W2D250-HH14-09

AC axial compact fan

sickle-shaped blades (S series)



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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**W2D250-HH14-09**
Motor	**M2D068-CC**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	460	460
Wiring		Y	Y	Y	Y
Frequency	Hz	50	60	60	60
Method of obtaining data		fa	fa	fa	fa
Valid for approval/standard		CE	CE	CE	UL 2111
Speed (rpm)	min^{-1}	2465	2580	2800	2800
Power consumption	W	110	145	165	175
Current draw	A	0.2	0.23	0.23	0.24
Max. back pressure	Pa	95	95	120	120
Max. back pressure	inH2O	0.38	0.38	0.48	0.48
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	85	60	60	60

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

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Technical description

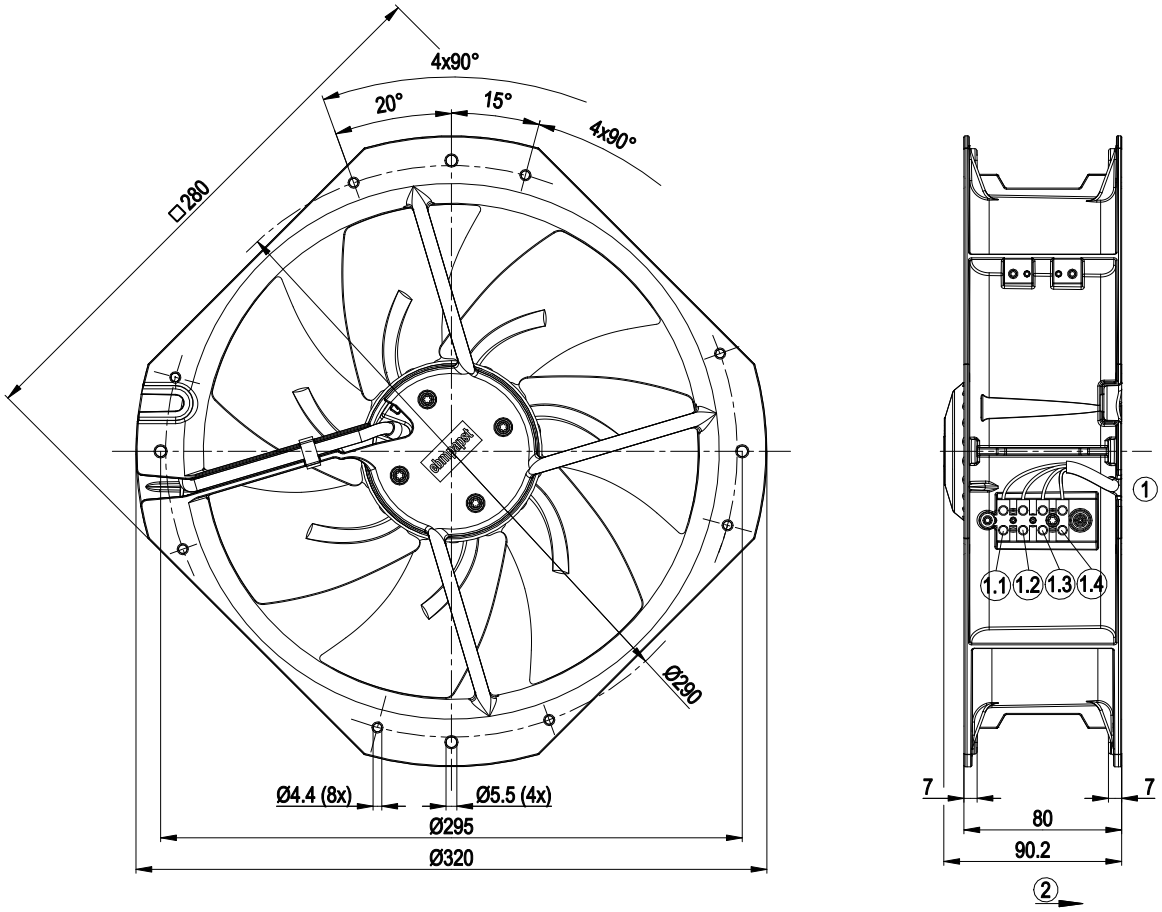
Weight	2.6 kg
Fan size	250 mm
Rotor surface	Painted black
Blade material	Sheet steel, painted black
Fan housing material	Die-cast aluminum
Number of blades	7
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F5
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	UL 1004-1; CSA C22.2 No. 100; CCC

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Product drawing



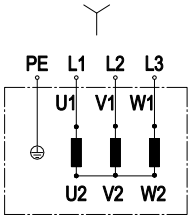
1	Cable PFA AWG20, 4x crimped splices
1.1	PE (green/yellow)
1.2	L1=U1 (black)
1.3	L2=V1 (blue)
1.4	L3=W1 (brown)
2	Direction of air flow "V"

