S4D500-AE01-15

AC axial fan

sickle-shaped blades (S series)

with guard grille for short nozzle

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**S4D500-AE01-15**
Motor	**M4D110-GF**

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}	1370	1520	1600	1370	1520	1600
Power consumption	W	680	1010	1110	680	1010	1110
Current draw	A	2.56	3.11	3.11	1.48	1.8	1.8
Max. back pressure	Pa	160	195	215	160	195	215
Max. back pressure	inH2O	0.64	0.78	0.86	0.64	0.78	0.86
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	90	60	60	90	60	60
Starting current	A	10.6	9.7	12.1	6.1	5.6	7.0

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}	%	34.8	32.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.3	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.65
09 Air flow q_v	m^3/h	5605
09 Pressure increase p_{fs}	Pa	146
10 Speed (rpm) n	min^{-1}	1375
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-73054

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Technical description

Weight	13.4 kg
Fan size	500 mm
Rotor surface	Cast in aluminum
Terminal box material	PP plastic
Blade material	Sheet aluminum
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F3-1
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 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; CE
Approval	CSA C22.2 No. 100; UL 1004-1; VDE; EAC

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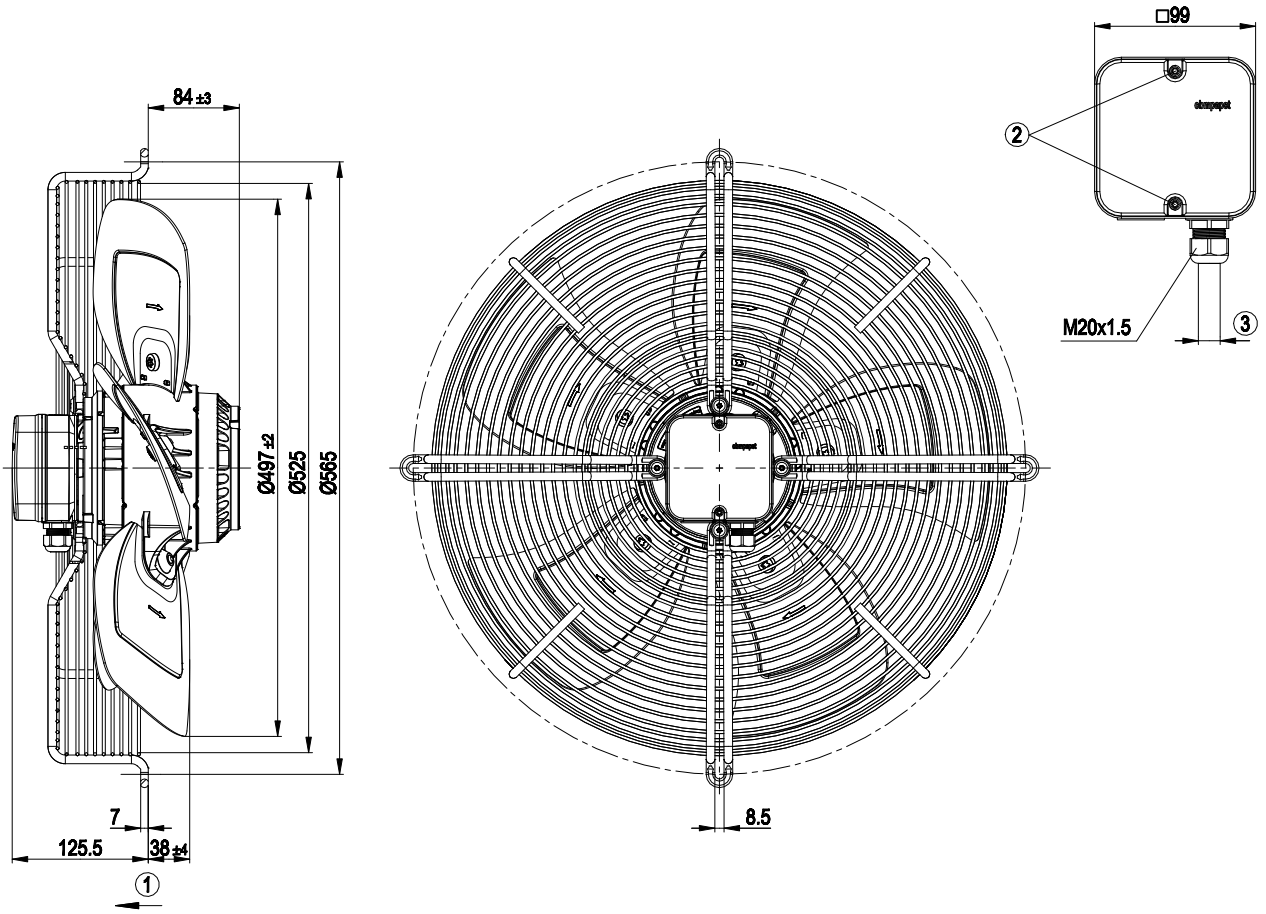
Product drawing



