S4D450-AP03-10

AC axial fan

sickle-shaped blades (S series)

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Nominal data

Type	**S4D450-AP03-10**		
Motor	**M4D074-GA**		
Phase		3~	3~
Nominal voltage	VAC	460	460
Wiring		Y	Y
Frequency	Hz	50	60
Method of obtaining data		cs	cs
Speed (rpm)	min^{-1}	1330	1460
Power consumption	W	285	380
Current draw	A	0.54	0.6
Max. back pressure	Pa	80	75
Max. back pressure	in. wg	0.32	0.3
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	65	55

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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	34.4	30.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		44.2	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.28
09 Air flow q_v	m^3/h	3615
09 Pressure increase p_{fs}	Pa	102
10 Speed (rpm) n	min^{-1}	1320
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-200570

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

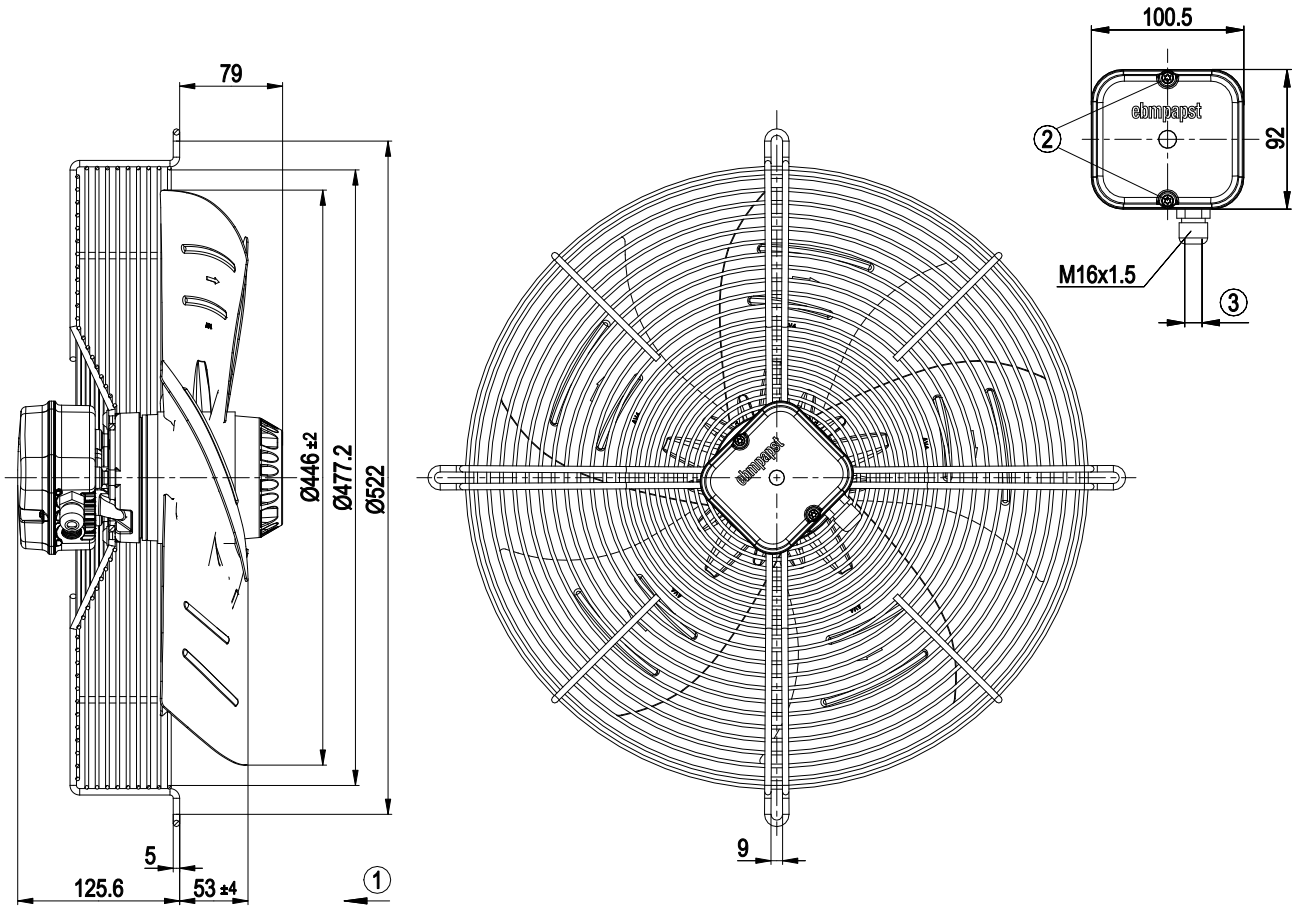
Weight	7.2 kg
Size	450 mm
Motor size	74
Rotor surface	Painted black
Terminal box material	PP plastic
Blade material	Sheet steel, painted black
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Electrical hookup	Terminal box
With cable	Variable
Protection class assignment	I; If a protective earth is connected by the customer This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 60335-1, motor does not have factory-installed overheating protection; CE

