W6D990-GY03-09

AC axial fan - HyBlade

sickle-shaped blades (S series)

Fan housing with guard grille

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Nominal data

Type	**W6D990-GY03-09**
Motor	**M6D138-OA**

Phase		3~	3~
Nominal voltage	VAC	230	460
Wiring		Δ	Y
Frequency	Hz	60	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	1100	1120
Power consumption	W	2830	2970
Current draw	A	9.5	5.6
Max. back pressure	Pa	95	100
Max. back pressure	in. wg	0.38	0.4
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	45	45
Starting current	A	36	25

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}	%	40.4	37.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		43.3	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	3.53
09 Air flow q_v	m^3/h	24930
09 Pressure increase p_{fs}	Pa	206
10 Speed (rpm) n	min^{-1}	1105
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-127221

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Technical description

Weight	58 kg
Size	990 mm
Motor size	138
Rotor surface	Cast in aluminum
Terminal box material	ABS plastic
Blade material	Sheet aluminum insert, sprayed with PP plastic
Fan housing material	Sheet steel, galvanized and coated with traffic white plastic (RAL 9016)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	-8°
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	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
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
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	VDE; EAC

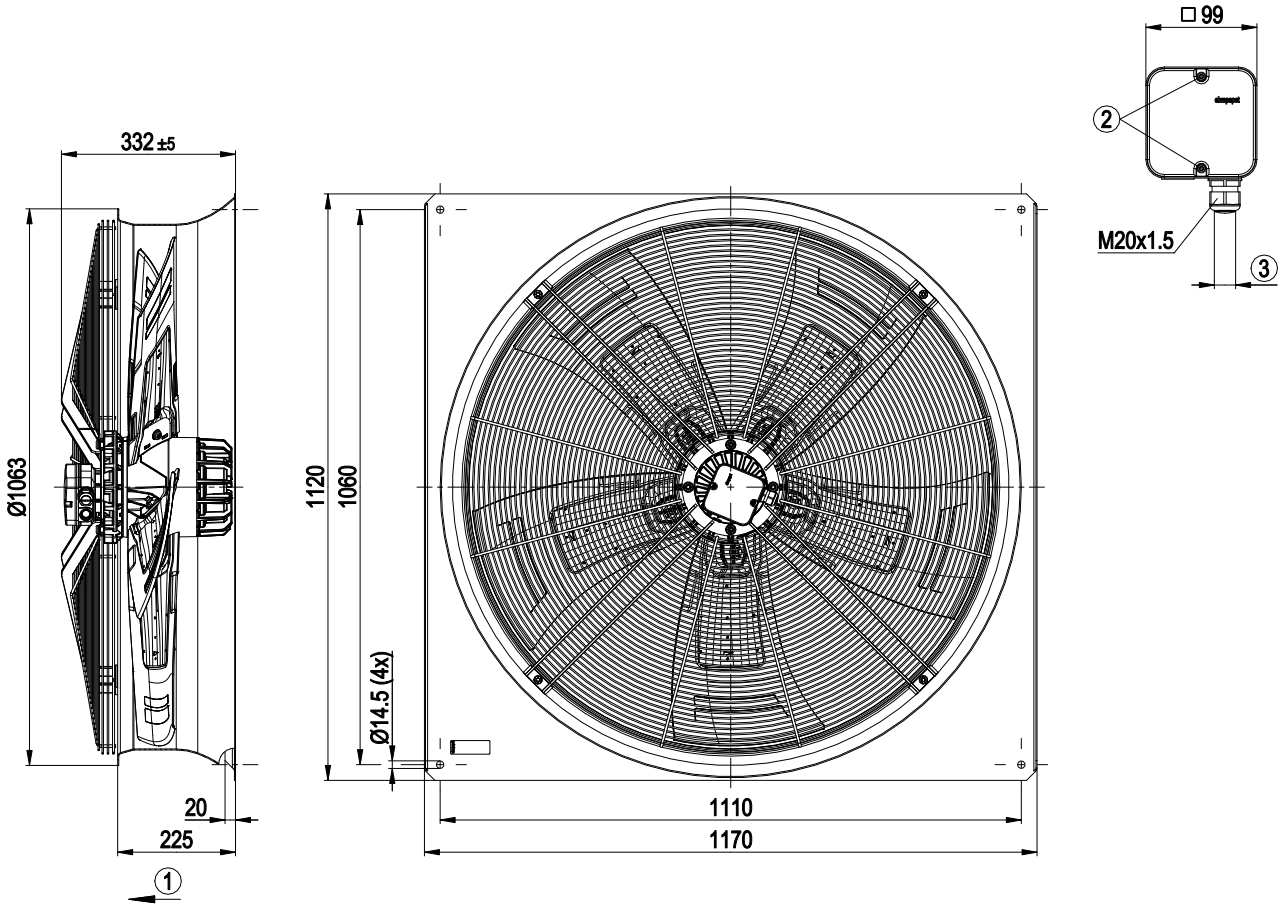
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Product drawing



