

## KARTA KATALOGOWA

# R4D310-AR18-01

Wentylator promieniowy AC, łopatki zakrzywione do tyłu, jednostronnie ssący

Producent: ebm-papst



## Dane znamionowe

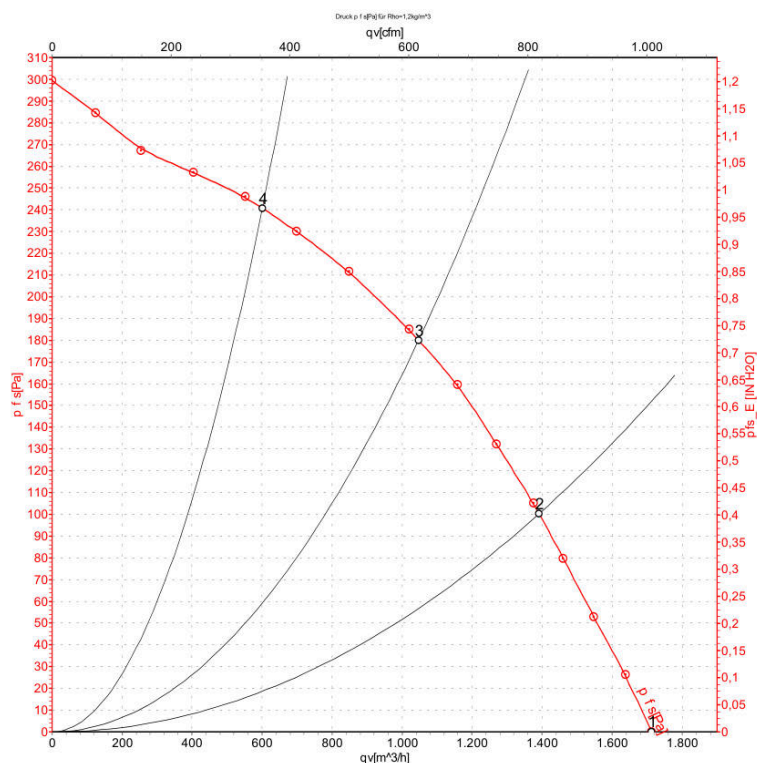
|                           |                                      |
|---------------------------|--------------------------------------|
| Napięcie znamionowe       | 3~ 230 V Δ / 400 V Y                 |
| Częstotliwość             | 50/60 Hz                             |
| Prędkość obrotowa         | 1430 / 1650 obr/min                  |
| Pobór mocy                | 85 / 115 W                           |
| Pobór prądu               | 0,52 / 0,45 A (Δ) · 0,3 / 0,26 A (Y) |
| Maks. wydajność           | 1715 m³/h                            |
| Maks. ciśnienie statyczne | 240 Pa                               |
| Temperatura otoczenia     | -25...+75 °C (60 Hz: +80 °C)         |

## Budowa

|                        |                   |
|------------------------|-------------------|
| Średnica wirnika       | 310 mm            |
| Materiał wirnika       | blacha aluminiowa |
| Liczba łopatek         | 6                 |
| Stopień ochrony        | IP44              |
| Klasa izolacji         | B                 |
| Zabezpieczenie silnika | termik (TOP)      |
| Masa                   | 3,6 kg            |

## Charakterystyka przepływowa

### Curves: Air performance 50 Hz



Measurement: LU-60237-1

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.

Dane na podstawie karty producenta ebm-papst (oryginał na kolejnych stronach).  
Wartości dla 50 Hz / 60 Hz; producent zastrzega możliwość zmian.

## Dobór, wycena i dostawa – zapytaj LUFTBERG

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R4D310-AR18-01

AC centrifugal fan  
backward-curved, single-intake



Nominal data

|                             |                   |      |      |      |      |
|-----------------------------|-------------------|------|------|------|------|
| Type                        | R4D310-AR18-01    |      |      |      |      |
| Motor                       | M4D068-EC         |      |      |      |      |
| Phase                       |                   | 3~   | 3~   | 3~   | 3~   |
| Nominal voltage             | VAC               | 230  | 230  | 400  | 400  |
| Wiring                      |                   | Δ    | Δ    | Y    | Y    |
| Frequency                   | Hz                | 50   | 60   | 50   | 60   |
| Method of obtaining data    |                   | fa   | fa   | fa   | fa   |
| Valid for approval/standard |                   | CE   | CE   | CE   | CE   |
| Speed (rpm)                 | min <sup>-1</sup> | 1430 | 1650 | 1430 | 1650 |
| Power consumption           | W                 | 85   | 115  | 85   | 115  |
| Current draw                | A                 | 0.52 | 0.45 | 0.3  | 0.26 |
| Min. back pressure          | Pa                | 0    | 0    | 0    | 0    |
| Min. back pressure          | inH2O             | 0    | 0    | 0    | 0    |
| Min. ambient temperature    | °C                | -25  | -25  | -25  | -25  |
| Max. ambient temperature    | °C                | 75   | 80   | 75   | 80   |

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



**R4D310-AR18-01**

# AC centrifugal fan

backward-curved, single-intake

## Technical description

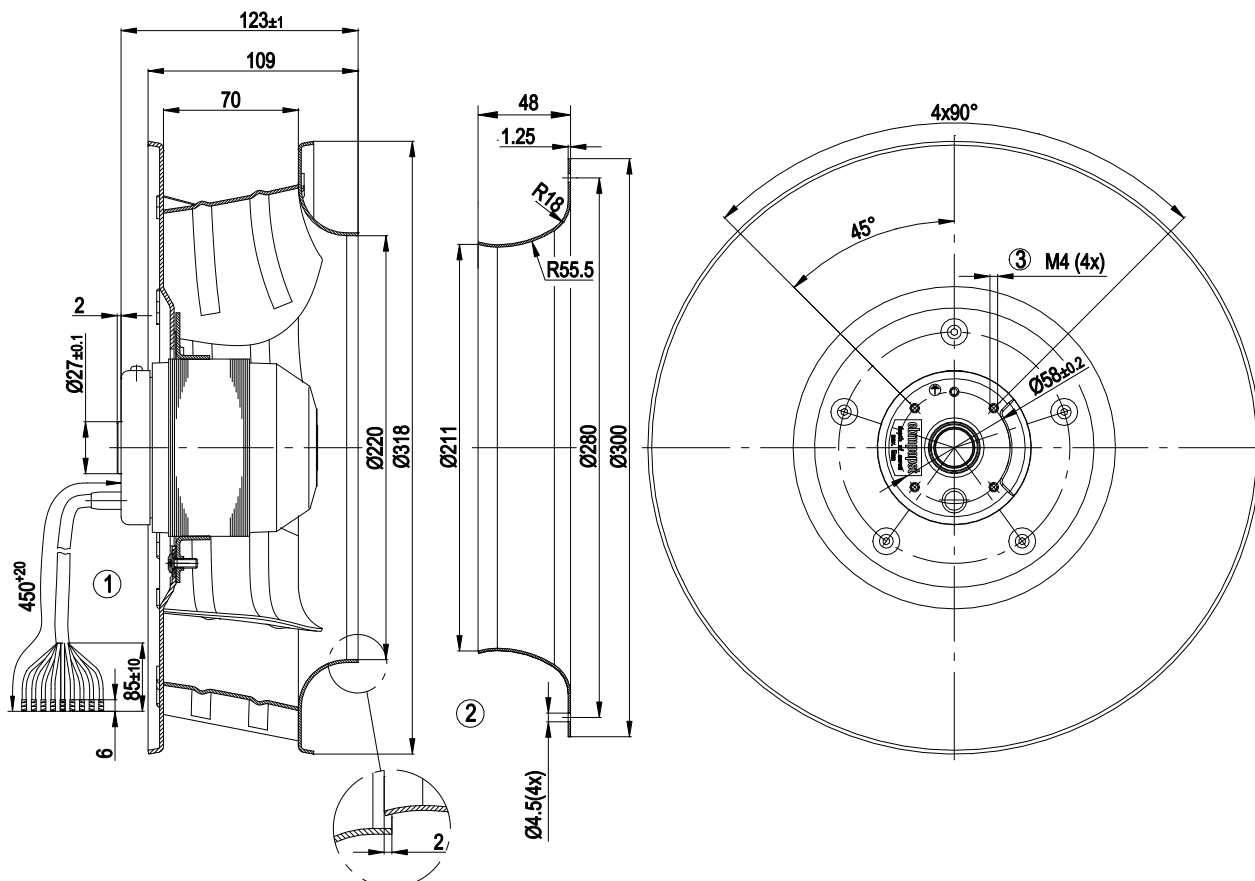
|                                                                            |                                                              |
|----------------------------------------------------------------------------|--------------------------------------------------------------|
| Weight                                                                     | 3.6 kg                                                       |
| Fan size                                                                   | 310 mm                                                       |
| Rotor surface                                                              | Painted black                                                |
| Impeller material                                                          | Sheet aluminum, laser-welded                                 |
| Number of blades                                                           | 6                                                            |
| Direction of rotation                                                      | Clockwise, viewed toward rotor                               |
| Degree of protection                                                       | IP44; installation- and position-dependent as per EN 60034-5 |
| Insulation class                                                           | "B"                                                          |
| Moisture (F) / Environmental (H) protection class                          | H0+                                                          |
| Max. permitted ambient temp. for motor (transport/storage)                 | + 80 °C                                                      |
| Min. permitted ambient temp. for motor (transport/storage)                 | - 40 °C                                                      |
| Installation position                                                      | Shaft horizontal or rotor on bottom; rotor on top on request |
| Condensation drainage holes                                                | On rotor side                                                |
| Mode                                                                       | S1                                                           |
| Motor bearing                                                              | Ball bearing                                                 |
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | < 0.75 mA                                                    |
| Motor protection                                                           | Thermal overload protector (TOP) with basic insulation       |
| With cable                                                                 | Axial                                                        |
| Protection class                                                           | I (with customer connection of protective earth)             |
| Conformity with standards                                                  | EN 60335-1; CE                                               |
| Approval                                                                   | CCC; EAC                                                     |

