D2E146-HT59-02

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**D2E146-HT59-02**
Motor	**M2E068-EC**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		fa	fa
Valid for approval/standard		CE	CE
Speed	min^{-1}	1600	1500
Power consumption	W	290	320
Current draw	A	1.28	1.4
Capacitor	µF	6	6
Capacitor voltage	VDB	400	400
Capacitor standard		P2 (CE)	P2 (CE)
Min. back pressure	Pa	0	0
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	50	40
Starting current	A	1.48	1.5

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	33.3	33.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		44	44
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.2
09 Air flow q_v	m^3/h	630
09 Pressure increase p_{fs}	Pa	379
10 Speed n	min^{-1}	2410
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-156752

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Technical description

Weight	3.4 kg
Fan size	146 mm
Rotor surface	Partly cast in aluminum
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
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F0
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, open rotor
Mode	S1
Motor storage	Ball 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
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; EN 60335-2-31; CE
Approval	VDE

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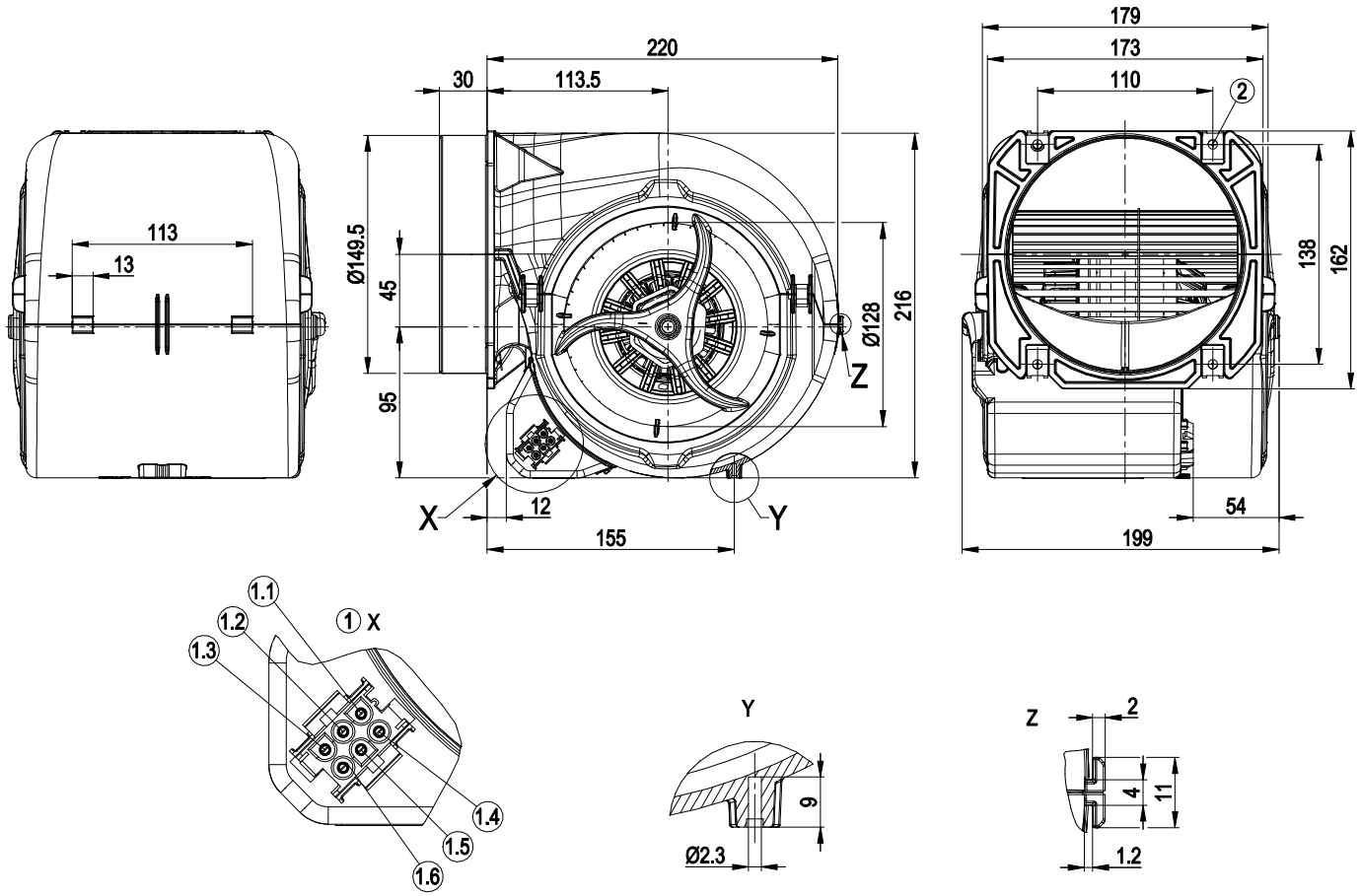
Product drawing



