D2E146-HT77-97

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)



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Nominal data

Type	**D2E146-HT77-97**
Motor	**M2E068-EC**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		fa	ml
Valid for approval/standard		-	-
Speed (rpm)	min^{-1}	1950	2050
Power consumption	W	345	400
Current draw	A	1.52	1.75
Capacitor	µF	8	8
Capacitor voltage	VDB	450	450
Capacitor standard		P2 (CE)	P2 (CE)
Min. back pressure	Pa	0	100
Min. back pressure	inH2O	0	0.4
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	50	50
Starting current	A	1.8	1.9

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	3.8 kg
Fan size	146 mm
Rotor surface	Unpainted
Terminal box material	PP plastic
Impeller material	Sheet steel, galvanized
Housing material	PP plastic
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP20; installation- and position-dependent as per EN 60034-5
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	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Calotte bearing
Speed levels	4
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Electrical hookup	Via terminal box, capacitor integrated and connected; With plug
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1
Approval	VDE

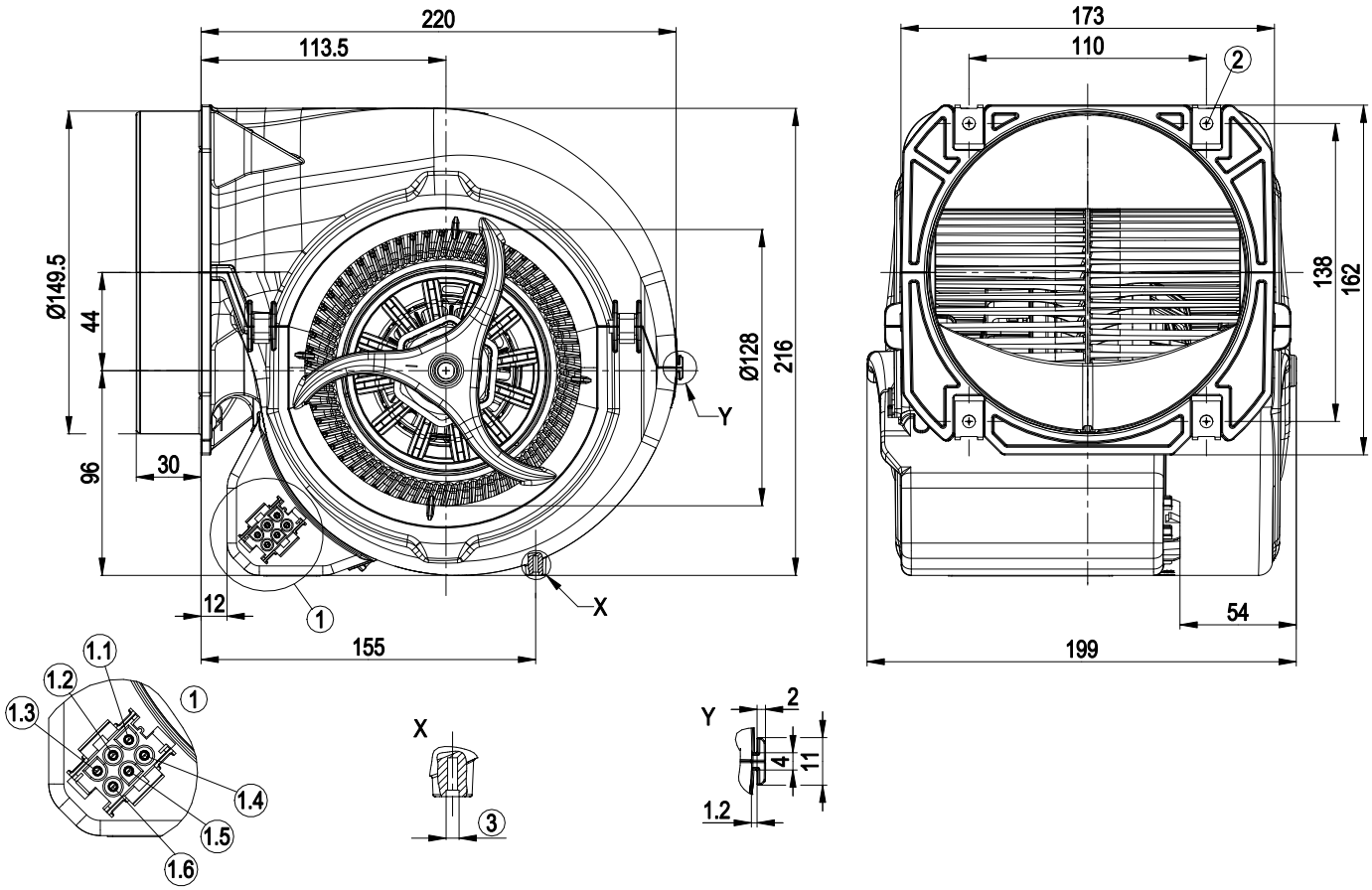
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Product drawing



