

AC axial fan

sickled blades (S series)

with guard grille for short nozzle

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Nominal data

Type	S4D420-AU02-03				
Motor	M4D094-EA				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400
Connection		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed	min ⁻¹	1360	1060	1490	970
Power input	W	260	185	385	220
Current draw	A	0.52	0.31	0.65	0.37
Max. back pressure	Pa	95	60	110	47
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	60	55	55
Starting current	A	1.7	0.55	1.57	0.51

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 = $1 + p_{fs} / 100\,000\text{ Pa}$

	Actual	Request 2013	Request 2015
Overall efficiency η_{es}	32.3	26	30
Efficiency grade N	42.3	36	40
Power input P_e	kW	0.26	
Air flow q_v	m ³ /h	3205	
Pressure increase p_{fs}	Pa	96	
Speed n	min ⁻¹	1350	

Data established at point of optimum efficiency



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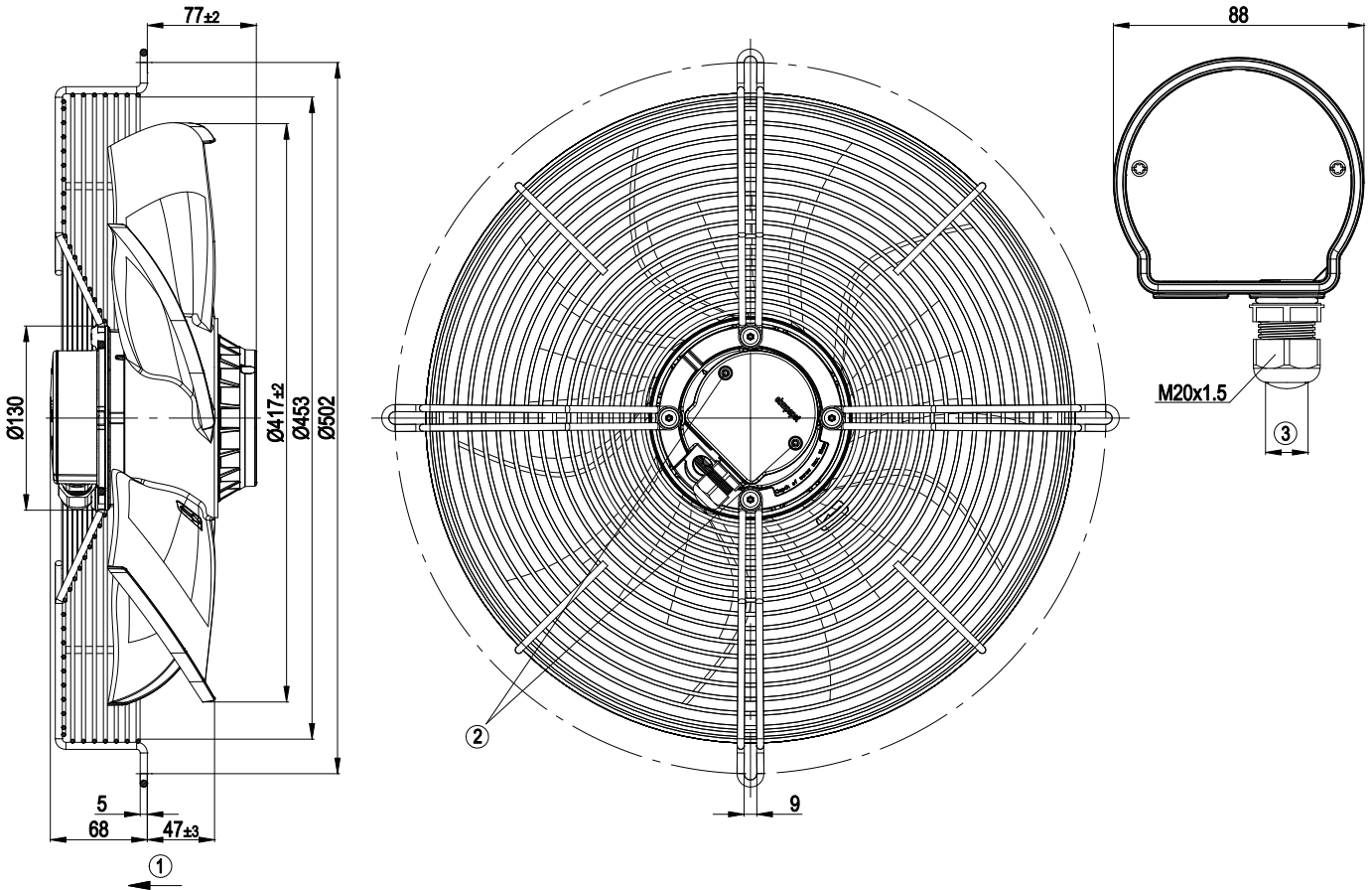
Technical features

