# AC centrifugal fan - RadiCal

backward-curved, single-intake

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## Nominal data

| **Type** | **R2E225-RA92-10** | | | |
|---|---|---|---|---|
| **Motor** | **M2E068-DF** | | | |
| Phase | | 1~ | 1~ | 1~ |
| Nominal voltage | VAC | 230 | 230 | 230 |
| Frequency | Hz | 50 | 60 | 60 |
| Method of obtaining data | | ml | ml | ml |
| Valid for approval/standard | | CE | CE | UL 2111 |
| Speed (rpm) | $min^{-1}$ | 2500 | 2600 | 2600 |
| Power consumption | W | 155 | 210 | 225 |
| Current draw | A | 0.68 | 0.92 | 0.95 |
| Capacitor | µF | 3.5 | 3.5 | 3.5 |
| Capacitor voltage | VDB | 450 | 450 | 450 |
| Capacitor standard | | | | UL |
| Min. back pressure | Pa | 0 | 0 | 0 |
| Min. back pressure | in. wg | 0 | 0 | 0 |
| Min. ambient temperature | °C | -25 | -25 | -25 |
| Max. ambient temperature | °C | 70 | 65 | 65 |
| Starting current | A | 1.25 | 1.2 | |

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** | 2.32 kg |
| **Size** | 225 mm |
| **Motor size** | 68 |
| **Rotor surface** | Painted black |
| **Impeller material** | PA66 plastic, glass-fiber reinforced |
| **Number of blades** | 7 |
| **Direction of rotation** | Clockwise, viewed toward rotor |
| **Degree of protection** | IP44; installation- and position-dependent as per EN 60034-5 |
| **Insulation class** | "F" |
| **Moisture (F) / Environmental (H) protection class** | H1 |
| **Max. permitted ambient temp. for motor (transport/storage)** | + 80 °C |
| **Min. permitted ambient temp. for motor (transport/storage)** | - 40 °C |
| **Installation position** | Shaft horizontal or rotor on bottom; rotor on top on request |
| **Condensation drainage holes** | On rotor side |
| **Mode** | S1 |
| **Motor bearing** | 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 |
| **With cable** | Variable |
| **Protection class** | I (with customer connection of protective earth) |
| **Conformity with standards** | EN 60034-1; EN 60204-1; EN 60335-1; EN 60335-2-31; CE; UKCA |
| **Approval** | CSA C22.2 No. 77; EAC; UL 1004-3 |
| **Comment** | The device is intended for use in extractor hoods in which the associated power consumption of the fan or the total of all installed fans is below 280 W. For these reasons, the Ecodesign Directive 2009/125/EC is not applicable. |

