W6D800-GE05-45

AC axial fan - HyBlade

sickled blades (S series)

with full square nozzle

W6D800-GE05-45 ebmpapst Datasheet
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Nominal data

Type	**W6D800-GE05-45**
Motor	**M6D138-LA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	400	400	460
Connection		Δ	Y	Y	Y
Frequency	Hz	60	50	60	60
Type of data definition		cs	cs	cs	cs
Valid for approval / standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	1030	905	1030	1060
Power input	W	1990	1570	1990	2140
Current draw	A	6.5	3.8	3.78	3.79
Max. back pressure	Pa	135	170	135	145
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	65	60	60
Starting current	A	17.5	13	10	10

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}	%	37.4	34.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.8	40
05 Variable speed drive		No	

09 Power input P_e	kW	1.38
09 Air flow q_v	m^3/h	14570
09 Pressure increase p_{fs}	Pa	128
10 Speed (rpm) n	min^{-1}	920
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-114552

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Technical features

Mass	44 kg
Size	800 mm
Surface of rotor	Cast in aluminium
Material of terminal box	PP plastic
Material of blades	Aluminium sheet insert, sprayed with PP plastic
Material of wall ring	Sheet steel, galvanised and coated in black plastic (RAL 9005)
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Blade angle	-5°
Direction of air flow	"V"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 55
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	Any
Condensate discharge holes	On rotor and stator sides
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
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2010); EN 61800-5-1; CE
Approval	UL 1004-1; CSA C22.2 No.100; EAC

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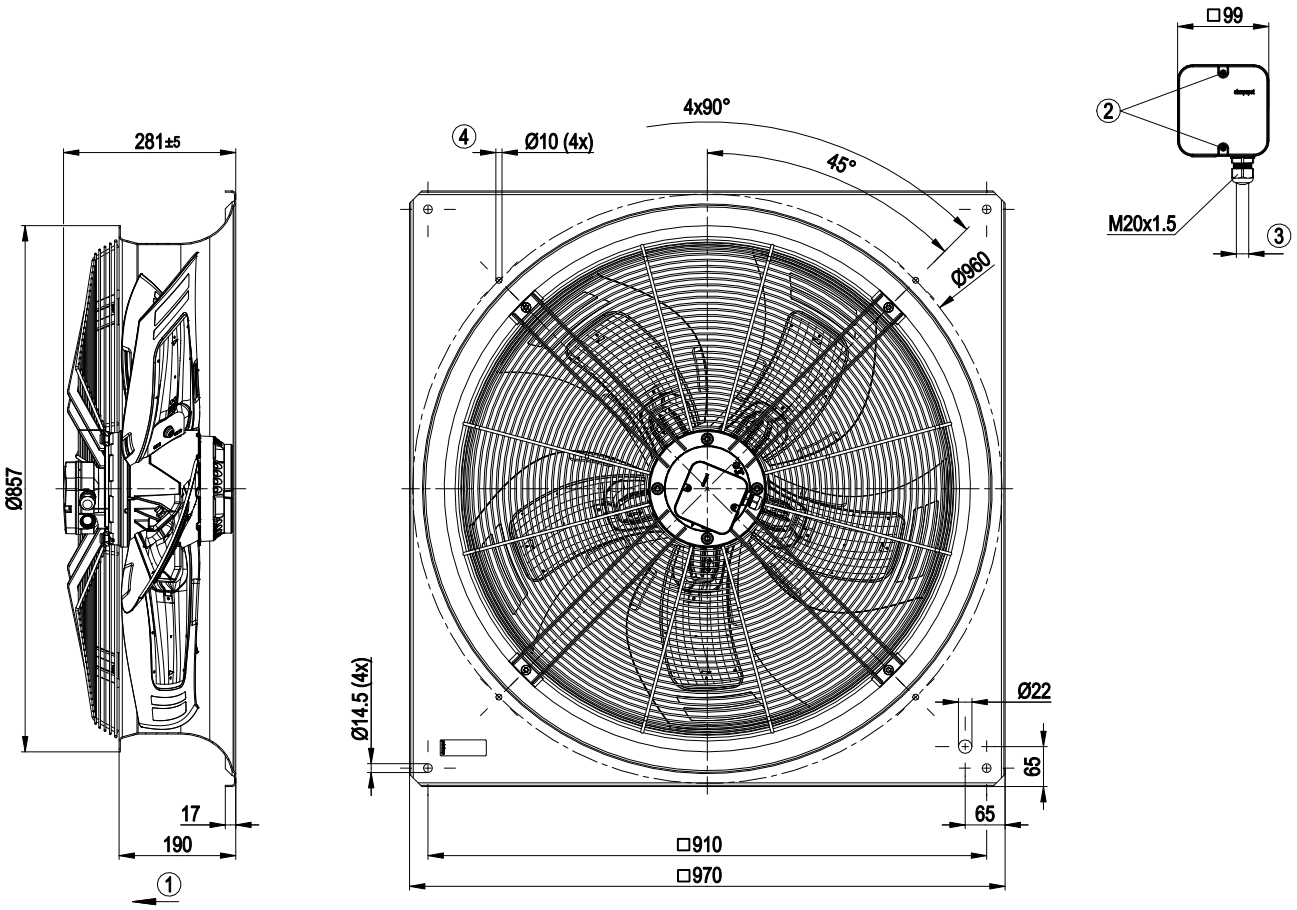
Product drawing



