A4D560-AR03-03

AC axial fan - HyBlade

sickled blades (S series)



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Nominal data

Type	**A4D560-AR03-03**
Motor	**M4D110-IA**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	230	230	277	400	400	480
Connection		Δ	Δ	Δ	Y	Y	Y
Frequency	Hz	50	60	60	50	60	60
Type of data definition		ml	ml	ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE	CE	CE
Speed (rpm)	min^{-1}	1390	1575	1640	1390	1575	1640
Power input	W	880	1320	1420	880	1320	1420
Current draw	A	3.72	4.26	4.39	2.15	2.46	2.54
Max. back pressure	Pa	170	215	230	170	215	230
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	65	65	65	65	65	65
Starting current	A	17	15	19	10	8.9	11.2

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}	%	36.1	33.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.8	40
05 Variable speed drive		No	

09 Power input P_e	kW	0.87
09 Air flow q_v	m^3/h	6755
09 Pressure increase p_{fs}	Pa	169
10 Speed (rpm) n	min^{-1}	1390
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-110536

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Technical features

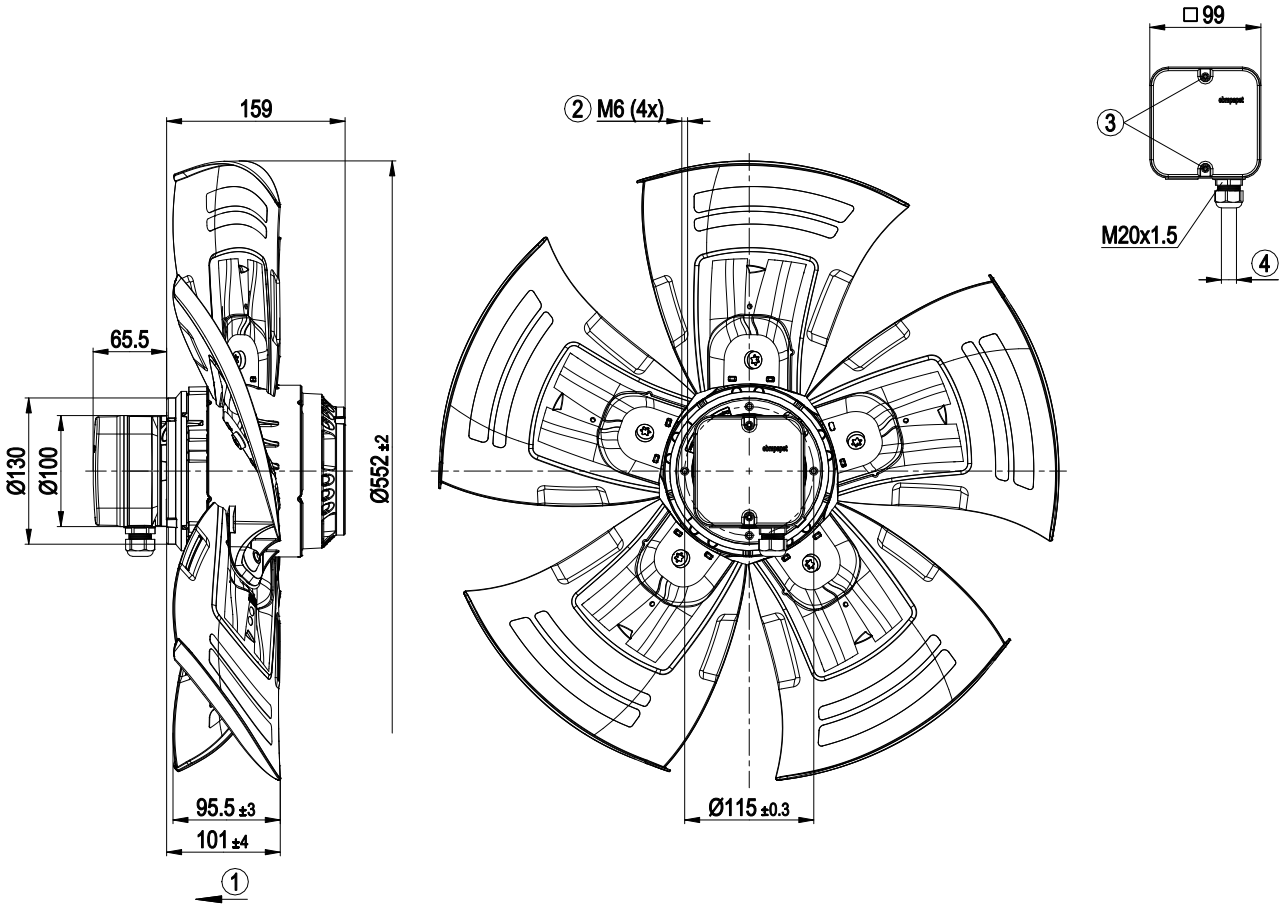
Mass	12.1 kg
Size	560 mm
Motor size	110
Surface of rotor	Cast in aluminium
Material of terminal box	PP plastic
Material of blades	Aluminium sheet insert, sprayed with PP plastic
Number of blades	5
Blade angle	-10°
Direction of air flow	V
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP54
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H2
Note ambient temperature	Occasional start-up between -40 °C and -25 °C is permissible. For continuous operation at ambient temperatures below -25 °C (e.g. refrigeration applications), a fan version with special low-temperature bearings must be used.
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)	<= 3.5 mA
Electrical connection	Terminal box
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	VDE; CSA C22.2 no. 100; EAC; UL 1004-1

