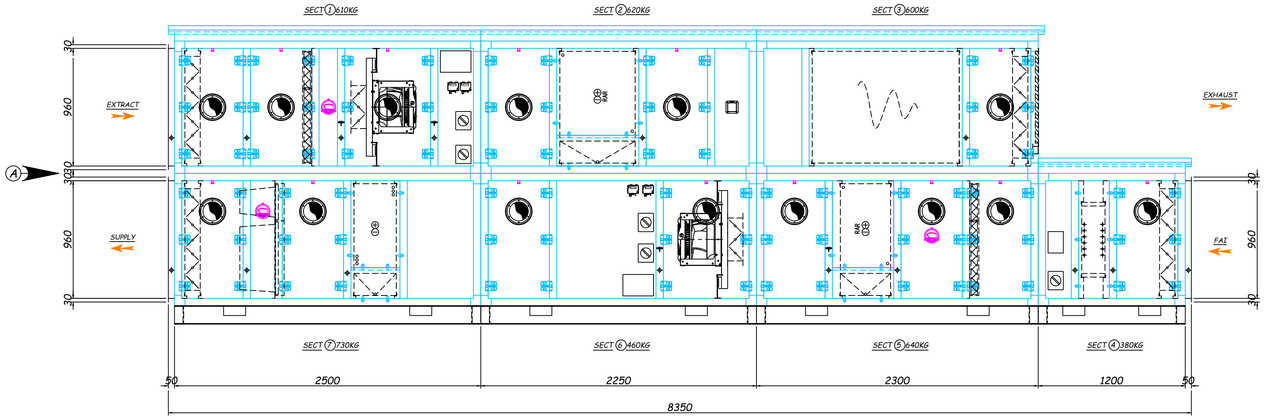
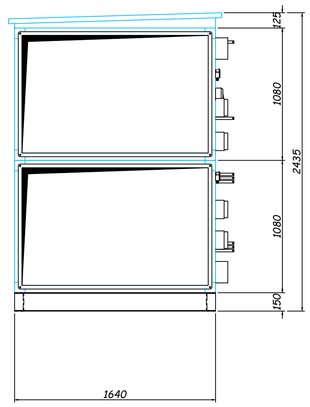
PLASTISOL PANELS & GREENCOAT (WHITE) INNER SKINS | BRASS TEST POINTS | TAPPING POINTS | LED LIGHT STRIPS

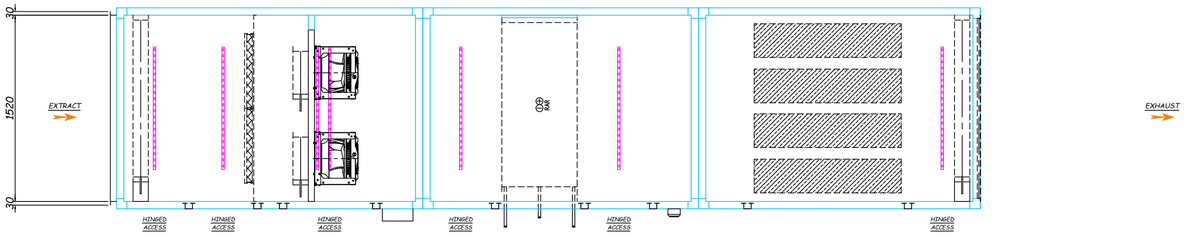
★ EXTRACT SECTIONS STACKED FOR DELIVERY



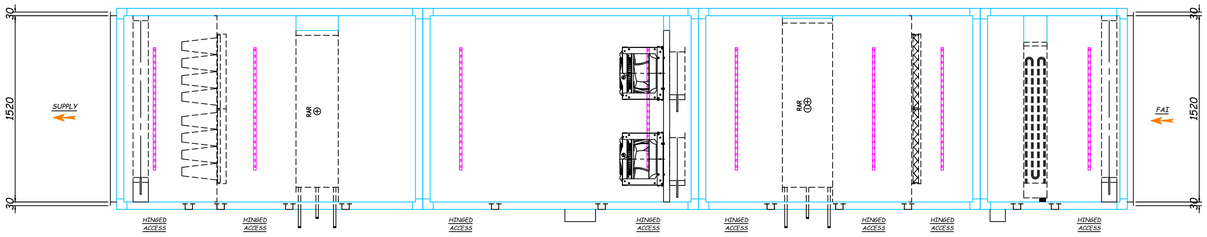
ELEVATION VIEW



VIEW ON ARROW "A"



