

# AC axial fan

straight blades (A series)

with full round nozzle

**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



## Nominal data

|                               |                   |      |      |
|-------------------------------|-------------------|------|------|
| Type                          | W2D250-CA02-01    |      |      |
| Motor                         | M2D068-DF         |      |      |
| Phase                         |                   | 3~   | 3~   |
| Nominal voltage               | VAC               | 400  | 400  |
| Connection                    |                   | Y    | Y    |
| Frequency                     | Hz                | 50   | 60   |
| Type of data definition       |                   | fa   | fa   |
| Valid for approval / standard |                   | CE   | CE   |
| Speed                         | min <sup>-1</sup> | 2650 | 2950 |
| Power input                   | W                 | 110  | 160  |
| Current draw                  | A                 | 0.22 | 0.26 |
| Max. back pressure            | Pa                | 205  | 300  |
| Min. ambient temperature      | °C                | -25  | -25  |
| Max. ambient temperature      | °C                | 70   | 40   |
| Starting current              | A                 | 0.78 | 0.75 |

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

|                                |                   | Actual | Request 2013 | Request 2015 |
|--------------------------------|-------------------|--------|--------------|--------------|
| Overall efficiency $\eta_{es}$ |                   | 28.1   | 24.1         | 28.1         |
| Efficiency grade N             |                   | 40     | 36           | 40           |
| Power input $P_e$              | kW                | 0.13   |              |              |
| Air flow $q_v$                 | m <sup>3</sup> /h | 1050   |              |              |
| Pressure increase $p_{fs}$     | Pa                | 121    |              |              |
| Speed n                        | min <sup>-1</sup> | 2600   |              |              |

Data established at point of optimum efficiency



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## Technical features

|                                                                    |                                                                 |
|--------------------------------------------------------------------|-----------------------------------------------------------------|
| Mass                                                               | 3.4 kg                                                          |
| Size                                                               | 250 mm                                                          |
| Surface of rotor                                                   | Coated in black                                                 |
| Material of blades                                                 | Sheet steel, coated in black                                    |
| Material of wall ring                                              | Sheet steel, galvanised                                         |
| Material of guard grille                                           | Steel, phosphated and coated in black plastic                   |
| Number of blades                                                   | 5                                                               |
| Direction of air flow                                              | "V"                                                             |
| Direction of rotation                                              | Counter-clockwise, seen on rotor                                |
| Type of protection                                                 | IP 44; Depending on installation and position as per EN 60034-5 |
| Insulation class                                                   | "B"                                                             |
| 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                                                       |
| Cable exit                                                         | Lateral                                                         |
| Protection class                                                   | I (if protective earth is connected by customer)                |
| Product conforming to standard                                     | EN 60335-1                                                      |

