D2E146-HT59-02

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

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 (rpm)	min^{-1}	1800	1500
Power consumption	W	275	320
Current draw	A	1.2	1.4
Capacitor	µF	6	6
Capacitor voltage	VDB	400	400
Capacitor standard		S2 (CE)	S2 (CE)
Min. back pressure	Pa	100	0
Min. back pressure	in. wg	0.4	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

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Technical description

Weight	3.43 kg
Size	146 mm
Motor size	68
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
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	Any
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Ball bearing
Speed levels	4
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Electrical hookup	Plug; Via terminal box, capacitor integrated and connected
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Motor capacitor according to EN 60252-1 in safety protection class	S2
Conformity with standards	EN 60335-1; EN 60335-2-31; CE
Approval	VDE; EAC

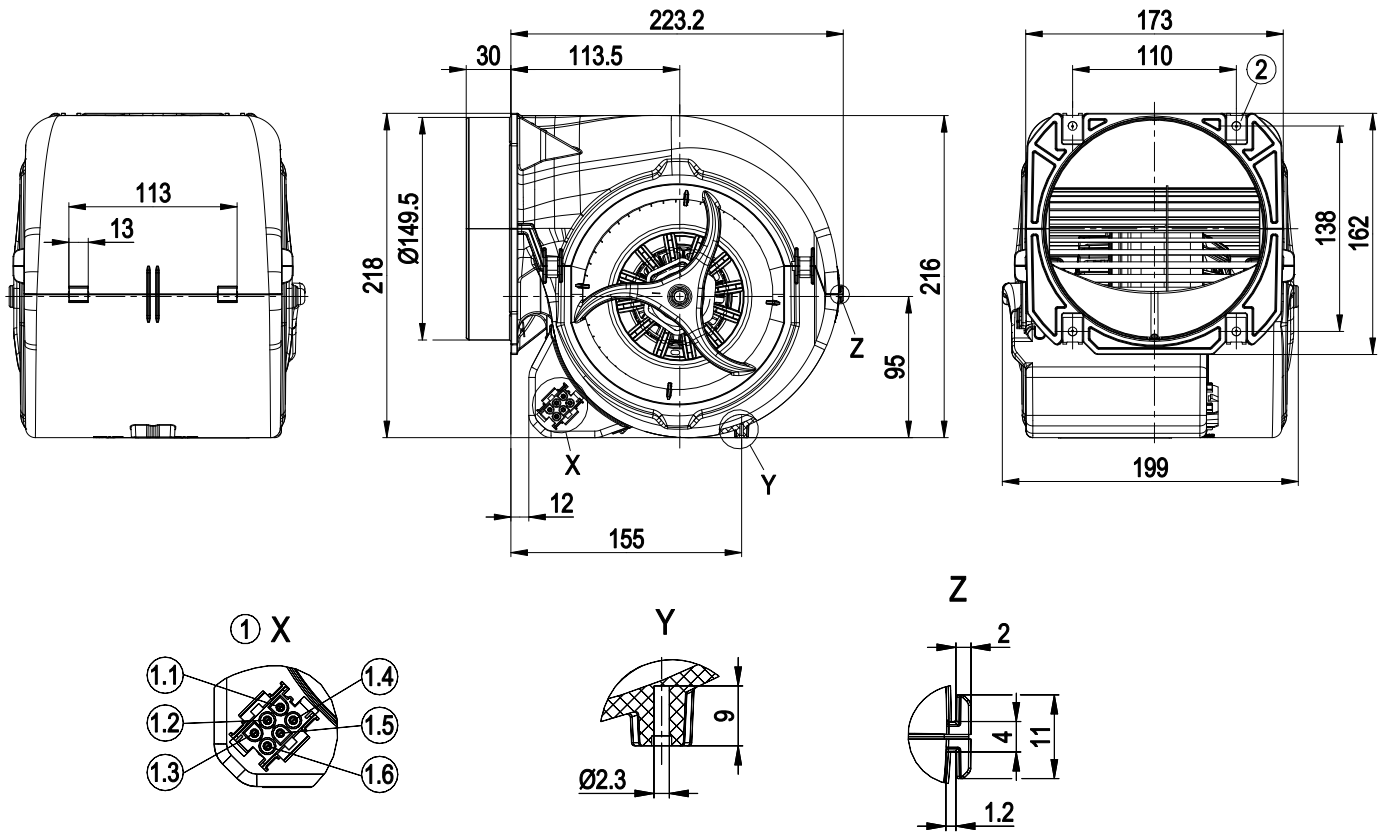
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Product drawing