1	Coded plug-in system AMP Universal Mate-N-Lok; Connector housing: AMP 926 682-3; 6x plug pin AMP 926 886-1
1.1	L = step 1
1.2	L = step 2
1.3	L = step 3
1.4	L = step 4
1.5	N
1.6	Protective earth
2	4x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus material thickness of mounting)
3	For M3 thread, max. clearance for screw 8 mm

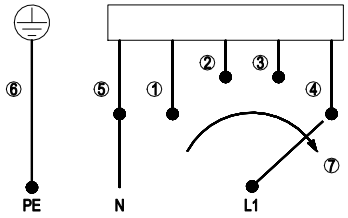
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Connection diagram



The switch must interrupt the circuit when switching.

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

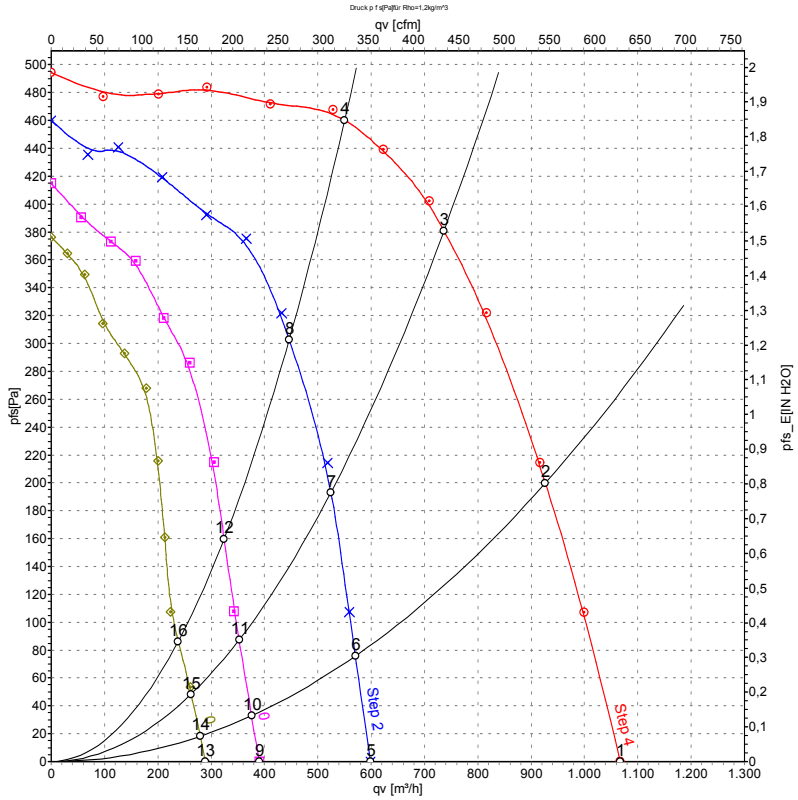
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Curves: Air performance 50 Hz



Measurement: LU-56691-1
Measurement: LU-56693-1
Measurement: LU-56695-1
Measurement: LU-56697-1

