AC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle, for barn ventilation

Nominal data

Type	**W6D910-DB01-35**
Motor	**M6D138-NA**

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}	920	760
Power consumption	W	2020	1390
Current draw	A	4.62	2.6
Max. back pressure	Pa	160	105
Max. back pressure	in. wg	0.64	0.42
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	60	60
Starting current	A	18.6	6.2

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}	%	38.4	35.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.9	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	1.96
09 Air flow q_v	m^3/h	18720
09 Pressure increase p_{fs}	Pa	145
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-117505

ebmpapst

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Technical description

Weight	52 kg
Size	910 mm
Motor size	138
Rotor surface	Painted black
Terminal box material	PP plastic
Blade material	Sheet aluminum insert (painted black), sprayed with PP plastic
Support ring material	Steel, coated with black plastic (RAL 9005)
Fan housing material	Sheet steel, galvanized and 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+A
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 top; rotor on bottom on request
Condensation drainage holes	On stator 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
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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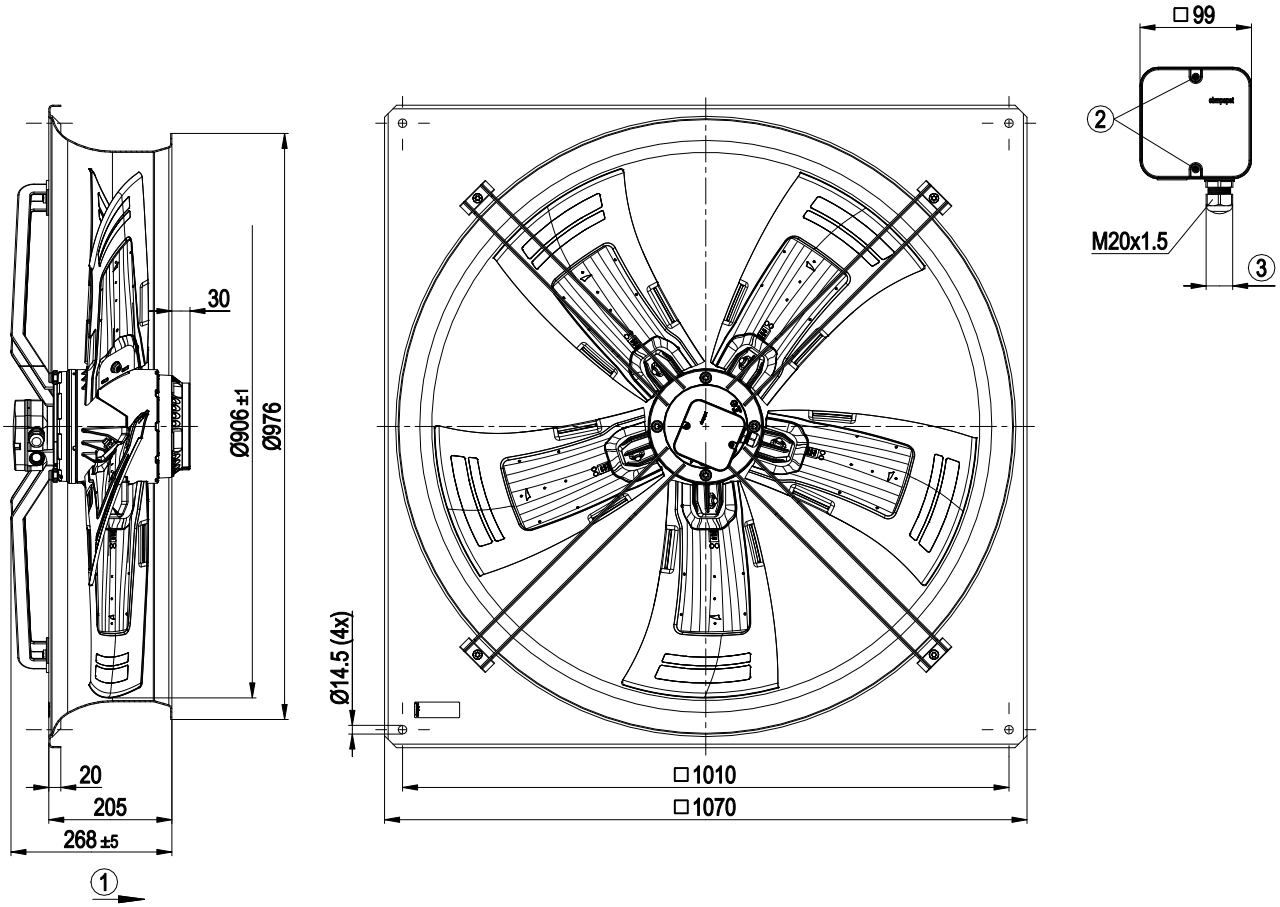
Product drawing