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Product drawing



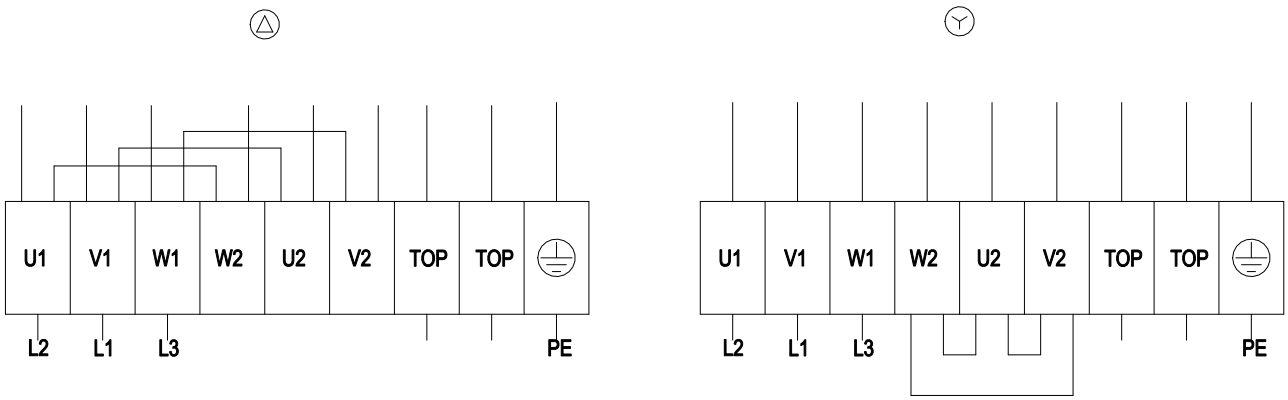
1	Direction of air flow "V"
2	Thread reach max. 12 mm
3	Tightening torque 1.5±0.2 Nm
4	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2±0.3 Nm

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Connection screen



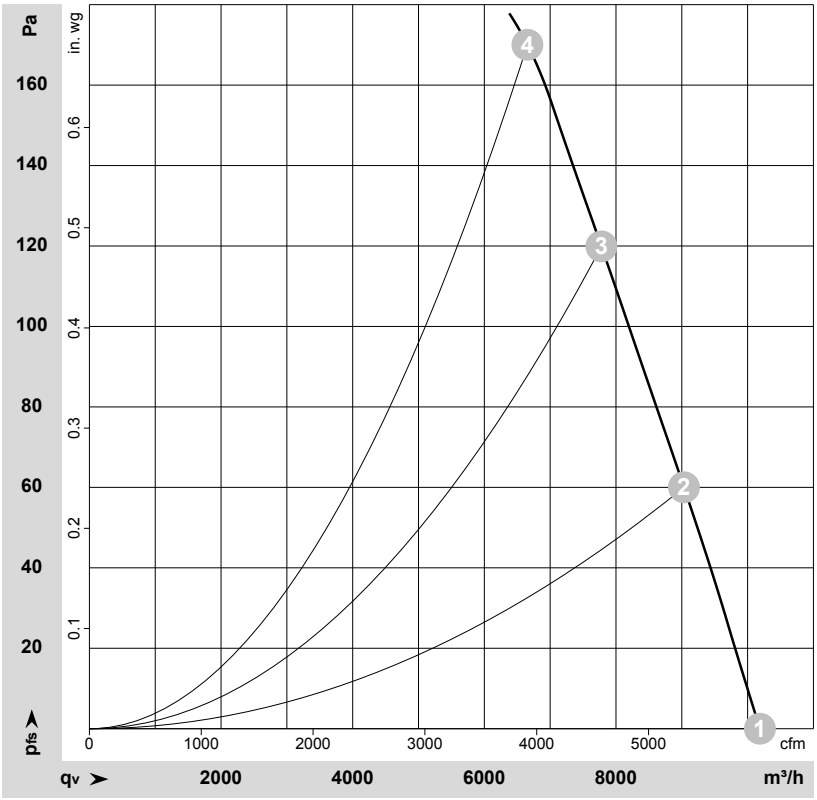
Δ	Delta connection	Y	Star connection	L1	= V1 = blue
L2	= U1 = black	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x grey
PE	green/yellow				

