D2E146-HR93-01

AC centrifugal fan

forward curved, dual inlet



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Nominal data

Type	**D2E146-HR93-01**
Motor	**M2E068-CF**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		fa	ml
Valid for approval / standard		CE	CE
Speed	min^{-1}	1050	1750
Power input	W	150	165
Current draw	A	0.66	0.73
Motor capacitor	µF	4	4
Capacitor voltage	VDB	400	400
Capacitor standard		P2 (CE)	P2 (CE)
Min. back pressure	Pa	0	220
Min. ambient temperature	°C	-20	-20
Max. ambient temperature	°C	50	50

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

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Technical features

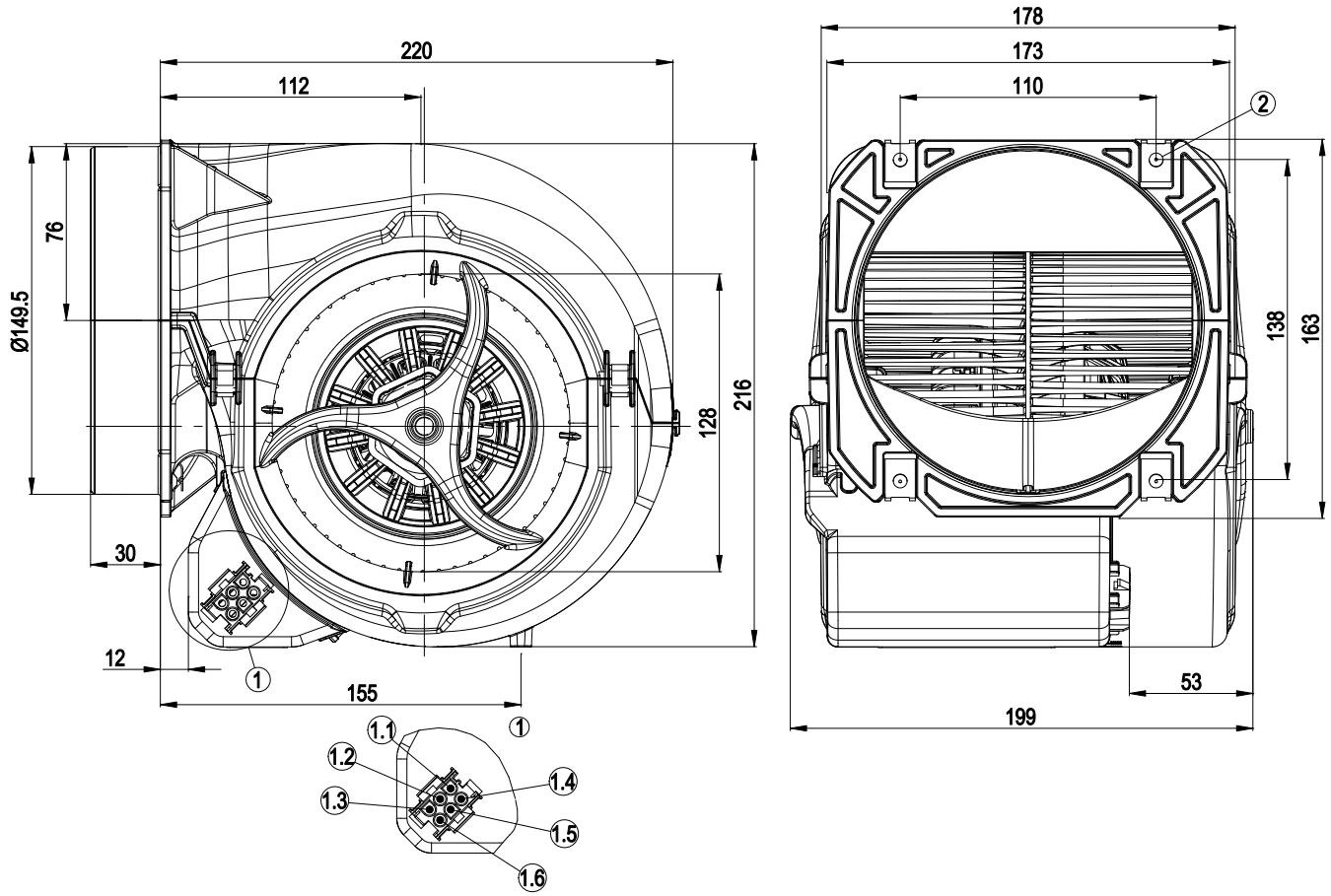
Mass	2.5 kg
Size	146 mm
Surface of rotor	Partially cast in aluminium
Material of impeller	PP plastic
Housing material	PP plastic
Motor suspension	Motor anti-vibration mounted on both sides
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"F"
Humidity class	F0
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Calotte bearing
Speed steps	4
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Electrical leads	With plug; Via terminal box, integrated capacitor connected via terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-2-31; CE
Approval	GOST; CCC; VDE

