**W2E250-HQ52-14**

# AC axial compact fan

sickle-shaped blades (S series), single-intake

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## Nominal data

| | |
|---|---|
| **Type** | **W2E250-HQ52-14** |
| **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 | 136 | 185 | 195 |
| Current draw | A | 0.61 | 0.82 | 0.83 |
| Capacitor | µF | 3 | 3 | 3 |
| Capacitor voltage | VDB | 400 | 400 | 400 |
| Capacitor standard | | S0 (CE) | S0 (CE) | UL |
| Max. back pressure | Pa | 120 | 130 | 130 |
| Max. back pressure | in. wg | 0.48 | 0.52 | 0.52 |
| Min. ambient temperature | °C | -25 | -25 | -25 |
| Max. ambient temperature | °C | 70 | 60 | 60 |
| Starting current | A | 1.15 | 1.07 | |

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

## Data according to Commission Regulation (EU) 327/2011

| | | Actual | Req. 2015 |
|---|---|---|---|
| 01 Overall efficiency $\eta_{es}$ | % | 29 | 28.1 |
| 02 Measurement category | | A | |
| 03 Efficiency category | | Static | |
| 04 Efficiency grade N | | 40.9 | 40 |
| 05 Variable speed drive | | No | |

| | | |
|---|---|---|
| 09 Power consumption $P_e$ | kW | 0.13 |
| 09 Air flow $q_v$ | $m^3/h$ | 1200 |
| 09 Pressure increase $p_{fs}$ | Pa | 119 |
| 10 Speed (rpm) n | $min^{-1}$ | 2510 |
| 11 Specific ratio* | | 1.00 |

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + $p_{fs}$ / 100 000 Pa

LU-156148

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## Technical description

| | |
|---|---|
| **Weight** | 3.0 kg |
| **Size** | 250 mm |
| **Motor size** | 68 |
| **Rotor surface** | Painted black |
| **Blade material** | Press-fitted sheet steel blank, sprayed with PP plastic |
| **Fan housing material** | Die-cast aluminum |
| **Number of blades** | 7 |
| **Airflow direction** | V |
| **Direction of rotation** | Counterclockwise, viewed toward rotor |
| **Degree of protection** | IP44; installation- and position-dependent |
| **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 |
| **Mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | < 0.75 mA |
| **Electrical hookup** | Via terminal strip, capacitor 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** | S0 |
| **Conformity with standards** | EN 60335-1; CE |
| **Approval** | UL 1004-3; CSA C22.2 No. 77 |

