S6D800-BA01-09

AC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for full nozzle

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**S6D800-BA01-09**
Motor	**M6D138-NA**

Phase		3~	3~	3~
Nominal voltage	VAC	400	400	400
Wiring		Δ	Y	Δ
Frequency	Hz	50	50	60
Method of obtaining data		ml	ml	ml
Valid for approval/standard		CE	CE	CE
Speed (rpm)	min^{-1}	915	750	1030
Power consumption	W	2090	1490	2780
Current draw	A	4.6	2.72	5.3
Max. back pressure	Pa	175	115	180
Max. back pressure	in. wg	0.7	0.46	0.72
Min. ambient temperature	°C	-40	-40	-40
Max. ambient temperature	°C	65	65	40
Starting current	A	18	6	16

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 (prEN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	35.3	35.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	1.82
09 Air flow q_v	m^3/h	17820
09 Pressure increase p_{fs}	Pa	131
10 Speed (rpm) n	min^{-1}	930
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-199861

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.

The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

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Technical description

Weight	34.6 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
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 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; UKCA
Approval	VDE; EAC

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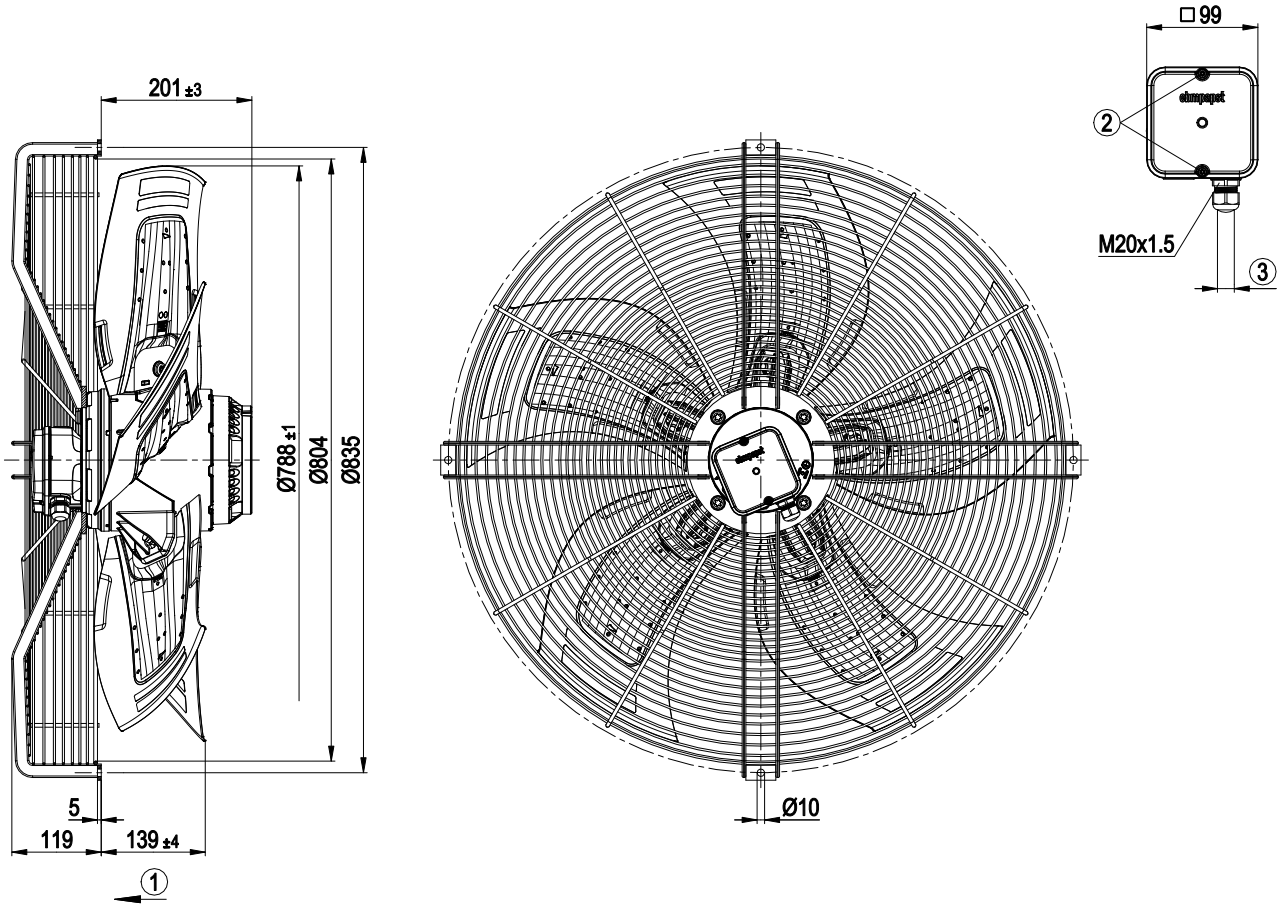
Product drawing