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## AC centrifugal fan

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## Product drawing



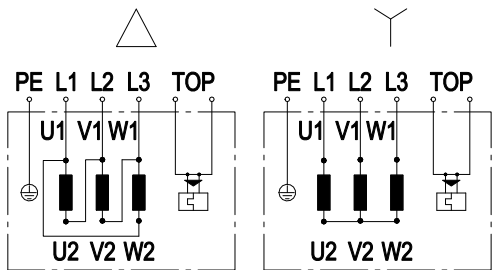
|   |                                                                            |
|---|----------------------------------------------------------------------------|
| 1 | Cable PVC 9G AWG20, 9 x crimped splices                                    |
| 2 | Accessory part: Inlet ring 31050-2-4013, not included in scope of delivery |
| 3 | Max. clearance for screw 5 mm                                              |

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Connection diagram



Note: Change of rotation direction by reversing two phases

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

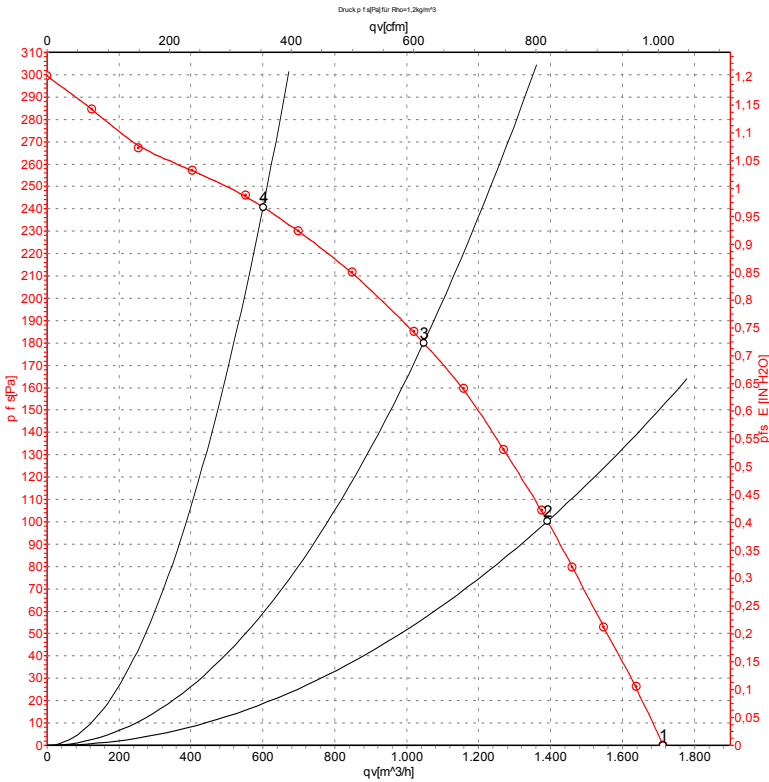


R4D310-AR18-01

AC centrifugal fan

backward-curved, single-intake

Curves: Air performance 50 Hz



Measurement: LU-60237-1

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

|   | 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            | inH <sub>2</sub> O |
| 1 | 400 | 50 | 1430              | 85             | 0.30 | 1715           | 0               | 1010           | 0.00               |
| 2 | 400 | 50 | 1410              | 106            | 0.31 | 1390           | 100             | 820            | 0.40               |
| 3 | 400 | 50 | 1405              | 114            | 0.32 | 1045           | 180             | 615            | 0.72               |
| 4 | 400 | 50 | 1415              | 106            | 0.31 | 600            | 240             | 355            | 0.96               |

