S4D400-AP16-73

AC axial fan

sickled blades (S series)

with guard grille for short nozzle



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S4D400-AP16-73**
Motor	**M4D074-EI**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400	460	460
Connection		Δ	Y	Δ	Y	Y	Y
Frequency	Hz	50	50	60	60	50	60
Type of data definition		fa	fa	fa	fa	fa	fa
Valid for approval / standard		CE	CE	CE	CE	CE	CE
Speed	min^{-1}	1440	1300	1670	1360	1350	1450
Power input	W	170	115	210	160	120	175
Current draw	A	0.53	0.21	0.44	0.27	0.22	0.26
Max. back pressure	Pa	150	100	120	60	80	80
Min. ambient temperature	°C	-25	-25	-25	-25	-25	-25
Max. ambient temperature	°C	55	85	65	70	85	55
Starting current	A					0.65	0.6

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

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		31.6	25.5	29.5
Efficiency grade N		42.1	36	40
Power input P_e	kW	0.22		
Air flow q_v	m^3/h	2610		
Pressure increase p_{fs}	Pa	100		
Speed n	min^{-1}	1400		

Data established at point of optimum efficiency

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Technical features

Mass	6.1 kg
Size	400 mm
Surface of rotor	Coated in black
Material of blades	Sheet steel, coated in black
Material of guard grille	Steel, phosphated and coated in black plastic
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position as per EN 60034-5
Insulation class	"F"
Humidity class	F1-2
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
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
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

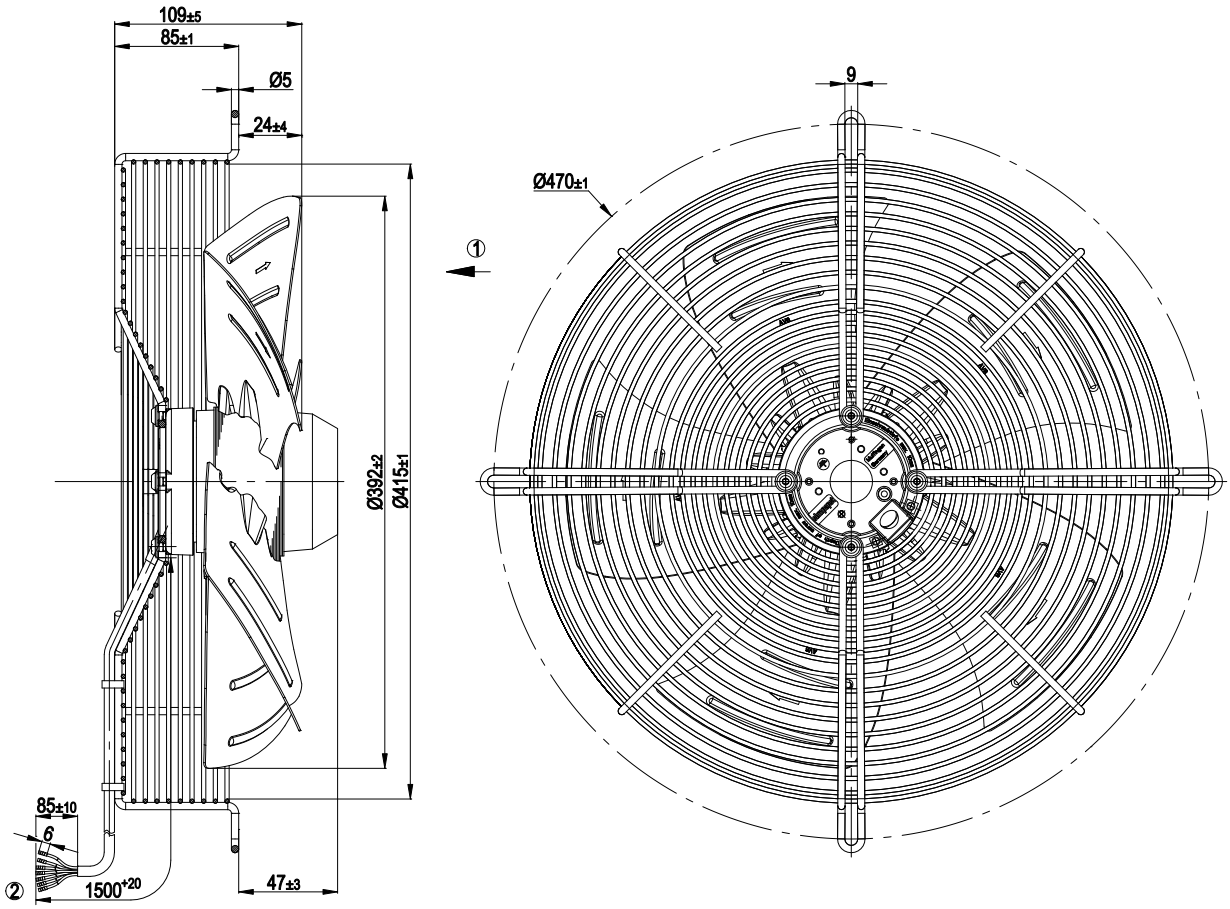
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Product drawing



1	Direction of air flow "V"
2	Connection line halogen- and silicone-free, 9G 0.5 mm², 9 x brass lead tips crimped

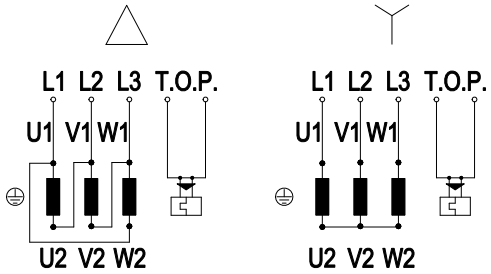
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Connection screen