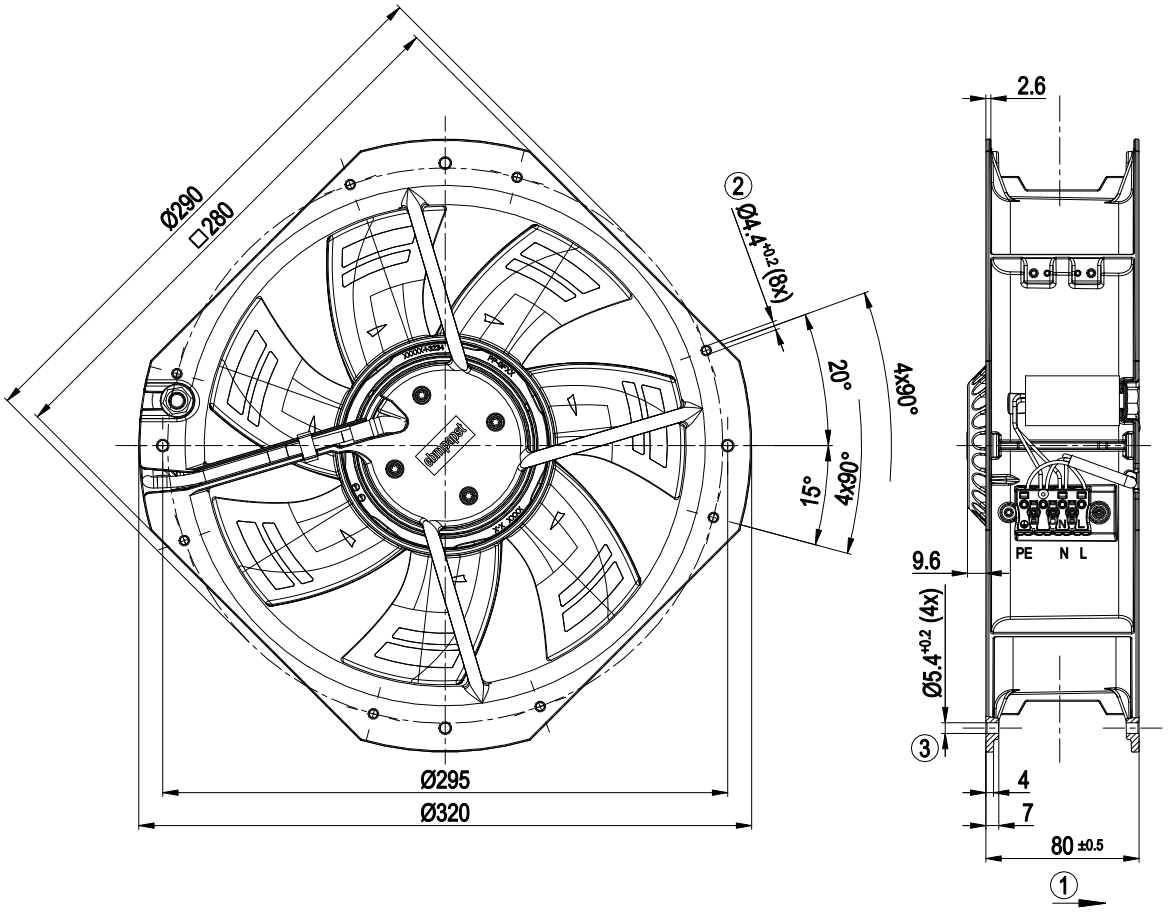


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# AC axial compact fan

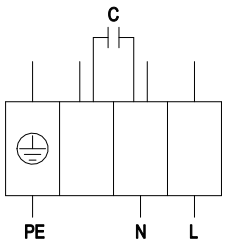
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## Product drawing




| | |
|---|---|
| 1 | Airflow direction "V" |
| 2 | For self-tapping M5 screws |
| 3 | For self-tapping M6 screws |

## Connection diagram




| | | | | | |
|---|---|---|---|---|---|
| PE | green/yellow | N | black | L | blue |

