

Nominal data

| | | | |
|-------------------------------|-------------------|---------|---------|
| Type | D2E146-HT59-02 | | |
| Motor | M2E068-EC | | |
| Phase | | 1~ | 1~ |
| Nominal voltage | VAC | 230 | 230 |
| Frequency | Hz | 50 | 60 |
| Type of data definition | | fa | fa |
| Valid for approval / standard | | CE | CE |
| Speed | min ⁻¹ | 1600 | 1500 |
| Power input | W | 290 | 320 |
| Current draw | A | 1.28 | 1.4 |
| Motor capacitor | μF | 6 | 6 |
| Capacitor voltage | VDB | 400 | 400 |
| Capacitor standard | | P2 (CE) | P2 (CE) |
| Min. back pressure | Pa | 0 | 0 |
| Min. ambient temperature | °C | -25 | -25 |
| Max. ambient temperature | °C | 50 | 40 |
| Starting current | A | 1.48 | 1.5 |

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

| | | Actual | Request 2013 | Request 2015 |
|--------------------------------|-------------------|--------|--------------|--------------|
| Installation category | A | | | |
| Efficiency category | Static | | | |
| Variable speed drive | No | | | |
| Specific ratio* | 1.00 | | | |
| Overall efficiency η_{es} | % | 33.3 | 26.3 | 33.3 |
| Efficiency grade N | | 44 | 37 | 44 |
| Power input P_e | kW | 0.2 | | |
| Air flow q_v | m ³ /h | 630 | | |
| Pressure increase p_{fs} | Pa | 379 | | |
| Speed n | min ⁻¹ | 2410 | | |

Data definition with optimum efficiency. LU-156752
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

D2E146-HT59-02

AC centrifugal fan

forward curved, dual inlet
with housing (flange)

Technical features

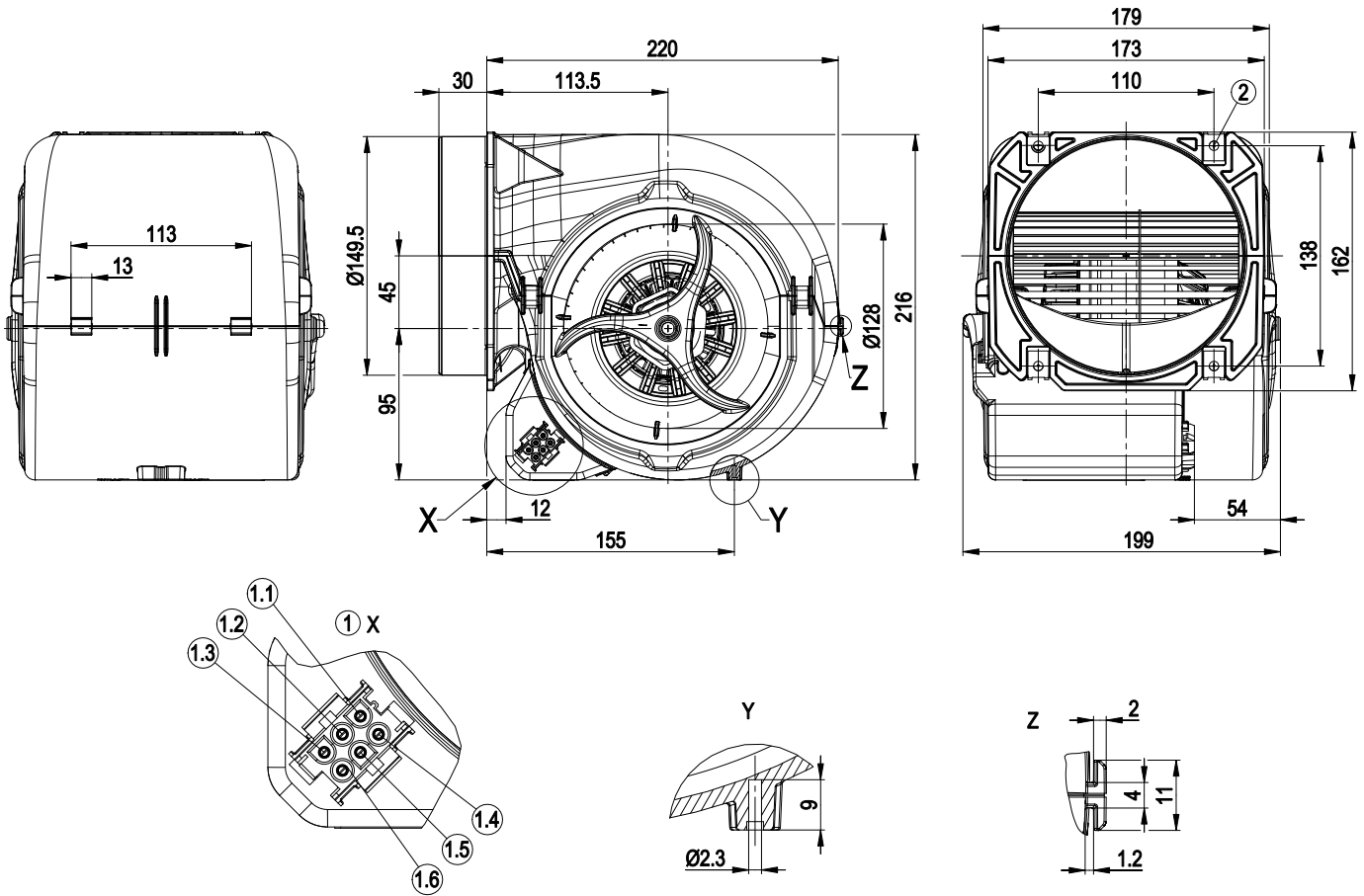
| | |
|--|--|
| Mass | 3.4 kg |
| Size | 146 mm |
| Surface of rotor | Partially cast in aluminium |
| Material of terminal box | PP plastic |
| Material of impeller | Sheet steel, galvanised |
| Housing material | PP plastic |
| Motor suspension | Motor mounted anti-vibration on both sides |
| Direction 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 |
| Touch current acc. IEC 60990 (measuring network Fig. 4, TN system) | < 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 | VDE |

