

## AW Axial Fans

### Low-pressure axial wall fans up to 39.000 m³/h

- Available with AC and EC motors for 60Hz
- Installation in any position
- Noise and energy-optimised impeller

[Find more details in our online catalogue](#)



#### Flexible

The AW fans are **designed** for extracting air in **low-pressure systems**. They can be installed in any position and way according to your demands.

This ensures that the fans can be used in a variety of **commercial** and **industrial** applications.

#### Performance

The **noise-optimised** axial impellers together with the **highly efficient** external rotor motors are designed to ensure high-level performance to **minimise power consumption** and **maximise efficiency**.

## Features

### Construction

The square wall plate is made of galvanized steel with powder coating in RAL9005.

Sizes **200-300** with **AC motors** except AW 300E2 are available with **integrated thermostat switch**.

Sizes **315-1000** with **AC** motors and AW **300E2** are available with pre-wired integrated **thermal contact** with leads for a **motor protection device**.

The models with **EC motors** have **integrated** electronic **motor protection**.

Depending on the type, the fans are equipped with an external **terminal box**, protection class **IP44**, **IP54** or **IP55**.

### Impeller

The AW fans use **axial impellers**. These are made of **coated steel**, **composite** material or **aluminium**, are dynamically **balanced** and are paired with corresponding external rotor motors.

### Motor

Depending on type, AW fans are equipped with an **AC** or **EC external rotor motor**. The motors are suitable for **50Hz** and **60Hz**.

### Motor protection

Sizes **200-300** with **AC** motors are available with **integrated** thermal protection with manual (electrical) reset.

Sizes **200-1000** with **AC** motors are available with prewired integral **thermal contact** with leads to a **motor protection device**.

Models with **EC** motors have an **integrated** electronic, **thermal protection** including **locked-rotor protection** and **soft-start**.

### Control

**EC motors** can be controlled by an external **signal of 0-10V**.

**EC motors depending on size** are also equipped with **ModBus** communication or **alarm signal**.

**AC motors** can be controlled by **5-step**, **stepless** speed regulator or **frequency inverter**.

### Installation

The AW fans can be installed in **any position** on **wall** or **ceiling** in **indoor** environments.

## Technical parameters

### Nominal data

|                                                           |           |      |
|-----------------------------------------------------------|-----------|------|
| Voltage (nominal)                                         | 400       | V    |
| Frequency                                                 | 50        | Hz   |
| Phases                                                    | 3~        |      |
| Motor circuit connection                                  | D; Y      |      |
| Input power                                               | 1,650     | W    |
| Input power kW                                            | 1.65      | kW   |
| Input current                                             | 3.7       | A    |
| Impeller speed                                            | 830       | rpm  |
| Air flow                                                  | max 6.182 | m³/s |
| Air flow at max. efficiency                               | 3.714     | m³/s |
| Specific ratio                                            | 1,000000  |      |
| Temperature of transported air                            | max 65    | °C   |
| Max temperature of transported air, when speed controlled | 65        | °C   |

### Protection/Classification

|                        |      |
|------------------------|------|
| Enclosure class, motor | IP54 |
| Insulation class       | F    |

### Data according to ErP

|                                 |                        |
|---------------------------------|------------------------|
| ErP ready                       | ErP 2018               |
| Measurement category            | A                      |
| Efficiency grade                | 40.6 $\eta_{actual}$   |
| Efficiency, static              | 35.7 $\eta_{statA}$    |
| Target efficiency grade ErP2013 | 36 $\eta_{target2013}$ |
| Target efficiency grade ErP2015 | 40 $\eta_{target2015}$ |

### Dimensions and weights

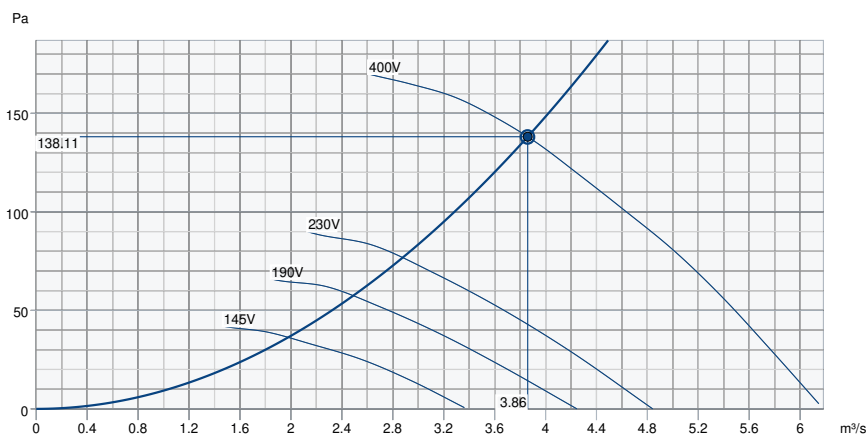
|        |          |
|--------|----------|
| Weight | 53    kg |
|--------|----------|

### Others

|                    |       |
|--------------------|-------|
| Color name, casing | Black |
| Motor type         | AC    |

## Performance

### Performance curve



#### Hydraulic data

|                          |               |
|--------------------------|---------------|
| Required air flow        | 3.86 m³/s     |
| Required static pressure | 138 Pa        |
| Working air flow         | 3.86 m³/s     |
| Working static pressure  | 138 Pa        |
| Air density              | 1.204 kg/m³   |
| Power                    | 1,574.8 W     |
| Fan control - RPM        | 842 rpm       |
| Current                  | 3.58 A        |
| SFP                      | 0.408 kW/m³/s |
| Control voltage          | 400.0 V       |
| Supply voltage           | 400 V         |