PLAN VIEW TOP DECK



PLAN VIEW BOTTOM DECK

★★★ DEROGATIONS ★★★

3.22 Access to plant and equipment above 1.5 m should be via platforms, fixed ladders, hook ladders, pulpit-style movable steps or access platforms.

8.12 Room air humidity should be kept below 70% in order to minimise risks associated with condensation and mould growth. There is generally no lower limit in unoccupied spaces; however, see application-specific guidance.

8.69 The humidity within the operating department when in use should fall within the range 35% to 60%. The cooling coil should be able to remove sufficient moisture so that 60% saturation at 20°C is not exceeded during the design summer outside conditions.

9.7 In the unlikely event that an internal or external plantroom cannot be provided, and ventilation units have to be located outside, they should be fully weatherproof to IP65 and secured from unauthorised access. Protection against the elements should also be provided for personnel carrying out routine inspection and maintenance activities. As an example, when two units are outside, and they are installed with their access doors facing each other, if the gap between them is roofed over and the open ends capped, the AHUs themselves create what is in effect a plantroom.

9.8 Water will be used during routine cleaning or spilt when maintenance is being undertaken. The area around plant should be tanked to prevent water penetration to adjacent areas and adequately drained.

Note:
Plantrooms should be provided with a sink so that glass drainage traps may be cleaned out and staff can wash their hands after handling contaminated/dirty filters. A source of domestic hot water (DHW) with a valved hose connection point will also be required so that AHUs can be washed out internally as part of their routine maintenance. Plantrooms at roof level should be served by a lift.

9.15 External finish to be corrosion resistant and may be available in a variety of colours at no additional cost. This can aid identification by colour-coding of units in a plantroom (for example, green for general ventilation; blue for theatres; red for laboratories and isolation facilities; grey for extract).

9.23 Access to air intakes and discharges, AHUs and items in the distribution system such as filters or auxiliary trimmer batteries located in a plantroom or plant area above 1.5 m should be via platforms, fixed ladders, hook ladders, pulpit style movable steps or access platforms. The method of access chosen should reflect the frequency and nature of the maintenance requirement. The installation of distribution ductwork and other electrical or mechanical services should provide sufficient clearance to allow access equipment to be moved into position.

9.38 The duct behind a louvre should be self-draining. If this is not practicable, it should be tanked and provided with a drainage system.

9.39 Cleaning access should be provided either from the outside via hinged louvres or by access doors in the plenum behind the louvre. Where a floor-level common plenum is provided, cleaning access should be via a walk-in door. High-level plenums should be able to be safely accessed by temporary or permanent means.

9.81 Main heater-batteries may be water or steam. Electric heaters are expensive to operate, and their efficiency is particularly dependent on the air velocity through them. Their use should be restricted to branch trimming control.

9.86 Cooling coils supplied with chilled water are the preferred option. For small loads, or where chilled water cannot be made available, direct expansion (DX) coils may be used.

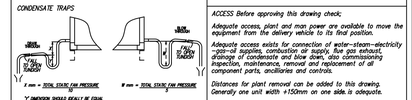
Note:
For DX coils, it may be necessary to divide the chiller circuits unevenly in order to achieve efficient operation under part-load conditions. The turn-down ratio should allow stable control down to 10% of the peak load.
NHS Net Zero Building Standard
Table 8 Deflection Test according to BS EN 1886.

10.13 AHUs should be positioned so that all parts are easily and safely accessible for routine inspection and service. If a unit is located against a wall or backs onto another unit, access to all parts should be available from the front. Units greater than 1 m wide should preferably have access from both sides or access doors large enough to permit the full and safe entry of maintenance personnel. I've assumed access is only available one side of the AHU.

