S4D450-BP05-13

AC axial fan

sickled blades (S series), single inlet
with guard grille for full nozzle

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**S4D450-BP05-13**
Motor	**M4D074-GA**

Phase		1~	1~	1~	1~
Nominal voltage	VAC	400	400	400	400
Connection		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Type of data definition		fa	fa	fa	fa
Valid for approval / standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	1360	1120	1500	1050
Power input	W	192	135	270	160
Current draw	A	0.43	0.24	0.50	0.29
Max. back pressure	Pa	85	50	35	15
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	80	80	70	70
Starting current	A	1.45	0.46	1.3	0.42

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	33.8	30.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		43.7	40
05 Variable speed drive		No	

09 Power input P_e	kW	0.27
09 Air flow q_v	m^3/h	3600
09 Pressure increase p_{fs}	Pa	92
10 Speed (rpm) n	min^{-1}	1285
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-65334

AC axial fan

sickled blades (S series), single inlet

with guard grille for full nozzle

Technical features

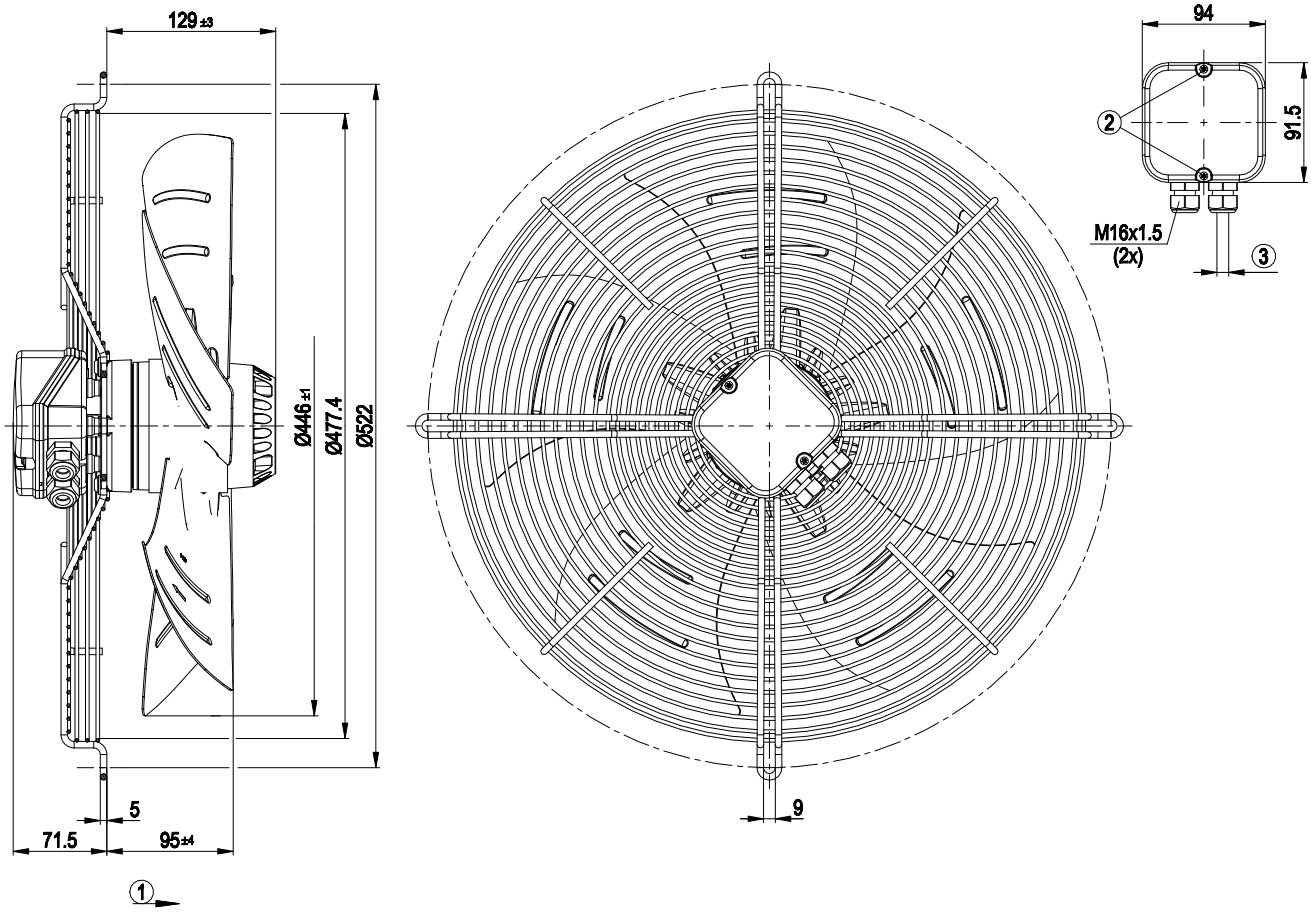
Mass	6.7 kg
Size	450 mm
Surface of rotor	Coated in black
Material of terminal box	ABS plastic
Material of blades	Sheet steel, coated in black
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Direction of air flow	"A"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position as per EN 60034-5
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H0+
Max. permissible ambient motor temp. (transp./ storage)	+ 70 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

