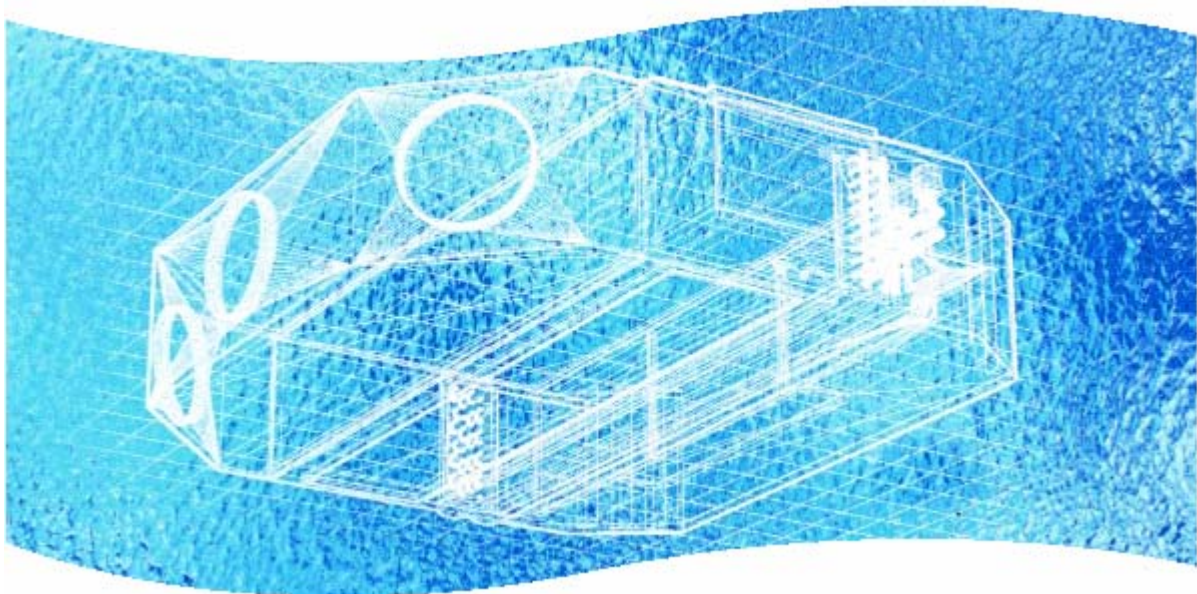


Installation, Operating & Maintenance Instructions



Horizontal Chassis, Waterside Control Fan Coil

Biddle Air Systems Limited
St Mary's Road
Nuneaton
Warwickshire
CV11 5AU

Tel : 024 76 384233
Fax : 024 76 373621
Web Site : www.biddle-air.co.uk
Email : sales@biddle-air.co.uk

Powerbreez

Installation

- Before carrying out any work we recommend isolating the unit from any mains or control power supply by removing the 3amp fuse from the controls box.
- If electrically heated units we also recommend removing the 16amp fuse from the plenum in which the electric elements are installed.
- Always wire the unit and any associated electrical equipment in accordance with the latest I.E.E. regulations and as per the manufacturer's instructions.
- Use electrical cable suited to the electrical rating of the unit.

Size	Fan Motor Running Current* (W)	Fan Motor Running Power* (W)	Full Load Current (A)	Starting Current (A)
PB1	0.59	84	0.92	0.98
PB2	0.35	67	0.45	0.48
PB3	0.66	88	0.88	1.49
PB4	0.80	123	0.99	1.54
PB5	1.09	187	1.40	1.56
PB6	1.42	228	1.84	2.06

* Based upon an external resistance of 30Pa and an operating voltage resulting in a noise level of NR35. Data relating to other external resistances and specific operating voltages is available on request

- Install the units above the ceiling, taking care when lifting it into position.

Size	Unit Dry Weight* (kg)	Discharge Plenum Weight (kg)
PB1	32	2
PB2	47	4
PB3	77	9
PB4	93	11
PB5	105	11
PB6	127	13

* Includes discharge plenum but includes complete controls box at 4kg & 2 x valves/actuators at 0.6kg each

- Hang the unit using the 4 x fixing slots on the unit and M10 drop rods or fixing bolts.
- Attach the ductwork to the spigots on the discharge plenum (if provided), bearing in mind that if our standard plenum is not used or if all the spigots on our standard plenum are not connected to ductwork the performance of the unit will be compromised.

Size	Standard Spigot Sizes (mm)
PB1	3 x 150 dia.
PB2	3 x 150 dia.
PB3	3 x 200 dia.
PB4	4 x 200 dia.
PB5	4 x 250 dia.
PB6	5 x 250 dia.

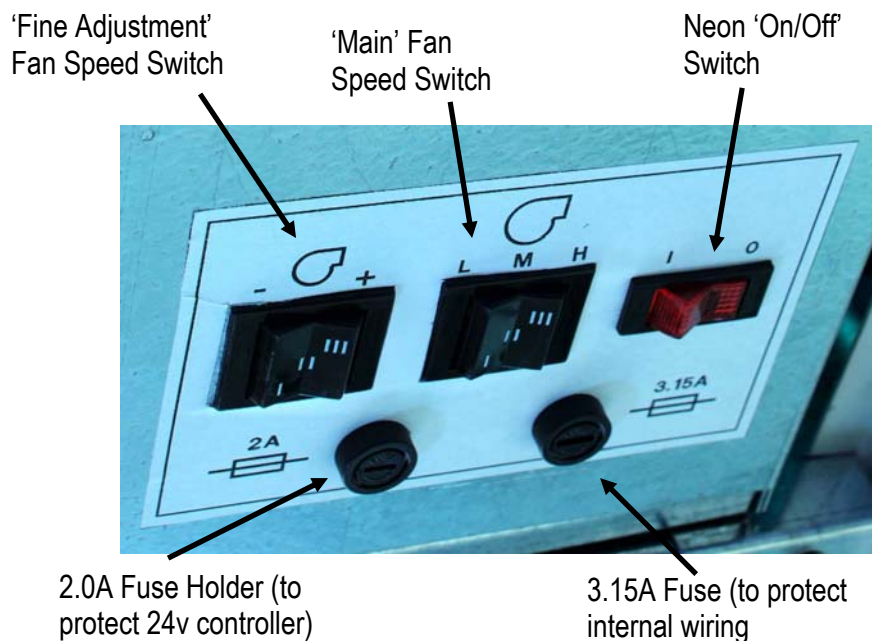
- Connect the chilled water and/or hot water flow and return pipework to the valve(s).

Size	Water Content of Coil (litres)		Coil Connection Size (mm)	
	Cooling	Heating	Cooling	Heating
PB1	0.8	0.1	15	15
PB2	1.8	0.2	15	15
PB3	3.1	0.3	22	15
PB4	3.7	0.4	22	15
PB5	4.3	0.4	22	15
PB6	6.2	0.5	22	15

- Use the air vents to ensure there is no air in the coil.
- If electrically heated units provide a power supply to the electric elements.
- Connect the 'flying lead' provided with the unit to a local fused spur.
- Replace the fuses.
- Push the kettle type plug into the socket on the controls box.

Operation

- The neon on/off switch on the controls box should be in the 'on' position.
- The 'main' fan speed switch on the controls box should, generally, be in the 'medium' position.
- The 'fine adjustment' fan speed switch on the controls box should, generally, be in the 'medium' position.
- The set point temperature adjuster (whether on the controller or remote to the unit) should be set to the desired room temperature.



Maintenance

Before carrying out any work we recommend isolating the unit from any mains or control power supply, following the procedure described under the 'Installation' section of this document.

Fans

- On sizes PB1 & PB2 access is via a single access panel on the underside of the unit.
- On sizes PB3 to PB6 access is via two access panels on the underside of the unit.
- The access panel(s) are removed by using a screwdriver to undo fasteners.
- The fans are of the forward curved centrifugal type, mounted on a fan plate that can be removed without disturbing the wiring.
- Occasionally check the fan runners for security on the shafts and, if necessary, carefully clean with a soft brush and a vacuum cleaner.

Motor

- Of a single phase (230volt, 1phase, 50Hz), totally enclosed, permanent split capacitor type having pre-lubricated sealed-for-life bearings requiring no maintenance.

Filters

- Each unit has a number of small cardboard frame EU3 grade panel filters, which can be withdrawn via access panels on either side of, or underneath, the unit.

Size	Number of Filters	Dimensions (mm)
PB1	1	200H x 475 L
PB2	1	200H x 725L
PB3	3	242H x 368L
PB4	2	242H x 368L
	1	242H x 552L
PB5	3	293H x 450L
PB6	4	293H x 450L

- The access panels are removed by undoing the captive quick release ¼ turn fasteners.
- The filters are designed to be replaced rather than cleaned, but they can be partially cleaned by gentle beating or with a vacuum cleaner.
- The period between replacement and/or cleaning is dependent on operating and site conditions.
- Replacement filters can be purchased from Biddle.

Drain Tray

- Fitted in the unit with a positive fall and manufactured from flame-retardant ABS plastic which can be easily cleaned in-situ or by removal from the unit.
- Always ensure that the condensate drain lines are clear.

Cooling/Heating Coil

- Providing the filters are kept clean the cooling/heating coil will require little or no attention.
- If any dust becomes trapped in the cooling/heating coil this should be cleaned by applying a jet of air to the air leaving side of the cooling/heating coil, or by using a vacuum cleaner.

Wiring

- Any controller, relays, transformer etc are house within the controls box.
- The controls box can be opened by using a screwdriver to undo the single screw.
- Occasionally check that all terminals are tight and that the cable insulation is in good condition.
- After servicing ensure that no parts have been disturbed so as to cause open terminals (such as the spade connectors) to short circuit with the unit chassis.