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

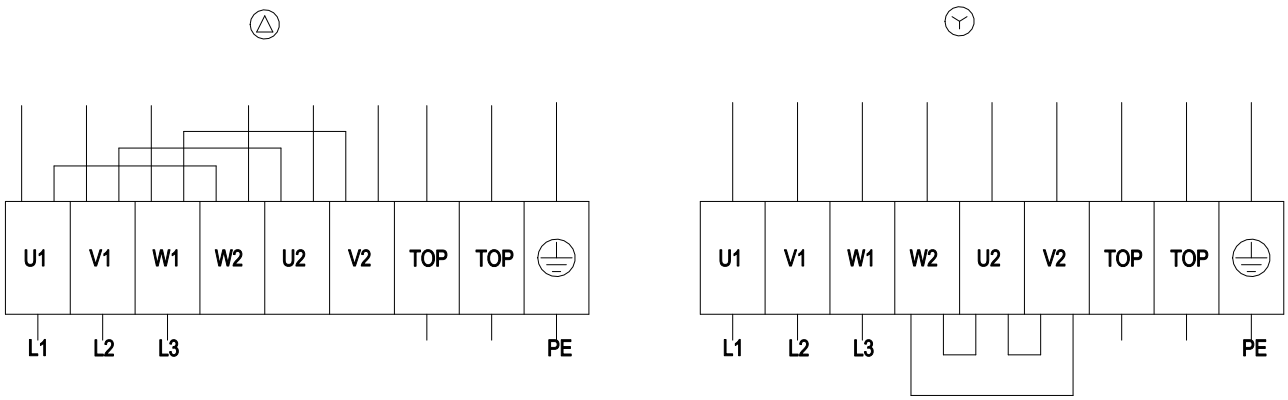
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Connection diagram



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				

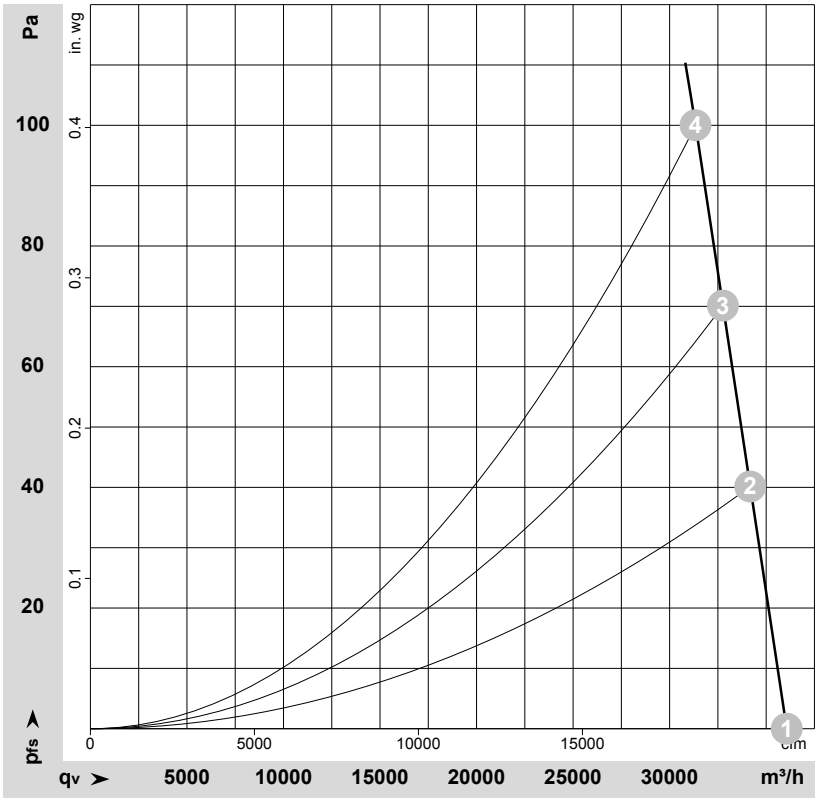
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-127221-1

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	Y	460	60	1145	2300	4.82	80	88	87	36065	0	21225	0.00
2	Y	460	60	1135	2577	5.09	79	87	86	34175	40	20115	0.16
3	Y	460	60	1130	2784	5.30	79	87	86	32760	70	19285	0.28
4	Y	460	60	1120	2970	5.60	79	86	86	31340	100	18445	0.40

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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