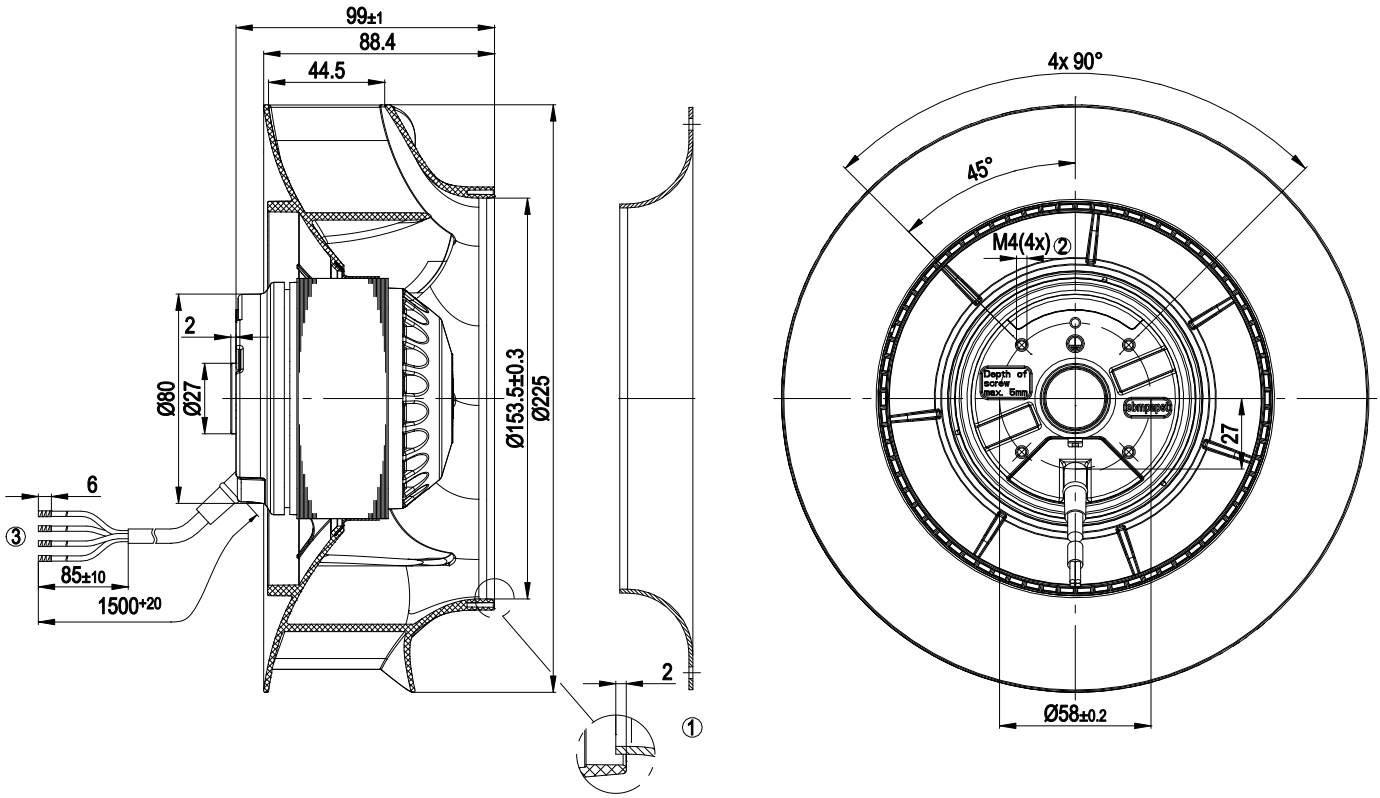


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## Product drawing




| | |
|---|---|
| 1 | Accessory part: Inlet ring 96358-2-4013, not included in scope of delivery. |
| 2 | Max. clearance for screw 5 mm |
| 3 | Cable PFA AWG20 |
| | 4x splice |