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

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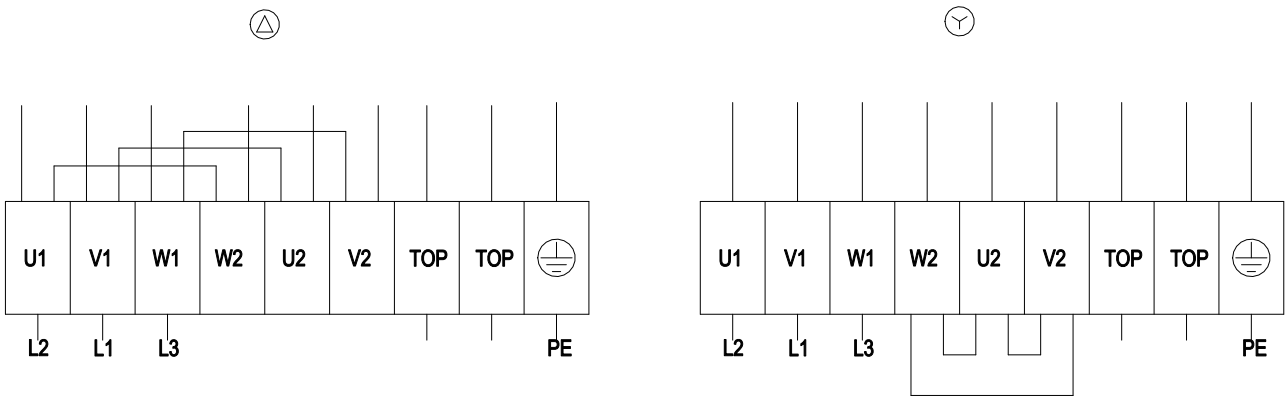
Connection diagram



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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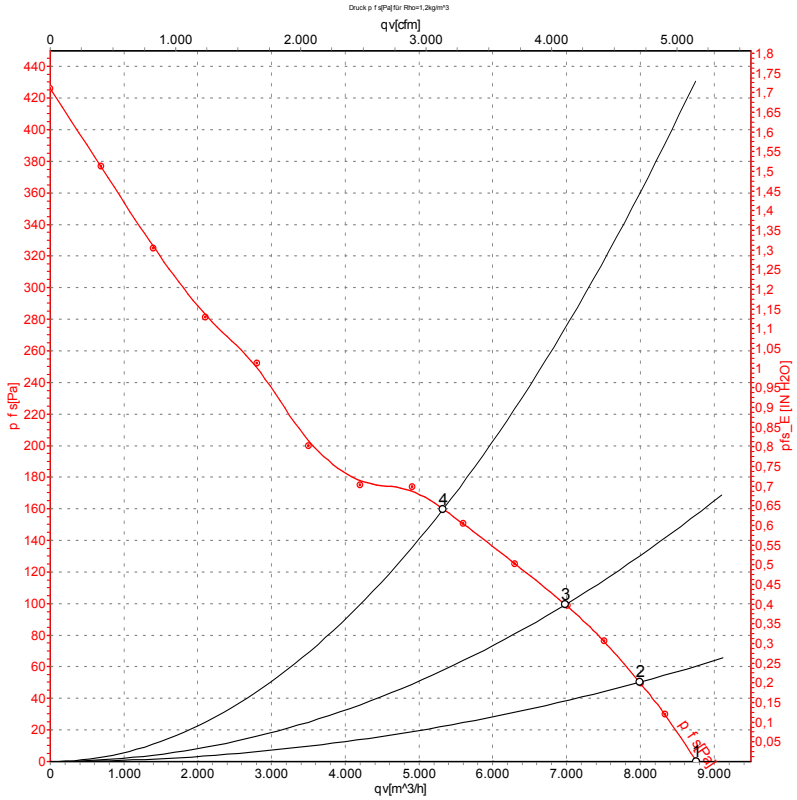
Curves: Air performance 50 Hz Y



