W6E450-CU04-02

AC axial fan - HyBlade

sickle-shaped blades (S series)

with round full nozzle

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Nominal data

Type	**W6E450-CU04-02**
Motor	**M6E094-EA**

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}	900	990
Power consumption	W	190	260
Current draw	A	0.86	1.16
Capacitor	µF	5	5
Capacitor voltage	VDB	450	450
Max. back pressure	Pa	60	75
Max. back pressure	in. wg	0.24	0.3
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	65	65

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	9.5 kg
Size	450 mm
Motor size	94
Rotor surface	Painted black
Terminal box material	PP plastic
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
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
Airflow direction	A
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
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	Terminal box
Motor protection	Thermal overload protector (TOP) internally connected
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 60034-1 (2010)
Approval	EAC; CCC

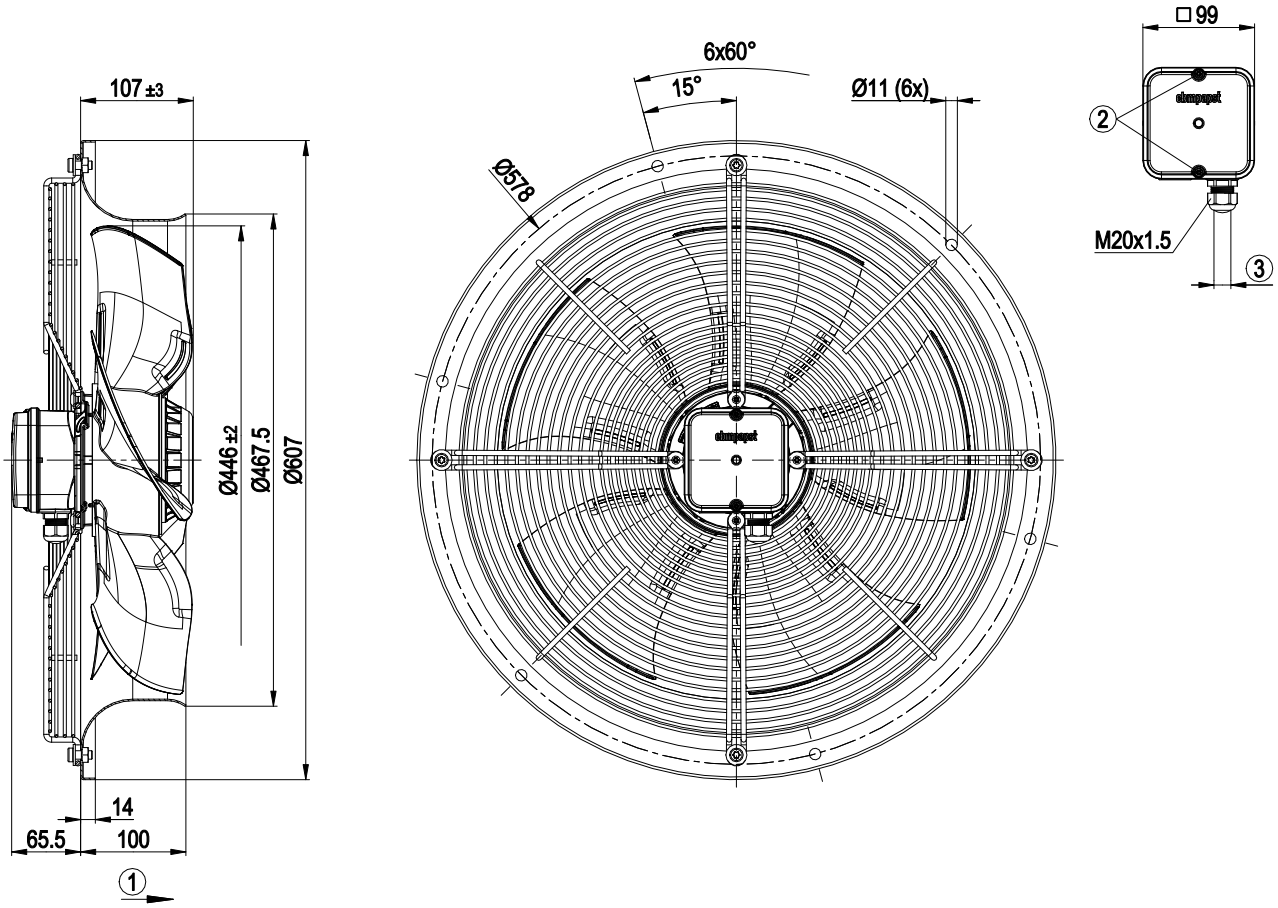
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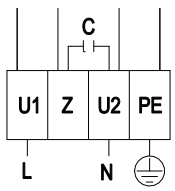
with round full nozzle