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Product drawing



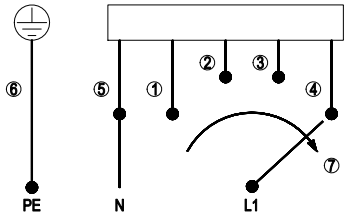
1	AMP Universal Mate-N-Lok coded plug system; connector shell: AMP 926 682-3; 6x plug pin: AMP 926 886-1
1.1	L = stage 1
1.2	L = step 2
1.3	L = stage 3
1.4	L = stage 4
1.5	N
1.6	Protective earth
2	4 x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus thickness of mounting material)

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Connection screen



When changing speeds, switch must break the circuit

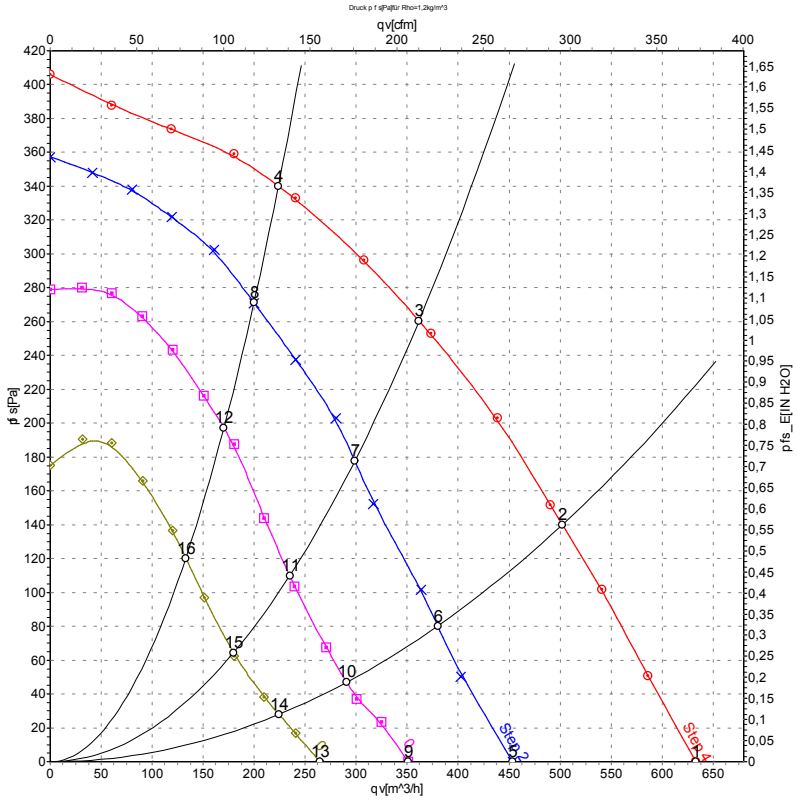
1	Step 1 (min.)	2	Step 2	3	Step 3
4	Step 4 (max.)	5	N	6	PE protective earth
7	Speed increase				

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Charts: Air flow 50 Hz



Measurement: LU-72081
Measurement: LU-72083
Measurement: LU-72085
Measurement: LU-72098

