# AC axial compact fan

**ebm-papst Mulfingen GmbH & Co. KG**
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

| | | | |
|---|---|---|---|
| **Type** | **W2E143-AA09-01** | | |
| **Motor** | **M2E052-BF** | | |
| 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) | $min^{-1}$ | 2800 | 3300 |
| Power consumption | W | 24 | 26 |
| Current draw | A | 0.12 | 0.11 |
| Capacitor | µF | 0.75 | 0.75 |
| Capacitor voltage | VDB | 400 | 400 |
| Capacitor standard | | S0 (CE) | S0 (CE) |
| Min. ambient temperature | °C | -25 | -25 |
| Max. ambient temperature | °C | 70 | 70 |
| Starting current | A | 0.26 | 0.26 |

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

# AC axial compact fan

## Technical description

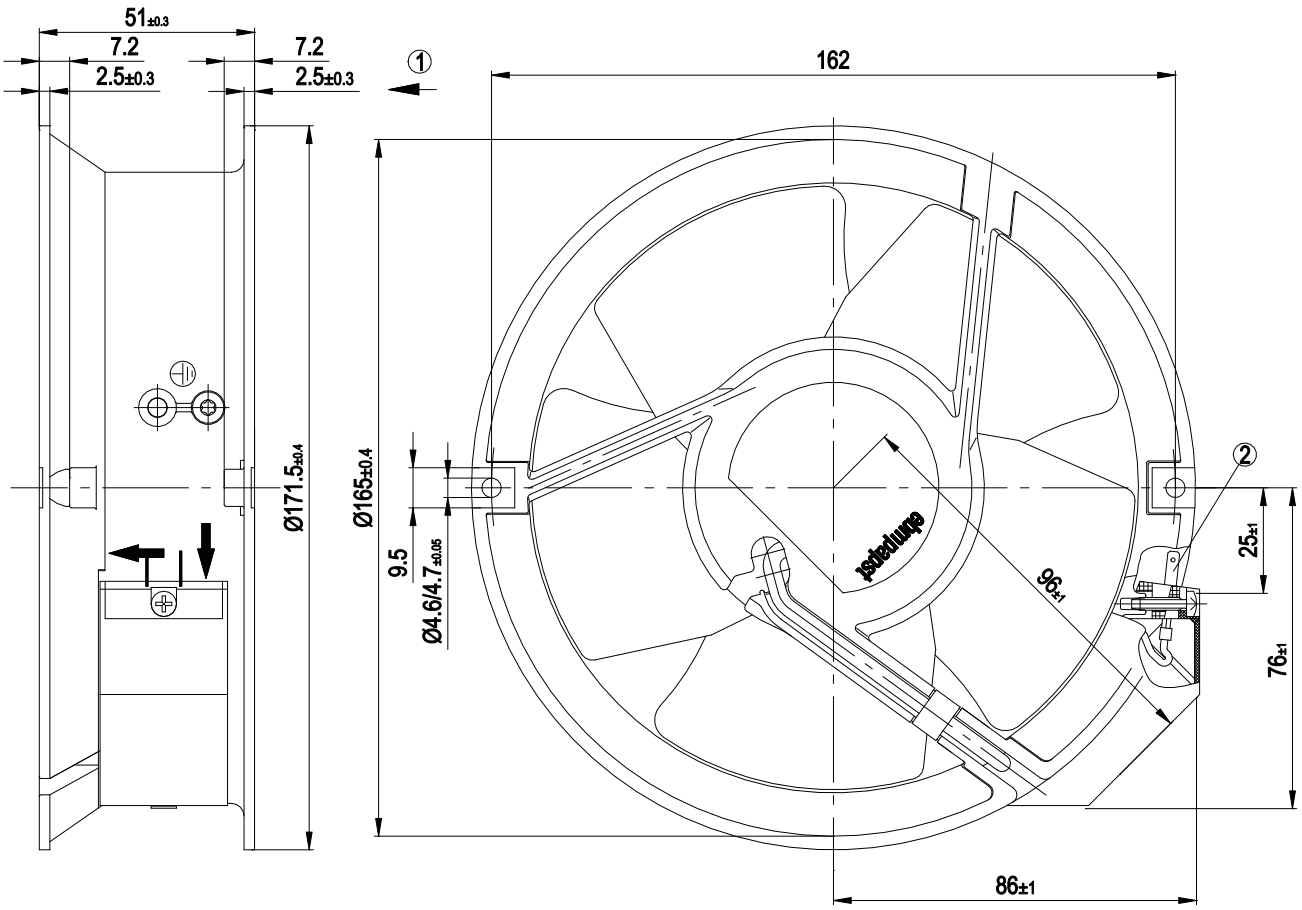
| | |
|---|---|
| **Weight** | 1.0 kg |
| **Size** | 143 mm |
| **Motor size** | 52 |
| **Rotor surface** | Rotor open, painted black |
| **Blade material** | Sheet steel, painted black |
| **Housing material** | Die-cast aluminum, painted black |
| **Number of blades** | 5 |
| **Airflow direction** | V |
| **Direction of rotation** | Counterclockwise, viewed toward rotor |
| **Degree of protection** | IP20 |
| **Insulation class** | "B" |
| **Moisture (F) / Environmental (H) protection class** | H0+ |
| **Ambient temperature note** | Occasional start-up between -40°C and -25°C is permissible.<br>For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our fan design with special low-temperature bearings. |
| **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, open rotor |
| **Mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | < 0.75 mA |
| **Electrical hookup** | Plug |
| **Motor protection** | Thermal overload protector (TOP) internally connected |
| **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** | CSA C22.2 No. 113; CCC; EAC; VDE; UL 507 |



