

AC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle

W6D800-DH01-02 ebmpapst Datasheet FansCo

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Nominal data

Type	W6D800-DH01-02		
Motor	M6D138-HF		
Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Δ	Y
Frequency	Hz	50	50
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min ⁻¹	850	610
Power consumption	W	1440	820
Current draw	A	2.9	1.6
Max. back pressure	Pa	150	80
Max. back pressure	in. wg	0.6	0.32
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	60	60
Starting current	A	9	3

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

		Actual	Req. 2015			
01 Overall efficiency η_{ES}	%	35.5	34.4	09 Power consumption P_e	kW	1.29
02 Measurement category		A		09 Air flow q_v	m ³ /h	13595
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	122
04 Efficiency grade N		41.1	40	10 Speed (rpm) n	min ⁻¹	870
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-115455



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Technical description

Weight	40.9 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	-5°
Airflow direction	A
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our 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 61800-5-1; EN 60034-1 (2010); CE
Approval	VDE; EAC

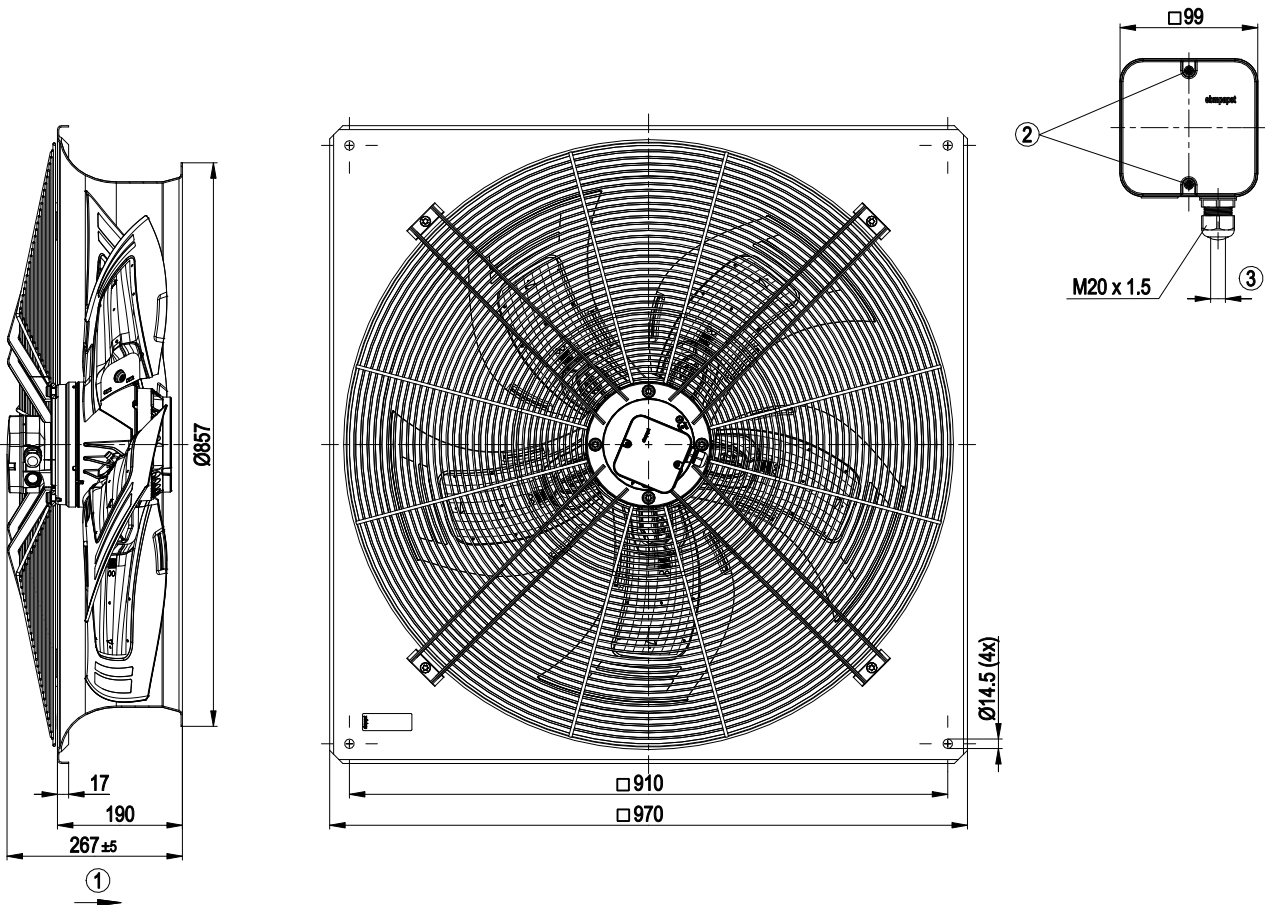


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Product drawing



1	Direction of air flow "A"
2	Tightening torque 1.5±0.2 Nm
3	Cable diameter: min. 7 mm, max. 14 mm, tightening torque 2±0.3 Nm

