**D2E133-DX73-91**

# AC centrifugal fan

forward-curved, dual-intake

with housing (without flange)

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## Nominal data

| | |
|---|---|
| **Type** | **D2E133-DX73-91** |
| **Motor** | **M2E068-DF** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Frequency | Hz | 50 |
| Method of obtaining data | | ml |
| Valid for approval/standard | | - |
| Speed (rpm) | $min^{-1}$ | 1600 |
| Power consumption | W | 200 |
| Current draw | A | 0.88 |
| Capacitor | µF | 3 |
| Capacitor voltage | VDB | 450 |
| Capacitor standard | | S2 (CE) |
| Min. back pressure | Pa | 110 |
| Min. back pressure | inH2O | 0.44 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 60 |
| Starting current | A | 0.98 |

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** | 4.1 kg |
| **Fan size** | 133 mm |
| **Rotor surface** | Unpainted |
| **Impeller material** | Sheet steel, galvanized |
| **Housing material** | Sheet steel, galvanized |
| **Motor suspension** | Motor vibration-damped on both sides |
| **Direction of rotation** | Clockwise, 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 |
| **Speed levels** | 5 |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | < 0.75 mA |
| **Electrical hookup** | Capacitor mounted |
| **Motor protection** | Thermal overload protector (TOP) internally connected |
| **With cable** | Axial |
| **Protection class** | I (with customer connection of protective earth) |
| **Motor capacitor according to EN 60252-1 in safety protection class** | S2 |
| **Conformity with standards** | EN 60335-1 |



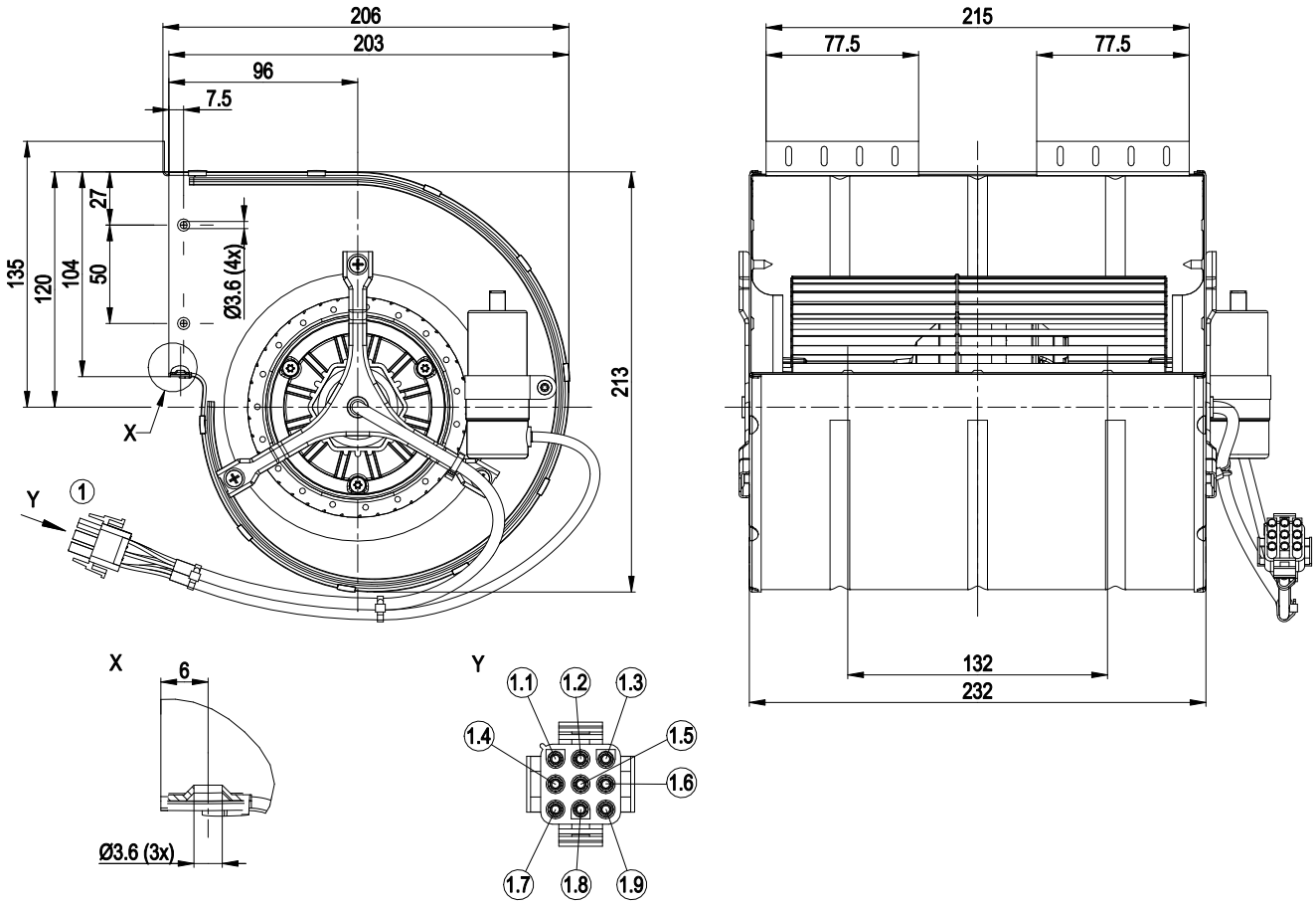
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## Product drawing