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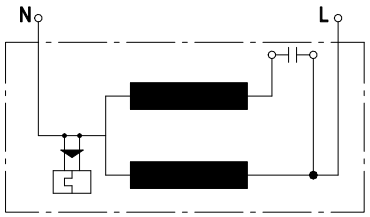
# AC axial compact fan

## Product drawing




| | |
|---|---|
| 1 | Direction of air flow "V" |
| 2 | Flat plug 2.8 x 0.5 mm |

## Connection diagram

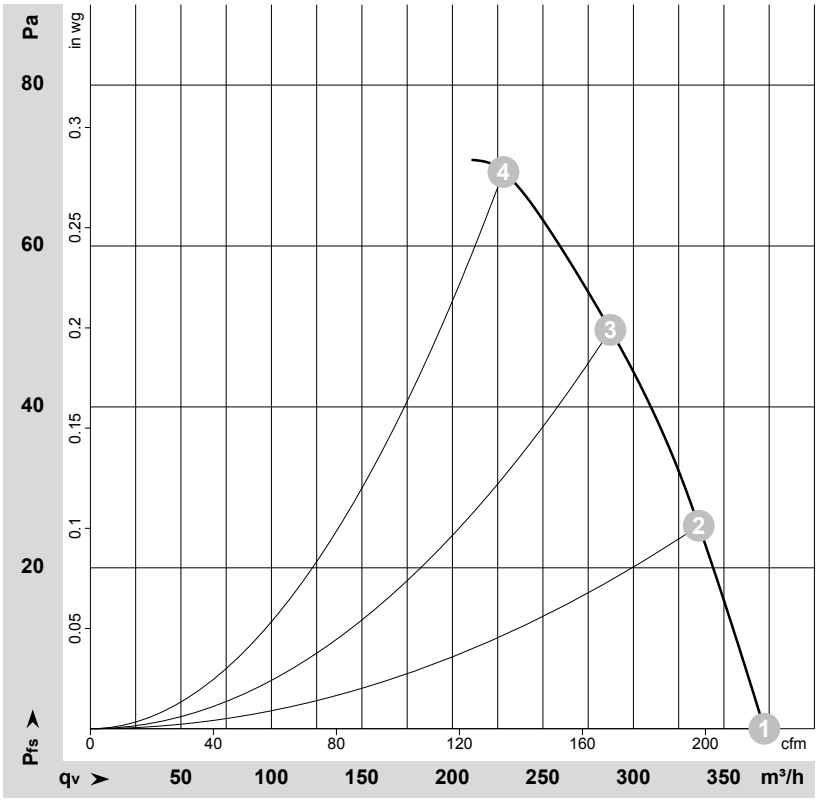





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# AC axial compact fan

## Curves: Air performance 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-26627-1

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 | in. wg |
| 1 | 230 | 50 | 2800 | 24 | 0.12 | 370 | 0 | 220 | 0.00 |
| 2 | 230 | 50 | 2840 | 25 | 0.12 | 335 | 25 | 200 | 0.10 |
| 3 | 230 | 50 | 2825 | 25 | 0.12 | 285 | 50 | 170 | 0.20 |
| 4 | 230 | 50 | 2810 | 26 | 0.13 | 230 | 70 | 135 | 0.28 |

