

AC centrifugal fan

forward-curved, dual-intake
with housing (flange)

D2D146-AA02-22 ebmpapst Datasheet FansCo

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Nominal data

| | | | |
|-----------------------------|-----------------------|----------|----------|
| Type | D2D146-AA02-22 | | |
| Motor | M2D068-EC | | |
| Phase | | 3~ | 3~ |
| Nominal voltage | VAC | 230 | 230 |
| Wiring | | Δ | Δ |
| Frequency | Hz | 50 | 60 |
| Method of obtaining data | | ml | ml |
| Valid for approval/standard | | - | - |
| Speed (rpm) | min ⁻¹ | 2250 | 2700 |
| Power consumption | W | 290 | 280 |
| Current draw | A | 0.81 | 0.76 |
| Min. back pressure | Pa | 275 | 450 |
| Min. back pressure | inH ₂ O | 1.1 | 1.81 |
| Min. ambient temperature | °C | -25 | -25 |
| Max. ambient temperature | °C | 60 | 60 |
| Starting current | A | 1.75 | 1.65 |

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



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Technical description

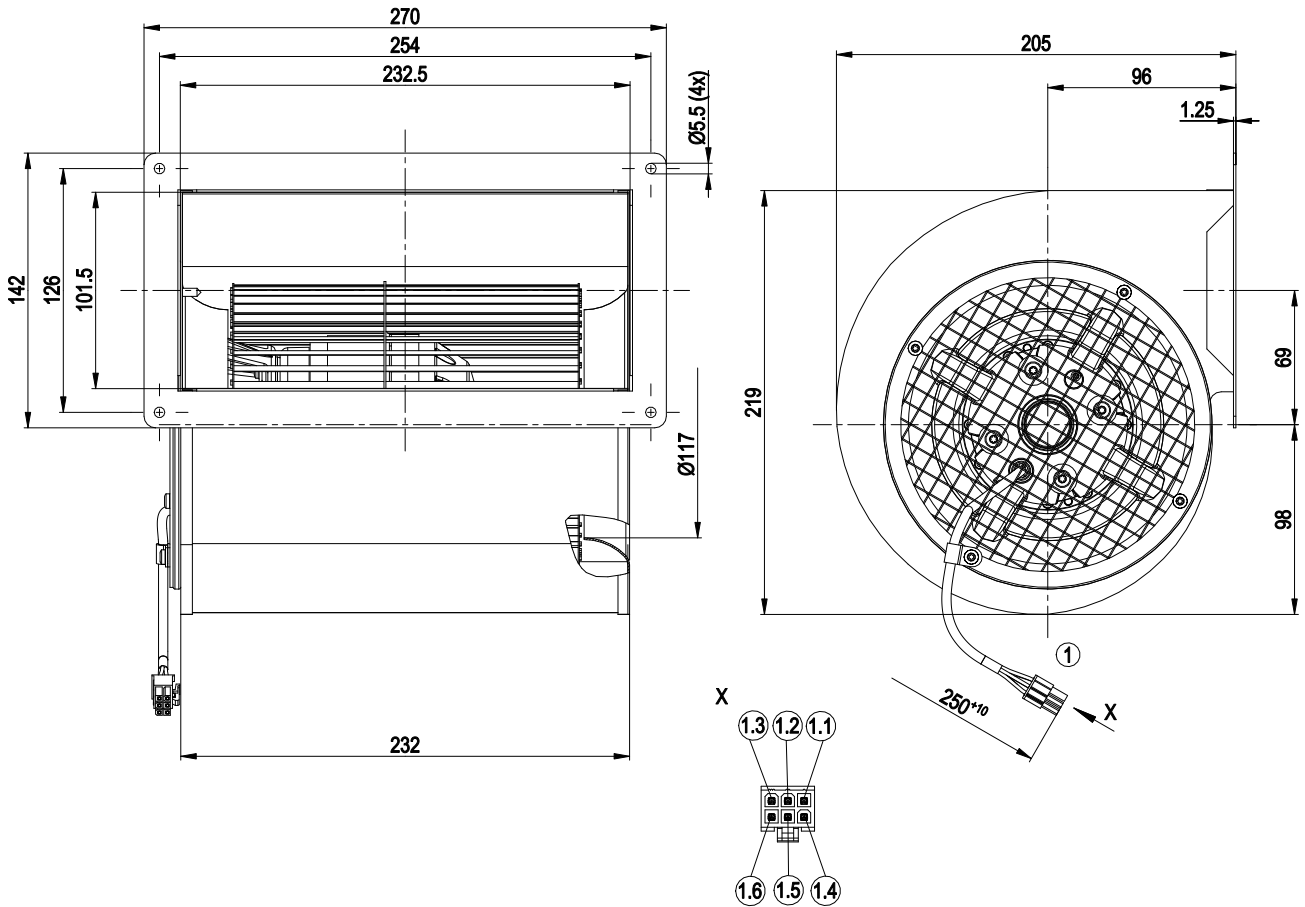
| | |
|--|--|
| Weight | 4.8 kg |
| Fan size | 146 mm |
| Rotor surface | Painted black |
| Impeller material | Sheet steel, painted black |
| Housing material | Sheet steel, galvanized |
| Guard grille material | Hot-dip galvanized and spot-welded net |
| Direction of rotation | Counterclockwise, viewed toward rotor |
| Degree of protection | IP44; installation- and position-dependent as per EN 60034-5 |
| Insulation class | "F" |
| Moisture (F) / Environmental (H) protection class | F2-2 |
| 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 |
| Electrical hookup | With plug |
| Motor protection | Thermal overload protector (TOP) with basic insulation |
| With cable | Variable |
| Protection class | I (with customer connection of protective earth) |
| Conformity with standards | EN 60335-1 |
| Approval | CSA C22.2 No. 100; UL 1004-1 |