Product drawing



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

Connection diagram



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

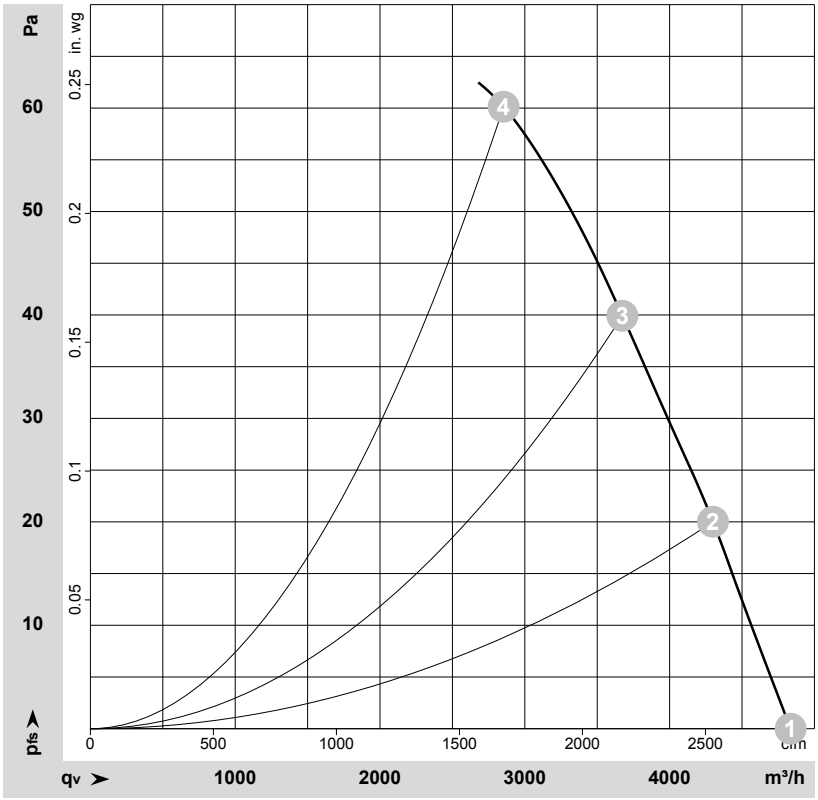
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Curves: Air performance 50 Hz



ρ = 1.189 kg/m³ ± 2 %

Measurement: LU-106691-1

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	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	1~	230	50	925	171	0.79	56	61	62	4835	0	2845	0.00
2	1~	230	50	915	180	0.82	55	60	60	4300	20	2530	0.08
3	1~	230	50	905	186	0.84	54	59	60	3675	40	2160	0.16
4	1~	230	50	900	190	0.86	53	59	59	2855	60	1680	0.24

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

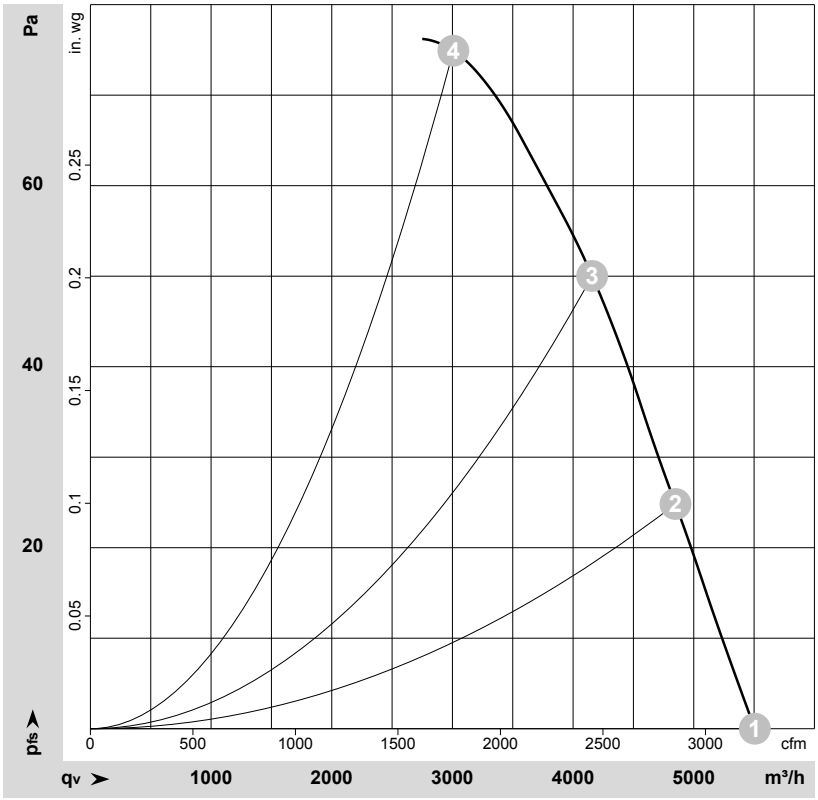
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Curves: Air performance 60 Hz



ρ = 1.188 kg/m³ ± 2 %

Measurement: LU-106697-1

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	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	1~	230	60	1060	241	1.05	58	64	65	5505	0	3240	0.00
2	1~	230	60	1035	251	1.09	57	63	63	4850	25	2855	0.10
3	1~	230	60	1015	260	1.13	56	62	62	4160	50	2445	0.20
4	1~	230	60	990	260	1.16	56	62	62	3010	75	1770	0.30

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

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