D2E146-HT59-02

AC centrifugal fan

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Product drawing



1 Coded plug system AMP Universal-Mate-N-Lok; connector housing: AMP 926 682-3; 6x plug pin AMP 926 886-1

1.1 L = Level 1

1.2 L = Level 2

1.3 L = Level 3

1.4 L = Level 4

1.5 N

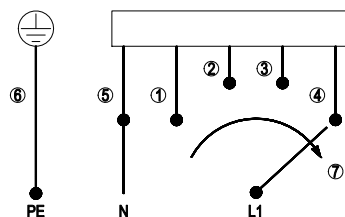
1.6 Protective earth

2 4x sheet metal nut for thread EN ISO 1478-ST 4.8 (min. screw length 14.5 mm plus thickness of mounting material)

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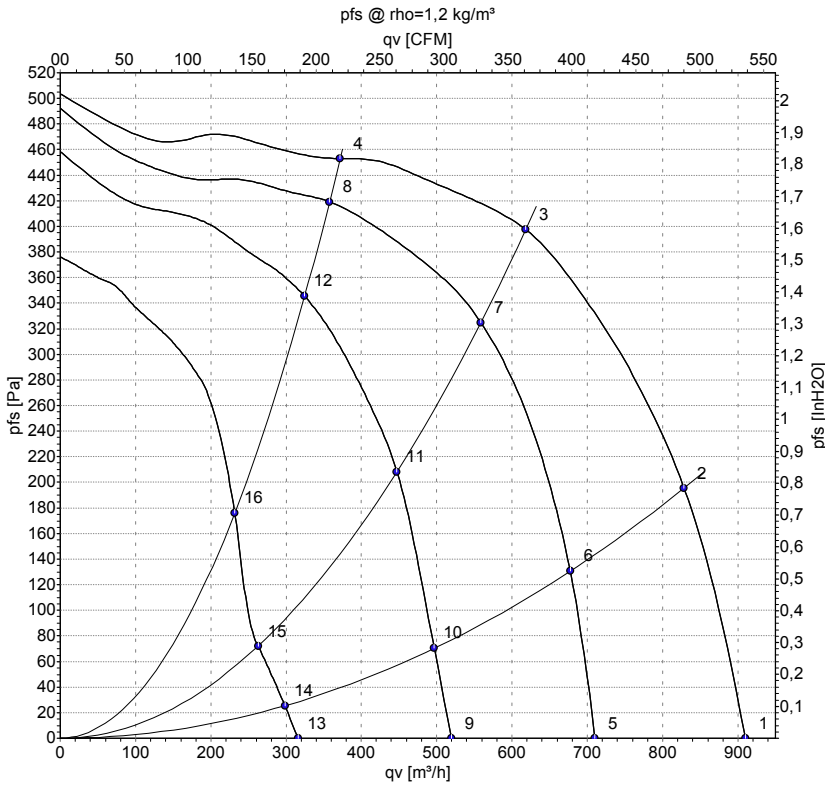
Connection screen



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 | | | | |

Charts: Air flow 50 Hz



Measurement: LU-156752
 Measurement: LU-156754
 Measurement: LU-156757
 Measurement: LU-156762

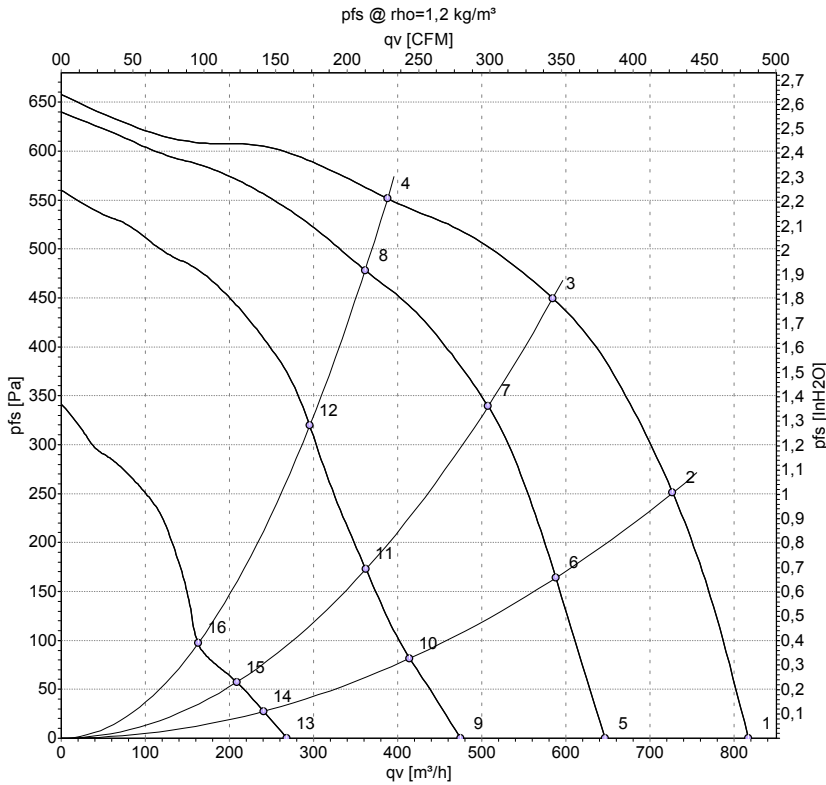
Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions 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 | LpA _{in} | LwA _{in} | qv | p _{fs} |
|----|-----|----|-------------------|----------------|------|-------------------|-------------------|-------------------|-----------------|
