

A8D800-AH01-01

# AC axial fan - HyBlade

sickle-shaped blades (S series)



## Nominal data

Type	A8D800-AH01-01		
Motor	M8D138-HF		
Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		$\Delta$	Y
Frequency	Hz	50	50
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min <sup>-1</sup>	670	520
Power consumption	W	830	500
Current draw	A	2.1	1.02
Max. back pressure	Pa	100	60
Max. back pressure	in. wg	0.4	0.24
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	60	60
Starting current	A	13	4.3

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 $\eta_{es}$	%	32.7	32.7	09 Power consumption $P_e$	kW	0.71
02 Measurement category	A			09 Air flow $q_v$	m <sup>3</sup> /h	10880
03 Efficiency category	Static			09 Pressure increase $p_{fs}$	Pa	75
04 Efficiency grade N	40	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 =  $1 + p_g / 100\,000\text{ Pa}$

LU-115478



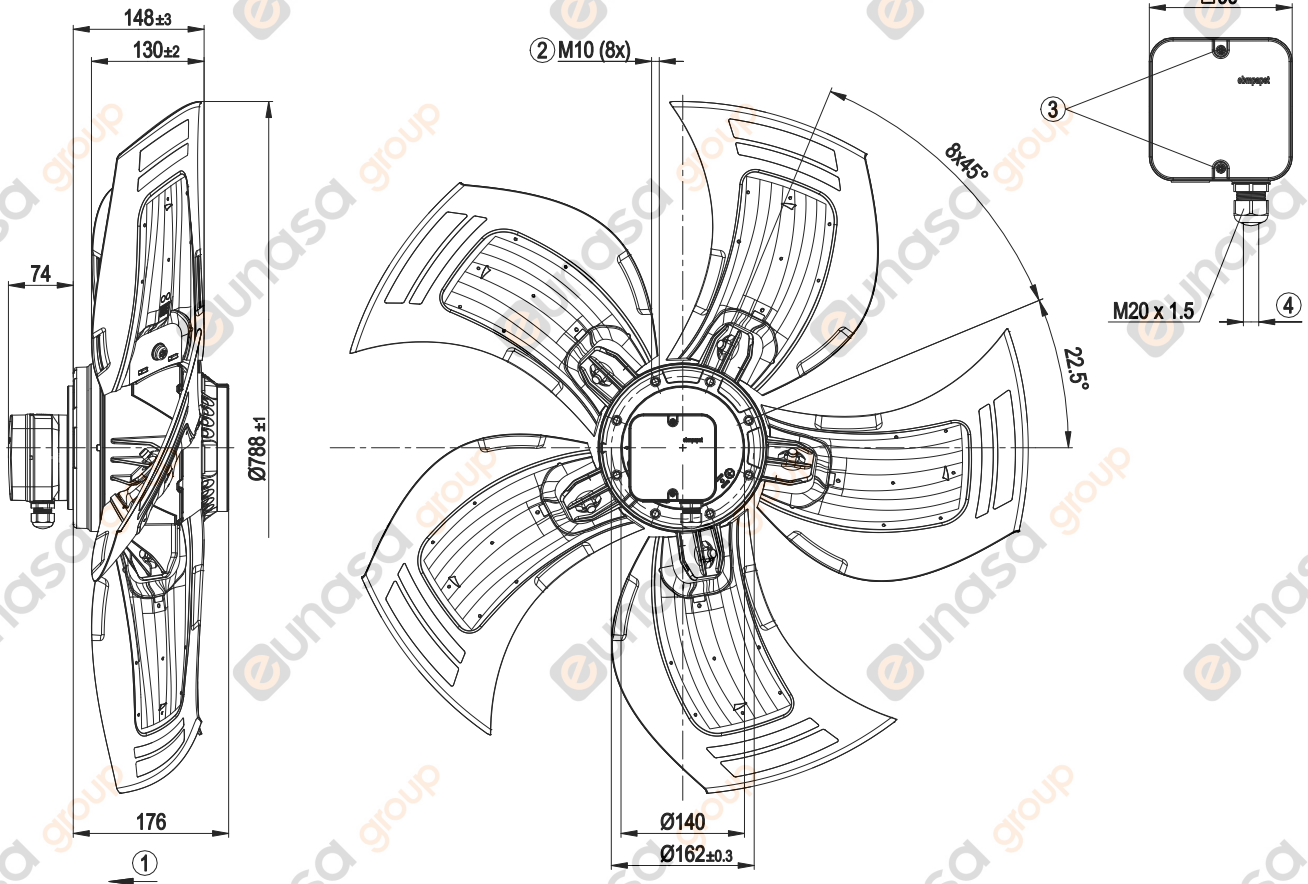
### Technical description

Weight	19.8 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
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; CCC; EAC