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

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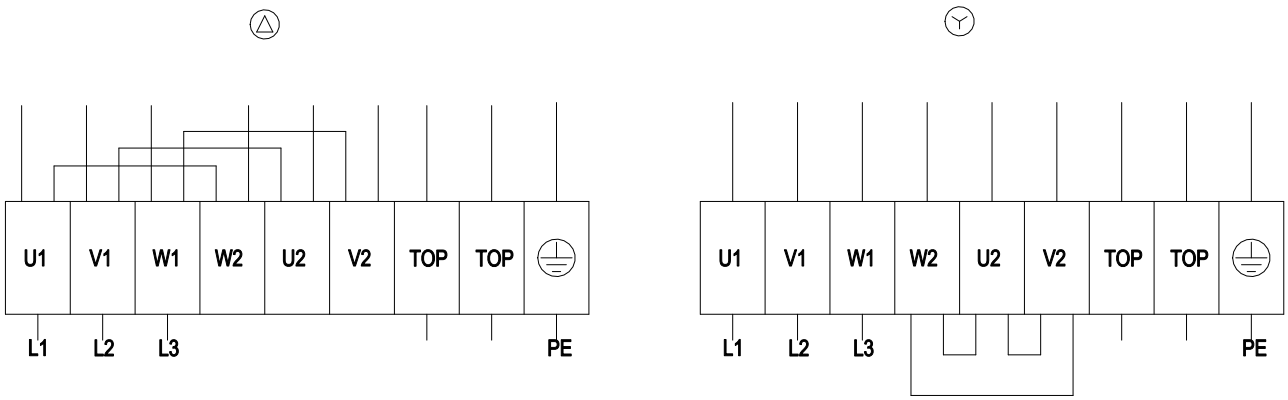
Connection diagram



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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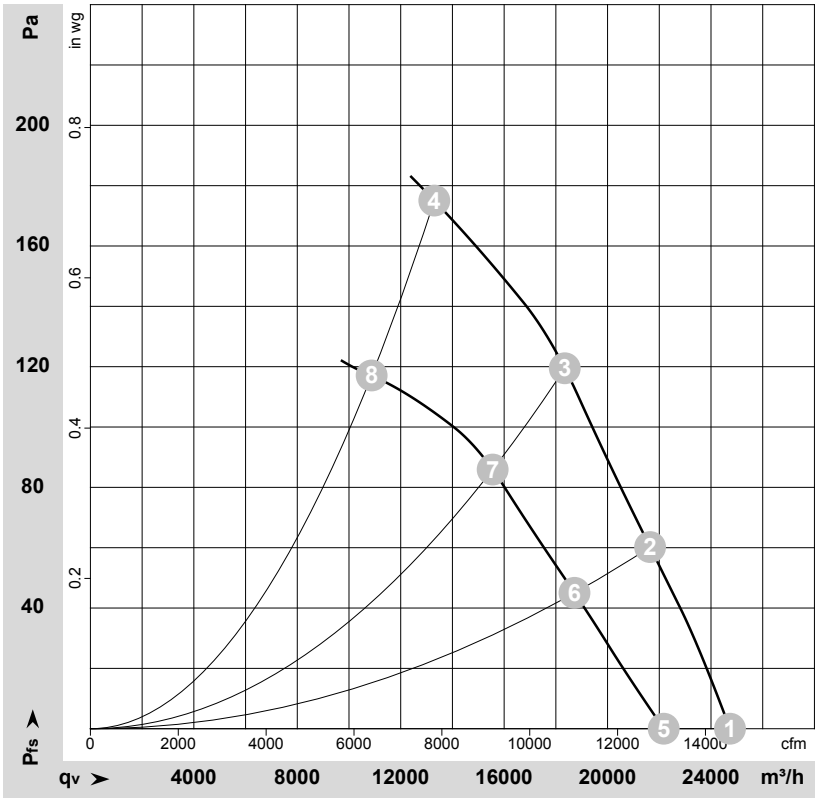
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-124239-1
Measurement: LU-124243-1

