

W4E450-CU03-01

AC axial fan - HyBlade®

sickled blades (S series)

with full round nozzle

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Nominal data

Type	W4E450-CU03-01		
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	450	450
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 definition with optimum efficiency.

LU-71958

The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



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Technical features

Mass	9.6 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 wall ring	Sheet steel, pre-galvanised and coated in black 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
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	CE
Approval	CCC; EAC

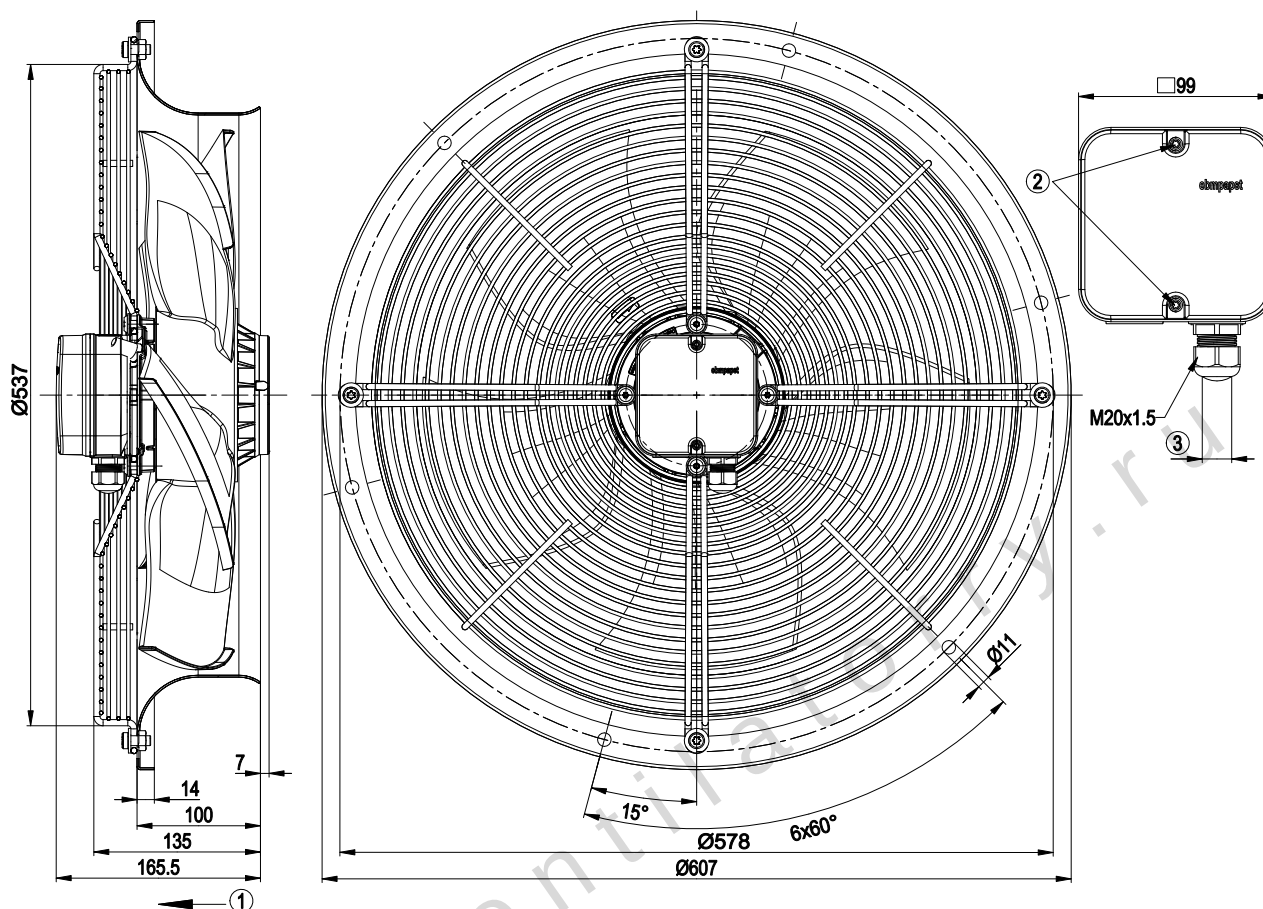
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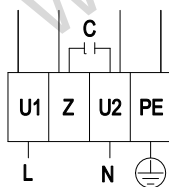
with full round nozzle

Product drawing



1	Direction of air flow "V"
2	Tightening torque 0.8±0.15 Nm
3	Cable diameter: min. 6 mm, max. 12 mm, tightening torque: 2±0.3 Nm

