W6D800-GE01-49

AC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle

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Nominal data

Type	**W6D800-GE01-49**
Motor	**M6D138-LA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
Wiring		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Method of obtaining data		ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	910	730	1090	850
Power consumption	W	1570	1060	2060	1350
Current draw	A	3.42	1.98	3.75	2.20
Max. back pressure	Pa	170	105	120	70
Max. back pressure	in. wg	0.68	0.42	0.48	0.28
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	70	70	55	55
Starting current	A	13	4.4	14	4.7

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}	%	37.3	34.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.7	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	1.4
09 Air flow q_v	m^3/h	14480
09 Pressure increase p_{fs}	Pa	131
10 Speed (rpm) n	min^{-1}	925
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 Pa

LU-113300

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Technical description

Weight	43 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 white aluminum plastic (RAL 9006)
Guard grille material	Steel, galvanized and coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	-5°
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

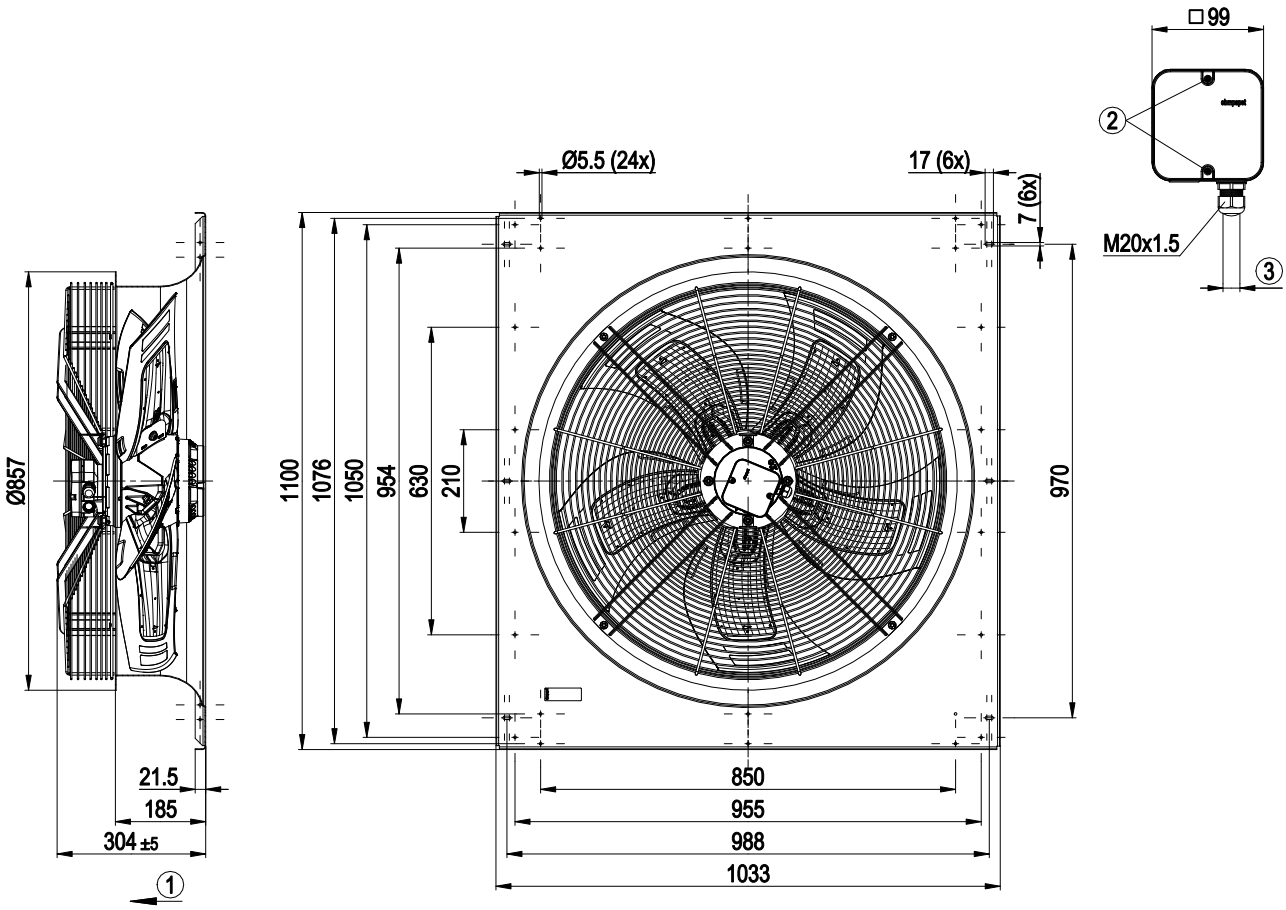
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Product drawing