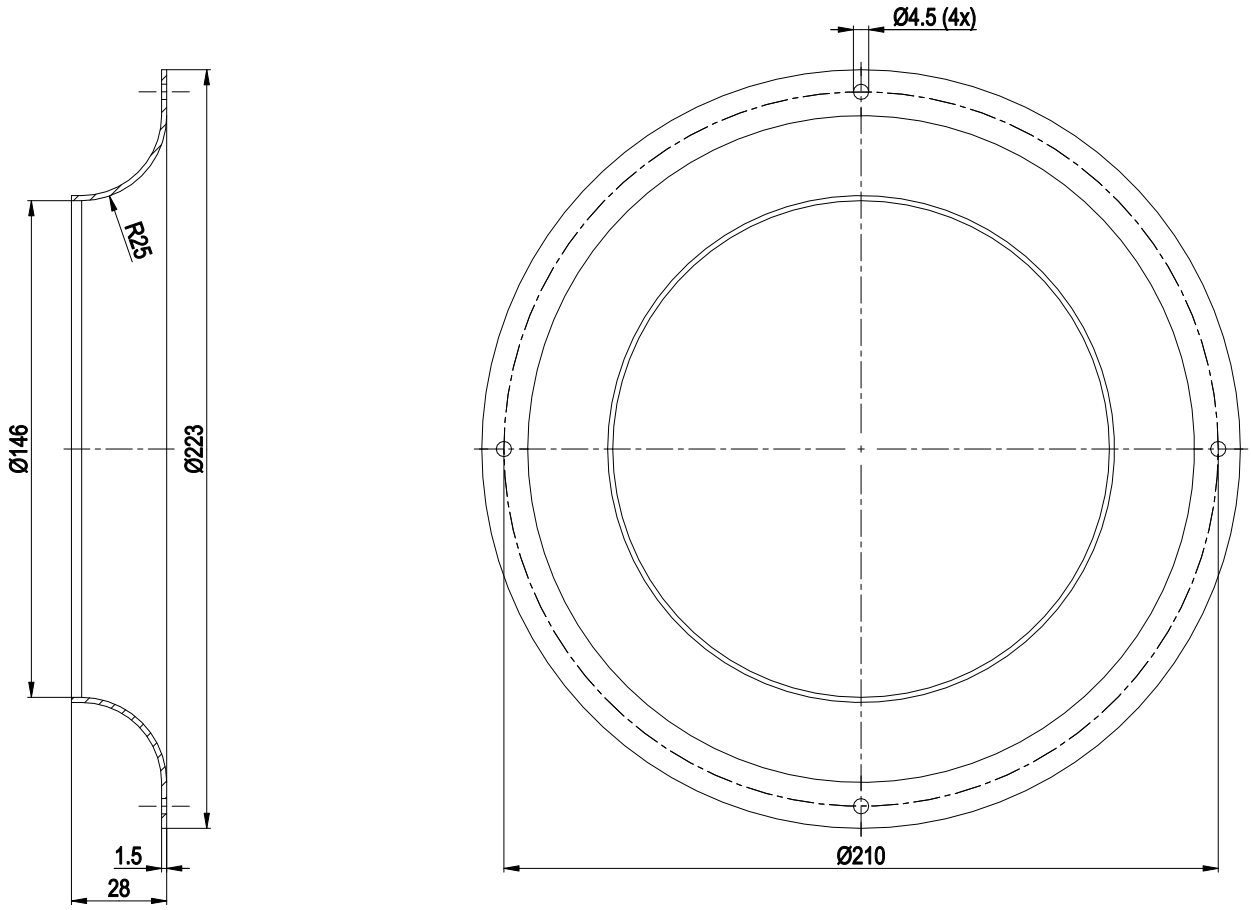


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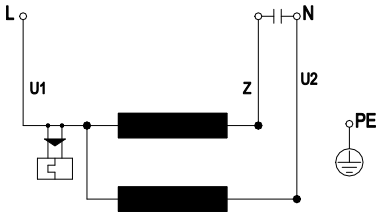
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## Accessory part




| | |
|---|---|
| | Inlet ring 96358-2-4013 |

## Connection diagram




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

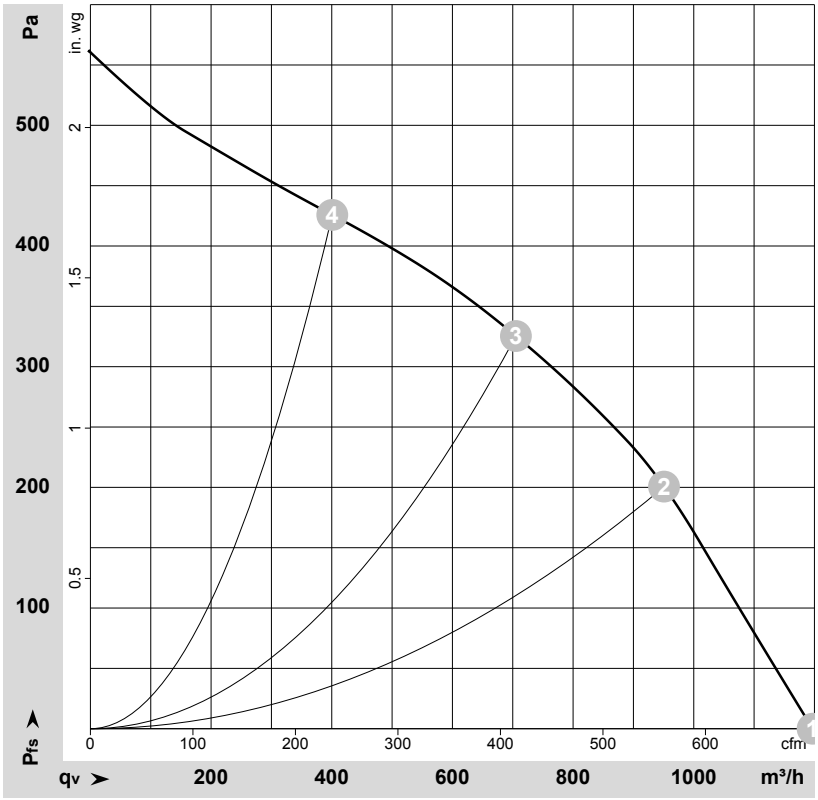


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## Curves: Air performance 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-154575-1