★★★ BEFORE INSTALLATION ★★★

COOLING COILS :
OVER VOLUME is caused by overestimation of initial resistance (e.g. clean terminal absolute filters)
CARRY OVER is caused by over volume and/or entering air dew point above design and/or evaporation temp. below design. Eliminators are therefore recommended on coils handling 100% fresh air and/or controlled by constant off temperature sensor, and/or humidistat and/or serving high final resistance filters.
FREEZING on low load is caused by inadequate compressor condenser capacity control.
CONDENSATE FLOODING is caused by inadequate differential trapping and/or pipe blockage, and/or inadequate pipe diameter and/or reverse pipe slope and/or reverse drain tray slope and/or cover plate air leakage and/or restricted air flow.

CONDENSATE TRAPS



WHERE THE CONTROLS PACKAGE IS NOT BY ECE:
ELECTRIC AIR HEATER BATTERIES should be fitted with,
EAHB/airflow interlock
High supply air temperature cut out (40°C)
Time delay fan off – EAHB off
Overheat cut out SPDT 165°C (Standard ECE fitting)

ELECTRIC MOTORS should be protected by thermal overload and single phasing protective devices.

WIRING DIAGRAMS contained within or attached to all electrical devices such as motors, electrode boiler humidifiers, electrical controls to gas burners, speed controllers, compressor condenser sets, etc., must be referred to, in conjunction with controls specialist wiring diagrams.

ACCESS Before approving this drawing check;

Adequate access, plant and man power are available to move the equipment from the delivery vehicle to its final position.

Adequate access exists for connection of water–steam–electricity –gas–oil supplies, combustion air supply, flue gas exhaust, drainage of condensate and blow down, also commissioning inspection, maintenance, removal and replacement of all component parts, ancillaries and controls.

Distances for plant removal can be added to this drawing. Generally one unit width +150mm on one side, is adequate.

★★★ TRAFFOLYTE LABELS ★★★

BRACHYTHERAPY AHU1 FAI DAMPER & FROST EAHB (AIR ON) ACCESS	BRACHYTHERAPY AHU1 FROST EAHB (AIR OFF) & PRIMARY FILTER ACCESS (ePM10 50% PANEL FILTER)	BRACHYTHERAPY AHU1 SUPPLY HR COIL (AIR ON) ACCESS	BRACHYTHERAPY AHU1 SUPPLY HR COIL (AIR OFF) ACCESS
BRACHYTHERAPY AHU1 SUPPLY FAN ACCESS	BRACHYTHERAPY AHU1 DX COIL (AIR ON) ACCESS	BRACHYTHERAPY AHU1 DX COIL (AIR OFF) & SECONDARY FILTER ACCESS (ePM1 80% RIGID BAG FILTER)	BRACHYTHERAPY AHU1 SUPPLY DAMPER ACCESS
BRACHYTHERAPY AHU1 EXTRACT DAMPER ACCESS	BRACHYTHERAPY AHU1 EXTRACT FILTER ACCESS (ePM10 50% PANEL FILTER)	BRACHYTHERAPY AHU1 EXTRACT HR COIL (AIR ON) ACCESS	BRACHYTHERAPY AHU1 EXTRACT HR COIL (AIR OFF) & EXHAUST ATTENUATOR (AIR ON) ACCESS
BRACHYTHERAPY AHU1 EXHAUST ATTENUATOR (AIR OFF) & EXHAUST DAMPER ACCESS	AHU 1 BRACHYTHERAPY		

★★★ DRAWING NOTES ★★★

Storage

For ECE unit size 45 and above the cost of any storage will be invoiced at £8/m²/week.

