D2E146-HT59-A6

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

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Nominal data

Type	**D2E146-HT59-A6**
Motor	**M2E068-EC**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed (rpm)	min^{-1}	1600	1500
Power input	W	290	320
Current draw	A	1.28	1.4
Motor capacitor	µF	6	6
Capacitor voltage	VDB	400	400
Capacitor standard		S2 (CE)	S2 (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 = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011

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

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

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Technical features

Mass	3.8 kg
Size	146 mm
Surface of rotor	Partially cast in aluminium
Material of terminal box	PP plastic
Material of impeller	Sheet steel, galvanised
Housing material	PP plastic
Motor suspension	Motor mounted anti-vibration 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	Via terminal box, integrated capacitor connected via terminal box; With plug
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
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 60335-1; CE

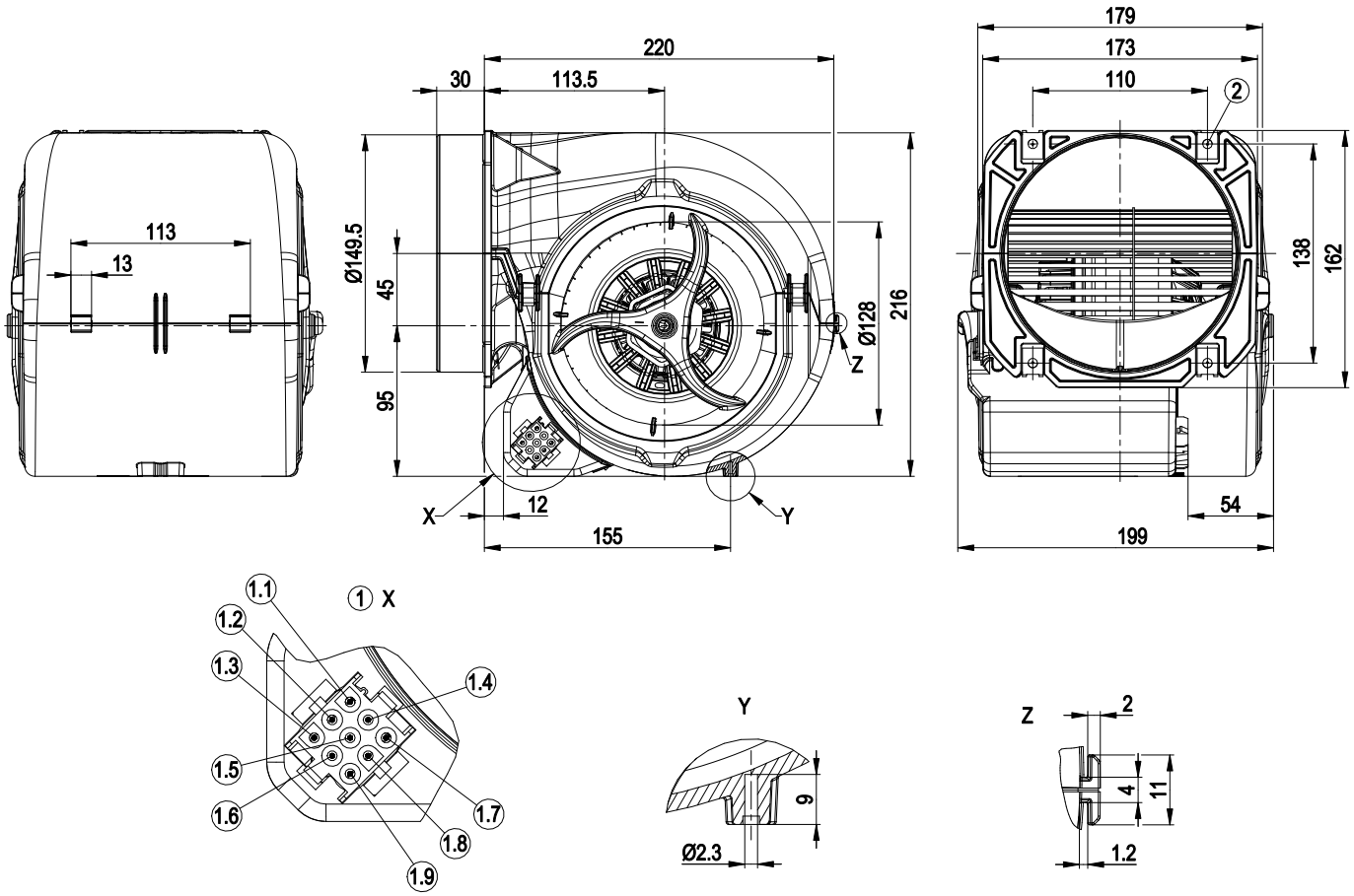
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Product drawing



