

AC axial fan

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	S4E450-AP01-11		
Motor	M4E074-GA		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		fa	fa
Valid for approval/standard		CE	CE
Speed (rpm)	min ⁻¹	1400	1600
Power consumption	W	245	355
Current draw	A	1.1	1.55
Capacitor	µF	8	8
Capacitor voltage	VDB	400	400
Max. back pressure	Pa	85	35
Max. back pressure	in. wg	0.34	0.14
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	60	40
Starting current	A	2.8	2.6

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 η_{es}	%	31.5	30.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		41	40
05 Variable speed drive		No	

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

09 Power consumption P_e	kW	0.32
09 Air flow q_v	m ³ /h	3690
09 Pressure increase p_{fs}	Pa	101
10 Speed (rpm) n	min ⁻¹	1325
11 Specific ratio*		1.00

* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-33262



AC axial fan

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

Technical description

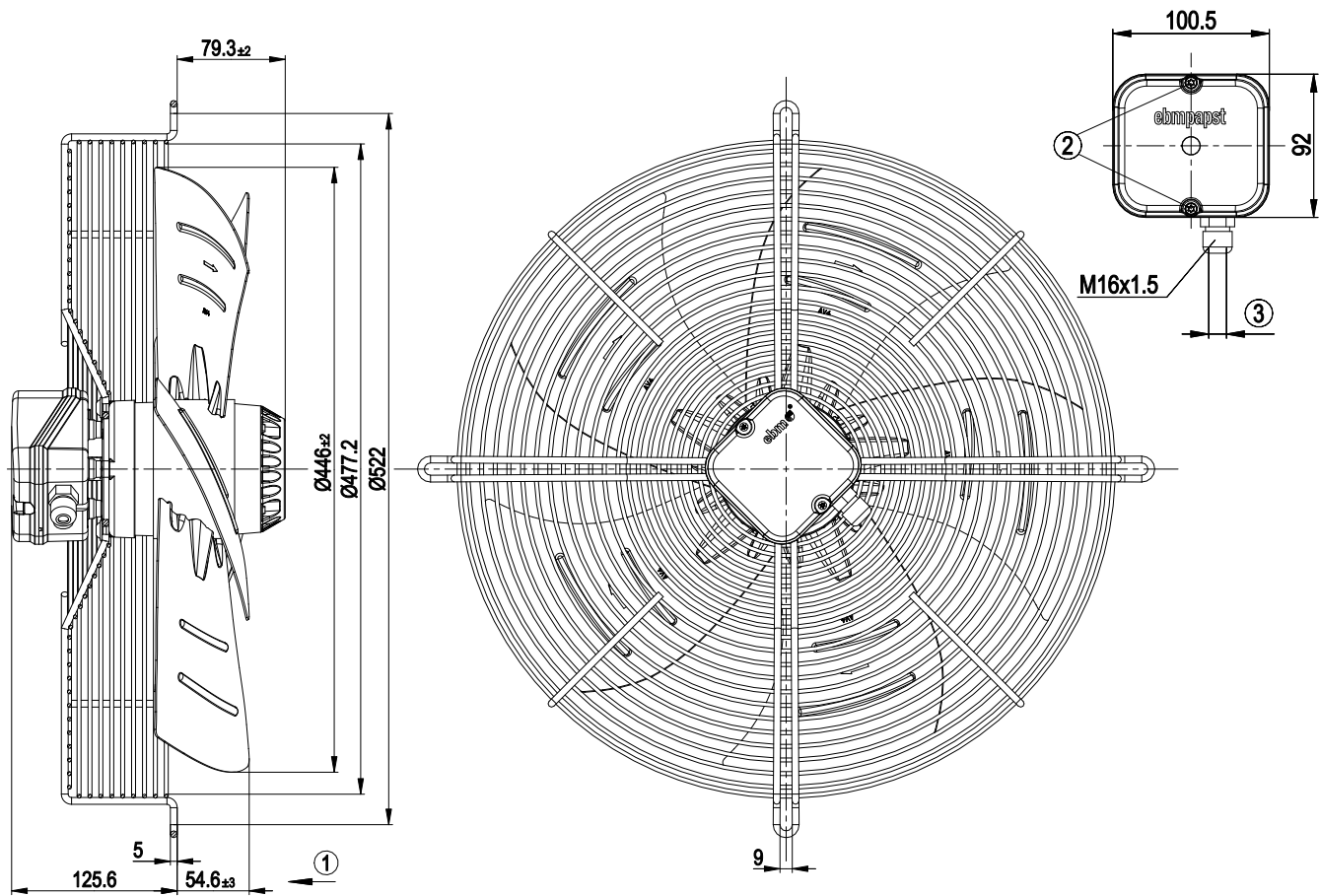
Weight	7.19 kg
Size	450 mm
Motor size	74
Rotor surface	Painted black
Terminal box material	ABS plastic
Blade material	Sheet steel, galvanized
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
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)	< 0.75 mA
Electrical hookup	Terminal box; Capacitor integrated and connected
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
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 60335-1; CE



AC axial fan

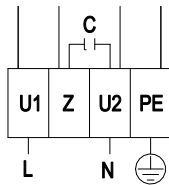
sickle-shaped blades (S series)
with guard grille for short nozzle

Product drawing



1	Direction of air flow "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter: min. 6 mm, max. 12 mm, tightening torque 1.3 ± 0.2 Nm

