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Date: 20th March 2015
Your Ref:
Our Ref: Q00354/UE1174

Richard Stephens Partnership
Mill Court
Mill Hill
Edenbridge
Kent
TN8 5DB

For the attention of: Mr. Andrew Paterson

Dear Sirs,

Re: **UCL NAC MRI Royal Free Hospital**

We thank you for your recent enquiry and have pleasure in submitting our quotation for the supply and delivery of **air handling units**.

Our quotation has been prepared based on your emailed enquiry dated 18th March 2015.

Prices

Our nett price for the supply and delivery of the equipment described in the following specification would be;

Item No.	One	Two
Unit Reference	AHU 201 Option 1	AHU 202 Option 1
Model No.	AHE 4/4	AHE 4/4
No. Of Units	1	1
Unit Price	£21,377	£17,867
Delivery	-----Included-----	

Please refer to the enclosed technical schedules and equipment specification for further details of the units offered.

We trust our quotation meets with your immediate requirements however should you require any further information please do not hesitate to contact us.

Yours faithfully

Energy Efficient Equipment Ltd



Phil Bullock
Director

philbullock@energy-efficient-equipment.co.uk

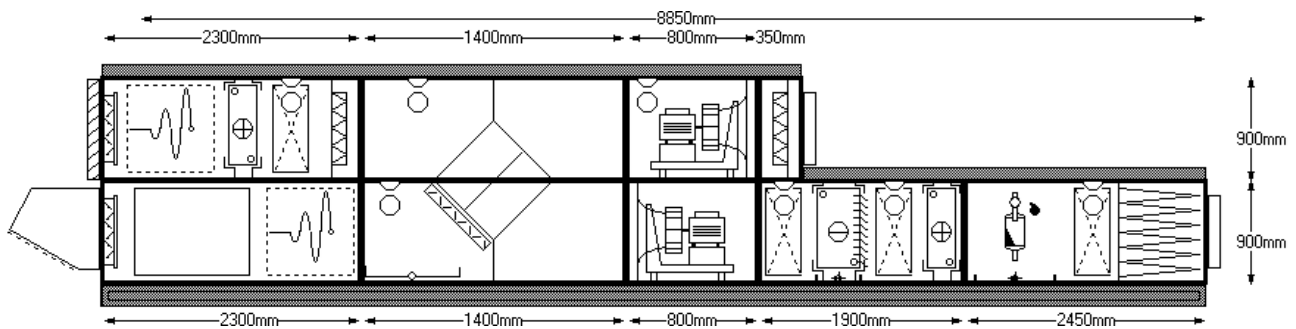
Notes To Be Read In Conjunction With Our Offer

General Notes

- All units are designed for external installation.
- Standard external finish for Weatherproof unit casework would comprise extruded anodised aluminium framework with Merlin Grey Plastisol panels.
- All bulkhead lights are low energy LED type.
- All bulkhead lights are wired to 1 common switch.
- Traffolyte label for each component.
- Brass test point between each component.
- The foregoing prices are based on equipment supplied in accordance with our standard specification for construction and finish comprising 16gauge Aluzink framework enclosed with 50mm thick double skin nominal 20gauge panels. Panels would be lined with semi rigid mineral wool insulation having a density of 60kg/m³ and a thermal conductivity of 0.034W/mK @ 10°C Mean temperature.
- This standard construction would be suitable for DW144 Class A leakage test.
- Please note that where net delivery charges are quoted these include for the most economical form of transport available to us in the absence of any special delivery requirements being advised at the enquiry stage and assume all units quoted will be supplied in one consignment.
- We would be pleased to quote separately for any special delivery arrangements relating to type and size of vehicle etc, on application.

AHU 201

1 No Model AHE 4 / 4 External Weatherproof Double Deck Horizontal unit.



Nominal size 2050mmH (Inc Roof & Base) x 900mmW x 8850mmL, Approx weight: 2366Kg

Supplied in a minimum of 2 sections for final assembly on site by others.

Supply duty: 0.54m³/s against 350Pa. External Resistance

Extract duty: 0.54m³/s against 350Pa. External Resistance

Unit Specific fan power is 2.09 w/l/s (clean filters) in accordance with BS EN13779:2007 and excludes any inverter losses.

Unit to Comprise;

Supply:

Supply Louvre c/w bird screen.

Fresh air damper suitable for motorised operation (actuator excluded).

900 mm long fresh air (atmospheric) melinex bagged Silencer.

