

# AC centrifugal fan - RadiCal

backward curved, single inlet



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## Nominal data

|                               |                   |      |      |
|-------------------------------|-------------------|------|------|
| Type                          | R2E225-RA92-48    |      |      |
| 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 |                   | -    | -    |
| Speed (rpm)                   | min <sup>-1</sup> | 2500 | 2600 |
| Power input                   | W                 | 155  | 210  |
| Current draw                  | A                 | 0.68 | 0.92 |
| Motor capacitor               | μF                | 3.5  | 3.5  |
| Capacitor voltage             | VDB               | 450  | 450  |
| Min. back pressure            | Pa                | 0    | 0    |
| Min. ambient temperature      | °C                | -25  | -25  |
| Max. ambient temperature      | °C                | 70   | 65   |
| Starting current              | A                 | 1.25 | 1.2  |

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit  
Subject to alterations

## Data in accordance with ecodesign regulation EU 327/2011

|                                   |   | Actual | Request 2015 |
|-----------------------------------|---|--------|--------------|
| 01 Overall efficiency $\eta_{es}$ | % | 42.5   | 42.5         |
| 02 Measurement category           |   | A      |              |
| 03 Efficiency category            |   | Static |              |
| 04 Efficiency grade N             |   | 62     | 62           |
| 05 Variable speed drive           |   | No     |              |

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

|                               |                   |      |
|-------------------------------|-------------------|------|
| 09 Power input $P_e$          | kW                | 0.14 |
| 09 Air flow $q_v$             | m³/h              | 705  |
| 09 Pressure increase $p_{fs}$ | Pa                | 320  |
| 10 Speed (rpm) n              | min <sup>-1</sup> | 2560 |
| 11 Specific ratio*            |                   | 1.00 |

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

LU-127147



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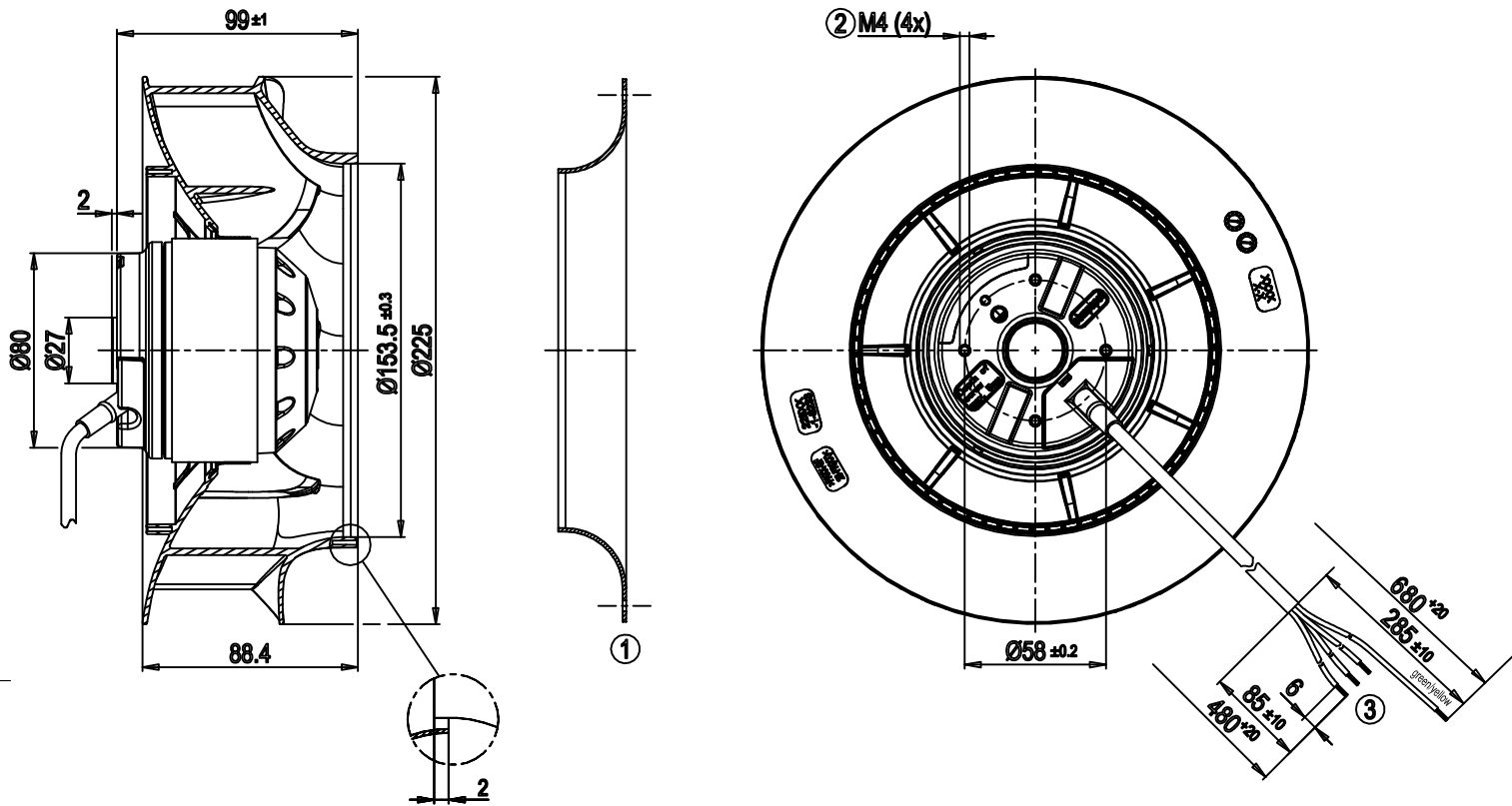
backward curved, single inlet

