

Fan housing with guard grille

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	W6D500-ZM03-01				
Motor	M6D110-EF				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
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	930	790	1090	890
Power consumption	W	265	190	420	300
Current draw	A	0.7	0.34	0.78	0.43
Max. back pressure	Pa	110	80	155	105
Max. back pressure	in. wg	0.44	0.32	0.62	0.42
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	60	60	60
Starting current	A	2.4	0.8	2.7	0.9

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}	%	38.7	30
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		48.7	40
05 Variable speed drive		No	

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

09 Power consumption P_e	kW	0.25
09 Air flow q_v	m ³ /h	4040
09 Pressure increase p_{fs}	Pa	90
10 Speed (rpm) n	min ⁻¹	930
11 Specific ratio*		1.00

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

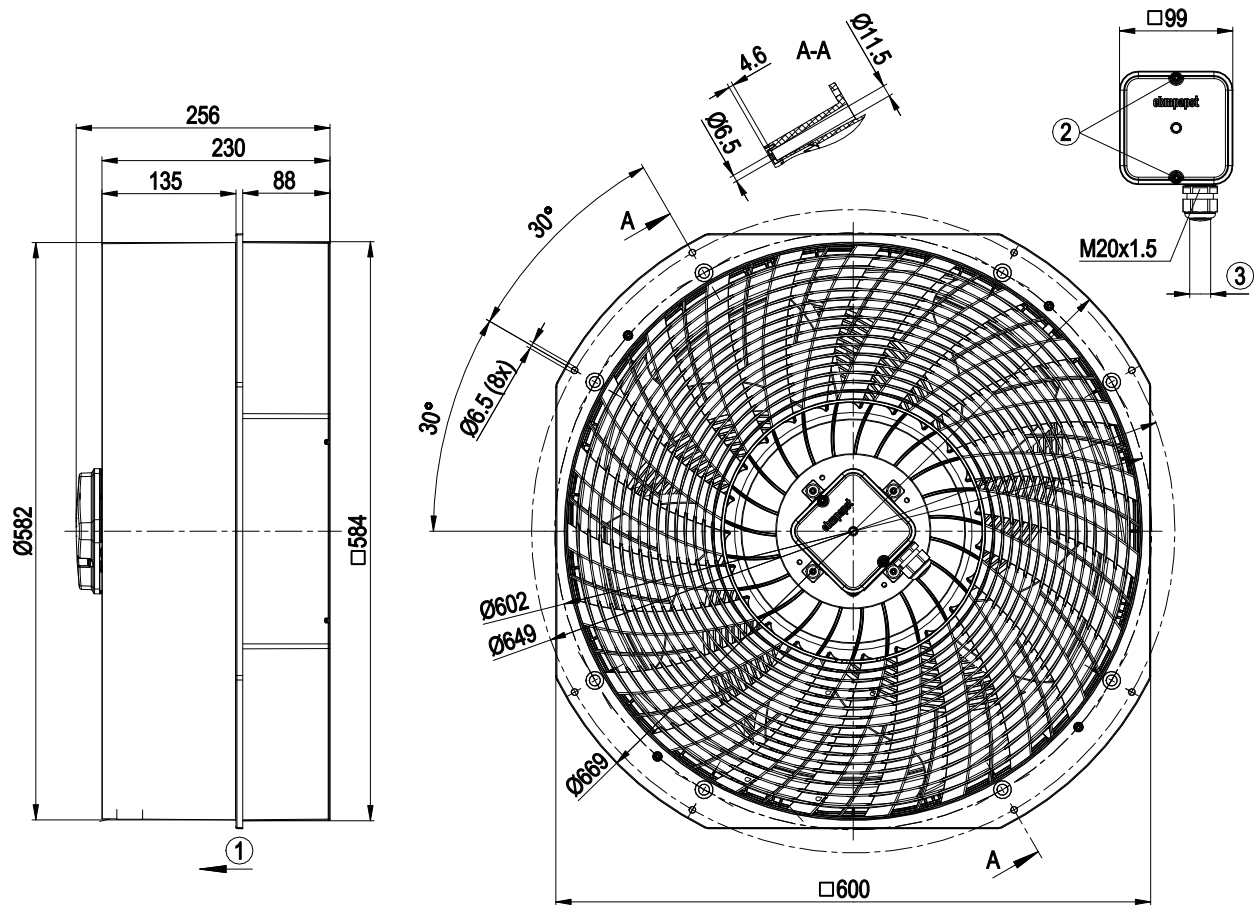
LU-210497



Technical description

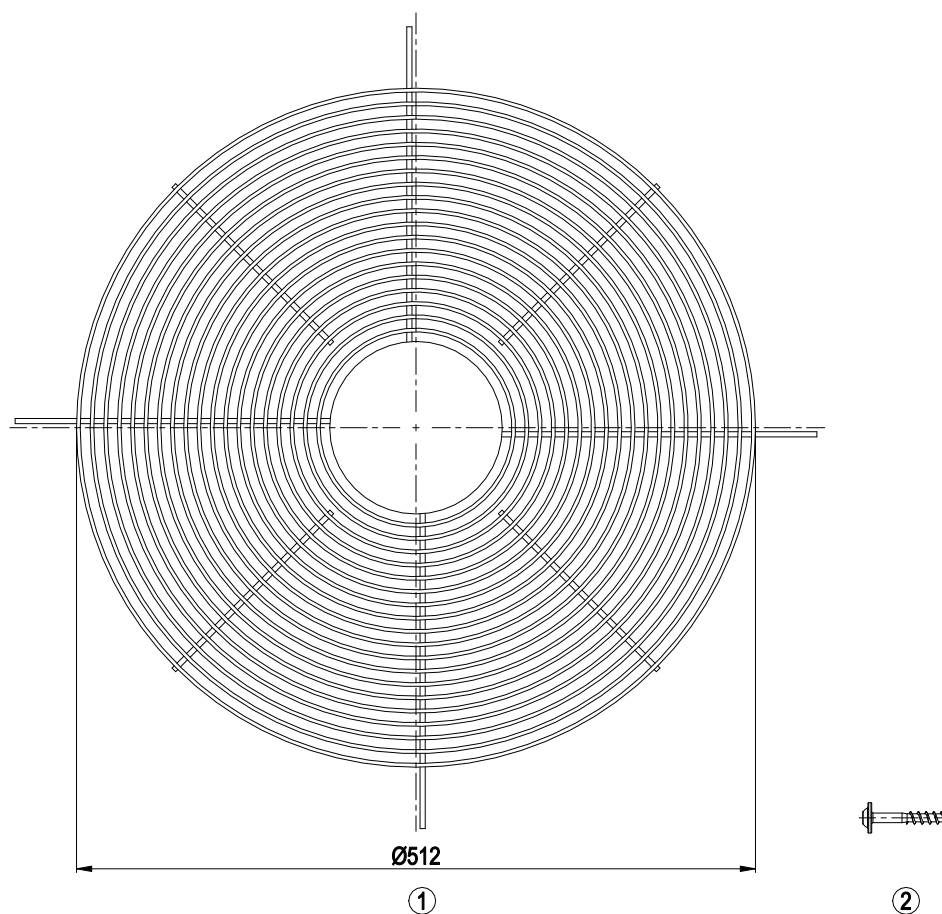
Size	500 mm
Motor size	110
Rotor surface	Painted black
Terminal box material	PP plastic
Impeller material	PP plastic, galvanized sheet-metal plate
Fan housing material	PP plastic
Number of blades	5
Airflow direction	V
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
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)	<= 3.5 mA
Electrical hookup	Terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1; CE
Approval	CSA C22.2 No. 100; EAC; UL 1004-1

Product drawing



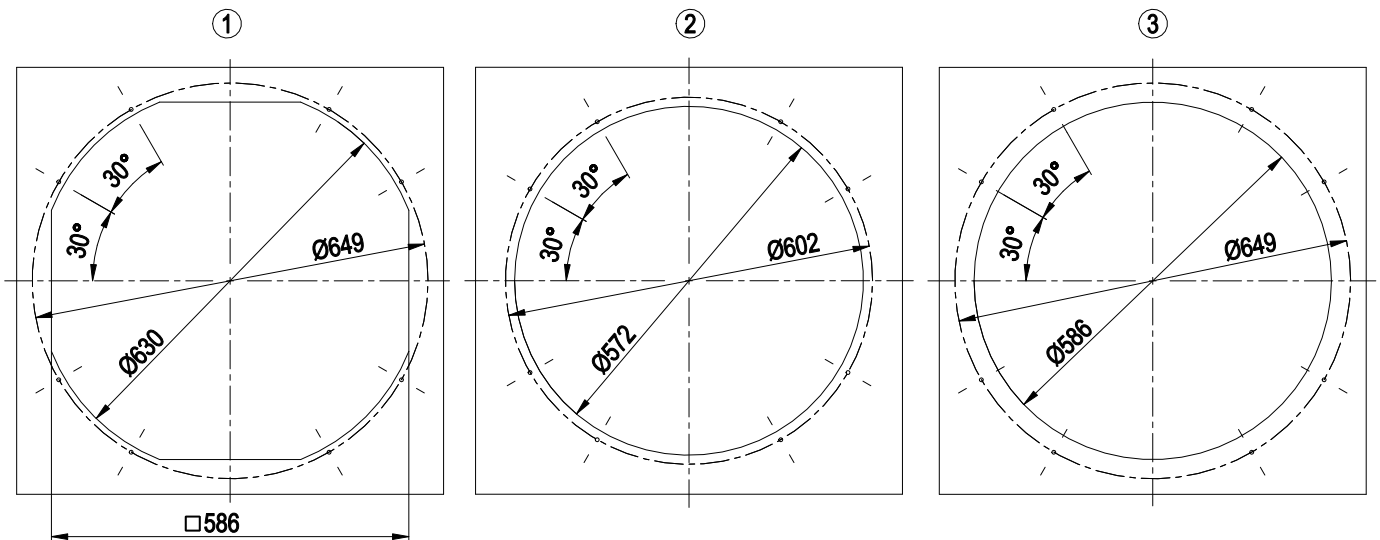
1	Airflow direction "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2 ± 0.3 Nm
	Accessory part: Guard grill 50070-2-4039 with oval head screw 60080-7-6201 (4x), can be fitted on the intake side. Not included in scope of delivery.
	The installation of accessories may change the air performance and noise values.