LPHW heating coil Cu 0.35 tube / ** No Fins ** fin construction.

- EAT -4°C.
- LAT 10°C.
- LPHW @ 82/71°C.
- Heating duty 9.3kW.
- Water flow rate 0.21l/s.
- Water pressure drop 13.1kPa.

AHU 201 (cont'd)

Access section c/w viewport and bulkhead light wired to one common switch.

Panel Filter G4 grade 50mm c/w 250 Pa Minihelic Gauge and 100% Spare Filters.

Aluminium plate heat recovery Recuperator module.

- 3.8 kW Duty.
- Coldside entering DB 10°C, RH 35%.
- Leaving DB 15.9°C, RH 23.8%.
- Viewport.
- Bulkhead light wired to one common switch.

Ø 280BC Plug Supply fan driven directly via 1.1kW 415V. 3Ph 50Hz 2 pole IE2 motor.

- Fan speed 2950 rpm.
- Efficiency 66 %.
- Absorbed power 0.7 kW.
- To be run via inverter @ 50Hz.
- Inverter supplied loose for wiring on site by others.
- Pre-wired isolator fitted.
- Door guard.
- Spare motor supplied loose.

Access section c/w viewport and bulkhead light wired to one common switch.

CW cooling coil Cu 0.35 tube / CuSn 0.12 fin construction c/w eliminator.

- EAT 29°C DB/19.5°C WB.
- LAT 11°C DB/10.5°C WB.
- Total duty 16.8kW.
- CW @ 7/12°C. F & R.
- Water flow rate 0.8l/s.
- Water pressure drop 14.7kPa.

Access section c/w viewport and bulkhead light wired to one common switch.

LPHW heating coil Cu 0.35 tube / Cu 0.16 fin construction.

- EAT 10°C.
- LAT 28°C.
- LPHW @ 82/71°C.
- Heating duty 11.9kW.
- Water flow rate 0.27l/s.
- Water pressure drop 13.5kPa.

Live steam humidifier c/w control valve.

- Duty 17.25kg/hr.
- Steam @ 1 Bar.

Access section c/w viewport and bulkhead light wired to one common switch.

F8 grade Synthetic Bag Filter 530mm c/w 500 Pa Minihelic Gauge and 100% Spare Filters.

Supply Outlet Spigot 800mmH x 800mmW.

Extract:

Extract Inlet Spigot 560mmH x 710mmW.

Panel Filter G4 grade 50mm c/w 250 Pa Minihelic Gauge and 100% Spare Filters.

AHU 201 (cont'd)

Ø 280BC Plug Extract fan driven directly via 0.75kW 415V. 3Ph 50Hz 2 pole IE2 motor.

- Fan speed 2564 rpm.
- Efficiency 67 %.
- Absorbed power 0.5 kW.
- To be run via inverter @ 46Hz.
- Inverter supplied loose for wiring on site by others.
- Pre-wired isolator fitted.
- Door guard.
- Viewport.
- Bulkhead light wired to one common switch.
- Spare motor supplied loose.

Aluminium plate heat recovery Recuperator module c/w face and by-pass dampers (actuator excluded) and drain tray.

- 3.8 kW Duty.
- Hotside entering DB 21°C, RH 50%.
- Leaving DB 15.1°C, RH 72.3%.
- Resulting condensate 0.0 l/hr.
- Bypass damper torque rating 2 N/m.
- Viewport.
- Bulkhead light wired to one common switch.

900 mm long exhaust (atmospheric) melinex bagged air silencer.

Exhaust damper suitable for motorised operation (actuator excluded).

Exhaust Hood c/w bird screen.

150mm High fabricated Base complete with lifting points.