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Product drawing



1	Direction of air flow "A"
2	Tightening torque 0.5±0.1 Nm
3	Cable diameter min. 5 mm, max. 10 mm, tightening torque 2±0.3 Nm

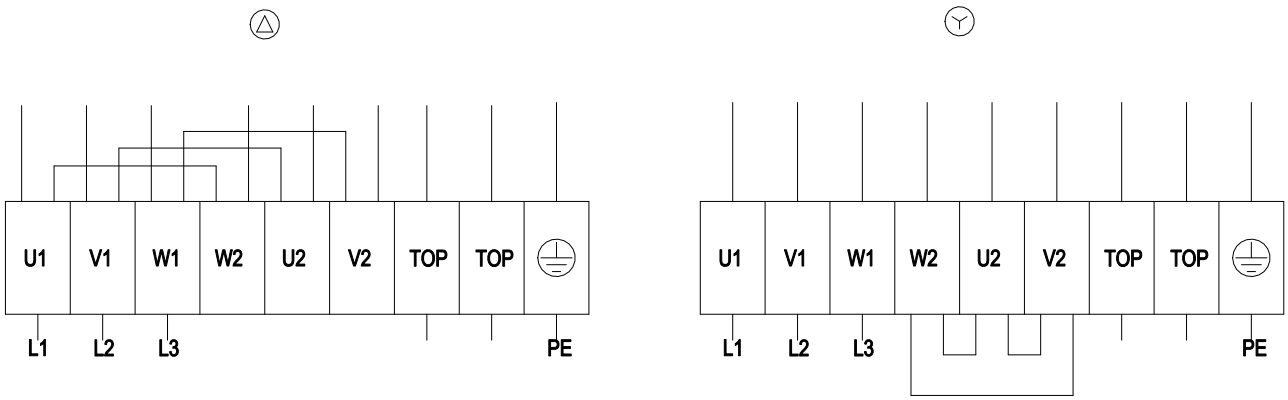
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Connection screen