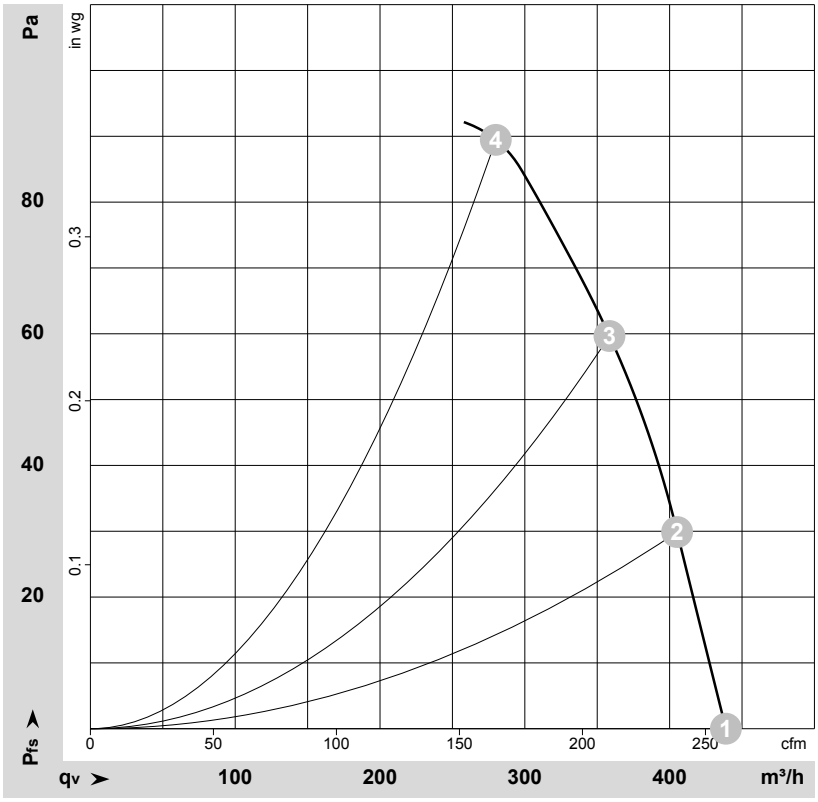
U = Voltage · f = Frequency · n = Speed (rpm) · $P_e$ = Power consumption · I = Current draw · $q_V$ = Air flow · $p_{fs}$ = Pressure increase



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# AC axial compact fan

## Curves: Air performance 60 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-26628-1

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 | in. wg |
| 1 | 230 | 60 | 3300 | 26 | 0.11 | 440 | 0 | 260 | 0.00 |
| 2 | 230 | 60 | 3350 | 28 | 0.12 | 405 | 30 | 240 | 0.12 |
| 3 | 230 | 60 | 3320 | 29 | 0.13 | 360 | 60 | 210 | 0.24 |
| 4 | 230 | 60 | 3280 | 30 | 0.13 | 280 | 90 | 165 | 0.36 |

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



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