

D2E146-HT67-02

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

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General partner: Elektrobau Mulfingen GmbH · Headquarters Mulfingen

County court Stuttgart · HRB 590142



Nominal data

| | | | |
|-------------------------------|-----------------------|---------|---------|
| Type | D2E146-HT67-02 | | |
| Motor | M2E068-EC | | |
| Phase | | 1~ | 1~ |
| Nominal voltage | VAC | 230 | 230 |
| Frequency | Hz | 50 | 60 |
| Type of data definition | | ml | ml |
| Valid for approval / standard | | CE | CE |
| Speed | min ⁻¹ | 1850 | 2100 |
| Power input | W | 355 | 400 |
| Current draw | A | 1.55 | 1.75 |
| Motor capacitor | µF | 8 | 8 |
| Capacitor voltage | VDB | 450 | 450 |
| Capacitor standard | | P2 (CE) | P2 (CE) |
| Min. back pressure | Pa | 0 | 200 |
| Max. ambient temperature | °C | 55 | 50 |

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Data according to ErP directive

| | |
|---------------------------|--------|
| Installation category | A |
| Efficiency category | Static |
| Closed-loop speed control | No |
| Specific ratio* | 1,00 |

* Specific ratio = $1 + p_{sf} / 100\,000$

| | Actual | Request 2013 | Request 2015 |
|----------------------------------|-------------------|--------------|--------------|
| Overall efficiency η_e | 29 | 27 | 34 |
| Efficiency grade N | 39 | 37 | 44 |
| Power input P_e | kW | 0,26 | |
| Air flow q_v | m ³ /h | 700 | |
| Pressure increase Total p_{sf} | Pa | 400 | |
| Speed n | min ⁻¹ | 2435 | |

