**D2D146-AA24-23**

# AC centrifugal fan

forward curved, dual inlet

with housing (flange)

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## Nominal data

| | |
|---|---|
| **Type** | **D2D146-AA24-23** |
| **Motor** | **M2D068-EC** |

| | | | | | |
|---|---|---|---|---|---|
| Phase | | 3~ | 3~ | 3~ | 3~ |
| Nominal voltage | VAC | 230 | 230 | 400 | 400 |
| Connection | | Δ | Δ | Y | Y |
| Frequency | Hz | 50 | 60 | 50 | 60 |
| Type of data definition | | ml | ml | ml | ml |
| Valid for approval / standard | | - | - | - | - |
| Speed (rpm) | $min^{-1}$ | 1900 | 2350 | 1900 | 2350 |
| Power input | W | 265 | 250 | 265 | 250 |
| Current draw | A | 0.72 | 0.67 | 0.41 | 0.38 |
| Min. back pressure | Pa | 200 | 350 | 200 | 350 |
| Min. ambient temperature | °C | -25 | -25 | -25 | -25 |
| Max. ambient temperature | °C | 50 | 55 | 50 | 55 |
| Starting current | A | 1.35 | 1.5 | 0.78 | 0.87 |

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

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## Technical features

| | |
|---|---|
| **Mass** | 4.6 kg |
| **Size** | 146 mm |
| **Motor size** | 68 |
| **Material of impeller** | Sheet steel, hot-galvanised |
| **Housing material** | Sheet steel, hot-galvanised |
| **Motor suspension** | Motor mounted via brackets on one side |
| **Direction of rotation** | Counter-clockwise, seen on rotor |
| **Type of protection** | IP44; Depending on installation and position as per EN 60034-5 |
| **Insulation class** | "F" |
| **Humidity (F) / environmental protection class (H)** | H1 |
| **Max. permissible ambient motor temp. (transp./ storage)** | + 80 °C |
| **Min. permissible ambient motor temp. (transp./storage)** | - 40 °C |
| **Mounting position** | Shaft horizontal or rotor on bottom; rotor on top on request |
| **Condensation drainage holes** | Rotor-side |
| **Operation mode** | S1 |
| **Motor bearing** | Hybrid bearing |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | < 0.75 mA |
| **Motor protection** | Thermal overload protector (TOP) brought out, basic insulation |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 60335-1 |
| **Approval** | EAC |



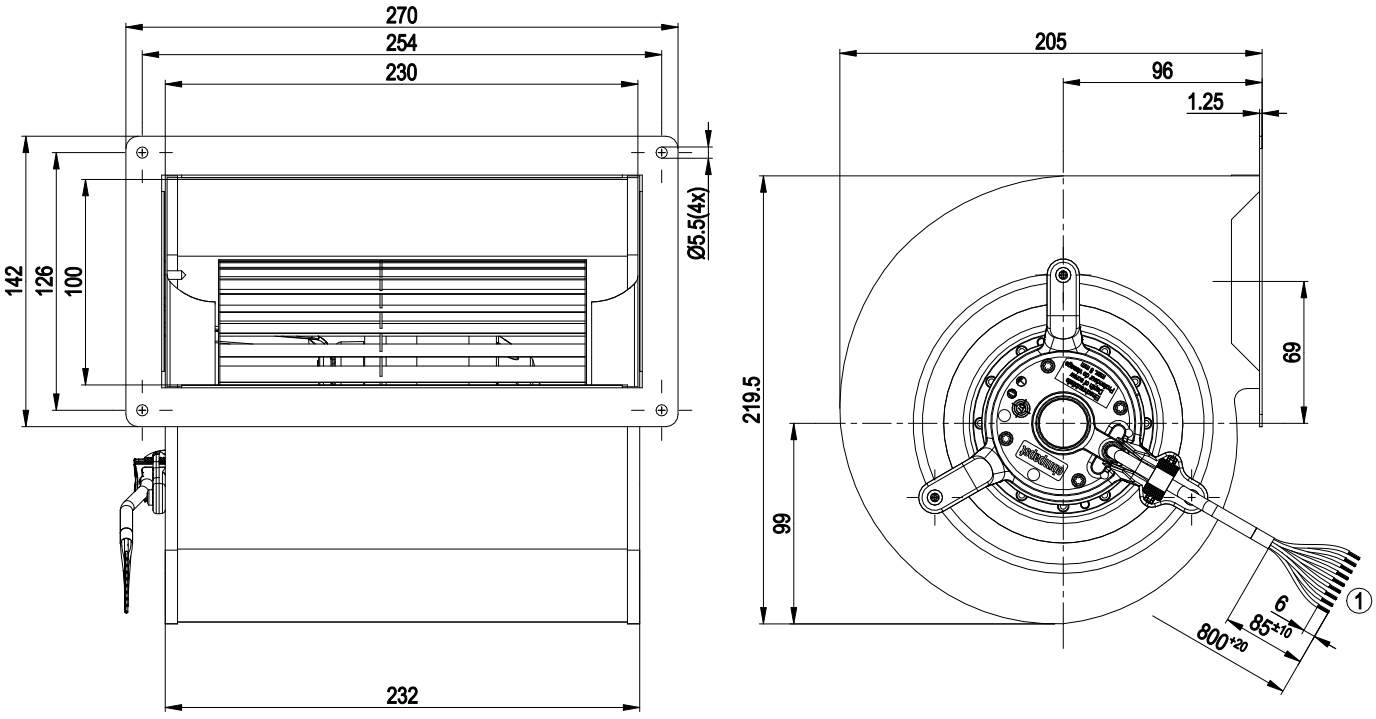
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## Product drawing