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	950	1474	3.99	66	73	73	24735	0	14560	0.00
2	Δ	400	50	940	1675	4.15	66	72	72	21645	60	12740	0.24
3	Δ	400	50	930	1837	4.29	67	74	73	18345	120	10795	0.48
4	Δ	400	50	915	2090	4.60	71	79	78	13300	175	7825	0.70
5	Y	400	50	840	1126	2.08	63	70	71	22170	0	13050	0.00
6	Y	400	50	810	1260	2.31	62	69	68	18720	45	11020	0.18
7	Y	400	50	790	1356	2.47	63	69	69	15555	86	9155	0.35
8	Y	400	50	750	1490	2.72	66	74	73	10875	117	6400	0.47

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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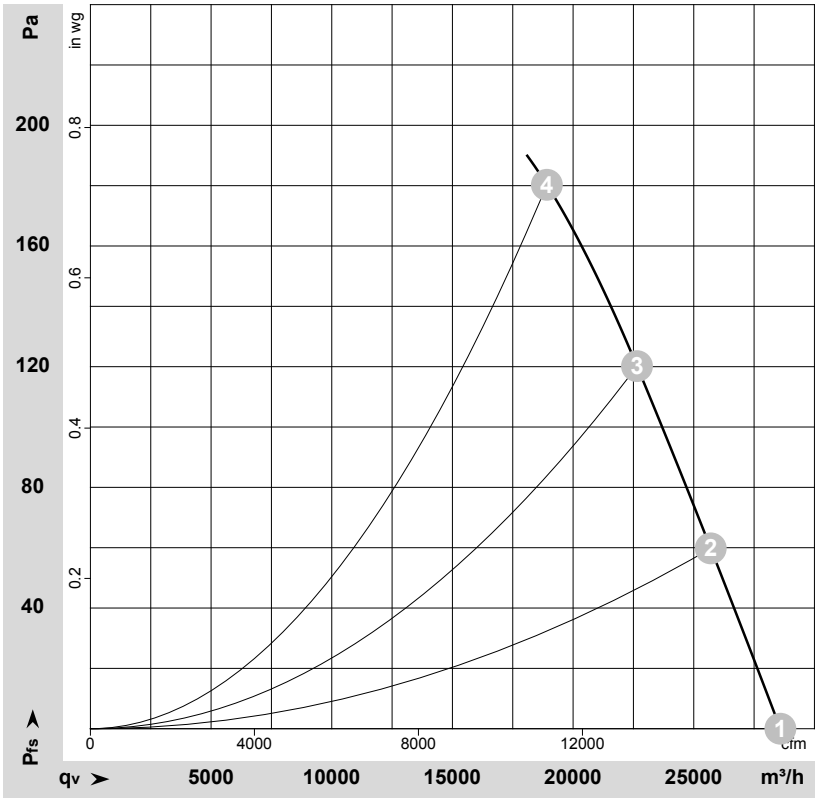
Curves: Air performance 60 Hz Δ



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-163462-1

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	60	1085	2153	4.29	69	76	77	28590	0	16825	0.00
2	Δ	400	60	1070	2392	4.67	69	76	76	25705	60	15130	0.24
3	Δ	400	60	1050	2573	4.96	69	76	76	22650	120	13330	0.48
4	Δ	400	60	1030	2780	5.30	71	78	77	18915	180	11130	0.72

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