

Forceflow

900 Series

FAN CONVECTOR



UNPACKING

Remove protective cardboard outer packaging and any polystyrene padding.

You should have received your fan convector in perfect condition. Please advise us within 24 hours of receipt if it is damaged in any way whatsoever.

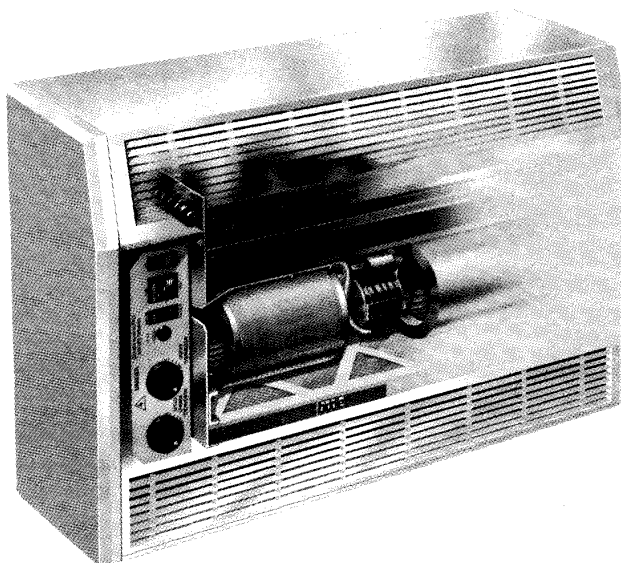
TOOLS REQUIRED

We suggest the following tools are used during installation :

- posi-drive screwdriver
- flat-head electrical screwdriver
- 7mm and 10mm nut-driver/socket and ratchet, with 75mm and 450mm extension pieces

INSTALLATION

- 1 Remove the access panel by unscrewing the 2 x retaining screws, or unlocking the 2 x key operated locks, within the front of the casing
- 2 Securely fix the unit to the wall or ceiling using the four fixing holes on the rear
- 3 Check whether the water connections are on the most appropriate side of the unit. If not, change the 'handing' following the instructions overleaf
- 4 Using proprietary fixings, connect the flow and return pipework to the coil (it is usual to have the water flow connection on the air leaving side of the coil), bringing the pipework in through the holes in the base of the unit - connections are all sized $\frac{3}{4}$ " Female BSP
- 5 Test and vent the coil to expel any air from the system
- 6 Feed the power supply cable, and any other necessary wires (eg remote switch box, remote thermostats etc), through the casing utilising the cable gland supplied, and use the plug supplied to blank off the hole on the opposite end of the unit



- 7 Remove the black/yellow electrics box by unscrewing the 2 x retaining M5 hex bolts
- 8 Locate the wiring diagram on the fan scroll
- 9 Carefully following the wiring diagram connect the power supply, and any other necessary items (eg remote switch box, remote thermostats), to the terminal block within the black/yellow electrics box
- 10 Check the electrical connections and supply power
- 11 Refix the electrics box
- 12 Set the neon on/off switch to the 'on' position
- 13 Set the speed control switch, typically, to the 'low' position
- 14 Set the summer/winter switch to the appropriate position (see note on back page)
- 15 Set the on/off thermostat to, typically, 20°C
- 16 Set the speed change thermostat to, typically, 16°C
- 17 Re-fix the access panel

MAINTENANCE

Before carrying out any maintenance work it is obviously important to isolate the unit from the power supply, and to ensure it cannot be accidentally restored by unauthorised personnel.

The standard cardboard frame panel filter is not designed to be cleaned, and should be replaced at appropriate intervals, which will vary from site to site.

The coil and fans should be cleaned by vacuuming, again at appropriate intervals.

SPARES

Biddle will supply spares for the Forceflow 900 Series fan convector for at least 5 years from the date of manufacture of the unit.

When ordering spares please state the model and serial number from the silver identification label inside the unit.

