

TECHNICAL SPECIFICATION SHEET

Date: 29 May 2020
Quote No: Q 10872

Project Reference: Royal Free Hospital ITU
Unit No: 10872-01-05

Unit Reference: AHU 1 DD
Revision: 5

AHU Details

Design Supply Air Volume	7	m ³ /s
External Static Pressure	350	Pa
Unit Velocity	1.72	m/s
Design Extract Air Volume	7	m ³ /s
External Static Pressure	350	Pa
Unit Velocity	1.72	m/s

Energy Use

	Supply on Filters	Extract on Filters	Overall	
Specific Fan Power	1.15	0.83	1.99	kW/(m ³ /s)

AHU Construction

Framework	50 mm
Framework Coating	Anodized
Panel Depth	50 mm
External Panel Finish	Mica Coated steel 0.90mm
Internal Panel Finish	Galv Sheet 1.2mm
Panel Insulation	Mineral Wool 50mm

Construction

Unit Location	External
Weather Roof	MICA Duo Pitch Roof
Baseframe	200 x 75 PFC
Casing performance (EN 1886 Standard)	
Leakage Class	L2
Casing strength	D1
Thermal Transmittance	T3
Thermal Bridge	TB3

Overall Unit Dimensions

Length	Width	Height	Weight (Per Unit)
11150 mm	3000 mm	3550 mm	8082 kg

Section Weights and Dimensions

Section No.	Length	Width	Height	Weight Approx +/-5%
A	2100 mm	3000 mm	1500 mm	1018 kg
B	3200 mm	3000 mm	3150 mm	2451 kg
C	2750 mm	3000 mm	1500 mm	1633 kg
D	3100 mm	3000 mm	1500 mm	1483 kg
E	750 mm	3000 mm	1500 mm	503 kg
F	2100 mm	3000 mm	1500 mm	994 kg

Inlet Section

Component	Damper	Casing	Aluminium EN AW6060 T6
Air Pressure Drop	1.00	Control	Extended Spindle

Accessories

Damper actuators to be provided and fitted by others.
Traffolyte Component label

Access Section

Length	500	mm
Access Side	Right	

Accessories

Factory fitted IP44 Internal bulkhead light (42W) wired to an IP66 external switch
Factory fitted viewport
Traffolyte Component Access label

TECHNICAL SPECIFICATION SHEET

Date: 29 May 2020
Quote No: Q 10872

Project Reference: Royal Free Hospital ITU
Unit No: 10872-01-05

Unit Reference: AHU 1 DD
Revision: 5

Steam Coil

Air On / Off	-5.00/5.0	°C/°C
Duty	84.81	kW
Steam Pressure	200.00	kPa
Steam Temp	133.5	°C
Steam Quantity	139.60	kg/h
Air Pressure Drop	6.00	Pa
Internal Volume	32.00	l

Construction

Casing Material	Galvanised
Tube Material	Copper
Fin Material	No Fins
Connection Size	1 x 2 x 1"(F) / 1 x 2 x 1"(R)

Accessories

Traffolyte Component label

Access Section

Length	500	mm
Access Side	Right	

Accessories

Factory fitted IP44 Internal bulkhead light (42W) wired to an IP66 external switch
Factory fitted viewport
Traffolyte Component Access label

Panel Filter

Clean PD	33	Pa
Mean	92	Pa
Recommended dirty	150	Pa

Construction

Grade	G3 (Washable)
Media	SS 304L Frame/Woven SS Mesh
Withdrawal	Front
Size 1 / Qty	10 x 495 x 495 x 45 mm
Size 2 / Qty	2 x 245 x 495 x 45 mm

Accessories

Factory fitted Dwyer Minihelic gauge (Range 0-250 Pa)
Traffolyte Component label

Plate Heat Exchanger

	Winter	Summer	
Supply Air On (db/RH)	5.00/50.0	30.00/39.8	°C/%
Supply Air Off (db/RH)	18.90/20.00	24.10/56.30	°C/%
Exhaust Air On (db/RH)	22.00/50.0	22.00/50.0	°C/%
Exhaust Air Off (db/RH)	9.80/100.00	27.90/35.10	°C/%
Heat Recovery	117.60	-51.00	kW
Efficiency	81.50	74.10	%
Supply Pressure Drop	139.18	148.37	Pa
Exhaust Pressure Drop	142.93	150.07	Pa