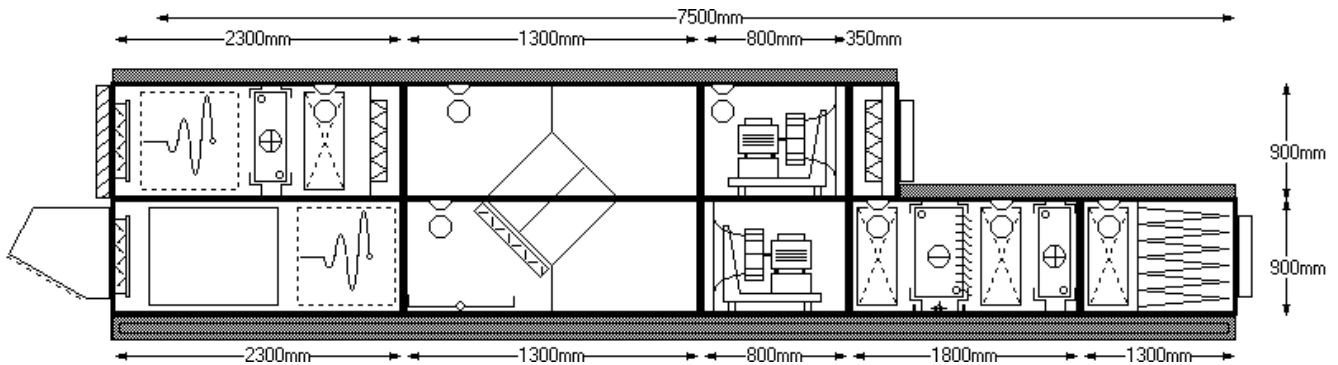
100mm high pitched Roof.

In-duct sound spectrum PWL (dB re10-12Watts):

	Hz	63	125	250	500	1K	2K	4K	8K
Extract Fan Inlet	dB	79	77	79	71	67	64	63	59
Extract Fan Discharge	dB	70	75	84	79	78	72	69	62
Supply Fan Inlet	dB	83	78	77	80	73	68	68	68
Supply Fan Discharge	dB	74	76	82	88	84	76	74	71
Extract Silencer Outlet Insertion Loss	dB	6	11	19	30	40	36	31	22
Supply Silencer Inlet Insertion Loss	dB	6	11	19	30	40	36	31	22

AHU 202

1 No Model AHE 4 / 4 External Weatherproof Double Deck Horizontal unit.



Nominal size 2050mmH (Inc Roof & Base) x 900mmW x 7500mmL, Approx weight: 2094Kg

Supplied in a minimum of 2 sections for final assembly on site by others.

Supply duty: 0.50m³/s against 350Pa. External Resistance

Extract duty: 0.50m³/s against 350Pa. External Resistance

Unit Specific fan power is 2.02 w/l/s (clean filters) in accordance with BS EN13779:2007 and excludes any inverter losses.

Unit to Comprise;

Supply:

Supply Louvre c/w bird screen.

Fresh air damper suitable for motorised operation (actuator excluded).

900 mm long fresh air (atmospheric) melinex bagged Silencer.

LPHW heating coil Cu 0.35 tube / ** No Fins ** fin construction.

- EAT -4°C.
- LAT 10°C.
- LPHW @ 82/71°C.
- Heating duty 8.6kW.
- Water flow rate 0.19l/s.
- Water pressure drop 11.5kPa.

Access section c/w viewport and bulkhead light wired to one common switch.

Panel Filter G4 grade 50mm c/w 250 Pa Minihelic Gauge and 100% Spare Filters.

Aluminium plate heat recovery Recuperator module.

- 3.5 kW Duty.
- Coldside entering DB 10°C, RH 35%.
- Leaving DB 15.8°C, RH 24%.
- Viewport.
- Bulkhead light wired to one common switch.

AHU 202 (cont'd)

Ø 280BC Plug Supply fan driven directly via 1.1kW 415V. 3Ph 50Hz 2 pole IE2 motor.

- Fan speed 2885 rpm.
- Efficiency 66 %.
- Absorbed power 0.7 kW.
- To be run via inverter @ 49Hz.
- Inverter supplied loose for wiring on site by others.
- Pre-wired isolator fitted.
- Door guard.
- Spare motor supplied loose.

Access section c/w viewport and bulkhead light wired to one common switch.

CW cooling coil Cu 0.35 tube / CuSn 0.12 fin construction c/w eliminator.

- EAT 29°C DB/19.5°C WB.
- LAT 18°C DB/15.4°C WB.
- Total duty 7.8kW.
- CW @ 7/12°C. F & R.
- Water flow rate 0.37l/s.
- Water pressure drop 11.2kPa.

Access section c/w viewport and bulkhead light wired to one common switch.

LPHW heating coil Cu 0.35 tube / Cu 0.16 fin construction.

- EAT 10°C.
- LAT 21°C.
- LPHW @ 82/71°C.
- Heating duty 6.8kW.
- Water flow rate 0.15l/s.
- Water pressure drop 4.8kPa.

Access section c/w viewport and bulkhead light wired to one common switch.

F8 grade Synthetic Bag Filter 530mm c/w 500 Pa Minihelic Gauge and 100% Spare Filters.

