AC axial fan

sickle-shaped blades (S series)

with square full nozzle

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	**W6D500-GH03-01**
Motor	**M6D110-EF**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400	480	480
Wiring		Δ	Y	Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60	60	60
Method of obtaining data		ml	ml	ml	ml	ml	ml
Valid for approval/standard		-	-	-	-	-	-
Speed (rpm)	min^{-1}	925	805	1060	835	1055	925
Power consumption	W	270	190	370	230	410	280
Current draw	A	0.7	0.33	0.73	0.41	0.74	0.42
Max. back pressure	Pa	80	60	100	53	110	72
Max. back pressure	inH2O	0.32	0.24	0.4	0.21	0.44	0.29
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	90	90	80	80	80	80
Starting current	A	2.5		2.3		2.8	

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

Weight	14.7 kg
Fan size	500 mm
Rotor surface	Painted black
Terminal box material	PP plastic
Electronics housing material	Rotor: cast in aluminum
Blade material	Sheet aluminum
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	-5°
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F3-1
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	Via 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 61800-5-1
Approval	EAC; VDE

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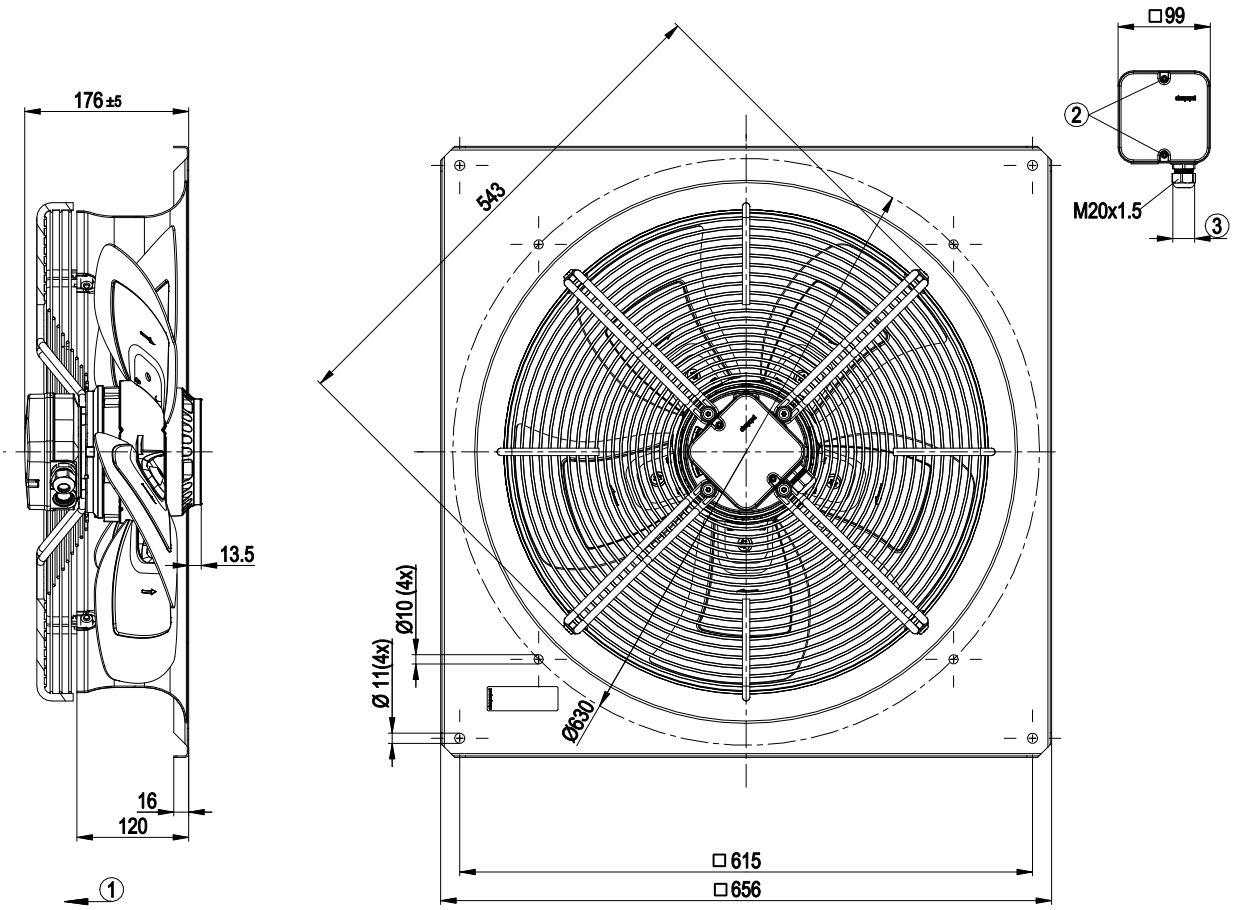
Product drawing



