S4D450-AP01-25

AC axial fan

sickled blades (S series)

with guard grille for short nozzle

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Nominal data

Type	**S4D450-AP01-25**
Motor	**M4D074-GA**

Phase		3~	3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400	480
Connection		Δ	Δ	Y	Y	Y
Frequency	Hz	50	60	50	60	60
Type of data definition		fa	fa	fa	fa	fa
Valid for approval / standard		CE	CE	CE	CE	CE
Speed (rpm)	min^{-1}	1380	1540	1380	1540	1620
Power input	W	200	285	200	285	310
Current draw	A	0.83	0.92	0.48	0.53	0.55
Max. back pressure	Pa	120	70	120	70	100
Min. ambient temperature	°C	-25	-25	-25	-25	-25
Max. ambient temperature	°C	60	60	60	60	50

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

Data in accordance with ecodesign regulation EU 327/2011 (EN 17166)

		Actual	Request 2015
01 Overall efficiency η_{es}	%	35.4	30.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		45.3	40
05 Variable speed drive		No	

09 Power input P_e	kW	0.27
09 Air flow q_v	m^3/h	3765
09 Pressure increase p_{fs}	Pa	96
10 Speed (rpm) n	min^{-1}	1315
11 Specific ratio*		1.00

Data definition with optimum efficiency.

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

LU-194765

The indicated efficiency values for obtaining conformity with the Ecodesign Directive EU 327/2011 were achieved with defined air conduction components (e.g. inlet nozzles).
The dimensions are to be requested from ebm-papst. If other air guide geometries are used on the installation side, the ebm-papst evaluation loses its validity/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 features

Mass	7.14 kg
Size	450 mm
Motor size	74
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	IP44; Depending on installation and position as per EN 60034-5
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H1+
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage 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 connection	Terminal box
Cable exit	Variable
Safety classification	I; If a protective earth is connected by the customer This component to be built-in can have several local protection class ratings. The specification refers to the basic design of this component. The final protection class is based on the intended installation and connection of the component.
Product conforming to standard	EN 60335-1, motor does not have factory-installed overheating protection; CE
Approval	EAC

