

SB Series Fan Coils



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Aquatherm Clever SB large fan coil units are designed to compliment the current range of air handling equipment available from Temperzone Ltd.

This range of units provide a high quality, low cost, fan coil unit primarily used in concealed ceiling mounted locations but can off the versatility to be modified for specific purposes, i.e outside location, special high grade filters, etc.

SB fan coil units offer fan performance characteristics from as low as 100 l/s to 1600 l/s and fan total static pressures of up to 400 Pa. Fans include direct driven double inlet, single and double scrolls with three speed single phase capacitor run motors.

Motors are suitable for connection of variable speed switches to provide variable air volumes to accurately match the desired fan coil unit duty.

Standard units can include panel filters, cooling coil & drain tray, heating coils and electric heating elements.

Specifications

The range of available temperzone options allows you to completely customise your unit, giving you flexibility and ultimate control.

Model	SB015	SB020	SB025	SB030	SB040	SB050
Nom. Air Flow (L/S)	420	620	850	1050	1250	1500
Dimensions (mm)						
Height	450	450	450	550	550	550
Width	800	1100	1400	1400	1650	1800



Construction

Standard Clever "SB" units are constructed with cast aluminium nodes connected with aluminium corner profile. Panels are single skin of pan style construction or double skin secured to the profile with tech screws and sealed with self adhesive foam tape. Insulation is 10mm foil faced foam insulation type "Thermabreak" and/or double skin 15 mm polyurethane foam insulation. Standard panel materials are unpainted galvanised mild steel sheet but alternative materials are also available, such as:

- Pre-plastic coated coloursteel in standard colour Titania. BHP coloursteel roofing colours are also available.
- Marine grade aluminium, stainless steel or Dulon spray painted zintec for special colours.

SB fan coil units include an inlet spigot and supply air spigot for connection of external ducting.

Special weather proof fan coil units are also available with coloursteel panel materials, flat sheet roof, inlet cowl with bird screen and 100mm aluminium cast mounting feet. Outdoor units are double skin panels only.

Filters

Filters are side access 22 mm of aluminium frame, washable media, flat panel filters or 48 mm disposable cardboard extended surface panel filters. Filters are located in channel frames and accessed from removable filter access panel secured with cam-crest fasteners. Filter grades of G2, G3, and G4 are standard.

Face velocity is limited to 2.6 m/s with either single or double filter panels. Filters are sealed with self adhesive foam tape.

Fans

Standard fans in "SB" fan coil units offer single phase, direct driven, double inlet centrifugal fans with forward curved blade impellers. Two types are generally fitted, either single scroll type DD or double scroll fan deck type FD2. A range of standard fans are indicated in this brochure, but a large selection of direct driven fans is available to best suit the fan coil unit duty.

Fan section access doors are hinged panels secured with screw fittings.

Fan motors are wired to a terminal strip inside the FCU as standard.

Coils

Heating and cooling coils are manufactured from 3/8"Ø & 5/8"Ø copper tube and headers and aluminium fins & framework. Standard coils are either 1, 3, or 6 row with fixed coil fin spacing of 472 fins per meter (12 FPI). Face velocity is limited to 2.5 m/s for cooling coils and 3.5 m/s for heating coils. Drain trays are 0.9mm aluminium with 6 mm self adhesive closed cell neoprene foam insulation and 20 mm BSP threaded nipple extending from the side of the casing. Panel construction under cooling coil drain tray section is double skin with polyurethane foam insulation to avoid moisture soaking.

For dual coil fan coil units, the heating coil is directly connected to the cooling coil, both located over the drain tray.

Motors

Motors used in "SB" fan coil units are of the open frame capacitor type, with 230 volt, 50 Hz power supply and IP20 protection. Fan motors are supplied with insulated flexible power lead for connection to either side as required.

Speed controlling is available but operation should be limited to connection only on high speed and only a performance reduction of 20% to avoid motor overheating problems.

Electric Elements

Clever "SB" fan coil units offer electric heating elements of single or three phase power supply in numerous stages to suit the capacity required. Standard safety devices include auto & manual over-temperature Klixon reset switches. Element terminals are located in a galvanised sheet metal casing with screw fixed cover. Elements are 11 mm finned tubular air heating type with maximum sheath temperature of 400°C at 20°C ambient.

Options Available

- Speed controller located on mounted plate inside fan access panel, fitted and wired.
- Differential air pressure switch to isolate power supply to heating elements in event air flow failure.
- Inlet and discharge plenums with spigots and butterflydamper including manual locking quadrants.



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