

# AC centrifugal fan

forward curved, single inlet  
with housing (without flange)

D2E146-AP50-E2 ebmpapst Datasheet  
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County court Stuttgart · HRA 590344

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County court Stuttgart · HRB 590142

## Nominal data

Type	D2E146-AP50-E2		
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 <sup>-1</sup>	2600	2700
Power input	W	250	340
Current draw	A	1.1	1.5
Motor capacitor	µF	8	8
Capacitor voltage	VDB	400	400
Capacitor standard		S0 (CE)	S0 (CE)
Min. back pressure	Pa	420	455
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	65	40

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit  
Subject to alterations

## Data according to ErP directive

		Actual	Request 2015			
01 Overall efficiency $\eta_{es}$	%	33.6	33.6	09 Power input $P_e$	kW	0.23
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	620
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	435
04 Efficiency grade N		44	44	10 Speed (rpm) n	min <sup>-1</sup>	2625
05 Variable speed drive		No		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 =  $1 + p_{fs} / 100\,000\text{ Pa}$

LU-77448



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## Technical features

<b>Mass</b>	4.4 kg
<b>Size</b>	146 mm
<b>Surface of rotor</b>	Uncoated
<b>Material of impeller</b>	Sheet steel, galvanised
<b>Housing material</b>	Sheet steel, galvanised
<b>Motor suspension</b>	Motor mounted via brackets on one side
<b>Direction of rotation</b>	Counter-clockwise, seen on rotor
<b>Type of protection</b>	IP 44; Depending on installation and position
<b>Insulation class</b>	"F"
<b>Humidity (F)/environmental protection class (H)</b>	H0 - dry environment
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+ 80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	- 40 °C
<b>Mounting position</b>	Any
<b>Condensate discharge holes</b>	None
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	< 0.75 mA
<b>Motor protection</b>	Thermal overload protector (TOP) wired internally
<b>Cable exit</b>	Variable
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 60335-1; CE
<b>Approval</b>	UL 1004-1; CSA C22.2 No.100

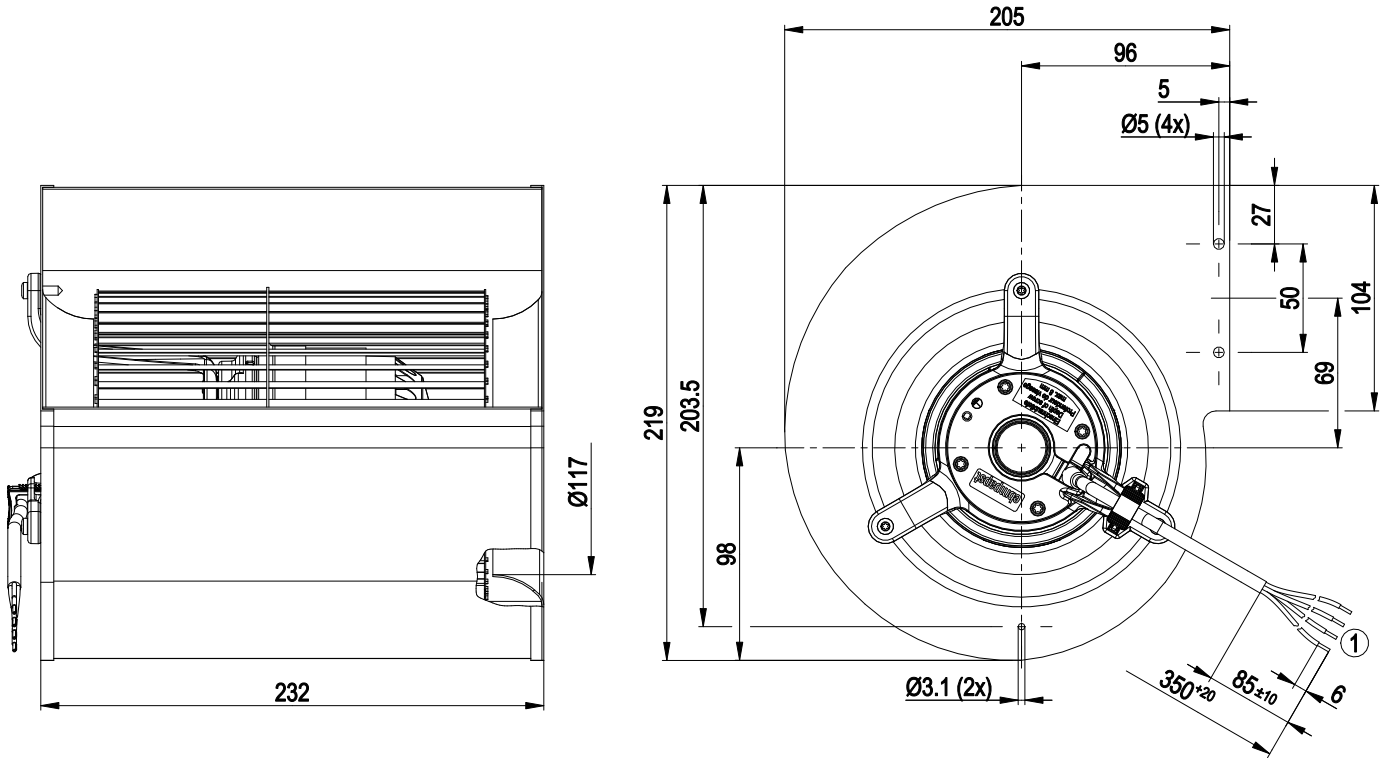


D2E146-AP50-E2

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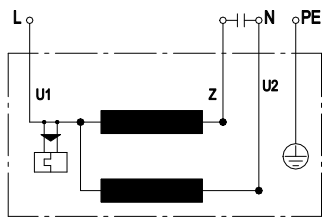
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## Product drawing



