

# AC axial fan

sickle-shaped blades (S series)

with round full nozzle

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## Nominal data

Type	W2D250-CH02-01				
Motor	M2D068-CC				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400
Wiring		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Method of obtaining data		fa	fa	fa	fa
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min <sup>-1</sup>	2450	2550	2450	2550
Power consumption	W	115	150	115	150
Current draw	A	0.34	0.41	0.20	0.24
Max. back pressure	Pa	150	150	150	150
Max. back pressure	inH <sub>2</sub> O	0.6	0.6	0.6	0.6
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	65	45	65	45
Starting current	A	0.82	0.77	0.47	0.44

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



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## Technical description

<b>Weight</b>	2.1 kg
<b>Fan size</b>	250 mm
<b>Rotor surface</b>	Painted black
<b>Blade material</b>	Sheet steel, painted black
<b>Fan housing material</b>	Sheet steel, pre-galvanized and coated with black plastic
<b>Guard grille material</b>	Steel, phosphated and coated with black plastic
<b>Number of blades</b>	7
<b>Airflow direction</b>	"V"
<b>Direction of rotation</b>	Counterclockwise, viewed toward rotor
<b>Degree of protection</b>	IP44
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	F5
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	< 0.75 mA
<b>With cable</b>	Lateral
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60335-1; CE
<b>Approval</b>	EAC

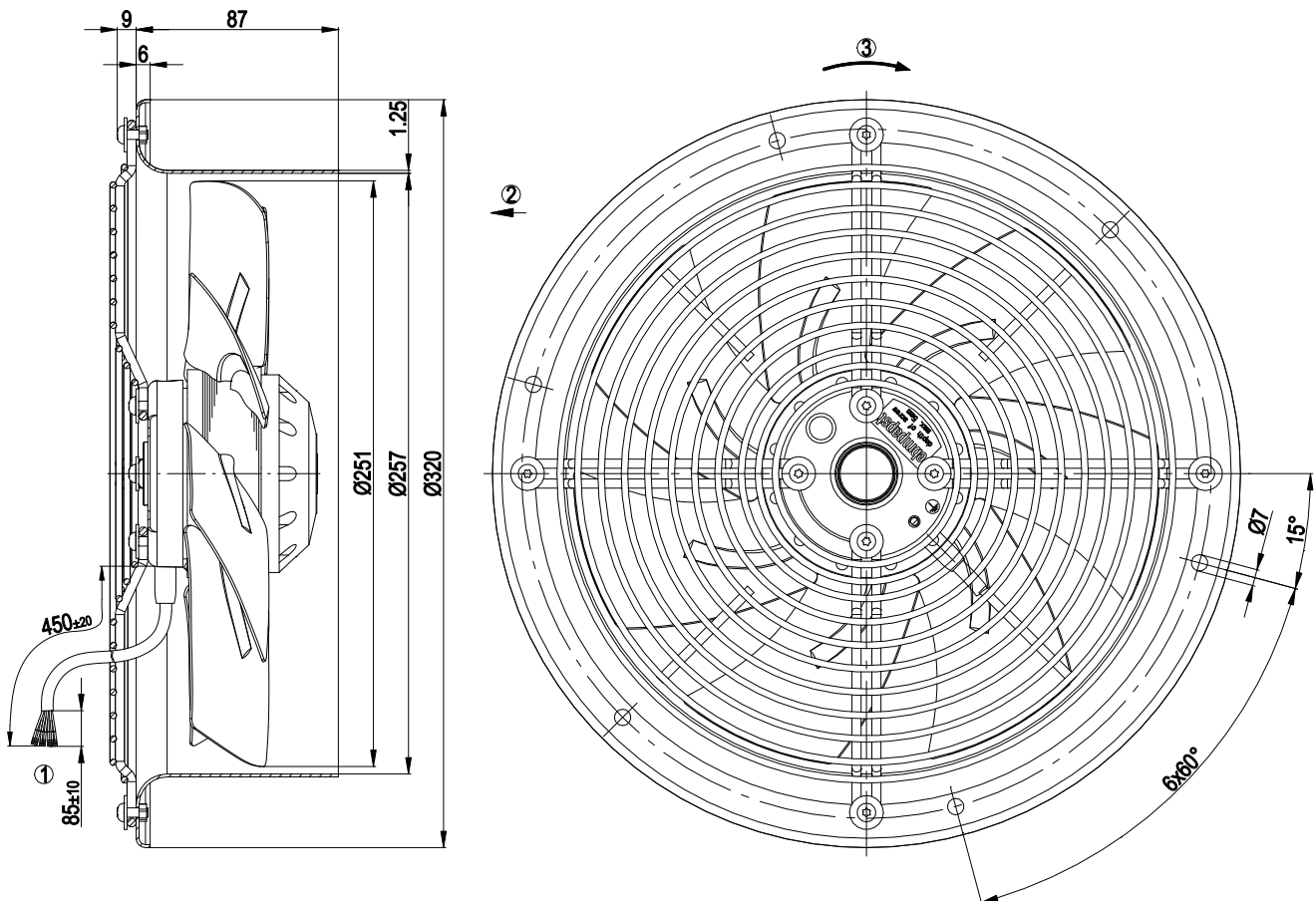


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## Product drawing



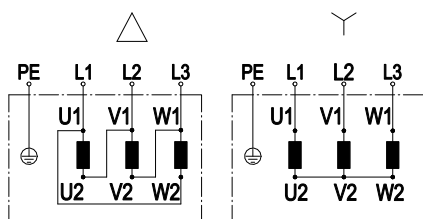
1	Cable PVC, 7x crimped splices
2	Direction of air flow "V"
3	Direction of rotation counterclockwise, viewed toward rotor

