S4D500-BD03-06

AC axial fan

sickle-shaped blades (S series)

with guard grille for full nozzle

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Nominal data

Type	**S4D500-BD03-06**
Motor	**M4D110-GF**

Phase		3~	3~	3~	3~	3~
Nominal voltage	VAC	230	400	400	480	480
Wiring		Δ	Δ	Y	Δ	Y
Frequency	Hz	50	50	50	60	60
Method of obtaining data		fa	fa	fa	fa	fa
Valid for approval/standard		-	-	-	-	-
Speed (rpm)	min^{-1}	1160	1380	1160	1620	1280
Power consumption	W	455	620	455	1000	695
Current draw	A	1.35	1.3	0.77	1.55	0.98
Max. back pressure	Pa	100	160	100	150	84
Max. back pressure	inH2O	0.4	0.64	0.4	0.6	0.34
Min. ambient temperature	°C	-40	-40	-40	-40	-40
Max. ambient temperature	°C	80	80	80	50	50
Starting current	A	2	6.5	2	7.5	2.2

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	13.2 kg
Fan size	500 mm
Rotor surface	Painted black
Terminal box material	Die-cast aluminum, painted black
Blade material	Sheet aluminum, painted black
Guard grille material	Steel, galvanized and coated with light gray plastic (RAL 7035)
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	F4-2
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	On stator 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
Approval	EAC; VDE

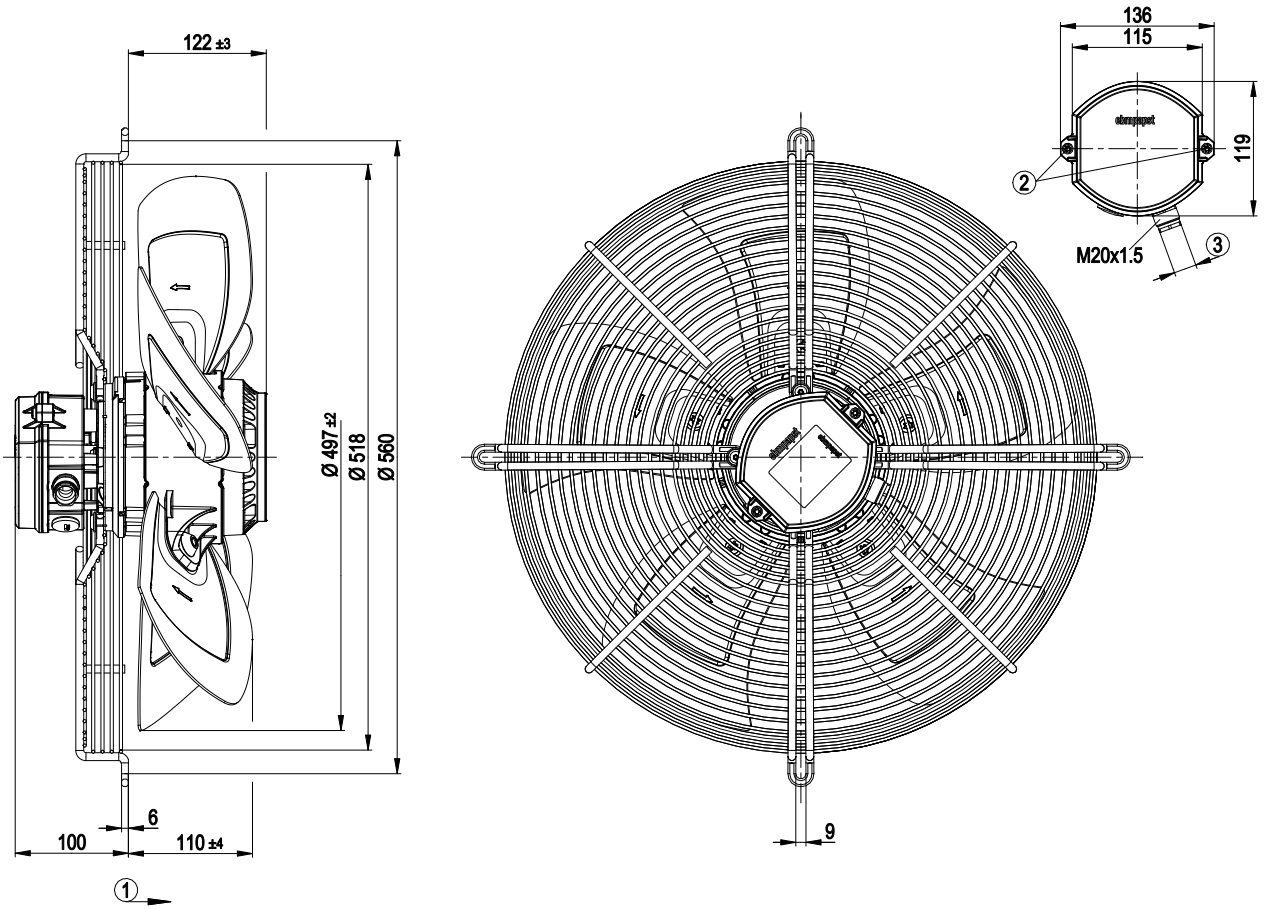
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Product drawing