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Product drawing



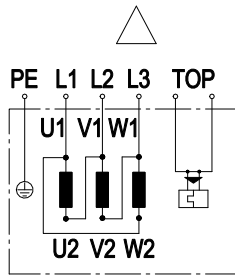
| | |
|-----|---|
| 1 | Cable PFA AWG20 (green/yellow AWG18), 6-pole connector housing Molex 46992-0610, 6x socket Molex 39-00-0059 |
| 1.1 | PE (green/yellow) |
| 1.2 | TOP (gray) |
| 1.3 | TOP (gray) |
| 1.4 | L1 (U1) black |
| 1.5 | L2 (V1) blue |
| 1.6 | L3 (W1) brown |



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Connection diagram



Note: Change of rotation direction by reversing two phases

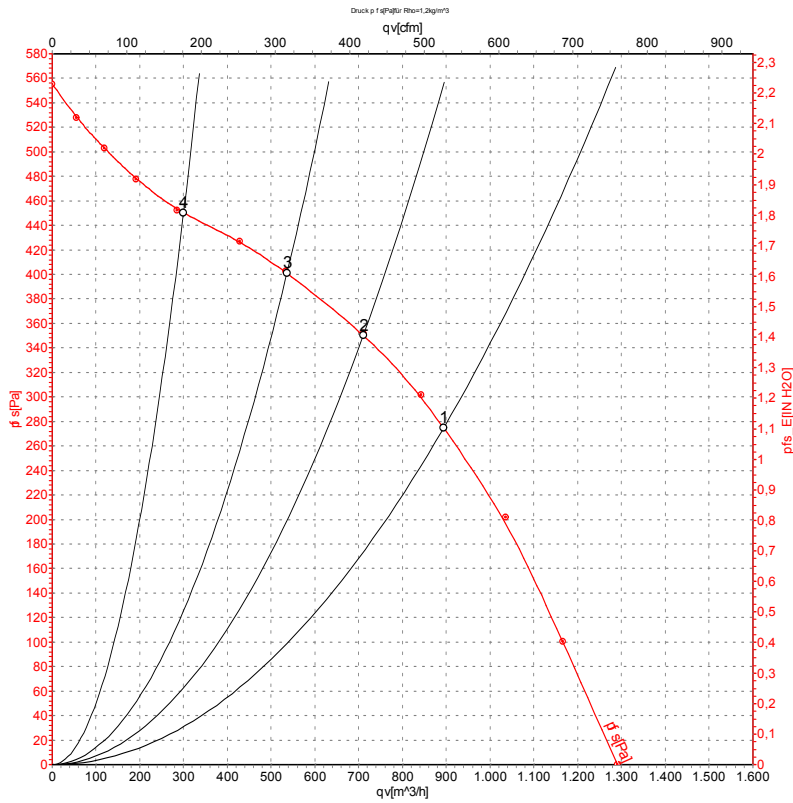
| | | | | | |
|----------|------------------|-----|--------------|----|--------------|
| Δ | Delta connection | L1 | = U1 = black | L2 | = V1 = blue |
| L3 | = W1 = brown | TOP | 2x gray | PE | green/yellow |

