


### CUSTOMER INFORMATION

Company		
Contact		
Telephone Number		
E-mail Address		
Project Name	British Museum - White Wing Refurb.	
Our Quotation Reference Number	QT314388	
Sales Engineer (Internal) Sales Engineer (External)	Jonathan Williams Chris Adam	

### CHILLER SELECTION INFORMATION

		UCCL150DX-4AMM
Cooling Capacity Required	[kW]	125
Fluid Inlet Temperature	[°C]	10
Fluid Outlet Temperature	[°C]	5
Design Ambient Temperature	[°C]	40
Fluid Type		Water
Glycol Concentration	[%]	N/A
Fluid Freezing Point	[°C]	0.0
Sound Level Variant		Extra Quiet
Sound Pressure (Distance to Listener)	[m]	10

### PERFORMANCE RELATED OPTIONS

Condenser Fan Motor Type		EC
Coil Protection Type		Standard
Buffer Tank		x
Expansion Vessel		x
Bypass		✓
Pumps		✓
Pump Configuration		Twin Head Pump
Pump Size		Standard

### PREDICTED PERFORMANCE DATA

	Notes		
Cooling Capacity (Gross)		[kW]	128.0
Cooling Capacity (Nett)		[kW]	127.5
Total Input Power (Gross)	(1)	[kW]	58.0
Total Input Power (Nett)	(1)	[kW]	58.5
Total EER (Gross)	(1)		2.21
Total EER (Nett)	(1)		2.18
ESEER (Gross)	(2)		3.95
ESEER (Nett)	(2)		3.75
SEER Office (Gross)	(3)		3.95
SEER Office (Nett)	(3)		3.75
Fluid Flow Rate		[l/s]	6.1
Chiller Pressure Drop		[kPa]	35.8
Capacity Steps (of maximum duty)		[%]	25-55-75-100

### ECODESIGN PERFORMANCE DATA

	Notes	
Application	(4)	COMFORT APPLICATION SSCEE 159.7% = Tier 1 (2018)

### NOTES

- All values inclusive of compressors and fans
- All part load ratios in line with BS EN 14825:2013
- SEER calculated using (a = 0.03, b = 0.33, c = 0.41, d = 0.23) according to Non-Domestic Building Services Compliance Guide
- SSCEE calculated using EN14825-1 Table 4 including external pump rerates as per EN14511. Compliance based on capacity at Ecodesign rating conditions

(Gross) = Excluding absorbed pump power as per EN14511, (Nett) = Including absorbed pump power as per EN14511

All performance data is supplied in accordance with BS EN14511-1 (external pump) and subject to the tolerances laid out in table 7, section VII of Eurovent 6/C/003-2016. Cooling Capacity; -5%, EER Full Load; -5%, (PL 75%; -6%, PL 50%; -8%, PL 25%; -14%, ESEER; -9%)

**TECHNICAL DATA - MECHANICAL****Construction**

Material		Base: Plain Galvanised Steel, Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint
Colour		Light Grey (RAL7035)

**Dimensions / Mass**

Dimensions (Height x Width x Length)	[mm]	2000 x 1300 x 4500
Machine Mass	[kg]	1608
Operating Mass	[kg]	1645

**Compressor**

Type		Tandem + Tandem
Quantity		4
Capacity Control		Staged
Oil Charge Volume	[l]	2 x 3.3 + 2 x 3.3
Oil Type		Polyol Ester

**Condenser**

Type		Copper Tube & Aluminium Fin
Face Area (Total)	[m <sup>2</sup> ]	40.8
Maximum Airflow	[m <sup>3</sup> /s]	14.8

**Fan**

Type		Axial - Sickle Bladed EC
Quantity		4
Diameter	[mm]	710
Maximum Speed	[rpm]	750
Fan Speed Control		Microprocessor Controlled EC (Electronically Commutated) Fans

**Refrigeration**

Configuration		Double Circuit
Refrigerant Type		R32
Refrigerant Control		Electronic Expansion Valve (EEV) - 1 x E3V55B / 1 x E3V55B
Refrigerant Charge (Total)	[kg]	22 + 22

**Evaporator**

Type		Brazed Plate
Insulation		Class 1
Water Volume	[l]	11.1
Design Flow Control		Constant Flow
		Unit to be commissioned and fixed at design water flow rate

**Connections**

Type		PN16 Flanged Connection
Unit Water Inlet and Outlet Size	[DN]	DN65
Water Drain / Bleed	[in]	1/2

**Water System**

Min. System Water Volume	[l]	567
Max. System Operating Pressure	[Barg]	10
Unit Water Volume	[l]	38

**Pumps**

Available Head	[kPa]	164.1
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**Strainer**

Fitted or Supplied Loose		Fitted
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**TECHNICAL DATA - ELECTRICAL**

**Unit Data**

Mains Supply	[VAC]	400V 3PH 50Hz
Nominal Run Amps*	[A]	116.2
Unit Maximum Start Amps*	[A]	Contact Airedale for details
Recommended Mains Fuse Size*	[A]	125
Maximum Mains Incoming Cable Size	[mm <sup>2</sup> ]	70

\* Inclusive of pump if specified



CAUTION - A separately fused, locally isolated, permanent single phase and neutral supply is required for the compressor sump heater, evaporator trace heating and control circuits.