Exclusions

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

- *Any special witness testing, balancing & commissioning.*
- *Spare part except set those listed on tender page.*
- *Anti vibration materials and holding bolts.*
- *Air or Liquid flow failure switches.*
- *Heating and cooling coil entering air low and high temperature cut out safety devices.*
- *Flexible connections in pipe work or ductwork on to our equipment.*
- *Insulation & vapour sealing of low temperature components.*
- *Cooler battery condensate drain pipe work.*
- *All air conditioning controls & wiring.*
- *Offloading, positioning and moving across site.*
- *Site protection of installed plant.*
- *Damper actuator motors.*
- *Silencers.*
- *Inertia fan bases with AV mountings.*
- *Tico pads.*
- *Builders work including holes for pipework & wiring, then making good aftern installation of said items*
- *Any other items not specifically mentioned in this drawing.*

mm:-	Galvanised sheet steel.	GSS:-	Galvanised sheet steel.
KG/m3:-	Mineral fibre (Rockwool).	MF:-	Mineral fibre (Rockwool).
PL:-	Plastisol coated galvanised sheet steel.	GC:-	Greencoat

SOUND REDUCTION INDEX
45mm STANDARD PANEL – 60cc 45 (AHU)
1.0mm PL INNER + 45mm x 100kg MF + 1.0mm GC (WHITE) OUTER

FREQUENCY	63	125	250	500	1000	2000	4000	8000	Hz
SRI	15	20	24	31	36	37	35	29	dB

★ AIR HANDLING UNIT DETAILS

LOUVRE/GRILLE

FUNCTION	EXTRACT
TYPE	WEATHER LOUVRE WITH BIRD SCREEN
POSITION	SECT. 1
DIMENSIONS	1515w X 796h

ATTENUATOR

FUNCTION	EXTRACT (PAINTED)								
FREQUENCY	63	125	250	500	1000	2000	4000	8000	Hz
STAT. INSERTION LOSSES	8	12	23	40	43	32	21	17	dB

DAMPERS

FUNCTION	FAI (PAINTED)	SUPPLY (PAINTED)	EXTRACT (PAINTED)	EXHAUST (PAINTED)
MANUAL / MOTORISED	MOTORISED	MOTORISED	MOTORISED	MOTORISED
VOLUME	1.40 m³/s	1.40 m³/s	1.40 m³/s	1.40 m³/s
DIMENSIONS (mm)	1280w x 830h	1280w x 830h	1280w x 830h	1280w x 830h
VELOCITY	1.32 m/s	1.32 m/s	1.32 m/s	1.32 m/s
No. OF SPINDLES	1 No. SPINDLE	2 No. SPINDLE	1 No. SPINDLE	2 No. SPINDLE

FUNCTION	S-FAN 1 (PAINTED)	S-FAN 2 (PAINTED)	E-FAN 1 (PAINTED)	E-FAN 2 (PAINTED)
MANUAL / MOTORISED	MOTORISED	MOTORISED	MOTORISED	MOTORISED
VOLUME	1.40 m³/s	1.40 m³/s	1.40 m³/s	1.40 m³/s
DIMENSIONS (mm)	350w x 350h	350w x 350h	350w x 350h	350w x 350h
VELOCITY	2.41 m/s	1.71 m/s	2.41 m/s	1.71 m/s
No. OF SPINDLES	1 No. SPINDLE	2 No. SPINDLE	1 No. SPINDLE	2 No. SPINDLE

FILTERS

FUNCTION	PRIMARY FILTER	SECONDARY FILTER	EXTRACT FILTER
MAGNETIC	FITTED	FITTED	FITTED
CODE/EFFICIENCY	ePM10 50% (PANEL FILTER)	ePM1 80% (RIGID BAG FILTER)	ePM10 50% (PANEL FILTER)
No OF CELLS	2 No. 596w x 596h x 47d	2 No. 592w x 592h x 292d	2 No. 596w x 596h x 47d
	2 No. 596w x 287h x 47d	2 No. 592w x 292h x 292d	2 No. 596w x 287h x 47d
FRAME (STAINLESS STEEL)	2 No. 610w x 610h x 75d	2 No. 610w x 610h x 75d	2 No. 610w x 610h x 75d
	2 No. 610w x 305h x 75d	2 No. 610w x 305h x 75d	2 No. 610w x 305h x 75d