## Technical features

|                                                                    |                                                                 |
|--------------------------------------------------------------------|-----------------------------------------------------------------|
| Size                                                               | 225 mm                                                          |
| Surface of rotor                                                   | Coated in black                                                 |
| Material of impeller                                               | Plastic PA6, fibreglass-reinforced                              |
| Number of blades                                                   | 7                                                               |
| 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 (F)/environmental protection class (H)                    | H0+                                                             |
| 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                                                       |
| 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 60335-1                                                      |
| Approval                                                           | CCC                                                             |

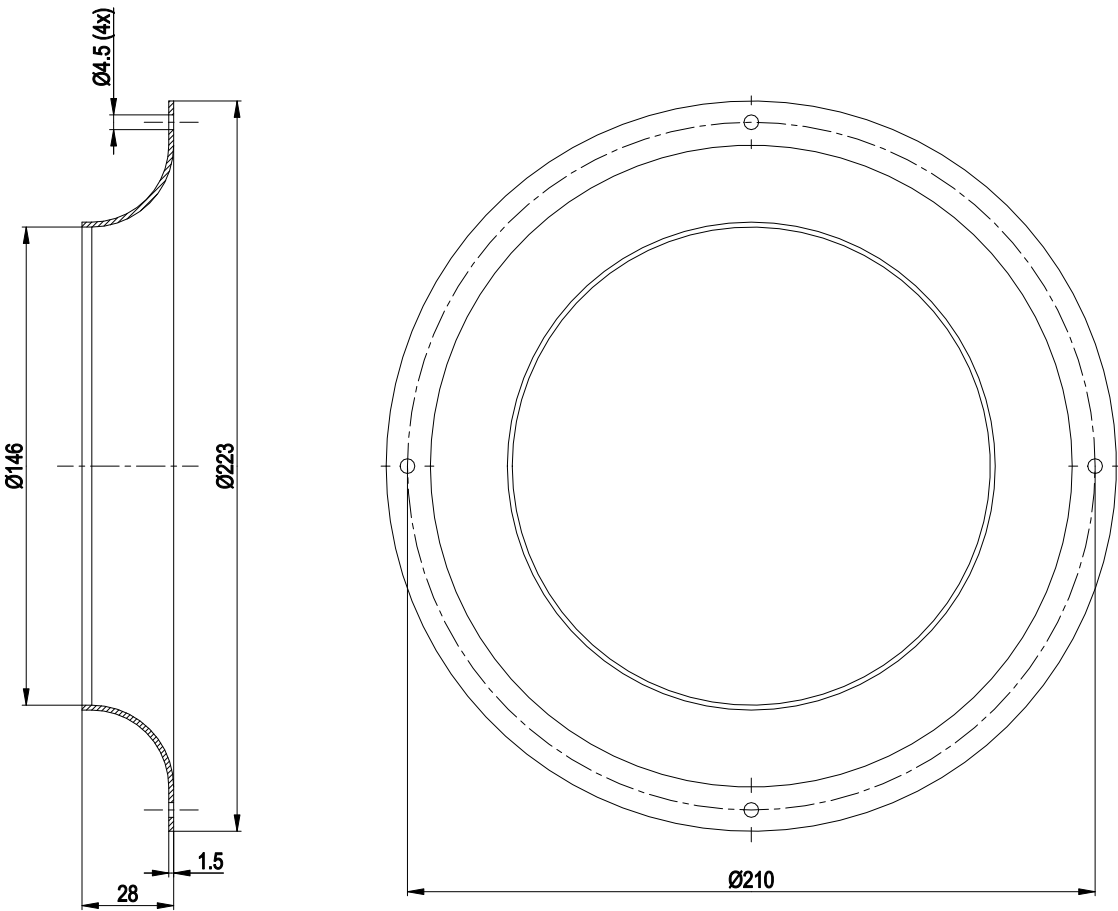


## Product drawing



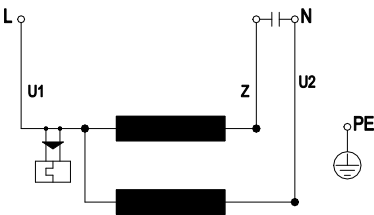
- |   |                                                                               |
|---|-------------------------------------------------------------------------------|
| 1 | Accessory part: inlet nozzle 96358-2-4013, not included in scope of delivery. |
| 2 | Thread reach max. 5 mm                                                        |
| 3 | Connection line silicone 4G 0.5 mm <sup>2</sup> , 4x lead tips crimped        |

Accessory part



1 Accessory part: Inlet nozzle 96358-2-4013 not included in scope of delivery

Connection screen



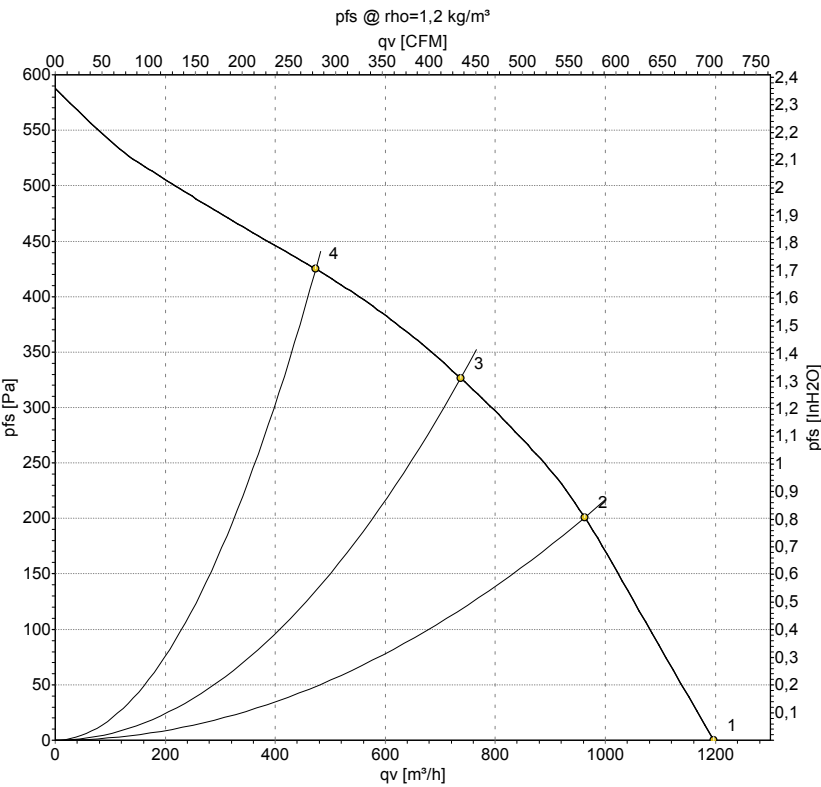
|    |              |   |       |    |       |
|----|--------------|---|-------|----|-------|
| U1 | blue         | Z | brown | U2 | black |
| PE | green/yellow |   |       |    |       |



