

# AC axial fan - AxiBlade

sickle-shaped blades (S series)

with square full nozzle

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### Nominal data

Type	W8D800-KG01-01				
Motor	M8D138-HF				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400
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 <sup>-1</sup>	680	540	740	465
Power consumption	W	730	460	1030	500
Current draw	A	2.0	0.96	2.2	1.1
Max. back pressure	Pa	90	55	110	43
Max. back pressure	in. wg	0.36	0.22	0.44	0.17
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	60	60	45	55
Starting current	A	5.5	1.7	4.6	1.5

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 $\eta_{es}$	%	36.7	32.7	09 Power consumption $P_e$	kW	0.71
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	11255
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	84
04 Efficiency grade N		44	40	10 Speed (rpm) n	min <sup>-1</sup>	685
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-178967

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## Technical description

Weight	44 kg
Fan size	800 mm
Rotor surface	Cast in aluminum
Terminal box material	PP plastic
Blade material	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	0°
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 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	Via 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); EN 61800-5-1; CE
Approval	VDE; EAC

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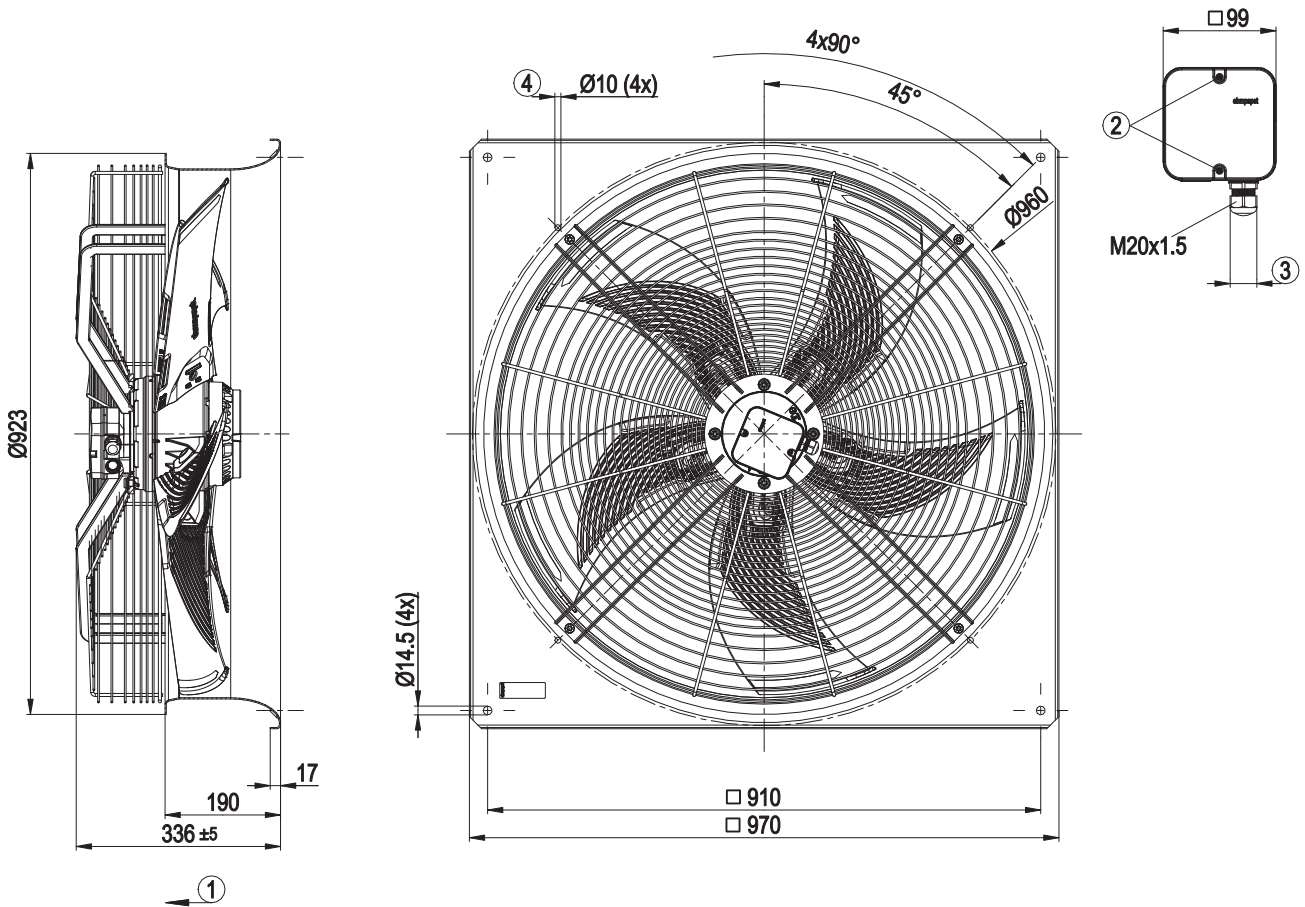