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

	Stage	U	f	n	P_e	I	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa
1	4	230	50	1100	150	0.66	635	0
2	4	230	50	1615	141	0.62	500	140
3	4	230	50	2035	132	0.58	360	260
4	4	230	50	2330	124	0.55	225	340
5	3	230	50	805	100	0.49	455	0
6	3	230	50	1225	97	0.48	380	80
7	3	230	50	1675	91	0.47	300	178
8	3	230	50	2105	81	0.45	200	271
9	2	230	50	640	83	0.43	350	0
10	2	230	50	980	80	0.42	290	47
11	2	230	50	1355	77	0.41	235	110
12	2	230	50	1785	71	0.40	170	197
13	1	230	50	505	70	0.38	265	0
14	1	230	50	750	69	0.38	225	28
15	1	230	50	1015	67	0.37	180	63
16	1	230	50	1405	64	0.36	135	120

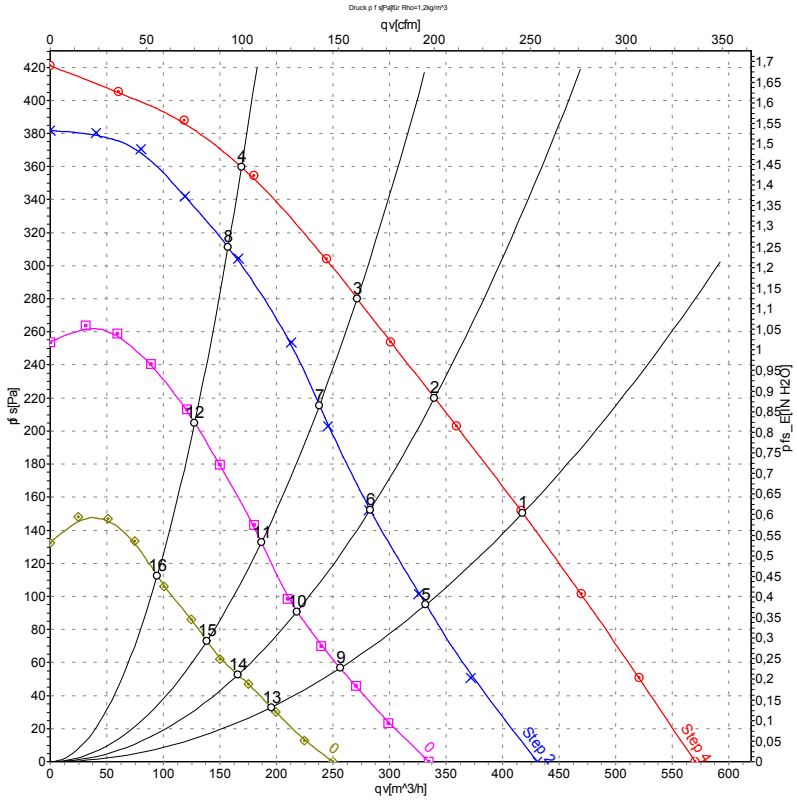
U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



Measurement: LU-72082
Measurement: LU-72084
Measurement: LU-72086
Measurement: LU-72099

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

	Stage	U	f	n	P_e	I	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa
1	4	230	60	1600	160	0.71	420	150
2	4	230	60	1865	159	0.69	340	220
3	4	230	60	2130	157	0.69	270	280
4	4	230	60	2390	155	0.68	170	360
5	3	230	60	1280	107	0.56	330	95
6	3	230	60	1570	105	0.56	285	151
7	3	230	60	1870	103	0.56	240	215
8	3	230	60	2225	98	0.55	155	312
9	2	230	60	1005	84	0.48	255	57
10	2	230	60	1225	83	0.48	220	90
11	2	230	60	1470	81	0.48	185	133
12	2	230	60	1825	79	0.48	130	205
13	1	230	60	770	69	0.42	195	33
14	1	230	60	925	69	0.42	165	53
15	1	230	60	1105	68	0.42	140	73
16	1	230	60	1370	67	0.42	95	112

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