

2010



## Air Handling Unit Specifications

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Unit 1 & 2 Smith Forge Ind. Est.  
North End Road  
Yatton  
Bristol  
BS49 4AU

Tel: +44 (0)1934 835900  
Fax: +44 (0)1934 832835  
Email: [sales@pricetwa.co.uk](mailto:sales@pricetwa.co.uk)  
Web: [www.pricetwa.co.uk](http://www.pricetwa.co.uk)

Radiant heating panels - 2010

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## Standard Air Handling Unit Specification

### General Information

Air handling equipment shall be manufactured in accordance with the following specification, designed for horizontal or vertical air flow.

Units shall be matching in both internal width and height to ensure smooth efficient air movement through each section of plant with minimum turbulence and pressure loss.

Access shall be provided to each section of plant for inspection and maintenance purposes.

Units shall be constructed to eliminate the transmission of mechanical vibration.

For ease of handling, larger units shall be transported to site in sections for assembly by others. All jointing gaskets, sealing materials and hardware shall be provided to allow assembly to be completed.

### Unit Frame

The unit framework shall be constructed using 50mm penta box section, manufactured from Z2 bright spangled hot dip galvanised steel.

The frame shall be assembled using pre formed corner sections and seam welded internally. Intermediate post work shall be fitted where necessary to provide a structure of strength and rigidity. The frame shall be capable of supporting the components and fittings forming the air handling unit and withstanding the pressure within the air system under operating conditions. The frame shall be vapour sealed.

### Enclosure and Access Panels

All enclosure panels and access doors shall be recessed into the 50mm frame work to provide a flush internal and external surface. The outer skin shall be manufactured from B.S.C. colour coat plastisol (plastic coated steel). The inner shall be manufactured from Z2 bright spangled hot dip galvanised steel. The cavity shall be packed with slab rockwool insulation compressed between the inner and outer skin, to form a panel with excellent thermal and acoustic properties. Internal floor panels are fitted with reinforced insulation to support man access.

All panels shall be flush mounted into the unit frame and be fully removable.

Access doors shall be provided to areas of regular maintenance. Door furniture allows both hinged or lift off operation and has integral allen key locking facility. Hinge action is operable to both sides of the door.

All panels shall be located on closed cell neoprene acoustic gaskets, about their perimeter.

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### Unit Base Skid

All air handling units shall be fitted with a steel base, fabricated from galvanized steel, designed to support the unit at the relevant structural points.

### Weather Protection

When units are to be installed outside, they shall be provided with a trussed pitched roof fitted over all elements of the framework.

The roof shall be manufactured from Z2 bright spangled hot dip galvanised steel.

The roof shall be flashed and sealed where jointing is necessary to prevent water ingress.

All unducted fresh air intakes and exhaust air discharges shall be fitted with either weather hoods or louvres complete with a bird / vermin screen.

### Standard Features

1. Unit constructed to meet the leakage requirements of DW143 class A
2. Frame to be vapour sealed
3. Fan motors wired to local isolators
4. Fan assemblies mounted on vibration isolators
5. Fan assemblies earth bonded
6. Fan discharges fitted with internal flexible duct connectors
7. Post work insulated around and downstream of cooling coils
8. Coils installed on slide rails
9. Drain trays manufactured to eliminate ponding and extended beyond the component casing to allow inspection and cleaning
10. Panel and bag filters fitted with inclined manometers, hepa's with vertical manometers
11. Bag filters installed in frames
12. Man access sections fitted with removable walkways
13. Air inlet and outlets suitable for flanged duct connection
14. All units fitted with flush base skids
15. All sections fitted with permanent lifting facility
16. Access doors adjustable to allow for seal deterioration
17. All non access panels removable
18. All unit sections and components fitted with identification and warning labels
19. Finish: Framework; self finish, Panels; plastisol coated



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**Optional Extras (not an exhaustive list)**

1. Unit constructed to meet the leakage requirements of DW143 class B, C, or D (as required)
2. Fan motors wired to local isolators complete with auxiliary contacts
3. Drive guards shall be fitted to all fan assemblies
4. View glasses shall be fitted to all fan sections
5. View glasses shall be fitted to all access sections
6. View glasses shall be fitted to all humidifier sections
7. Unit access areas fitted with bulkhead lights, pre wired to external switches
8. Fan sections fitted with bulkhead lights, pre wired to external switches
9. Humidifier sections fitted with bulkhead lights, pre wired to external switches
10. Test points shall be fitted between all components
11. All access doors shall be key lockable
12. The unit shall be fitted with guttering, down comers and shoe discharges
13. Barkell Limited shall attend site to complete assembly, following final positioning by others
14. The units shall be leakage tested at works
15. The units shall be witness leakage tested at works
16. The units shall be leakage tested on site
17. Non standard colours available
18. Floating hinges for low leakage applications
19. Trunking can be installed integral to the AHU frame work
20. Enclosures can be provided for controls or power distribution equipment
21. A comprehensive controls package can be supplied for each AHU