Accessory part



1	Guard grill 50070-2-4039
2	Oval head screw 60080-7-6201 (4x)

Mounting dimensions



All 8 holes on the relevant pitch circle must always be used for all types of fastening.

1 intake-side mounting on flange

2 intake-side mounting on suction nozzle

The Ø6.5 mm holes must be pierced from the underside with a mandrel or similar tool.

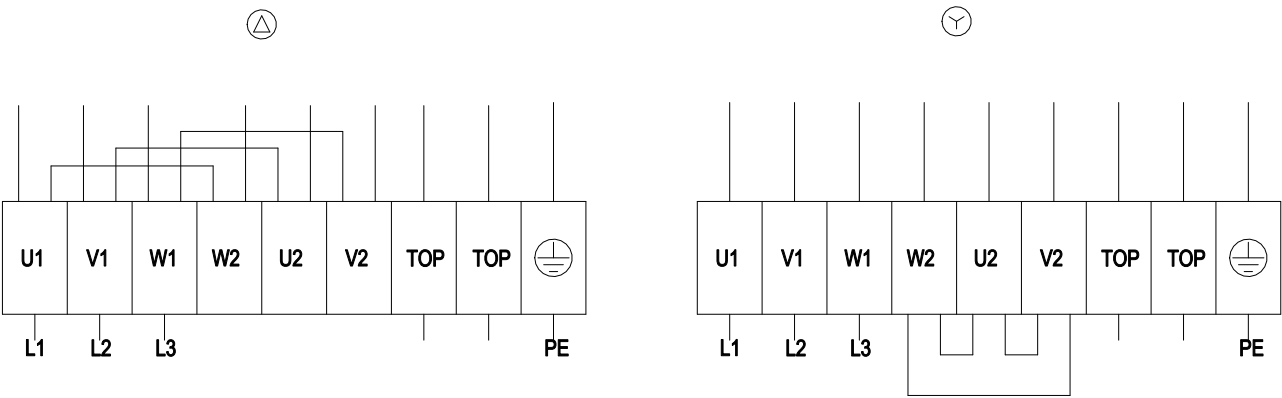
We recommend using M6 cheese-head screws with hexagon socket (DIN 912/DIN EN ISO 4762) for fastening.

