S4D500-AM01-04

AC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for short nozzle

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S4D500-AM01-04**
Motor	**M4D110-GF**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	277	400	480
Wiring		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Method of obtaining data		ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE
Speed	min^{-1}	1350	1590	1350	1590
Power consumption	W	690	1050	690	1050
Current draw	A	2.34	2.72	1.35	1.57
Max. back pressure	Pa	155	160	155	160
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	65	60	65	60
Starting current	A	17.3		10	

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	33.3	32.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40.8	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.66
09 Air flow q_v	m^3/h	5985
09 Pressure increase p_{fs}	Pa	134
10 Speed n	min^{-1}	1355
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-110665

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Technical description

Weight	13 kg
Fan size	500 mm
Rotor surface	Painted black
Terminal box material	PC/ABS 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
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture 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 storage	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) externally wired
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	EAC; VDE; UL 1004-1; CSA C22.2 No. 100

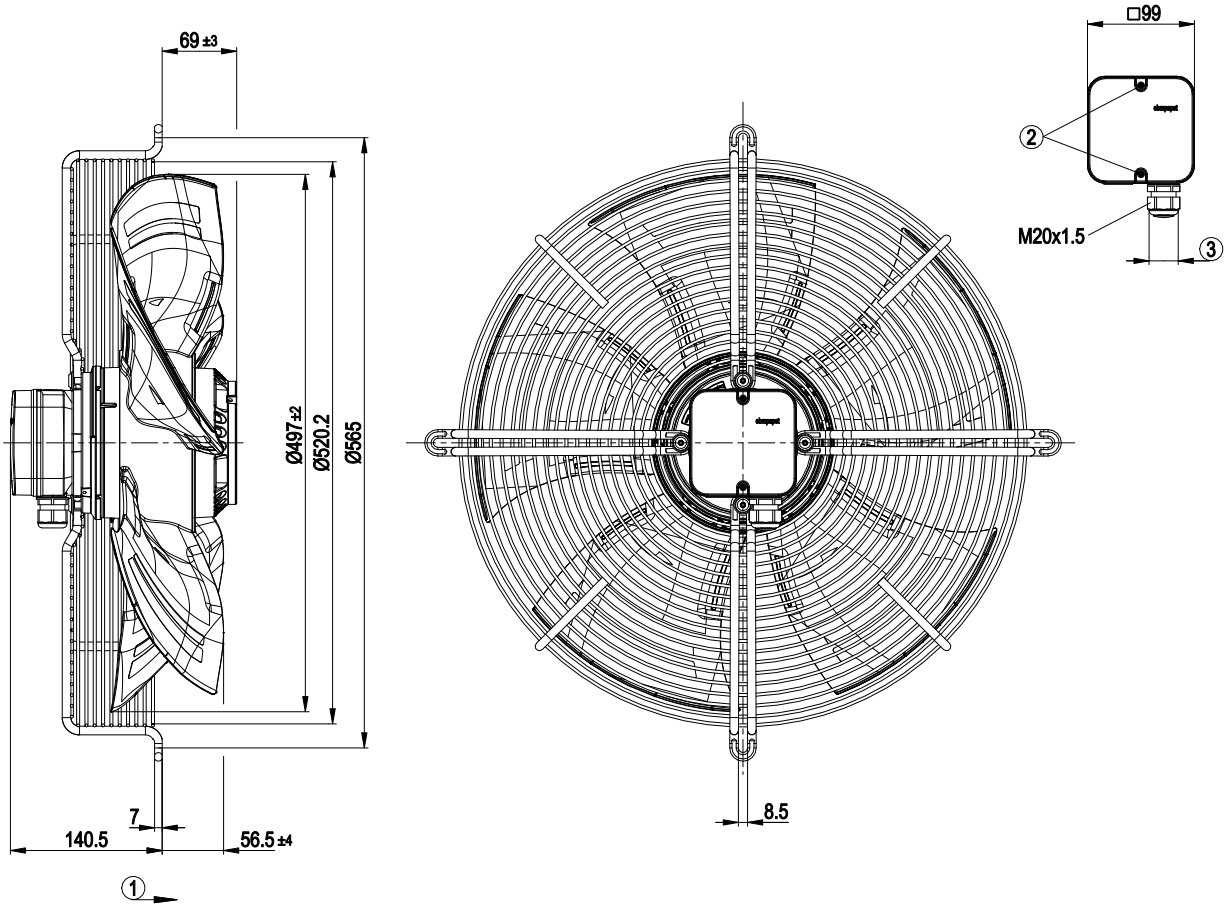
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Product drawing