Note: Direction of rotation changes when two phases are reversed

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

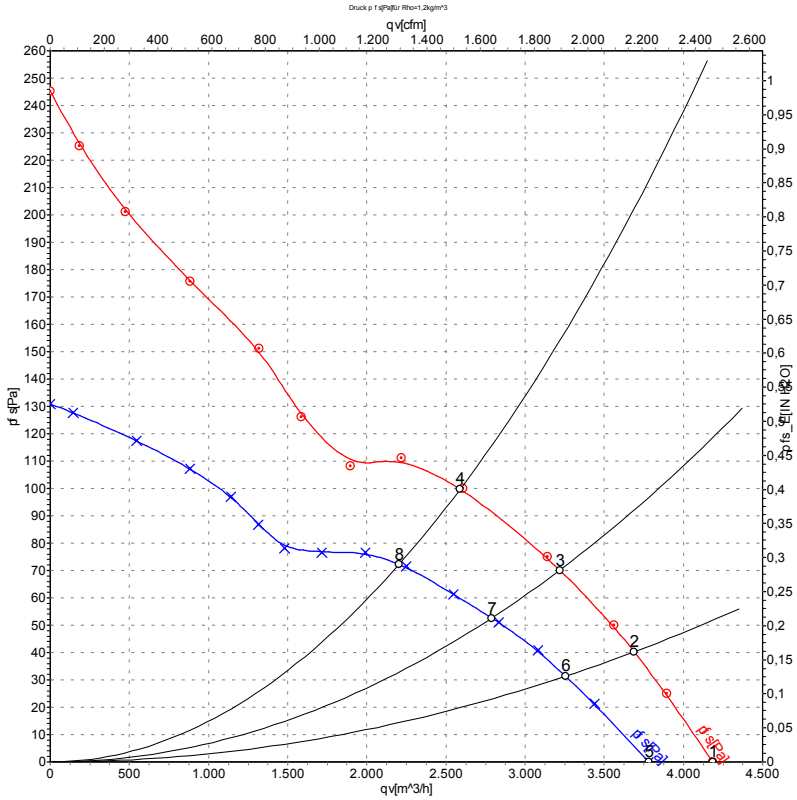
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Charts: Air flow 50 Hz Δ



Measurement: LU-43060
Measurement: LU-51669

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	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa
1	Δ	400	50	1440	170	0.53	4185	0
2	Δ	400	50	1425	192	0.51	3690	40
3	Δ	400	50	1415	211	0.51	3220	70
4	Δ	400	50	1400	229	0.53	2590	100
5	Y	400	50	1300	115	0.21	3780	0
6	Y	400	50	1255	131	0.23	3255	31
7	Y	400	50	1220	145	0.25	2790	53
8	Y	400	50	1180	156	0.27	2205	72

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

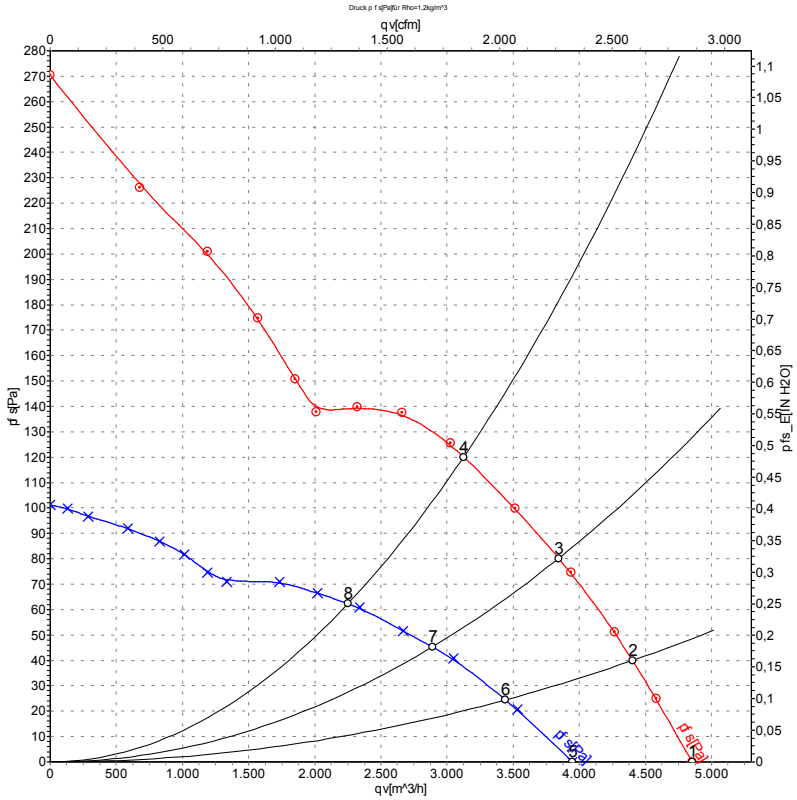
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Charts: Air flow 60 Hz Δ



Measurement: LU-43061
Measurement: LU-51672

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	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa
1	Δ	400	60	1670	210	0.44	4850	0
2	Δ	400	60	1650	245	0.47	4400	40
3	Δ	400	60	1625	279	0.51	3845	80
4	Δ	400	60	1600	311	0.55	3125	120
5	Y	400	60	1360	160	0.27	3950	0
6	Y	400	60	1280	173	0.29	3440	25
7	Y	400	60	1205	185	0.32	2890	45
8	Y	400	60	1135	195	0.33	2250	62

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

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