| | |
|---|---|
| 1 | Connection line Dipotherm 9G 0.5 mm², 9x brass lead tips crimped |



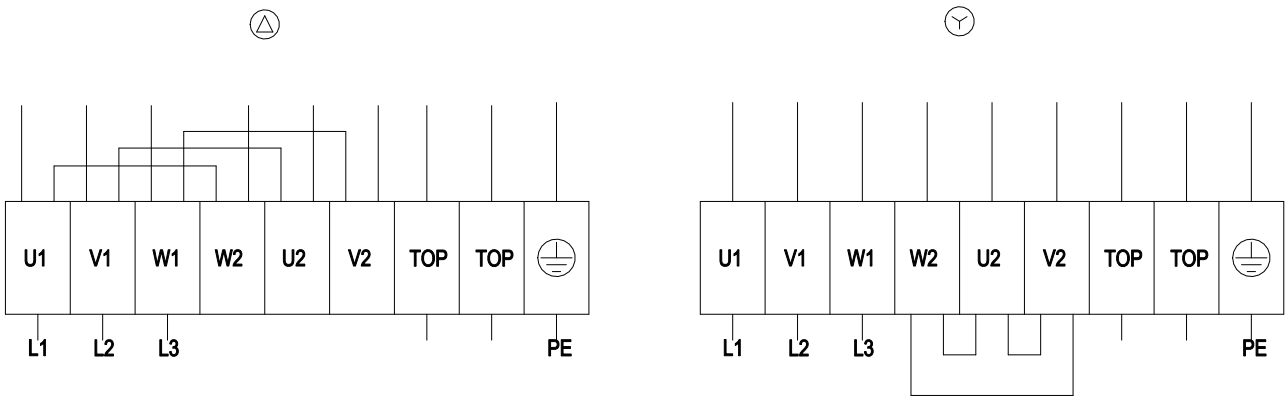
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## Connection screen




| | | | | | |
|---|---|---|---|---|---|
| Δ | Delta-connection | Y | Star connection | L1 | = U1 = black |
| L2 | = V1 = blue | L3 | = W1 = brown | W2 | yellow |
| U2 | green | V2 | white | TOP | 2 x grey |
| PE | green / yellow | | | | |



