**W2E208-BA86-51**

# AC diagonal compact fan

sickle-shaped blades (S series)



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## Nominal data

| | |
|---|---|
| **Type** | **W2E208-BA86-51** |
| **Motor** | **M2E068-CF** |

| | | | |
|---|---|---|---|
| Phase | | 1~ | 1~ |
| Nominal voltage | VAC | 115 | 115 |
| Frequency | Hz | 50 | 60 |
| Method of obtaining data | | fa | fa |
| Valid for approval/standard | | CE | CE |
| Speed (rpm) | $min^{-1}$ | 2750 | 3100 |
| Power consumption | W | 67 | 87 |
| Current draw | A | 0.7 | 0.78 |
| Capacitor | µF | 6 | 6 |
| Capacitor voltage | VDB | 220 | 220 |
| Capacitor standard | | S0 (CE) | S0 (CE) |
| Min. back pressure | Pa | 0 | 0 |
| Max. back pressure | Pa | 135 | 165 |
| Min. back pressure | inH2O | 0 | 0 |
| Max. back pressure | inH2O | 0.54 | 0.66 |
| Min. ambient temperature | °C | -25 | -25 |
| Max. ambient temperature | °C | 72 | 72 |

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** | 2.8 kg |
| **Fan size** | 208 mm |
| **Rotor surface** | Painted black |
| **Blade material** | PA plastic |
| **Fan housing material** | Die-cast aluminum, painted black |
| **Number of blades** | 5 |
| **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** | Lateral |
| **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 2111; CSA C22.2 No. 77 |

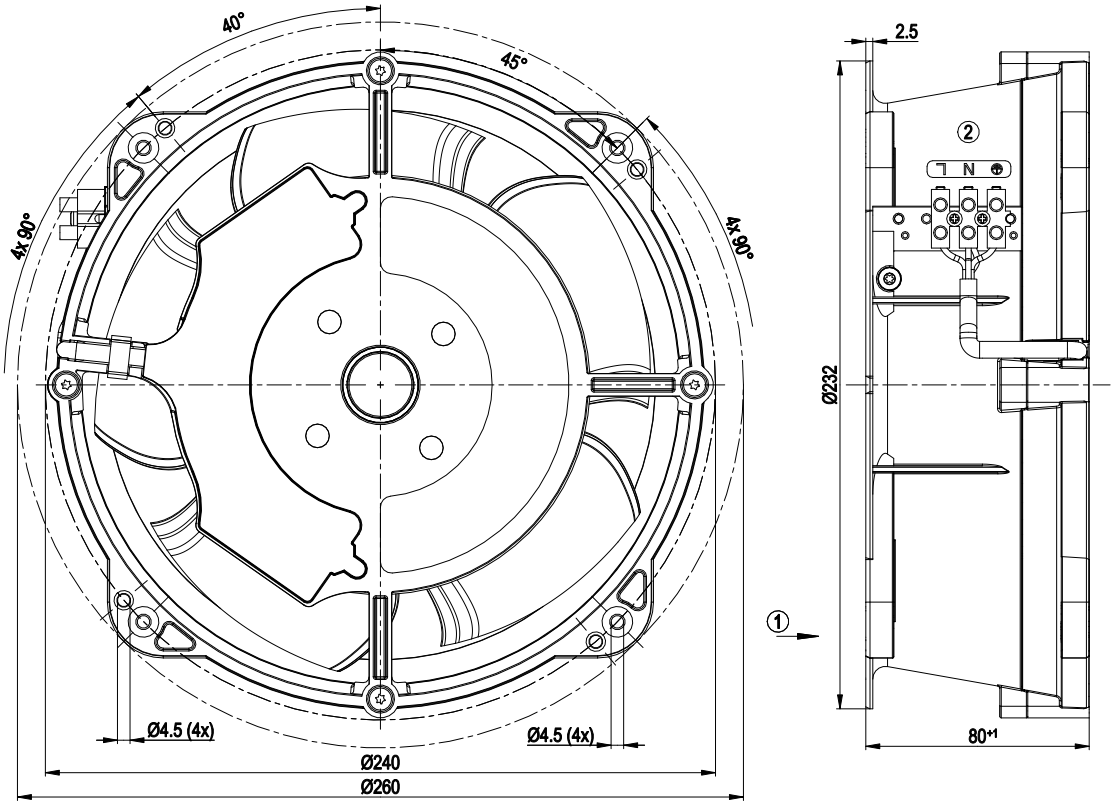


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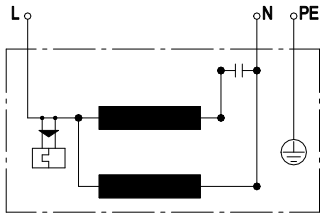
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## Product drawing




| | |
|---|---|
| 1 | Direction of air flow "V" |
| 2 | Cable PFA AWG20, 3x crimped splices |

