AC axial fan

sickle-shaped blades (S series)

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**A4D400-AN12-06**
Motor	**M4D094-FA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	208	208	208	208
Wiring		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Method of obtaining data		ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	1380	1140	1550	1110
Power consumption	W	320	240	480	310
Current draw	A	1.38	0.75	1.65	0.98
Max. back pressure	Pa	100	70	125	65
Max. back pressure	inH2O	0.4	0.28	0.5	0.26
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	60	60	60

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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	30.5	30.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.31
09 Air flow q_v	m^3/h	3605
09 Pressure increase p_{fs}	Pa	92
10 Speed (rpm) n	min^{-1}	1405
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-109876

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Technical description

Weight	5.9 kg
Fan size	400 mm
Rotor surface	Painted black
Blade material	PP plastic
Number of blades	5
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Mode	S1
Motor bearing	Ball bearing with low-temperature lubricant
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	CSA C22.2 No. 100; UL 1004-1

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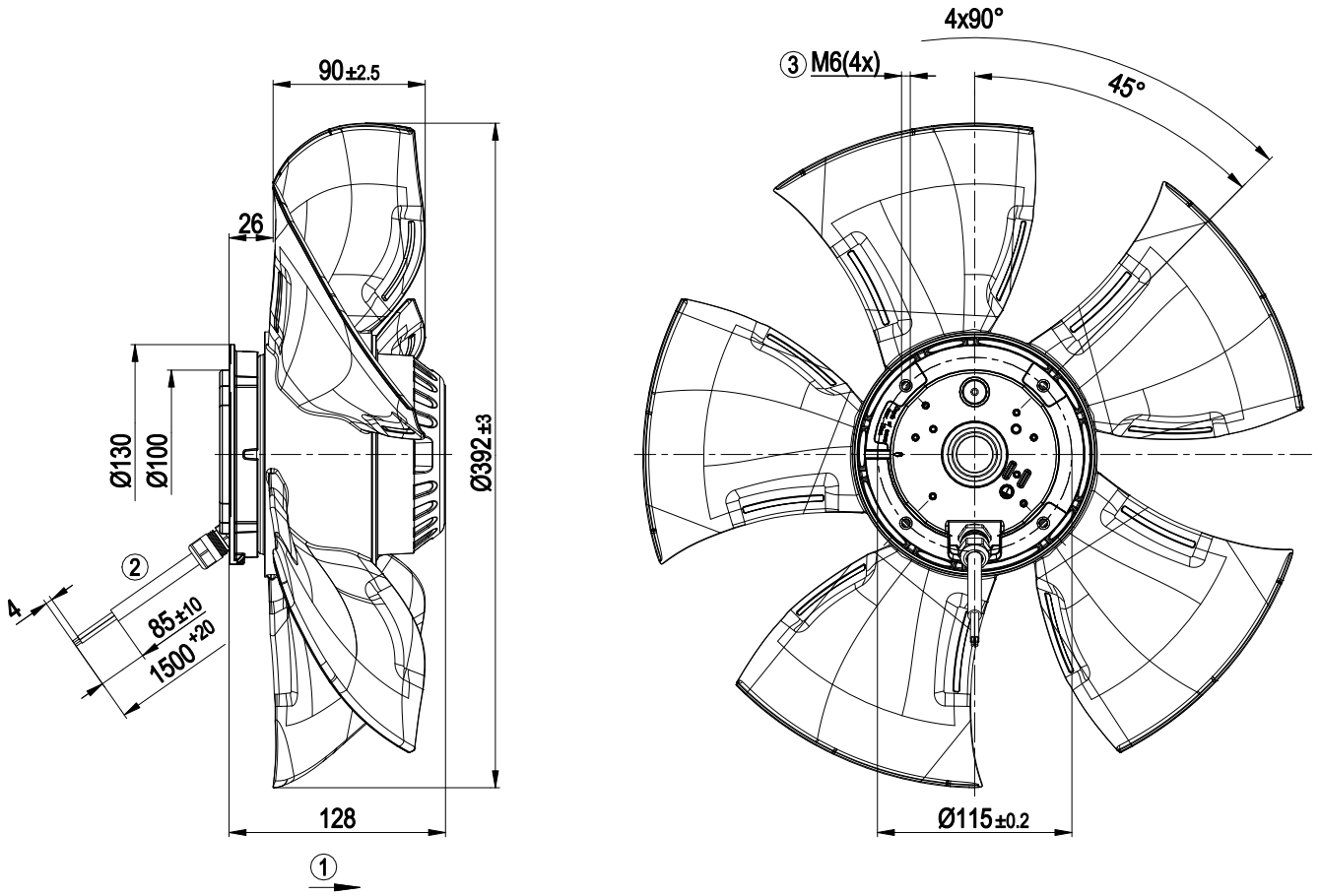
Product drawing



