D2E146-CD81-24

AC centrifugal fan

forward-curved, dual-intake

with housing (without flange)

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Nominal data

Type	**D2E146-CD81-24**	
Motor	**M2E068-DF**	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Method of obtaining data		ml
Valid for approval/standard		-
Speed (rpm)	min^{-1}	2150
Power consumption	W	210
Current draw	A	0.93
Capacitor	µF	4
Capacitor voltage	VDB	400
Capacitor standard		S2 (CE)
Min. back pressure	Pa	300
Min. back pressure	inH2O	1.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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	4.2 kg
Fan size	146 mm
Rotor surface	Unpainted
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Guard grille material	PA plastic
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
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
Speed levels	5
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1

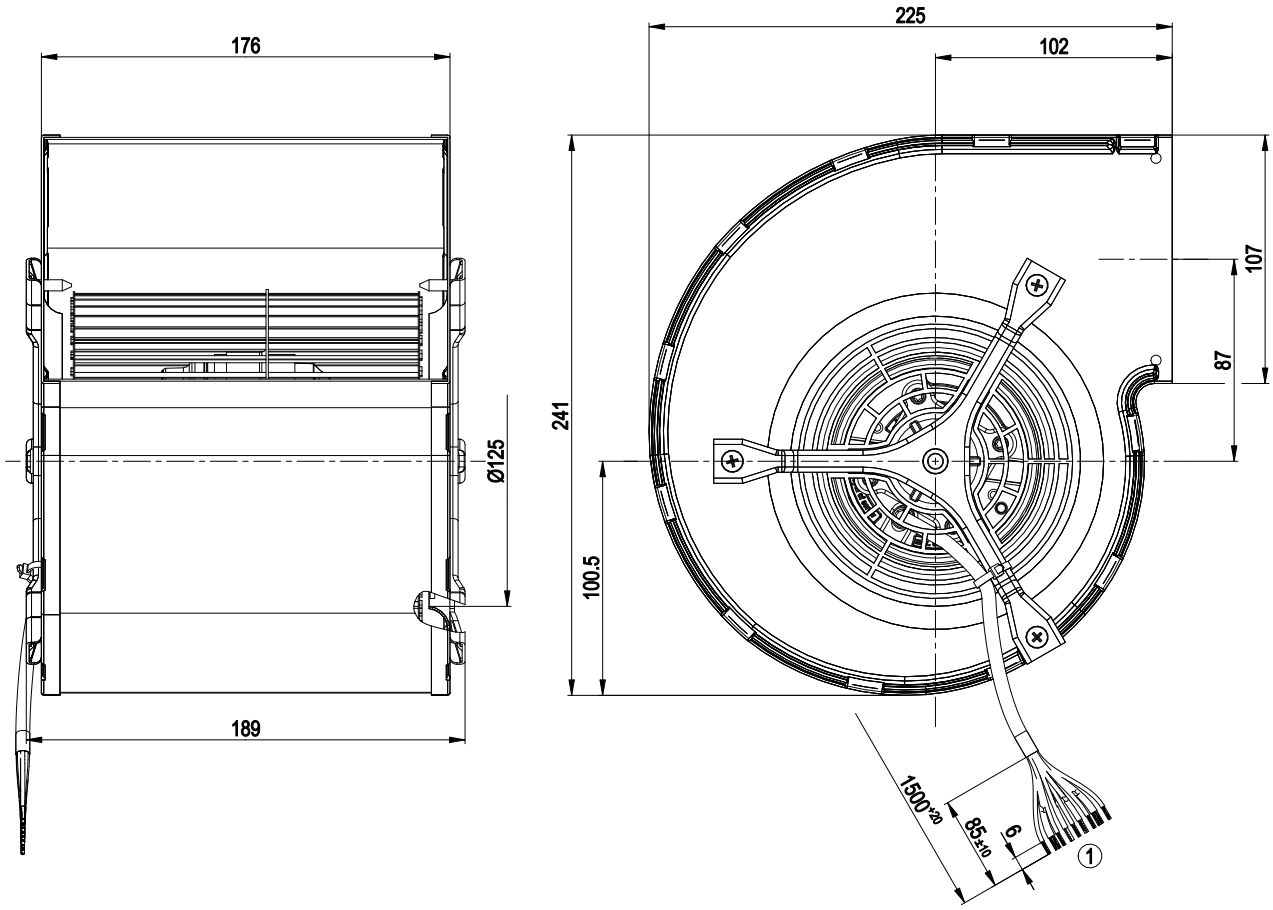
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Product drawing