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

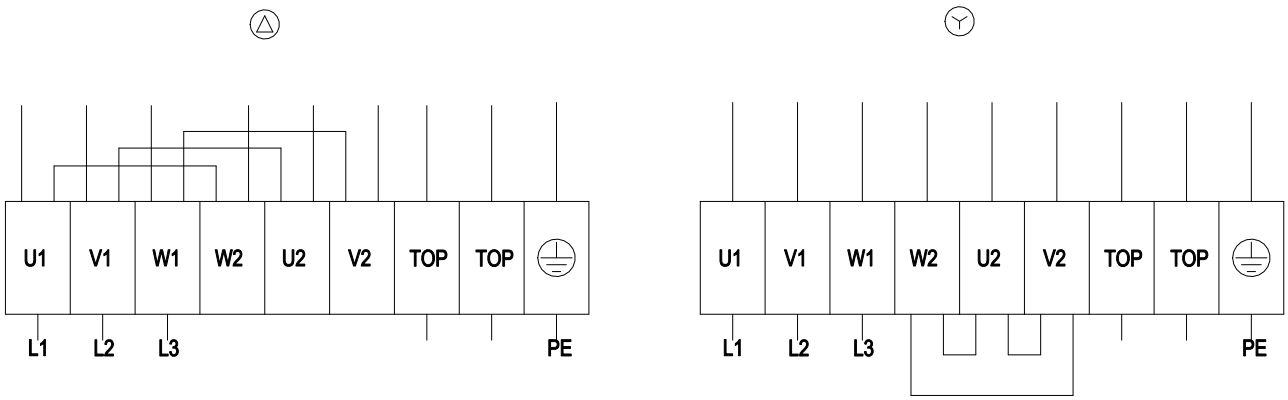
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Connection diagram



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

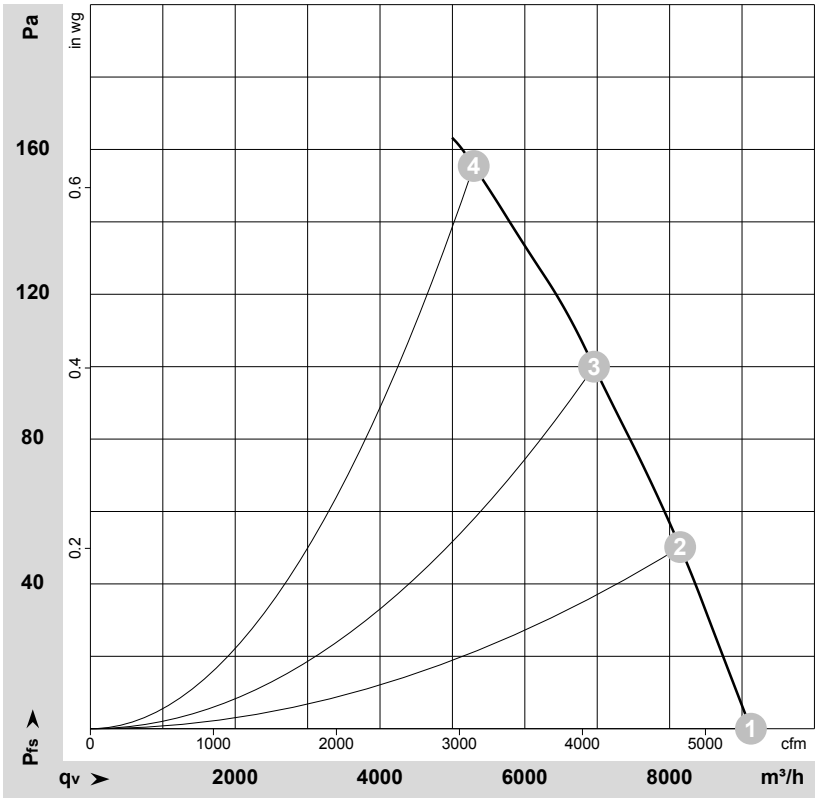
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Curves: Air performance 50 Hz