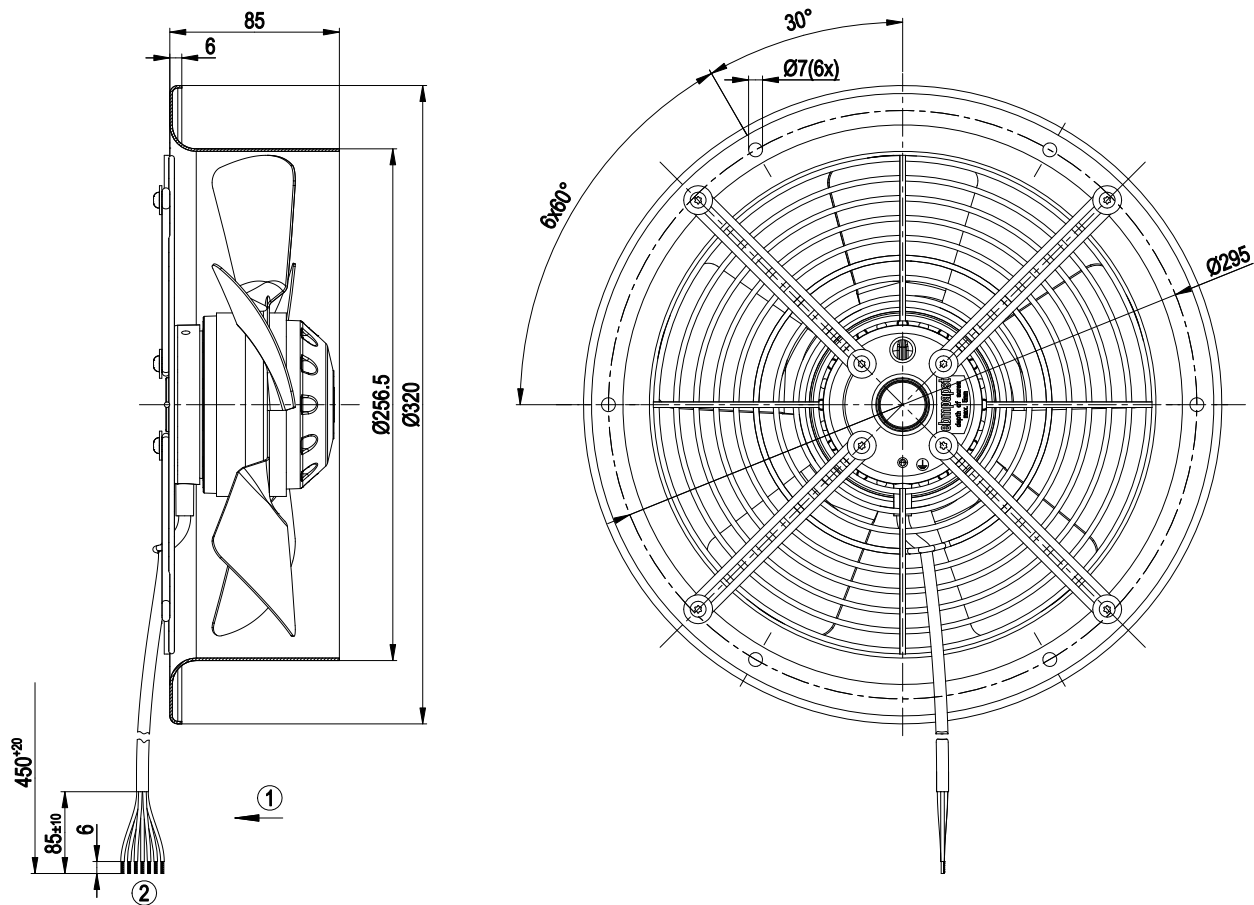


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## Product drawing

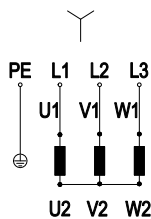


- |   |                                                                         |
|---|-------------------------------------------------------------------------|
| 1 | Direction of air flow "V"                                               |
| 2 | Connection line PVC 7G 0.5 mm <sup>2</sup> , 7x brass lead tips crimped |

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Connection screen

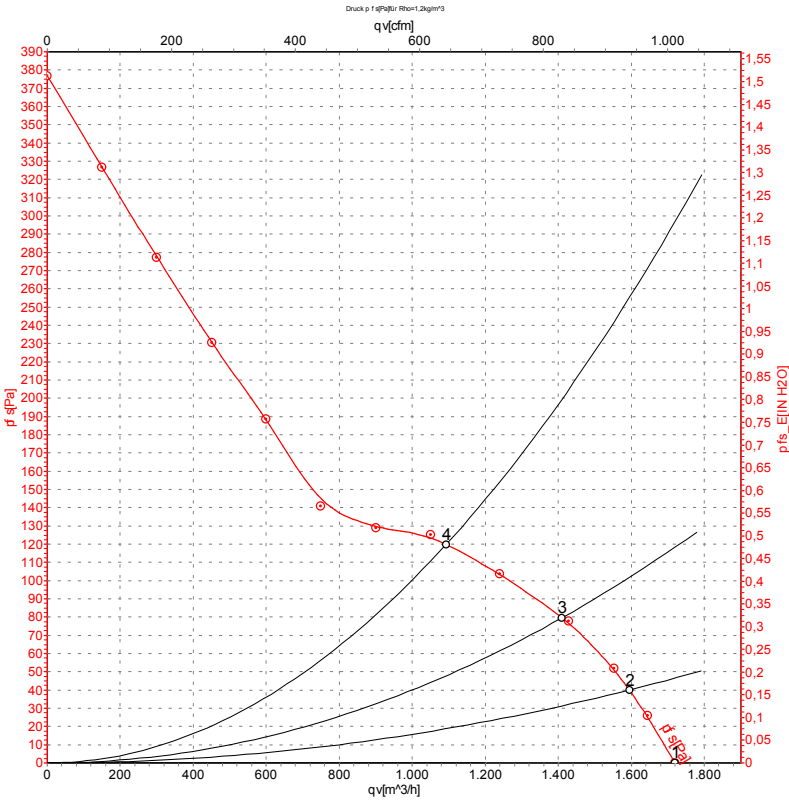


|    |                 |    |              |    |      |
|----|-----------------|----|--------------|----|------|
| Y  | Star connection | L1 | black        | L2 | blue |
| L3 | brown           | PE | green/yellow |    |      |