| | V | Hz | min ⁻¹ | W | A | dB(A) | dB(A) | m ³ /h | Pa |
| 1 | 230 | 50 | 1600 | 290 | 1.28 | 62 | 73 | 910 | 0 |
| 2 | 230 | 50 | 2020 | 256 | 1.12 | 61 | 73 | 830 | 200 |
| 3 | 230 | 50 | 2420 | 203 | 0.89 | 60 | 72 | 620 | 400 |
| 4 | 230 | 50 | 2645 | 161 | 0.70 | 63 | 74 | 370 | 450 |
| 5 | 230 | 50 | 1280 | 247 | 1.08 | 56 | 67 | 710 | 0 |
| 6 | 230 | 50 | 1665 | 226 | 0.99 | 56 | 68 | 675 | 133 |
| 7 | 230 | 50 | 2210 | 183 | 0.83 | 59 | 70 | 560 | 325 |
| 8 | 230 | 50 | 2550 | 140 | 0.66 | 63 | 74 | 360 | 421 |
| 9 | 230 | 50 | 960 | 203 | 0.89 | 48 | 59 | 520 | 0 |
| 10 | 230 | 50 | 1235 | 196 | 0.87 | 49 | 60 | 495 | 70 |
| 11 | 230 | 50 | 1805 | 174 | 0.78 | 53 | 65 | 445 | 214 |
| 12 | 230 | 50 | 2330 | 133 | 0.63 | 60 | 71 | 325 | 345 |
| 13 | 230 | 50 | 595 | 163 | 0.72 | 36 | 47 | 315 | 0 |
| 14 | 230 | 50 | 765 | 160 | 0.71 | 36 | 47 | 300 | 26 |
| 15 | 230 | 50 | 1065 | 154 | 0.68 | 40 | 52 | 265 | 72 |
| 16 | 230 | 50 | 1675 | 138 | 0.63 | 51 | 62 | 230 | 181 |