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## Product drawing



1	Airflow direction "V"
2	Tightening torque $1.5 \pm 0.2$ Nm
3	Cable diameter: min. 7 mm, max. 14 mm, tightening torque $2 \pm 0.3$ Nm
4	Mounting holes for FlowGrid

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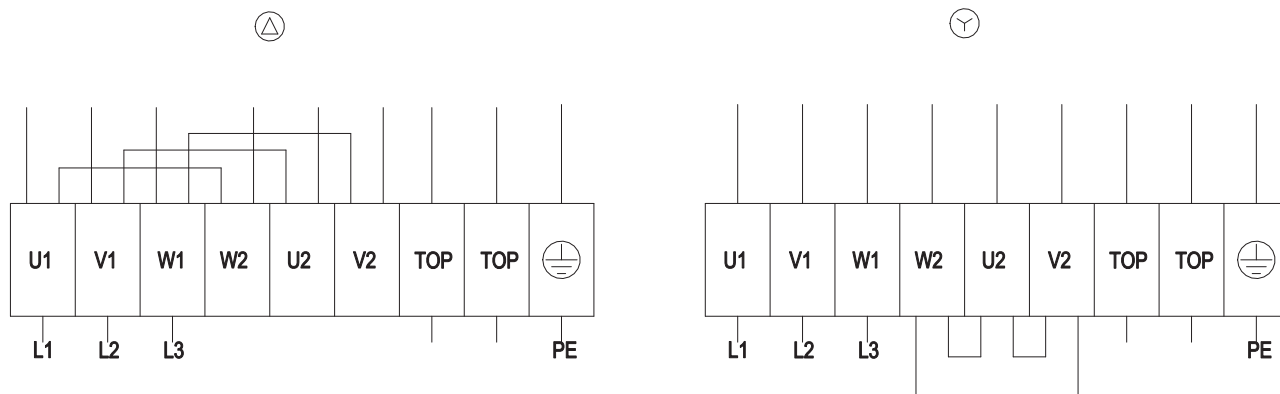


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## Connection diagram



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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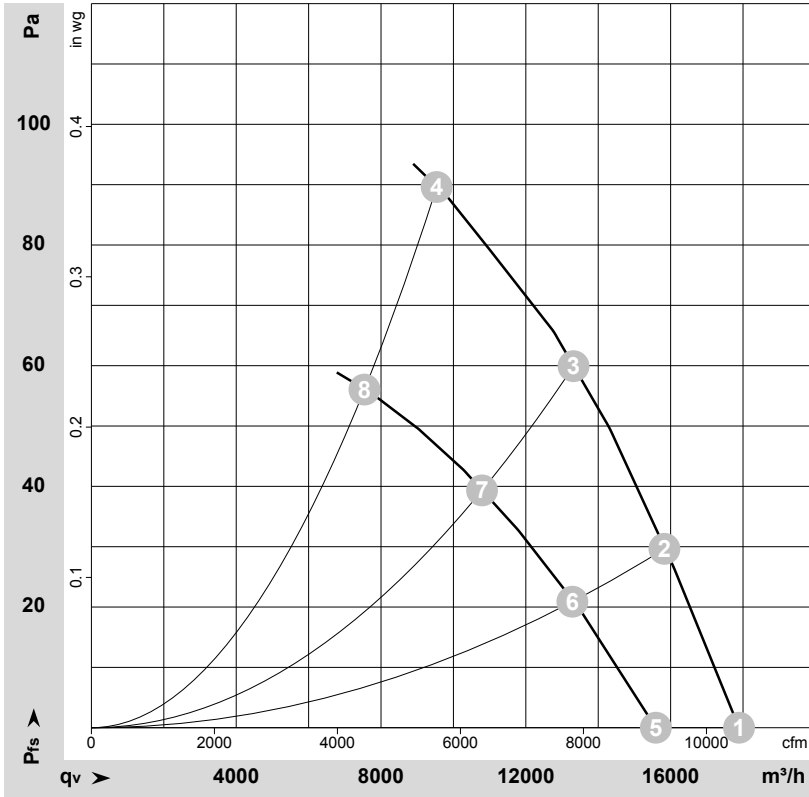