Data established at point of optimum efficiency



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Technical features

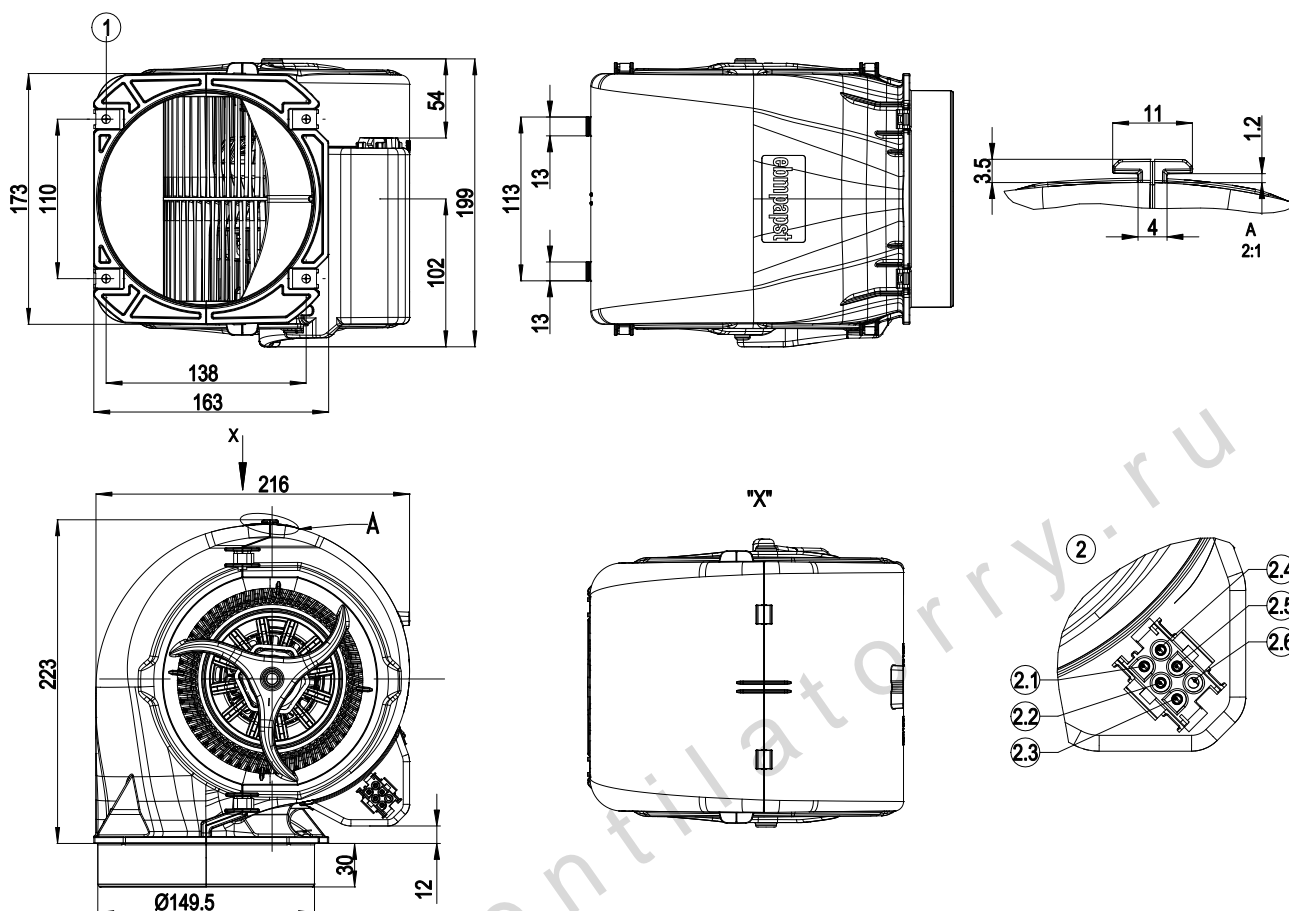
| | |
|---|--|
| Mass | 3.41 kg |
| Size | 146 mm |
| Surface of rotor | Partially cast in aluminium |
| Material of terminal box | PP plastic, black |
| Material of impeller | Sheet steel, hot-dip galvanised |
| Housing material | PP plastic, black |
| Motor suspension | Motor mounted with anti-vibration on both sides |
| Direction of rotation | Counter-clockwise, seen on rotor |
| Type of protection | IP 20 |
| Insulation class | "F" |
| Humidity class | F0 |
| Max. permissible ambient motor temp. (transp./ storage) | + 80 °C |
| Min. permissible ambient motor temp. (transp./storage) | - 40 °C |
| Mounting position | Any |
| Condensate discharge holes | None, open rotor |
| Operation mode | S1 |
| Motor bearing | Ball bearing |
| Speed steps | 4 |
| Leakage current | < 0.75 mA |
| Electrical leads | With plug; Via terminal box, integrated capacitor connected via terminal box |
| Motor protection | Thermal overload protector (TOP) wired internally |
| Cable exit | Variable |
| Protection class | I (if protective earth is connected by customer) |
| Product conforming to standard | EN 60335-2-31; CE |
| Approval | CCC; VDE |

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Product drawing



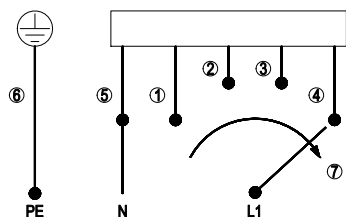
| | |
|-----|--|
| 1 | 4x sheet metal nut for thread EN ISO 1478-ST 4.8 (min. screw length 14.5 mm plus thickness of mounting material) |
| 2 | AMP Universal Mate-N-Lok coded plug system; connector shell: AMP 926 682-3; 6x plug pin: AMP 926 886-1 |
| 2.1 | L = step 1 |
| 2.2 | L = step 2 |
| 2.3 | L = step 3 |
| 2.4 | L = step 4 |
| 2.5 | N |
| 2.6 | Protective earth |

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Connection screen



When changing speeds, switch must break the circuit

| | | | | | |
|---|----------------|---|--------|---|---------------------|
| 1 | Step 1 (min.) | 2 | Step 2 | 3 | Step 3 |
| 4 | Step 4 (max.) | 5 | N | 6 | PE protective earth |
| 7 | Speed increase | | | | |