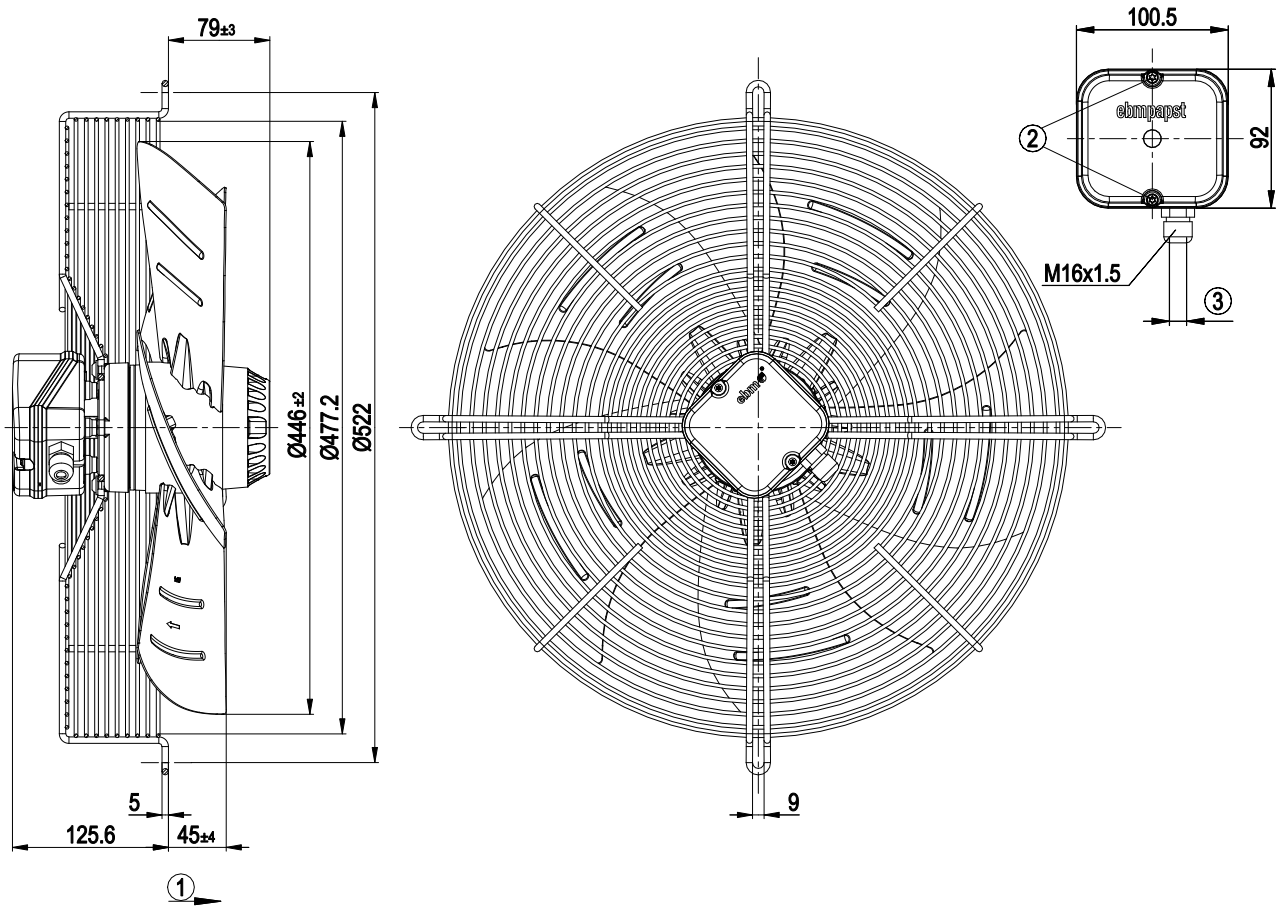
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Product drawing



1	Direction of air flow "A"
2	Tightening torque 1.5±0.2 Nm
3	Cable diameter max. 7.5 mm, tightening torque 1.3±0.2 Nm

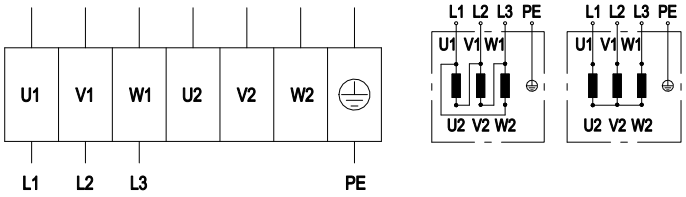
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Connection screen



	Three-phase motor	Y	Star connection	Δ	Delta connection
L1	= U1 = black	L2	= V1 = blue	L3	= W1 = brown
U2	green	V2	white	W2	yellow
PE	PE (green/yellow)				

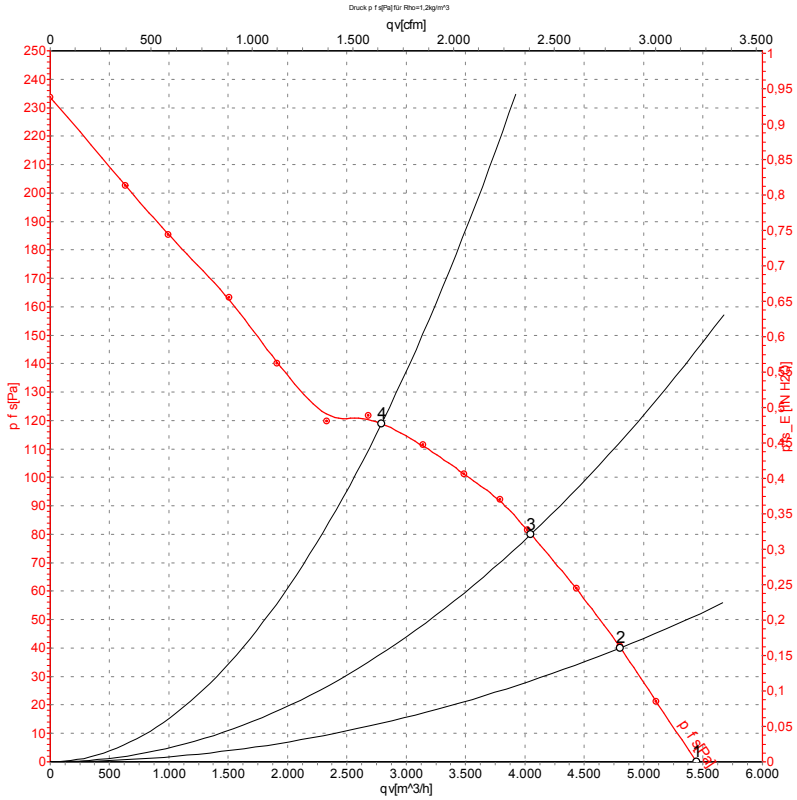
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Charts: Air flow 50 Hz



Measurement: LU-27634-1

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

	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	in. wg
1	400	50	1380	200	0.48	5445	0	3205	0.00
2	400	50	1345	235	0.53	4800	40	2825	0.16
3	400	50	1320	264	0.57	4050	80	2385	0.32
4	400	50	1285	301	0.61	2790	120	1645	0.48

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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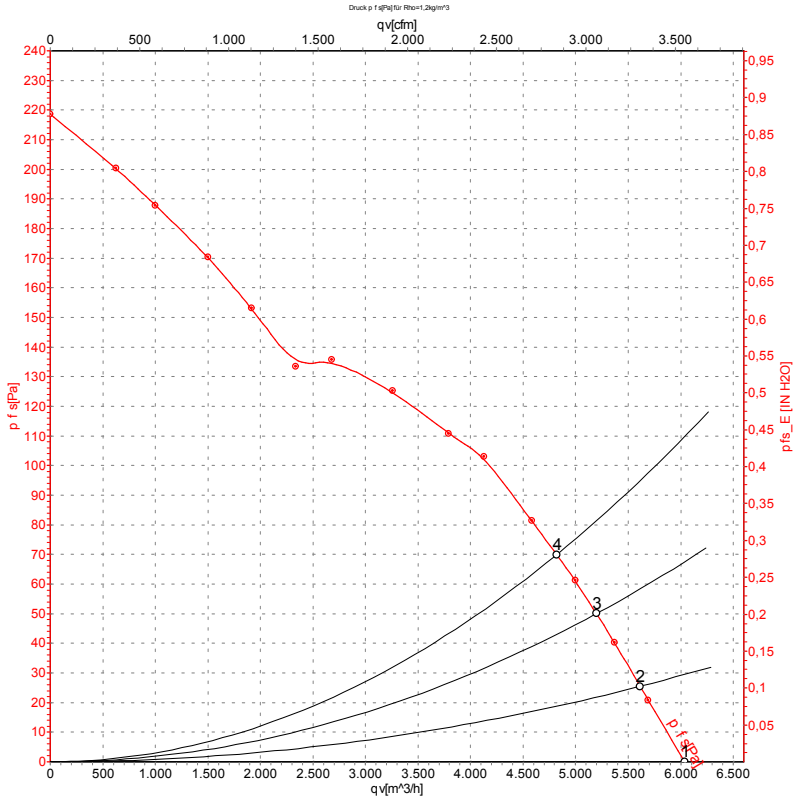
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Charts: Air flow 60 Hz



Measurement: LU-27635-1

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

	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	in. wg
1	400	60	1540	285	0.53	6040	0	3555	0.00
2	400	60	1505	314	0.58	5615	25	3305	0.10
3	400	60	1475	337	0.62	5200	50	3060	0.20
4	400	60	1450	355	0.64	4820	70	2835	0.28

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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