ρ = 1,15 kg/m³ ± 2%

Measurement: LU-110665

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}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Y	400	50	1400	505	1.15	68	75	75	9125	0
2	Y	400	50	1380	570	1.22	65	72	73	8145	50
3	Y	400	50	1365	626	1.27	64	71	71	6955	100
4	Y	400	50	1350	690	1.35	66	73	72	5295	155

Wired = Wiring · U = Power supply · f = Frequency · n = Speed · 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

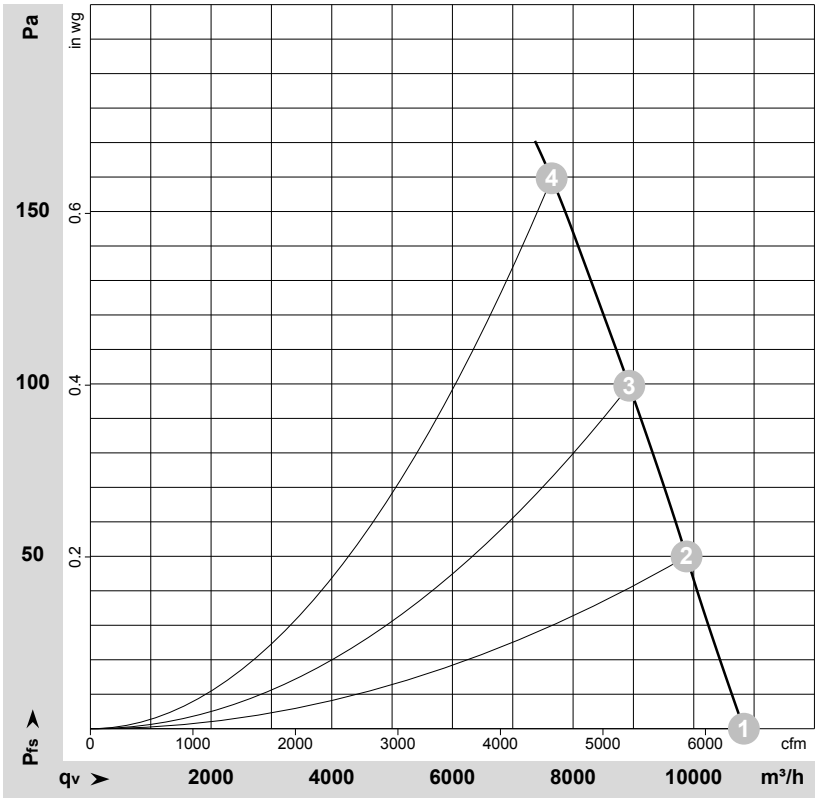
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Curves: Air performance 60 Hz



ρ = 1,15 kg/m³ ± 2%

Measurement: LU-110667

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}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Y	480	60	1650	817	1.33	71	78	79	10830	0
2	Y	480	60	1630	895	1.41	69	76	77	9880	50
3	Y	480	60	1615	966	1.48	68	75	75	8930	100
4	Y	480	60	1590	1050	1.57	67	74	75	7645	160

Wired = Wiring · U = Power supply · f = Frequency · n = Speed · 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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