**G2E140-PI51-42**

# AC centrifugal fan

backward curved, single inlet

with housing (flange)

**ebm-papst Mulfingen GmbH & Co. KG**
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

ErP2013 EXCEEDS THE NORM

## Nominal data

| | |
|---|---|
| **Type** | **G2E140-PI51-42** |
| **Motor** | **M2E068-DF** |

| | | | |
|---|---|---|---|
| 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 | $min^{-1}$ | 2200 | 2100 |
| Power input | W | 180 | 225 |
| Current draw | A | 0.8 | 0.99 |
| Motor capacitor | µF | 4 | 4 |
| Capacitor voltage | VDB | 450 | 450 |
| Capacitor standard | | P0 (CE) | P0 (CE) |
| Min. ambient temperature | °C | -25 | -25 |
| Max. ambient temperature | °C | 80 | 60 |

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 |
| Variable speed drive | No |
| Specific ratio* | 1.00 |

* Specific ratio = 1 + $p_{fs}$ / 100 000 Pa

| | | Actual | Request 2013 | Request 2015 |
|---|---|---|---|---|
| Overall efficiency $\eta_{es}$ | % | 26 | 25.1 | 32.1 |
| Efficiency grade N | | 37.9 | 37 | 44 |
| Power input $P_e$ | kW | 0.13 | | |
| Air flow $q_v$ | $m^3/h$ | 345 | | |
| Pressure increase $p_{fs}$ | Pa | 352 | | |
| Speed n | $min^{-1}$ | 2570 | | |

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

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## Technical features

| | |
|---|---|
| **Mass** | 2.9 kg |
| **Size** | 140 mm |
| **Surface of rotor** | Coated in black |
| **Material of impeller** | Sheet steel, coated in black |
| **Housing material** | Sheet steel, galvanised |
| **Material of guard grille** | Hot-galvanised and spot-welded power line |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 44; Depending on installation and position as per EN 60034-5 |
| **Insulation class** | "F" |
| **Humidity class** | F1-2 |
| **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 |
| **Condensate discharge holes** | Rotor-side |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | < 0.75 mA |
| **Electrical leads** | Capacitor mounted; With plug |
| **Motor protection** | Thermal overload protector (TOP) brought out |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 60335-1; CE |
| **Approval** | CCC; UL 1004-1; CSA C22.2 Nr.100 |



