

AC axial fan - HyBlade®

sickled 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

County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

County court Stuttgart · HRB 590142



Nominal data

Type	S4E450-AU03-01		
Motor	M4E094-EA		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed	min ⁻¹	1300	1490
Power input	W	350	425
Current draw	A	1.55	1.87
Motor capacitor	µF	8	8
Capacitor voltage	VDB	400	400
Max. back pressure	Pa	120	50
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	55	45
Starting current	A	6.0	5.5

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

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		32.9	26.6	30.6
Efficiency grade N		42.3	36	40
Power input P_e	kW	0.33		
Air flow q_v	m ³ /h	3920		
Pressure increase p_{fs}	Pa	100		
Speed n	min ⁻¹	1325		

Data established at point of optimum efficiency



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Technical features

Mass	7.5 kg
Size	450 mm
Surface of rotor	Coated in black
Material of terminal box	ABS plastic, black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Material of guard grille	Steel, phosphated and coated in black plastic
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box, integrated capacitor connected via terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2004); CE
Approval	CCC

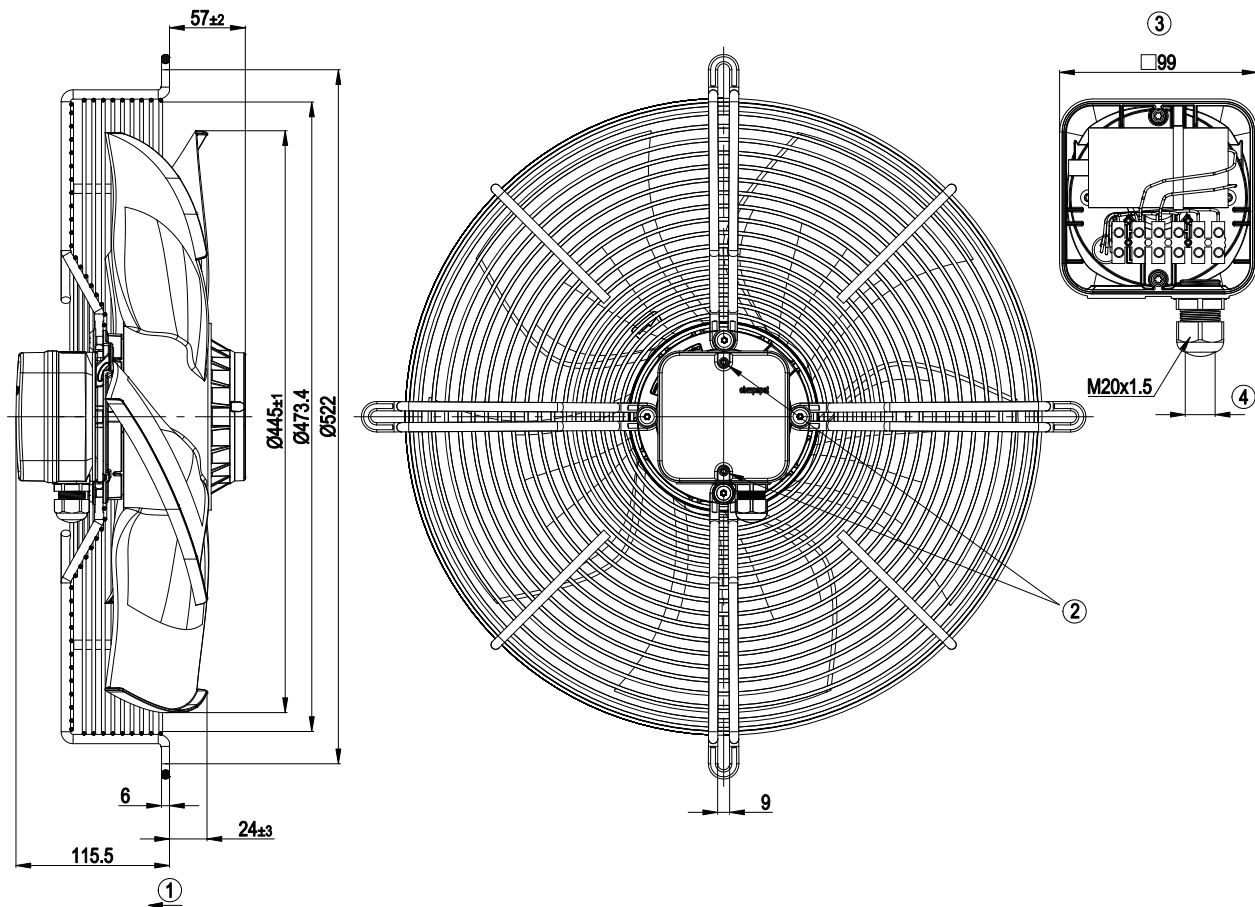


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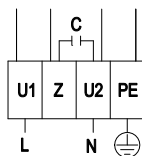
with guard grille for short nozzle