1	Coded plug 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)

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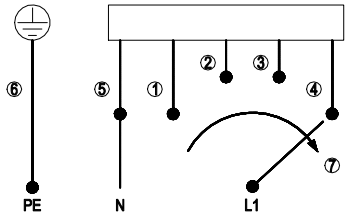
Connection diagram



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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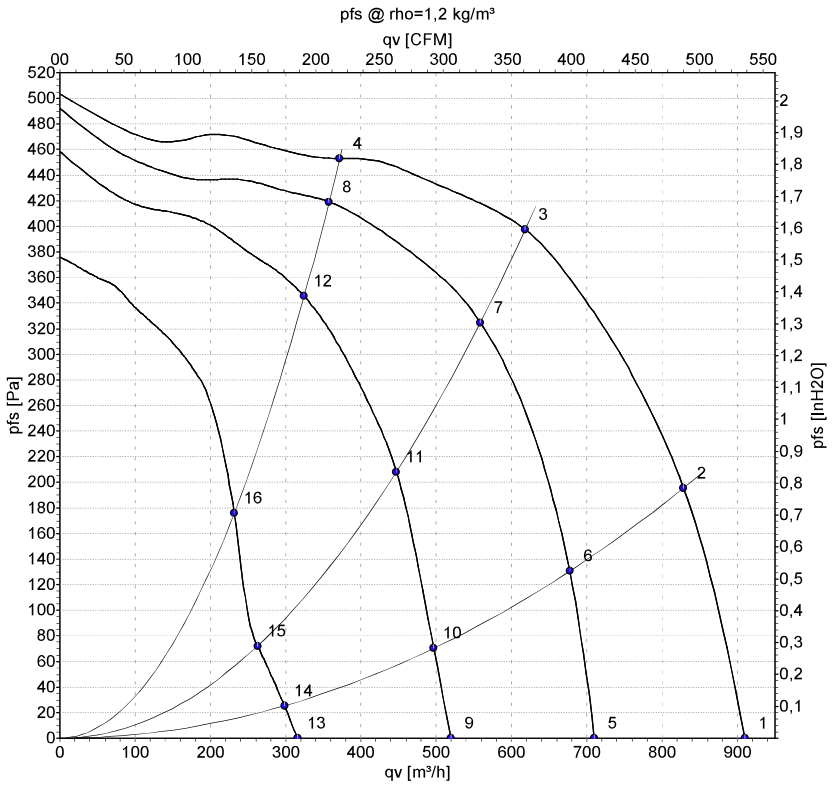
Curves: Air performance 50 Hz



Measurement: LU-156752
Measurement: LU-156754
Measurement: LU-156757
Measurement: LU-156762