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## Charts: Air flow 50 Hz



Measurement: LU-154575-1

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 <sub>e</sub> | I    | LpA <sub>in</sub> | LwA <sub>in</sub> | q <sub>v</sub> | p <sub>fs</sub> | q <sub>v</sub> | p <sub>fs</sub> |
|---|-----|----|-------------------|----------------|------|-------------------|-------------------|----------------|-----------------|----------------|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | dB(A)             | dB(A)             | m³/h           | Pa              | cfm            | in. wg          |
| 1 | 230 | 50 | 2660              | 130            | 0.57 | 66                | 73                | 1195           | 0               | 705            | 0.00            |
| 2 | 230 | 50 | 2500              | 155            | 0.68 | 63                | 70                | 965            | 200             | 565            | 0.80            |
| 3 | 230 | 50 | 2560              | 150            | 0.65 | 58                | 66                | 735            | 325             | 435            | 1.30            |
| 4 | 230 | 50 | 2615              | 139            | 0.61 | 63                | 70                | 475            | 425             | 280            | 1.71            |

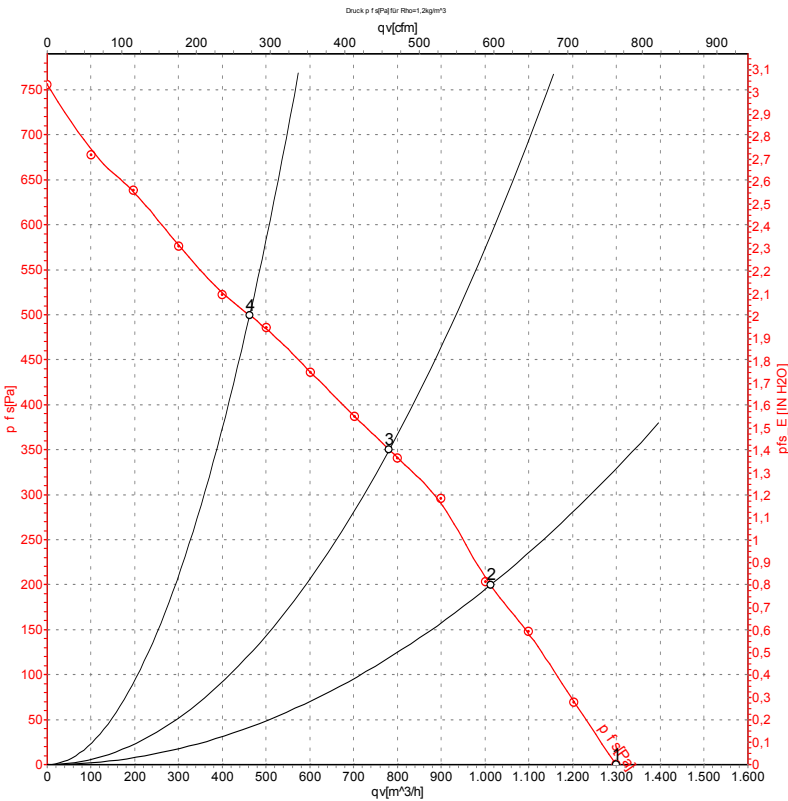
U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side · q<sub>v</sub> = Air flow  
p<sub>fs</sub> = Pressure increase



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## Charts: Air flow 60 Hz



Measurement: LU-127148-1

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: L<sub>wA</sub> measured as per ISO 13347 / L<sub>pA</sub> 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 <sub>e</sub> | I    | LpA <sub>in</sub> | LwA <sub>in</sub> | q <sub>v</sub> | p <sub>fs</sub> | q <sub>v</sub> | p <sub>fs</sub> |
|---|-----|----|-------------------|----------------|------|-------------------|-------------------|----------------|-----------------|----------------|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | dB(A)             | dB(A)             | m³/h           | Pa              | cfm            | in. wg          |
| 1 | 230 | 60 | 2900              | 190            | 0.83 | 69                | 76                | 1300           | 0               | 765            | 0.00            |
| 2 | 230 | 60 | 2700              | 210            | 0.92 | 64                | 72                | 1010           | 200             | 595            | 0.80            |
| 3 | 230 | 60 | 2700              | 207            | 0.90 | 60                | 68                | 780            | 350             | 460            | 1.41            |
| 4 | 230 | 60 | 2815              | 196            | 0.85 | 66                | 73                | 460            | 500             | 270            | 2.01            |

U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side · q<sub>v</sub> = Air flow  
p<sub>fs</sub> = Pressure increase