EAHB

FUNCTION	FROST
LOAD/OUTPUT	6.00 KW
AIR ON	-5.00°C db
AIR OFF	-2.00°C db
ELECTRICAL SUPPLY	400V - 3~ - 50Hz
CONTROL	THYRISTOR CONTROL
FLC	8.67 A
DIMENSIONS	1300w x 610h X 190d

COILS

FUNCTION	HR SUPPLY SUMMER	HR SUPPLY WINTER	HR EXTRACT SUMMER	HR EXTRACT WINTER
LOAD/OUTPUT	14.80 kW	28.60 kW	14.80 kW	28.60 kW
AIR ON	35.00°C db / 23.90°C wb	-2.00°C db	22.00°C db	1.40°C db / 22.00°C wb
AIR OFF	26.30°C db / 21.50°C wb	14.80°C db	30.70°C db	9.10°C db / 8.60°C wb
MEDIUM	ETH GLYCOL 20%		ETH GLYCOL 20%	
FLUID INLET TEMP.	24.40°C	18.90°C	32.50°C	3.20°C
FLUID OUTLET TEMP.	32.50°C	3.20°C	24.40°C	18.90°C
FLUID FLOW RATE	0.460 l/s		0.460 l/s	
FLUID PRESS. DROP	63.70 kPa	71.00 kPa	63.70 kPa	71.00 kPa
FACE VELOCITY	2.00 m/s		2.00 m/s	
INTERNAL VOLUME	36.90 l		36.90 l	
FIN MATERIAL	COPPER		COPPER EL. TINNED	
TUBE MATERIAL	COPPER		COPPER	
INLET CONNECTION	1 No. 1" BSP		1 No. 1" BSP	
OUTLET CONNECTION	1 No. 1" BSP		1 No. 1" BSP	
DRAIN CONN.	1 No. 1" BSP		1 No. 1" BSP	
ELIMINATORS	N/A		N/A	
CASEWORK CONSTRUCTION	STAINLESS STEEL		STAINLESS STEEL	
DRAINTRAY CONSTRUCTION	STAINLESS STEEL (REMOVABLE)		STAINLESS STEEL (REMOVABLE)	
HANDING	LHS		RHS	
COIL SIZE	1500w x 912h x 410d		1500w x 912h x 615d	

FUNCTION	DX COOLING	DX HEATING
LOAD/OUTPUT	54.30 kW	25.00 kW
AIR ON	27.00°C db / 21.20°C wb	12.00°C db
AIR OFF	10.00°C db / 9.90°C wb	26.00°C db
MEDIUM	R32	
EVAPORATING TEMP.	6.00°C	
LIQUID TEMP.	45.00°C	
CONDENSING TEMP.		40.00°C
FLUID PRESS. DROP	31.00 kPa	
FACE VELOCITY	2.00 m/s	
INTERNAL VOLUME	18.60 l	
FIN MATERIAL	COPPER EL. TINNED	
TUBE MATERIAL	COPPER	
LIQUID CONNECTION	3 No. 1/2" PLAIN	
SUCTION CONNECTION	3 No. 7/8" PLAIN	
DRAIN CONN.	1 No. 1" BSP	
ELIMINATORS	N/A	
CASEWORK CONSTRUCTION	STAINLESS STEEL	
DRAINTRAY CONSTRUCTION	STAINLESS STEEL (REMOVABLE)	
HANDING	LHS	
COIL SIZE	1400w x 912h x 345d	

FANS (RUN & STANDBY)(COMMANDO SOCKET)

FUNCTION	SUPPLY		EXTRACT	
AIR VOLUME	2 x 0.70 m³/s		2 x 0.70 m³/s	
EXTERNAL RESISTANCE	300 Pa		300 Pa	
TOTAL STATIC FAN PRESSURE	544 Pa		475Pa	
FAN SPEED	1854 RPM		1753 RPM	
MAX FAN SPEED	2370 RPM		2370 RPM	
FAN	2 No. FA-C35-EM56-C0000		2 No. FA-C35-EM56-C0000	
DUTY MOTOR	1.30 kW		1.30 kW	
FLC SC	2.10 AMPS	INTEGRATED VSD	2.10 AMPS	INTEGRATED VSD
STANDBY MOTOR	1.30 kW		1.30 kW	
FLC SC	2.10 AMPS	INTEGRATED VSD	2.10 AMPS	INTEGRATED VSD
ELEC. SUPPLY	400V/3PH/50Hz		400V/3PH/50Hz	
HANDING	LHS		RHS	

FAN SOUND POWER LEVEL

SUPPLY									
FREQUENCY	63	125	250	500	1000	2000	4000	8000	Hz
OUTLET	71	81	74	75	77	80	72	71	dB
INLET	69	78	75	74	73	66	64	64	dB
EXTRACT									
FREQUENCY	63	125	250	500	1000	2000	4000	8000	Hz
OUTLET	69	79	72	73	75	78	70	69	dB
INLET	67	76	73	72	71	71	64	62	dB

SPECIFIC FAN POWER

FUNCTION	SUPPLY	EXTRACT
VOLUME AIR FLOW RATE	1.40 m³/s	1.40 m³/s
POWER FROM MAINS	1.20 kW	1.04 kW
SPECIFIC FAN POWER	0.86 kW/(m³/s)	0.74 kW/(m³/s)
SPECIFIC FAN POWER (SUPPLY AND EXTRACT COMBINED)	1.60 kW/(m³/s)	

ANCILLARY ITEMS

1 No. EXTERNAL LIGHT SWITCH FITTED FOR AHU	4 No. DFT-FLOW-2000-D AIR FLOW SENSOR
1 No. EAHB TERMINAL BOX	4 No. TAPPING POINTS
1 No. 16A EAHB ISOLATOR	4 No. 16A FAN ISOLATORS
2 No. FAN TERMINAL BOXES	13 No. NAME PLATES
2 No. FAN SLIDE RAILS	14 No. LED LIGHT STRIPS FOR AHU
3 No. AHU DUCT CONNECTION SPIGOT	14 No. VIEWPORTS FITTED
4 No. FAN DOOR GUARDS	16 No. BRASS TESTPOINTS

HTM03-01 AHU REFERENCE LABEL (100mm CHARACTERS)
SPARE SET OF FILTERS
SPARE FAN WITH COMMANDO SOCKET
TA25/1/130POS - DX COIL GLASS DRAIN TRAP (SUPPLIED LOOSE)
TA25/1/120POS - EXTRACT HR GLASS DRAIN TRAP (SUPPLIED LOOSE)
TA25/1/570/170 - SUPPLY HR COIL GLASS DRAIN TRAPS (SUPPLIED LOOSE)

DRAWING REVISIONS

DATE:	REV.	INIT.:	DESCRIPTION:
-	-	-	-
-	-	-	-
-	-	-	-

FINISH
PANEL CONSTRUCTION – 1mm PLASTISOL OUTER PANELS WITH 1mm GREENCOAT (WHITE) DOUBLE SKIN
UNIT FRAMEWORK: 60mm THERMAL BREAK EXTRUDED ALUMINIUM PROFILE WITH BLACK ALUMINIUM CORNERS
BASE CONSTRUCTION:150mm POWDERCOATED GALV WITH LIFTING EYES
★ RECOMMENDED SPARES — ALL HANDINGS VIEWED IN DIRECTION OF AIRFLOW

PROJECT
MOUNT VERNON HOSPITAL

DRG. TITLE
AHU1 SUPPLY & EXTRACT (BRACHYTHERAPY)
NRVU - BVU
60cc - BESPOKE

CLIENT	JC WATSONMECHANICAL LIMITED	SCALE	1:25	DRG. No.	
CLIENT O/No	P000007345	DATE 06/02/2026	DRAWN AP	11774/0226/01	
CONTRACT No	11774/0226	ISSUED 09/02/2026	CHECKED SH		

QUALITY CONTROL CHECK(LISTINITIALS)

ece® air handling and conditioning
Pharoah House Arnolde Close Medway City Estate Rochester Kent ME2 4QW Tel:- (01634) 729690 Fax:- (01634) 729691