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## Nominal data

|                             |                   |      |      |      |      |
|-----------------------------|-------------------|------|------|------|------|
| Type                        | R4D400-AD22-06    |      |      |      |      |
| Motor                       | M4D094-HA         |      |      |      |      |
| Phase                       |                   | 3~   | 3~   | 3~   | 3~   |
| Nominal voltage             | VAC               | 400  | 400  | 400  | 400  |
| Wiring                      |                   | Δ    | Y    | Δ    | Y    |
| Frequency                   | Hz                | 50   | 50   | 60   | 60   |
| Method of obtaining data    |                   | ml   | ml   | ml   | ml   |
| Valid for approval/standard |                   | -    | -    | -    | -    |
| Speed (rpm)                 | min <sup>-1</sup> | 1415 | 1235 | 1610 | 1220 |
| Power consumption           | W                 | 515  | 385  | 750  | 515  |
| Current draw                | A                 | 1.41 | 0.7  | 1.44 | 0.93 |
| Min. back pressure          | Pa                | 0    | 0    | 0    | 0    |
| Min. back pressure          | in. wg            | 0    | 0    | 0    | 0    |
| Min. ambient temperature    | °C                | -40  | -40  | -40  | -40  |
| Max. ambient temperature    | °C                | 60   | 80   | 60   | 40   |
| Starting current            | A                 | 5    | 1.7  | 4.7  | 1.6  |

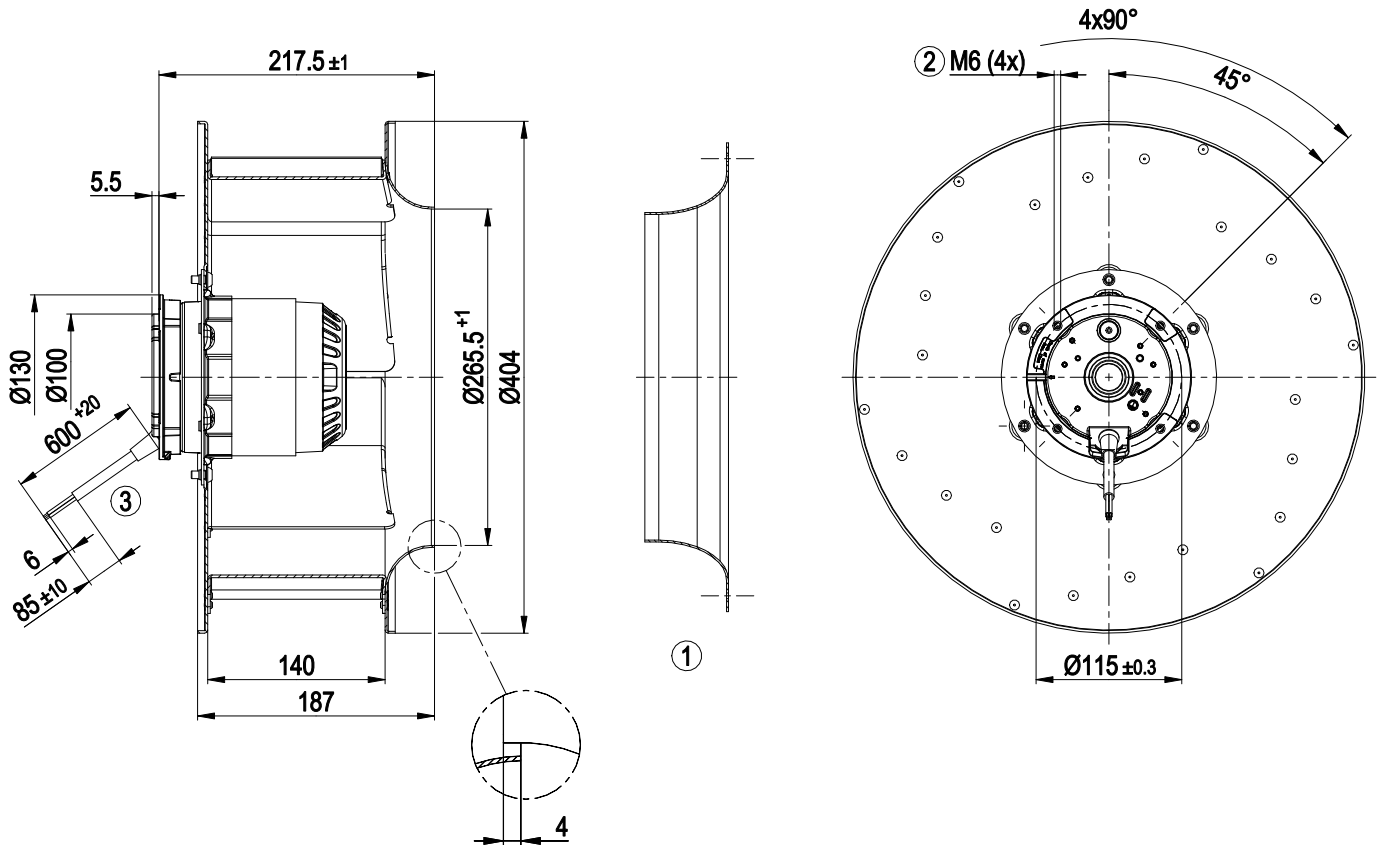
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change



## Technical description

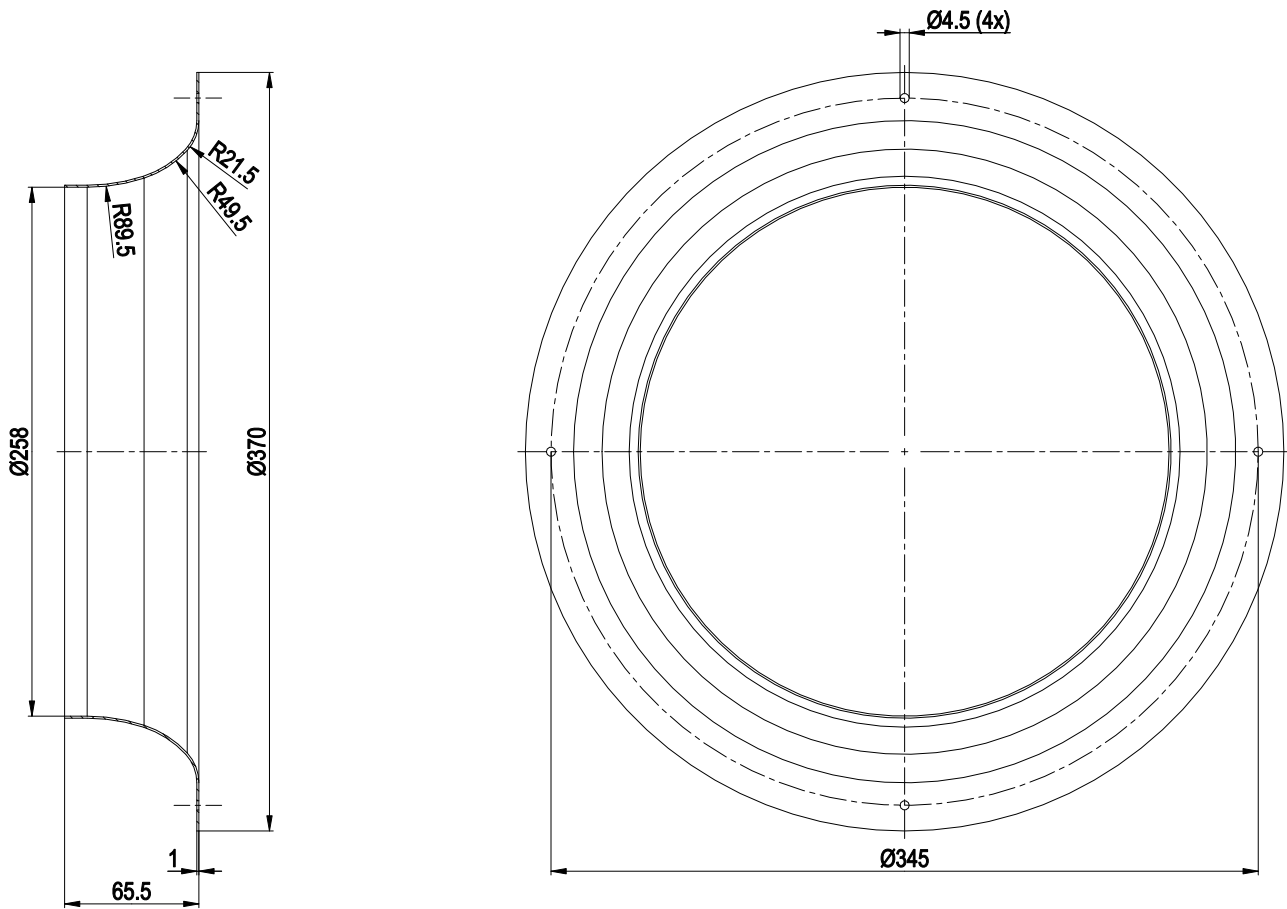
|                                                                            |                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Weight                                                                     | 8.58 kg                                                                                                                                                                                                                                              |
| Size                                                                       | 400 mm                                                                                                                                                                                                                                               |
| Motor size                                                                 | 94                                                                                                                                                                                                                                                   |
| Rotor surface                                                              | Painted black                                                                                                                                                                                                                                        |
| Impeller material                                                          | Sheet aluminum                                                                                                                                                                                                                                       |
| Number of blades                                                           | 6                                                                                                                                                                                                                                                    |
| Direction of rotation                                                      | Clockwise, viewed toward rotor                                                                                                                                                                                                                       |
| Degree of protection                                                       | IP54                                                                                                                                                                                                                                                 |
| Insulation class                                                           | "F"                                                                                                                                                                                                                                                  |
| Moisture (F) / Environmental (H) protection class                          | H2                                                                                                                                                                                                                                                   |
| Ambient temperature note                                                   | Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings. |
| Max. permitted ambient temp. for motor (transport/storage)                 | +80 °C                                                                                                                                                                                                                                               |
| Min. permitted ambient temp. for motor (transport/storage)                 | -40 °C                                                                                                                                                                                                                                               |
| Installation position                                                      | Any                                                                                                                                                                                                                                                  |
| Condensation drainage holes                                                | None                                                                                                                                                                                                                                                 |
| Mode                                                                       | S1                                                                                                                                                                                                                                                   |
| Motor bearing                                                              | Ball bearing                                                                                                                                                                                                                                         |
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | <= 3.5 mA                                                                                                                                                                                                                                            |
| Motor protection                                                           | Thermal overload protector (TOP) with basic insulation                                                                                                                                                                                               |
| With cable                                                                 | Variable                                                                                                                                                                                                                                             |
| Protection class                                                           | I (with customer connection of protective earth)                                                                                                                                                                                                     |
| Conformity with standards                                                  | EN 60034-1 (2010)                                                                                                                                                                                                                                    |
| Comment on CE                                                              | Commissioning not permitted in the European Economic Area                                                                                                                                                                                            |
| Approval                                                                   | EAC; CCC                                                                                                                                                                                                                                             |

## Product drawing



|   |                                                                           |
|---|---------------------------------------------------------------------------|
| 1 | Accessory part: inlet ring 54476-2-4013 not included in scope of delivery |
| 2 | Max. clearance for screw 12 mm                                            |
| 3 | Cable silicone 9G 0.5 mm <sup>2</sup>                                     |
|   | 9x splice                                                                 |

## Accessory part

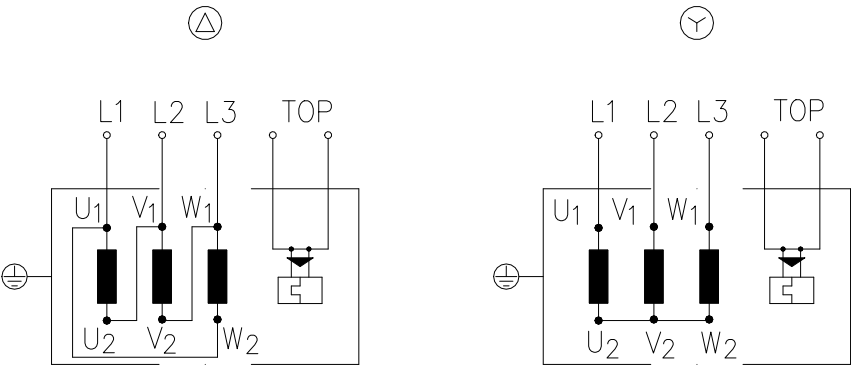


Inlet ring 54476-2-4013

# AC centrifugal fan

backward-curved, single-intake

Connection diagram

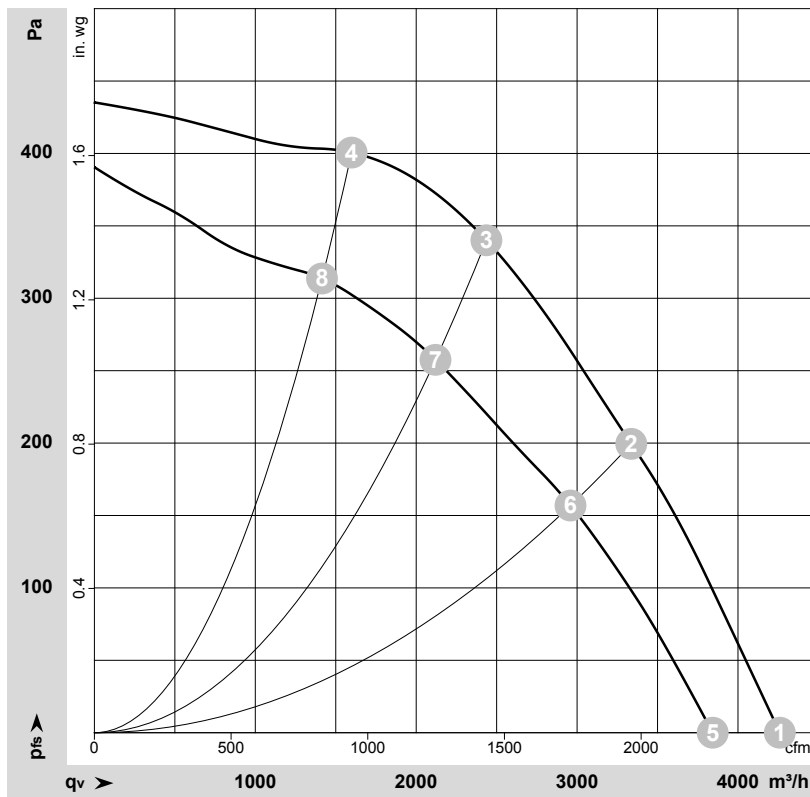