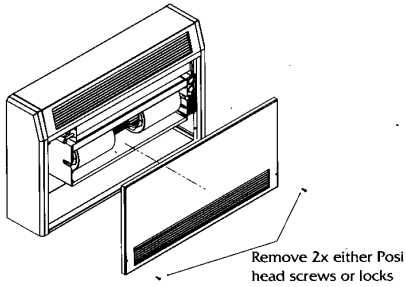
ForceflowTM
FAN CONVECTOR RANGE

INSTALLATION
OPERATING &
MAINTENANCE

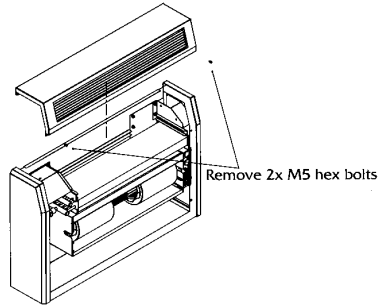
CHANGING THE UNIT HANDING

STEPS 1 - 9

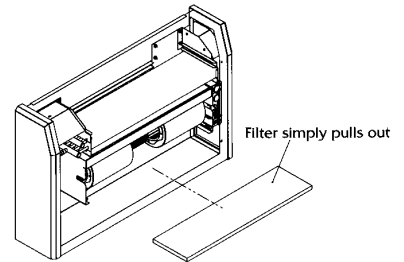
1 Removing Access Panel



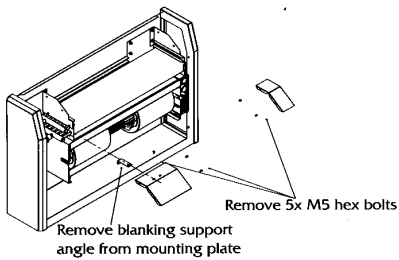
2 Removing Top Panel



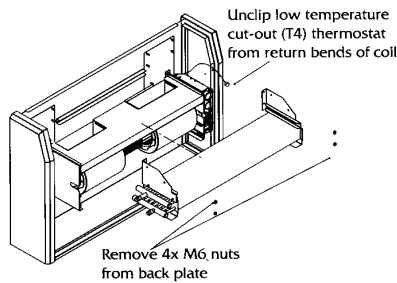
3 Removing Filter



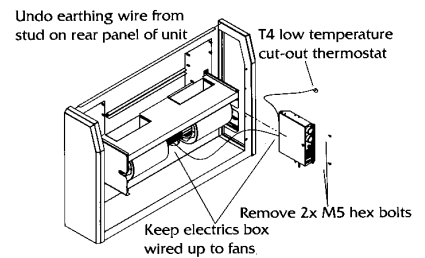
4 Removing Blanking Plates



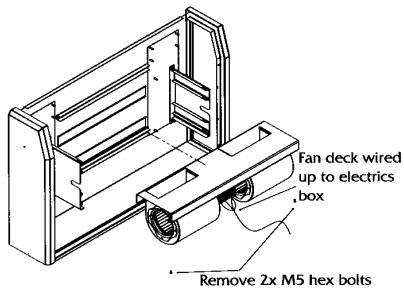
5 Removing Coil



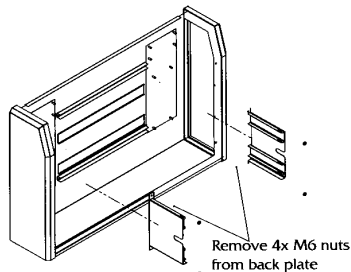
6 Removing Electrics Box



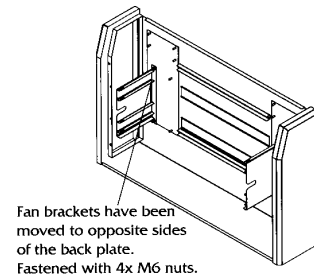
7 Removing Fan Deck



8 Removing Fan Brackets



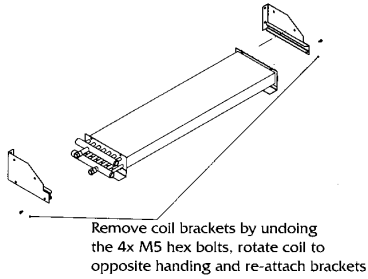
9 Moving Fan Brackets



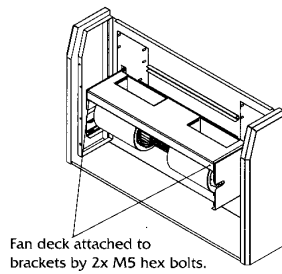
CHANGING THE UNIT HANDING

STEPS 10 - 18

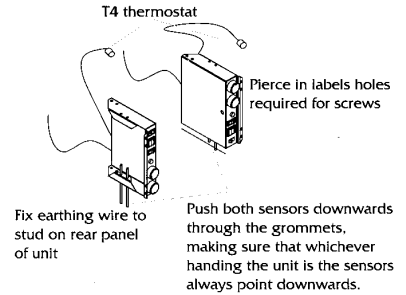
10 Changing Coil Handing



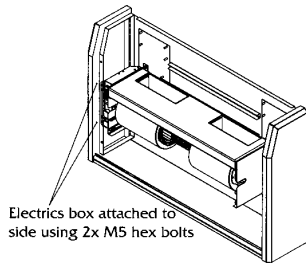
11 Re-attaching Fan Deck



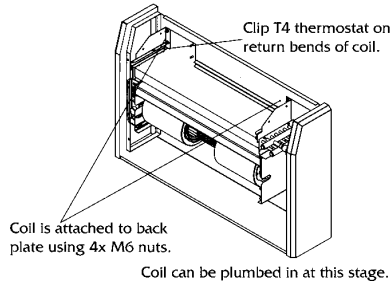
12 Changing Electrics Box Handing



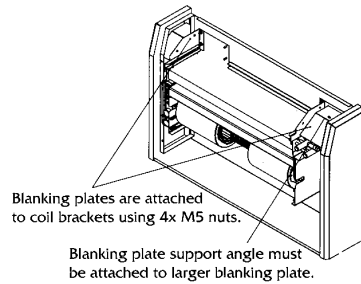
13 Re-attaching Electrics Box



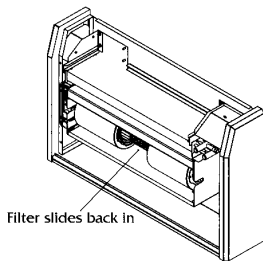
14 Re-attaching Coil



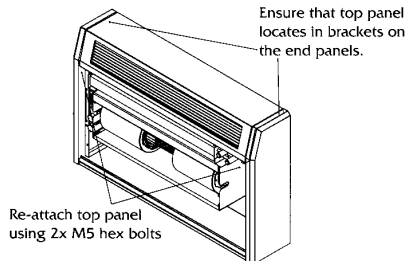
15 Re-attaching Blanking Plates



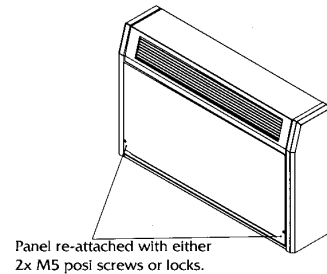
16 Re-attaching Filter



17 Re-attaching Top Panel



18 Re-attaching Access Panel



OPERATION

ELECTRICAL DATA

Model	Full Load Current (Amps)	Start Current (Amps)
915	0.33	0.47
930	0.49	0.68
935	0.45	0.67
940	0.50	0.68
975	1.70	3.55

All units are suitable for 240 volt, 1 phase, 50Hz supply

If electric heated unit:

The T1 and T2 thermostats should be set at around 20°C and 16°C respectively.

The T2 thermostat will change heat output (as the room warms from 3kW to 1.5kW) rather than fan speed.

The T1 thermostat will turn the fans and heating off when the set-point temperature is reached.

The fans will run at a single speed as set by the speed control rocker switch/remote slider.

Controls are either built in to the unit as part of the electrics box, and concealed behind the access panel, or supplied loose for remote fixing on site.

