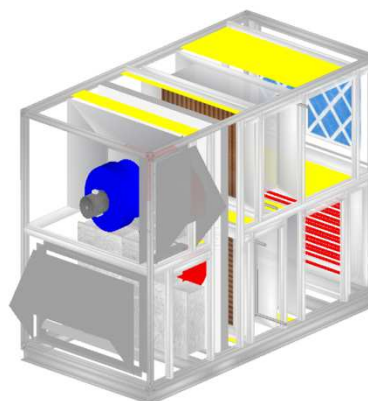


PROJECT DETAILS

Project no	Q1163635\Rev-Ordered\	Date	05 Jun 2018	Unit No	Q1163635-01-0-d1	Project Reference	Great Ormond St Hospital (GOSH) Barclay House, London
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UNIT DETAILS

Unit Model	MAX/D/SW/S		
Customer Reference	AHU/01		
Unit Location	External		
Access Side	Right		
Frame Construction	50mm Post - 50mm Panels		
Frame Finish	STD R7004 Powdercoated		
Panel Insulation	Mineral Wool - 50mm		
Panel Internal Sheet	Natural Galv. Steel - 0.9		
Panel External Sheet	Std P/Coat Galv. Steel - 0.9		
Roof Type	Twin Pitched Roof		
Roof Height	125 mm		
Base Frame	100mm Sheet Steel (3)		
Width	1750 mm		
Height	2100 mm		
Length	3425 mm		
Weight Approx +-5%	1315.1 kg		
Section Quantity	5		
	Supply	Extract	
Duty	2.00	2.00	m³/s
External Pressure	275	275	Pa
Total Pressure	559	645	Pa
Unit Combined SFP	1.92	W//s	
Unit Rating & Performance To	EN13053:2006 +A1:2011		
Unit Mechanical Construction To	EN1886:2007		
Leakage Class	L2 to EN1886:2007		



SECTION WEIGHTS AND DIMENSIONS

Section No	Width	Height	Length	Weight Approx +-5%
A	1750 mm	2100 mm	3425 mm	NaN kg

SUPPLY SIDE SECTION A

001 INLET SECTION			
<u>Weather Hood Galv</u>			
Width	1350 mm	Height	800 mm
Velocity	1.85 m/s	Pressure Drop	11.00 Pa
Finish	Painted	Position	Onair
<u>Fresh Air Damper</u>			
Width	1350 mm	Height	800 mm
Velocity	1.85 m/s	Pressure Drop	11.00 Pa
Material	Aluminium	Position	Onair
Finish	None	Mounting	Internal

EXTRAS
ACCESSORIES
24V Open Close Damper Motor

002 RIGID FILTERS			
Stage #	1	Face Velocity	1.65 m/s
Type	Rigid	Pressure Drop	26 Pa
Media	Glass Fibre Paper	Withdrawl	Front
Filter Grade	F7	Framework Material/Type	
Filter Type	RB7	Spare Filters	None

EXTRAS
ACCESSORIES
Filter Pressure Switch - Fitted

DUAL SIDE SECTION A

003 HEAT WHEEL EXCHANGER					
Material		1=Galvanized	Drive Type		
Matrix Type		0=All	Rotor Speed		15
<u>Fresh Air</u>			<u>Extract Air</u>		
Air Volume		2.00 m³/s	Air Volume		2.00 m³/s
kW Rating		63.800 kW	kW Rating		63.800 kW
Efficiency		73.200 %	Efficiency		73.200 %
Pressure Drop		167.0	Pressure Drop		184.0
Inlet	Temperature	-5.00 °C	Inlet	Temperature	21.00 °C
	Humidity	100.0 %		Humidity	50.1 %
Outlet	Temperature	14.000 °C	Outlet	Temperature	2.000 °C
	Humidity	52.900 %		Humidity	99.000 %
Summer Operation					
Inlet	Temperature	30.00 °C	Inlet	Temperature	24.00 °C
	Humidity	50.0 %		Humidity	50.0 %
Outlet	Temperature	25.600 °C	Outlet	Temperature	28.400 °C
	Humidity	64.600 %		Humidity	38.600 %

SUPPLY SIDE SECTION A

004 PLENUM	
Length	100.0 mm

005 DX COOLING COIL			
Air On Dry Bulb	29.6 °C	Air Off Dry Bulb	18.0 °C
Air On Wet Bulb	21.7 °C	Air Off Wet Bulb	16.2 °C
Air Off RH Result	82.9 %	Medium	R410a
Evap. Temp.	5.0 °C	Cooling Duty	42.66 kW
Fin Material	Aluminium	Eliminator Requirement	needed - fit P400
No. of Sections	1	Connection Liquid/Suction	1 x 5/8" / 1 x 1,5/8"

Coil Internal Volume	9.0 L
EXTRAS	
NOTES	
Where vertical risers are being used within the pipework installation, appropriate oil traps must be fitted. Failure to do so may invalidate the warranty of the condensing units.	
Please Note. This unit has a channel base. Please ensure that you mount the unit sufficiently clear of the floor to enable you to fit the required depth of trap on the cooling coil. Failure to trap the coil sufficiently deep enough will lead to water leaking from this unit.	