Supply Outlet Spigot 800mmH x 800mmW.

Extract:

Extract Inlet Spigot 560mmH x 710mmW.

Panel Filter G4 grade 50mm c/w 250 Pa Minihelic Gauge and 100% Spare Filters.

Ø 280BC Plug Extract fan driven directly via 0.75kW 415V. 3Ph 50Hz 2 pole IE2 motor.

- Fan speed 2541 rpm.
- Efficiency 67 %.
- Absorbed power 0.5 kW.
- To be run via inverter @ 45Hz.
- Inverter supplied loose for wiring on site by others.
- Pre-wired isolator fitted.
- Door guard.
- Viewport.
- Bulkhead light wired to one common switch.
- Spare motor supplied loose.

AHU 202 (cont'd)

Aluminium plate heat recovery Recuperator module c/w face and by-pass dampers (actuator excluded) and drain tray.

- 3.5 kW Duty.
- Hotside entering DB 21°C, RH 50%.
- Leaving DB 15.2°C, RH 71.8%.
- Resulting condensate 0.0 l/hr.
- Bypass damper torque rating 1.7 N/m.
- Viewport.
- Bulkhead light wired to one common switch.

900 mm long exhaust (atmospheric) melinex bagged air silencer.

Exhaust damper suitable for motorised operation (actuator excluded).

Exhaust Hood c/w bird screen.

150mm High fabricated Base complete with lifting points.

100mm high pitched Roof.

In-duct sound spectrum PWL (dB re10-12Watts):

	Hz	63	125	250	500	1K	2K	4K	8K
Extract Fan Inlet	dB	79	77	79	71	67	64	63	59
Extract Fan Discharge	dB	70	75	84	79	78	72	69	62
Supply Fan Inlet	dB	83	78	77	80	73	68	68	68
Supply Fan Discharge	dB	74	76	82	88	84	76	74	71
Extract Silencer Outlet Insertion Loss	dB	6	11	19	30	40	36	31	22
Supply Silencer Inlet Insertion Loss	dB	6	11	19	30	40	36	31	22

Specification

In the absence of any specification please check that our offer meets with your requirements. We reserve the right to amend our price accordingly should changes be necessary.

Validity & Terms

If our quotation proves to be acceptable orders should be placed with:

Air Handling Equipment Ltd
c/o Energy Efficient Equipment Ltd,
23 Cotton Street,
Liverpool.
Merseyside.
L3 7DY

Our price, based upon the cost of component parts, materials and labour ruling at the date of this quotation, is open for acceptance for a period of 60 days and assumes that the required delivery date corresponds to our quoted delivery.

Terms: To be agreed subject to credit status.

Prices exclude VAT which will be charged at the appropriate rate ruling at the time of invoice.

12 Month Warranty

A full 12-month warranty is offered, commencing from the date of delivery or invoice, whichever is the sooner and covers all faulty components and workmanship.

This warranty is subject to fully documented evidence to show that competent engineers have carried out the correct maintenance.

Any unit subject to a warranty claim will be inspected or repaired during normal working hours (between 8:00am and 6:00pm Mon-Fri). Should it be necessary for this work to be completed outside of normal working hours costs may be incurred.

Exclusions

We draw your attention to the following list of exclusions, which should be read fully together with our Terms and Conditions of Sale, which are available on request.

- **Any special witness testing, balancing & commissioning.**
- **Anti vibration materials and holding bolts.**
- **Air or liquid flow failure switches.**
- **Flexible connections in pipe work or ductwork on to our equipment.**
- **Insulation & vapour sealing of low temperature components.**
- **Cooler battery condensate drain pipe work & glass traps.**
- **All air conditioning controls and wiring.**
- **Damper actuators**
- **Off loading, positioning, moving across site, assembly & sealing.**
- **Site protection of installed plant.**
- **Tico pads.**
- **Builders work including holes for pipe work & wiring, then making good after installation of said items.**
- **Any other items not specifically mentioned within this quotation.**