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## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-185335-1  
Measurement: LU-185467-1

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 <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	Δ	400	50	705	538	1.89	61	67	67	17890	0	10530	0.00
2	Δ	400	50	700	613	1.93	61	67	67	15830	30	9315	0.12
3	Δ	400	50	690	682	1.98	61	67	67	13320	60	7840	0.24
4	Δ	400	50	680	730	2.00	65	72	73	9535	90	5615	0.36
5	Y	400	50	615	364	0.77	57	64	63	15590	0	9175	0.00
6	Y	400	50	585	413	0.86	57	63	62	13285	21	7820	0.08
7	Y	400	50	560	449	0.92	57	63	63	10790	39	6350	0.16
8	Y	400	50	540	460	0.96	58	65	66	7540	56	4440	0.22

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

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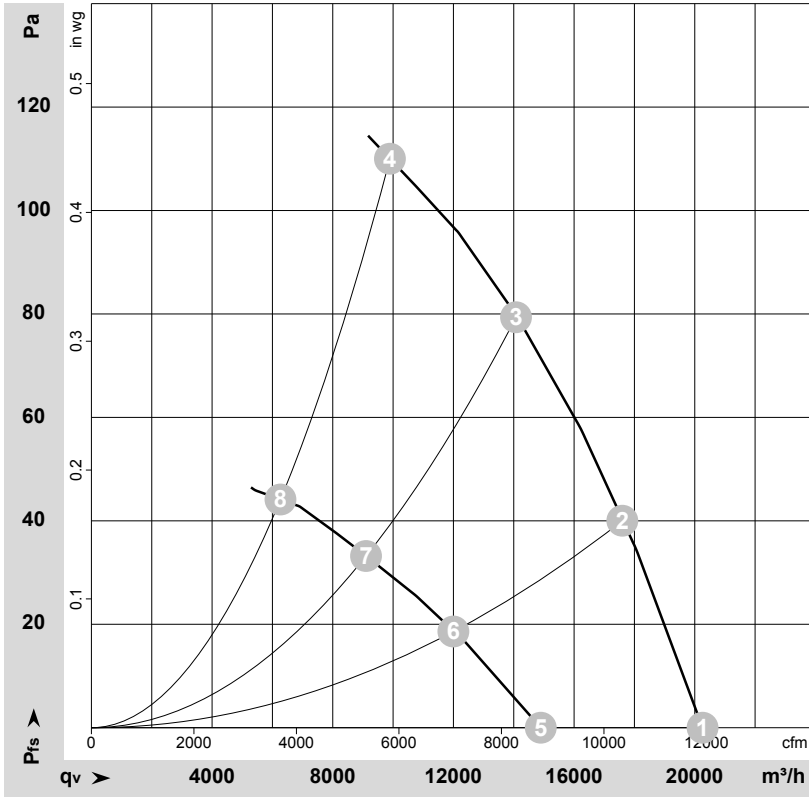


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## Curves: Air performance 60 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-185470-1  
Measurement: LU-185473-1

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 <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	Δ	400	60	810	712	1.70	64	71	71	20260	0	11925	0.00
2	Δ	400	60	785	839	1.89	64	70	70	17600	40	10360	0.16
3	Δ	400	60	760	949	2.06	63	70	70	14075	80	8285	0.32
4	Δ	400	60	740	1030	2.20	69	76	77	9895	110	5825	0.44
5	Y	400	60	590	451	0.95	56	63	62	14895	0	8765	0.00
6	Y	400	60	535	475	1.02	55	61	61	12000	19	7060	0.08
7	Y	400	60	490	490	1.07	54	61	62	9105	33	5360	0.13
8	Y	400	60	465	500	1.10	56	63	64	6265	44	3690	0.18

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

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