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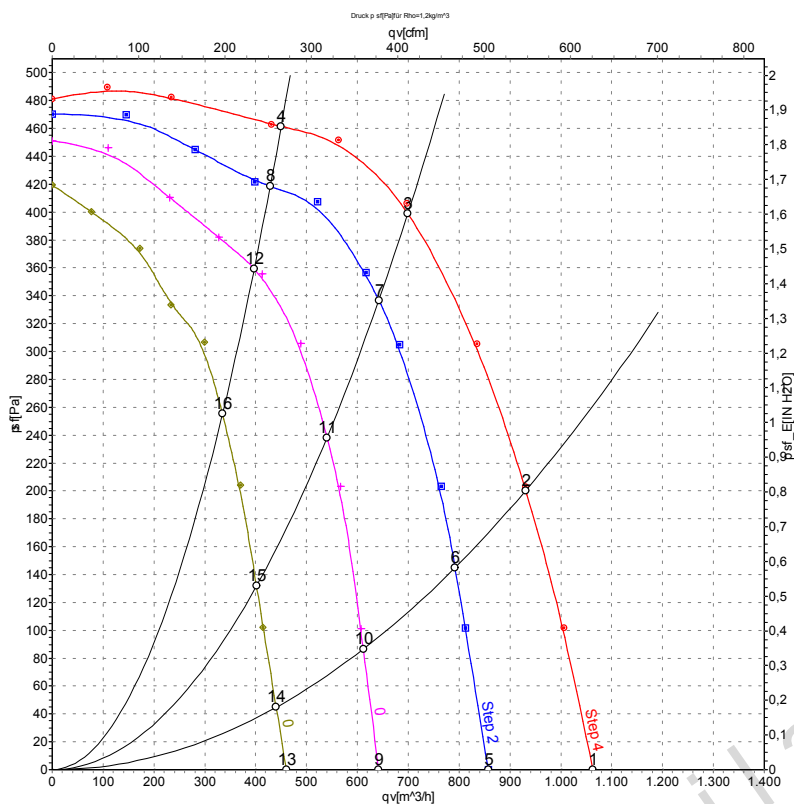


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Charts: Air flow 50 Hz



Measurement: LU-45713
Measurement: LU-45715
Measurement: LU-45717
Measurement: LU-45719

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

| | Stage | U | f | n | Pe | I | qv | Psf |
|----|-------|-----|----|-------------------|-----|------|-------------------|-----|
| | | V | Hz | min ⁻¹ | W | A | m ³ /h | Pa |
| 1 | 4 | 230 | 50 | 1850 | 355 | 1.55 | 1060 | 0 |
| 2 | 4 | 230 | 50 | 2150 | 318 | 1.38 | 930 | 200 |
| 3 | 4 | 230 | 50 | 2435 | 268 | 1.16 | 700 | 400 |
| 4 | 4 | 230 | 50 | 2610 | 227 | 0.99 | 450 | 460 |
| 5 | 3 | 230 | 50 | 1550 | 286 | 1.27 | 855 | 0 |
| 6 | 3 | 230 | 50 | 1850 | 261 | 1.18 | 790 | 145 |
| 7 | 3 | 230 | 50 | 2235 | 222 | 1.03 | 640 | 337 |
| 8 | 3 | 230 | 50 | 2515 | 179 | 0.87 | 430 | 418 |
| 9 | 2 | 230 | 50 | 1195 | 233 | 1.06 | 640 | 0 |
| 10 | 2 | 230 | 50 | 1455 | 222 | 1.02 | 610 | 88 |
| 11 | 2 | 230 | 50 | 1890 | 196 | 0.94 | 540 | 239 |
| 12 | 2 | 230 | 50 | 2315 | 158 | 0.81 | 395 | 360 |
| 13 | 1 | 230 | 50 | 875 | 195 | 0.89 | 460 | 0 |
| 14 | 1 | 230 | 50 | 1055 | 191 | 0.88 | 440 | 45 |
| 15 | 1 | 230 | 50 | 1420 | 179 | 0.84 | 400 | 132 |
| 16 | 1 | 230 | 50 | 1965 | 151 | 0.76 | 335 | 255 |