1 Connection line PFA AWG20 (green/yellow AWG18), 4x lead tips crimped

## Connection screen



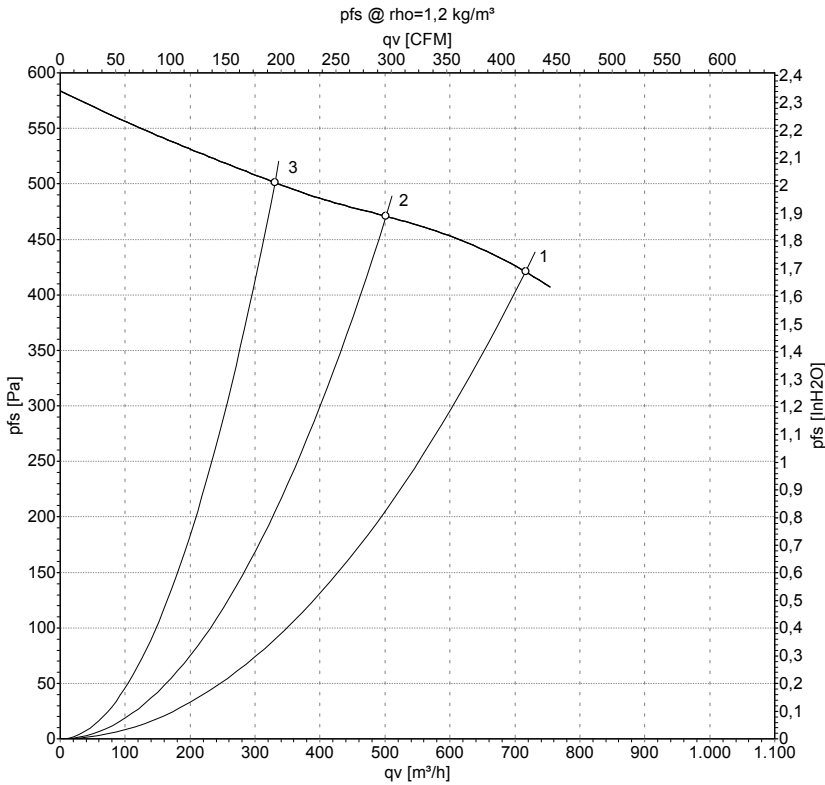
U1	blue	Z	brown	U2	black
PE	green/yellow				



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## Charts: Air flow 50 Hz Y



Measurement: LU-77448-1

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 <sub>e</sub>	I	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m³/h	Pa	cfm	inH2O
1	230	50	2600	250	1.10	715	420	420	1.69
2	230	50	2690	212	0.94	500	470	295	1.89
3	230	50	2765	186	0.83	330	500	195	2.01

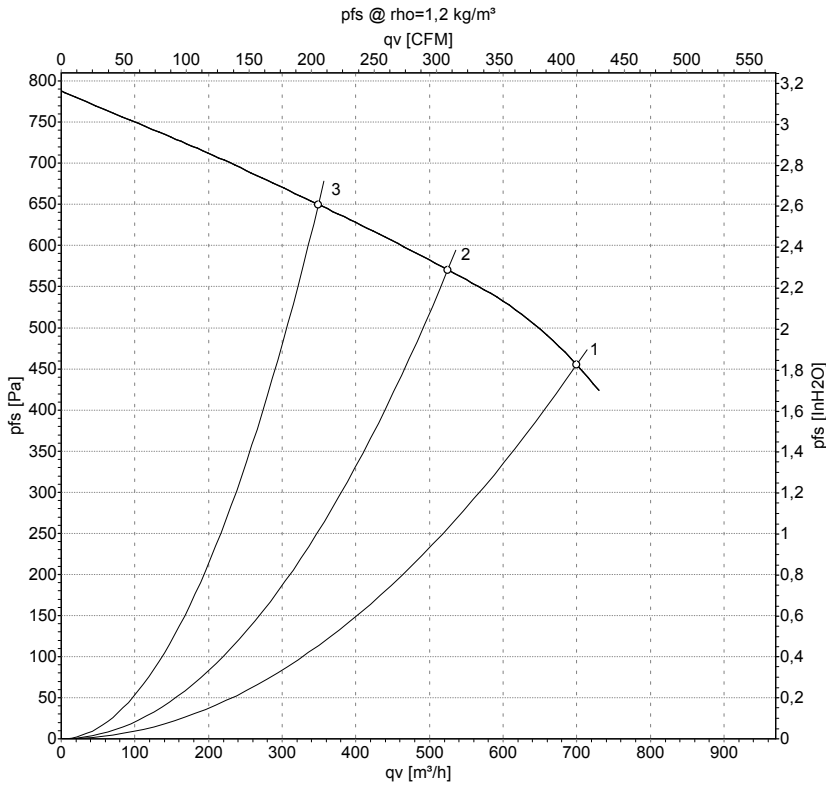
U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power input · I = Current draw · q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase



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## Charts: Air flow 60 Hz Y



Measurement: LU-77449-1

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 <sub>e</sub>	I	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	inH2O
1	230	60	2700	340	1.50	700	455	410	1.83
2	230	60	2955	307	1.39	525	570	310	2.29
3	230	60	3135	274	1.28	350	650	205	2.61

U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power input · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