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	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	4	230	50	1950	345	1.52	1065	0	630	0.00
2	4	230	50	2215	312	1.36	925	200	545	0.80
3	4	230	50	2435	275	1.20	735	380	435	1.53
4	4	230	50	2580	245	1.07	550	460	325	1.85
5	3	230	50	1125	213	0.99	600	0	355	0.00
6	3	230	50	1380	205	0.96	570	76	335	0.31
7	3	230	50	1760	190	0.92	525	199	310	0.80
8	3	230	50	2110	166	0.85	445	305	265	1.22
9	2	230	50	770	175	0.82	390	0	230	0.00
10	2	230	50	920	172	0.81	375	33	220	0.13
11	2	230	50	1160	167	0.80	350	85	205	0.34
12	2	230	50	1510	157	0.76	325	160	190	0.64
13	1	230	50	575	159	0.75	290	0	170	0.00
14	1	230	50	700	157	0.74	280	18	165	0.07
15	1	230	50	920	153	0.73	260	51	155	0.20
16	1	230	50	1150	149	0.71	240	86	140	0.35

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

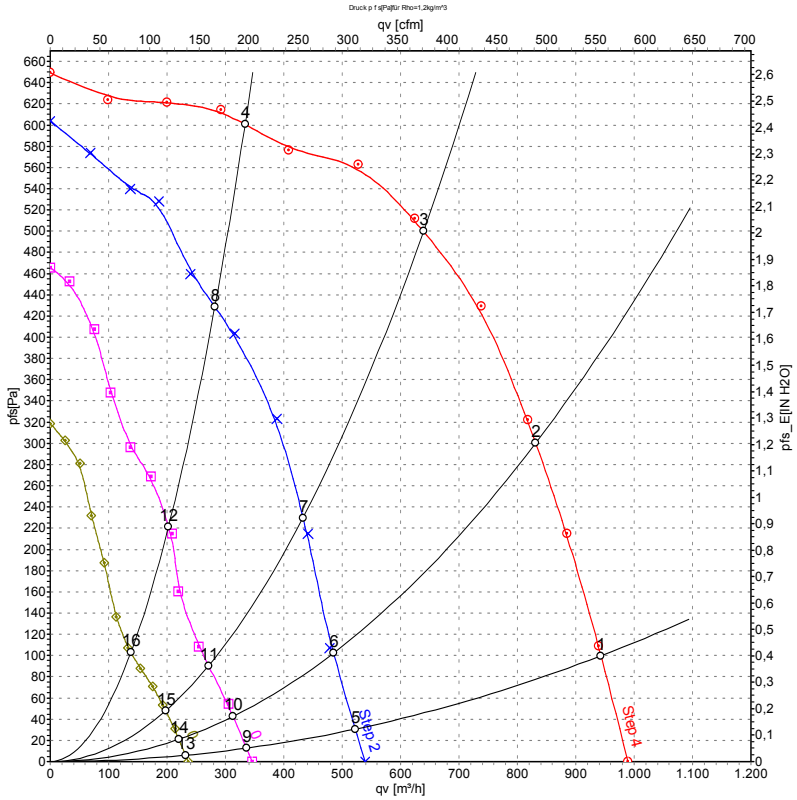
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Curves: Air performance 60 Hz



Measurement: LU-56692-1
Measurement: LU-56694-1
Measurement: LU-56696-1
Measurement: LU-56698-1

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	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	4	230	60	2050	400	1.75	945	100	555	0.40
2	4	230	60	2320	388	1.69	830	300	490	1.20
3	4	230	60	2700	368	1.61	640	500	375	2.01
4	4	230	60	3015	337	1.49	335	600	195	2.41
5	3	230	60	1140	213	1.06	520	30	305	0.12
6	3	230	60	1370	210	1.05	485	96	285	0.39
7	3	230	60	1830	200	1.03	435	232	255	0.93
8	3	230	60	2570	168	0.98	280	429	165	1.72
9	2	230	60	740	167	0.85	335	13	200	0.05
10	2	230	60	905	165	0.85	315	44	185	0.18
11	2	230	60	1160	162	0.84	270	90	160	0.36
12	2	230	60	1845	150	0.82	205	224	120	0.90
13	1	230	60	530	149	0.77	230	6	135	0.02
14	1	230	60	665	148	0.76	220	22	130	0.09
15	1	230	60	885	145	0.76	200	48	115	0.19
16	1	230	60	1290	141	0.75	140	103	80	0.41

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