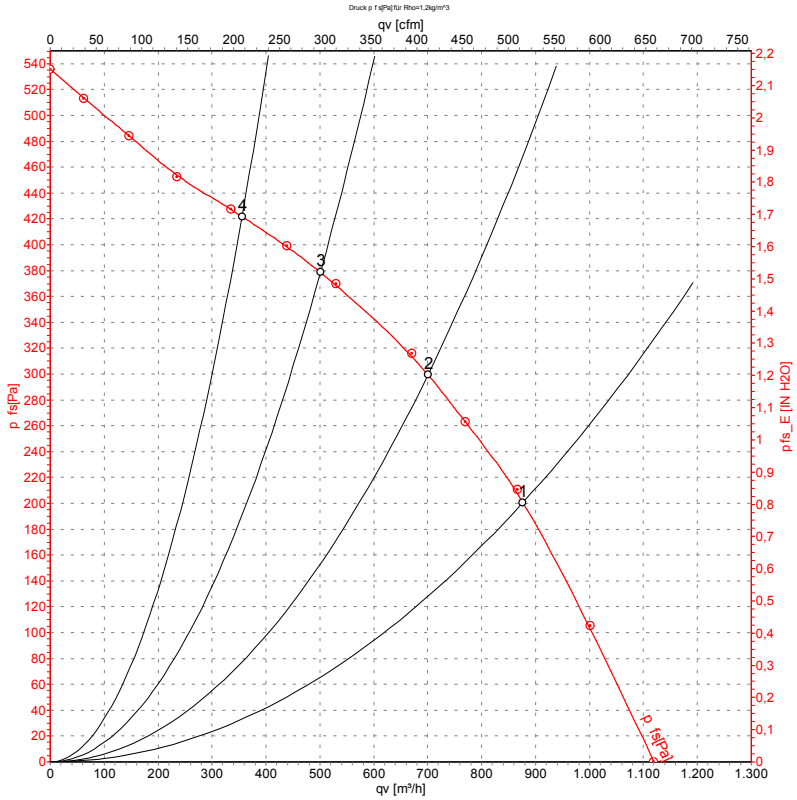
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## Charts: Air flow 50 Hz




Measurement: LU-56535-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

## 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 | 400 | 50 | 1900 | 265 | 0.41 | 875 | 200 | 515 | 0.80 |
| 2 | 400 | 50 | 2165 | 219 | 0.34 | 700 | 300 | 410 | 1.20 |
| 3 | 400 | 50 | 2430 | 167 | 0.27 | 500 | 380 | 295 | 1.53 |
| 4 | 400 | 50 | 2545 | 141 | 0.23 | 355 | 420 | 210 | 1.69 |

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



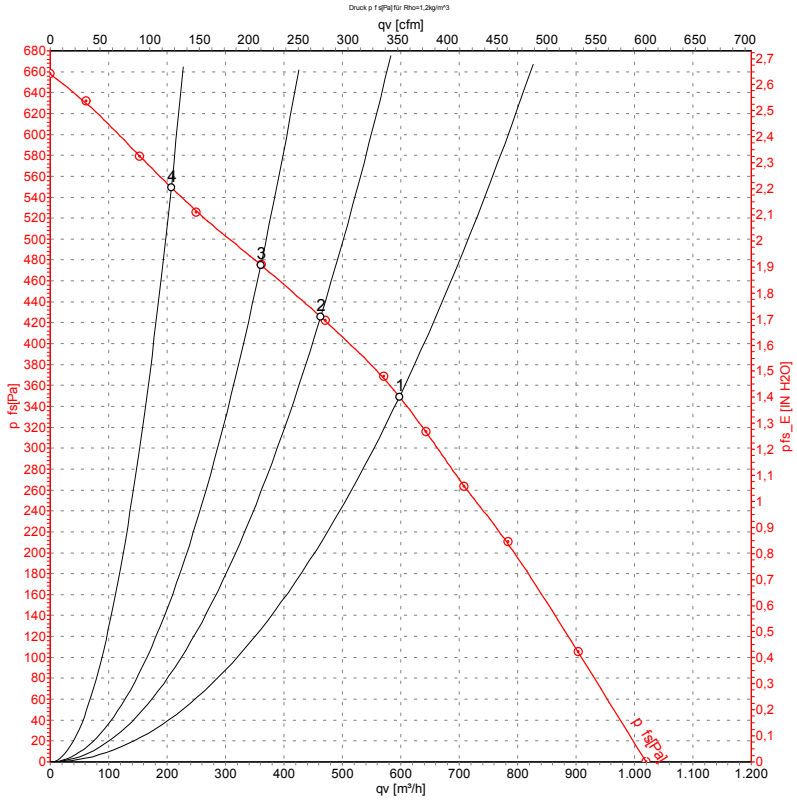
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## Charts: Air flow 60 Hz




Measurement: LU-56536-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

## 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 | 400 | 60 | 2350 | 250 | 0.38 | 600 | 350 | 350 | 1.41 |
| 2 | 400 | 60 | 2580 | 219 | 0.34 | 465 | 425 | 275 | 1.71 |
| 3 | 400 | 60 | 2715 | 197 | 0.31 | 360 | 475 | 210 | 1.91 |
| 4 | 400 | 60 | 2855 | 174 | 0.27 | 205 | 550 | 120 | 2.21 |

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



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