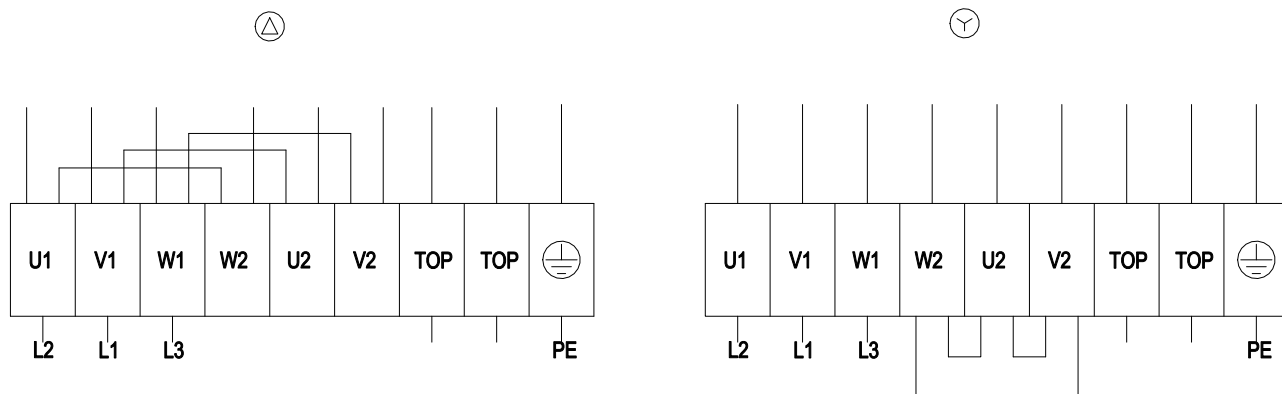


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Connection diagram



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

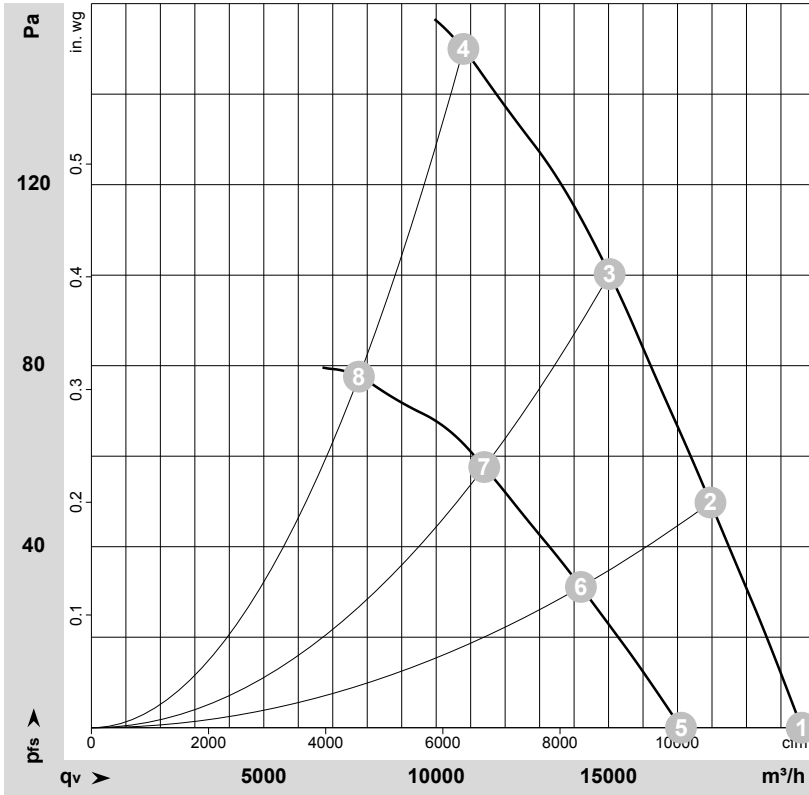


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Curves: Air performance 50 Hz



$\rho = 1.185 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-115455-1
Measurement: LU-115453-1

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	Δ	400	50	910	940	2.26	66	73	72	20600	0	12125	0.00
2	Δ	400	50	895	1112	2.48	63	69	69	17955	50	10570	0.20
3	Δ	400	50	875	1248	2.64	65	71	70	15030	100	8845	0.40
4	Δ	400	50	850	1440	2.90	69	76	76	10790	150	6350	0.60
5	Y	400	50	760	665	1.29	62	68	68	17100	0	10065	0.00
6	Y	400	50	710	731	1.42	57	64	63	14200	31	8355	0.12
7	Y	400	50	665	776	1.52	57	64	63	11395	58	6705	0.23
8	Y	400	50	610	820	1.60	60	68	67	7760	78	4565	0.31

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

