

Biflow SB – Cylindrical

Features & Benefits



The Biflow SB is a quality range of bifurcated axial fans with a cylindrical casing, specially developed for handling more hostile air movement applications. The Biflow SB is designed so that air throughput totally by-passes the motor, keeping the motor out of the airstream in a cooler environment.

- 3 standard sizes from 400mm to 630mm.
- Air volume flow rates of up to 4.50 m³/sec.
- Static pressures of up to 200 Pa.
- Motor out of the air stream - Ideal for high temperature applications.
- Motors are foot mounted totally enclosed metric, protected to IP55.
- Robust, hot dipped galvanised steel casing.
- Suitable for ambient operating temperatures of up to 200° C.
- Ideal for external or internal mounting.
- Wide range of ancillaries.

Features & Benefits

Motor protection – As the motor is out of the air stream, when the fan is operating at temperatures of up to 200° C, this keeps the air, dust and other contaminants away from the motor, which is an important benefit.

Quality impellers – Adjustable pitch aerofoil section impellers with blades made from high quality pressure die cast aluminium. Hubs are pressure die cast aluminium.

Mounting arrangement – With a single entry motor tunnel into the fan casing, the motor tunnel must be either mounted with its opening vertically upwards, or horizontal to ensure adequate motor cooling. All bifurcated axial fans are suitable for external mounting.

Material strength - SB bifurcated axial fans have a robust, heavy duty construction for added strength and durability. Fan casings are heavy gauge, sheet steel, roll formed and welded and hot dipped galvanised after fabrication to BS 729.

Motor accessibility – Foot mounted motors are easily accessible, which means where there is a requirement to change motors, this can be done relatively easily.

Cost effective – The high efficiency impellers make this a very economical method of moving high volumes of air at low to medium pressures.

Choice – A range of 3 sizes from 400mm to 630mm diameter, means wider performance and greater choice for the engineer.

Availability – The SB range of bifurcated fans is available immediately from stock.

Flexible performance – Adjustable pitch impellers mean the pitch angle of the impeller can be adjusted on site (within limits) if a commissioning problem were to occur.

Integral Flanges – Casings have integral spun flanges for a smooth airflow.

Full Accessory Range – Mounting feet, anti-vibration mounts, matching flanges, flexible connectors, silencers, bell mouth inlets, non return dampers and wire guards.

Tested to the very latest standards – SB units are tested to ISO 5801:1997 (airside performance) and to BS 848 Pt 2:1985 (sound performance) meaning accurate, up to date information on performance and noise data that can be relied upon.

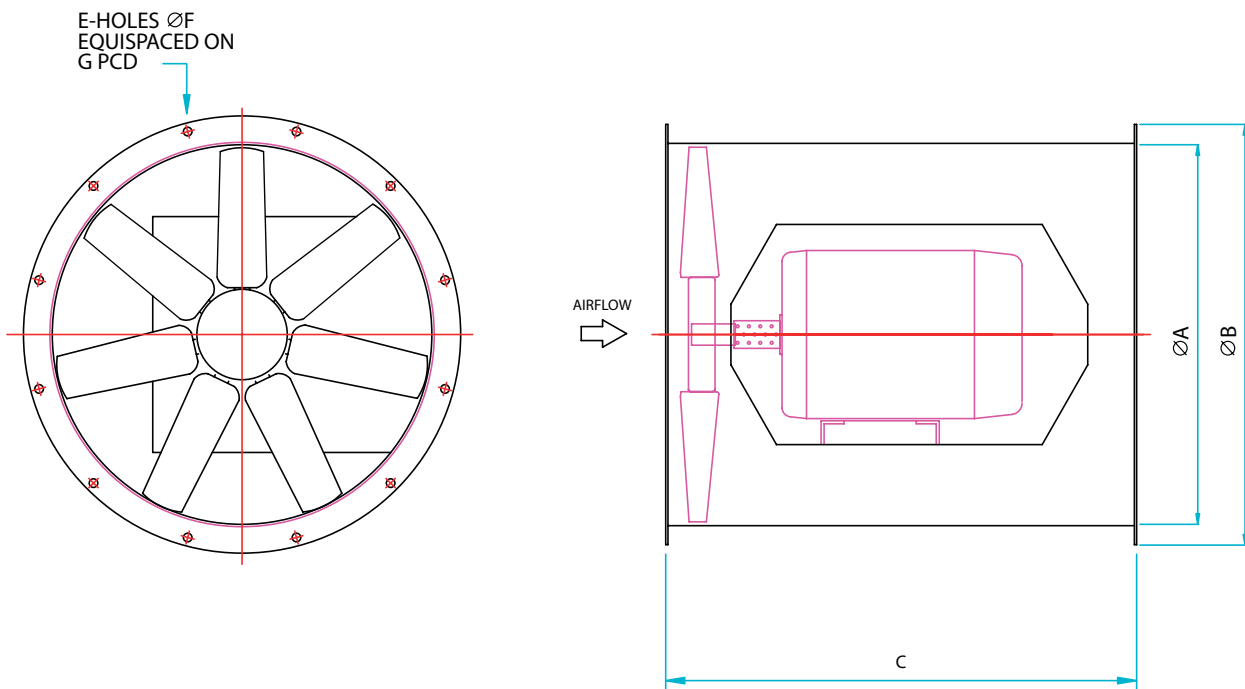
Quality assurance – All units are designed and manufactured with procedures as defined in BS EN ISO 9001: 2000.

Warranty – Each SB bifurcated fan has a 12 month warranty.

Applications

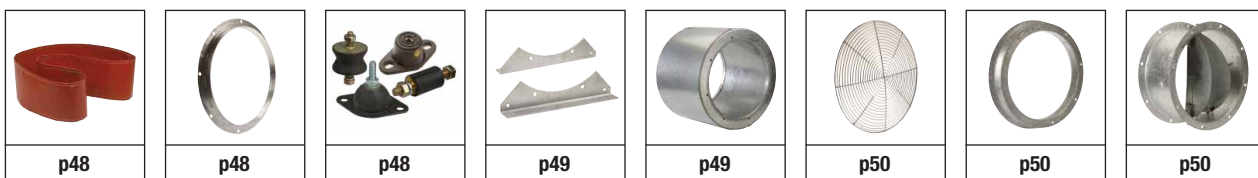
Kitchen extract, spray booths, hot gas situations, corrosive atmospheres, boiler houses, heavy industrial.

Biflow SB - Cylindrical Dimensional Data



| Product Code | A | B | C | E | F | G | Weight kg |
|--------------|-----|-----|-----|----|----|-----|-----------|
| SB400-CYL4-3 | 400 | 475 | 450 | 8 | 12 | 450 | 29 |
| SB500-CYL4-3 | 500 | 585 | 450 | 12 | 12 | 560 | 47 |
| SB630-CYL4-3 | 630 | 715 | 570 | 12 | 12 | 690 | 78 |

Accessories



Biflow SB - Cylindrical Performance & Electrical Data



THREE Phase - 380V-415V / 50Hz

| Product Code | Speed r/min | Airflow m ³ /s @ Static Pressure Pa. | | | | | | | Motor Electrical Data | | | A.V. Mounts | dBA @ 3m |
|--------------|-------------|---|------|------|------|------|------|------|-----------------------|---------|-----------|-------------|----------|
| | | 0 | 25 | 50 | 75 | 100 | 150 | 200 | FLC Amps | SC Amps | Output kW | | |
| SB400-CYL4-3 | 1400 | 1.01 | 0.96 | 0.89 | 0.82 | 0.70 | | | 0.69 | 3.80 | 0.25 | S2B | 55 |
| SB500-CYL4-3 | 1415 | 2.30 | 2.23 | 2.14 | 2.04 | 1.92 | 1.52 | | 1.67 | 10.9 | 0.75 | S2G | 62 |
| SB630-CYL4-3 | 1410 | 4.50 | 4.38 | 4.27 | 4.16 | 4.04 | 3.76 | 3.44 | 4.54 | 30.9 | 2.2 | S2 | 70 |

Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.

Silencer Data

| Product Code | dBA Attenuation | | ΔP (Pa) | dBA Attenuation | | ΔP (Pa) |
|--------------|-----------------|------|---------|-----------------|------|---------|
| | 1DENP | 1DEP | 1DEP | 2DENP | 2DEP | 2DEP |
| SB400-CYL4-3 | -9 | -13 | 14 | -13 | -15 | 22 |
| SB500-CYL4-3 | -9 | -11 | 26 | -14 | -15 | 42 |
| SB630-CYL4-3 | -9 | -14 | 39 | -13 | -21 | 63 |

For explanation of silencer data see p20.

Spinning of air at inlet connection

DO NOT!

A poorly designed inlet box can generate spinning of the air which can reduce performance by around 25%.

Also, avoid small inlet boxes as they can cause surging.

DO!

Splitters at the inlet help prevent spinning flow. Turning vanes, where $R/W < 1.0$ improves uniformity of flow approaching the fan inlet.

Inlet boxes should be amply sized.