Construction

Material 0=Standard (V)
Bypass Fitted

Accessories

Heat exchanger selection compliant to ERP2018 (Ecodesign directive 1253/2014)
Damper actuators to be provided and fitted by others.
Traffolyte Component label

Drain Tray

Construction

Type	Removable
Material	Stainless Steel

TECHNICAL SPECIFICATION SHEET

Date: 29 May 2020
Quote No: Q 10872

Project Reference: Royal Free Hospital ITU
Unit No: 10872-01-05

Unit Reference: AHU 1 DD
Revision: 5

Supply Fan - Fan Array 2 x 1

Design Air Volume	7	m ³ /s	Impeller	Backward Curve
Total Fan Resistance	1044	Pa	Internal Isolation	
Fan Speed	1745	r/min		
Frequency @ Design Speed	50.00	Hz		
Control Voltage	9.63	Volts		
Maximum Fan Speed	1760	r/min		
Efficiency	72.20	%		

Motor Data (Electrical Loads per Fan)

FLC	7.70	Amps	Type	EC
Total Input Power	5.06	kW	Rating	IE4
Motor Power	5.00	kW		
Motor Speed	1746	r/min		
Electrical Supply	400/3/50.00			

Accessories

Factory fitted IP44 Internal bulkhead light (42W) wired to an IP66 external switch
Factory fitted viewport
Removable wire mesh guard is fitted behind the fan access door.
Fan Healthy Contacts (For integration in to the controls system)
Fan Label kit, Fan Access, Traffolyte Warning label - Fan run down, Danger label - Safety, Electrical Isolation
Factory Fitted Inlet Guard
EC Fan(s) c/w externally mounted & wired IP66 rated isolator & IP54 terminal box with an integral speed potentiometer and terminals for BMS connections.

Access Section

Length	500	mm
Access Side	Right	

Accessories

Factory fitted IP44 Internal bulkhead light (42W) wired to an IP66 external switch
Factory fitted viewport
Traffolyte Component Access label

Chilled Water Coil

Air On (db/wb)	30.00/20.00	°C/°C	Casing Material	Stainless Steel 316
Air Off (db/wb)	16.0/14.7	°C/°C	Tube Material	Copper
Duty	135.59	kW	Fin Material	Copper/PreTinned
Water(Inlet)/(Outlet)	6.00/12.00	°C/°C	Connection Size	1 x 3"(F) / 1 x 3"(R)
Water PD	14	kPa	Eliminators	not needed BUT fit P400
Water Flow Rate	5.39	L/s	Drain Tray	4 S Steel Removable draintray
Face Velocity	2.31	m/s		
Air Pressure Drop	72.00	Pa		
Internal Volume	47.90	l		

Accessories

Valve and actuator to be supplied and fitted by others
Traffolyte label - Drain Trap Instruction
Traffolyte Component label
Stainless Steel inner Skin
Stainless Steel Inner Skin
UVC Lamps

Access Section

Length	500	mm
Access Side	Right	

TECHNICAL SPECIFICATION SHEET

Date: 29 May 2020
Quote No: Q 10872

Project Reference: Royal Free Hospital ITU
Unit No: 10872-01-05

Unit Reference: AHU 1 DD
Revision: 5

Accessories

Factory fitted IP44 Internal bulkhead light (42W) wired to an IP66 external switch
Factory fitted viewport
Traffolyte Component Access label

UVC Light Section

Length 500 mm
Access Side Right

Access Section

Length 500 mm
Access Side Right

Accessories

Factory fitted IP44 Internal bulkhead light (42W) wired to an IP66 external switch
Factory fitted viewport
Traffolyte Component Access label

Steam Coil

Air On / Off 5.00/21.0 °C/°C
Duty 135.69 kW
Steam Pressure 200.00 kPa
Steam Temp 133.5 °C
Steam Quantity 223.30 kg/h
Air Pressure Drop 7.00 Pa
Internal Volume 13.70 l

