W2D250-HJ02-09

AC axial compact fan

sickled blades (S series), single inlet

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W2D250-HJ02-09**
Motor	**M2D068-DC**

Phase		3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	460	460
Connection		Y	Y	Y	Y	Y
Frequency	Hz	50	60	60	60	60
Type of data definition		fa	fa	fa	fa	fa
Valid for approval / standard		CE	CE	UL 2111	CE	UL 2111
Speed	min^{-1}	2660	2920	2920	3050	3050
Power input	W	115	165	165	180	190
Current draw	A	0.23	0.27	0.27	0.28	0.29
Max. back pressure	Pa	155	175	175	195	195
Min. ambient temperature	°C	-25	-25	-25	-25	-25
Max. ambient temperature	°C	65	45	45	45	45

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	28.4	24.3	28.3
Efficiency grade N		40.1	36	40
Power input P_e	kW	0.14		
Air flow q_v	m^3/h	1450		
Pressure increase p_{fs}	Pa	100		
Speed n	min^{-1}	2530		

Data definition with optimum efficiency. LU-51572
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

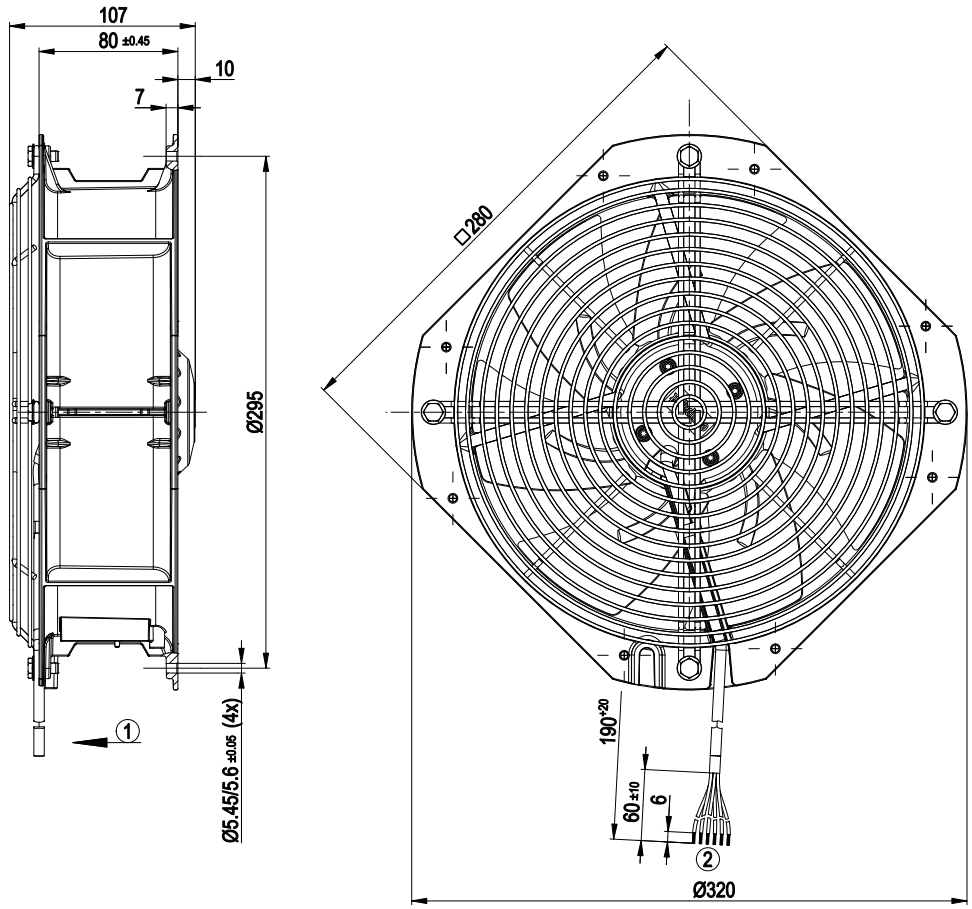
Mass	3.4 kg
Size	250 mm
Surface of rotor	Coated in black
Material of blades	Sheet steel, coated in black
Material of wall ring	Die-cast aluminium
Material of guard grille	Steel, coated in white aluminium plastic (RAL 9006)
Number of blades	7
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"B"
Humidity class	F2-2
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	CSA C22.2 Nr.100; UL 1004-1

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Product drawing



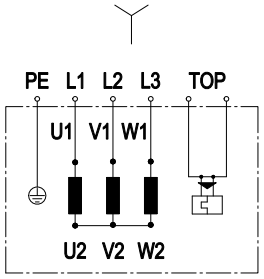
1	Direction of air flow "V"
2	Connection line PFA AWG20, 6x lead tips crimped