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	Mounting holes for FlowGrid

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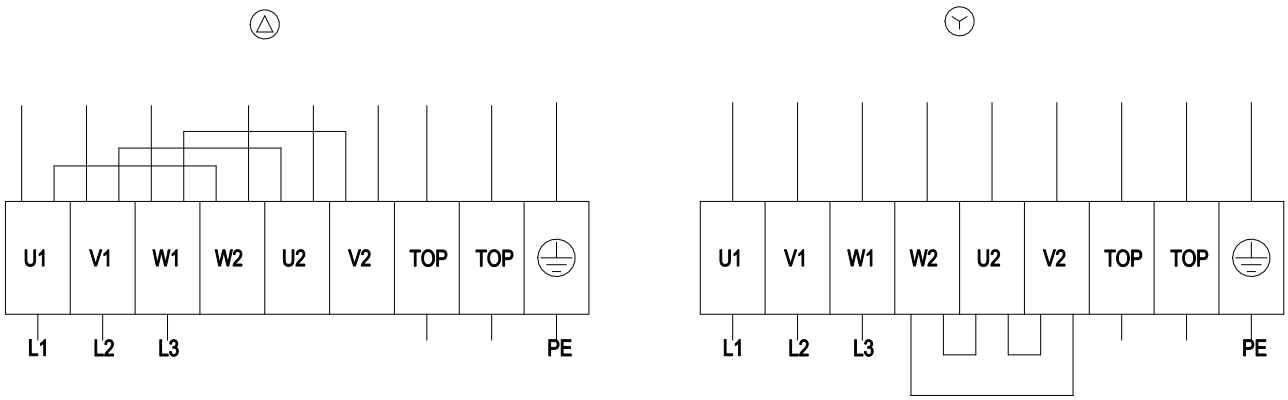
Connection screen



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

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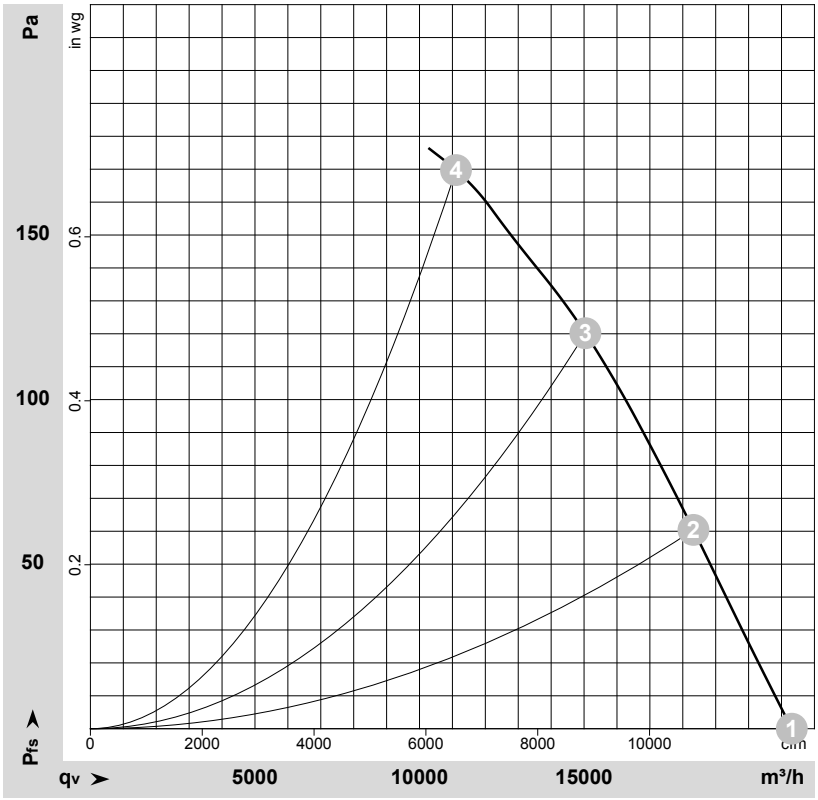
Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-114552-1