Construction

Casing Material Galvanised
Tube Material Copper
Fin Material Copper
Connection Size 1 x 2 x 1"(F) / 1 x 2 x 1"(R)

Accessories

Traffolyte Component label

Access Section

Length 500 mm
Access Side Right

Accessories

Factory fitted IP44 Internal bulkhead light (42W) wired to an IP66 external switch
Factory fitted viewport
Traffolyte Component Access label

Bag Filter

Clean PD 153 Pa
Mean 302 Pa
Recommended dirty 450 Pa

Construction

Grade ePM1 70%(ISO16890)
Media 25mm Galv Frame/Glass Fibre
Withdrawal Front
Size 1 / Qty 10 x 492 x 492 x 380 mm
Size 2 / Qty 2 x 242 x 492 x 380 mm

Accessories

Factory fitted Dwyer Minihelic gauge (Range 0-500 Pa)
Traffolyte Component label

Outlet Section

Component Damper
Air Pressure Drop 1.00 Pa

Construction

Casing Aluminium EN AW6060 T6
Control Manual

Accessories

Damper fitted with quadrant for manual adjustment (Air Balancing by others)
Traffolyte Component label

Inlet Section

Component Damper
Air Pressure Drop 1.00 Pa

Construction

Casing Aluminium EN AW6060 T6
Control Manual

TECHNICAL SPECIFICATION SHEET

Date: 29 May 2020
Quote No: Q 10872

Project Reference: Royal Free Hospital ITU
Unit No: 10872-01-05

Unit Reference: AHU 1 DD
Revision: 5

Accessories

Damper fitted with quadrant for manual adjustment (Air Balancing by others)
Traffolyte Component label

Panel Filter			Construction	
Clean PD	33	Pa	Grade	G3 (Washable)
Mean	92	Pa	Media	Ali Frame/Woven Ali Mesh
Recommended dirty	150	Pa	Withdrawal	Side
			Size 1 / Qty	10 x 495 x 495 x 45 mm
			Size 2 / Qty	2 x 245 x 495 x 45 mm

Accessories

Factory fitted Dwyer Minihelic gauge (Range 0-250 Pa)
Traffolyte Component label

Exhaust Fan - Fan Array 2 x 1			Construction	
Design Air Volume	7	m ³ /s	Impeller	Backward Curve
Total Fan Resistance	659	Pa	Internal Isolation	
Fan Speed	1517	r/min		
Frequency @ Design Speed	50.00	Hz		
Control Voltage	9.75	Volts		
Maximum Fan Speed	1540	r/min		
Efficiency	72.41	%		

Motor Data (Electrical Loads per Fan)			Construction	
FLC	5.10	Amps	Type	EC
Total Input Power	3.18	kW	Rating	IE4
Motor Power	3.30	kW		
Motor Speed	1517	r/min		
Electrical Supply	400/3/50.00			

Accessories

Factory fitted IP44 Internal bulkhead light (42W) wired to an IP66 external switch
Factory fitted viewport
Removable wire mesh guard is fitted behind the fan access door.
Fan Healthy Contacts (For integration in to the controls system)
Fan Label kit, Fan Access, Traffolyte Warning label - Fan run down, Danger label - Safety, Electrical Isolation
Factory Fitted Inlet Guard
EC Fan(s) c/w externally mounted & wired IP66 rated isolator & IP54 terminal box with an integral speed potentiometer and terminals for BMS connections.

Outlet Section			Construction	
Component	Damper		Casing	Aluminium EN AW6060 T6
Air Pressure Drop	1.00	Pa	Control	Extended Spindle

Accessories

Damper actuators to be provided and fitted by others.
Traffolyte Component label

TECHNICAL SPECIFICATION SHEET

Date: 29 May 2020
Quote No: Q 10872

Project Reference: Royal Free Hospital ITU
Unit No: 10872-01-05

Unit Reference: AHU 1 DD
Revision: 5

AHU Acoustic Data:

Acoustic Data (Supply Fan Sound Power Level):