| | |
|---|---|
| 1 | Cable ETFE AWG20, 9-pole connector housing tyco 350720-4, 6x plug pin tyco 926885-1, 2x plug pin tyco 926868-3, 1x plug pin tyco 350654-1 |
| 1.1 | white |
| 1.2 | red |
| 1.3 | gray |
| 1.4 | orange |
| 1.5 | black |
| 1.6 | blue |
| 1.7 | green/yellow |
| 1.8 | yellow + capacitor |
| 1.9 | brown + capacitor |



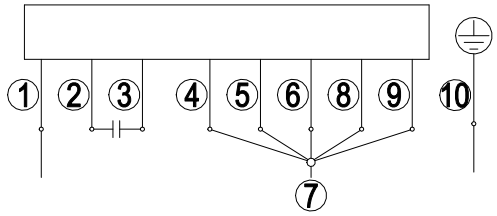
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## Connection diagram




Note: High speed (step V); low speed (step I)

| | | | | | |
|---|---|---|---|---|---|
| 1 | = N = blue | 2 | brown | 3 | yellow |
| 4 | Step I white | 5 | Step II red | 6 | Step III gray |
| 7 | L1 | 8 | Step IV orange | 9 | Step V black |
| 10 | PE | | | | |



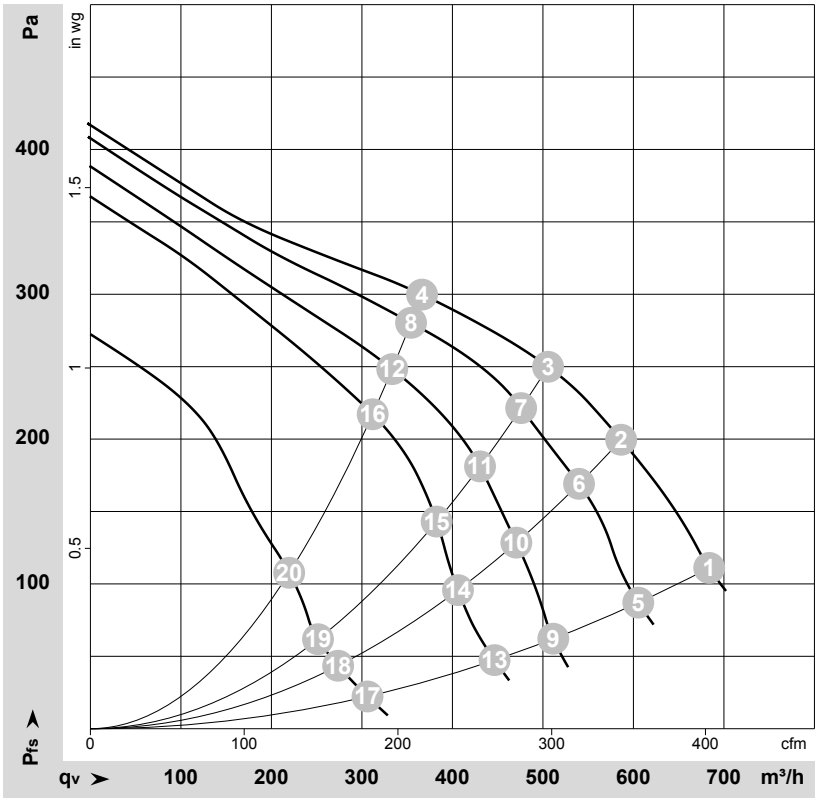
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## Curves: Air performance 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-32441-1
Measurement: LU-32442-1
Measurement: LU-32443-1
Measurement: LU-32444-1
Measurement: LU-32445-1

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

| | Stage | 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 | 5 | 230 | 50 | 1900 | 190 | 0.82 | 685 | 110 | 405 | 0.44 |
| 2 | 5 | 230 | 50 | 2155 | 176 | 0.76 | 585 | 200 | 345 | 0.80 |