1	Direction of air flow "A"
2	Tightening torque 2.5 ± 0.4 Nm
3	Cable diameter min. 10 mm, max. 12 mm; tightening torque 4 ± 0.6 Nm

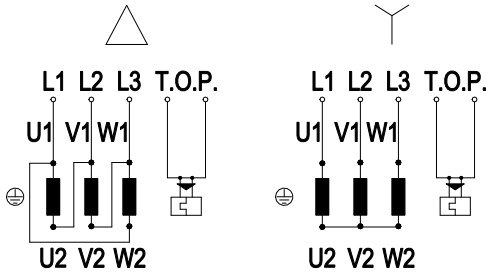
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Connection diagram



Note: Change of rotation direction by reversing two phases

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

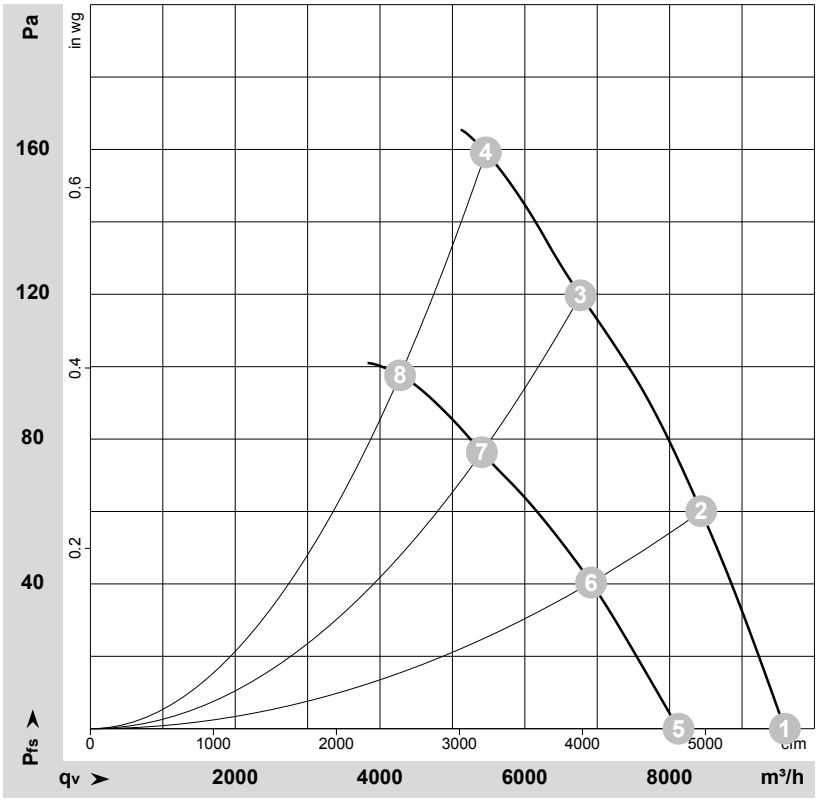
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-100710-1
Measurement: LU-100714-1

