

AC centrifugal fan

forward curved, dual inlet
with housing (without flange)

D2E146-AP50-E4 ebmpapst Datasheet
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Nominal data

| Type | D2E146-AP50-E4 | | |
|-------------------------------|-------------------|---------|---------|
| 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 | 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 η_{es} | % | 33.6 | 33.6 | 09 Power input P_e | kW | 0.23 |
| 02 Measurement category | | A | | 09 Air flow q_v | m ³ /h | 620 |
| 03 Efficiency category | | Static | | 09 Pressure increase p_{fs} | Pa | 435 |
| 04 Efficiency grade N | | 44 | 44 | 10 Speed (rpm) n | min ⁻¹ | 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

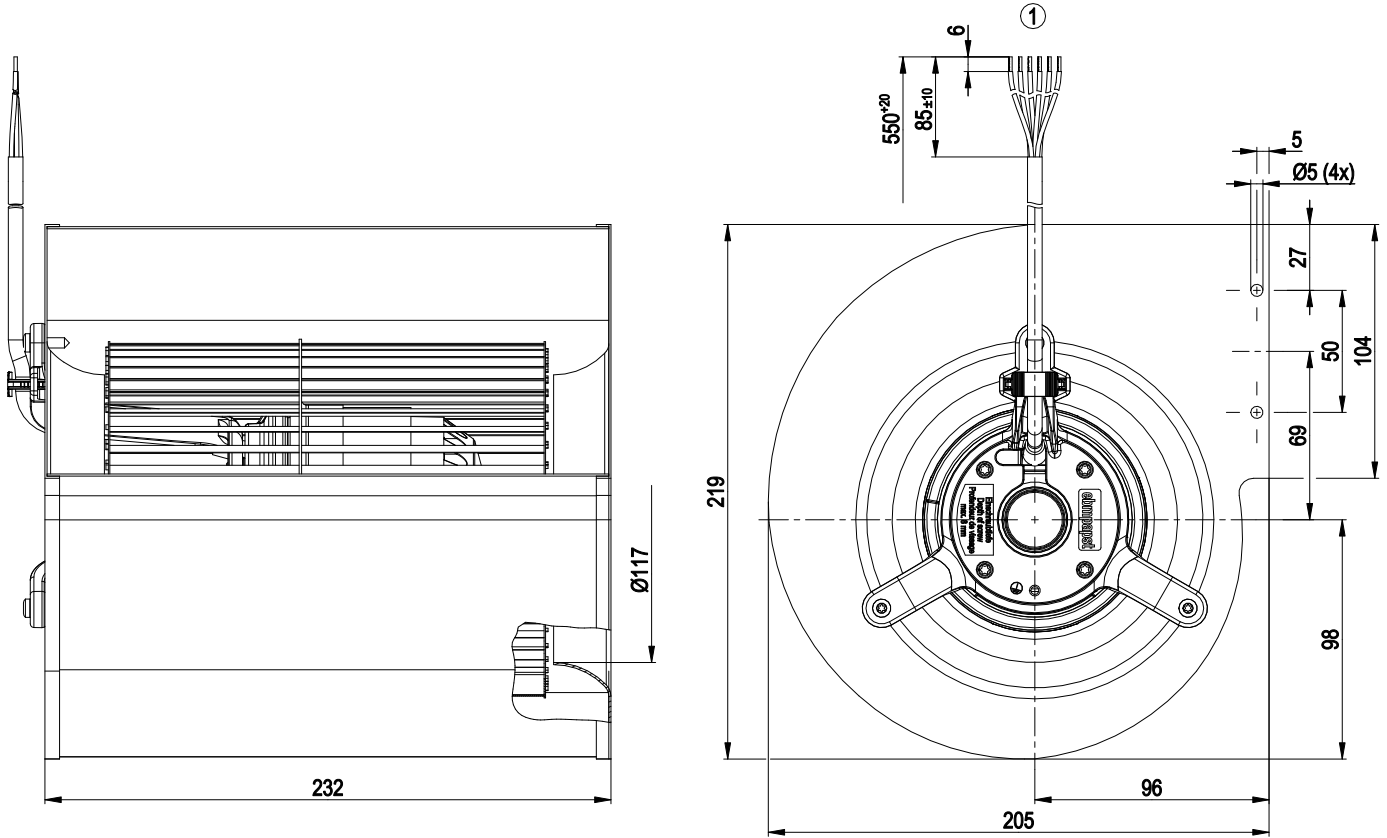
| | |
|---|---|
| Mass | 4.3 kg |
| Size | 146 mm |
| Surface of rotor | Coated in black |
| Material of impeller | Sheet steel, galvanised and coated in black |
| Housing material | Sheet steel, galvanised |
| Motor suspension | Motor mounted via brackets on one side |
| Direction of rotation | Counter-clockwise, seen on rotor |
| Type of protection | IP 44; Depending on installation and position as per EN 60034-5 |
| 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 | Shaft horizontal or rotor on bottom; rotor on top on request |
| Condensate discharge holes | Rotor-side |
| Operation mode | S1 |
| Motor bearing | Ball bearing |
| Touch current acc. IEC 60990 (measuring network Fig. 4, TN system) | < 0.75 mA |
| Motor protection | Thermal overload protector (TOP) brought out, basic insulation |
| Cable exit | Variable |
| Protection class | I (if protective earth is connected by customer) |
| Product conforming to standard | EN 60335-1; CE |
| Approval | CSA C22.2 No.100; UL 1004-1 |