1	Airflow direction "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 7 mm, max. 14 mm, tightening torque 2 ± 0.3 Nm

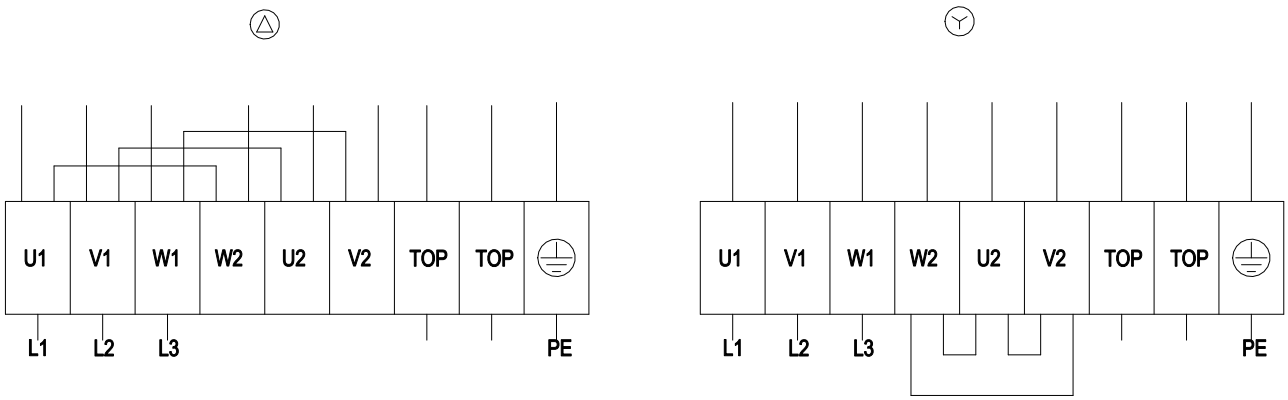
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Connection diagram



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

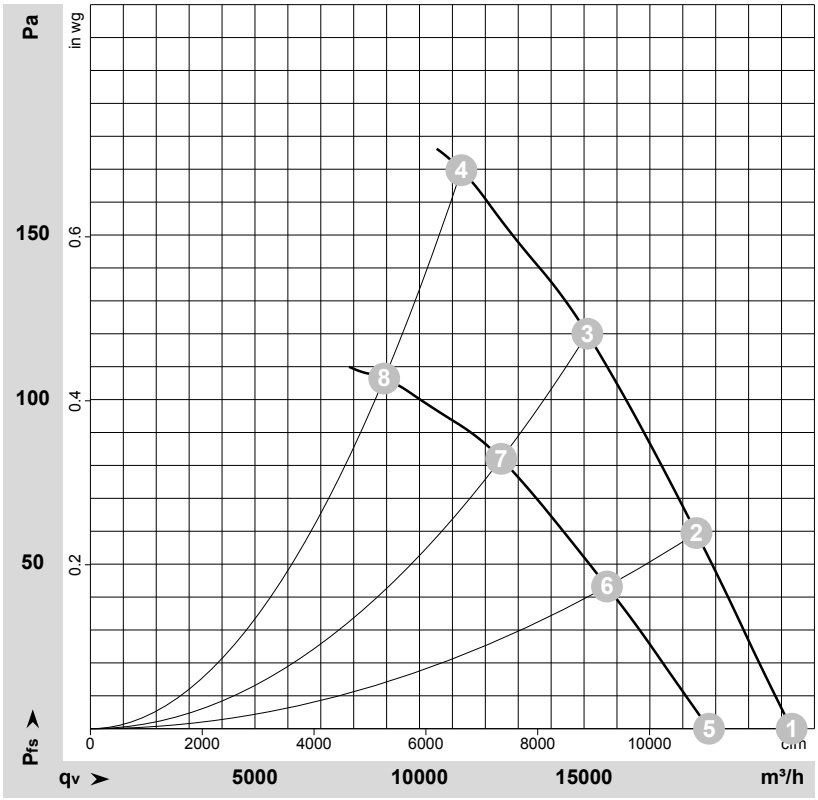
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-113300-1
Measurement: LU-113303-1

