

S4D500-AM03-02

AC axial fan - HyBlade

®

sickle-shaped blades (S series)
with guard grille for short nozzle

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Amtsgericht (court of registration) Stuttgart · HRB 590142



Nominal data

Type	S4D500-AM03-02				
Motor	M4D110-GF				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	460
Connection		Δ	Y	Δ	Δ
Frequency	Hz	50	50	60	60
Method of obtaining data					
corresponds					
Speed (rpm)					
Power consumption					
Current draw					
Max. back pressure					
Min. ambient temperature					
Max. ambient temperature					
Starting current	A	6.5			

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to change

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio *	1.00
* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$	

	Actual	Req. 2013	Req. 2015
Overall efficiency η_s	33.4	28.8	32.8
Efficiency grade N	40.6	36	40
Power consumption P_e	kW	0.73	
Air flow q_v	m³/h	5860	
Pressure increase p_{fs}	Pa	151	
Speed (rpm) n	min ⁻¹	1385	

Data established at point of optimum efficiency

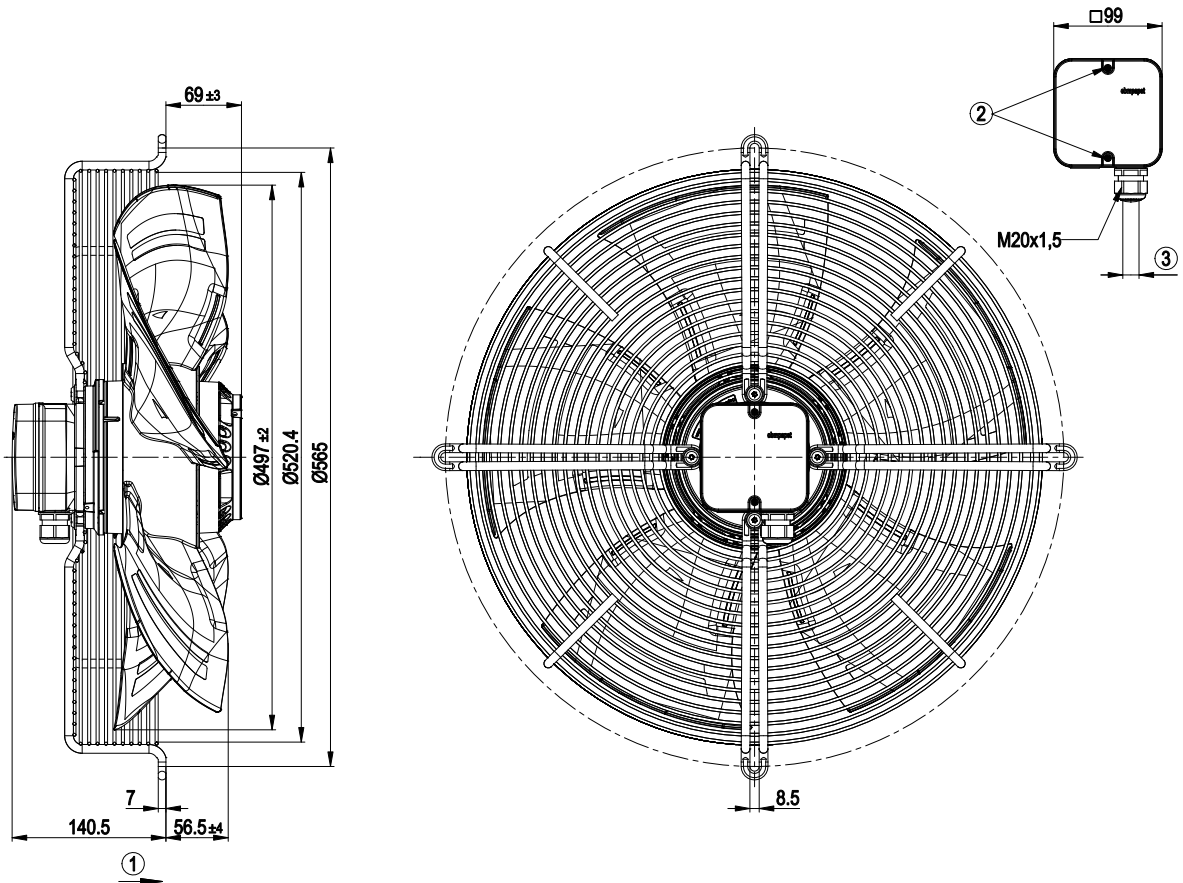


Technical description

Weight	12.9 kg
Motor size	500 mm
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
Direction of air flow	«A»
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP 54
Insulation class	«F»