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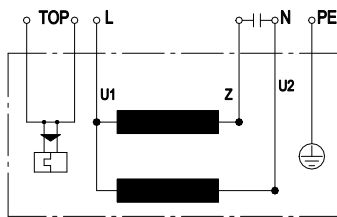
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Product drawing



1 Connection line PFA AWG20 (green/yellow AWG18), 6x lead tips crimped

Connection screen



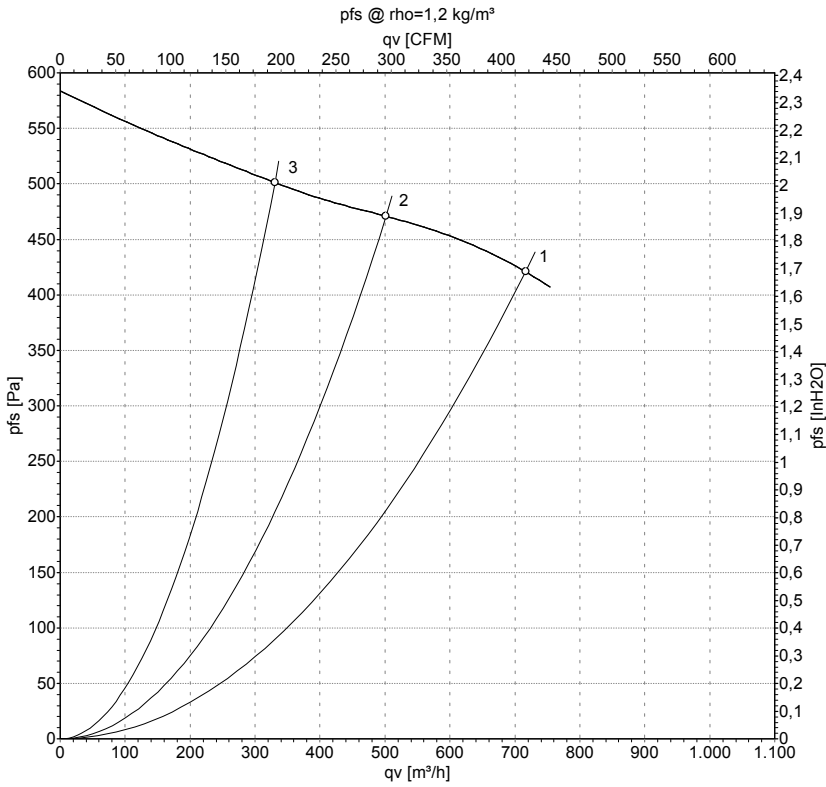
| | | | | | |
|----|--------------|-----|----------|----|-------|
| U1 | Blue | Z | brown | U2 | black |
| PE | green/yellow | TOP | 2 x grey | | |



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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 _e | I | q _v | P _{fs} | q _v | P _{fs} |
|---|-----|----|-------------------|----------------|------|----------------|-----------------|----------------|-----------------|
| | V | Hz | min ⁻¹ | 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 |

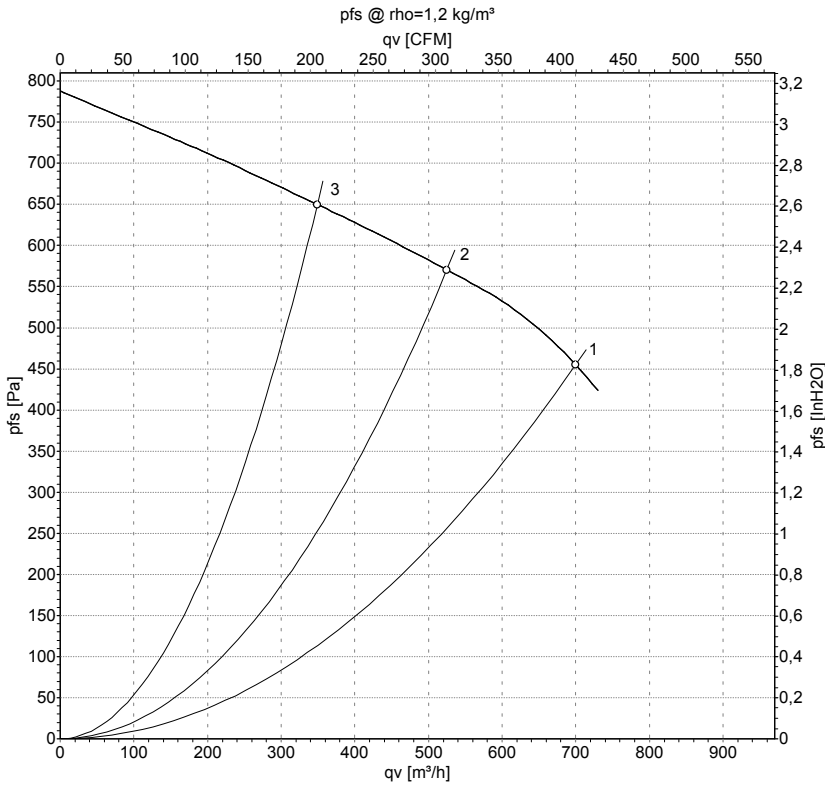
U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase



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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 _e | I | q _v | P _{fs} | q _v | P _{fs} |
|---|-----|----|-------------------|----------------|------|-------------------|-----------------|----------------|-----------------|
| | V | Hz | min ⁻¹ | W | A | m ³ /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_e = Power input · I = Current draw · q_v = Air flow · P_{fs} = Pressure increase