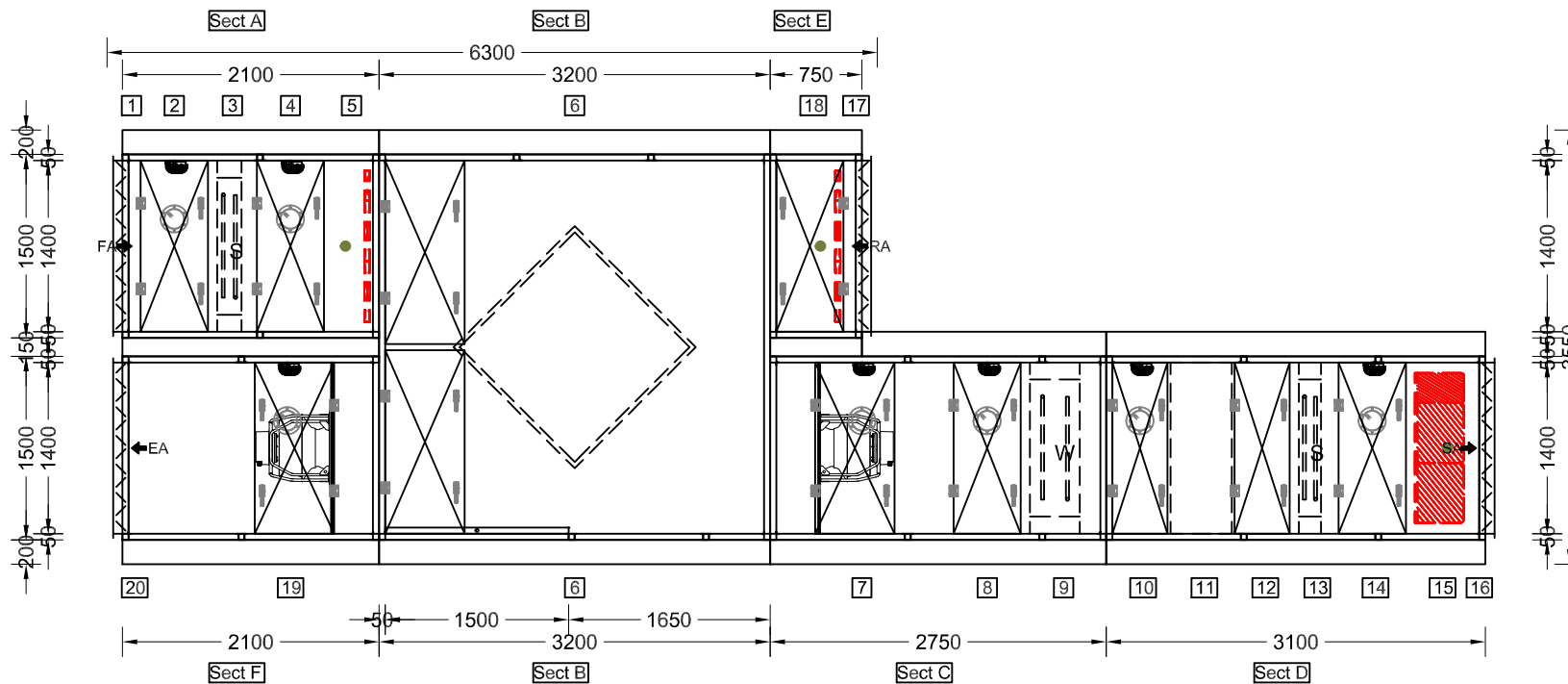
Frequency(Hz)	63	125	250	500	1K	2K	4K	8K
Supply Fan Inlet Lw (dB):	65	81	79	74	76	76	79	73
Supply Fan Outlet Lw (dB):	75	81	79	82	86	81	80	76

Acoustic Data (Extract Fan Sound Power Level):

Frequency(Hz)	63	125	250	500	1K	2K	4K	8K
Extract Fan Inlet Lw (dB)	66	79	77	72	76	72	81	68
Extract Fan Outlet Lw (dB)	71	79	78	80	80	77	82	72

The In-duct Sound Power Level Spectra are in dB re-1pW.

The fan sound power levels shown above do not include for the effects of mounting the fans within the AHU section(s). Please allow for the additional correction of 6db across the spectrum.