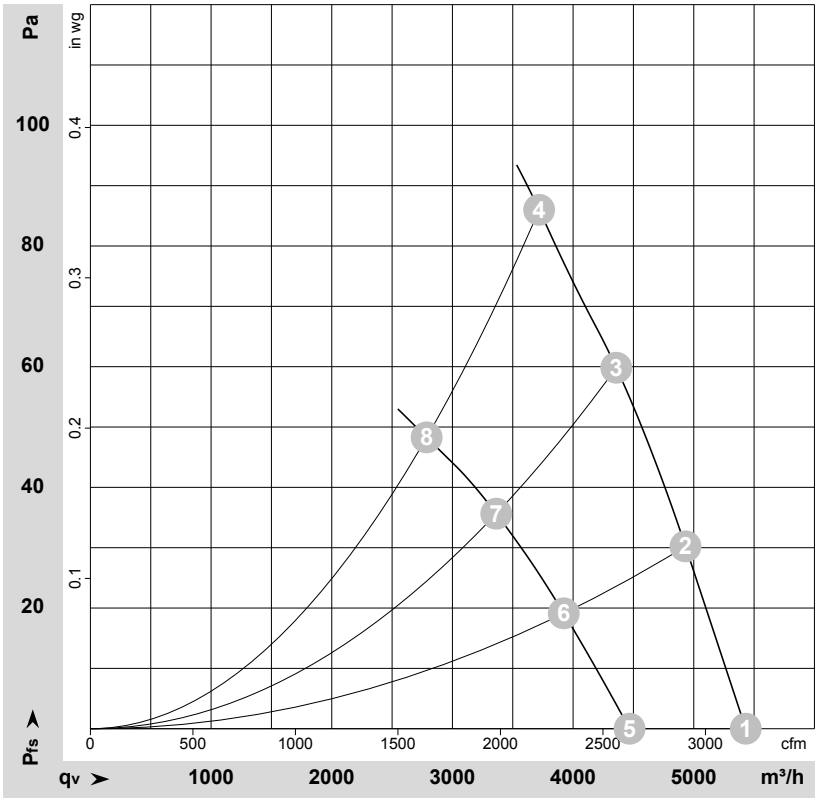
Δ	Delta-connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-65334-1
Measurement: LU-65332-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	Conn.	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Δ	400	50	1360	192	0.43	5430	0	3195	0.00
2	Δ	400	50	1340	218	0.45	4930	30	2900	0.12
3	Δ	400	50	1315	242	0.48	4360	60	2565	0.24
4	Δ	400	50	1290	266	0.51	3720	85	2190	0.34
5	Y	400	50	1120	135	0.24	4470	0	2630	0.00
6	Y	400	50	1060	149	0.26	3925	20	2310	0.08
7	Y	400	50	1005	158	0.27	3365	36	1980	0.14
8	Y	400	50	960	166	0.29	2785	48	1640	0.19

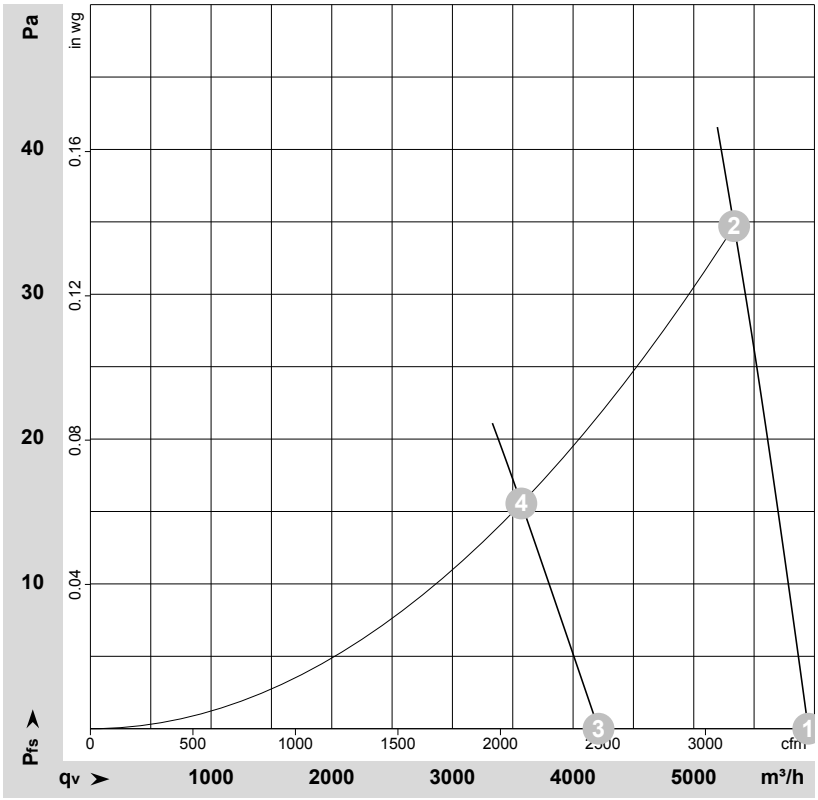
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-65335-1
Measurement: LU-65333-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	Conn.	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Δ	400	60	1500	270	0.50	5950	0	3500	0.00
2	Δ	400	60	1445	308	0.55	5335	35	3140	0.14
3	Y	400	60	1050	160	0.29	4210	0	2480	0.00
4	Y	400	60	970	168	0.30	3570	16	2100	0.06

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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