1	Coded plug system: 6-pole connector housing TE 2178773-1, 6x plug pin TE 926886-1
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	PE
2	4x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus material thickness of attachment)

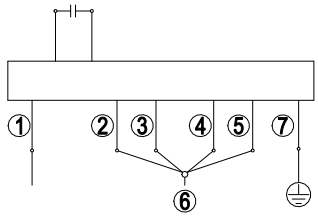
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Connection diagram



Note: High speed (step IV); low speed (step I); the switch must interrupt the circuit on switching.

1	N (blue)
2	Step I black 1/white
3	Step II black 2/red
4	Step III black 3/gray
5	Step IV black 4/black
6	L1
7	= PE = green/yellow

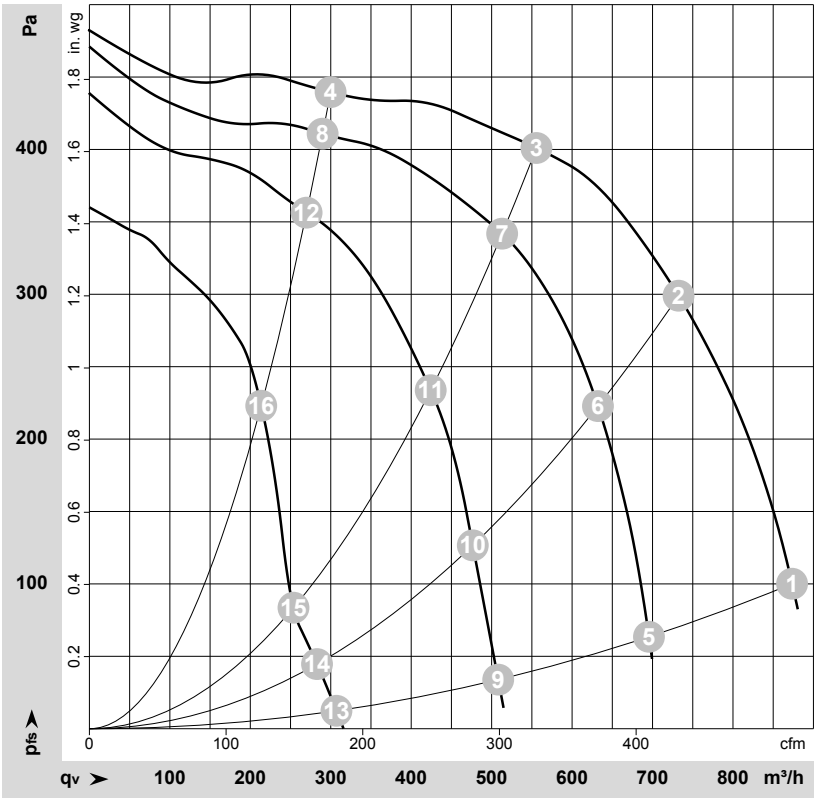
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

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

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	Wired	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	in. wg
1	4	1~	230	50	1800	275	1.20	62	73	875	100	515	0.40
2	4	1~	230	50	2250	229	1.00	60	72	730	300	430	1.20
3	4	1~	230	50	2480	194	0.85	61	72	555	400	325	1.61
4	4	1~	230	50	2690	151	0.66	64	75	300	440	175	1.77
5	3	1~	230	50	1490	236	1.03			695	69	410	0.28
6	3	1~	230	50	1950	207	0.92			630	223	370	0.90
7	3	1~	230	50	2315	172	0.78			515	342	300	1.37
8	3	1~	230	50	2610	129	0.62			290	411	170	1.65
9	2	1~	230	50	1100	200	0.88			510	34	300	0.14
10	2	1~	230	50	1480	188	0.84			475	127	280	0.51
11	2	1~	230	50	1925	166	0.76			425	234	250	0.94
12	2	1~	230	50	2460	119	0.58			270	356	160	1.43
13	1	1~	230	50	680	161	0.71			305	12	180	0.05
14	1	1~	230	50	905	157	0.70			285	45	165	0.18
15	1	1~	230	50	1135	153	0.68			255	79	150	0.32
16	1	1~	230	50	1920	125	0.58			215	223	125	0.90

