

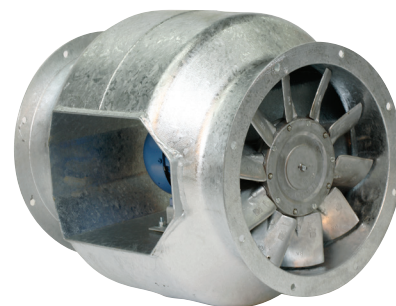
# BIFLOW SB CON

Bifurcated Conical Axial Flow Fan

# BIFLOW SB CON

## Product Overview

- 4 standard sizes from 250mm to 500mm
- Air volume flow rates up to 3.803 m³/s
- Static pressures up to 608 Pa
- Suitable for operating temperatures up to +200°C
- Available in **AC**



**A range of bifurcated axial fans, specially developed with motor out of the airstream to handle more hostile air movement applications.**

### High Temperature

Class H motors out of the airstream are not effected by contaminates in the ventilated air. Suitable for elevated temperatures of up to 200°C.

### Efficient Performance

High Efficiency Adjustable pitch aerofoil impellers are provided with blades made from high quality pressure die cast aluminium.

### Corrosion resistance

The fan casing is dip galvanised after fabrication to BS 729, offering enhanced corrosion resistance.

### Weather Resistance

The fans are suitable for external mounting as standard.

### Long Life

Motor is isolated from hot and contaminated air, prolonging the life of the fan.

### Warranty

Each SB has a 12 month warranty.

### Construction

Constructed from sheet steel with both motor and impeller mounted within the length of the unit casing.

### Motor

Motors are foot mounted, totally enclosed fan cooled, IP55, with sealed for life bearings with a standard industrial paint finish and Class H insulation to EN 60034-5.

### Impeller

Adjustable pitch aerofoil impellers are provided with blades made from high quality pressure die cast aluminium (LM6), natural finish. Impellers are factory set at an angle to provide maximum performance. The hubs are manufactured from die cast aluminium alloy (LM24). Assembled impellers are to be dynamically balanced to ISO 14694 Grade G6.3.

### Typical Applications

- Kitchen Extract
- Spray Booths
- Hot Gas Situations
- Corrosive Atmospheres
- Boiler Houses
- Heavy Industrial

### Contents

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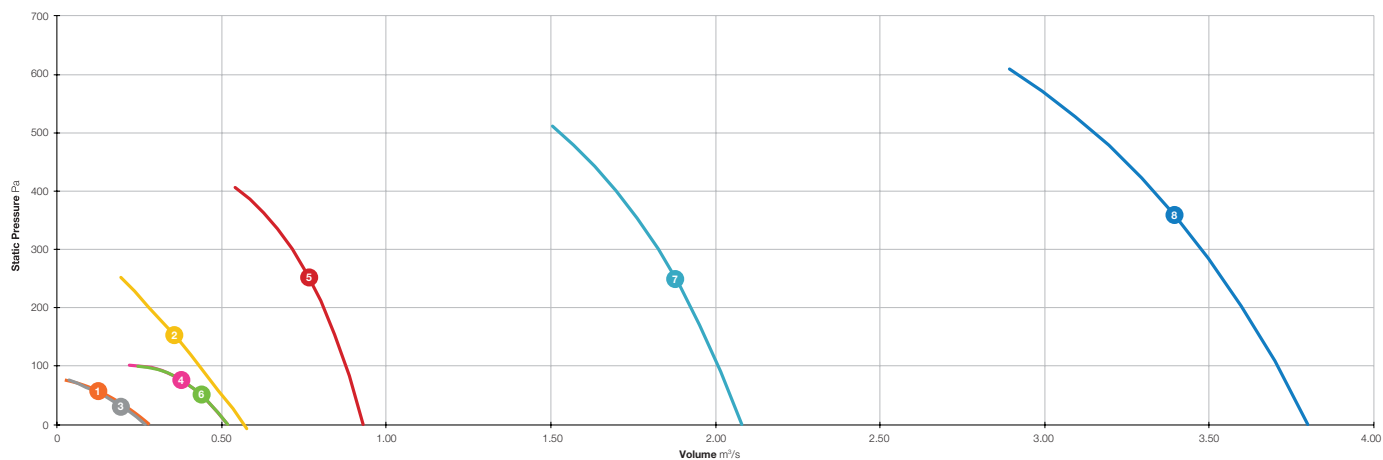
### Product Coding