Change of rotation direction by reversing two phases

|    |                  |    |                 |     |              |
|----|------------------|----|-----------------|-----|--------------|
| Δ  | Delta connection | Y  | Star connection | L1  | = U1 = black |
| L2 | = V1 = blue      | L3 | = W1 = brown    | W2  | yellow       |
| U2 | green            | V2 | white           | TOP | 2x gray      |
| PE | green/yellow     |    |                 |     |              |



## Curves: Air performance 50 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-104783-1  
Measurement: LU-104595-1

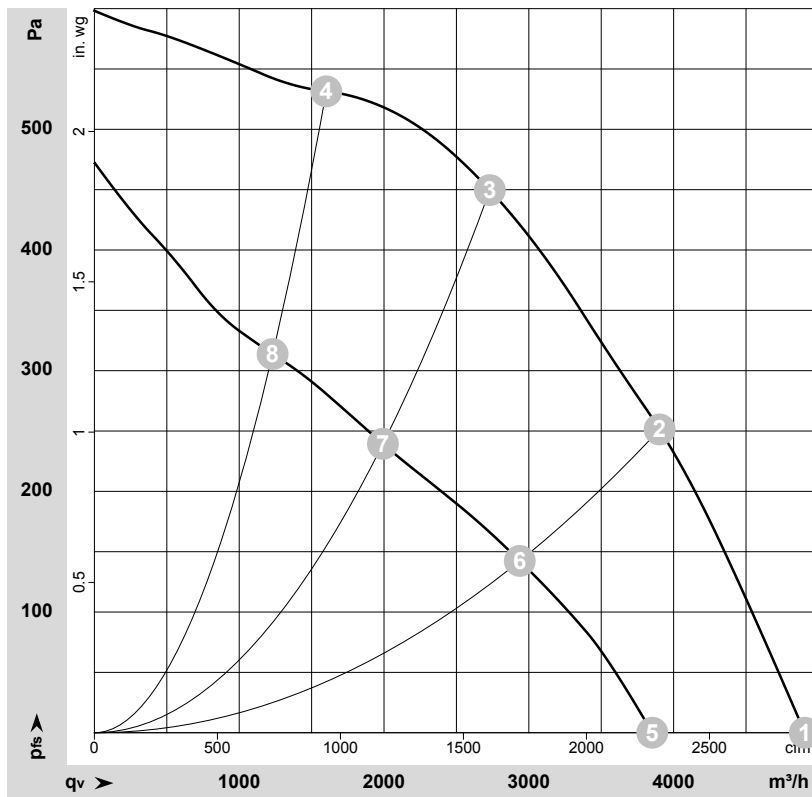
Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