On/off (T1) thermostat – this is usually set to around 20°C. Once room temperature reaches this setting the fans automatically turn off.

Speed change (T2) thermostat – this is usually set to circa 16°C. If the speed control switch is in the 'low' position, the fans automatically run at medium speed when room temperature is below this setting and at low speed when room temperature is above this setting.

Low temperature cut out (T4) thermostat – clipped on to the return bends of the coil, this monitors the temperature of the water in the coil and automatically turns the fans off when it drops below circa 40°C.

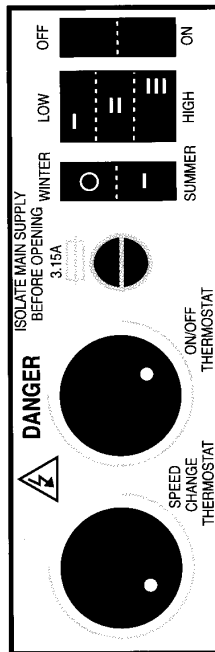
On/off switch – the unit can be switched on or off using the neon rocker switch/remote slider.

Speed control switch - the unit can be set to run at one of three fan speeds. However it is usual to set the rocker switch to the 'low' position/remote slider to position 1.

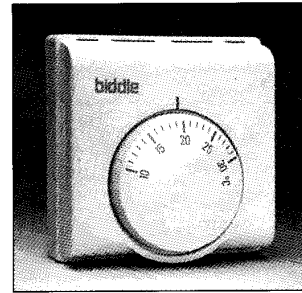
Summer/winter switch – when the rocker switch is set in the 'summer' position/remote slider to the (▲) position it over-rides the low limit cut out (T4) thermostat and the on/off (T1) thermostat. This allows the unit to continually re-circulate ambient air when heating is turned off.

When heating is required, the rocker switch should be set in the 'winter' position/remote slider to the (※) position. However the fans will not operate until a water temperature of at least 40°C is detected by the low limit cut out (T4) thermostat.

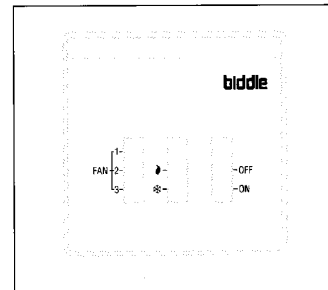
Built in electrics box, showing thermostats and switches



Remote thermostat



Remote switch box



WARNING – if a remote on/off (T1) thermostat is installed with a remote switch box the on/off (T1) thermostat will remain live even when the on/off switch is in the 'off' position.

Biddle Air System Limited
 St. Mary's Road, Nuneaton
 Warwickshire CV11 5AU.
 Telephone: 024 7638 4233
 Fax: 024 7637 3621
 Email: sales@biddle-air.co.uk
<http://www.biddle-air.co.uk>