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## Product drawing

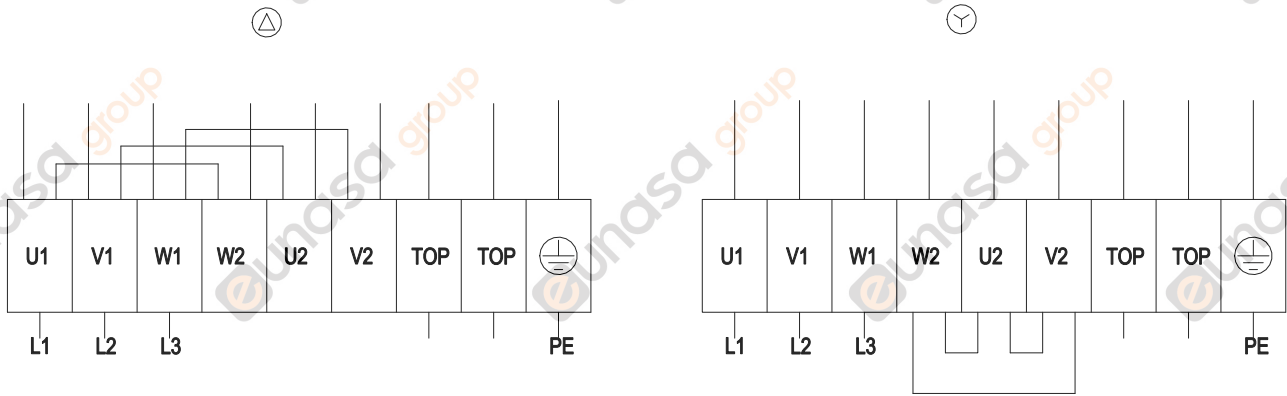


1	Direction of air flow "V"
2	Max. clearance for screw 18 mm
3	Tightening torque $1.5 \pm 0.2$ Nm
4	Cable diameter: min. 7 mm, max. 14 mm; tightening torque $2 \pm 0.3$ Nm

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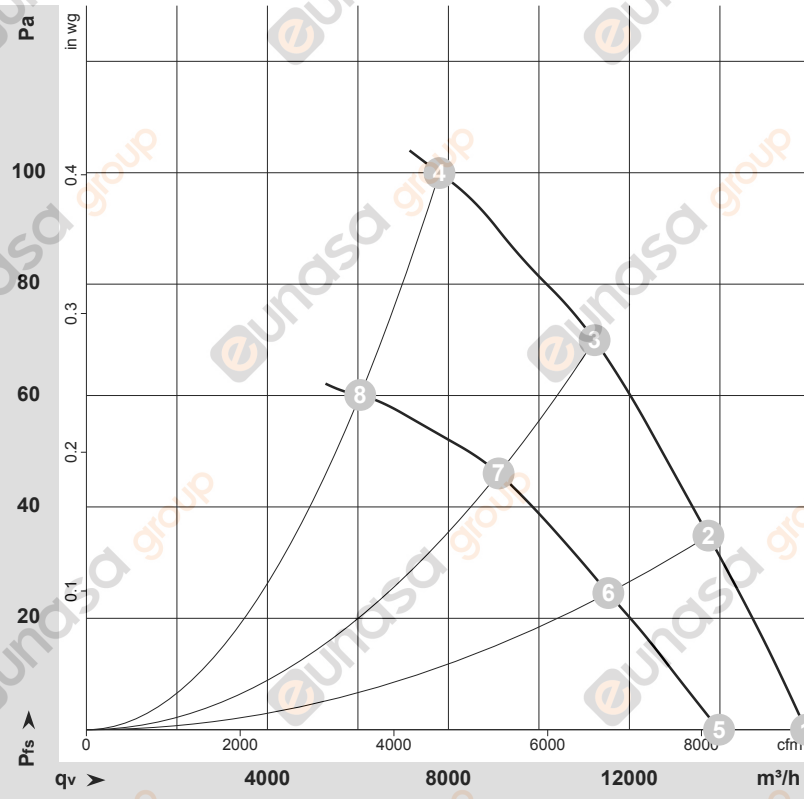
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## Connection diagram



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				

## Curves: Air performance 50 Hz



$\rho = 1.195 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-115478-1  
Measurement: LU-115481-1

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	547	1.96	60	66	66	15905	0	9360	0.00
2	Δ	400	50	695	636	1.97	57	63	62	13745	35	8090	0.14
3	Δ	400	50	685	710	2.02	59	66	64	11230	70	6610	0.28
4	Δ	400	50	670	830	2.10	64	72	72	7800	100	4590	0.40
5	Y	400	50	620	363	0.77	57	63	63	13980	0	8230	0.00
6	Y	400	50	585	419	0.87	53	59	58	11535	24	6790	0.10
7	Y	400	50	555	458	0.94	54	60	59	9110	46	5360	0.18
8	Y	400	50	520	500	1.02	57	65	65	6050	60	3560	0.24

Wired = Wiring · U = Voltage · 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