Product drawing



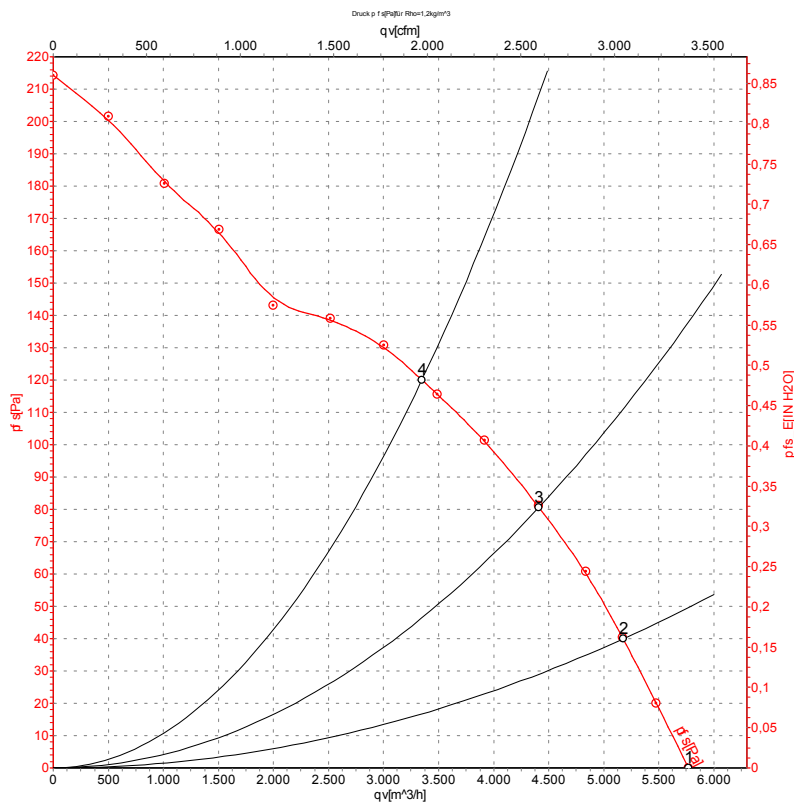
1	Direction of air flow "V"
2	Tightening torque 0.8 ± 0.15 Nm
3	Illustration without terminal box cover
4	Cable diameter: min. 6 mm, max. 12 mm, tightening torque: 2 ± 0.15 Nm

Connection screen



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

Charts: Air flow 50 Hz



Measurement: LU-71958

Air performance measured as per ISO 5801
Installation category A. For detailed
information on the measuring set-up, please
contact ebm-papst. Suction-side noise
levels: LwA measured as per ISO 13347 /
LpA measured with 1m distance to fan axis.
The values given are valid under the
measuring conditions mentioned above and
may vary according to the actual installation
situation. With any deviation from the
standard set-up, the specific values have to
be checked and reviewed with the unit
installed.

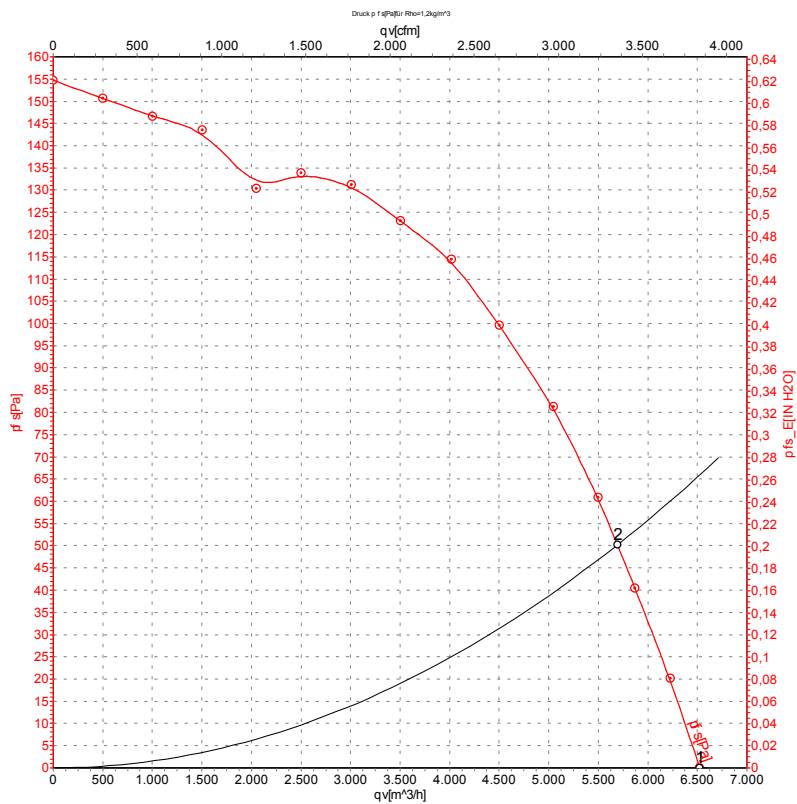
Measured values

	U	f	n	P _e	I	LwA _{in}	qv	p _{fs}
	V	Hz	min ⁻¹	W	A	dB(A)	m³/h	Pa
1	230	50	1380	272	1.20	74	5770	0
2	230	50	1355	299	1.31	74	5175	40
3	230	50	1340	321	1.40	73	4410	80
4	230	50	1300	350	1.55	73	3350	120

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LwA_{in} = Sound power level inlet side · qv = Air flow · p_{fs} = Pressure increase



Charts: Air flow 60 Hz



Measurement: LU-71963

Air performance measured as per ISO 5801
 Installation category A. For detailed
 information on the measuring set-up, please
 contact ebm-papst. Suction-side noise
 levels: L_{wA} measured as per ISO 13347 /
 L_{pA} measured with 1m distance to fan axis.
 The values given are valid under the
 measuring conditions mentioned above and
 may vary according to the actual installation
 situation. With any deviation from the
 standard set-up, the specific values have to
 be checked and reviewed with the unit
 installed.

Measured values

	U	f	n	P _e	I	L _{wA_{in}}	qv	p _{fs}
	V	Hz	min ⁻¹	W	A	dB(A)	m³/h	Pa
1	230	60	1545	396	1.74	76	6525	0
2	230	60	1490	425	1.87	77	5695	50

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · L_{wA_{in}} = Sound power level inlet side · qv = Air flow · p_{fs} = Pressure increase