W4D500-CM01-80

AC axial fan - HyBlade

sickled blades (S series)

with full round nozzle, Transformator fan

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	**W4D500-CM01-80**
Motor	**M4D110-GF**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	277	400	480
Connection		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		fa	fa	fa	fa
Valid for approval / standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	1400	1650	1400	1650
Power input	W	530	870	530	870
Current draw	A	2.0	2.4	1.15	1.4
Max. back pressure	Pa	140	160	140	160
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	65	60	65	60
Starting current	A	10.6	12.1	6.1	7.0

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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	33.3	32.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40.8	40
05 Variable speed drive		No	

09 Power input P_e	kW	0.66
09 Air flow q_v	m^3/h	5985
09 Pressure increase p_{fs}	Pa	134
10 Speed (rpm) n	min^{-1}	1355
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-110665

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Technical features

Mass	13.8 kg
Size	500 mm
Surface of rotor	Coated in black
Material of terminal box	Die-cast aluminium, coated in black
Material of blades	Press-fitted, coated sheet steel blank, sprayed with PP plastic
Material of wall ring	Sheet steel, galvanised and plastic-coated in white aluminium (RAL 9006)
Material of guard grille	Steel, coated in white aluminium plastic (RAL 9006)
Number of blades	5
Direction of air flow	"A"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H2+
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 top; rotor on bottom on request
Condensate discharge holes	On the stator 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
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CSA C22.2 No.100; UL 1004-1; VDE; EAC

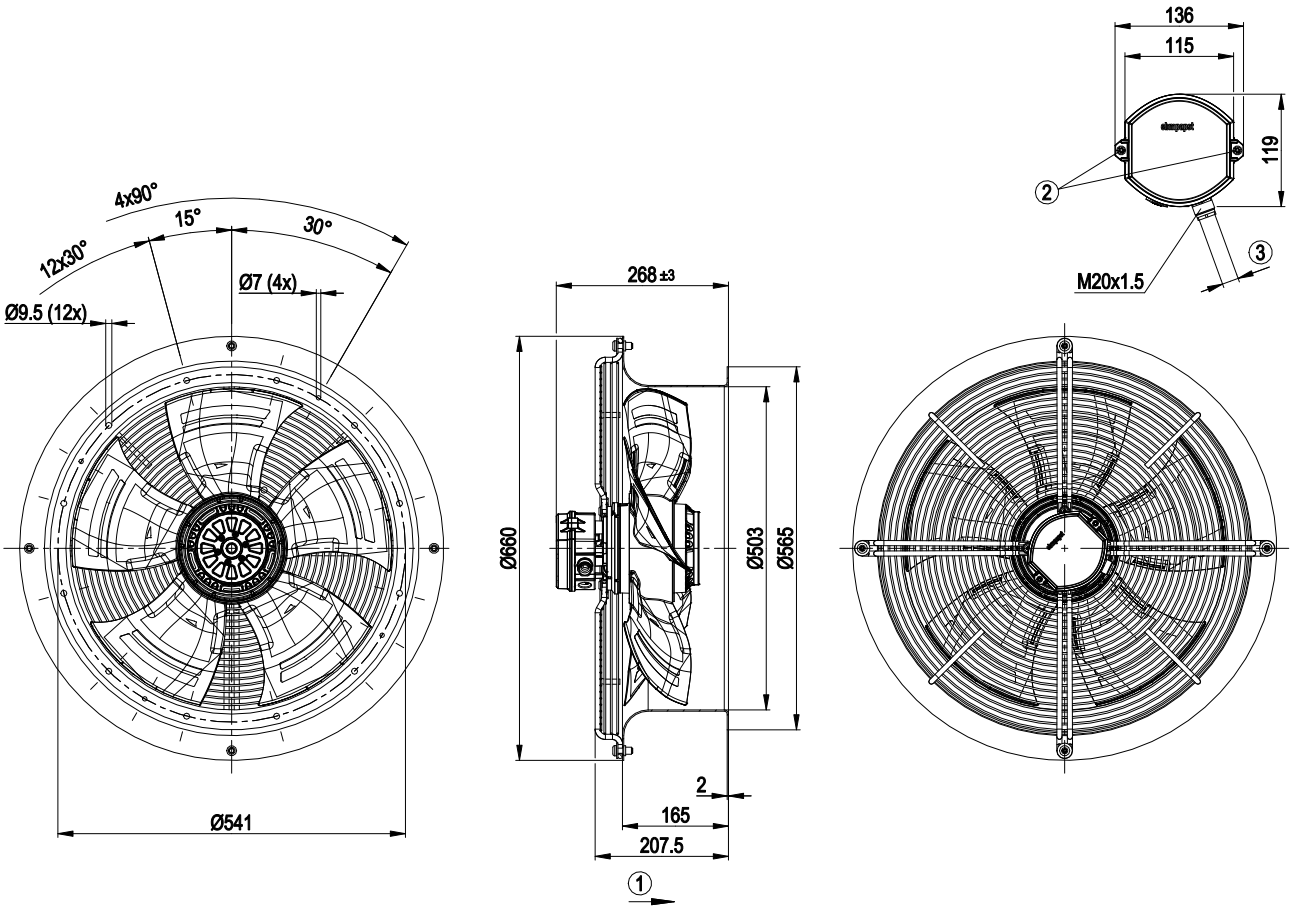
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Product drawing



1	Direction of air flow "A"
2	Tightening torque 2.5±0.4 Nm
3	Cable diameter min. 10 mm, max. 12 mm, tightening torque 4±0.6 Nm