## Connection diagram




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

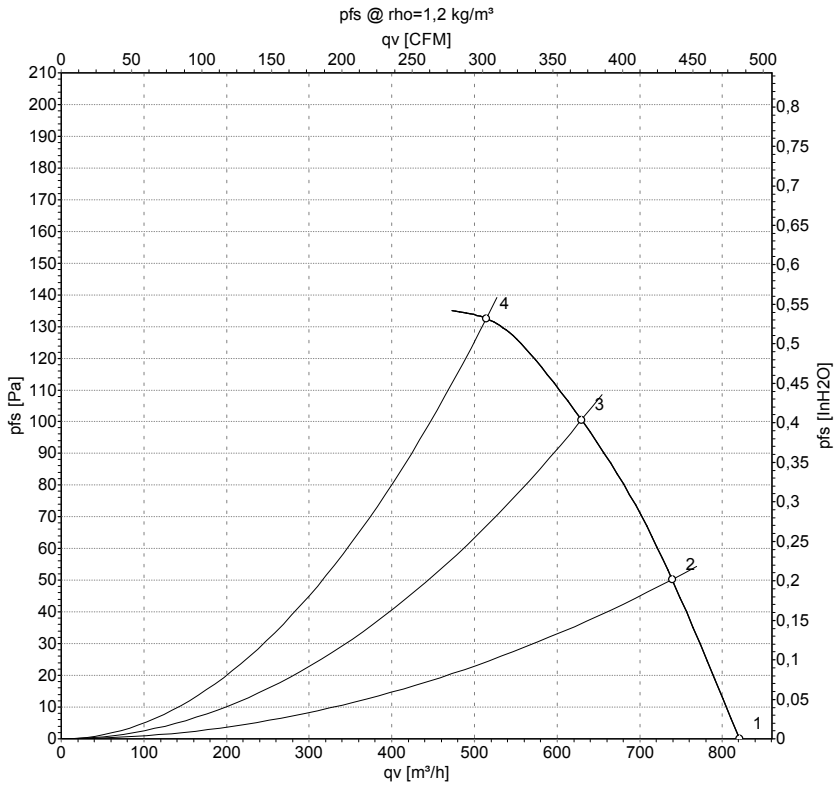


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# AC diagonal compact fan

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## Curves: Air performance 50 Hz




Measurement: LU-45967-1

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

| | 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 | 115 | 50 | 2750 | 67 | 0.70 | 820 | 0 | 485 | 0.00 |
| 2 | 115 | 50 | 2705 | 72 | 0.73 | 740 | 50 | 435 | 0.20 |
| 3 | 115 | 50 | 2675 | 76 | 0.75 | 630 | 100 | 370 | 0.40 |
| 4 | 115 | 50 | 2675 | 76 | 0.75 | 515 | 135 | 305 | 0.54 |

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

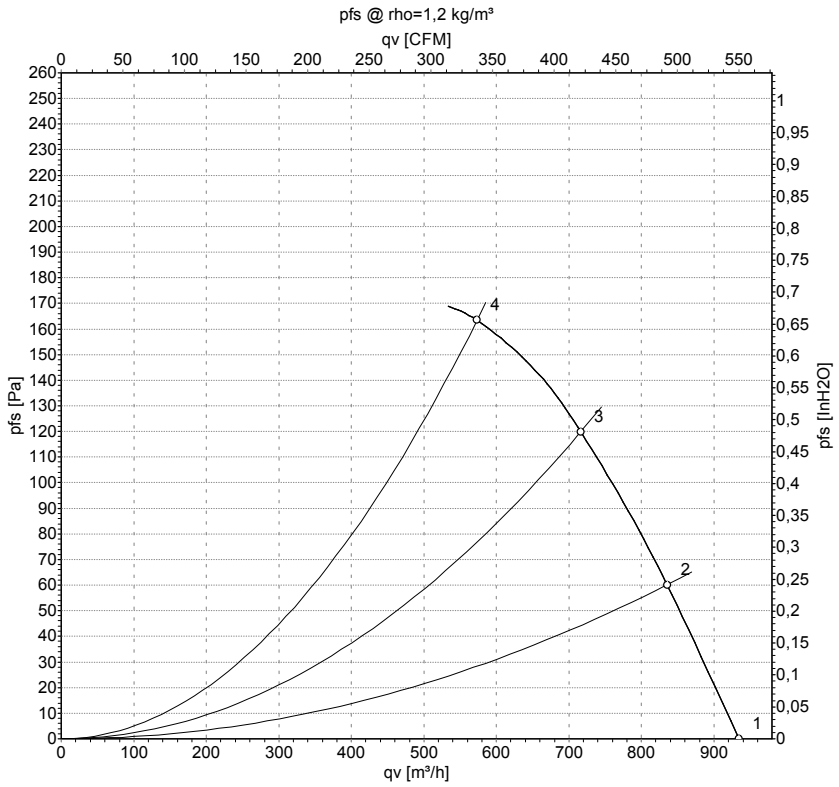


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## Curves: Air performance 60 Hz




Measurement: LU-45968-1

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

| | 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 | 115 | 60 | 3100 | 87 | 0.78 | 935 | 0 | 550 | 0.00 |
| 2 | 115 | 60 | 3040 | 92 | 0.81 | 835 | 60 | 490 | 0.24 |
| 3 | 115 | 60 | 2970 | 99 | 0.87 | 715 | 120 | 420 | 0.48 |
| 4 | 115 | 60 | 2965 | 98 | 0.87 | 575 | 165 | 335 | 0.66 |

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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