Measurement: LU-73054-1

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	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	m^3/h	Pa	cfm	inH2O
1	Y	400	50	1410	496	1.25	80	8760	0	5155	0.00
2	Y	400	50	1400	554	1.31	78	7990	50	4705	0.20
3	Y	400	50	1385	610	1.37	79	6985	100	4110	0.40
4	Y	400	50	1370	680	1.48	79	5325	160	3135	0.64

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LwA_{in} = Sound power level intake side · q_V = Air flow · p_{fs} = Pressure increase

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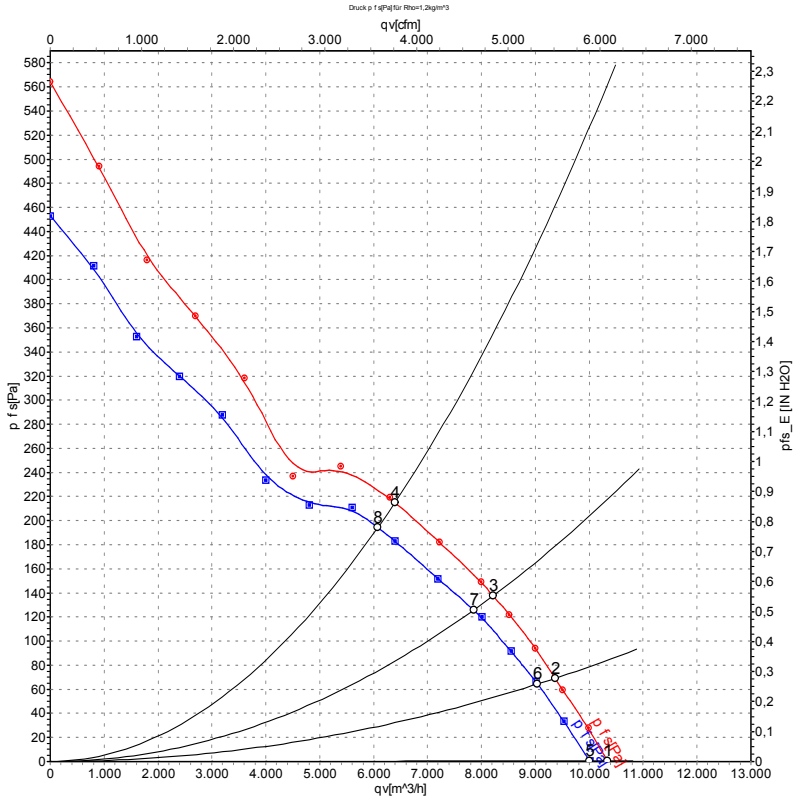
Curves: Air performance 60 Hz Y



Measurement: LU-73055-1
Measurement: LU-73057-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Y	480	60	1670	805	1.40	10340	0	6085	0.00
2	Y	480	60	1650	899	1.50	9365	70	5515	0.28
3	Y	480	60	1630	984	1.59	8220	138	4840	0.55
4	Y	480	60	1600	1110	1.80	6390	215	3760	0.86
5	Y	400	60	1615	740	1.35	10000	0	5885	0.00
6	Y	400	60	1585	834	1.49	9040	65	5320	0.26
7	Y	400	60	1560	907	1.58	7855	125	4625	0.50
8	Y	400	60	1520	1010	1.80	6080	195	3575	0.78

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase