W6D500-CG03-80

AC axial fan

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

ErP2013 EXCEEDS THE NORM

Nominal data

Type	**W6D500-CG03-80**
Motor	**M6D110-EF**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400	480	480
Connection		Δ	Y	Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60	60	60
Type of data definition		fa	fa	fa	fa	fa	fa
Valid for approval / standard		CE	CE	CE	CE	CE	CE
Speed	min^{-1}	945	830	1080	865	1115	960
Power input	W	250	175	340	240	380	280
Current draw	A	0.70	0.31	0.69	0.42	0.75	0.41
Max. back pressure	Pa	75	50	90	45	100	60
Max. ambient temperature	°C	90	90	75	75	75	75
Starting current	A	2.5	0.85	2.3	0.8	2.8	0.95

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_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	26.9	26.3	30.3
Efficiency grade N		36.6	36	40
Power input P_e	kW	0.29		
Air flow q_v	m^3/h	4285		
Pressure increase p_{fs}	Pa	67		
Speed n	min^{-1}	925		

Data definition with optimum efficiency. LU-104095
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	21.3 kg
Size	500 mm
Surface of rotor	Coated in black
Material of terminal box	Die-cast aluminium, coated in black
Material of blades	Aluminium sheet, coated in black
Material of wall ring	Sheet steel, pre-galvanised and plastic-coated in white aluminium (RAL 9006)
Material of guard grille	Steel, galvanised and plastic-coated in white aluminium (RAL 9006)
Number of blades	5
Blade angle	0°
Direction of air flow	"A"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-2
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
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	EAC; VDE

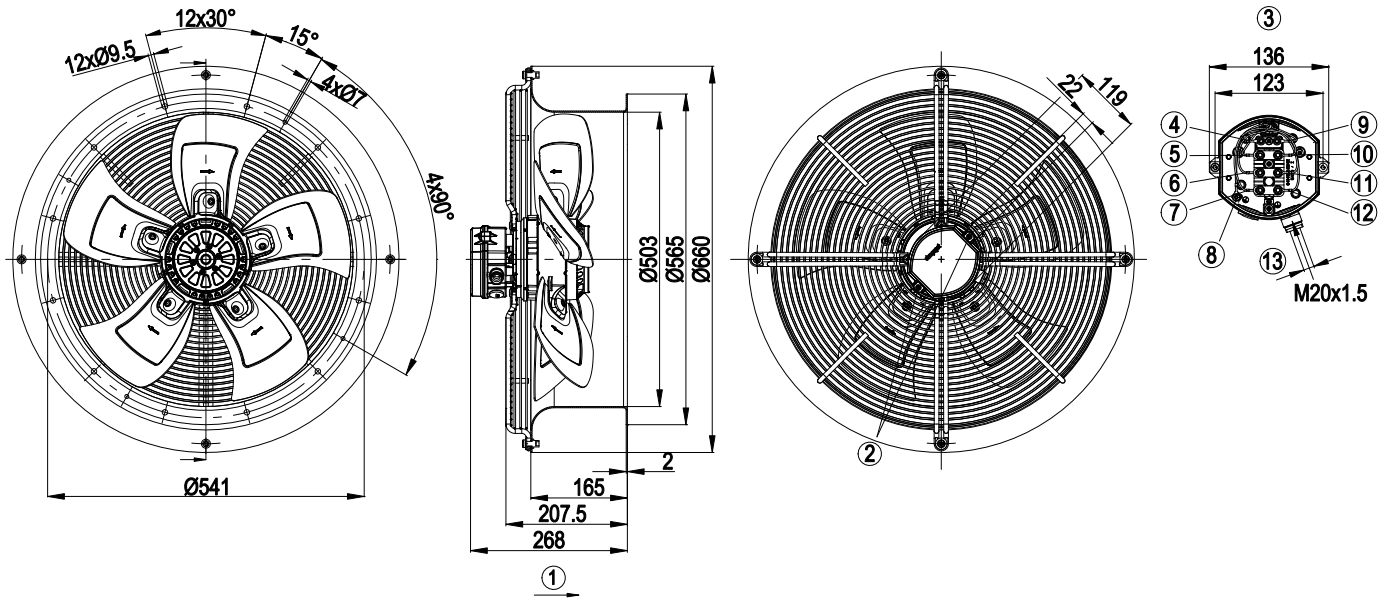
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Product drawing



1	Direction of air flow "A"
2	Tightening torque 2.0 ± 0.2 Nm
3	Illustration without terminal box cover
4	grey
5	white
6	green
7	yellow
8	green/yellow
9	grey
10	brown
11	light blue
12	black
13	Cable diameter: min. 10 mm, max. 12 mm; tightening torque: 2.0 ± 0.2 Nm

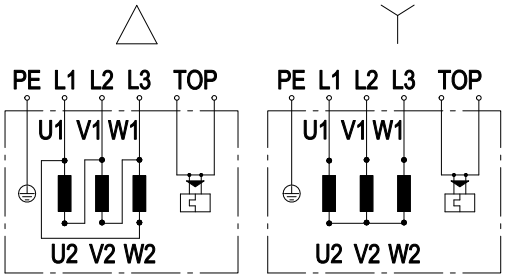
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Connection screen