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Product drawing



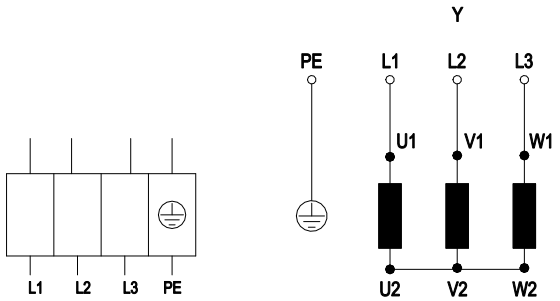
1	Airflow direction "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm

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Connection diagram



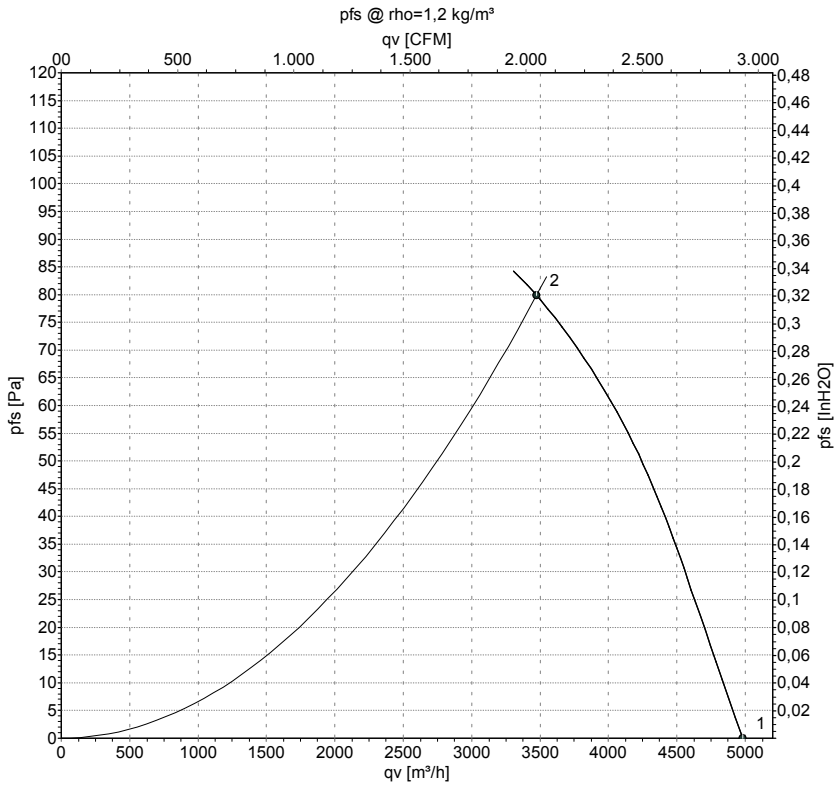
Y	Star connection	L1	black	L2	blue
L3	brown	PE	green/yellow		

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Curves: Air performance 50 Hz



Measurement: LU-38669-1

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

	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	460	50	1375	224	0.49	4980	0	2930	0.00
2	460	50	1330	285	0.54	3475	80	2045	0.32

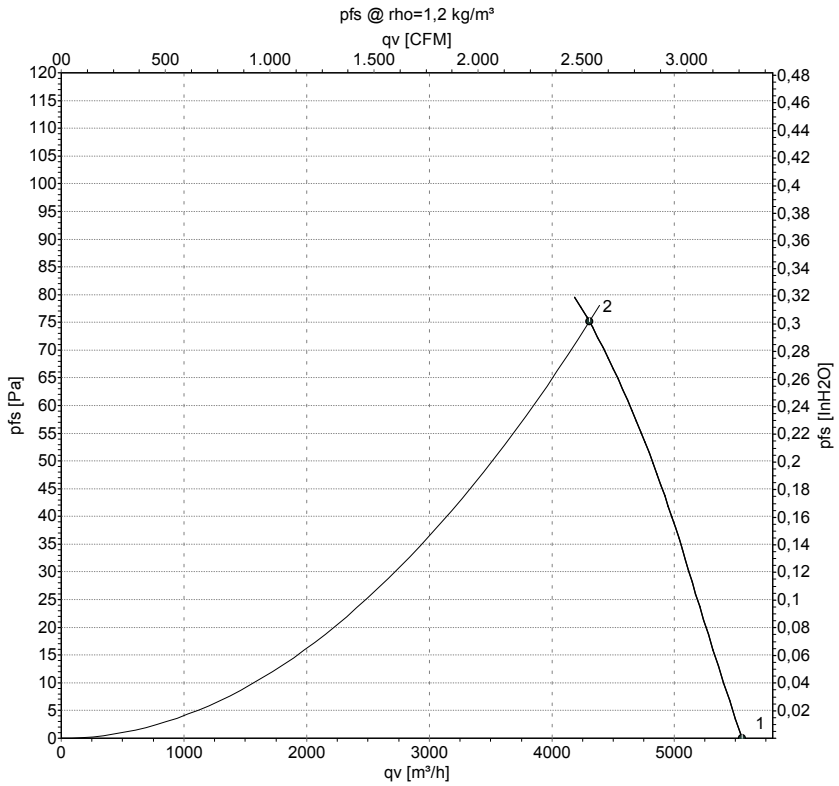
U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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Curves: Air performance 60 Hz



Measurement: LU-38670-1

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

	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	460	60	1535	322	0.53	5550	0	3265	0.00
2	460	60	1460	380	0.60	4305	75	2535	0.30

U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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