D2E146-HS97-03

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

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General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**D2E146-HS97-03**
Motor	**M2E068-DF**

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 (rpm)	min^{-1}	1350	1750
Power input	W	195	215
Current draw	A	0.86	0.94
Motor capacitor	µF	5	5
Capacitor voltage	VDB	400	400
Capacitor standard		S2 (CE)	S2 (CE)
Min. back pressure	Pa	0	150
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	45	40

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	3 kg
Size	146 mm
Surface of rotor	Partially cast in aluminium
Material of terminal box	PP plastic, black
Material of impeller	PP plastic, white
Housing material	PP plastic, black
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 (F)/environmental protection class (H)	H0 - dry environment
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, open rotor
Operation mode	S1
Motor bearing	Ball 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)
Motor capacitor according to EN 60252-1 in safety protection class	S2
Product conforming to standard	EN 60335-2-31; CE
Approval	CCC; VDE; EAC

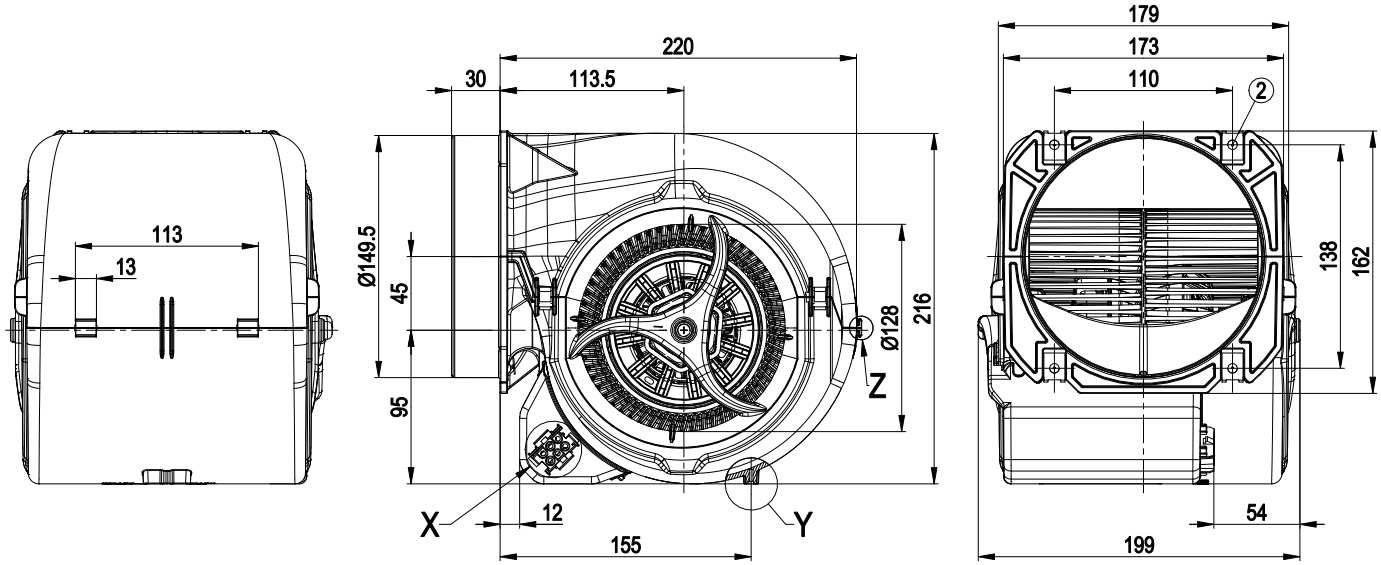
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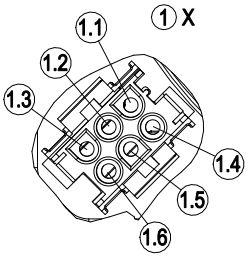
AC centrifugal fan

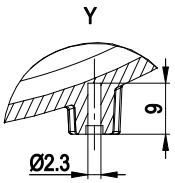
forward curved, dual inlet

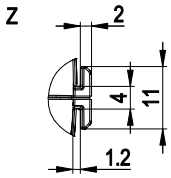
with housing (flange)

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)

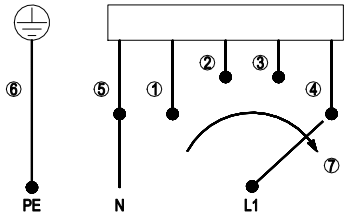
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Connection screen



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				

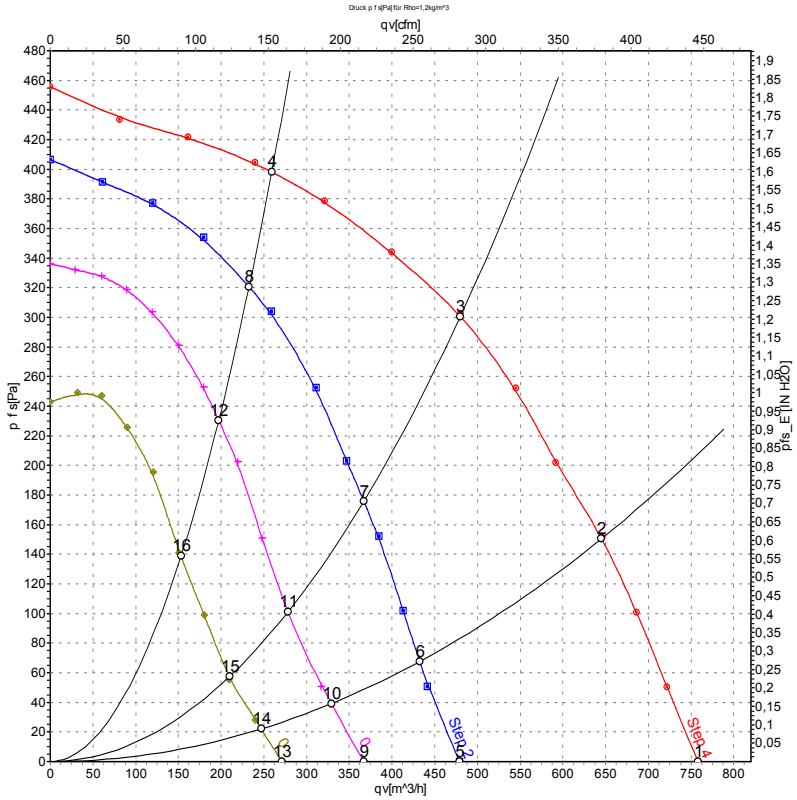
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Charts: Air flow 50 Hz



Measurement: LU-72087-1
Measurement: LU-72089-1
Measurement: LU-72091-1
Measurement: LU-72094-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	4	230	50	1350	195	0.86	53	65	760	0	445	0.00
2	4	230	50	1795	185	0.81	53	65	645	150	380	0.60
3	4	230	50	2200	169	0.75	55	67	480	300	285	1.20
4	4	230	50	2520	146	0.65	58	70	260	400	150	1.61
5	3	230	50	875	128	0.61	42	54	480	0	280	0.00
6	3	230	50	1215	125	0.60	43	55	430	67	255	0.27
7	3	230	50	1680	116	0.58	49	61	365	176	215	0.71
8	3	230	50	2255	94	0.52	56	68	235	321	135	1.29
9	2	230	50	660	109	0.53	35	46	365	0	215	0.00
10	2	230	50	915	106	0.52	36	48	330	38	195	0.15
11	2	230	50	1280	102	0.51	43	54	280	100	165	0.40
12	2	230	50	1920	88	0.48	52	64	195	230	115	0.92
13	1	230	50	510	95	0.47	27	39	270	0	160	0.00
14	1	230	50	715	94	0.47	28	40	245	22	145	0.09
15	1	230	50	960	92	0.46	34	46	210	55	125	0.22
16	1	230	50	1515	85	0.44	46	58	155	138	90	0.55

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow
p_{fs} = Pressure increase

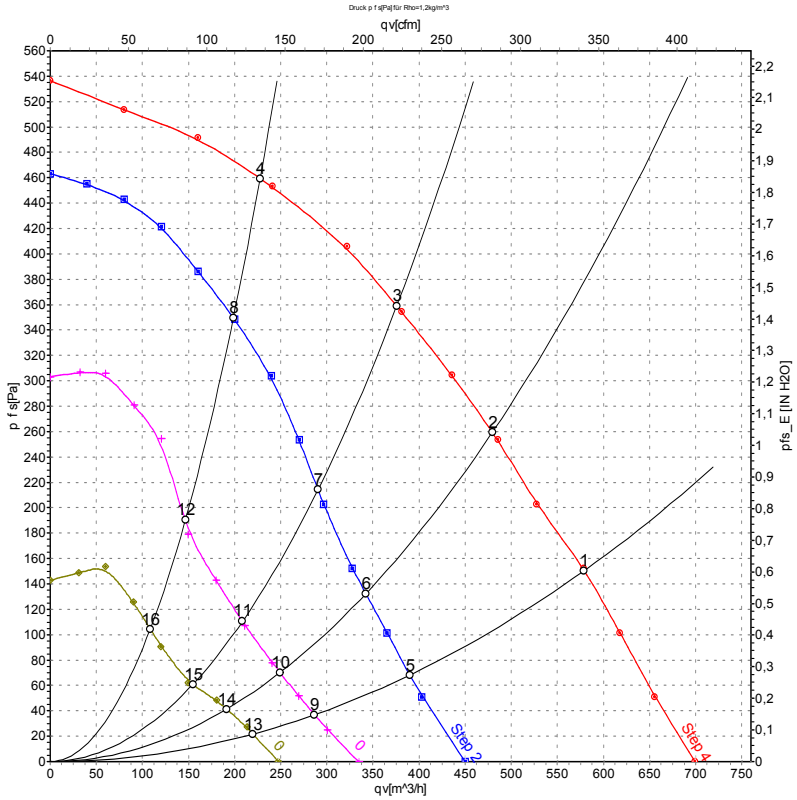
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Charts: Air flow 60 Hz



Measurement: LU-72088-1
Measurement: LU-72090-1
Measurement: LU-72092-1
Measurement: LU-72095-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	4	230	60	1750	215	0.94	580	150	340	0.60
2	4	230	60	2060	212	0.93	480	260	280	1.04
3	4	230	60	2380	208	0.91	375	360	220	1.45
4	4	230	60	2710	201	0.89	230	460	135	1.85
5	3	230	60	1175	131	0.67	390	68	230	0.27
6	3	230	60	1485	129	0.67	340	132	200	0.53
7	3	230	60	1855	125	0.66	290	214	170	0.86
8	3	230	60	2365	114	0.65	200	350	115	1.41
9	2	230	60	890	106	0.57	285	37	170	0.15
10	2	230	60	1100	105	0.57	250	70	145	0.28
11	2	230	60	1365	104	0.57	210	110	120	0.44
12	2	230	60	1835	99	0.56	145	187	85	0.75
13	1	230	60	665	92	0.50	220	22	130	0.09
14	1	230	60	820	91	0.50	190	41	115	0.16
15	1	230	60	1010	90	0.50	155	60	90	0.24
16	1	230	60	1325	88	0.50	110	104	65	0.42

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

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