1	Coded plug system: Connector housing 9-pole Tyco 927231-5, 8x plug pin Tyco 926886-1
1.1	L = Step 1
1.2	L = Step 2
1.3	L = Step 3
1.4	L = Step 4
1.5	not used
1.6	TOP
1.7	TOP
1.8	N
1.9	Protective earth
2	4x sheet metal nut for thread EN ISO 1478-ST 4.8 (min. screw length 14.5 plus thickness of mounting material)

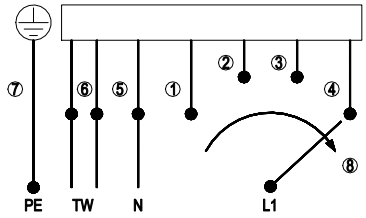
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Connection screen



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	TOP 2x
7	Protective earth	8	Speed increase		

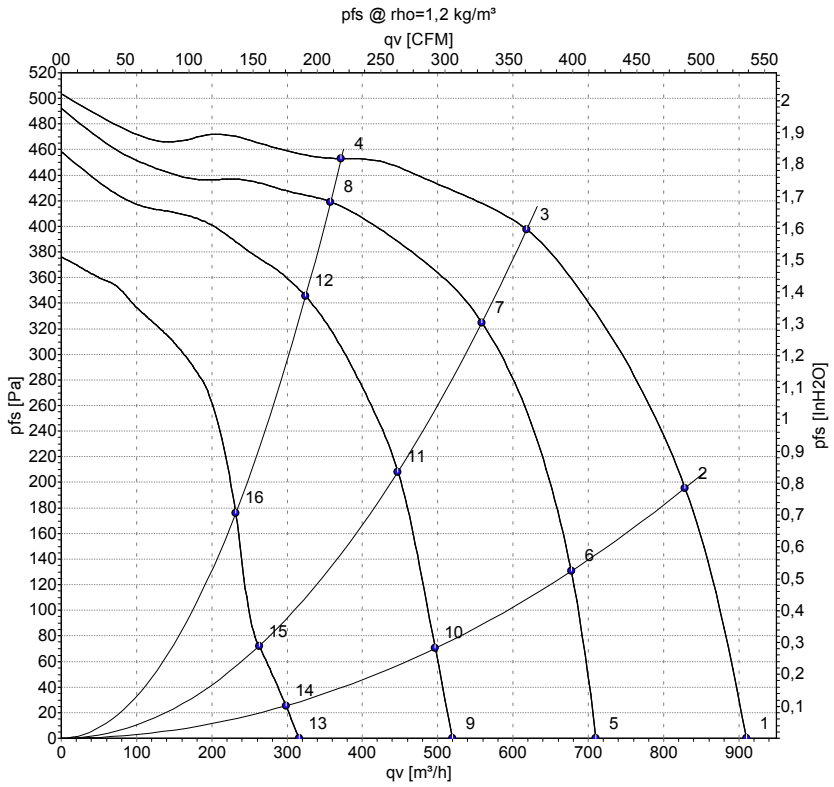
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Charts: Air flow 50 Hz



Measurement: LU-156752-1
Measurement: LU-156754-1
Measurement: LU-156757-1
Measurement: LU-156762-1