1	Direction of air flow "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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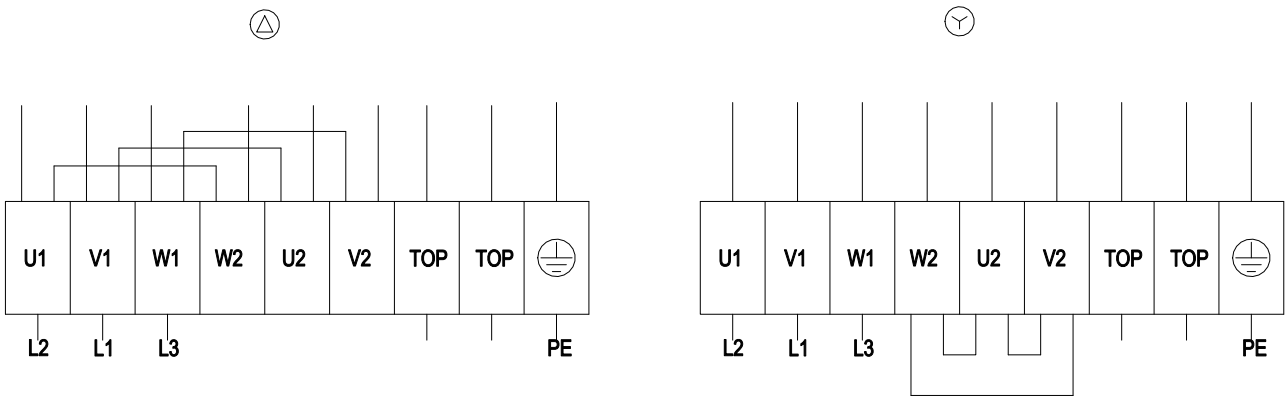
Connection diagram



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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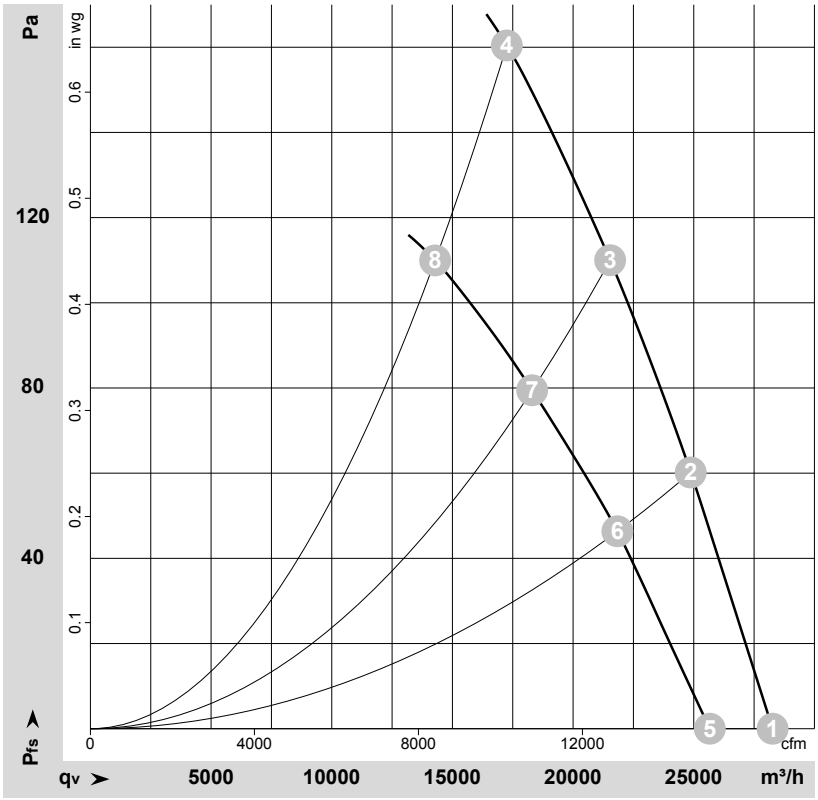
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-117505-1
Measurement: LU-119168-1

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	955	1287	3.97	72	79	79	28265	0	16635	0.00
2	Δ	400	50	940	1588	4.19	69	76	76	24875	60	14640	0.24
3	Δ	400	50	930	1816	4.41	69	76	76	21535	110	12675	0.44
4	Δ	400	50	920	2020	4.62	72	79	79	17255	160	10155	0.64
5	Y	400	50	865	999	1.88	69	76	76	25665	0	15105	0.00
6	Y	400	50	825	1193	2.19	66	73	73	21835	47	12850	0.19
7	Y	400	50	790	1314	2.42	65	72	72	18305	79	10775	0.32
8	Y	400	50	760	1390	2.60	67	74	74	14285	110	8405	0.44

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