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Charts: Air flow 50 Hz Y



Measurement: LU-69121

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

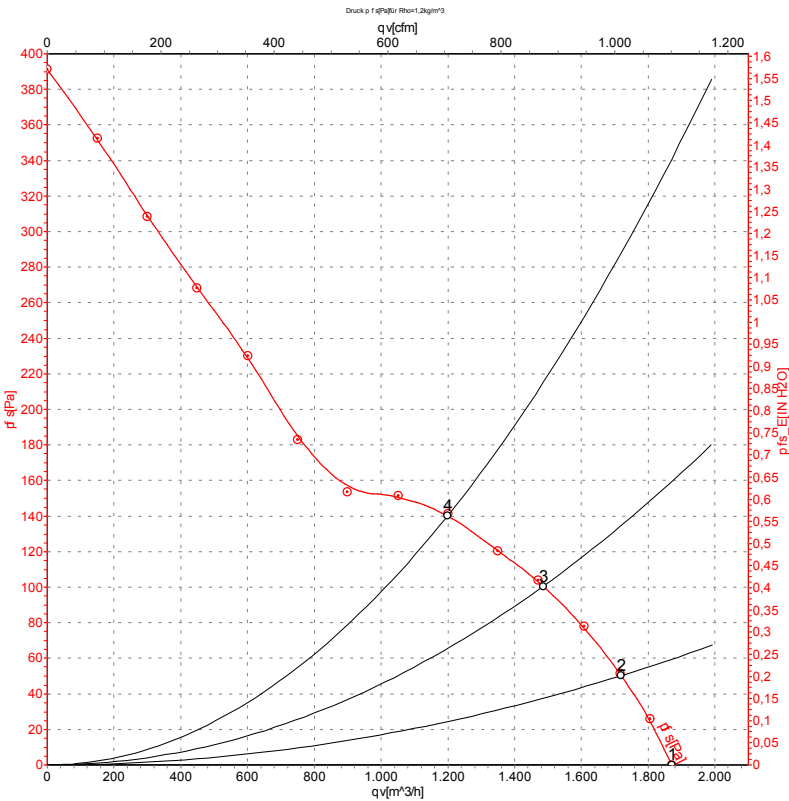
|   | Conn. | U   | f  | n                 | P <sub>e</sub> | I    | qv                | p <sub>fs</sub> |
|---|-------|-----|----|-------------------|----------------|------|-------------------|-----------------|
|   |       | V   | Hz | min <sup>-1</sup> | W              | A    | m <sup>3</sup> /h | Pa              |
| 1 | Y     | 400 | 50 | 2650              | 110            | 0.22 | 1720              | 0               |
| 2 | Y     | 400 | 50 | 2620              | 126            | 0.23 | 1595              | 40              |
| 3 | Y     | 400 | 50 | 2600              | 131            | 0.24 | 1410              | 80              |
| 4 | Y     | 400 | 50 | 2595              | 131            | 0.24 | 1090              | 120             |

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase



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Charts: Air flow 60 Hz Y



Measurement: LU-69123

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

|   | Conn. | U   | f  | n                 | P <sub>e</sub> | I    | qv                | p <sub>fs</sub> |
|---|-------|-----|----|-------------------|----------------|------|-------------------|-----------------|
|   |       | V   | Hz | min <sup>-1</sup> | W              | A    | m <sup>3</sup> /h | Pa              |
| 1 | Y     | 400 | 60 | 2950              | 160            | 0.26 | 1870              | 0               |
| 2 | Y     | 400 | 60 | 2850              | 177            | 0.28 | 1720              | 50              |
| 3 | Y     | 400 | 60 | 2810              | 184            | 0.29 | 1485              | 100             |
| 4 | Y     | 400 | 60 | 2805              | 184            | 0.29 | 1200              | 140             |

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase



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