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Connection screen



Note: Direction of rotation changes when two phases are reversed

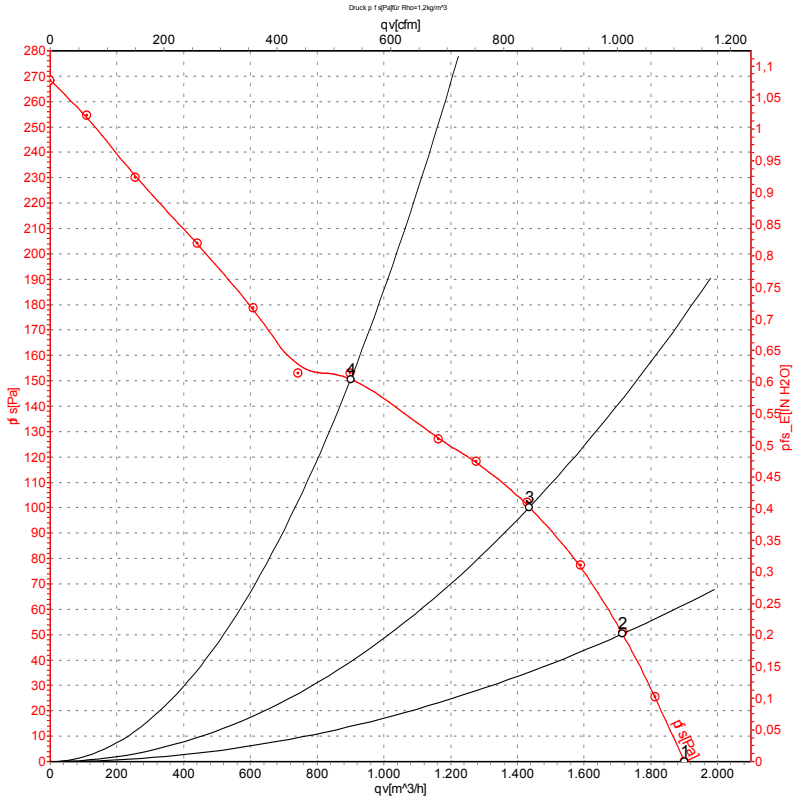
Y	Star connection	L1	= U1 = black	L2	= V1 = blue
L3	= W1 = brown	PE	green/yellow	TOP	2x grey

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Charts: Air flow 50 Hz



Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	400	50	2660	115	0.23	1900	0
2	400	50	2610	129	0.25	1715	50
3	400	50	2545	146	0.27	1435	100
4	400	50	2470	164	0.29	900	150

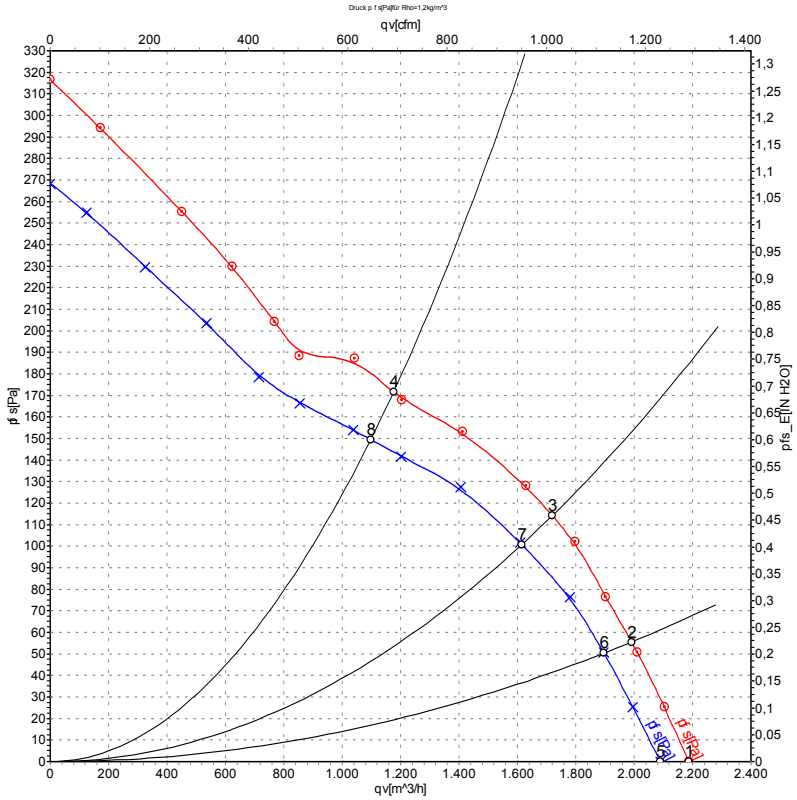
U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	460	60	3050	180	0.28	2185	0
2	460	60	2985	198	0.29	1990	56
3	460	60	2900	220	0.32	1720	114
4	460	60	2785	248	0.35	1175	170
5	400	60	2920	165	0.27	2090	0
6	400	60	2835	182	0.29	1895	50
7	400	60	2730	200	0.32	1615	100
8	400	60	2610	221	0.35	1095	150

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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