## Measured values

|   | Wired | U   | f  | n                 | P <sub>e</sub> | I    | q <sub>v</sub> | p <sub>fs</sub> | q <sub>v</sub> | p <sub>fs</sub> |
|---|-------|-----|----|-------------------|----------------|------|----------------|-----------------|----------------|-----------------|
|   |       | V   | Hz | min <sup>-1</sup> | W              | A    | m³/h           | Pa              | cfm            | in. wg          |
| 1 | Δ     | 400 | 50 | 1425              | 445            | 1.20 | 4260           | 0               | 2505           | 0.00            |
| 2 | Δ     | 400 | 50 | 1415              | 478            | 1.23 | 3335           | 200             | 1965           | 0.80            |
| 3 | Δ     | 400 | 50 | 1415              | 515            | 1.41 | 2435           | 340             | 1435           | 1.36            |
| 4 | Δ     | 400 | 50 | 1420              | 467            | 1.20 | 1600           | 400             | 940            | 1.61            |
| 5 | Y     | 400 | 50 | 1275              | 343            | 0.61 | 3845           | 0               | 2260           | 0.00            |
| 6 | Y     | 400 | 50 | 1235              | 383            | 0.67 | 2960           | 158             | 1740           | 0.63            |
| 7 | Y     | 400 | 50 | 1235              | 385            | 0.70 | 2120           | 258             | 1250           | 1.04            |
| 8 | Y     | 400 | 50 | 1255              | 358            | 0.63 | 1415           | 315             | 835            | 1.26            |

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

## Curves: Air performance 60 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-104787-1  
Measurement: LU-104598-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

## Measured values

|   | Wired | U   | f  | n                 | P <sub>e</sub> | I    | q <sub>v</sub>    | p <sub>fs</sub> | q <sub>v</sub> | p <sub>fs</sub> |
|---|-------|-----|----|-------------------|----------------|------|-------------------|-----------------|----------------|-----------------|
|   |       | V   | Hz | min <sup>-1</sup> | W              | A    | m <sup>3</sup> /h | Pa              | cfm            | in. wg          |
| 1 | Δ     | 400 | 60 | 1650              | 651            | 1.22 | 4905              | 0               | 2890           | 0.00            |
| 2 | Δ     | 400 | 60 | 1625              | 716            | 1.30 | 3905              | 250             | 2295           | 1.00            |
| 3 | Δ     | 400 | 60 | 1610              | 750            | 1.44 | 2730              | 450             | 1605           | 1.81            |
| 4 | Δ     | 400 | 60 | 1640              | 655            | 1.20 | 1600              | 530             | 940            | 2.13            |
| 5 | Y     | 400 | 60 | 1275              | 480            | 0.85 | 3850              | 0               | 2265           | 0.00            |
| 6 | Y     | 400 | 60 | 1215              | 502            | 0.89 | 2935              | 143             | 1730           | 0.57            |
| 7 | Y     | 400 | 60 | 1220              | 515            | 0.93 | 1990              | 239             | 1170           | 0.96            |
| 8 | Y     | 400 | 60 | 1260              | 473            | 0.83 | 1230              | 314             | 725            | 1.26            |

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase