

AC axial fan

sickle-shaped blades (S series)

with round full nozzle

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	W4E450-IG01-01		
Motor	M4E110-EF		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		-	-
Speed (rpm)	min ⁻¹	1330	1410
Power consumption	W	500	720
Current draw	A	2.2	3.15
Capacitor	µF	10	10
Capacitor voltage	VDB	400	400
Max. back pressure	Pa	100	110
Max. back pressure	inH ₂ O	0.4	0.44
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	80	50
Starting current	A	4.3	4.5

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	12.8 kg
Fan size	450 mm
Rotor surface	Painted black
Terminal box material	ABS plastic
Blade material	Sheet aluminum, painted black
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	0°
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, capacitor integrated and connected
Motor protection	Thermal overload protector (TOP) with basic insulation
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 61800-5-1
Approval	EAC

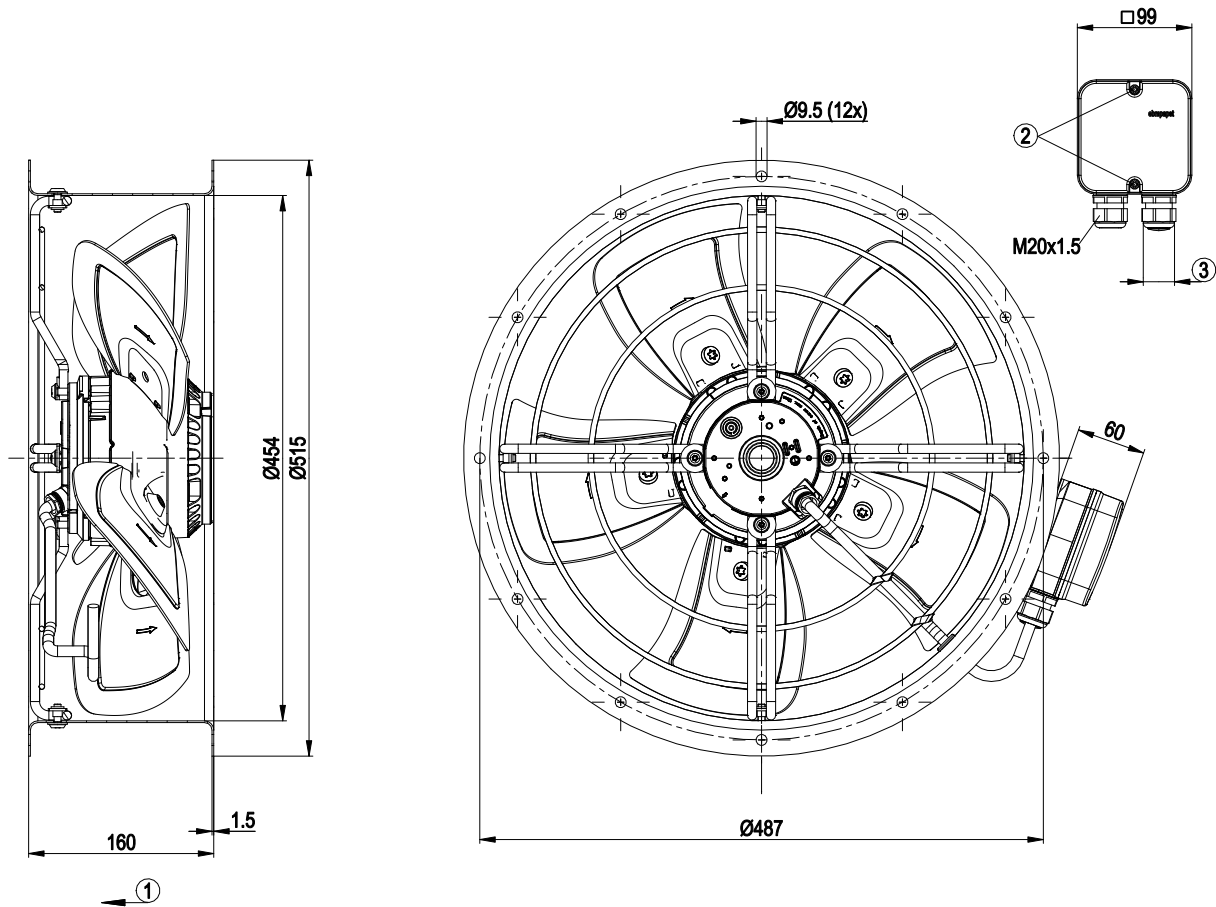


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Product drawing

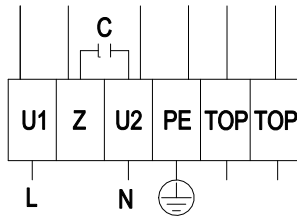


1	Direction of air flow "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 6 mm, max. 12 mm; tightening torque 2 ± 0.15 Nm

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Connection diagram



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

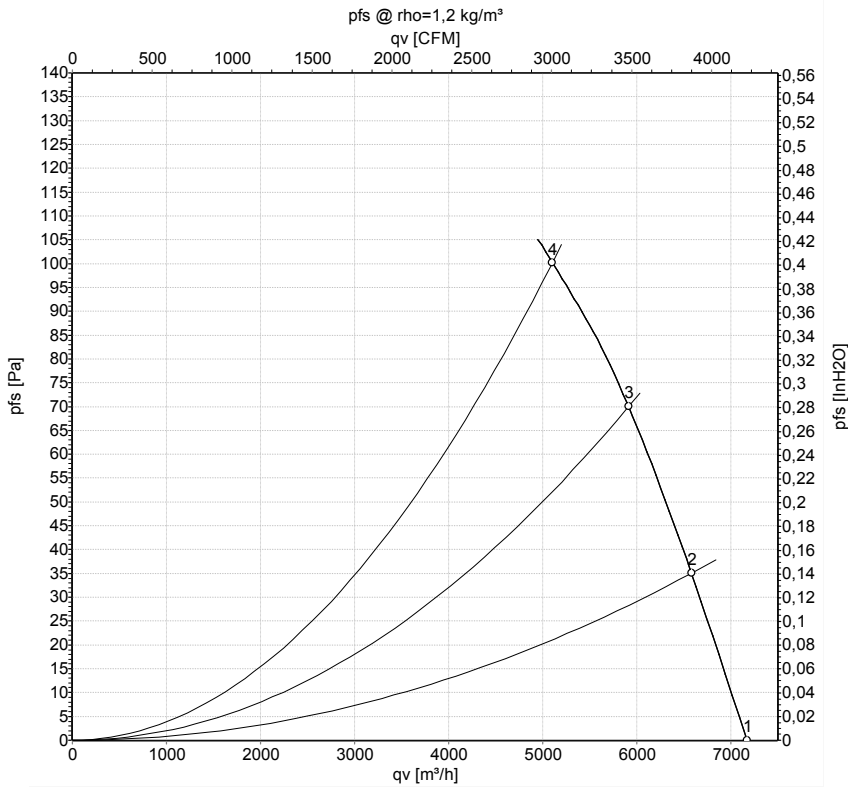


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Curves: Air performance 50 Hz



Measurement: LU-74661-1

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	inH ₂ O
1	230	50	1375	425	1.85	7175	0	4220	0.00
2	230	50	1360	448	1.96	6585	35	3875	0.14
3	230	50	1350	472	2.06	5915	70	3480	0.28
4	230	50	1330	500	2.20	5105	100	3005	0.40

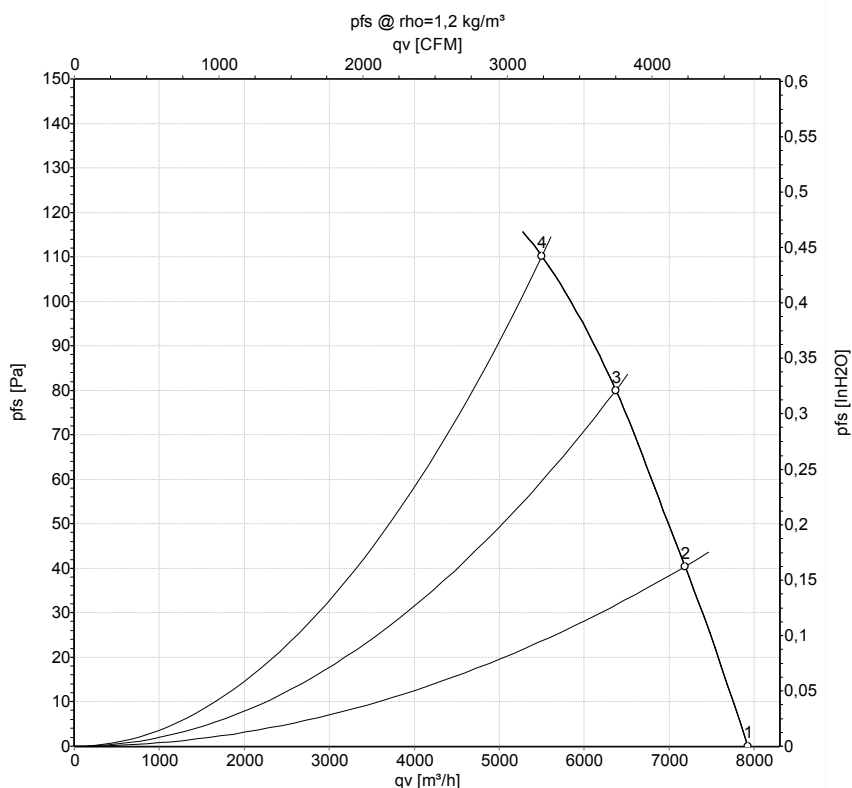
U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase



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Curves: Air performance 60 Hz



Measurement: LU-74662-1

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	inH ₂ O
1	230	60	1535	661	2.86	7925	0	4665	0.00
2	230	60	1495	681	2.96	7190	40	4230	0.16
3	230	60	1450	707	3.07	6375	80	3750	0.32
4	230	60	1410	720	3.15	5500	110	3240	0.44

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