Mass	6 kg
Size	420 mm
Surface of rotor	Coated in black
Material of terminal box	ABS plastic, black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
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 54
Insulation class	"F"
Humidity class	F4-1
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)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) brought out
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2004); CE
Approval	CCC; GOST

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Product drawing



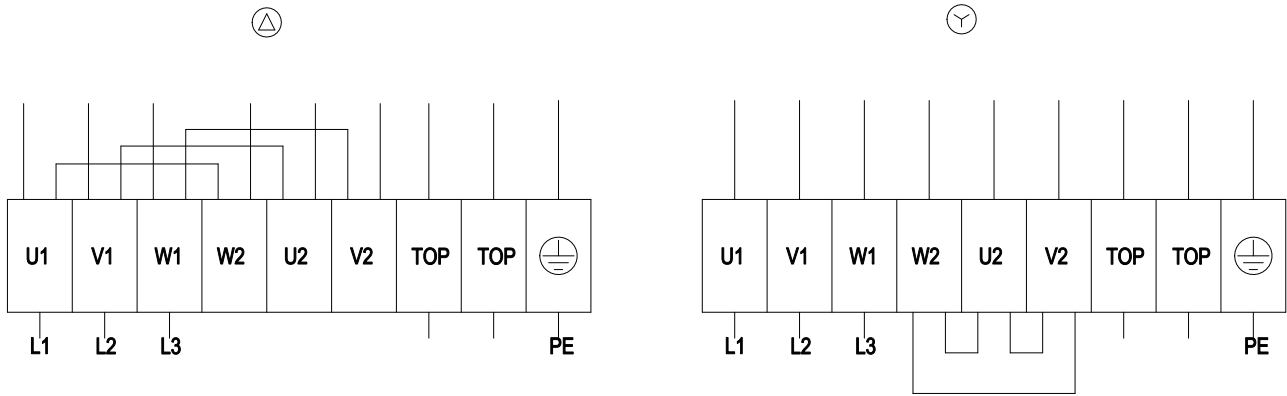
1	Direction of air flow "V"
2	Tightening torque 1.0 ± 0.15 Nm
3	Cable diameter: min. 6 mm, max. 12 mm; tightening torque: 2Nm ± 0.2Nm