Connection screen



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

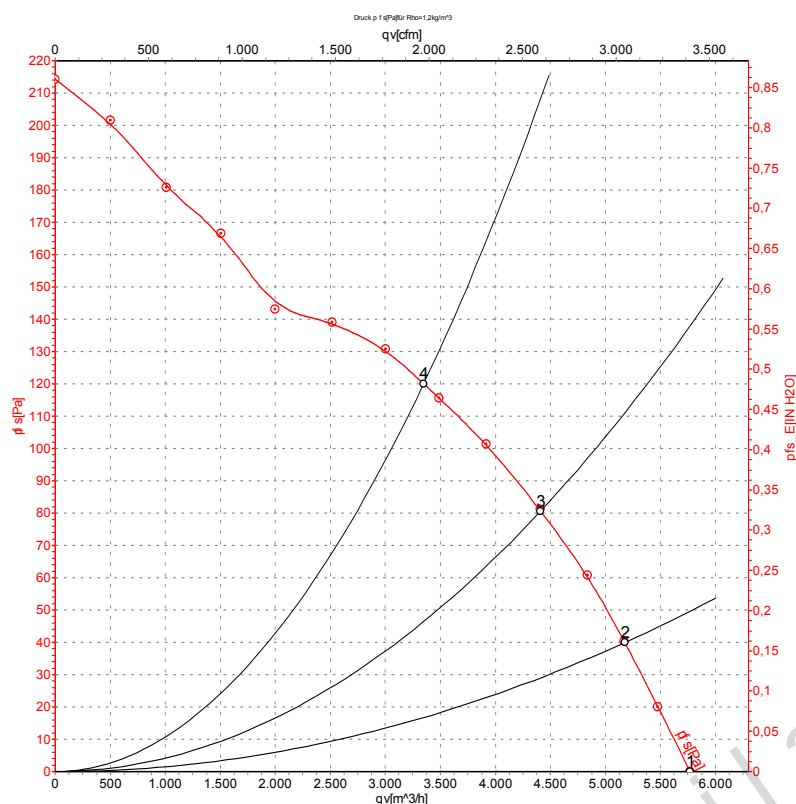
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Charts: Air flow 50 Hz



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

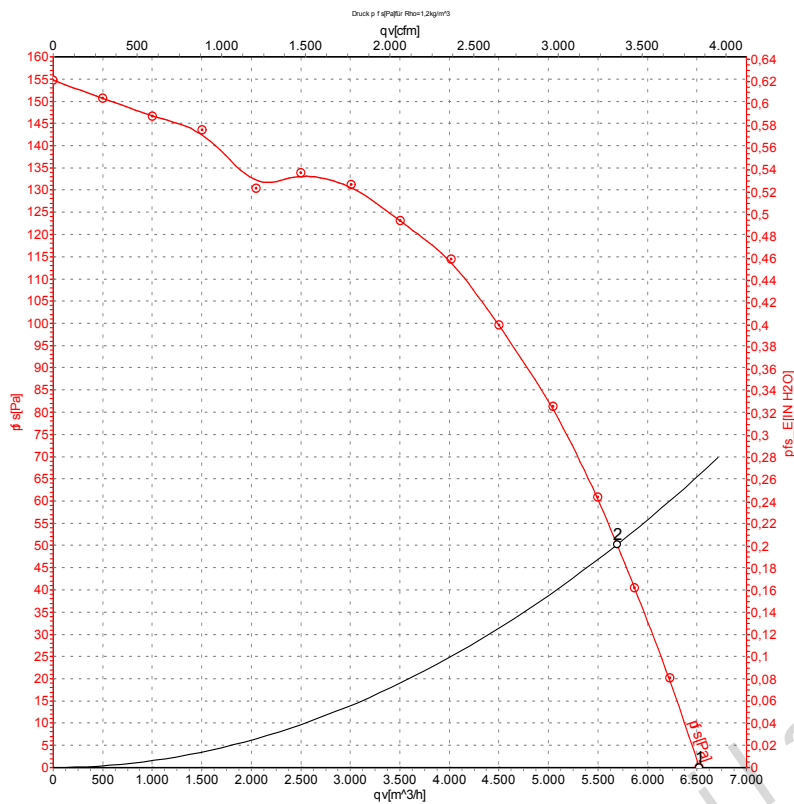
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Charts: Air flow 60 Hz



Air performance measured as per ISO 5801
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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
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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