AirCraft Air Handling are a leading British Manufacturer of Air Handling Units providing quality products and cost-effective solutions. Established in the 1990’s, AirCraft have designed and manufactured bespoke and versatile units that have provided quality service in varied environments including Education, Offices, Shopping Centres, Laboratories and Hotels. AirCraft products have created comfortable environments all over the UK, Europe and the Middle East.

HTM-03 Compliant
Bespoke Designs
Available Flat Packed - Site Assembled

Craftsmanship in Air
HTM-03 Compliant Units

SAMPLE SPECIFICATION

CASING CONSTRUCTION
Unit framework shall be 50 mm anodized aluminium section with cast corner pieces. The aluminium penta post profile shall be 2 mm thick. Panels shall be flush into the framework providing a smooth outer and inner finish. Panels shall be of double skinned construction tray form comprising of the following:-

- 50 mm thick and manufactured using 0.7 mm goosewing grey plastisol outer skin and 1.0 mm galvanised inner skin.
- 50 mm thick insulation with a thermal conductivity of 0.034-0.035 W/mK.


Access doors shall be of hinged design and shall seat into compression rubber seals.

General access doors to be 500 mm wide. Bag filter access 600 mm wide.

Lockable handles shall be fitted to all access doors.

Units shall be mounted on 300 mm channel base which shall be extended to fixing of lifting lugs.

Viewing points and lights fitted to fan, filter sections and access sections. Pre-wired to external on/off switch. Lights to be suitable for 240 volt supply single phase. View ports on upper deck mounted at low level.

Insertion losses through casing

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DAMPER SECTION
Where stated, the unit shall have a fresh air intake, exhaust, return air and supply dampers. Damper to have edge seals fitted to blades and suitable for motorized operation.

Damper torque = 4 Nm per 1m² of damper face area.

FROST COIL
Air volume 1.3 m³/s Air on -5°C Air Off +5 °C

Water Flow 82 Return 71 Water Flow Rate TBA l/s Water Pressure Drop TBA Kpa

Frost coil shall be suitable for operation with LPHW. Coil shall be constructed from seamless copper plain tubes with no fins. The coil block shall be housed in a galvanized steel casing suitable for “slide in” application. Connections to be steel BSP screwed.

A 10% margin in capacity shall be included in all coil selections.

All coils shall be tested to 30 kg.cm² air under water and copies of test certificates provided.

Coil face velocity not to exceed 2.0 m/s.

FILTER SECTION
Filters shall be mounted in a fixed galvanized steel frame arrangement for side withdrawal.

All filters are compliant with EN779:2012 test standards. All filters are non combustible.

The panel filters shall be 50 mm G4. (Dirty filter 150 pa). Bag filters shall be 600 mm F7. (Dirty filter 250 pa).

Manometers fitted to all filters. Model ref AHC 600 operating range 0-600 pa. Operating limits maximum pressure 200 kpa temperature limits -40 /+60 °C. Accuracy 5 pa (inclined scale) 20 pa (vertical scale). Gauge fluid ISO-paraffin, s.g. 0.786 kg/dm³ (15°C). Note – structure of gauge prevents the gauge fluid escaping from the meter.

Magnehelic gauges fitted.

Each bank of filters will have 1 magnehelic gauge.

FAN SECTION
Supply Fan 1.3 m³/s External static 300 pa Total Fan static 621 pa (Mid life) Extract Fan 1.3 m³/s External static 300 pa Total Fan static 508 pa (Mid life)

Unit shall have supply and extract fans.

Fan shall be Plug type with backward curved impellor. Fan wheels shall be statically and dynamically balanced and mounted on a solid steel shaft turning in sealed for life bearings.

Direct Drive motors shall be of the TEFC type with class F insulation wound for 415 v 3 phase 50Hz electrical supply. Fan assembly shall be isolated from unit casing with anti vibration mounts and a flexible connection.

Supply fan run frequency @ design dirty filter 74 Hz Extract fan run frequency @ design dirty filter 70 Hz

Fan access guards fitted. Motors wired to external isolators.

Fan data sheets attached.

HEAT RECLAIM COIL
Air vol 1.3 m³/s Air On 21°C Air Off 11.4°C

Cooling coils shall be suitable for operation with chilled water (25% Glycol). All coils shall be constructed from seamless copper tubes expanded into copper fins electro tinned plated.

The coil block to be housed in stainless steel casing suitable for ‘slide in’ application. Coil to be complete with removable stainless steel drain tray.

3 pass plastic eliminator fitted.

A 10% margin in capacity shall be included in all coil selections.

Coil face velocity not to exceed 2.5 m³/s.

Space shall be adequate to house full HTM-03 compliant coil arrangement, including eliminator and stainless steel removable drain tray.

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SAMPLE SPECIFICATION

HEATING COILS
Air volume 1.3 m$^3$/s  Air on 5°C  Air Off 20°C
Water Flow 82  Return 71  Water Flow Rate TBA l/s  Water Pressure Drop TBA Kpa

Heating coil shall be suitable for operation with LPHW. Coil shall be constructed from seamless copper tubes expanded into copper fins. The coil block shall be housed in a galvanized steel casing suitable for "slide in" application. Connections to be steel BSP screwed.

A 10% margin in capacity shall be included in all coil selections.

All coils shall be tested to 30 kg.cm$^2$ air under water and copies of test certificates provided.

Coil face velocity not to exceed 2.0 m/s.

HEATING COILS - RUN ROUND
Air volume 1.3 m$^3$/s  Air on 5°C  Air Off 15°C
Water Flow 82  Return 71  Water Flow Rate TBA l/s  Water Pressure Drop TBA Kpa

Heating coil shall be suitable for operation with LPHW. Coil shall be constructed from seamless copper tubes expanded into copper fins. The coil block shall be housed in a galvanized steel casing suitable for "slide in" application. Connections to be steel BSP screwed.

A 10% margin in capacity shall be included in all coil selections.

All coils shall be tested to 30 kg.cm$^2$ air under water and copies of test certificates provided.

Coil face velocity not to exceed 2.0 m/s.