AC axial fan

sickle-shaped blades (S series)

Fan housing with guard grille, Transformer fan

Nominal data

Type	**W8D500-CG01-85**
Motor	**M8D110-EF**

Phase		3~	3~	3~
Nominal voltage	VAC	230	380	400
Wiring		Δ	Y	Y
Frequency	Hz	60	60	50
Method of obtaining data		ml	ml	ml
Valid for approval/standard		CE	CE	CE
Speed (rpm)	min^{-1}	610	580	615
Power consumption	W	160	150	120
Current draw	A	0.50	0.28	0.25
Max. back pressure	Pa	37	34	34
Max. back pressure	inH2O	0.15	0.14	0.14
Min. ambient temperature	°C	-40	-40	-40
Max. ambient temperature	°C	65	65	70
Starting current	A			0.5

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	19 kg
Fan size	500 mm
Rotor surface	Painted black
Terminal box material	PP plastic
Blade material	Sheet aluminum, painted black
Fan housing material	Sheet steel, pre-galvanized and coated with cement-gray plastic (RAL 7033)
Guard grille material	Steel, galvanized and coated with cement-gray plastic (RAL 7033)
Number of blades	5
Blade pitch	0°
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-2
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 top; rotor on bottom on request
Condensation drainage holes	On stator 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

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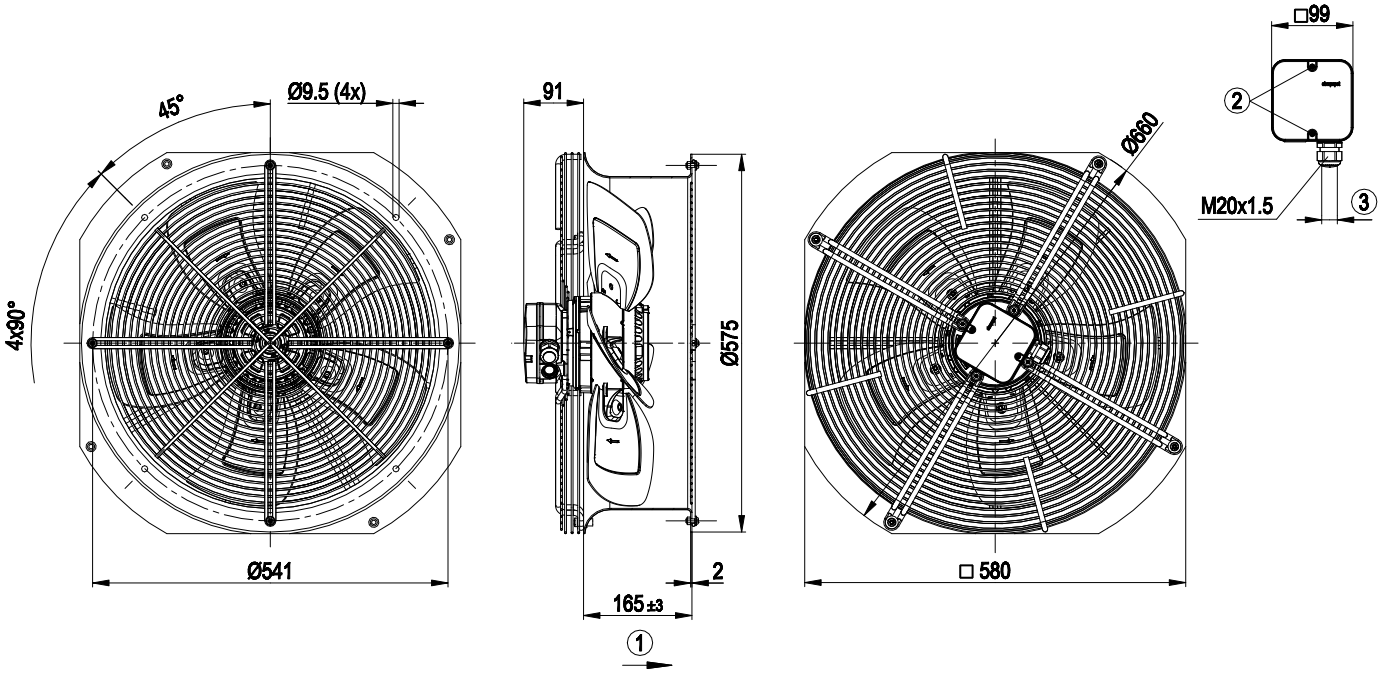
Product drawing



