# HTM-03 Compliant


AirCraft

Craftsmanship in Air

# HTM-03 Compliant Units

SAMPLE SPECIFICATION

## CASING CONSTRUCTION

Unit frame work 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.
Performance Euro Class A1. Standards BSEN 13162, ISO 14001.2004.

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

| 63 | 125 | 250 | 500 | 1K | 2K | 4K | 8K |
|---|---|---|---|---|---|---|---|
| 18 | 25 | 29 | 29 | 27 | 33 | 36 | 33 |

## 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 1m$^2$ of damper face area.

## FROST COIL

Air volume 1.3 m$^3$/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.cm$^2$ 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/dm$^3$ (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 m$^3$/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 2.5m$^3$/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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# HTM-03 Compliant Units

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.

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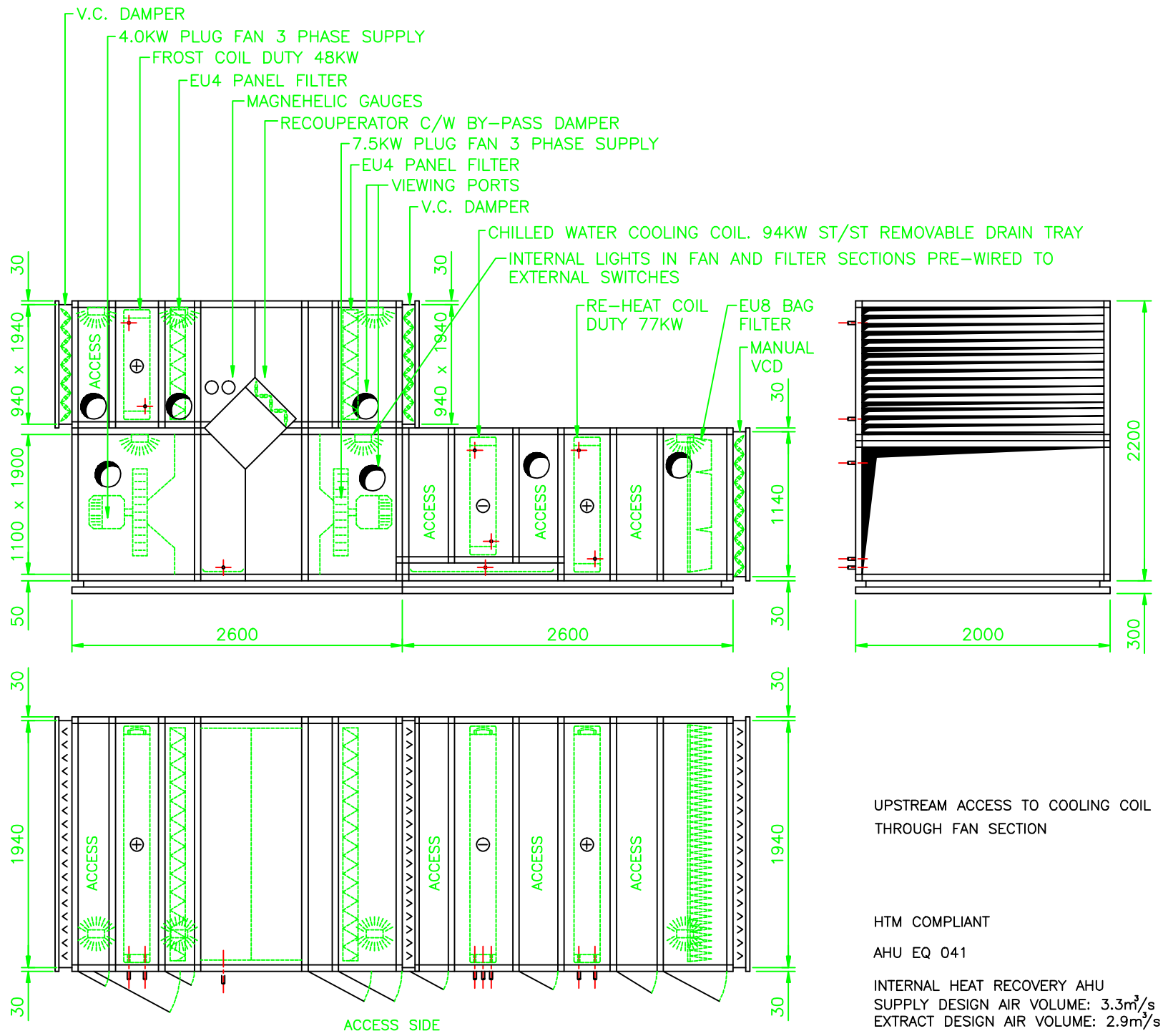


UPSTREAM ACCESS TO COOLING COIL THROUGH FAN SECTION

HTM COMPLIANT

AHU EQ 041

INTERNAL HEAT RECOVERY AHU
SUPPLY DESIGN AIR VOLUME: 3.3$m^3/s$
EXTRACT DESIGN AIR VOLUME: 2.9$m^3/s$

ADDITIONAL NOTES:

NOTE:
Keep Drop Rods (If Any) And Pipework etc. Clear Of Access And Withdrawal Positions.

Unit Double Skinned

Finish:

Colour: GOOSEWING GREY

A: Allow 2200mm For Withdrawal Of Filters, Fan And Motor.

B: Allow 2200mm For Withdrawal Of Coils etc.

Approx. Weight: T.B.A. kg.

Unit Shipped In T.B.C. Pieces

Job Title: COLSTON PRIMARY.
Job No: 11278 EASTWOOD AIRCON
Original Drawing Date: 07.07.11.
Issue & Date: F, 13.09.11.

Drawing No: CD5174