

# AC axial fan

straight blades (A series), single inlet  
with guard grille for full nozzle

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County court Stuttgart · HRB 590142



## Nominal data

|                               |                   |      |      |      |      |
|-------------------------------|-------------------|------|------|------|------|
| Type                          | S4D350-BA06-08    |      |      |      |      |
| Motor                         | M4D068-EC         |      |      |      |      |
| Phase                         |                   | 3~   | 3~   | 3~   | 3~   |
| Nominal voltage               | VAC               | 230  | 230  | 400  | 400  |
| Connection                    |                   | Δ    | Δ    | Y    | Y    |
| Frequency                     | Hz                | 50   | 60   | 50   | 60   |
| Type of data definition       |                   | fa   | fa   | fa   | fa   |
| Valid for approval / standard |                   | -    | -    | -    | -    |
| Speed                         | min <sup>-1</sup> | 1420 | 1620 | 1420 | 1620 |
| Power input                   | W                 | 145  | 190  | 145  | 190  |
| Current draw                  | A                 | 0.68 | 0.62 | 0.39 | 0.36 |
| Max. back pressure            | Pa                | 150  | 150  | 150  | 150  |
| Min. ambient temperature      | °C                | -25  | -25  | -25  | -25  |
| Max. ambient temperature      | °C                | 50   | 50   | 50   | 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 |
| Variable speed drive  | No     |
| Specific ratio*       | 1.00   |

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

|                                |                   | Actual | Request 2013 | Request 2015 |
|--------------------------------|-------------------|--------|--------------|--------------|
| Overall efficiency $\eta_{es}$ | %                 | 28.5   | 24.5         | 28.5         |
| Efficiency grade N             |                   | 40     | 36           | 40           |
| Power input $P_e$              | kW                | 0.15   |              |              |
| Air flow $q_v$                 | m <sup>3</sup> /h | 2015   |              |              |
| Pressure increase $p_{fs}$     | Pa                | 75     |              |              |
| Speed n                        | min <sup>-1</sup> | 1390   |              |              |

Data definition with optimum efficiency. LU-64797  
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



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## Technical features

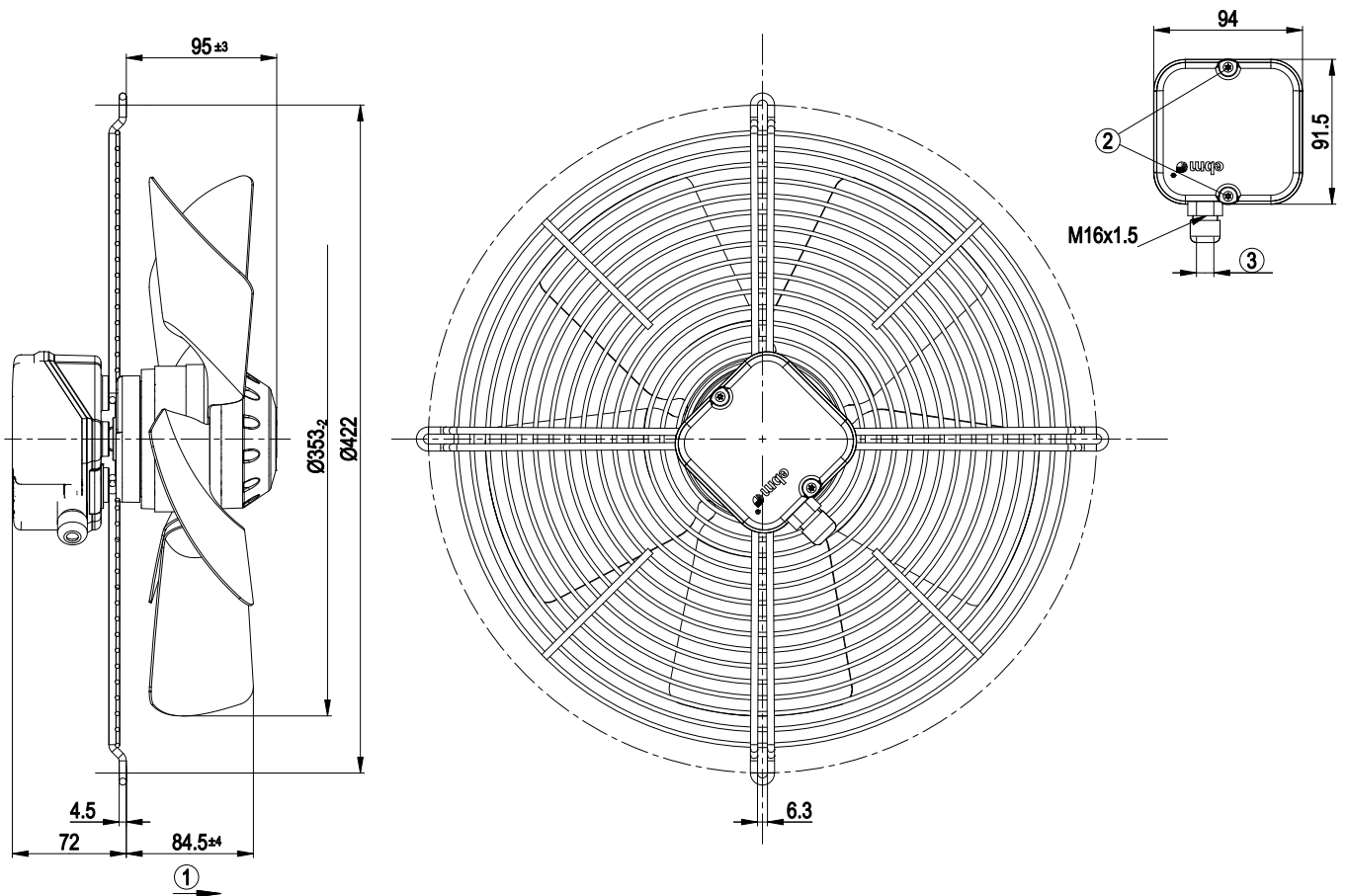
|                                                                    |                                                                          |
|--------------------------------------------------------------------|--------------------------------------------------------------------------|
| Mass                                                               | 4.2 kg                                                                   |
| Size                                                               | 350 mm                                                                   |
| Surface of rotor                                                   | Coated in black                                                          |
| Material of terminal box                                           | ABS plastic                                                              |
| Material of blades                                                 | Sheet steel, coated in black                                             |
| Material of guard grille                                           | Steel, coated in black plastic (RAL9005)                                 |
| Number of blades                                                   | 5                                                                        |
| Direction of air flow                                              | "A"                                                                      |
| Direction of rotation                                              | Clockwise, seen on rotor                                                 |
| Type of protection                                                 | IP 44; Depending on installation and position as per EN 60034-5          |
| Insulation class                                                   | "B"                                                                      |
| Humidity class                                                     | F2-2                                                                     |
| 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                                                   | Via terminal box                                                         |
| Cable exit                                                         | Axial                                                                    |
| Protection class                                                   | I (if protective earth is connected by customer)                         |
| Product conforming to standard                                     | EN 60335-1, motor does not have factory-installed overheating protection |
| Approval                                                           | CCC                                                                      |