1	Airflow direction "A"
2	Cable silicone 9G 0.75 mm²
3	Max. clearance for screw 12 mm

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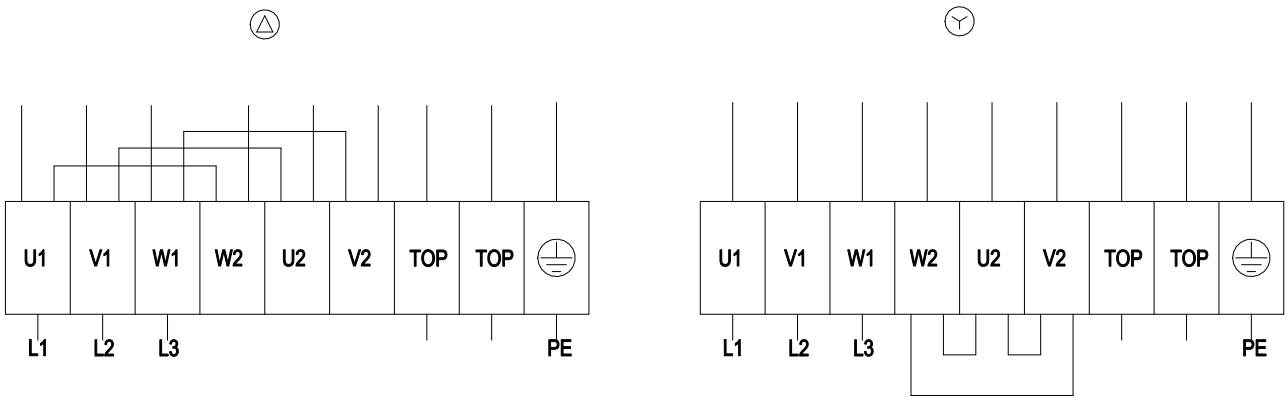
Connection diagram



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

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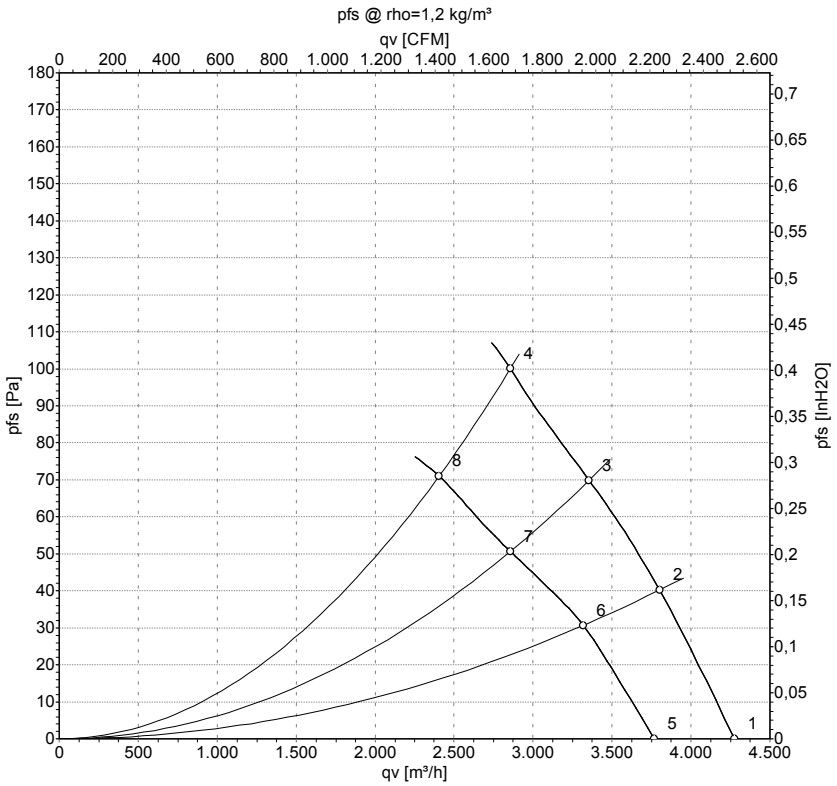
Curves: Air performance 50 Hz



Measurement: LU-116624-1
Measurement: LU-116526-1

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

	Wired	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	208	50	1415	246	1.26	4275	0	2515	0.00
2	Δ	208	50	1415	256	1.28	3800	40	2240	0.16
3	Δ	208	50	1400	278	1.31	3355	70	1975	0.28
4	Δ	208	50	1380	320	1.38	2855	100	1680	0.40
5	Y	208	50	1245	193	0.61	3765	0	2215	0.00
6	Y	208	50	1230	201	0.63	3315	31	1950	0.12
7	Y	208	50	1200	214	0.68	2855	51	1680	0.20
8	Y	208	50	1140	240	0.75	2405	72	1415	0.29

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

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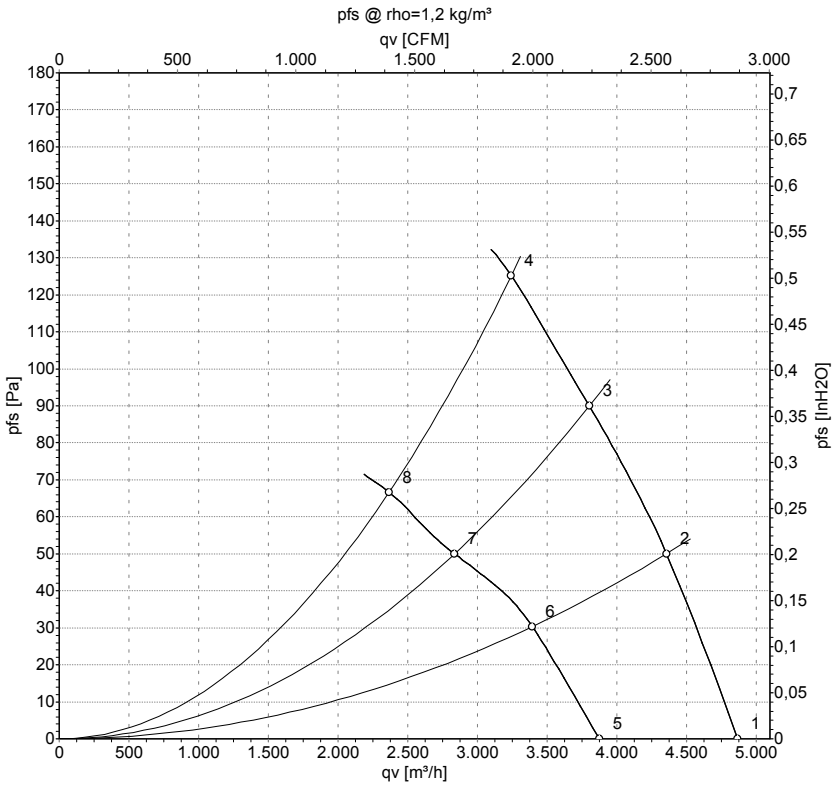
Curves: Air performance 60 Hz



Measurement: LU-116637-1
Measurement: LU-116525-1

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

	Wired	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	208	60	1630	368	1.34	4870	0	2865	0.00
2	Δ	208	60	1620	382	1.38	4360	50	2565	0.20
3	Δ	208	60	1600	419	1.48	3805	90	2240	0.36
4	Δ	208	60	1550	480	1.65	3245	125	1910	0.50
5	Y	208	60	1280	272	0.85	3875	0	2280	0.00
6	Y	208	60	1250	277	0.87	3395	30	2000	0.12
7	Y	208	60	1200	288	0.91	2835	50	1670	0.20
8	Y	208	60	1110	310	0.98	2365	67	1395	0.27

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