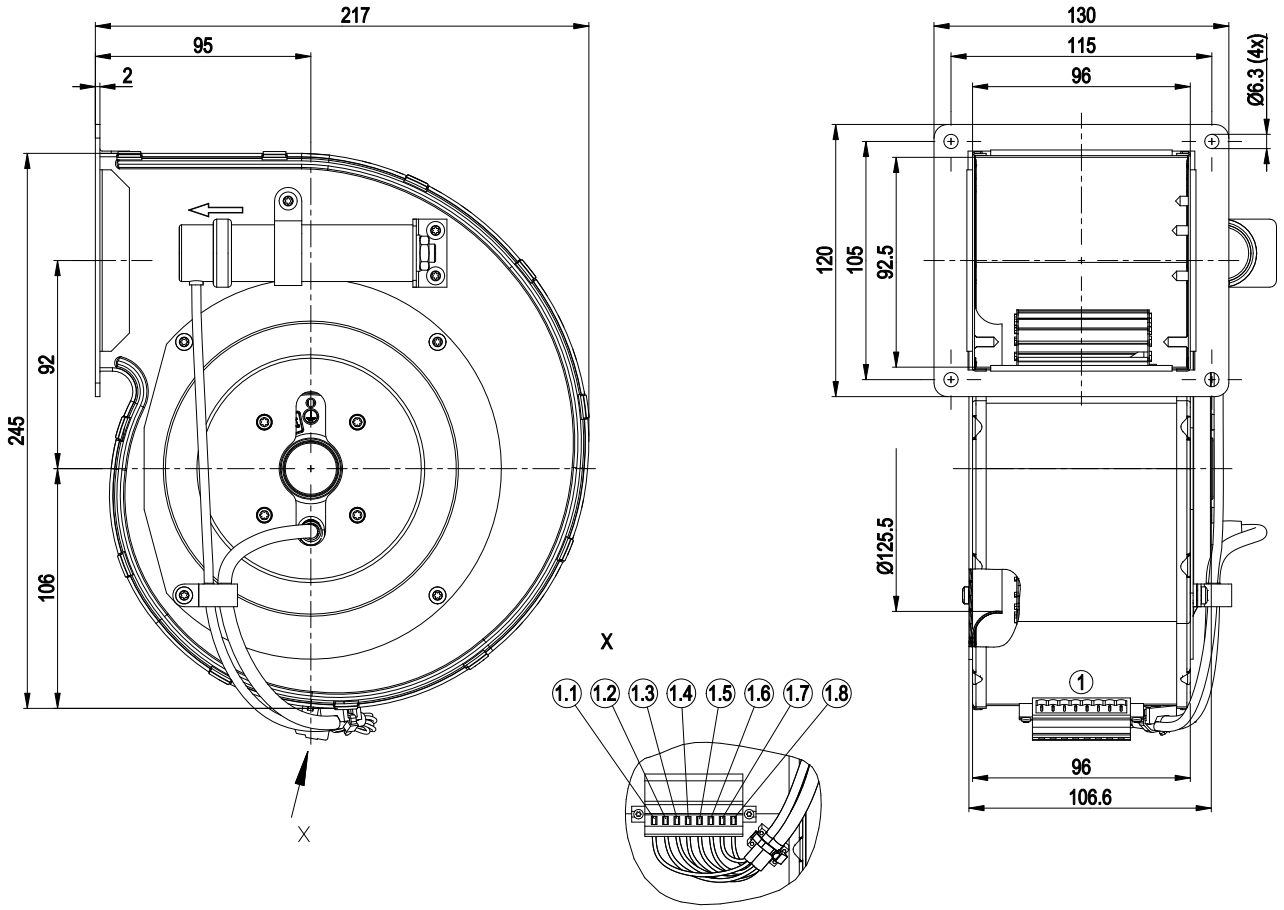
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## Product drawing




| | |
|---|---|
| 1 | Connection line PFA AWG20, with connector shell Wago 231-608/019-000 and 8x brass lead tips crimped |
| 1.1 | Capacitor |
| 1.2 | brown |
| 1.3 | Blue |
| 1.4 | grey |
| 1.5 | green / yellow |
| 1.6 | grey |
| 1.7 | Capacitor |
| 1.8 | black |



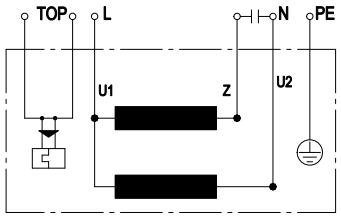
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## Connection screen




| | | | | | |
|---|---|---|---|---|---|
| U1 | Blue | Z | brown | U2 | black |
| PE | green/yellow | TOP | 2 x grey | | |



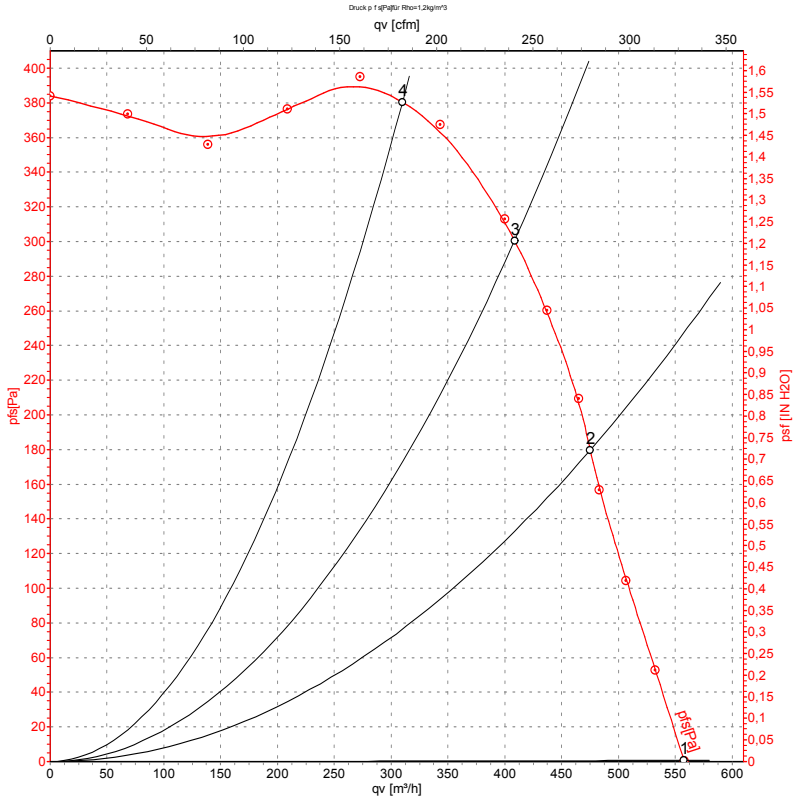
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## Charts: Air flow 50 Hz