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = Air flow
 p_e = Pressure increase

Charts: Air flow 60 Hz



Measurement: LU-156771
 Measurement: LU-156772
 Measurement: LU-156773
 Measurement: LU-156774

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 | LpA _{in} | LwA _{in} | qv | p _{fs} |
|----|-----|----|-------------------|----------------|------|-------------------|-------------------|-------------------|-----------------|
| | V | Hz | min ⁻¹ | W | A | dB(A) | dB(A) | m ³ /h | Pa |
| 1 | 230 | 60 | 1500 | 320 | 1.40 | 60 | 71 | 815 | 0 |
| 2 | 230 | 60 | 2085 | 296 | 1.28 | 60 | 71 | 725 | 250 |
| 3 | 230 | 60 | 2570 | 267 | 1.17 | 62 | 73 | 585 | 450 |
| 4 | 230 | 60 | 2930 | 236 | 1.06 | 65 | 77 | 390 | 550 |
| 5 | 230 | 60 | 1170 | 254 | 1.11 | 54 | 65 | 645 | 0 |
| 6 | 230 | 60 | 1685 | 244 | 1.08 | 54 | 66 | 590 | 164 |
| 7 | 230 | 60 | 2260 | 221 | 1.01 | 59 | 70 | 505 | 339 |
| 8 | 230 | 60 | 2720 | 188 | 0.92 | 64 | 75 | 360 | 477 |
| 9 | 230 | 60 | 875 | 204 | 0.92 | 46 | 57 | 475 | 0 |
| 10 | 230 | 60 | 1225 | 197 | 0.89 | 46 | 56 | 415 | 81 |
| 11 | 230 | 60 | 1640 | 192 | 0.88 | 51 | 62 | 360 | 173 |
| 12 | 230 | 60 | 2255 | 169 | 0.82 | 59 | 70 | 295 | 320 |
| 13 | 230 | 60 | 515 | 157 | 0.72 | 29 | 40 | 270 | 0 |
| 14 | 230 | 60 | 730 | 153 | 0.70 | 30 | 41 | 240 | 28 |
| 15 | 230 | 60 | 955 | 151 | 0.69 | 36 | 47 | 210 | 57 |
| 16 | 230 | 60 | 1245 | 147 | 0.68 | 42 | 53 | 165 | 93 |

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = Air flow
 p_{fs} = Pressure increase