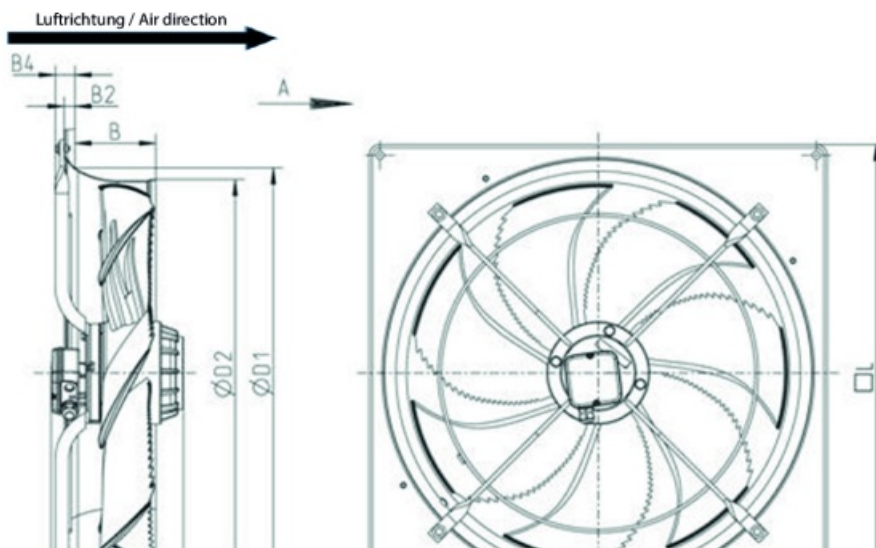
| Sound power level                        |       | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | Total |
|------------------------------------------|-------|----|-----|-----|-----|----|----|----|----|-------|
| Inlet                                    | dB(A) | 26 | 43  | 58  | 64  | 70 | 71 | 66 | 57 | 75    |
| Outlet                                   | dB(A) | 28 | 46  | 61  | 65  | 70 | 69 | 65 | 57 | 74    |
| Sound pressure level at 3m (20m² Sabine) | dB(A) | -  | -   | -   | -   | -  | -  | -  | -  | 67    |
| Sound pressure level at 3m free field    | dB(A) | -  | -   | -   | -   | -  | -  | -  | -  | 53    |

## Ecodesign

### Ecodesign 327

|                             |                                                                                                                                            |      |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------|
| Manufacturer                | Systemair GmbH                                                                                                                             |      |
| Type                        | AW 800DS                                                                                                                                   |      |
| Year of manufacture         | See name plate of the fan                                                                                                                  |      |
| Air flow qv                 | 3.7139                                                                                                                                     | m³/s |
| Efficiency category         | static                                                                                                                                     |      |
| Efficiency grade N          | 40.6                                                                                                                                       |      |
| Efficiency grade target N   | 40                                                                                                                                         |      |
| Speed (rpm) n               | 860                                                                                                                                        | rpm  |
| Pressure increase total psf | 154                                                                                                                                        | Pa   |
| Power consumption Ped       | 1,650                                                                                                                                      | W    |
| Overall efficiency          | 35.7                                                                                                                                       | %    |
| Variable speed drive        | No                                                                                                                                         |      |
| Additional components       | Components used to calculate the energy efficiency that are not apparent from the measurement category are detailed in the CE declaration. |      |
| Maintenance                 | Information on installation, operation and maintenance is provided in the operating instructions.                                          |      |
| Recycling / disposal        | Information on recycling and disposal is provided in the operating instructions.                                                           |      |

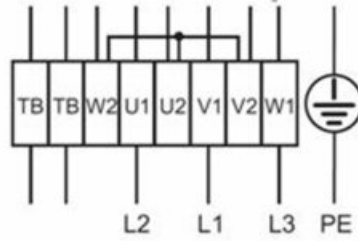
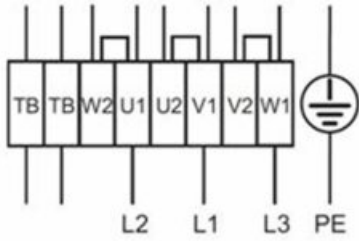
## Dimension





|          | □A  | B   | B2 | B3  | B4 | ØD1 | ØD2 | ØD4  | □L  |
|----------|-----|-----|----|-----|----|-----|-----|------|-----|
| AW 800DS | 910 | 193 | 17 | 319 | 67 | 869 | 804 | 14,5 | 970 |

## Wiring



## Accessories

- Frequency converter FRQ5S-4A (36233)
- Motor protect. switch S-DT 16E (161207)
- RTRD 4 Speed cont. Systemair (5942)
- SG AW 800 Guard grill (GFC) (3397)
- RAW 800 Roof Cowl c/w BG (86541)
- Frequency converter FRQS-4A (36231)
- REV-5POL/07-7,5kW R/Y (33980)
- RTRDU 4 Speed contr. Systemair (5946)
- Step switch S-DT2SKT, Y/D (2697)

## Documents

- L-BAL-001-SYSTEMAIR.PDF
- installation variations\_1\_AR\_AW.pdf