Humidity 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	
Condensation drainage holes	
Mode	
Motor protection	
Touch current acc. to IEC 60990 (measuring circuit Fig. 4, TN system)	
Electrical connection	Via terminal box
Motor protection	thermostat (TW)
Cable exit	
Protection class	protective earth connected by customer)
Conformity with standards	EN 61800-5-1; CE
Approval	VDE; GOST

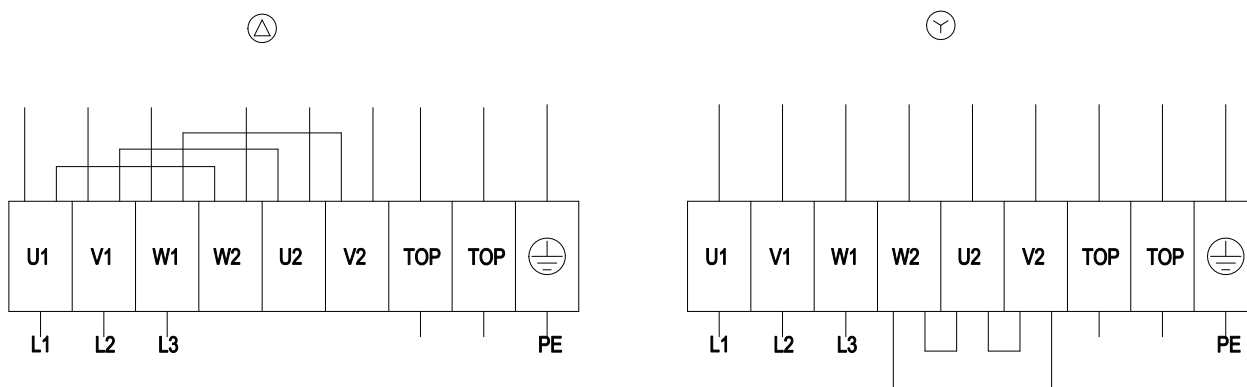
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Product drawing



1	Voltage
2	Tightening torque: 1.5±0.2 Nm
3	Cable diameter: min. 6 mm, max. 12 mm; tightening torque: 2±0.3 Nm

Connection diagram



Δ	Delta connection
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Y	Star connection
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L1	= U1 = black
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L2	= V1 = blue
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L3	= W1
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W2	yellow
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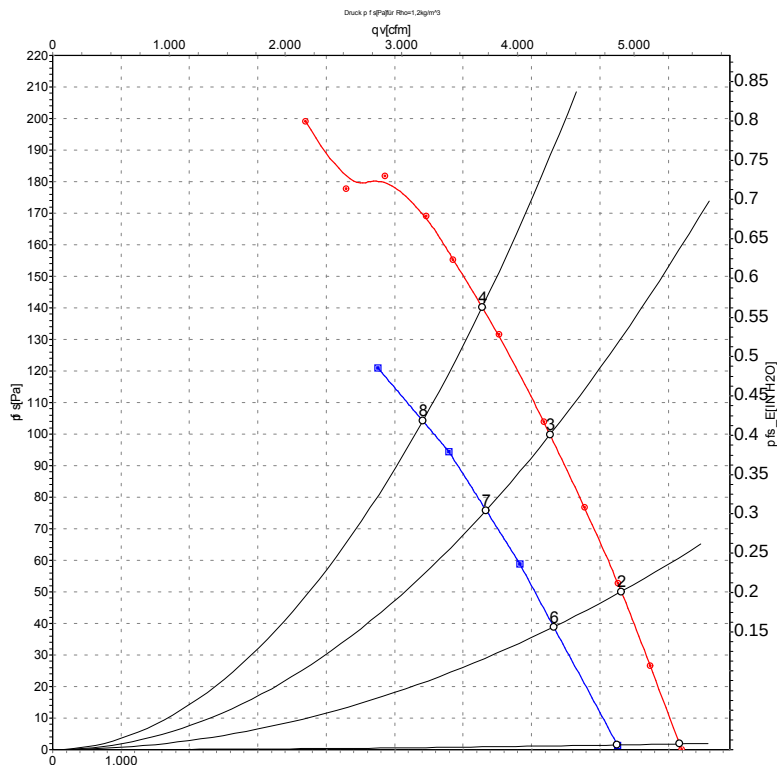
U2	green
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V2	white
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TOP	2 x gray
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PE	green
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Curves: Air performance 50 Hz