| 3 | 5 | 230 | 50 | 2305 | 163 | 0.71 | 505 | 250 | 300 | 1.00 |
| 4 | 5 | 230 | 50 | 2495 | 146 | 0.63 | 365 | 300 | 215 | 1.20 |
| 5 | 4 | 230 | 50 | 1635 | 160 | 0.69 | 605 | 86 | 355 | 0.35 |
| 6 | 4 | 230 | 50 | 1965 | 148 | 0.65 | 540 | 169 | 320 | 0.68 |
| 7 | 4 | 230 | 50 | 2170 | 136 | 0.61 | 475 | 221 | 280 | 0.89 |
| 8 | 4 | 230 | 50 | 2410 | 121 | 0.55 | 355 | 280 | 210 | 1.12 |
| 9 | 3 | 230 | 50 | 1445 | 141 | 0.62 | 510 | 58 | 300 | 0.23 |
| 10 | 3 | 230 | 50 | 1735 | 134 | 0.59 | 470 | 128 | 275 | 0.51 |
| 11 | 3 | 230 | 50 | 1980 | 126 | 0.56 | 430 | 182 | 255 | 0.73 |
| 12 | 3 | 230 | 50 | 2280 | 109 | 0.51 | 335 | 251 | 195 | 1.01 |
| 13 | 2 | 230 | 50 | 1225 | 127 | 0.56 | 445 | 44 | 265 | 0.18 |
| 14 | 2 | 230 | 50 | 1510 | 122 | 0.55 | 405 | 94 | 240 | 0.38 |
| 15 | 2 | 230 | 50 | 1780 | 116 | 0.53 | 385 | 146 | 225 | 0.59 |
| 16 | 2 | 230 | 50 | 2125 | 103 | 0.48 | 310 | 217 | 185 | 0.87 |
| 17 | 1 | 230 | 50 | 825 | 98 | 0.44 | 305 | 21 | 180 | 0.08 |
| 18 | 1 | 230 | 50 | 990 | 97 | 0.44 | 275 | 39 | 160 | 0.16 |
| 19 | 1 | 230 | 50 | 1125 | 96 | 0.43 | 250 | 53 | 150 | 0.21 |
| 20 | 1 | 230 | 50 | 1515 | 91 | 0.42 | 220 | 109 | 130 | 0.44 |

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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