Measurement: LU-46695

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 | qv | $p_{fs}$ |
|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | $m^3/h$ | Pa |
| 1 | 230 | 50 | 2200 | 180 | 0.80 | 560 | 0 |
| 2 | 230 | 50 | 2355 | 161 | 0.70 | 475 | 180 |
| 3 | 230 | 50 | 2470 | 147 | 0.64 | 410 | 300 |
| 4 | 230 | 50 | 2610 | 130 | 0.56 | 310 | 380 |

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



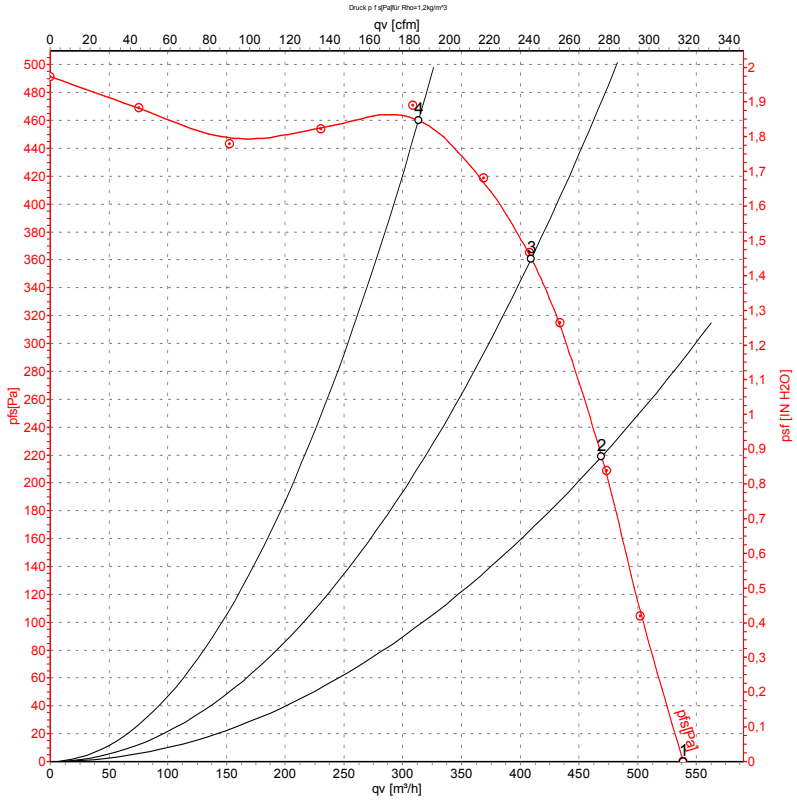
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## Charts: Air flow 60 Hz




Measurement: LU-46699

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 | qv | $p_{fs}$ |
|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | $m^3/h$ | Pa |
| 1 | 230 | 60 | 2100 | 225 | 0.99 | 540 | 0 |
| 2 | 230 | 60 | 2430 | 210 | 0.91 | 470 | 220 |
| 3 | 230 | 60 | 2640 | 200 | 0.87 | 410 | 360 |
| 4 | 230 | 60 | 2875 | 185 | 0.81 | 315 | 460 |

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



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