**D2E097-CB01-45**

# AC centrifugal fan

forward-curved, single-intake

with housing (without flange)

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## Nominal data

| | |
|---|---|
| **Type** | **D2E097-CB01-45** |
| **Motor** | **M2E042-CA** |

| | | | |
|---|---|---|---|
| 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) | $min^{-1}$ | 1650 | 1650 |
| Power consumption | W | 42 | 42 |
| Current draw | A | 0.19 | 0.20 |
| Capacitor | µF | 1.5 | 1.5 |
| Capacitor voltage | VDB | 400 | 400 |
| Capacitor standard | | S2 (CE) | S2 (CE) |
| Min. back pressure | Pa | 0 | 0 |
| Min. back pressure | in. wg | 0 | 0 |
| Min. ambient temperature | °C | -25 | -25 |
| Max. ambient temperature | °C | 50 | 55 |

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** | 1.1 kg |
| **Size** | 97 mm |
| **Motor size** | 42 |
| **Rotor surface** | Unpainted |
| **Impeller material** | Sheet steel, galvanized |
| **Housing material** | Sheet steel, galvanized |
| **Motor suspension** | Motor mounted with brackets on one side |
| **Direction of rotation** | Counterclockwise, viewed toward rotor |
| **Degree of protection** | IP44; installation- and position-dependent |
| **Insulation class** | "B" |
| **Moisture (F) / Environmental (H) protection class** | H0+ |
| **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 |
| **Mode** | S1 |
| **Motor mounting** | Ball bearing |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | < 0.75 mA |
| **Motor protection** | Thermal overload protector (TOP) internally connected |
| **Protection class** | I (with customer connection of protective earth) |
| **Conformity with standards** | EN 60335-1; CE |