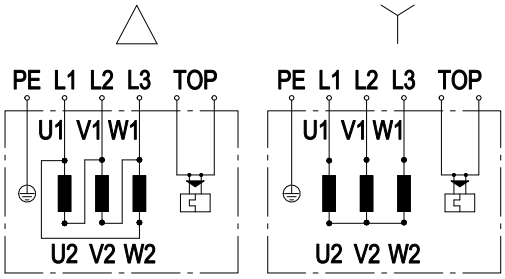
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Connection screen



Note: Change in direction of rotation by reversing two phases

Δ	Delta connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	2xgrey
PE	green/yellow				

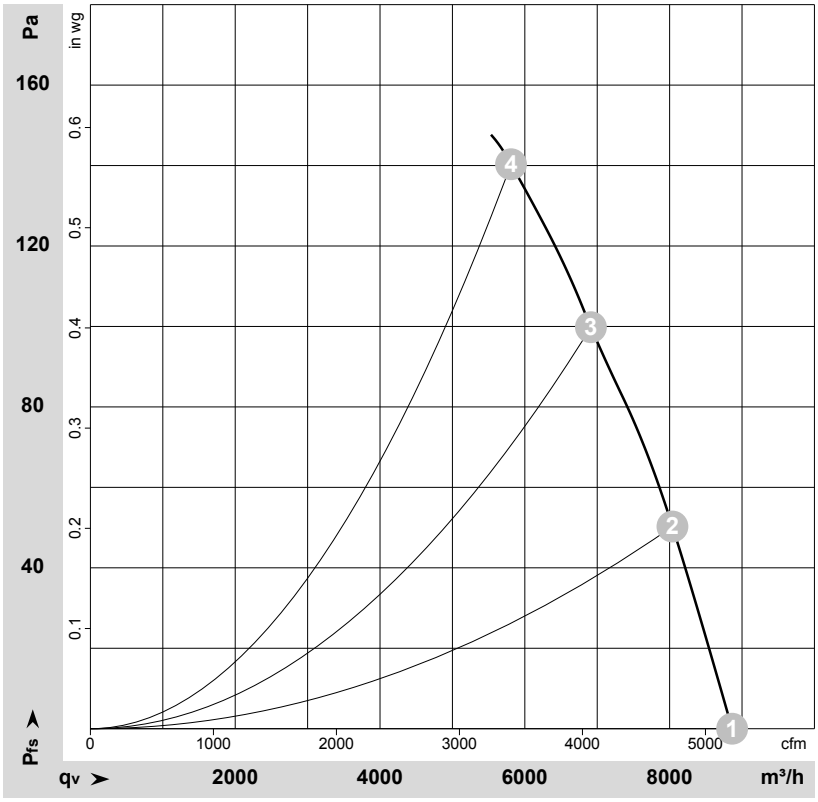
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174132-1

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

	Conn.	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	inH2O
1	Y	400	50	1400	530	1.15	73	80	79	8865	0	5215	0.00
2	Y	400	50	1380	584	1.22	72	78	78	8040	50	4730	0.20
3	Y	400	50	1365	636	1.28	70	77	77	6915	100	4070	0.40
4	Y	400	50	1360	671	1.32	69	75	75	5810	140	3420	0.56

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

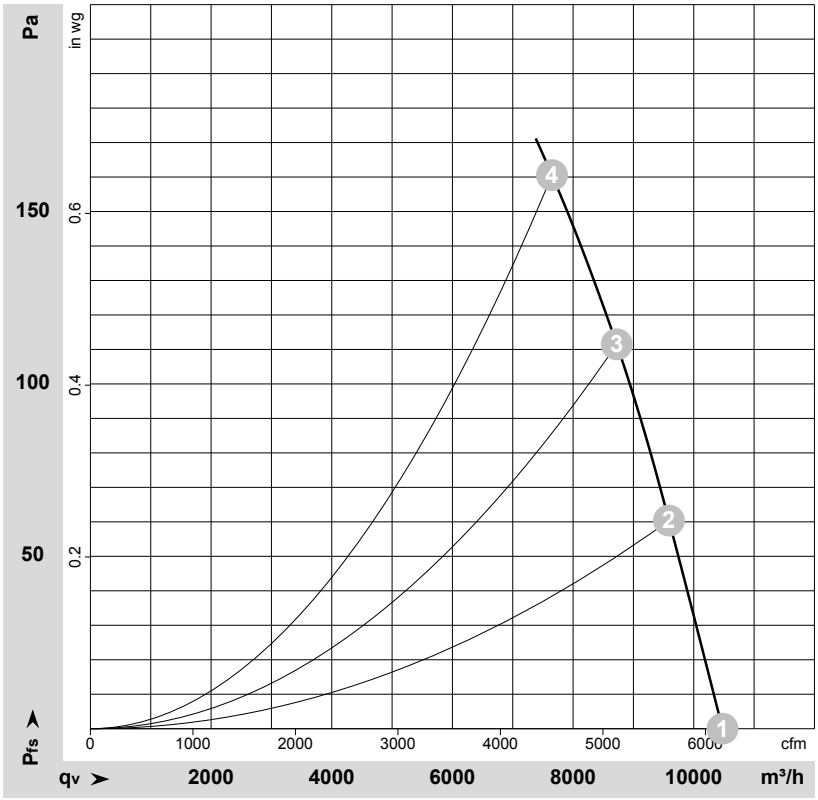
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Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174127-1

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

	Conn.	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	inH2O
1	Y	480	60	1650	870	1.40	77	84	84	10475	0	6165	0.00
2	Y	480	60	1625	945	1.49	76	83	83	9590	60	5645	0.24
3	Y	480	60	1615	1006	1.56	75	82	82	8725	110	5135	0.44
4	Y	480	60	1600	1069	1.63	73	80	80	7650	160	4505	0.64

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

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