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

	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	230	50	1600	290	1.28	62	73	910	0	535	0.00
2	230	50	2020	256	1.12	61	73	830	200	490	0.80
3	230	50	2420	203	0.89	60	72	620	400	365	1.61
4	230	50	2645	161	0.70	63	74	370	450	220	1.81
5	230	50	1280	247	1.08	56	67	710	0	420	0.00
6	230	50	1665	226	0.99	56	68	675	133	400	0.53
7	230	50	2210	183	0.83	59	70	560	325	330	1.30
8	230	50	2550	140	0.66	63	74	360	421	210	1.69
9	230	50	960	203	0.89	48	59	520	0	305	0.00
10	230	50	1235	196	0.87	49	60	495	70	295	0.28
11	230	50	1805	174	0.78	53	65	445	214	265	0.86
12	230	50	2330	133	0.63	60	71	325	345	190	1.39
13	230	50	595	163	0.72	36	47	315	0	185	0.00
14	230	50	765	160	0.71	36	47	300	26	175	0.10
15	230	50	1065	154	0.68	40	52	265	72	155	0.29
16	230	50	1675	138	0.63	51	62	230	181	135	0.73

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

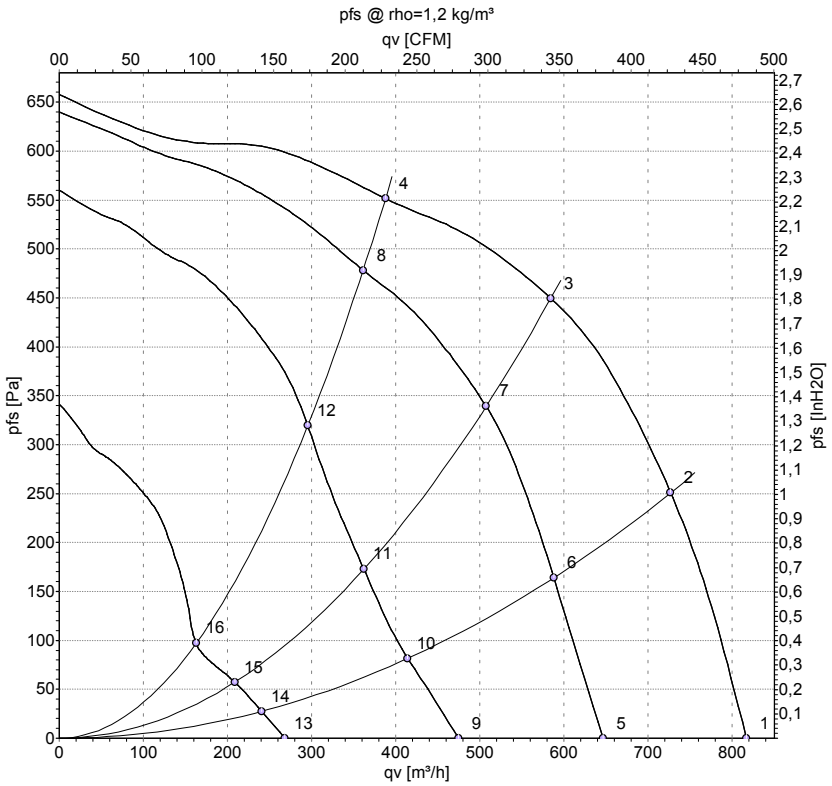
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Charts: Air flow 60 Hz



Measurement: LU-156771-1
Measurement: LU-156772-1
Measurement: LU-156773-1
Measurement: LU-156774-1

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

	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	230	60	1500	320	1.40	60	71	815	0	480	0.00
2	230	60	2085	296	1.28	60	71	725	250	430	1.00
3	230	60	2570	267	1.17	62	73	585	450	345	1.81
4	230	60	2930	236	1.06	65	77	390	550	230	2.21
5	230	60	1170	254	1.11	54	65	645	0	380	0.00
6	230	60	1685	244	1.08	54	66	590	164	345	0.66
7	230	60	2260	221	1.01	59	70	505	339	300	1.36
8	230	60	2720	188	0.92	64	75	360	477	210	1.91
9	230	60	875	204	0.92	46	57	475	0	280	0.00
10	230	60	1225	197	0.89	46	56	415	81	245	0.33
11	230	60	1640	192	0.88	51	62	360	173	215	0.69
12	230	60	2255	169	0.82	59	70	295	320	175	1.28
13	230	60	515	157	0.72	29	40	270	0	160	0.00
14	230	60	730	153	0.70	30	41	240	28	140	0.11
15	230	60	955	151	0.69	36	47	210	57	120	0.23
16	230	60	1245	147	0.68	42	53	165	93	95	0.37

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
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