Connection diagram



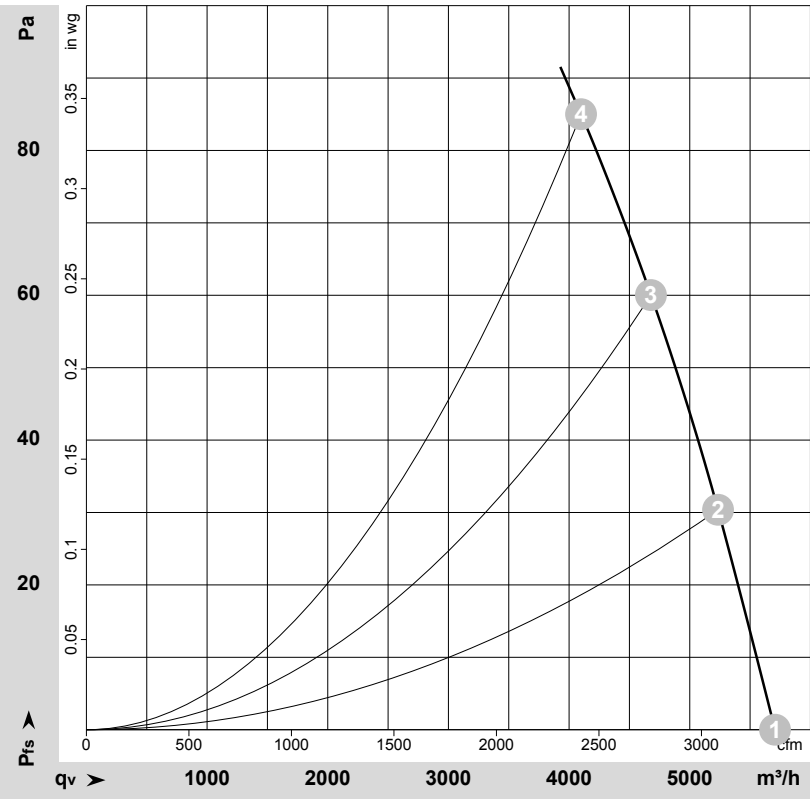
L	= U1 = blue	Z	brown	N	= U2 = black
PE	green/yellow				



AC axial fan

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

Curves: Air performance 50 Hz



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

Measurement: LU-33262-1

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 _e	I	q _v	p _{fs}	q _v	p _{fs}
	V	Hz	min ⁻¹	W	A	m ³ /h	Pa	cfm	in. wg
1	230	50	1400	245	1.10	5705	0	3360	0.00
2	230	50	1385	265	1.19	5235	30	3080	0.12
3	230	50	1365	286	1.28	4680	60	2755	0.24
4	230	50	1340	306	1.36	4100	85	2415	0.34

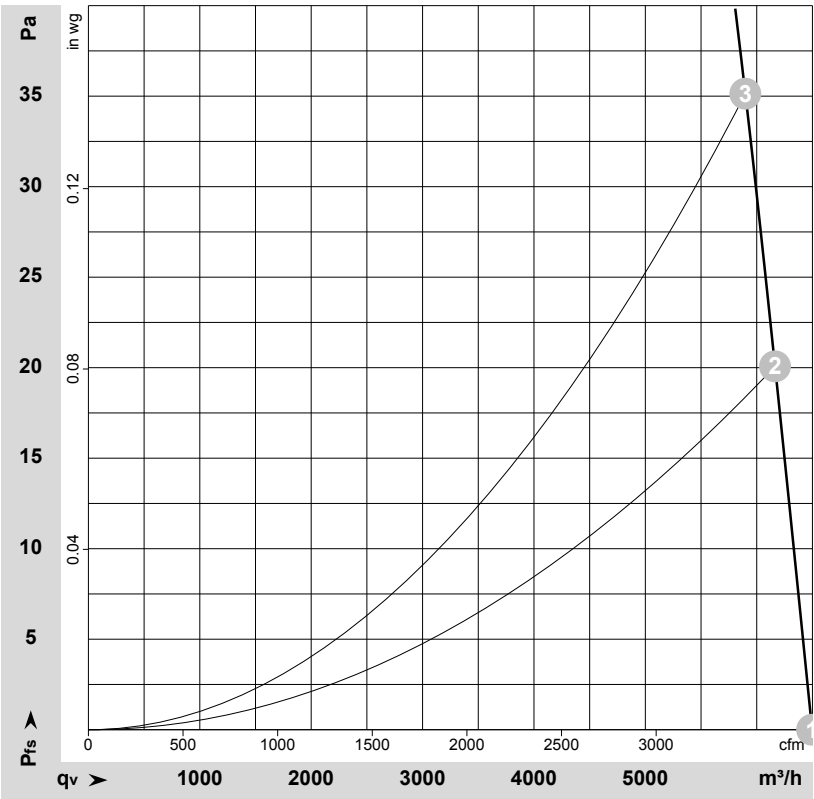
U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase



AC axial fan

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

Curves: Air performance 60 Hz



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

Measurement: LU-33263-1

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 _e	I	q _v	p _{ts}	q _v	p _{ts}
	V	Hz	min ⁻¹	W	A	m ³ /h	Pa	cfm	in. wg
1	230	60	1600	355	1.55	6495	0	3825	0.00
2	230	60	1580	364	1.58	6165	20	3630	0.08
3	230	60	1555	377	1.64	5900	35	3470	0.14

U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · p_{ts} = Pressure increase