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

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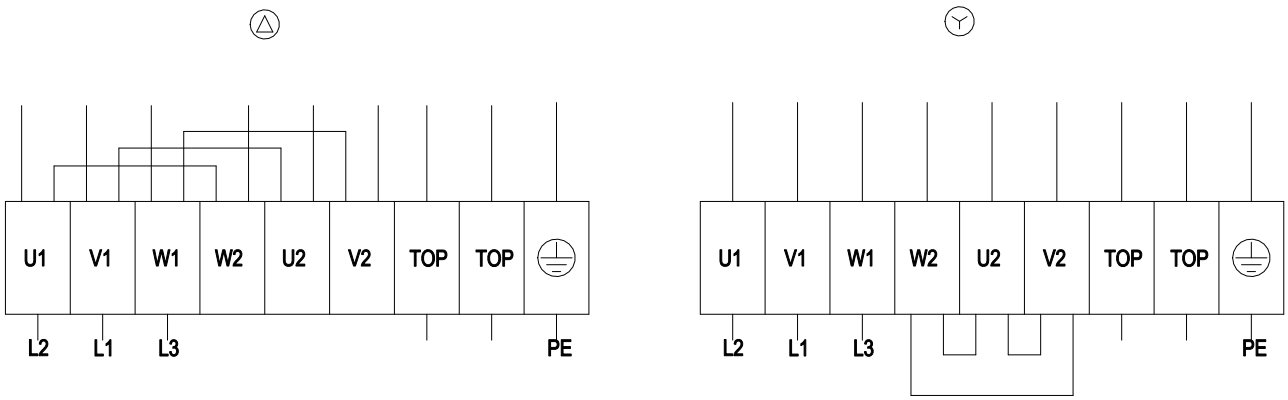
Connection diagram



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

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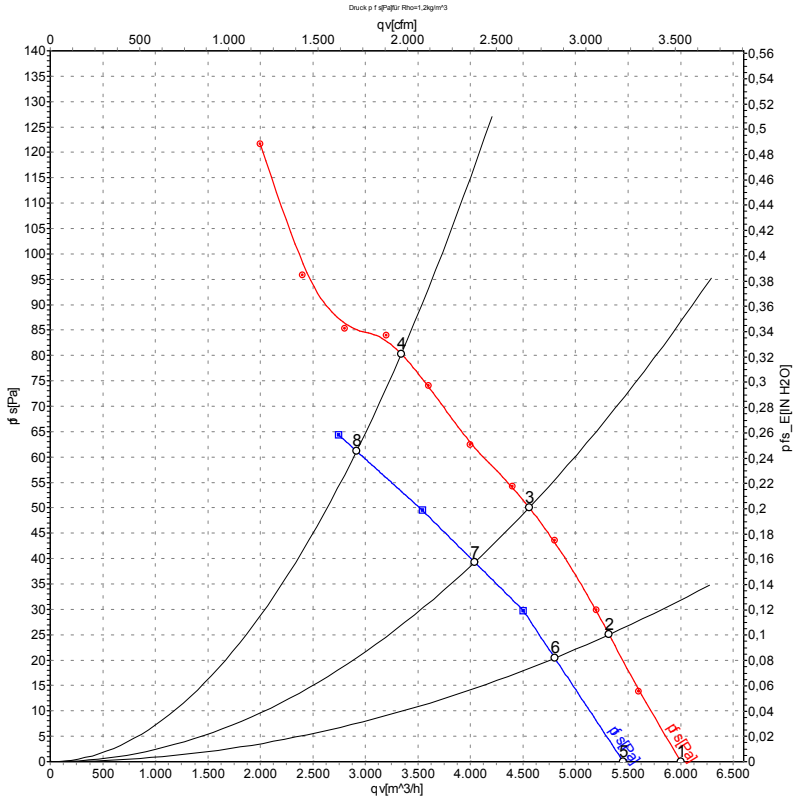
Curves: Air performance 50 Hz