1	Direction of air flow "A"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 7 mm, max. 14 mm; tightening torque 2±0.3 Nm

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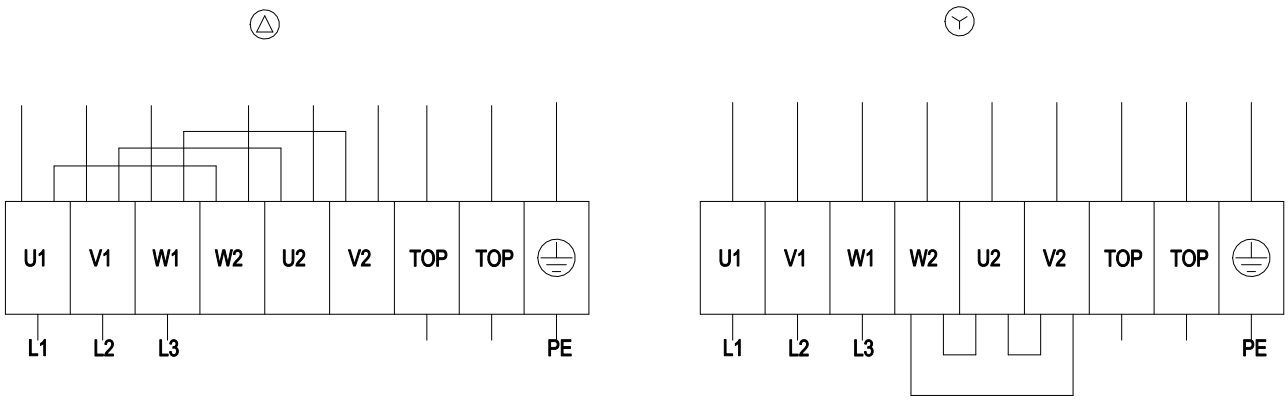
Connection diagram



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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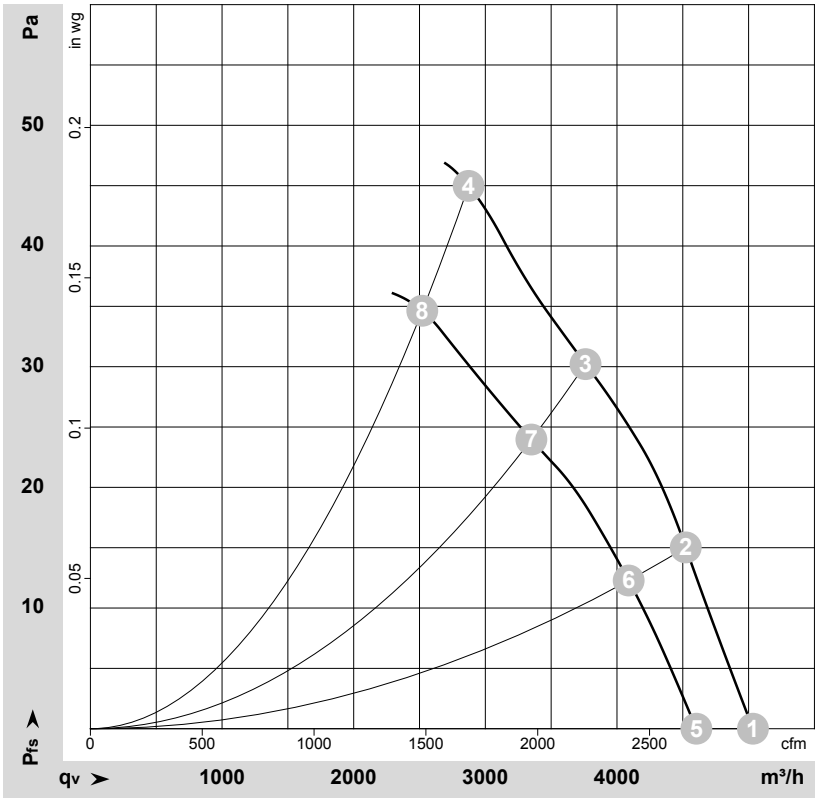
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-102524-1
Measurement: LU-102526-1