3 outlet-side mounting on flange

AC axial fan - AxiEco

Fan housing with guard grille

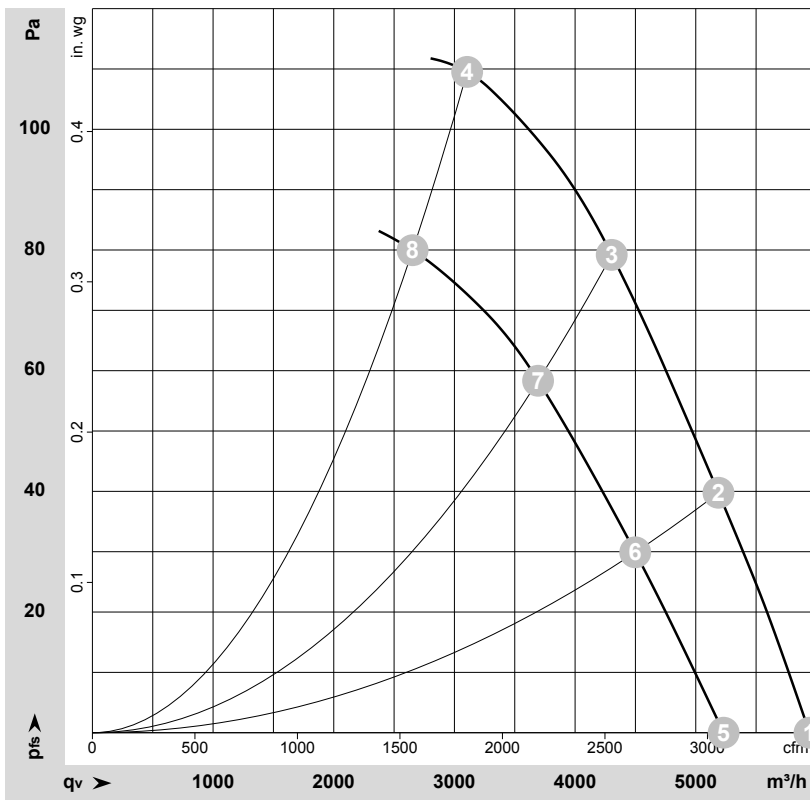
Connection diagram



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				



Curves: Air performance 50 Hz


 $\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

 Measurement: LU-210497-1
 Measurement: LU-213310-1

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.

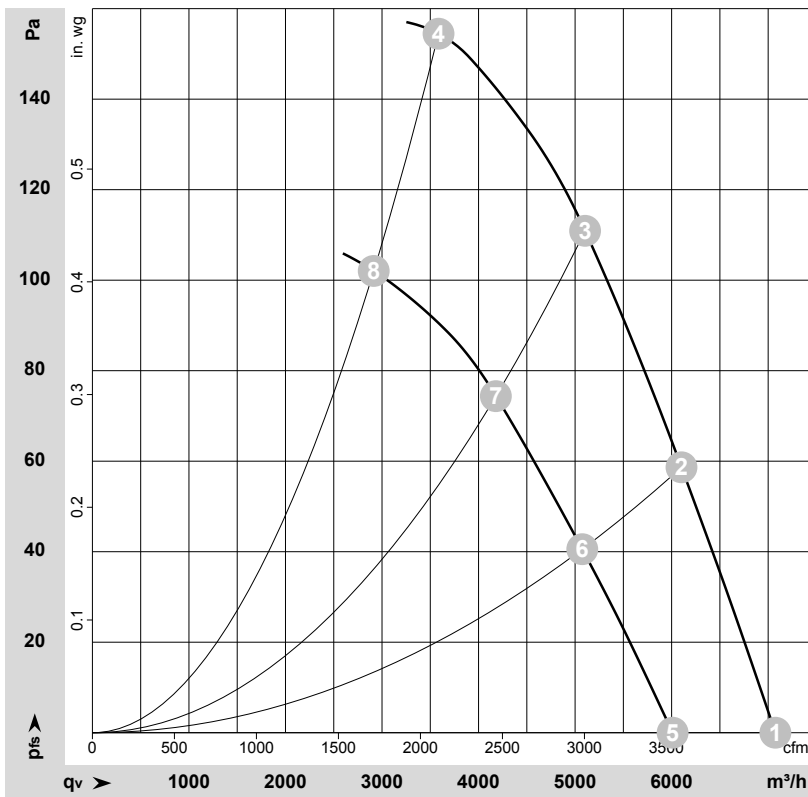
Measured values

	Wired	U	f	n	P _e	I	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	Δ	400	50	945	224	0.65	64	70	70	5945	0	3500	0.00
2	Δ	400	50	935	244	0.66	61	67	69	5190	40	3055	0.16
3	Δ	400	50	930	257	0.67	59	66	67	4305	80	2535	0.32
4	Δ	400	50	930	265	0.70	60	67	68	3105	110	1830	0.44
5	Y	400	50	835	161	0.28	61	67	67	5230	0	3080	0.00
6	Y	400	50	815	175	0.30	58	64	65	4500	30	2650	0.12
7	Y	400	50	800	184	0.31	55	62	63	3695	58	2175	0.23
8	Y	400	50	790	190	0.34	56	62	64	2655	80	1560	0.32

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
 LwA_{out} = Sound power level outlet side · q_v = Air flow · p_{fs} = Pressure increase



Curves: Air performance 60 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-213296-1
Measurement: LU-213298-1

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	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)	m³/h	Pa	cfm	in. wg
1	Δ	480	60	1120	350	0.70	68	74	75	7075	0	4165	0.00
2	Δ	480	60	1105	385	0.73	65	71	73	6100	60	3590	0.24
3	Δ	480	60	1100	406	0.74	63	70	71	5105	110	3005	0.44
4	Δ	480	60	1090	420	0.78	65	72	73	3585	155	2110	0.62
5	Y	480	60	955	256	0.36	64	70	71	6010	0	3535	0.00
6	Y	480	60	920	277	0.38	61	67	68	5075	41	2985	0.16
7	Y	480	60	905	288	0.40	58	65	66	4180	74	2460	0.30
8	Y	480	60	890	300	0.43	59	66	67	2915	105	1715	0.42

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