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				

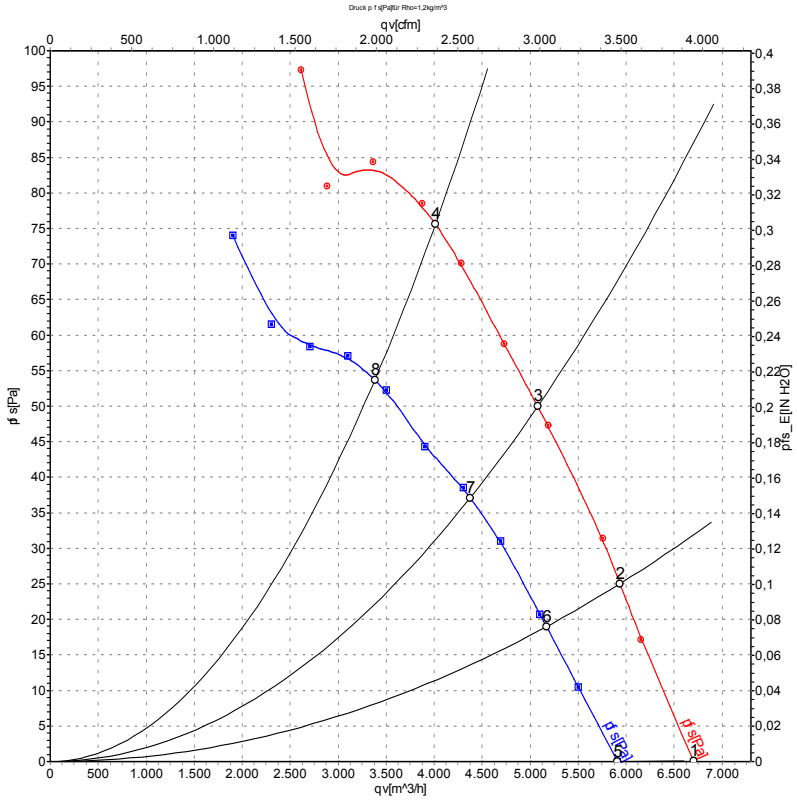
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Charts: Air flow 50 Hz



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}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	400	50	945	242	0.68	63	69	69	6700	0
2	Δ	400	50	935	263	0.68	64	70	70	5935	25
3	Δ	400	50	930	283	0.69	64	70	69	5080	50
4	Δ	400	50	920	310	0.75	64	71	71	4015	75
5	Y	400	50	835	174	0.31	61	67	66	5910	0
6	Y	400	50	815	189	0.33	61	67	67	5170	19
7	Y	400	50	795	201	0.34	60	66	66	4375	37
8	Y	400	50	775	220	0.36	60	66	66	3380	54

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · 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 · qv = Air flow · p_{fs} = Pressure increase

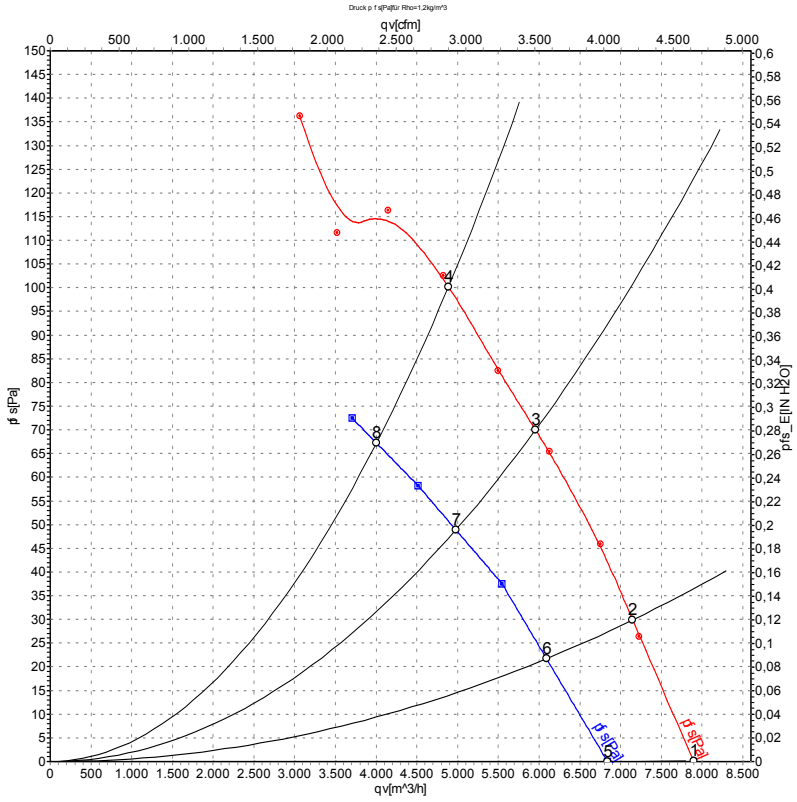
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Charts: Air flow 60 Hz



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

	Conn.	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	480	60	1115	375	0.72	67	73	72	7900	0
2	Δ	480	60	1110	403	0.74	67	73	73	7145	30
3	Δ	480	60	1095	442	0.77	67	73	73	5955	70
4	Δ	480	60	1085	480	0.84	68	74	74	4885	100
5	Y	480	60	965	277	0.39	64	70	69	6840	0
6	Y	480	60	940	293	0.41	64	70	70	6090	22
7	Y	480	60	910	314	0.44	63	69	69	4980	49
8	Y	480	60	890	330	0.48	63	69	69	4005	67

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · 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 · qv = Air flow · p_{fs} = Pressure increase

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