

# AC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for short nozzle

## ebm-papst Mulfingen GmbH & Co. KG

Bachmühle 2 · D-74673 Mulfingen

Phone +49 7938 81-0

Fax +49 7938 81-110

info1@de.ebmpapst.com

www.ebmpapst.com

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	S6E560-AN01-01		
Motor	M6E110-GF		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min <sup>-1</sup>	920	1010
Power consumption	W	390	570
Current draw	A	1.78	2.48
Capacitor	µF	10	10
Capacitor voltage	VDB	400	400
Max. back pressure	Pa	80	95
Max. back pressure	in. wg	0.32	0.38
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	75	55

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

		Actual	Req. 2015			
01 Overall efficiency $\eta_{es}$	%	31.1	31.1	09 Power consumption $P_e$	kW	0.39
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	4750
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	90
04 Efficiency grade N		40	40	10 Speed (rpm) n	min <sup>-1</sup>	915
05 Variable speed drive		No		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 =  $1 + p_s / 100\,000\text{ Pa}$

LU-110456



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## Technical description

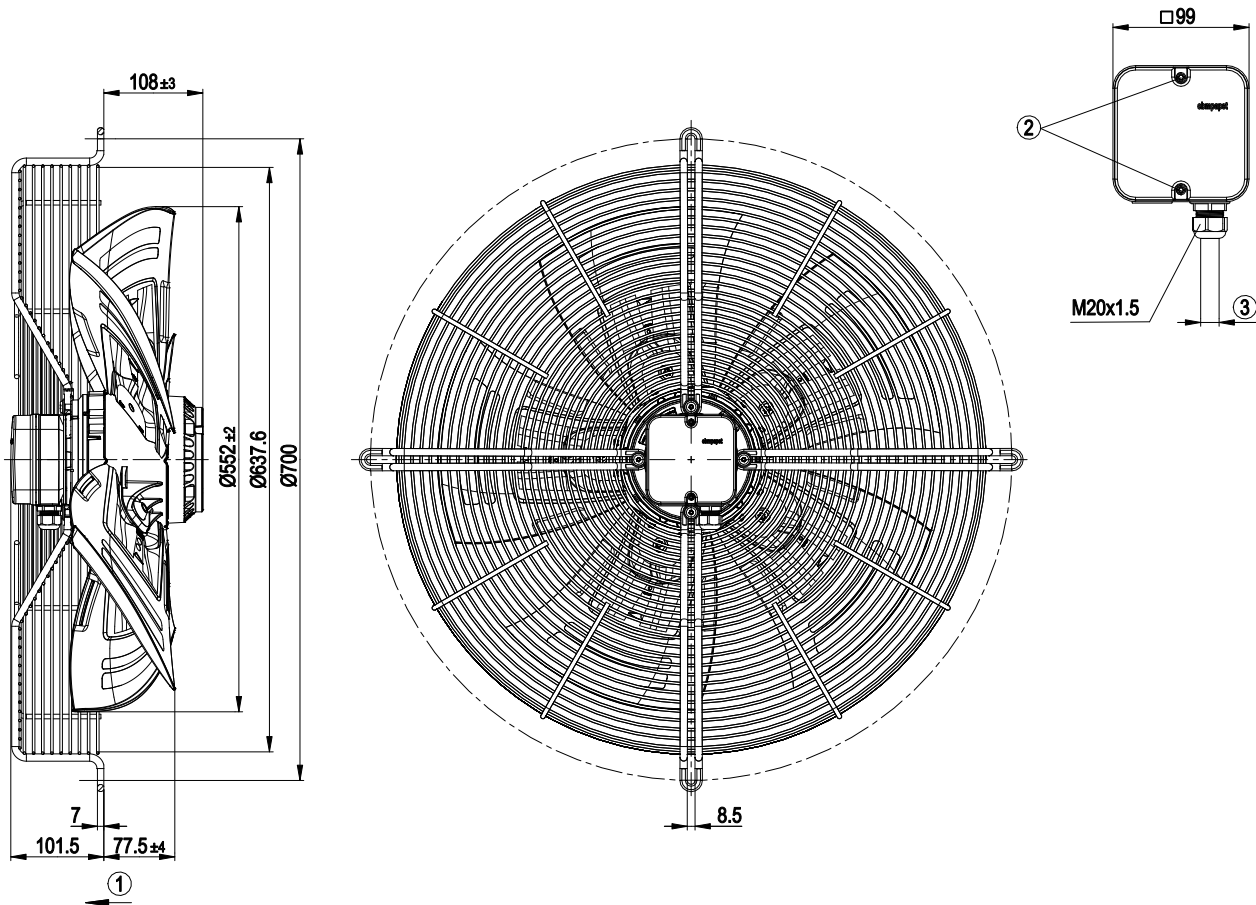
Weight	14.5 kg
Size	560 mm
Motor size	110
Rotor surface	Cast in aluminum
Terminal box material	PC/ABS plastic
Blade material	Sheet aluminum insert, sprayed with PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	-5°
Airflow direction	V
Direction 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 mounting	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box; Via terminal box, capacitor integrated and connected
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Motor capacitor according to EN 60252-1 in safety protection class	S0
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 100; CCC; VDE; UL 1004-1; EAC