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

	U	f	n	P_e	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	1600	290	1.28	62	73	910	0
2	230	50	2020	256	1.12	61	73	830	200
3	230	50	2420	203	0.89	60	72	620	400
4	230	50	2645	161	0.70	63	74	370	450
5	230	50	1280	247	1.08	56	67	710	0
6	230	50	1665	226	0.99	56	68	675	133
7	230	50	2210	183	0.83	59	70	560	325
8	230	50	2550	140	0.66	63	74	360	421
9	230	50	960	203	0.89	48	59	520	0
10	230	50	1235	196	0.87	49	60	495	70
11	230	50	1805	174	0.78	53	65	445	214
12	230	50	2330	133	0.63	60	71	325	345
13	230	50	595	163	0.72	36	47	315	0
14	230	50	765	160	0.71	36	47	300	26
15	230	50	1065	154	0.68	40	52	265	72
16	230	50	1675	138	0.63	51	62	230	181

U = Power supply · f = Frequency · n = Speed · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
qv = Air flow · p_{fs} = Pressure increase

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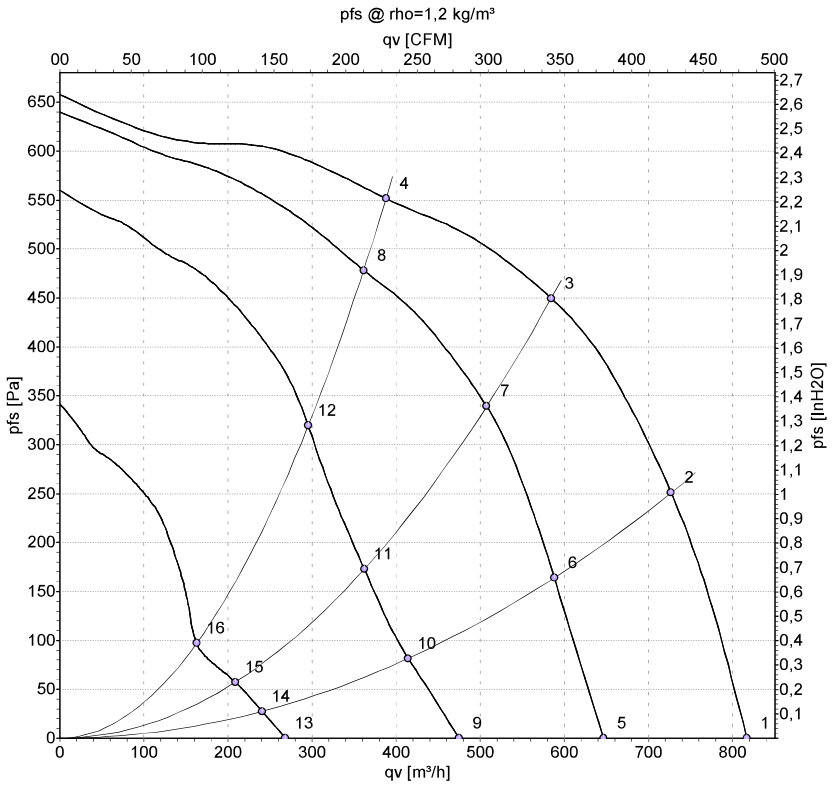
Curves: Air performance 60 Hz



Measurement: LU-156771
Measurement: LU-156772
Measurement: LU-156773
Measurement: LU-156774

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

	U	f	n	P_e	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	60	1500	320	1.40	60	71	815	0
2	230	60	2085	296	1.28	60	71	725	250
3	230	60	2570	267	1.17	62	73	585	450
4	230	60	2930	236	1.06	65	77	390	550
5	230	60	1170	254	1.11	54	65	645	0
6	230	60	1685	244	1.08	54	66	590	164
7	230	60	2260	221	1.01	59	70	505	339
8	230	60	2720	188	0.92	64	75	360	477
9	230	60	875	204	0.92	46	57	475	0
10	230	60	1225	197	0.89	46	56	415	81
11	230	60	1640	192	0.88	51	62	360	173
12	230	60	2255	169	0.82	59	70	295	320
13	230	60	515	157	0.72	29	40	270	0
14	230	60	730	153	0.70	30	41	240	28
15	230	60	955	151	0.69	36	47	210	57
16	230	60	1245	147	0.68	42	53	165	93

U = Power supply · f = Frequency · n = Speed · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
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