

# AC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle

W6D800-GA01-01 ebmpapst Datasheet

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General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

<b>Type</b>	W6D800-GA01-01		
<b>Motor</b>	M6D138-NA		
Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		$\Delta$	Y
Frequency	Hz	50	50
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min <sup>-1</sup>	915	750
Power consumption	W	2090	1490
Current draw	A	4.6	2.72
Max. back pressure	Pa	175	115
Max. back pressure	in. wg	0.7	0.46
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	65	65
Starting current	A	18	6

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change

## Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency $\eta_{es}$	%	35.3	35.3	09 Power consumption $P_e$	kW	1.82
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	17820
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	131
04 Efficiency grade N		40	40	10 Speed (rpm) n	min <sup>-1</sup>	930
05 Variable speed drive		No		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.  
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

\* Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$

LU-199861



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## Technical description

Weight	46.8 kg
Size	800 mm
Motor size	138
Rotor surface	Cast in aluminum
Terminal box material	PP plastic
Blade material	Sheet aluminum insert, 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
Blade pitch	0°
Airflow direction	V
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	Any
Condensation drainage holes	On rotor and stator sides
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) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	VDE; EAC

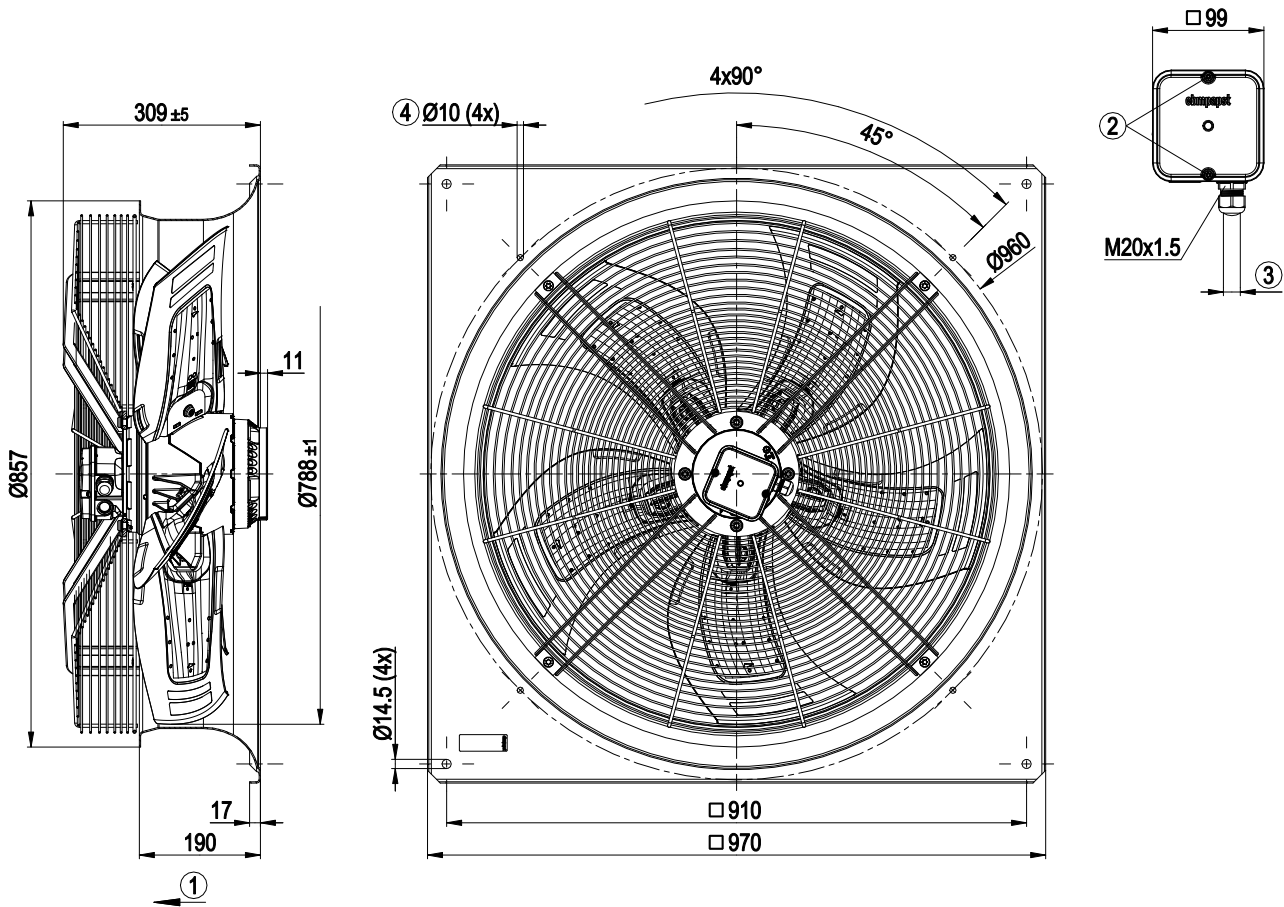


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## Product drawing



1	Direction of air flow "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 7 mm, max. 14 mm, tightening torque 2 ± 0.3 Nm
4	Attachment holes for FlowGrid (80000-2-2957 not included in scope of delivery)



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## Connection diagram



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

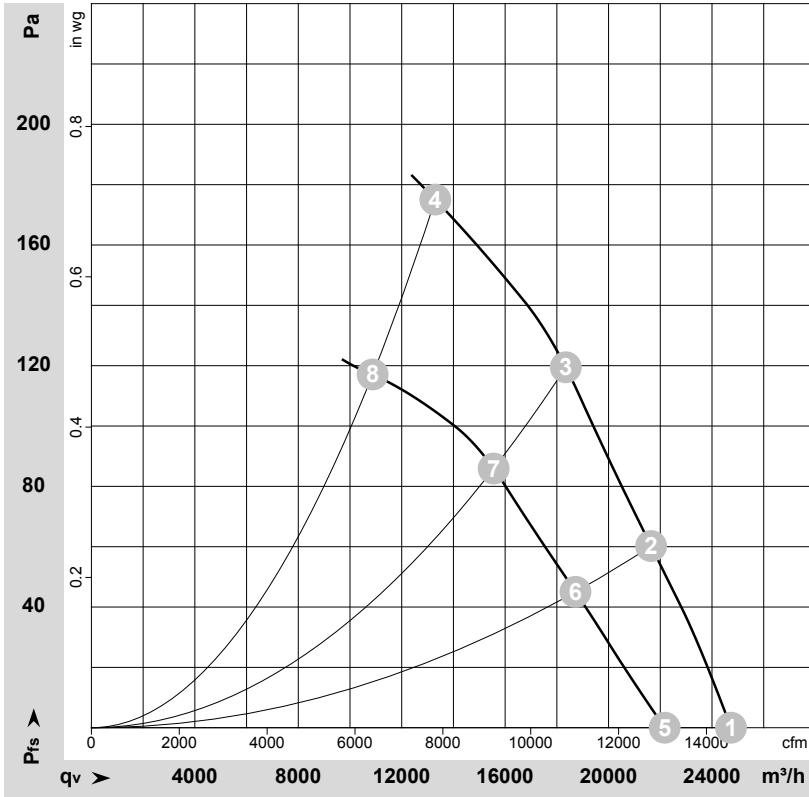


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## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-124239-1  
Measurement: LU-124243-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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	Pe	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	qv	Pfs	qv	Pfs
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	Δ	400	50	950	1474	3.99	66	73	73	24735	0	14560	0.00
2	Δ	400	50	940	1675	4.15	66	72	72	21645	60	12740	0.24
3	Δ	400	50	930	1837	4.29	67	74	73	18345	120	10795	0.48
4	Δ	400	50	915	2090	4.60	71	79	78	13300	175	7825	0.70
5	Y	400	50	840	1126	2.08	63	70	71	22170	0	13050	0.00
6	Y	400	50	810	1260	2.31	62	69	68	18720	45	11020	0.18
7	Y	400	50	790	1356	2.47	63	69	69	15555	86	9155	0.35
8	Y	400	50	750	1490	2.72	66	74	73	10875	117	6400	0.47

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · Pe = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · qv = Air flow · Pfs = Pressure increase