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## Connection diagram



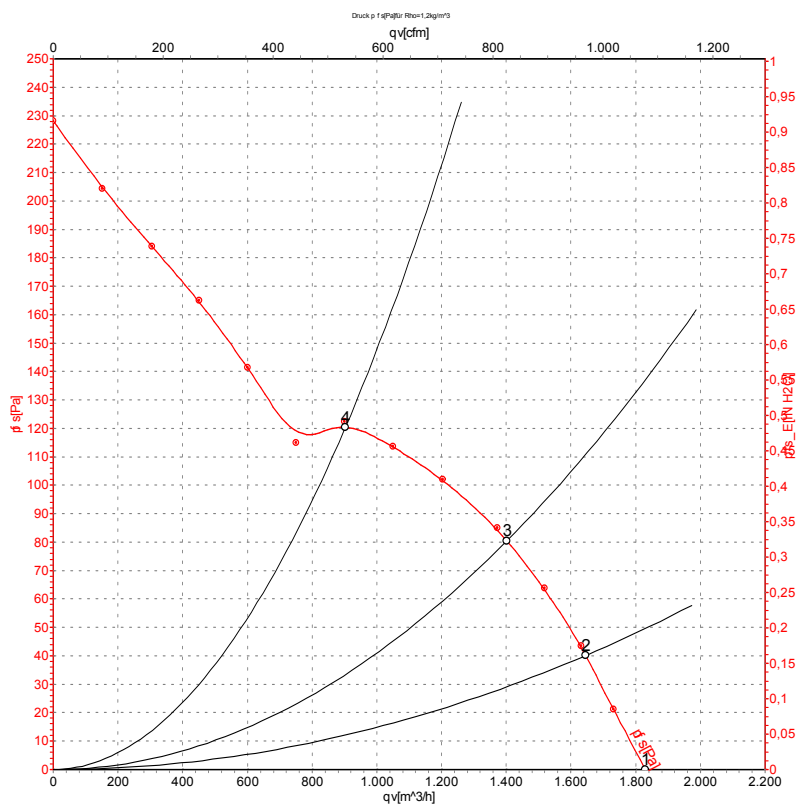
Change of rotation direction by reversing two phases

	Three-phase motor	Δ	Delta connection	Y	Star connection
L1	= U1 = black	L2	= V1 = blue	L3	= W1 = brown
U2	green	V2	white	W2	yellow
PE	green/yellow				

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## Curves: Air performance 50 Hz



Measurement: LU-59965-1

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

	U	f	n	P <sub>e</sub>	I	qv	p <sub>fs</sub>	qv	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m³/h	Pa	CFM	inH <sub>2</sub> O
1	400	50	2500	100	0.20	1830	0	1075	0.00
2	400	50	2425	111	0.21	1645	40	970	0.16
3	400	50	2360	120	0.21	1400	80	825	0.32
4	400	50	2310	127	0.22	905	122	530	0.49

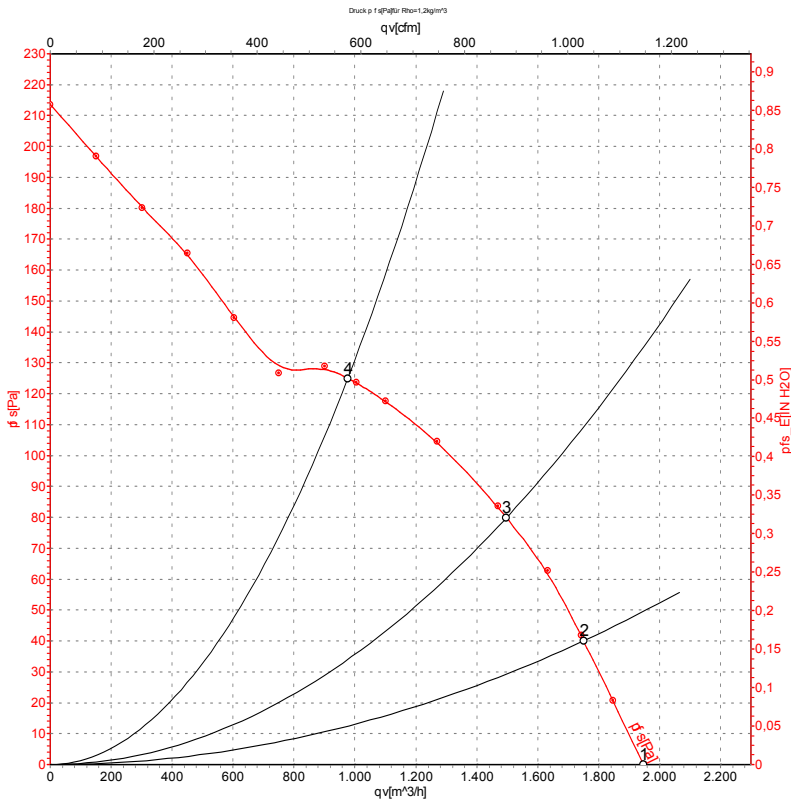
U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase



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## Curves: Air performance 60 Hz



Measurement: LU-59966-1

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

	U	f	n	P <sub>e</sub>	I	qv	p <sub>fs</sub>	qv	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	CFM	inH <sub>2</sub> O
1	400	60	2650	140	0.23	1950	0	1150	0.00
2	400	60	2545	148	0.24	1750	40	1030	0.16
3	400	60	2450	158	0.25	1495	80	880	0.32
4	400	60	2350	166	0.26	975	125	575	0.50

U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase