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Curves: Air performance 50 Hz



Measurement: LU-38467-1

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 | qv | p _{fs} | qv | p _{fs} |
|---|-----|----|-------------------|----------------|------|-------------------|-----------------|-----|--------------------|
| | V | Hz | min ⁻¹ | W | A | m ³ /h | Pa | CFM | inH ₂ O |
| 1 | 400 | 50 | 2250 | 290 | 0.47 | 895 | 275 | 525 | 1.10 |
| 2 | 400 | 50 | 2420 | 241 | 0.39 | 710 | 350 | 420 | 1.41 |
| 3 | 400 | 50 | 2540 | 201 | 0.34 | 535 | 400 | 315 | 1.61 |
| 4 | 400 | 50 | 2685 | 149 | 0.27 | 300 | 450 | 175 | 1.81 |

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

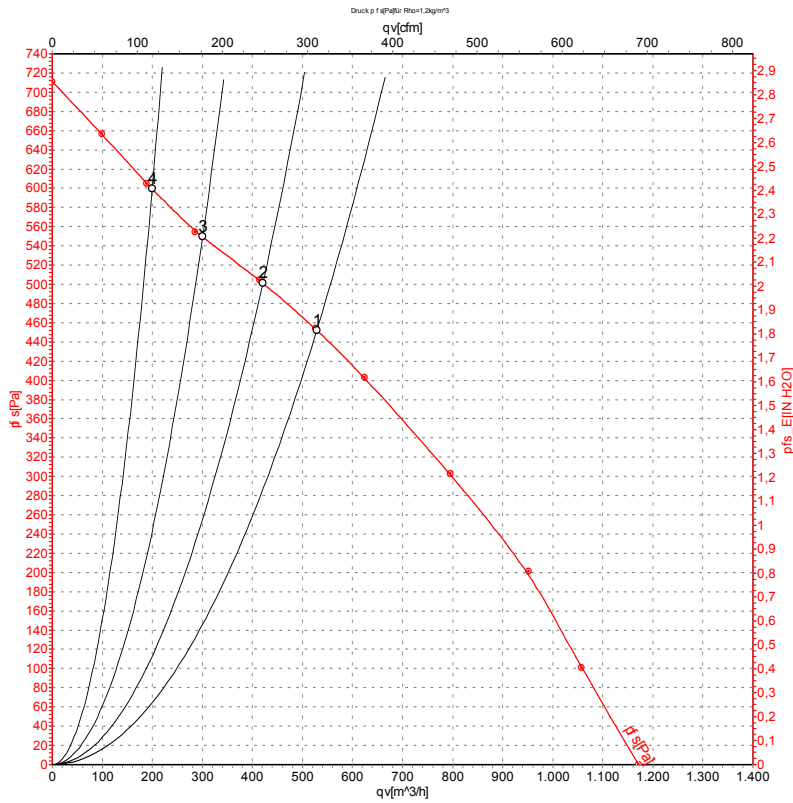


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Curves: Air performance 60 Hz



Measurement: LU-38468-1

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 | qv | p _{fs} | qv | p _{fs} |
|---|-----|----|-------------------|----------------|------|-------------------|-----------------|-----|--------------------|
| | V | Hz | min ⁻¹ | W | A | m ³ /h | Pa | CFM | inH ₂ O |
| 1 | 400 | 60 | 2700 | 280 | 0.44 | 530 | 450 | 310 | 1.81 |
| 2 | 400 | 60 | 2855 | 240 | 0.38 | 420 | 500 | 250 | 2.01 |
| 3 | 400 | 60 | 2945 | 217 | 0.35 | 300 | 550 | 175 | 2.21 |
| 4 | 400 | 60 | 3070 | 185 | 0.30 | 200 | 600 | 120 | 2.41 |

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