| Code         | Reference                                   |
|--------------|---|
| <b>SB</b>    | Product Range                               |
| <b>250</b>   | Diameter (250/315/400...)                   |
| <b>/</b>     |   |
| <b>4</b>     | Number of Poles (2/4/6)                     |
| <b>-</b>     |   |
| <b>1</b>     | Voltage Supply (Single Phase / Three Phase) |
| <b>AC</b>    | Motor Type (AC/EC)                          |
| <b>A - Z</b> | Additional Coding (A - Z) Product Variants  |
| e.g.         | <b>SB250 / CON4 - 1AC</b>                   |

# BIFLOW SB CON



## Performance Range Curves



- |                  |                  |
|------------------|------------------|
| 1 SB250 / CON4-1 | 5 SB315 / CON2-3 |
| 2 SB250 / CON2-3 | 6 SB315 / CON4-3 |
| 3 SB250 / CON4-3 | 7 SB400 / CON2-3 |
| 4 SB315 / CON4-1 | 8 SB500 / CON2-3 |

# BIFLOW SB CON



## Performance, SFP & Electrical Data

**Single Phase** 220V to 240V / 50Hz

| Product Code | Speed r/min | Airflow SFP | Airflow m³/s @ Static Pressure Pa |       |       |       |       |     |     |     | At Best Efficiency Point | Electrical Data |       | dBA @ 3m |  |
|--------------|-------------|-------------|-----------------------------------|-------|-------|-------|-------|-----|-----|-----|--------------------------|-----------------|-------|----------|--|
|              |             |             | 0                                 | 25    | 50    | 75    | 100   | 150 | 200 | 250 | Output kW                | Peak Amps       |       |          |  |
| SB250-CON4-1 | 1450        | m³/s        | 0.280                             | 0.223 | 0.150 | 0.029 | -     | -   | -   | -   | 0.120                    | 1.13            | Inlet | 48       |  |
| SB315-CON4-1 | 1370        | m³/s        | 0.521                             | 0.483 | 0.439 | 0.383 | 0.257 | -   | -   | -   | 0.120                    | 1.13            | Inlet | 51       |  |

Data provided is at standard air density of 1.2 kg/m³.

Exempt from ErP of the European Parliament.

Peak Amps @ 230V / 1PH / 50Hz.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