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	950	1000	2.80	67	73	73	21310	0	12540	0.00
2	Δ	400	50	940	1208	2.98	64	70	70	18415	60	10840	0.24
3	Δ	400	50	925	1381	3.17	67	73	72	15100	120	8890	0.48
4	Δ	400	50	910	1570	3.42	72	79	78	11275	170	6635	0.68
5	Y	400	50	845	770	1.40	64	70	70	18800	0	11065	0.00
6	Y	400	50	800	898	1.70	60	66	65	15695	43	9240	0.17
7	Y	400	50	765	982	1.87	62	68	67	12485	82	7345	0.33
8	Y	400	50	730	1060	1.98	65	72	72	8925	105	5255	0.42

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

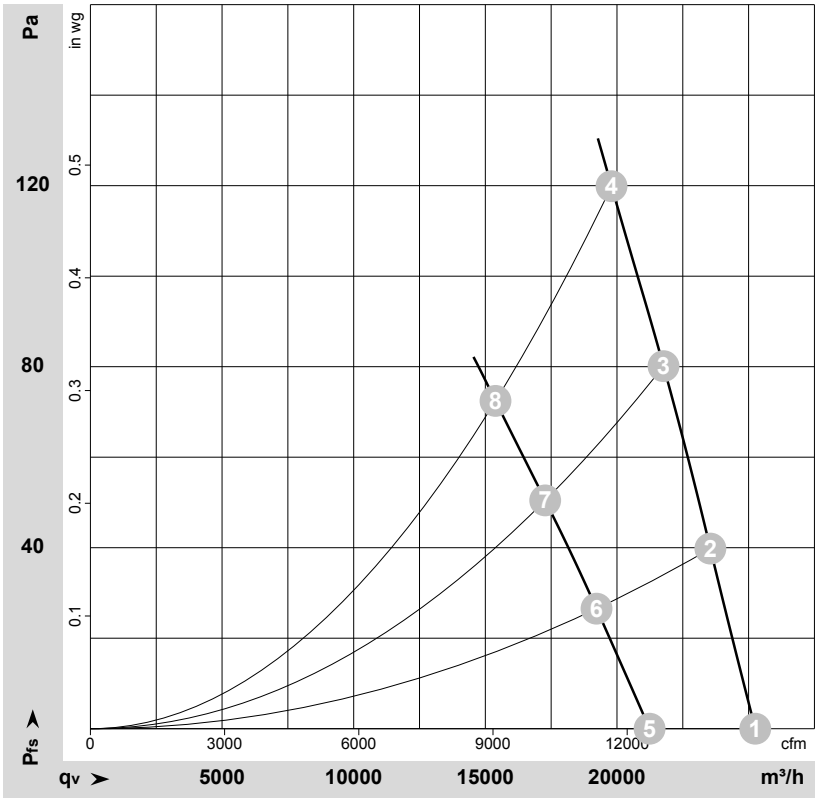
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-115634-1
Measurement: LU-115635-1

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	480	60	1120	1580	3.30	71	78	78	25255	0	14865	0.00
2	Δ	480	60	1110	1752	3.39	69	76	75	23550	40	13860	0.16
3	Δ	480	60	1100	1925	3.58	68	75	74	21770	80	12810	0.32
4	Δ	480	60	1090	2060	3.75	69	76	75	19795	120	11650	0.48
5	Y	480	60	940	1160	1.90	66	73	73	21240	0	12500	0.00
6	Y	480	60	910	1240	2.03	64	70	70	19225	27	11315	0.11
7	Y	480	60	875	1302	2.15	62	69	68	17275	50	10165	0.20
8	Y	480	60	850	1350	2.20	62	69	68	15385	70	9055	0.28

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

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