U = Power supply · 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

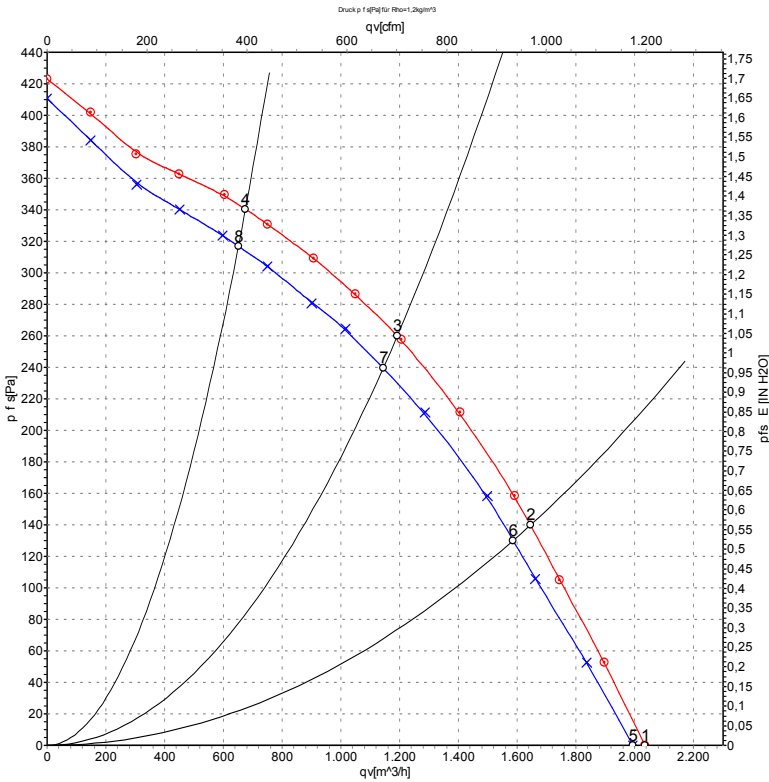


R4D310-AR18-01

AC centrifugal fan

backward-curved, single-intake

Curves: Air performance 60 Hz



Measurement: LU-60239-1  
Measurement: LU-60238-1

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

|   | 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            | inH <sub>2</sub> O |
| 1 | 480 | 60 | 1700              | 130            | 0.32 | 2035           | 0               | 1195           | 0.00               |
| 2 | 480 | 60 | 1670              | 163            | 0.34 | 1645           | 140             | 970            | 0.56               |
| 3 | 480 | 60 | 1650              | 177            | 0.35 | 1190           | 260             | 700            | 1.04               |
| 4 | 480 | 60 | 1665              | 162            | 0.34 | 675            | 340             | 395            | 1.36               |
| 5 | 400 | 60 | 1650              | 115            | 0.26 | 1995           | 0               | 1175           | 0.00               |
| 6 | 400 | 60 | 1610              | 146            | 0.30 | 1585           | 130             | 935            | 0.52               |
| 7 | 400 | 60 | 1585              | 158            | 0.31 | 1145           | 240             | 675            | 0.96               |
| 8 | 400 | 60 | 1610              | 145            | 0.30 | 650            | 317             | 385            | 1.27               |

U = Power supply · 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