# BIFLOW SB CON



## Performance, SFP & Electrical Data

Three Phase 380V to 415V / 50Hz

| Product Code | Speed r/min | Airflow SFP | Airflow m³/s @ Static Pressure Pa |       |       |       |       |       |       |       |       |       |       |       | At Best Efficiency Point | Electrical Data |       | dBA @ 3m |    |
|--------------|-------------|-------------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------------|-----------------|-------|----------|----|
|              |             |             | 0                                 | 25    | 50    | 75    | 100   | 150   | 200   | 250   | 300   | 350   | 400   | 500   | Output kW                | Peak Amps       | Δ / Y |          |    |
| SB250-CON2-3 | 2780        | m³/s        | 0.566                             | 0.535 | 0.502 | 0.468 | 0.434 | 0.360 | 0.282 | 0.198 | -     | -     | -     | -     | 0.250                    | 0.68            | Mains | Inlet    | 61 |
| SB250-CON4-3 | 1370        | m³/s        | 0.270                             | 0.211 | 0.140 | 0.040 | -     | -     | -     | -     | -     | -     | -     | -     | 0.120                    | 0.48            | Mains | Inlet    | 48 |
| SB315-CON2-3 | 2780        | m³/s        | 0.931                             | 0.919 | 0.906 | 0.892 | 0.878 | 0.848 | 0.810 | 0.768 | 0.716 | 0.648 | 0.554 | -     | 0.550                    | 1.18            | Mains | Inlet    | 64 |
| SB315-CON4-3 | 1370        | m³/s        | 0.521                             | 0.483 | 0.439 | 0.383 | 0.257 | -     | -     | -     | -     | -     | -     | -     | 0.120                    | 0.48            | Mains | Inlet    | 51 |
| SB400-CON2-3 | 2800        | m³/s        | 2.082                             | 2.065 | 2.047 | 2.029 | 2.010 | 1.969 | 1.926 | 1.878 | 1.825 | 1.766 | 1.698 | 1.527 | 2.200                    | 4.42            | Mains | Inlet    | 70 |
| SB500-CON2-3 | 2840        | m³/s        | 3.803                             | 3.780 | 3.756 | 3.732 | 3.707 | 3.655 | 3.600 | 3.541 | 3.477 | 3.408 | 3.332 | 3.152 | 4.000                    | 7.49            | Mains | Inlet    | 80 |

Data provided is at standard air density of 1.2 kg/m³.  
Exempt from ErP of the European Parliament.  
Peak Amps @ 400V / 3PH / 50Hz.  
The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

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## Sound Data

Single Phase 220V to 240V / 50Hz

| Product Code |       | Sound Power Level dBW @ Octave Band Hz |       |       |       |      |      |      |      | Total dB |
|--------------|-------|--|-------|-------|-------|------|------|------|------|----------|
|              |       | 63Hz                                   | 125Hz | 250Hz | 500Hz | 1kHz | 2kHz | 4kHz | 8kHz |          |
| SB250-CON4-1 | Inlet | 77                                     | 74    | 71    | 64    | 62   | 60   | 57   | 47   | 80       |
| SB315-CON4-1 | Inlet | 80                                     | 77    | 74    | 68    | 66   | 64   | 62   | 53   | 83       |

Data provided at standard air density of 1.2 kg/m³.  
Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.  
The Sound Power Level Spectra are in dB re-1pW.

# BIFLOW SB CON



## Sound Data

Three Phase 380V to 415V / 50Hz

| Product Code | Speed r/min |       | Sound Power Level dBW @ Octave Band Hz |       |       |       |      |      |      |      | Total dB |
|--------------|-------------|-------|--|-------|-------|-------|------|------|------|------|----------|
|              |             |       | 63Hz                                   | 125Hz | 250Hz | 500Hz | 1kHz | 2kHz | 4kHz | 8kHz |          |
| SB250-CON2-3 | 2780        | Inlet | 83                                     | 81    | 79    | 78    | 77   | 75   | 73   | 69   | 88       |
| SB250-CON4-3 | 1370        | Inlet | 77                                     | 74    | 71    | 64    | 62   | 60   | 57   | 47   | 80       |
| SB315-CON2-3 | 2780        | Inlet | 90                                     | 86    | 82    | 81    | 80   | 77   | 77   | 71   | 93       |
| SB315-CON4-3 | 1370        | Inlet | 80                                     | 77    | 74    | 68    | 66   | 64   | 62   | 53   | 83       |
| SB400-CON2-3 | 2800        | Inlet | 94                                     | 87    | 86    | 90    | 84   | 83   | 80   | 73   | 97       |
| SB500-CON2-3 | 2840        | Inlet | 98                                     | 93    | 90    | 96    | 96   | 95   | 93   | 89   | 104      |

Data provided at standard air density of 1.2 kg/m³.  
Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.  
The Sound Power Level Spectra are in dB re-1pW.