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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-110536-1

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

	Conn.	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Y	400	50	1435	604	1.88	72	78	78	10185	0	5995	0.00
2	Y	400	50	1415	717	1.95	68	74	74	9035	60	5315	0.24
3	Y	400	50	1400	818	2.05	70	76	75	7780	120	4580	0.48
4	Y	400	50	1390	880	2.15	71	77	77	6655	170	3915	0.68

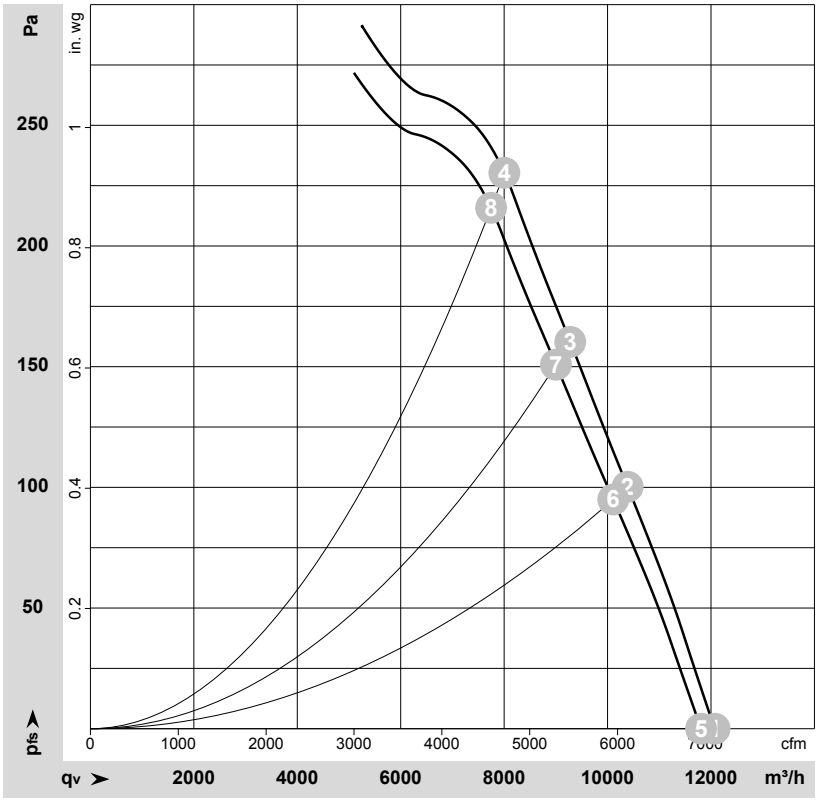
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-110544-1
Measurement: LU-204949-1

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

	Conn.	U	f	n	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Y	480	60	1705	959	2.01	75	81	82	12070	0	7105	0.00
2	Y	480	60	1675	1186	2.20	72	79	78	10390	100	6115	0.40
3	Y	480	60	1660	1313	2.32	74	80	79	9280	160	5460	0.64
4	Y	480	60	1640	1420	2.54	75	81	81	8005	230	4710	0.92
5	Y	480	60	1665	872	1.78	75	81	81	11810	0	6950	0.00
6	Y	480	60	1630	1076	2.06	72	78	77	10110	95	5950	0.38
7	Y	480	60	1610	1186	2.21	73	79	78	9000	151	5300	0.61
8	Y	480	60	1575	1320	2.46	74	80	80	7750	215	4560	0.86

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

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