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase

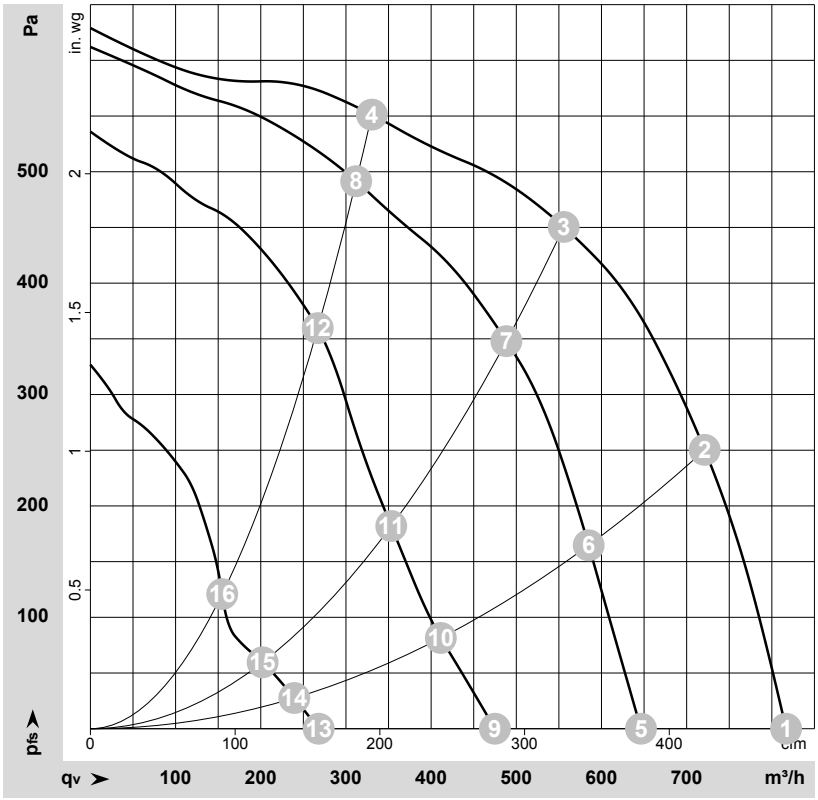
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

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

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	Wired	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	in. wg
1	4	1~	230	60	1500	320	1.40	60	71	815	0	480	0.00
2	4	1~	230	60	2110	295	1.28	60	71	720	250	425	1.00
3	4	1~	230	60	2640	262	1.15	62	74	555	450	325	1.81
4	4	1~	230	60	2995	228	1.03	66	78	330	550	195	2.21
5	3	1~	230	60	1170	254	1.11			645	0	380	0.00
6	3	1~	230	60	1710	243	1.08			585	165	345	0.66
7	3	1~	230	60	2335	216	1.00			490	348	285	1.40
8	3	1~	230	60	2830	179	0.89			310	492	185	1.98
9	2	1~	230	60	875	204	0.92			475	0	280	0.00
10	2	1~	230	60	1240	197	0.89			410	81	240	0.33
11	2	1~	230	60	1715	190	0.87			355	182	210	0.73
12	2	1~	230	60	2470	158	0.79			265	360	155	1.45
13	1	1~	230	60	515	157	0.72			270	0	160	0.00
14	1	1~	230	60	740	153	0.70			240	28	140	0.11
15	1	1~	230	60	995	150	0.69			200	60	120	0.24
16	1	1~	230	60	1460	144	0.68			155	121	90	0.49

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase

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