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	400	50	715	178	0.62	57	63	63	5035	0	2960	0.00
2	Δ	400	50	715	187	0.61	58	64	63	4525	15	2660	0.06
3	Δ	400	50	710	196	0.61	56	63	62	3760	30	2215	0.12
4	Δ	400	50	700	210	0.61	58	65	64	2875	45	1690	0.18
5	Y	400	50	655	100	0.22	55	61	61	4605	0	2710	0.00
6	Y	400	50	640	107	0.23	56	62	61	4090	12	2405	0.05
7	Y	400	50	630	115	0.24	53	60	59	3350	24	1970	0.10
8	Y	400	50	615	120	0.25	54	61	61	2520	35	1485	0.14

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

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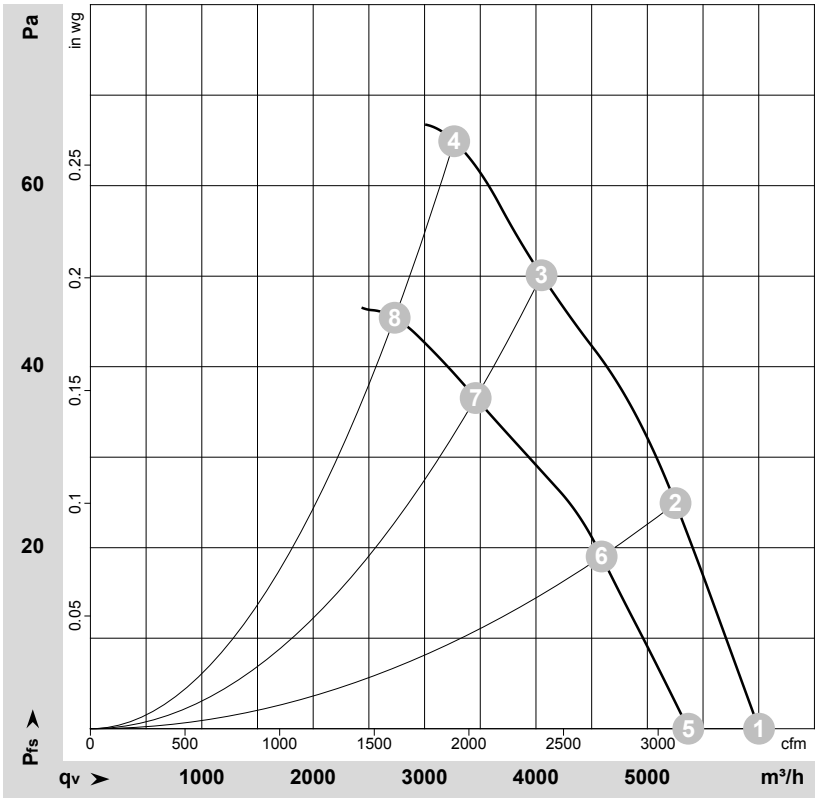
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-102527-1
Measurement: LU-102528-1

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	855	243	0.63	61	67	66	6005	0	3535	0.00
2	Δ	480	60	845	263	0.62	61	68	67	5255	25	3090	0.10
3	Δ	480	60	840	279	0.63	60	67	66	4050	50	2385	0.20
4	Δ	480	60	830	300	0.65	63	69	69	3265	65	1920	0.26
5	Y	480	60	760	151	0.26	58	64	64	5370	0	3160	0.00
6	Y	480	60	740	167	0.27	58	65	64	4590	19	2700	0.08
7	Y	480	60	715	180	0.29	56	63	62	3460	37	2035	0.15
8	Y	480	60	700	190	0.30	58	65	65	2730	46	1610	0.18

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