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Connection diagram



Change of rotation direction by reversing two phases

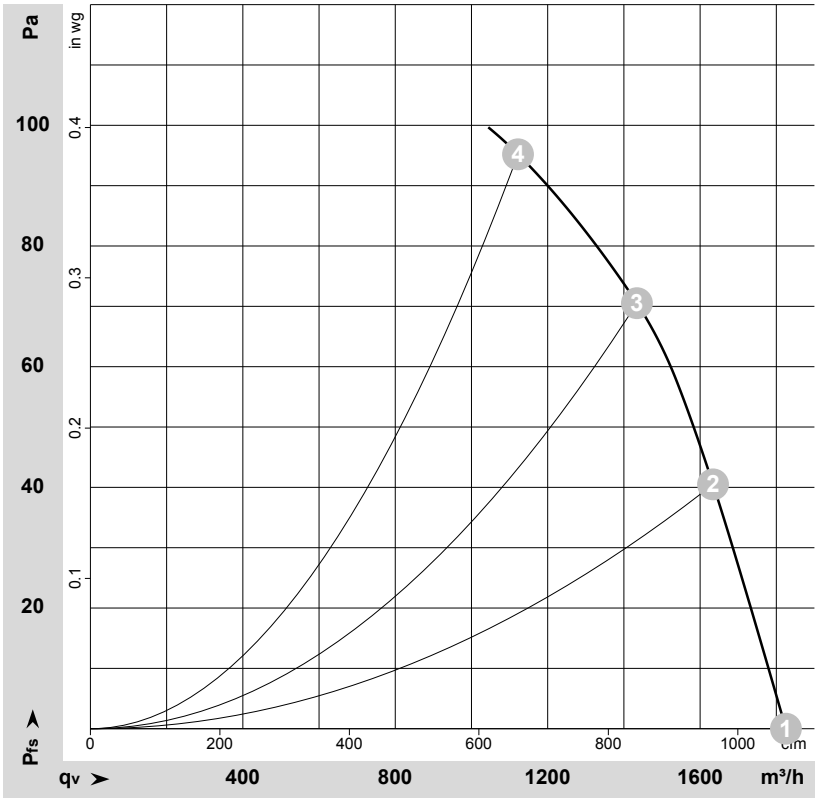
	Three-phase motor	Y	Star connection	L1	black
L2	blue	L3	brown	PE	green/yellow

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-113550-1

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_e	I	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	400	50	2465	110	0.20	1825	0	1075	0.00
2	400	50	2395	117	0.21	1635	40	960	0.16
3	400	50	2345	124	0.22	1435	70	845	0.28
4	400	50	2295	132	0.22	1120	95	660	0.38

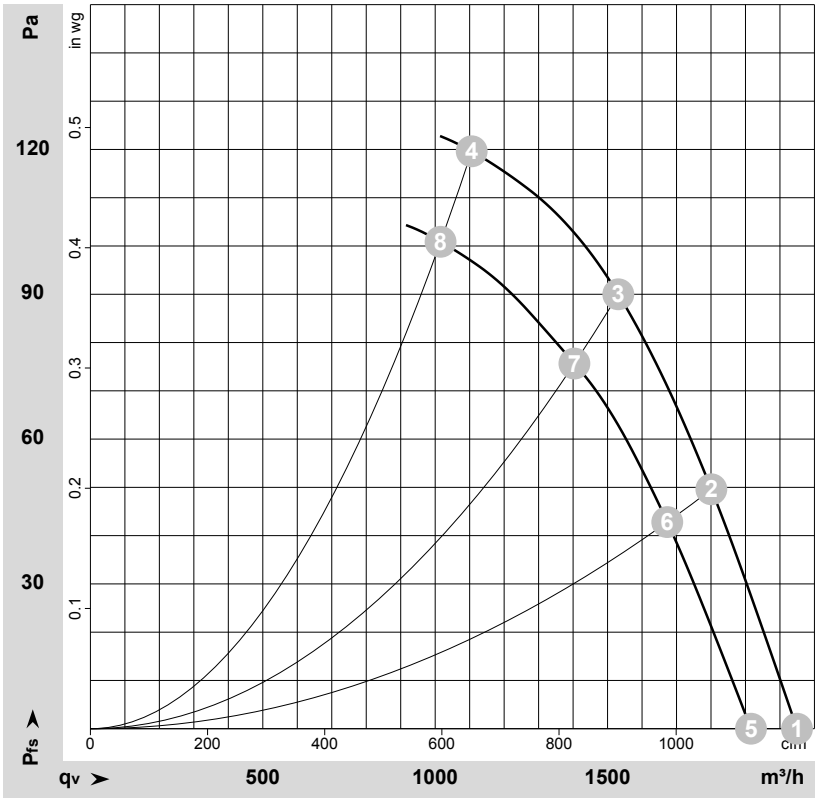
U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-113559-1
Measurement: LU-113558-1

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_e	I	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	460	60	2800	165	0.23	2050	0	1205	0.00
2	460	60	2645	175	0.25	1800	50	1060	0.20
3	460	60	2560	186	0.26	1530	90	900	0.36
4	460	60	2470	197	0.28	1105	120	650	0.48
5	400	60	2580	145	0.23	1915	0	1130	0.00
6	400	60	2460	154	0.25	1675	43	985	0.17
7	400	60	2360	162	0.26	1405	76	825	0.31
8	400	60	2265	170	0.27	1015	100	600	0.40

U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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