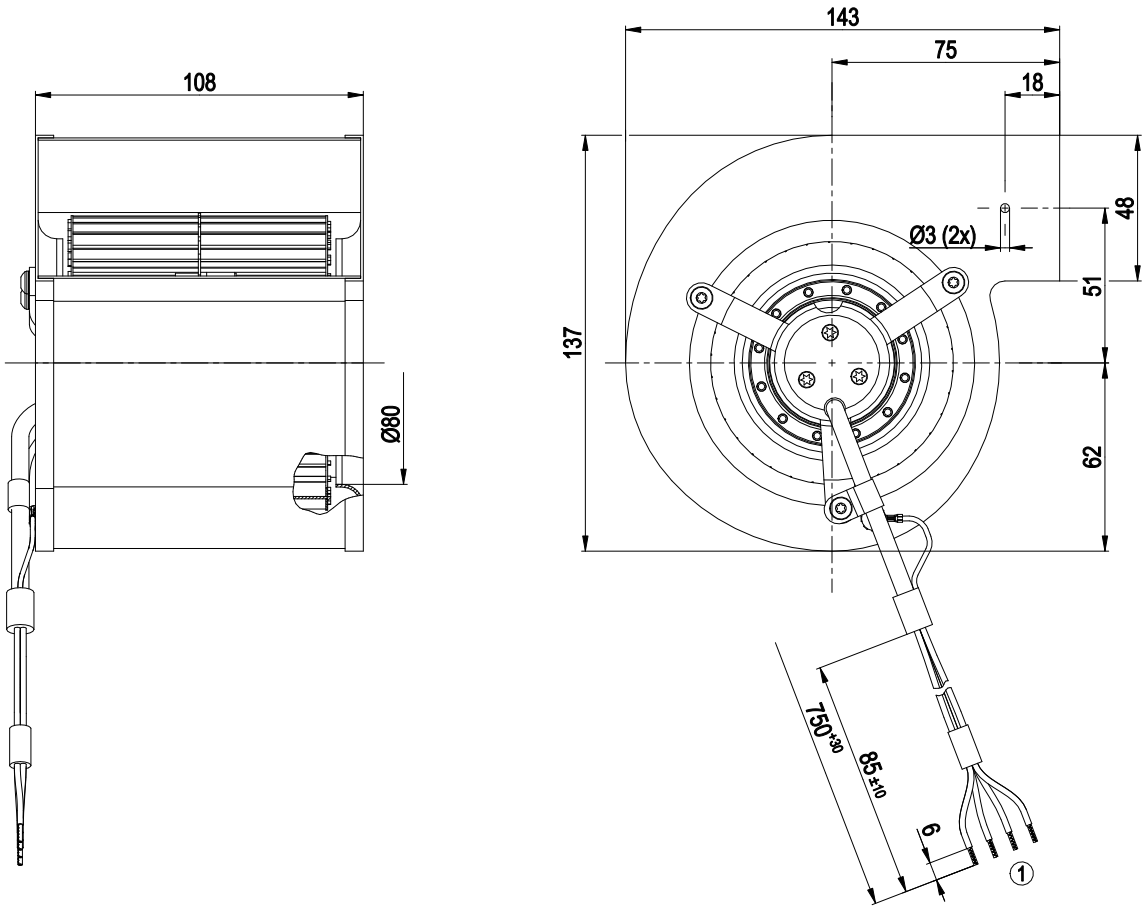


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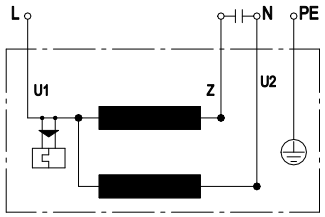
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## Product drawing




| | |
|---|---|
| 1 | Cable PVC 3x 0.25 mm², 1x AWG20 (green/yellow) |
| | 4x splice |

## Connection diagram




| | | | | | |
|---|---|---|---|---|---|
| U1 | blue | Z | brown | U2 | black |
| PE | green/yellow | | | | |



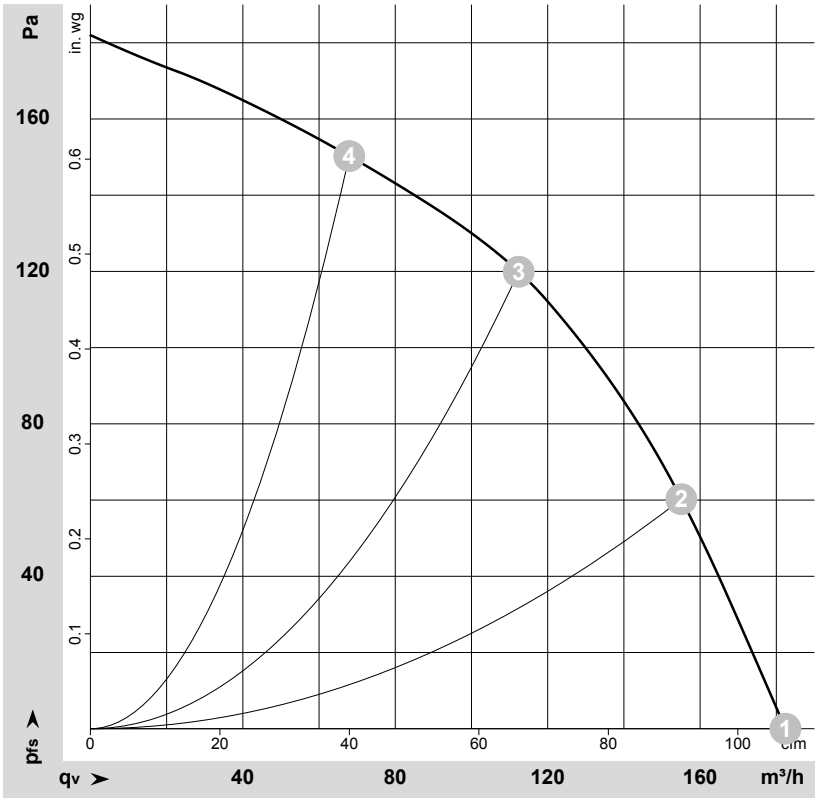
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# AC centrifugal fan