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Connection screen

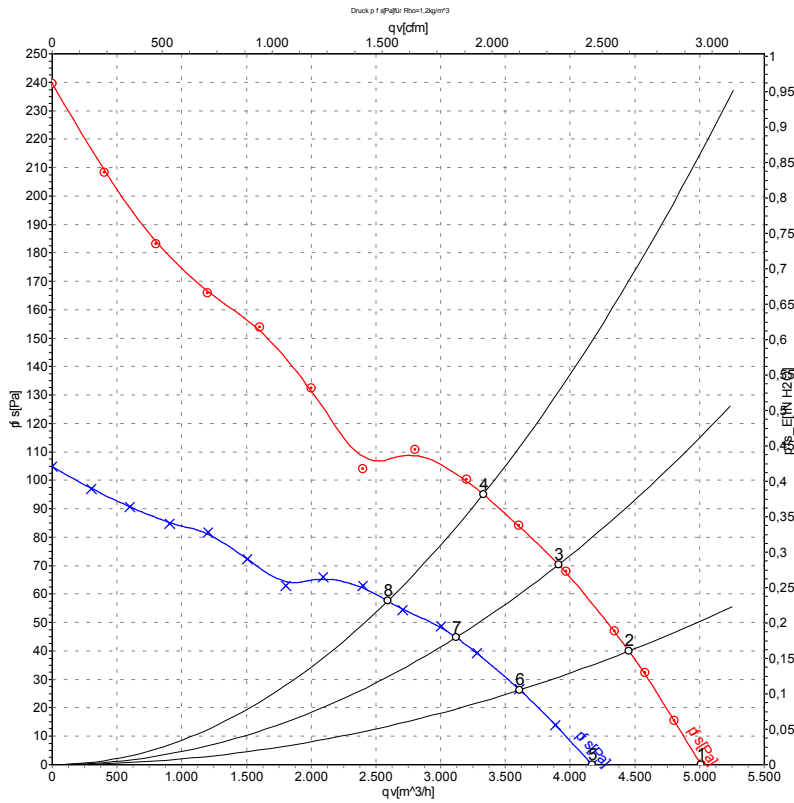


Δ	Delta-connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

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Charts: Air flow 50 Hz Δ



Measurement: LU-72485
Measurement: LU-72487

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	1390	207	0.46	5015	0
2	Δ	400	50	1375	230	0.48	4455	40
3	Δ	400	50	1365	243	0.49	3910	70
4	Δ	400	50	1360	260	0.52	3330	95
5	Y	400	50	1160	153	0.25	4170	0
6	Y	400	50	1115	165	0.28	3610	26
7	Y	400	50	1090	172	0.29	3120	45
8	Y	400	50	1060	185	0.31	2590	58

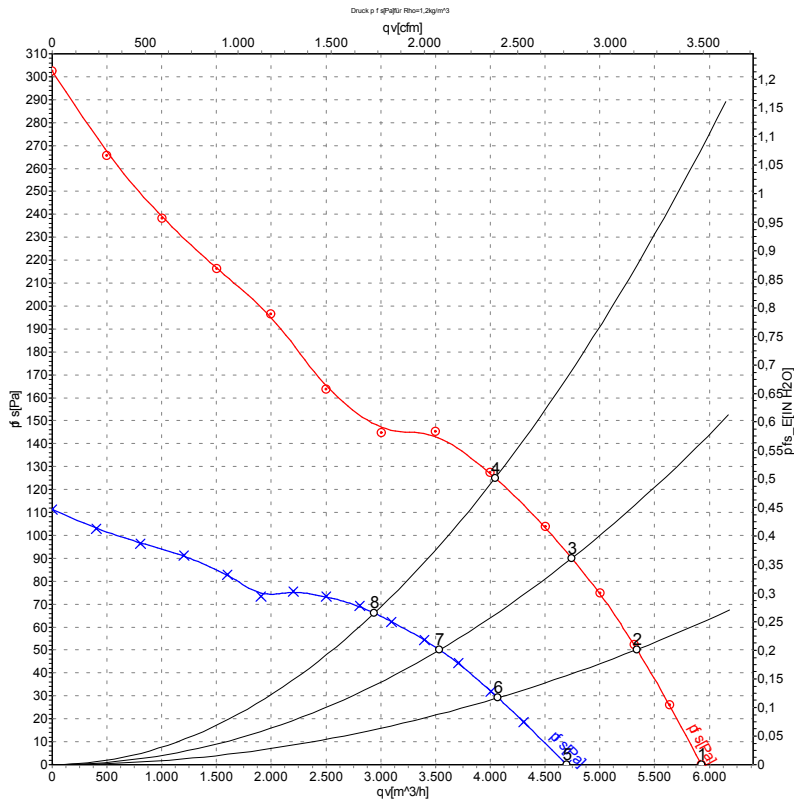
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase



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Charts: Air flow 60 Hz Δ



Measurement: LU-72493
Measurement: LU-72494

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: L_{WA} measured as per ISO 13347 / L_{pA} 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	480	60	1635	339	0.54	5930	0
2	Δ	480	60	1615	368	0.57	5340	50
3	Δ	480	60	1600	391	0.59	4745	90
4	Δ	480	60	1570	450	0.67	4045	125
5	Y	480	60	1300	241	0.33	4695	0
6	Y	480	60	1235	257	0.36	4070	29
7	Y	480	60	1200	265	0.37	3540	50
8	Y	480	60	1155	275	0.39	2940	66

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