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}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	Δ	400	50	1380	615	1.28	71	77	9590	0	5645	0.00
2	Δ	400	50	1360	687	1.37	71	77	8435	60	4965	0.24
3	Δ	400	50	1345	753	1.44	71	78	6770	120	3985	0.48
4	Δ	400	50	1325	820	1.59	74	80	5460	160	3215	0.64
5	Y	400	50	1160	454	0.76			8120	0	4780	0.00
6	Y	400	50	1115	492	0.82			6915	41	4070	0.16
7	Y	400	50	1070	521	0.87			5405	76	3180	0.31
8	Y	400	50	1035	550	0.95			4275	98	2515	0.39

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

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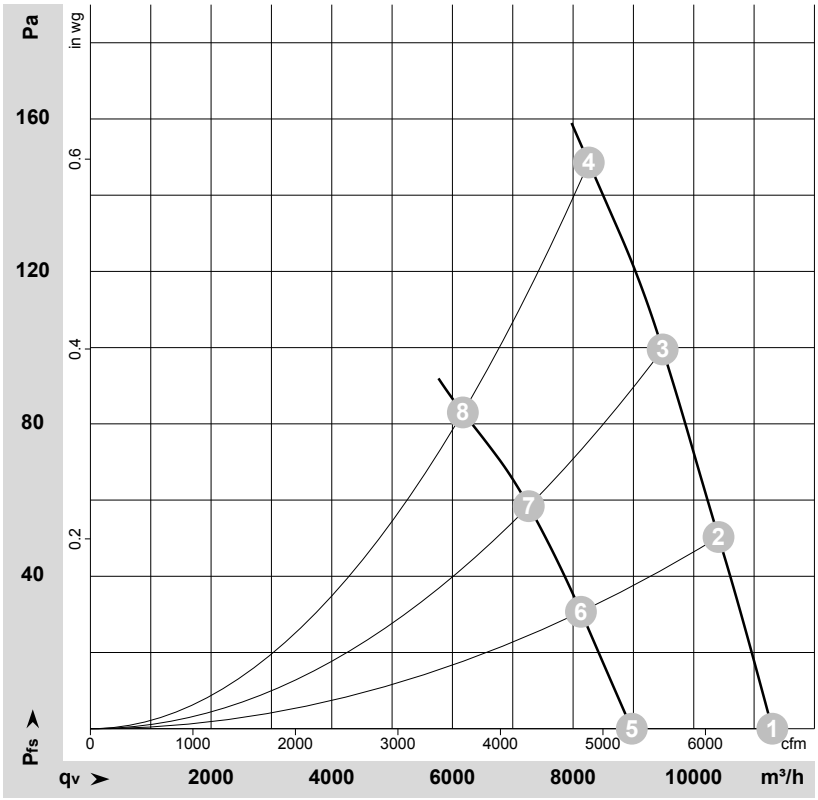
S4D500-BD03-06

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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-100711-1
Measurement: LU-100715-1

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}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	Δ	480	60	1620	996	1.54	74	80	11300	0	6650	0.00
2	Δ	480	60	1605	1072	1.63	74	80	10410	50	6130	0.20
3	Δ	480	60	1590	1142	1.70	74	80	9485	100	5585	0.40
4	Δ	480	60	1570	1220	1.86	75	81	8260	150	4860	0.60
5	Y	480	60	1285	695	0.97			8975	0	5280	0.00
6	Y	480	60	1250	724	1.02			8130	31	4785	0.12
7	Y	480	60	1210	749	1.06			7265	58	4275	0.23
8	Y	480	60	1170	770	1.13			6175	83	3635	0.33

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
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