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## Product drawing



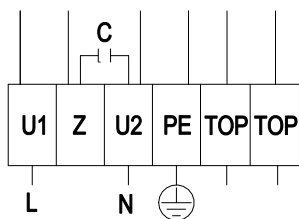
1	Direction of air flow "V"
2	Tightening torque $1.5 \pm 0.2$ Nm
3	Cable diameter: min. 6 mm, max. 12 mm, tightening torque $2 \pm 0.3$ Nm



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## Connection diagram

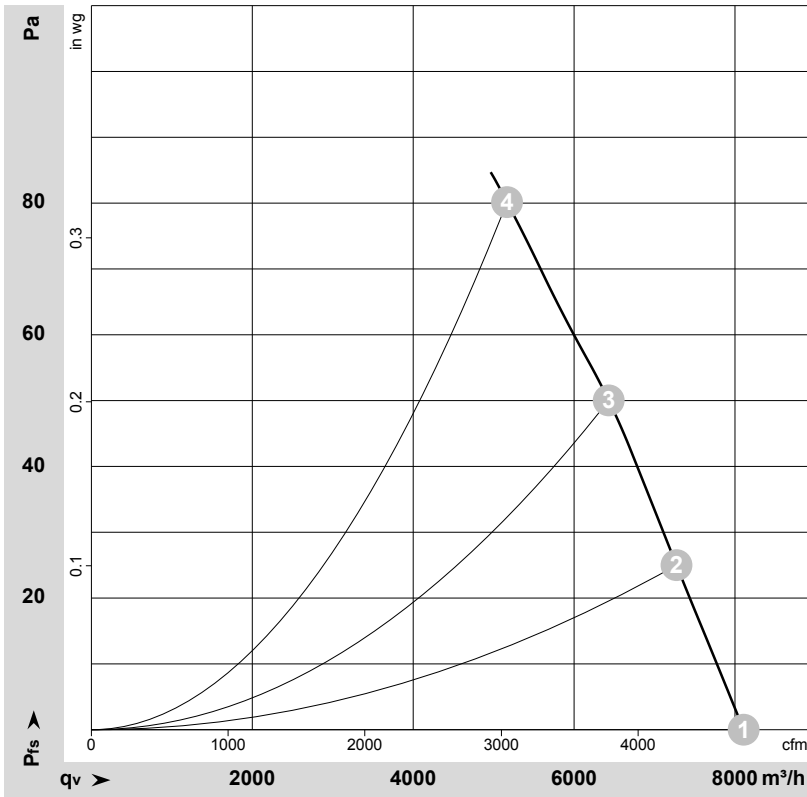


L	= U1 = blue	Z	brown	N	= U2 = black
PE	green/yellow	TOP	gray		

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## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-110456-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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

	U	f	n	P <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	230	50	945	310	1.46	60	66	66	8110	0	4770	0.00
2	230	50	935	339	1.57	59	65	65	7275	25	4280	0.10
3	230	50	930	364	1.67	57	64	63	6430	50	3785	0.20
4	230	50	920	390	1.78	62	67	67	5165	80	3040	0.32

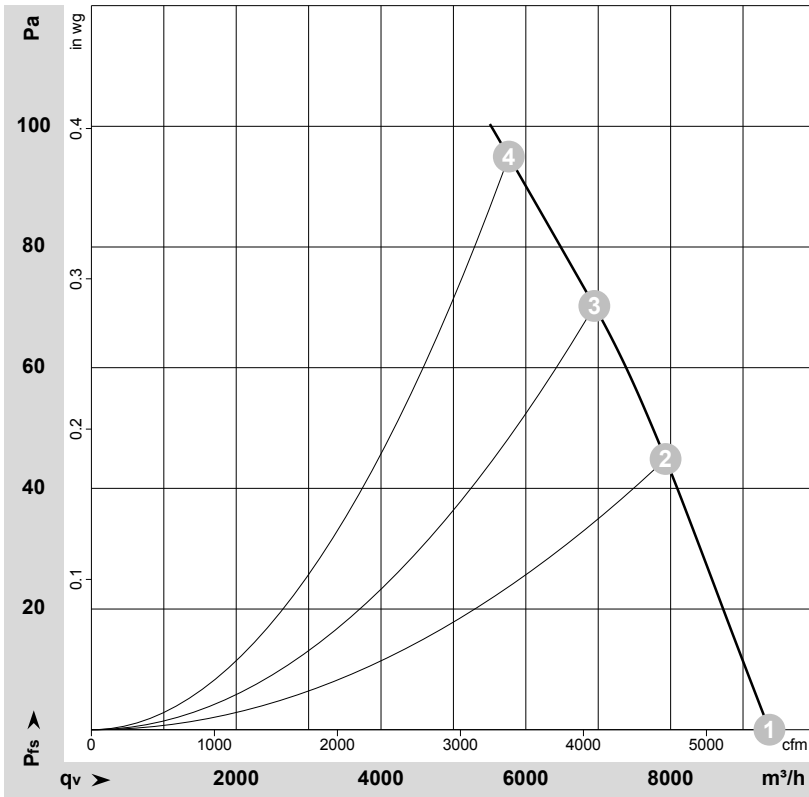
U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase



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## Curves: Air performance 60 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-110462-1

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

	U	f	n	P <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	230	60	1095	452	1.97	63	69	70	9365	0	5510	0.00
2	230	60	1060	510	2.22	61	68	67	7930	45	4665	0.18
3	230	60	1040	539	2.35	60	67	67	6945	70	4090	0.28
4	230	60	1010	570	2.48	64	70	69	5765	95	3395	0.38

U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase

