S6D500-AJ01-03

AC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for short nozzle

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Nominal data

Type	**S6D500-AJ01-03**
Motor	**M6D110-EF**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	230	230	277	400	400	480
Wiring		Δ	Δ	Δ	Y	Y	Y
Frequency	Hz	50	60	60	50	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}	930	1050	1095	930	1050	1095
Power consumption	W	260	380	410	260	380	410
Current draw	A	1.13	1.22	1.25	0.65	0.70	0.72
Max. back pressure	Pa	75	93	100	75	93	100
Max. back pressure	in. wg	0.3	0.37	0.4	0.3	0.37	0.4
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	65	65	65	65	65	65
Starting current	A	4.4	4				

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 η_{es}	%	31.2	29.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		41.4	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.24
09 Air flow q_v	m^3/h	4505
09 Pressure increase p_{fs}	Pa	61
10 Speed (rpm) n	min^{-1}	935
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-199811

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Technical description

Weight	10.8 kg
Size	500 mm
Motor size	110
Rotor surface	Painted black
Terminal box material	PP plastic
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	0°
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
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	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 60034-1 (2010); CE
Approval	VDE; EAC; UL 1004-1

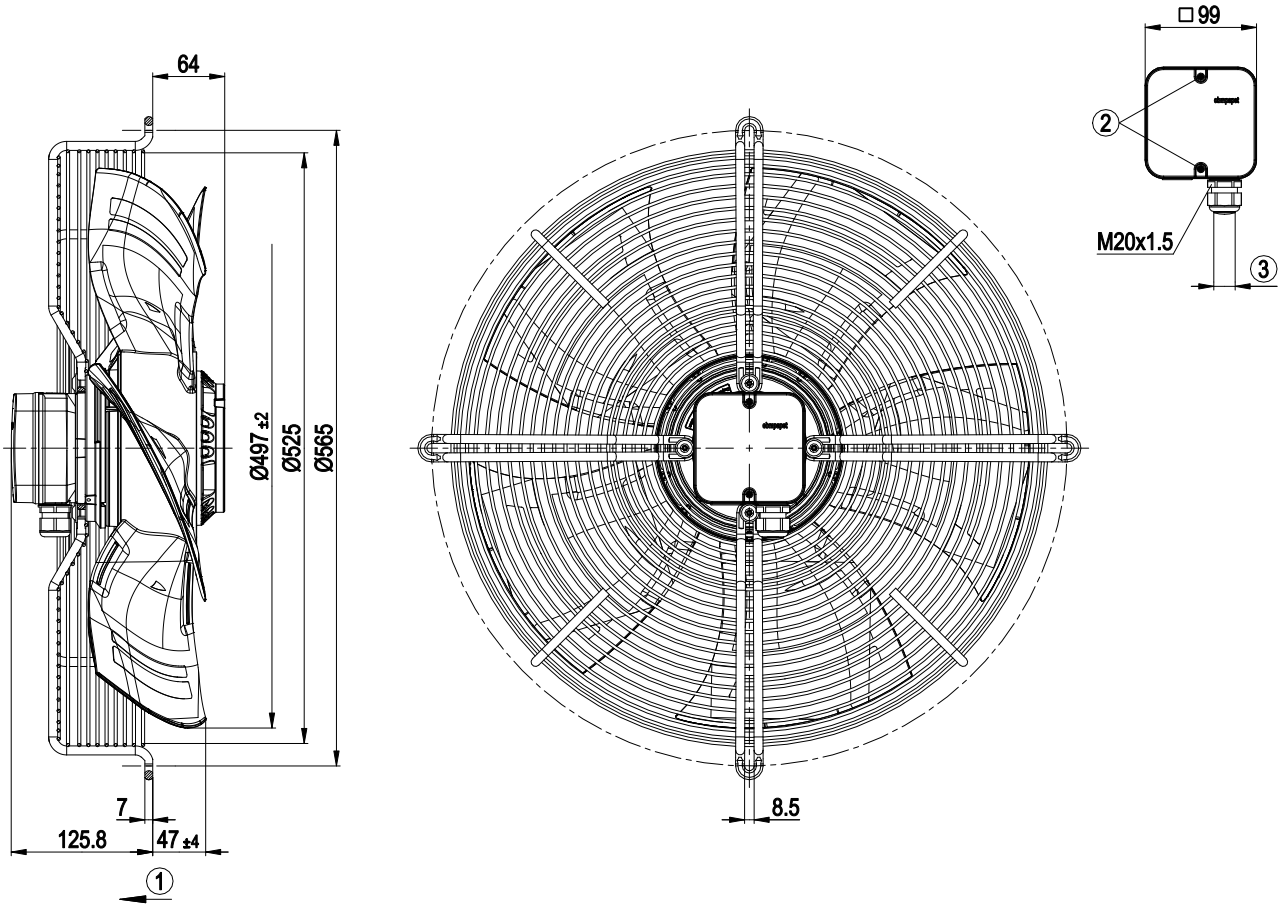
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Product drawing



1	Airflow direction "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2 ± 0.3 Nm

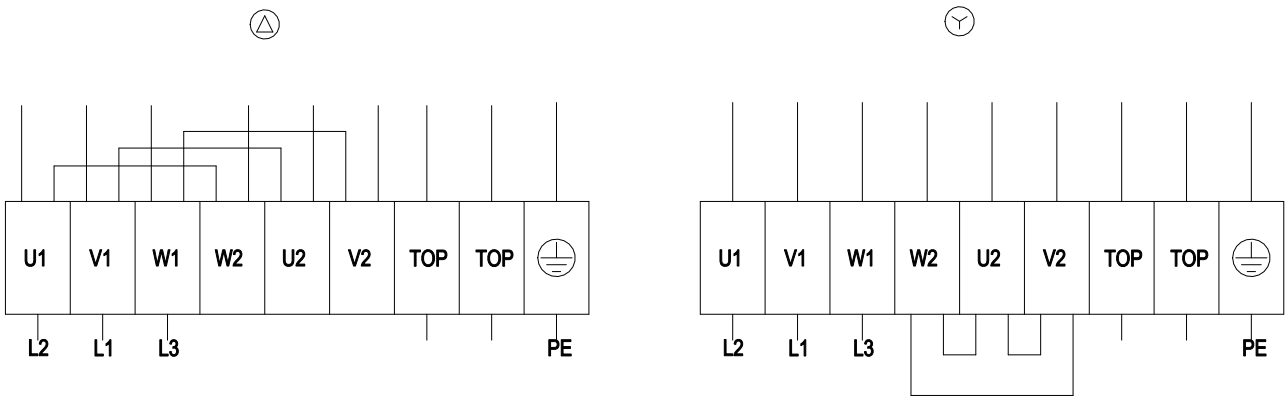
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Connection diagram



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				

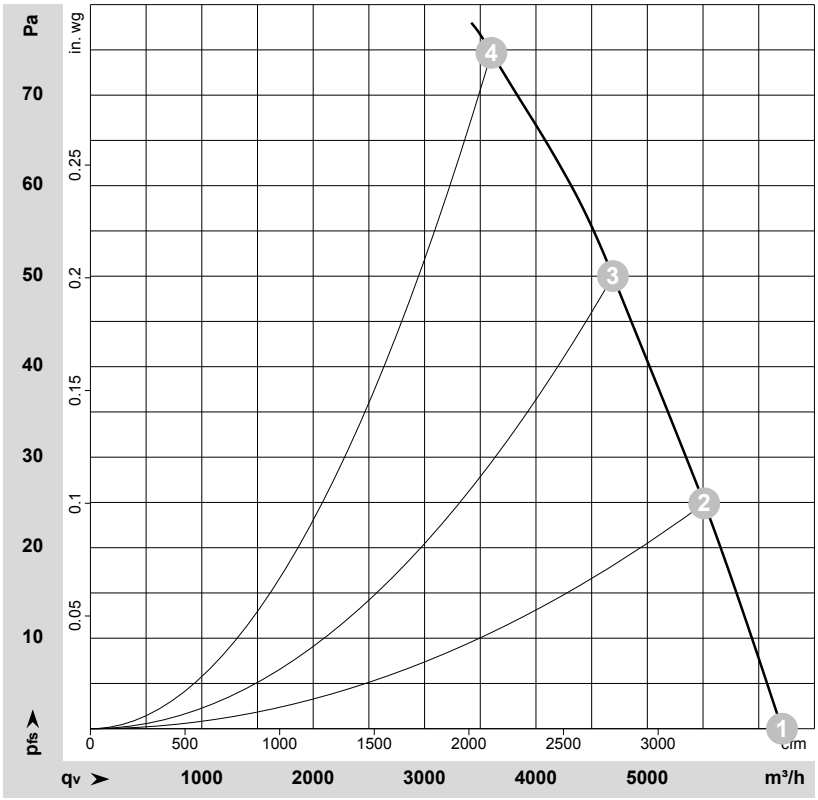
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-110652-1

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	in. wg
1	Y	400	50	955	197	0.61	61	67	67	6210	0	3655	0.00
2	Y	400	50	945	220	0.62	58	64	64	5510	25	3245	0.10
3	Y	400	50	935	242	0.63	55	62	61	4690	50	2760	0.20
4	Y	400	50	930	260	0.65	56	63	63	3600	75	2120	0.30

Wired = Wiring · U = Voltage · 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

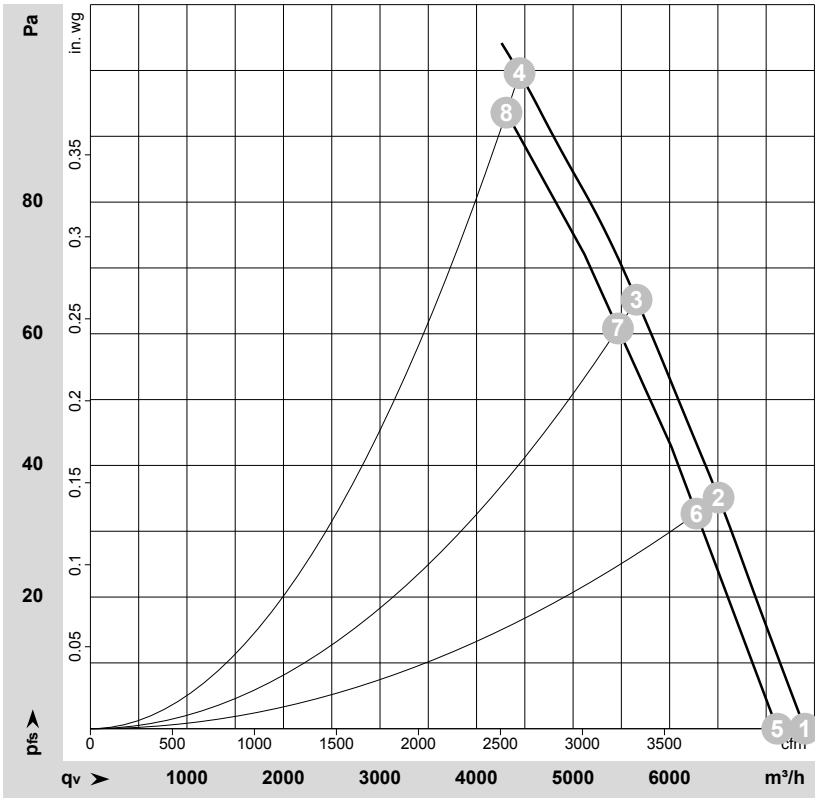
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-110654-1
Measurement: LU-106405-1

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	in. wg
1	Y	480	60	1130	301	0.64	64	71	71	7400	0	4355	0.00
2	Y	480	60	1115	343	0.67	61	68	68	6505	35	3830	0.14
3	Y	480	60	1110	370	0.68	59	66	66	5660	65	3330	0.26
4	Y	480	60	1095	410	0.72	59	67	66	4445	100	2615	0.40
5	Y	400	60	1105	281	0.59	63	70	70	7115	0	4190	0.00
6	Y	400	60	1085	315	0.63	60	67	67	6280	33	3695	0.13
7	Y	400	60	1070	342	0.65	58	65	65	5465	61	3215	0.24
8	Y	400	60	1050	380	0.70	59	65	65	4310	93	2535	0.37

Wired = Wiring · U = Voltage · 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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