	480	60	965	277	0.39	64	70	69	6840	0	4025	0.00
6	Y	480	60	940	293	0.41	64	70	70	6090	22	3585	0.09
7	Y	480	60	910	314	0.44	63	69	69	4980	49	2930	0.20
8	Y	480	60	890	330	0.48	63	69	69	4005	67	2355	0.27

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 · q_V = Air flow · p_{fs} = Pressure increase