Unit Height including base 3350mm

Unit Width 3000mm

Section A: Weight = 1018Kgs

Components

- 1 Inlet
- 2 Access
- 3 Steam Heater
- 4 Access
- 5 Panel Filter

Section B: Weight = 2451Kgs

Components

- 6 Plate Heat Exchanger

Section C: Weight = 1633Kgs

Components

- 7 FANARRAY
- 8 Access
- 9 Water Cooling Coil

Section D: Weight = 1483Kgs

Components

- 10 Access
- 11 Plenum
- 12 Access
- 13 Steam Heater
- 14 Access
- 15 Bag Filter
- 16 Outlet

Section E: Weight = 503Kgs

Components

- 17 Inlet
- 18 Panel Filter

Section F: Weight = 994Kgs

Components

- 19 FANARRAY
- 20 Outlet

ELEVATION

M&Y Ventilation Equipment Limited

104 Franklyn Road, Haywards Heath,

West Sussex RH16 4DN

T: 0844 756 0202

F: 0844 756 0203

Email: sales@myventilation.co.uk

Web: www.airhandlingunits.co.uk

Date: 29 May 2020

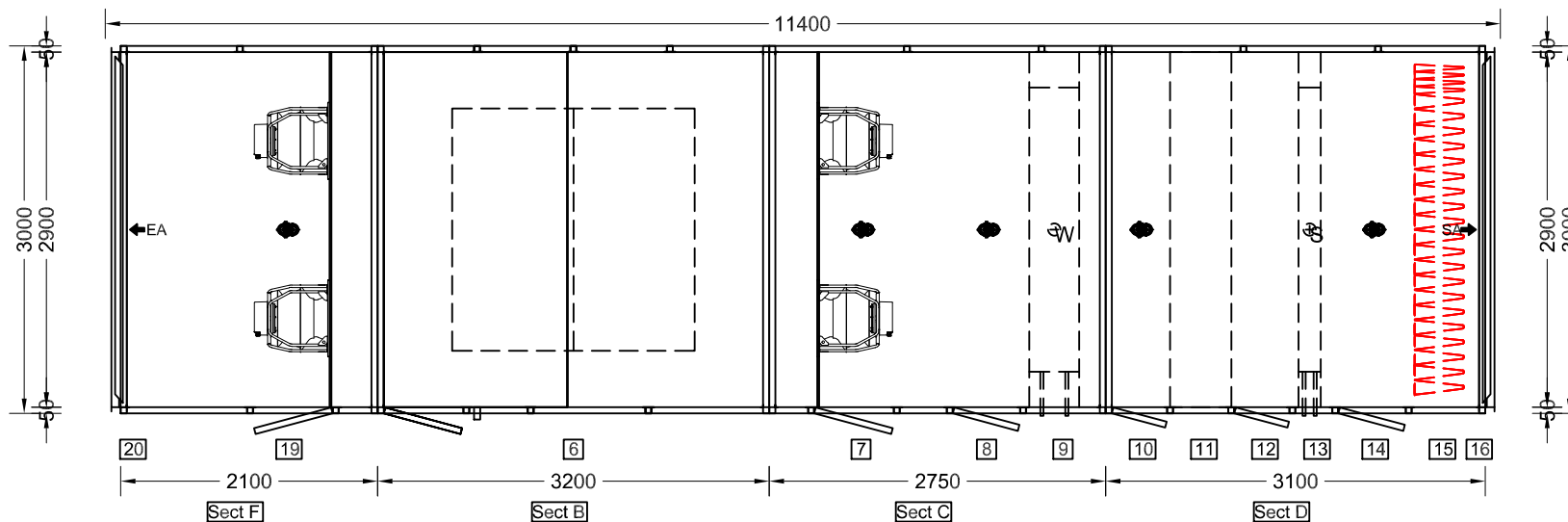
Quote No: Q 10872

Project Reference: Royal Free Hospital ITU

Unit No: 10872-01-05

Unit Reference: AHU 1 DD

Revision: 5



Unit Height including base 3350mm

Unit Width 3000mm

Section A: Weight = 1018Kgs

Components

- 1 Inlet
- 2 Access
- 3 Steam Heater
- 4 Access
- 5 Panel Filter

Section B: Weight = 2451Kgs

Components

- 6 Plate Heat Exchanger

Section C: Weight = 1633Kgs

Components

- 7 FANARRAY
- 8 Access
- 9 Water Cooling Coil

Section D: Weight = 1483Kgs

Components

- 10 Access
- 11 Plenum
- 12 Access
- 13 Steam Heater
- 14 Access
- 15 Bag Filter
- 16 Outlet