Measurement: LU-106631
Measurement: LU-106885

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 must be checked in the installed unit.

Measured values

	Conn.										
1	Δ	400	50	1420	540	1.21	68	75	75	9195	0
2	Δ	400	50	1410	603	1.28	66	72	73	8315	50
3	Δ					1.34	64	71	71	7270	100
4	Δ					1.41	65	71	71	6280	140
5	Y					0.71		72	73	8255	0
6	Y	400	50	1245	476	0.78		70	70	7325	39
7	Y	400	50	1215	515	0.84		68	68	6335	76
8	Y	400	50	1180	550	0.95		68	68	5410	104

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P

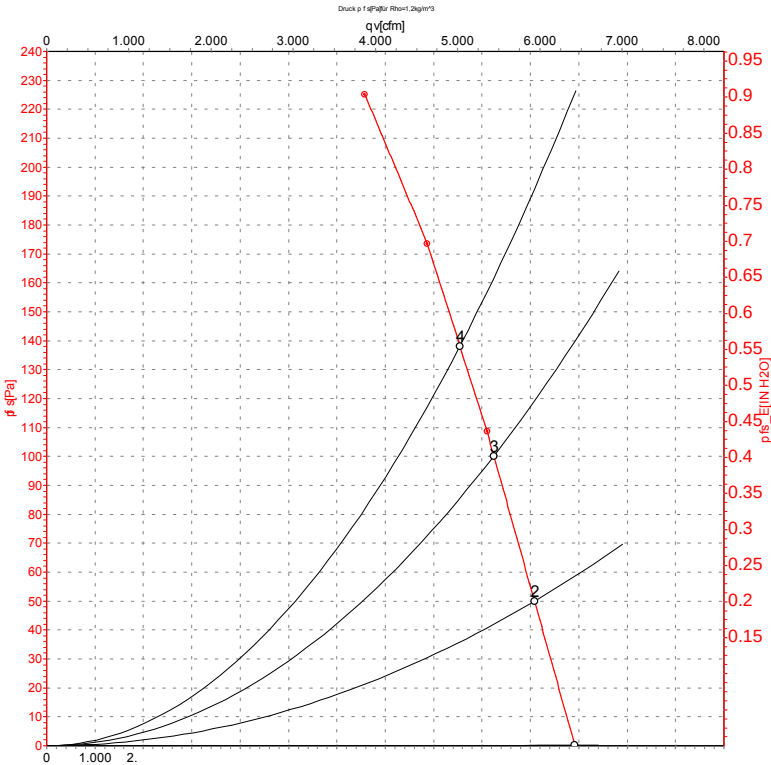
P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level, intake side

LwA_{in} = Sound power level, intake side · LwA

P_{out} = Sound power level, outlet side · qv = Air flow · p

p_s = Pressure increase

Curves: Air performance 60 Hz



Measurement: LU-110160

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 must be checked in the installed unit.

Measured values

	Conn.										
1	Δ	460	60	1680	854	1.41	71	79	79	10920	0
2	Δ	460	60	1670	927	1.49	70	77	77	10080	50
3	Δ					1.57	68	75	76	9245	100
4	Δ					1.64	68	75	75	8545	138

Conn. = Connection

Speed · P

P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level, intake side

LwA_{in} = Sound power level, intake side · LwA

P_{out} = Sound power level, outlet side · q_v = Air flow · p

Δp = Pressure increase