1	Cable halogen-silicone-free 9G 0.5 mm², 9x crimped splices

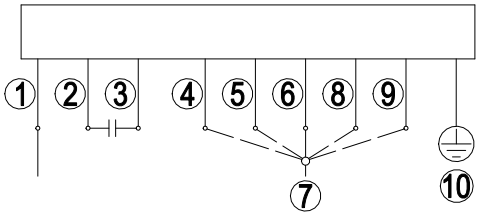
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Connection diagram



Note: High speed (step IV); low speed (step I)

1	= N = blue
2	brown
3	yellow
4	Step I black 1 / white
5	Step II black 2 / red
6	Step III black 3 / gray
7	L1
8	Step IV black 4 / orange
9	Step V black 5 / black
10	PE (green/yellow)

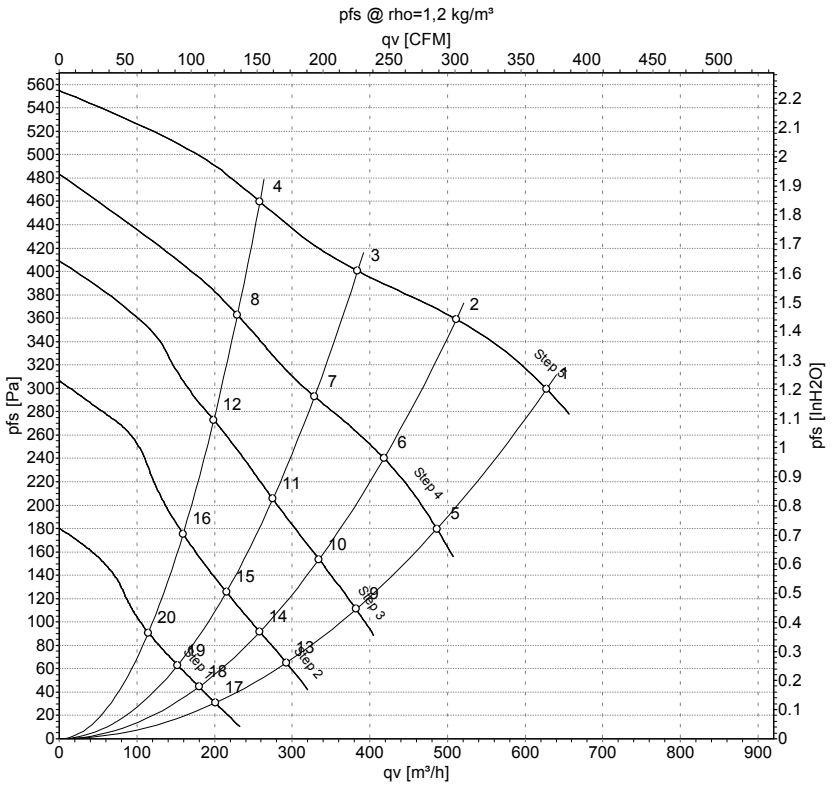
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Curves: Air performance 50 Hz



Measurement: LU-27808-1
Measurement: LU-27809-1
Measurement: LU-27810-1
Measurement: LU-27811-1
Measurement: LU-27812-1

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

	Stage	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	5	230	50	2150	210	0.93	625	300	370	1.20
2	5	230	50	2280	191	0.84	510	360	300	1.45
3	5	230	50	2415	173	0.77	385	400	225	1.61
4	5	230	50	2510	159	0.71	260	460	150	1.85
5	4	230	50	1655	179	0.78	485	181	285	0.73
6	4	230	50	1885	167	0.72	420	240	245	0.96
7	4	230	50	2080	154	0.67	330	293	195	1.18
8	4	230	50	2235	142	0.62	230	364	135	1.46
9	3	230	50	1320	157	0.69	380	112	225	0.45
10	3	230	50	1535	150	0.66	335	154	195	0.62
11	3	230	50	1775	141	0.62	275	205	160	0.82
12	3	230	50	1945	133	0.59	200	273	115	1.10
13	2	230	50	1010	137	0.60	295	65	170	0.26
14	2	230	50	1185	134	0.59	260	91	150	0.37
15	2	230	50	1370	130	0.57	215	126	125	0.51
16	2	230	50	1565	125	0.55	160	175	95	0.70
17	1	230	50	705	117	0.51	200	30	120	0.12
18	1	230	50	840	115	0.51	180	44	105	0.18
19	1	230	50	970	114	0.50	150	63	90	0.25
20	1	230	50	1115	112	0.49	115	90	70	0.36

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

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