Measurement: LU-104088-1
Measurement: LU-104624-1

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}	η_{es}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	%	m^3/h	Pa	CFM	inH2O
1	Δ	400	50	950	198	0.65	64	70	70	38	6000	0	3535	0.00
2	Δ	400	50	945	220	0.65	63	69	68	41	5320	25	3130	0.10
3	Δ	400	50	940	237	0.66	63	69	69	40	4560	50	2685	0.20
4	Δ	400	50	925	270	0.70	65	72	72	32	3340	80	1965	0.32
5	Y	400	50	865	140	0.26	62	68	67	42	5455	0	3210	0.00
6	Y	400	50	845	154	0.28	61	67	67	43	4800	20	2825	0.08
7	Y	400	50	830	166	0.29	61	67	66	40	4040	39	2380	0.16
8	Y	400	50	805	190	0.33	62	68	68	31	2915	61	1715	0.24

Wired = Wiring · U = Power supply · 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 · η_{es} = Total efficiency of fan · qv = Air flow · p_{fs} = Pressure increase

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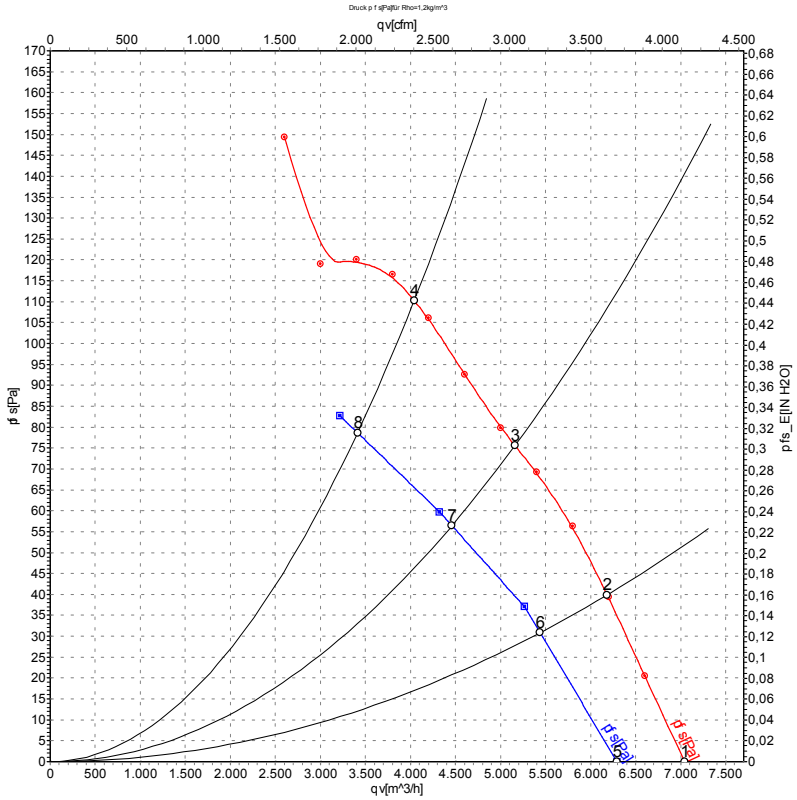
Curves: Air performance 60 Hz



Measurement: LU-104090-1
Measurement: LU-104872-1

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}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	Δ	480	60	1130	303	0.67	68	74	74	7040	0	4145	0.00
2	Δ	480	60	1120	341	0.70	66	72	72	6185	40	3640	0.16
3	Δ	480	60	1110	368	0.71	67	73	73	5160	75	3040	0.30
4	Δ	480	60	1055	410	0.74	69	76	75	4040	110	2380	0.44
5	Y	480	60	1005	223	0.32	65	71	71	6295	0	3705	0.00
6	Y	480	60	970	247	0.35	64	70	69	5440	31	3200	0.12
7	Y	480	60	950	264	0.37	63	70	69	4460	56	2625	0.22
8	Y	480	60	925	280	0.42	65	71	71	3415	79	2010	0.32

Wired = Wiring · U = Power supply · 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 · qv = Air flow · p_{fs} = Pressure increase