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	950	992	2.81	67	73	73	21310	0	12545	0.00
2	Y	400	50	935	1204	3.00	63	70	69	18325	60	10785	0.24
3	Y	400	50	920	1365	3.21	67	73	72	15040	120	8855	0.48
4	Y	400	50	905	1570	3.80	72	79	79	11110	170	6540	0.68

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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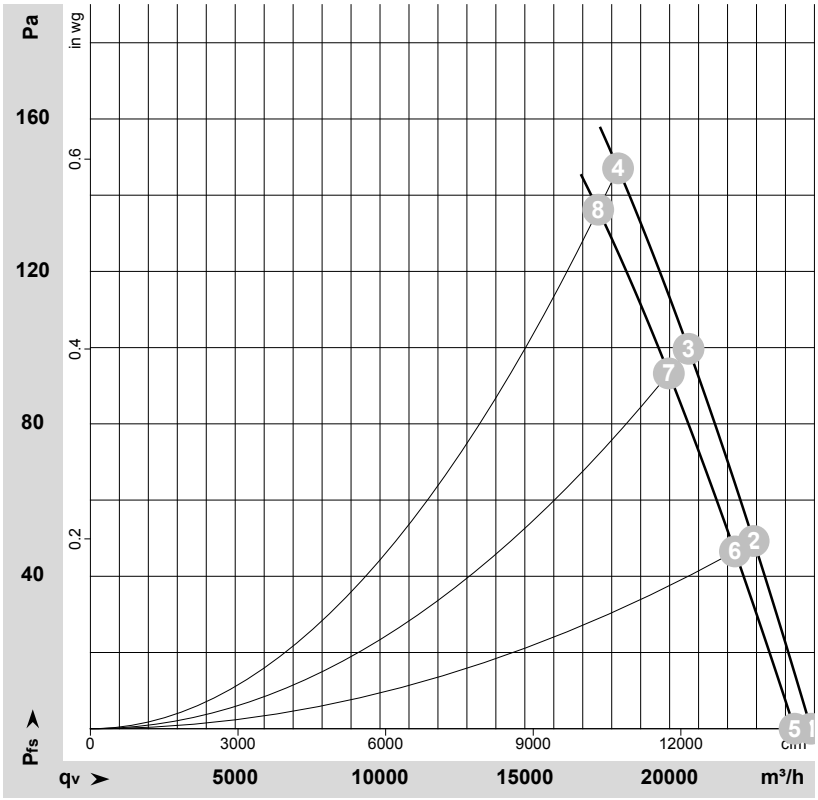
Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-131342-1
Measurement: LU-114637-1

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	460	60	1115	1604	3.17	70	77	77	24885	0	14645	0.00
2	Y	460	60	1100	1807	3.41	68	75	75	22900	50	13480	0.20
3	Y	460	60	1090	1976	3.62	69	75	75	20655	100	12155	0.40
4	Y	460	60	1060	2140	3.79	70	77	75	18220	145	10725	0.58
5	Y	400	60	1090	1512	3.11	70	76	77	24315	0	14310	0.00
6	Y	400	60	1070	1693	3.40	67	74	74	22255	48	13100	0.19
7	Y	400	60	1050	1844	3.64	68	74	74	19975	93	11755	0.37
8	Y	400	60	1030	1990	3.78	69	75	74	17535	135	10320	0.54

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