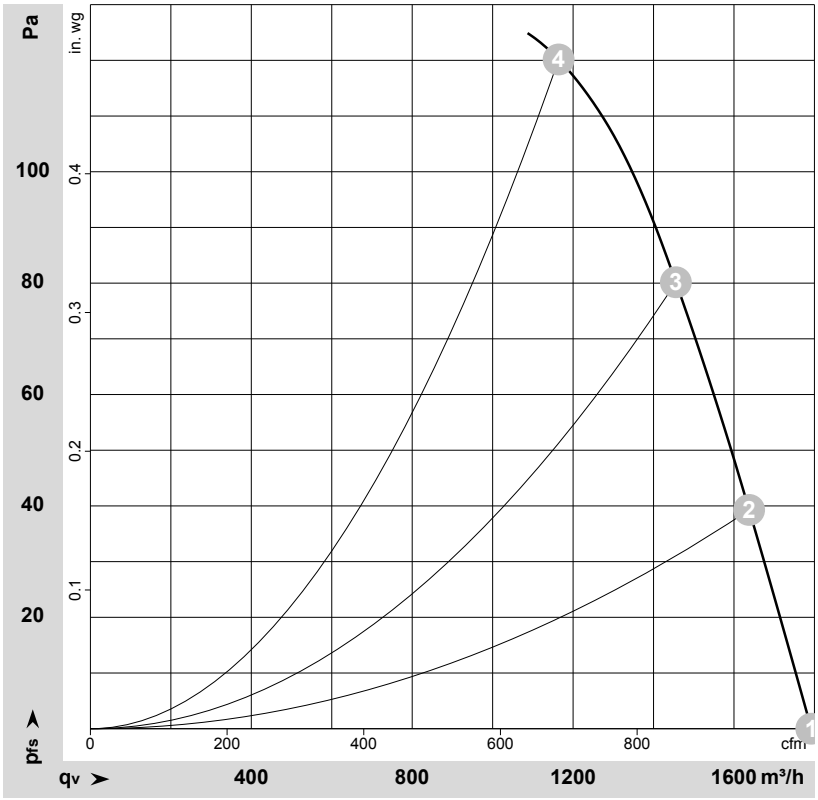


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# AC axial compact fan

sickle-shaped blades (S series), single-intake

## Curves: Air performance 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-156148-1

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 | 2685 | 108 | 0.49 | 62 | 69 | 1790 | 0 | 1055 | 0.00 |
| 2 | 1~ | 230 | 50 | 2625 | 118 | 0.53 | 63 | 69 | 1640 | 40 | 965 | 0.16 |
| 3 | 1~ | 230 | 50 | 2565 | 128 | 0.57 | 63 | 70 | 1455 | 80 | 855 | 0.32 |
| 4 | 1~ | 230 | 50 | 2500 | 136 | 0.61 | 65 | 72 | 1165 | 120 | 685 | 0.48 |

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

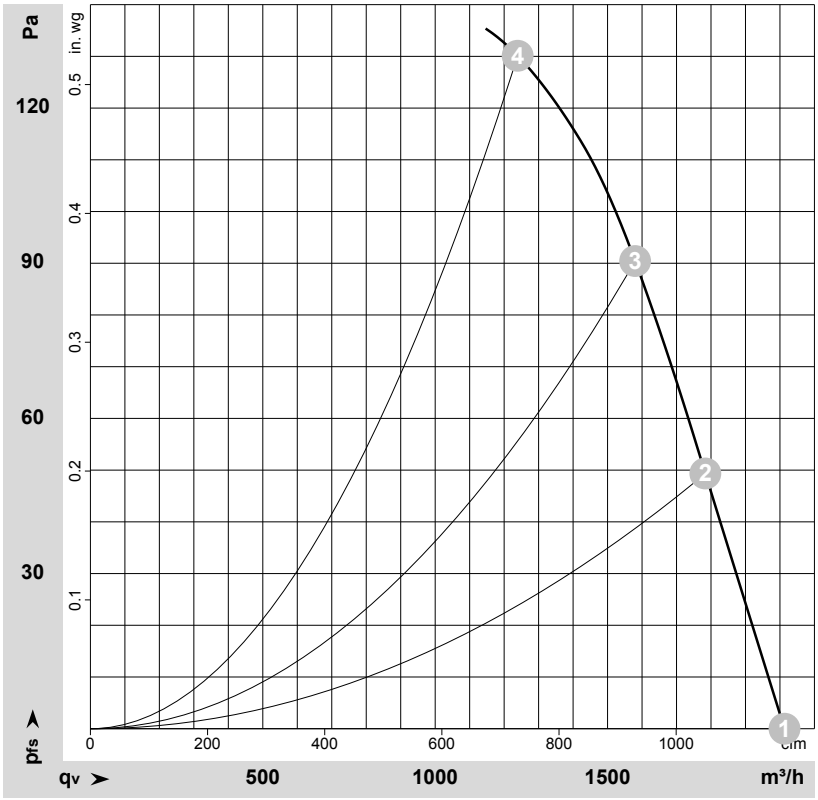


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# AC axial compact fan

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## Curves: Air performance 60 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-156200-1

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 | 2990 | 153 | 0.66 | 65 | 72 | 2015 | 0 | 1185 | 0.00 |
| 2 | 1~ | 230 | 60 | 2870 | 163 | 0.71 | 65 | 71 | 1785 | 50 | 1050 | 0.20 |
| 3 | 1~ | 230 | 60 | 2740 | 175 | 0.76 | 64 | 71 | 1580 | 90 | 930 | 0.36 |
| 4 | 1~ | 230 | 60 | 2600 | 185 | 0.82 | 68 | 75 | 1240 | 130 | 730 | 0.52 |

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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