Section E: Weight = 503Kgs

Components

- 17 Inlet
- 18 Panel Filter

Section F: Weight = 994Kgs

Components

- 19 FANARRAY
- 20 Outlet

PLAN LOWER DECK

M&Y Ventilation Equipment Limited

104 Franklyn Road, Haywards Heath,

West Sussex RH16 4DN

T: 0844 756 0202

F: 0844 756 0203

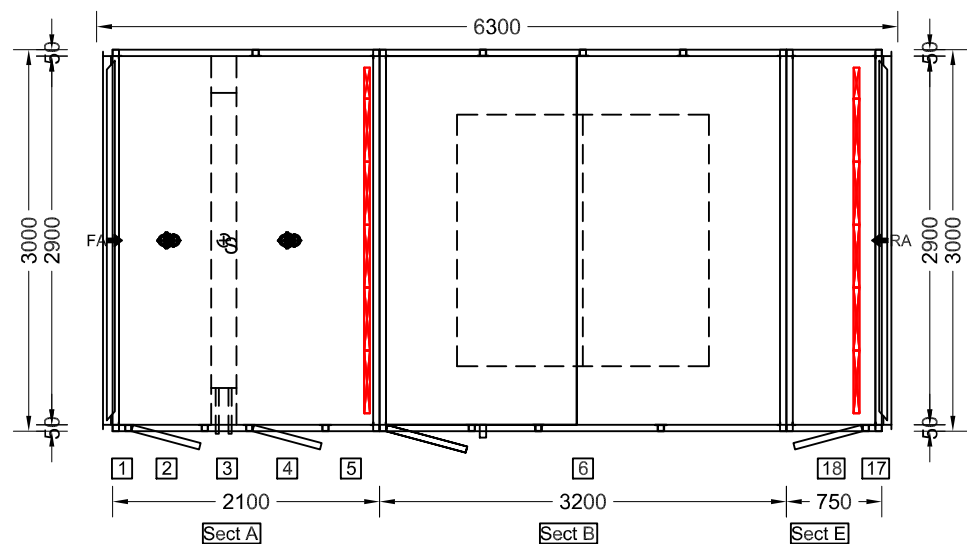
Email: sales@myventilation.co.uk

Web: www.airhandlingunits.co.uk

Date: 29 May 2020
Quote No: Q 10872

Project Reference: Royal Free Hospital ITU
Unit No: 10872-01-05

Unit Reference: AHU 1 DD
Revision: 5



PLAN UPPER DECK

Unit Height including base 3350mm

Unit Width 3000mm

Section A: Weight = 1018Kgs

Components

- 1 Inlet
- 2 Access
- 3 Steam Heater
- 4 Access
- 5 Panel Filter

Section B: Weight = 2451Kgs

Components

- 6 Plate Heat Exchanger

Section C: Weight = 1633Kgs

Components

- 7 FANARRAY
- 8 Access
- 9 Water Cooling Coil

Section D: Weight = 1483Kgs

Components

- 10 Access
- 11 Plenum
- 12 Access
- 13 Steam Heater
- 14 Access
- 15 Bag Filter
- 16 Outlet

Section E: Weight = 503Kgs

Components

- 17 Inlet
- 18 Panel Filter

Section F: Weight = 994Kgs

Components

- 19 FANARRAY
- 20 Outlet

M&Y Ventilation Equipment Limited

104 Franklynn Road, Haywards Heath,
West Sussex RH16 4DN

T: 0844 756 0202

F: 0844 756 0203

Email: sales@myventilation.co.uk

Web: www.airhandlingunits.co.uk

Date: 29 May 2020
Quote No: Q 10872

Project Reference: Royal Free Hospital ITU
Unit No: 10872-01-05

Unit Reference: AHU 1 DD
Revision: 5