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 | $LpA_{in}$ | $LwA_{in}$ | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | V | Hz | $min^{-1}$ | W | A | dB(A) | dB(A) | $m^3/h$ | Pa | cfm | in. wg |
| 1 | 1~ | 230 | 50 | 2660 | 132 | 0.58 | 66 | 73 | 1195 | 0 | 705 | 0.00 |
| 2 | 1~ | 230 | 50 | 2500 | 155 | 0.68 | 63 | 70 | 950 | 200 | 560 | 0.80 |
| 3 | 1~ | 230 | 50 | 2555 | 150 | 0.66 | 58 | 66 | 705 | 325 | 415 | 1.30 |
| 4 | 1~ | 230 | 50 | 2625 | 138 | 0.60 | 63 | 70 | 400 | 425 | 235 | 1.71 |

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

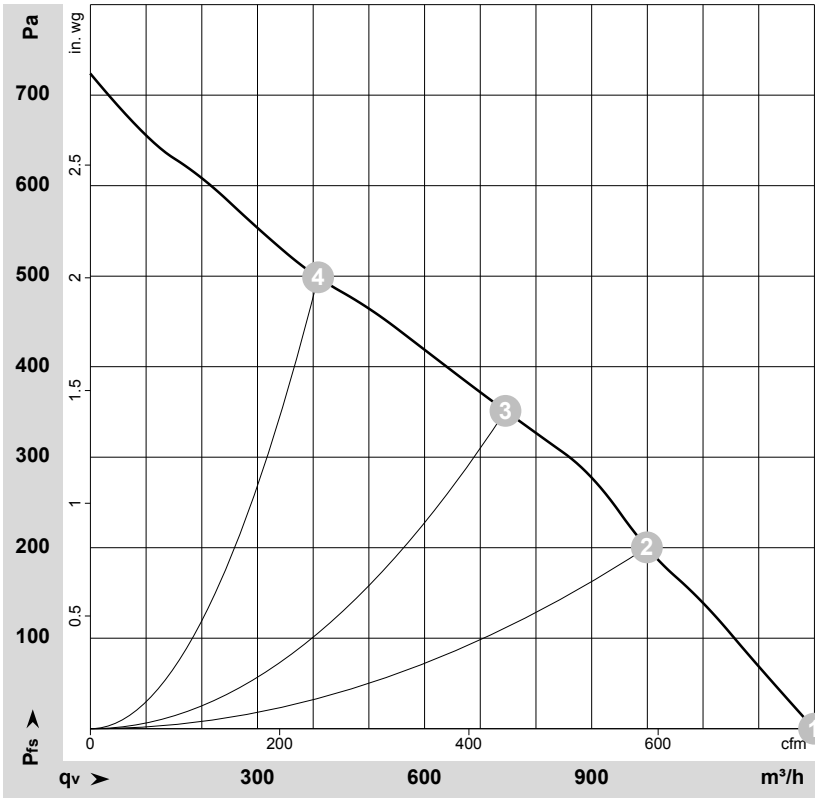


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## Curves: Air performance 60 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-127148-1

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 | $LpA_{in}$ | $LwA_{in}$ | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | V | Hz | $min^{-1}$ | W | A | dB(A) | dB(A) | $m^3/h$ | Pa | cfm | in. wg |
| 1 | 1~ | 230 | 60 | 2930 | 187 | 0.81 | 69 | 76 | 1300 | 0 | 765 | 0.00 |
| 2 | 1~ | 230 | 60 | 2700 | 210 | 0.92 | 64 | 71 | 1000 | 200 | 590 | 0.80 |
| 3 | 1~ | 230 | 60 | 2700 | 207 | 0.90 | 60 | 68 | 745 | 350 | 440 | 1.41 |
| 4 | 1~ | 230 | 60 | 2860 | 192 | 0.83 | 67 | 75 | 410 | 500 | 240 | 2.01 |

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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