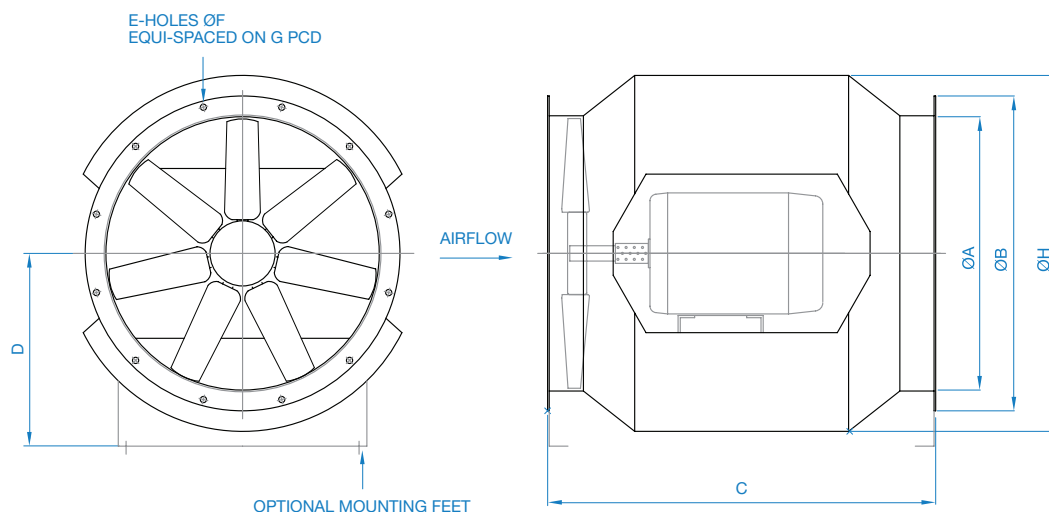
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## Dimensional Data

### Single & Three Phase

| Product Code | A   | B   | C   | D   | E  | F  | G   | H   | Weight kg |
|--------------|-----|-----|-----|-----|----|----|-----|-----|-----------|
| SB250-CON4-1 | 250 | 325 | 460 | 220 | 8  | 10 | 299 | 400 | 23        |
| SB250-CON2-3 | 250 | 325 | 460 | 220 | 8  | 10 | 299 | 400 | 23        |
| SB250-CON4-3 | 250 | 325 | 460 | 220 | 8  | 10 | 299 | 400 | 23        |
| SB315-CON4-1 | 315 | 380 | 500 | 250 | 8  | 10 | 355 | 460 | 30        |
| SB315-CON2-3 | 315 | 380 | 500 | 250 | 8  | 10 | 355 | 460 | 31        |
| SB315-CON4-3 | 315 | 380 | 500 | 250 | 8  | 10 | 355 | 460 | 30        |
| SB400-CON2-3 | 400 | 485 | 650 | 305 | 8  | 12 | 450 | 570 | 49        |
| SB500-CON2-3 | 500 | 585 | 710 | 370 | 12 | 12 | 560 | 700 | 86        |



Dimensions are in mm.



# BIFLOW SB CON



## Accessories

### Single Phase

| Product Code                 | Ancillary Pack* | AV Mounts (set of 4)** | Bell Mouth Inlet | Flanged Damper | Flanged Silencer 1D Podded | Flanged Silencer 1D Unpodded |
|------------------------------|-----------------|------------------------|------------------|----------------|----------------------------|------------------------------|
| <a href="#">SB250-CON4-1</a> | APK250SBCON/002 | 062-002                | 241B-0250        | 019-0250-STD   | 068-0250-1DEP              | 068-0250-1DENP               |
| <a href="#">SB315-CON4-1</a> | APK315SBCON/003 | 062-003                | 241B-0315        | 019-0315-STD   | 068-0315-1DEP              | 068-0315-1DENP               |

| Product Code                 | Flanged Silencer 2D Podded | Flanged Silencer 2D Unpodded | High Temperature Flexible Connectors (each) | Impeller Side Guard | Matching Flanges (each) | Mounting Feet (each) | Wiring Diagrams |
|------------------------------|----------------------------|------------------------------|---|---------------------|-------------------------|----------------------|-----------------|
| <a href="#">SB250-CON4-1</a> | 068-0250-2DEP              | 068-0250-2DENP               | 063-0250-PU250                              | 078C-0250-C         | 061B-0250-B             | 060B-0250-B          | 152-521         |
| <a href="#">SB315-CON4-1</a> | 068-0315-2DEP              | 068-0315-2DENP               | 063-0315-PU250                              | 078C-0315-C         | 061B-0315               | 060B-0315-B          | 152-521         |