006 PLENUM	
Length	200.0 mm

007 SUPPLY PLENUM FAN - SINGLE FAN								
Model		RH56C-ZID.GG.CR-114631		Working RPM			1257 RPM	
Efficiency		66.0 %		Working Hz			41 Hz	
Sound Power		79 dbW		Maximum Hz			Hz	
Fan Blade Type		Backward Curve		Absorbed Power			1.77 kW	
Fan Finish		Standard		Motor Type:			EC (0-10 volt input required for speed control)	
Motor Power		3.40 kW		Motor Voltage			400	
FLC		4.20 A						
Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet-db	64	75	71	67	66	65	61	55
Outlet-db	69	79	75	75	73	70	66	62

EXTRAS	
ACCESSORIES	
Airflow Pressure Switch - Fitted	

008 ELECTRIC HEATER			
Air On DB	-5.0 °C	Air Off DB	3.7 °C
Maximum Heater Duty	22.5 kW	Total Load	21.0 kW
Stages	1	Pressure Drop	20.00 Pa
Voltage	Three phase	Velocity	2.28 m/s
Control	Thyristor		

009 OUTLET SECTION			
50mm Spigot Galv			
Width	1650 mm	Height	900 mm
Velocity	1.36 m/s	Pressure Drop	0.00 Pa
Finish	Painted	Position	Ofair

EXHAUST SIDE SECTION A

0010 INLET SECTION			
50mm Spigot Galv			
Width	1650 mm	Height	900 mm
Velocity	1.36 m/s	Pressure Drop	0.00 Pa
Finish	Painted	Position	Onair

0011 PANEL FILTERS			
Stage #	1	Face Velocity	2.37 m/s
Type	Panel	Pressure Drop	37 Pa
Media	Cotton / Synthetic Fibre	Withdrawal	Side
Filter Grade	G4	Framework Material/Type	
Filter Type	AP	Spare Filters	None
EXTRAS			
ACCESSORIES			

Filter Pressure Switch - Fitted

0012 Compressor Section

Length	775.0 mm
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EXTRAS

0013 DX COOLING COIL

Air On Dry Bulb	22.0 °C	Air Off Dry Bulb	8.4 °C
Air On Wet Bulb	15.4 °C	Air Off Wet Bulb	8.2 °C
Air Off RH Result	98.5 %	Medium	R410a
Evap. Temp.	5.0 °C	Cooling Duty	42.66 kW
Fin Material	Aluminium	Eliminator Requirement	not needed BUT fit P400
No. of Sections	1	Connection Liquid/Suction	1 x 7/8" / 1 x 1,5/8"
Coil Internal Volume	25.1 L		

EXTRAS

NOTES

Where vertical risers are being used within the pipework installation, appropriate oil traps must be fitted. Failure to do so may invalidate the warranty of the condensing units.

Please Note. This unit has a channel base. Please ensure that you mount the unit sufficiently clear of the floor to enable you to fit the required depth of trap on the cooling coil. Failure to trap the coil sufficiently deep enough will lead to water leaking from this unit.

0014 PLENUM

Length	200.0 mm
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EXHAUST SIDE SECTION A

0015 PLENUM

Length	200.0 mm
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0016 EXHAUST PLENUM FAN - SINGLE FAN

Model	RH56C-ZID.GG.CR-114631		Working RPM	1325 RPM				
Efficiency	65.1 %		Working Hz	43 Hz				
Sound Power	80 dbW		Maximum Hz	Hz				
Fan Blade Type	Backward Curve		Absorbed Power	2.06 kW				
Fan Finish	Standard		Motor Type:	EC (0-10 volt input required for speed control)				
Motor Power	3.40 kW		Motor Voltage	400				
FLC	4.20 A							
Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet-db	65	76	72	68	68	67	62	57
Outlet-db	71	80	76	76	75	72	68	63

EXTRAS

ACCESSORIES

Airflow Pressure Switch - Fitted

0017 OUTLET SECTION**Exhaust Air Damper**

Width	600 mm	Height	900 mm
Velocity	3.70 m/s	Pressure Drop	45.00 Pa
Material	Aluminium	Position	Lfair
Finish	None	Mounting	Internal

Weather Hood Galv

Width	600 mm	Height	900 mm
Velocity	3.70 m/s	Pressure Drop	45.00 Pa
Finish	Painted	Position	Lfair

EXTRAS**ACCESSORIES**

24V Open Close Damper Motor

AHU ACOUSTIC DATA**Connection Noise Spectra - Supply Section**

Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Overall dB
Inlet Linear Sound Pressure Level L _p dB	53	64	56	53	49	46	36	18	55
Outlet Linear Sound Pressure Level L _p dB	67	75	69	70	70	67	63	59	74

Connection Noise Spectra - Extract Section

Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Overall dB
Inlet Linear Sound Pressure Level L _p dB	56	66	60	57	56	55	46	34	61
Outlet Linear Sound Pressure Level L _p dB	69	76	70	71	72	69	65	60	76

Casing Noise Breakout Spectrum at 3m Distance

Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply Fan Power Spectrum L _w dB	69	79	75	75	73	70	66	62
Extract Fan Power Spectrum L _w dB	71	80	76	76	75	72	68	63
Combined Fan Power Spectrum L _w dB	73	83	79	79	77	74	70	66
Case Insertion Reduction	13	17	18	35	39	39	38	38
Reduction for 3m Distance	18	18	18	18	18	18	18	18
Resultant Linear Sound Pressure Level at 3m L _p dB	43	48	43	26	21	18	15	10
NR Level at 3m	33							
Resultant A-Weighted Sound Pressure Level at 3m L _p dB	17	32	34	23	21	19	16	9