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## Curves: Air performance 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-4570-1

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

| | Wired | 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 | in. wg |
| 1 | 1~ | 230 | 50 | 1650 | 42 | 0.19 | 180 | 0 | 105 | 0.00 |
| 2 | 1~ | 230 | 50 | 1870 | 37 | 0.17 | 155 | 60 | 90 | 0.24 |
| 3 | 1~ | 230 | 50 | 2200 | 35 | 0.15 | 110 | 120 | 65 | 0.48 |
| 4 | 1~ | 230 | 50 | 2420 | 34 | 0.15 | 70 | 150 | 40 | 0.60 |

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · $P_e$ = Power consumption · I = Current draw · $q_V$ = Air flow · $p_{fs}$ = Pressure increase



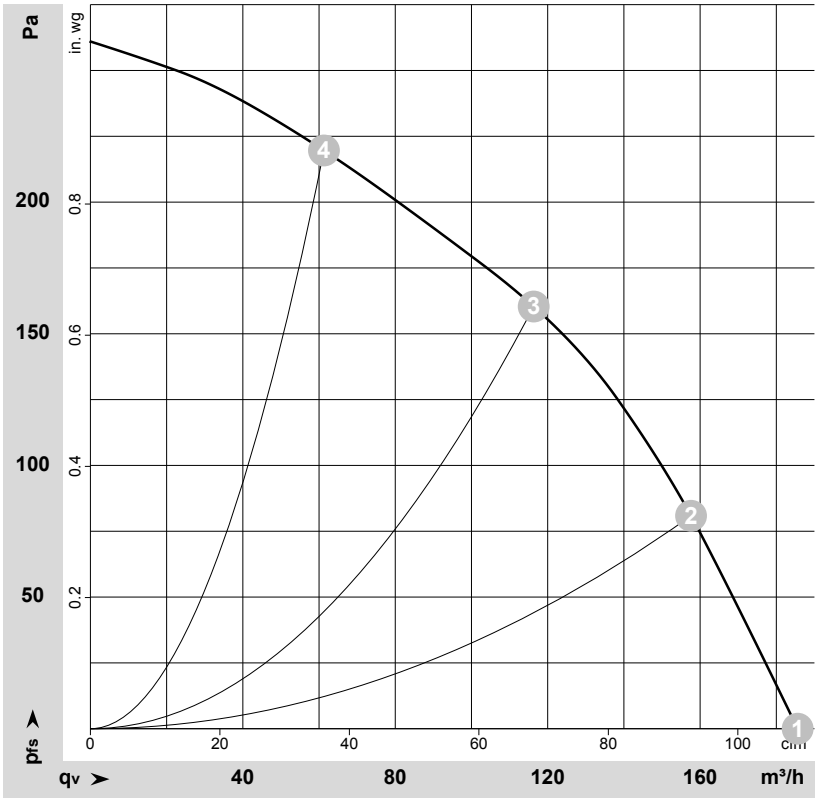
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# AC centrifugal fan

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## Curves: Air performance 60 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-4574-1

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

| | Wired | 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 | in. wg |
| 1 | 1~ | 230 | 60 | 1650 | 42 | 0.20 | 185 | 0 | 110 | 0.00 |
| 2 | 1~ | 230 | 60 | 2055 | 40 | 0.19 | 160 | 80 | 95 | 0.32 |
| 3 | 1~ | 230 | 60 | 2550 | 37 | 0.17 | 115 | 160 | 70 | 0.64 |
| 4 | 1~ | 230 | 60 | 2940 | 34 | 0.16 | 60 | 220 | 35 | 0.88 |

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · $P_e$ = Power consumption · I = Current draw · $q_V$ = Air flow · $p_{fs}$ = Pressure increase



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