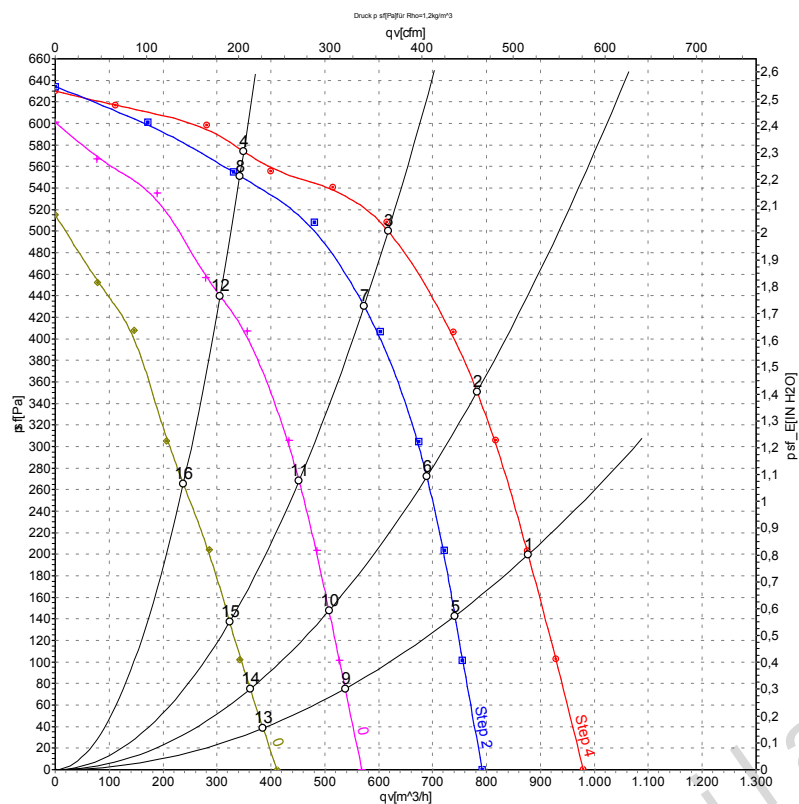
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Charts: Air flow 60 Hz



Measurement: LU-45714
 Measurement: LU-45716
 Measurement: LU-45718
 Measurement: LU-45720

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. 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

| | Stage | U | f | n | P _e | I | qv | P _{sf} |
|----|-------|-----|----|-------------------|----------------|------|-------------------|-----------------|
| | | V | Hz | min ⁻¹ | W | A | m ³ /h | Pa |
| 1 | 4 | 230 | 60 | 2100 | 400 | 1.75 | 875 | 200 |
| 2 | 4 | 230 | 60 | 2360 | 384 | 1.67 | 780 | 350 |
| 3 | 4 | 230 | 60 | 2685 | 360 | 1.58 | 620 | 500 |
| 4 | 4 | 230 | 60 | 2935 | 335 | 1.48 | 350 | 575 |
| 5 | 3 | 230 | 60 | 1780 | 296 | 1.37 | 740 | 143 |
| 6 | 3 | 230 | 60 | 2085 | 284 | 1.34 | 690 | 273 |
| 7 | 3 | 230 | 60 | 2495 | 260 | 1.29 | 575 | 432 |
| 8 | 3 | 230 | 60 | 2870 | 226 | 1.22 | 345 | 552 |
| 9 | 2 | 230 | 60 | 1325 | 228 | 1.10 | 540 | 75 |
| 10 | 2 | 230 | 60 | 1560 | 222 | 1.09 | 510 | 148 |
| 11 | 2 | 230 | 60 | 1990 | 210 | 1.07 | 450 | 268 |
| 12 | 2 | 230 | 60 | 2575 | 181 | 1.02 | 305 | 439 |
| 13 | 1 | 230 | 60 | 950 | 187 | 0.92 | 385 | 38 |
| 14 | 1 | 230 | 60 | 1105 | 185 | 0.91 | 360 | 74 |
| 15 | 1 | 230 | 60 | 1400 | 180 | 0.90 | 325 | 137 |
| 16 | 1 | 230 | 60 | 1985 | 165 | 0.88 | 240 | 265 |