### Three Phase

| Product Code                 | Ancillary Pack* | AV Mounts (set of 4)** | Bell Mouth Inlet | Flanged Damper | Flanged Silencer 1D Podded | Flanged Silencer 1D Unpodded |
|------------------------------|-----------------|------------------------|------------------|----------------|----------------------------|------------------------------|
| <a href="#">SB250-CON2-3</a> | APK250SBCON/002 | 062-002                | 241B-0250        | 019-0250-STD   | 068-0250-1DEP              | 068-0250-1DENP               |
| <a href="#">SB250-CON4-3</a> | APK250SBCON/002 | 062-002                | 241B-0250        | 019-0250-STD   | 068-0250-1DEP              | 068-0250-1DENP               |
| <a href="#">SB315-CON2-3</a> | APK315SBCON/003 | 062-003                | 241B-0315        | 019-0315-STD   | 068-0315-1DEP              | 068-0315-1DENP               |
| <a href="#">SB315-CON4-3</a> | APK315SBCON/003 | 062-003                | 241B-0315        | 019-0315-STD   | 068-0315-1DEP              | 068-0315-1DENP               |
| <a href="#">SB400-CON2-3</a> | APK400SBCON/003 | 062-003                | 241B-0400-BELL   | 019-0400-STD   | 068-0400-1DEP              | 068-0400-1DENP               |
| <a href="#">SB500-CON2-3</a> | APK500SBCON/004 | 062-004                | 241B-0500-BELL   | 019-0500-STD   | 068-0500-1DEP              | 068-0500-1DENP               |

| Product Code                 | Flanged Silencer 2D Podded | Flanged Silencer 2D Unpodded | High Temperature Flexible Connectors (each) | Impeller Side Guard | Matching Flanges (each) | Mounting Feet (each) | Wiring Diagram |
|------------------------------|----------------------------|------------------------------|---|---------------------|-------------------------|----------------------|----------------|
| <a href="#">SB250-CON2-3</a> | 068-0250-2DEP              | 068-0250-2DENP               | 063-0250-PU250                              | 078C-0250-C         | 061B-0250-B             | 060B-0250-B          | 152-600        |
| <a href="#">SB250-CON4-3</a> | 068-0250-2DEP              | 068-0250-2DENP               | 063-0250-PU250                              | 078C-0250-C         | 061B-0250-B             | 060B-0250-B          | 152-600        |
| <a href="#">SB315-CON2-3</a> | 068-0315-2DEP              | 068-0315-2DENP               | 063-0315-PU250                              | 078C-0315-C         | 061B-0315               | 060B-0315-B          | 152-600        |
| <a href="#">SB315-CON4-3</a> | 068-0315-2DEP              | 068-0315-2DENP               | 063-0315-PU250                              | 078C-0315-C         | 061B-0315               | 060B-0315-B          | 152-600        |
| <a href="#">SB400-CON2-3</a> | 068-0400-2DEP              | 068-0400-2DENP               | 063-0400-PU250                              | 078C-0400-C         | 061B-0400               | 060B-0400-B          | 152-600        |
| <a href="#">SB500-CON2-3</a> | 068-0500-2DEP              | 068-0500-2DENP               | 063-0500-PU250                              | 078C-0500-C         | 061B-0500               | 060B-0500-B          | 152-601        |

\* Consists of Flexible Connections, Matching Flanges, AV Mounts and Mounting Feet.

\*\* Supplied as a single mount.

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