AIR HANDLING EQUIPMENT LIMITED

TERMS AND CONDITIONS OF SALE

Validity and Definitions:	All quotations are made and all orders are accepted and all units, goods and services are sold or supplied subject to these Terms and Conditions of Sale which shall be deemed to be incorporated in any and every order or contract between Air Handling Equipment Limited – “ the Company” – and its customer and these Terms and Conditions shall take precedence whenever or wherever they conflict with any other terms and conditions, and the term “services” includes, but is not limited to the preparation of drawings and specifications and the selection of materials and the installation and testing of all units or goods sold or supplied by the Company or any agent or sub-contractor of the Company.
Quotations and Terms:	Any Price shown on the Company’s Quotation is open for acceptance for 60 days from the date thereof. All goods supplied will be invoiced at the date of despatch. All invoices are strictly nett for payment in 60 days from date of invoice. If the customer fails to take delivery of the units or goods when they are ready for delivery, the Company shall be entitled to invoice the customer at the date when the units or goods are ready for delivery.
Suitability:	It is the responsibility of the customer to determine the suitability or the fitness for any purpose of any units, goods or services sold or supplied by the Company and the customer of the Company shall rely on his or its own judgement (and not that of the Company) as to the suitability or fitness thereof for the purpose for which the same are being ordered or purchased and accordingly the Company shall not be liable for any loss or damage whatsoever arising out of or in connection with the use of such units, goods or services.
Drawings & Specifications:	It is the responsibility of the customer to inspect or examine all drawings and specifications relating to the units or goods to be sold or supplied before the contract is made (in so far as the same are capable of inspection or examination at that time) and the customer of the Company shall rely on his or its own inspection or examination (so far as aforesaid) and not any implied condition of merchantable quality and accordingly the Company shall not be liable for any loss or damage arising out of or in connection with the use of such units or goods.
Delivery:	Whilst every endeavour will be made to meet any quoted delivery dates all such dates shall be treated as estimates only not involving the Company in any liability for not producing or delivering or completing the units, goods or services on such dates and the customer shall not be entitled thereby to refuse a delivery or deliveries made after any such date or dates, or to cancel any order or contract or part thereof or to make any claim for losses or damages. If the contract provides for delivery by instalments, each delivery shall be deemed to be subject of a separate contract to which these terms and conditions shall apply and non-delivery or delay in delivery of any instalment shall not affect the balance of the sale or contract or entitle the customer to cancel or rescind the same.
Storage:	If the customer fails to take delivery of the units or goods when they are ready for delivery, the Company may at its option store them or have them stored by a third party. In such event the cost for the additional handling, storage and insurance which may be incurred will be borne and paid by the customer and added to and form part of the price.
Property and Bailment:	The property in the units or goods will not pass from the Company to the customer until the customer has paid the Company in full for the units, goods or services sold or supplied by the Company to the customer (by this order or contract) and any handling, storage or insurance charges associated therewith. Until the property in the units or goods passes from the Company, the customer as bailee will be responsible to the Company for the safe-keeping of the units or goods and the cost of the units or goods being kept insured and the clear marking of the units or goods as being the property of the Company. If contrary to the foregoing provisions of this Clause the customer shall sell the units or goods then any payment or payments received by the customer in respect of the units or goods shall be held by the customer on behalf of the Company and on trust to pay the same to the Company. The foregoing provisions of this clause shall be in addition to and without prejudice to any other rights of the Company resulting or arising from breach of contract by the customer including any right to recover possession of the units or goods sold or supplied to the customer.
Risk:	Risk will pass on delivery ex works by the Company or from a third party store or warehouse to the customer or to a carrier, whichever is the earlier, and accordingly any loss or damage in transit is at the risk of the customer.
Guarantee:	If during 12 months from the date of despatch any part of any units or goods manufactured and sold or supplied by the Company is found upon inspection by the Company to be defective in material or workmanship under normal use, when properly installed as designed, the Company will, free of cost, repair or replace the defective part, as the Company so wishes, provided such part is returned carriage paid to the Company as soon as possible. For units or goods sold or supplied which are not manufactured by the Company, it will transfer to the customer the benefit of any guarantee which may be given to the manufacturer in respect of such units or goods if the Company is able to effect such transfer.
Design, etc:	No rights in design copyright or any patent application, patent or trademark are or shall be transferred to or conferred upon the customer of the Company in relation to any drawings specifications, units or goods sold or supplied by the Company.
Distributors:	All customers of the company who are distributors and not users of the units, goods or services sold or supplied by the Company shall sell or supply the same to third parties on the same terms and conditions and shall procure that if the same shall be further sold or supplied then on each such occasions the same terms and conditions shall apply.
Variations:	These conditions cannot be varied or altered in any way except as agreed by the Company in writing and signed by a representative of the Company duly authorised in writing. No representative of the Company is authorised to vary these conditions orally and any purported oral variation shall be null and void.