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## Product drawing

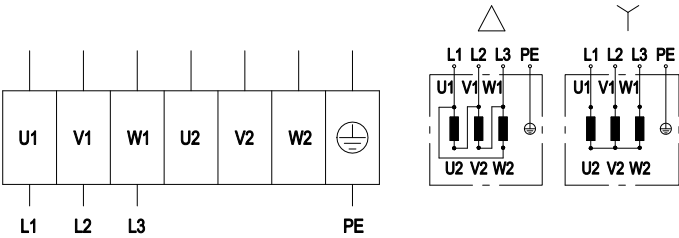


|   |                                                                |
|---|----------------------------------------------------------------|
| 1 | Direction of air flow "A"                                      |
| 2 | Tightening torque $0.5 \pm 0.1$ Nm                             |
| 3 | Cable diameter max. 7.5 mm, tightening torque $1.3 \pm 0.2$ Nm |

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## Connection screen



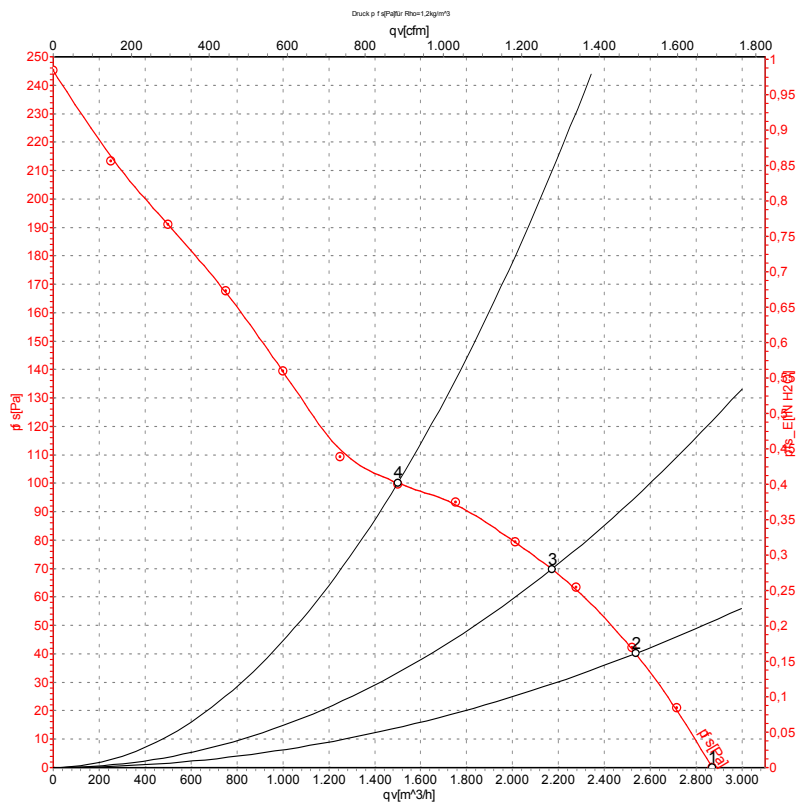
|    |                   |    |                 |    |                  |
|----|-------------------|----|-----------------|----|------------------|
|    | Three-phase motor | Y  | Star connection | Δ  | Delta connection |
| L1 | = U1 = blue       | L2 | = V1 = black    | L3 | = W1 = brown     |
| U2 | = white           | V2 | = green         | W2 | = yellow         |
| PE | PE (green/yellow) |    |                 |    |                  |



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## Charts: Air flow 50 Hz



Measurement: LU-64797

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    | qv                | p <sub>fs</sub> |
|---|-----|----|-------------------|----------------|------|-------------------|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m <sup>3</sup> /h | Pa              |
| 1 | 400 | 50 | 1420              | 128            | 0.39 | 2870              | 0               |
| 2 | 400 | 50 | 1405              | 141            | 0.40 | 2535              | 40              |
| 3 | 400 | 50 | 1395              | 150            | 0.41 | 2170              | 70              |
| 4 | 400 | 50 | 1385              | 158            | 0.41 | 1500              | 100             |

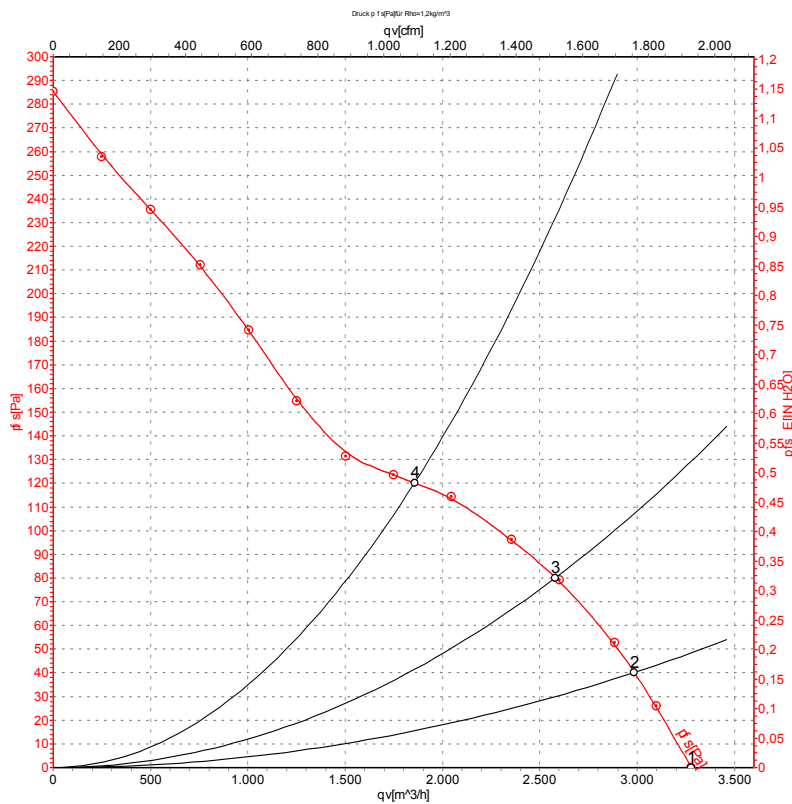
U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase



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## Charts: Air flow 60 Hz



Measurement: LU-64798

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    | qv                | p <sub>fs</sub> |
|---|-----|----|-------------------|----------------|------|-------------------|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m <sup>3</sup> /h | Pa              |
| 1 | 400 | 60 | 1620              | 169            | 0.36 | 3280              | 0               |
| 2 | 400 | 60 | 1605              | 185            | 0.36 | 2985              | 40              |
| 3 | 400 | 60 | 1580              | 202            | 0.38 | 2580              | 80              |
| 4 | 400 | 60 | 1560              | 217            | 0.39 | 1855              | 120             |

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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