Permanent Supply	[VAC]	230V 1PH 50Hz
Max. Permanent Incoming Cable Size	[mm <sup>2</sup> ]	4
Recommended Permanent Main Fuse Size	[A]	16
Control Circuit	[VAC]	24V (±10%) / 230V

**External Trace Heating**

Available (Fitted by Others)	[W]	500
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**Condenser Fan - Per Fan**

Quantity		4
Full Load Amps	[A]	2.7
Locked Rotor Amps	[A]	8.1
Motor Rating	[kW]	1.7

**Compressor - Per Compressor**

Quantity		4
Nominal Run Amps	[A]	22.64 / 22.64
Locked Rotor Amps	[A]	158 / 158
Motor Rating	[kW]	13.44 / 13.44
Sump Heater Rating	[W]	80
Start Amps	[A]	158 / 158
Type of Start		Direct on line

**Evaporator Pad Heater**

Power per Heater (1 per Unit)	[W]	80
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**OPTIONAL EXTRAS**

**Power Factor Correction**

Nominal Run Amps	[A]	96
Maximum Start Amps	[A]	238
Compressor Nominal Run Amps - Per Compressor	[A]	20.74 / 20.74
Recommended Mains Fuse	[A]	125

**Electronic Soft Start**

Nominal Run Amps	[A]	116
Maximum Start Amps	[A]	175
Recommended Mains Fuse	[A]	125

**Pump**

Configuration		Twin Head Pump
Full Load Amps	[A]	6.15
Locked Rotor Amps	[A]	Contact Airedale for details
Motor Rating	[kW]	3.37
Type of Start		Direct on line

**SOUND DATA**

**Measurement of Sound**

All sound data quoted has been measured in the third-octave band limited values, using a Real Time Analyser calibrated sound intensity meter in accordance with BS EN ISO9614 : 2009.

All Sound Power Levels quoted are calculated from measured sound intensity according to BS EN ISO9614 : 2009.

Sound Pressure Levels are calculated from sound power using the expanded parallelepiped method according to BS EN ISO11203 : 2009.

Resultant performance figures obtained from test will be proven to not differ from the claimed figures by more than the allowable deviations specified in table 7 of section VII of Eurovent RS 6/C/003-2016 (A-weighted sound power; +3dBA).

**Directivity Indicator**

The sound measurements quoted in the Global Chiller Sound Level Values table do not incorporate any directivity or denote any sound level heard at any given position surrounding the chiller, rather they represent the total sound levels radiating from the chiller in all directions in the horizontal plane from source.

Please Note: pump sound levels are not included.

**Global Chiller Sound Level Values**

Frequency	[Hz]	63	125	250	500	1k	2k	4k	8k
Sound Power Level	[dB]	82.4	75.0	77.1	76.1	74.6	71.5	72.9	70.1
Sound Pressure @ 10m	[dB]	50.3	42.9	45.0	44.0	42.5	39.4	40.8	38.0
Sound Pressure @ 10m	[dB]								
<b>Total Sound Data</b>									
Sound Power Level	[dB(A)]	80.3							
Sound Pressure @ 10m	[dB(A)]	48.2							
Sound Pressure @ 10m	[dB(A)]	48.2							

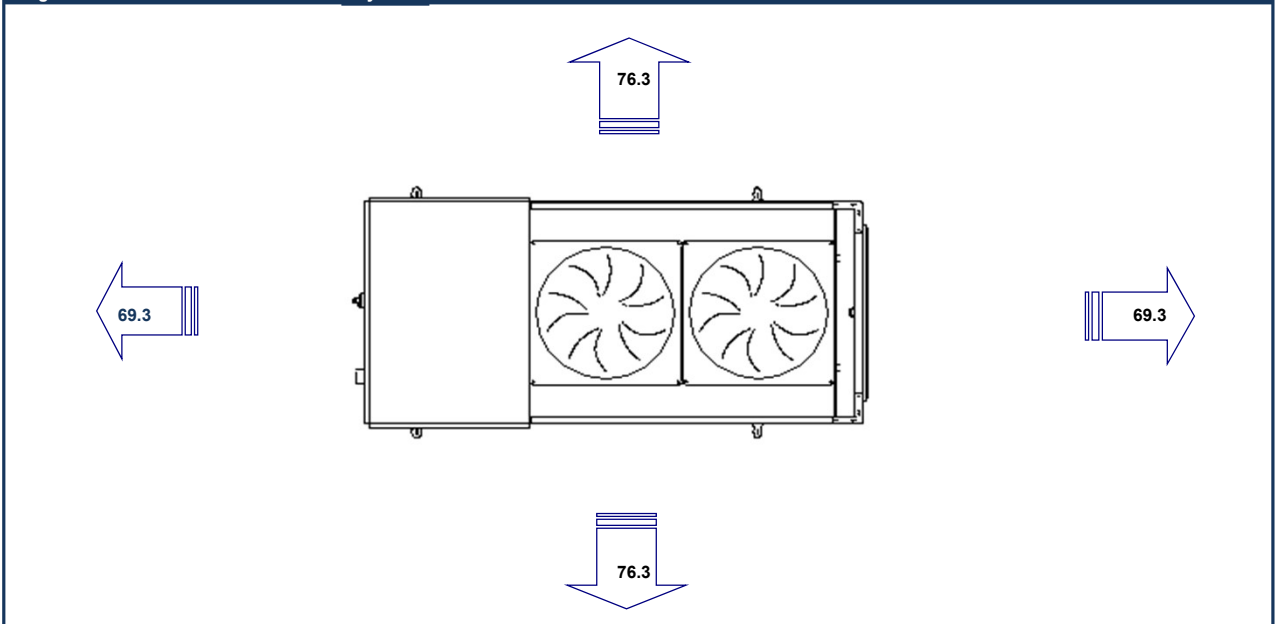
**Note:**

Sound Power Levels calculated from measured sound intensity according to BS EN ISO9614 : 2009. Sound Pressure Levels calculated from sound power using the expanded parallelepiped method according to BS EN ISO11203 :2009.

dBA is the overall noise level measured on the A scale.

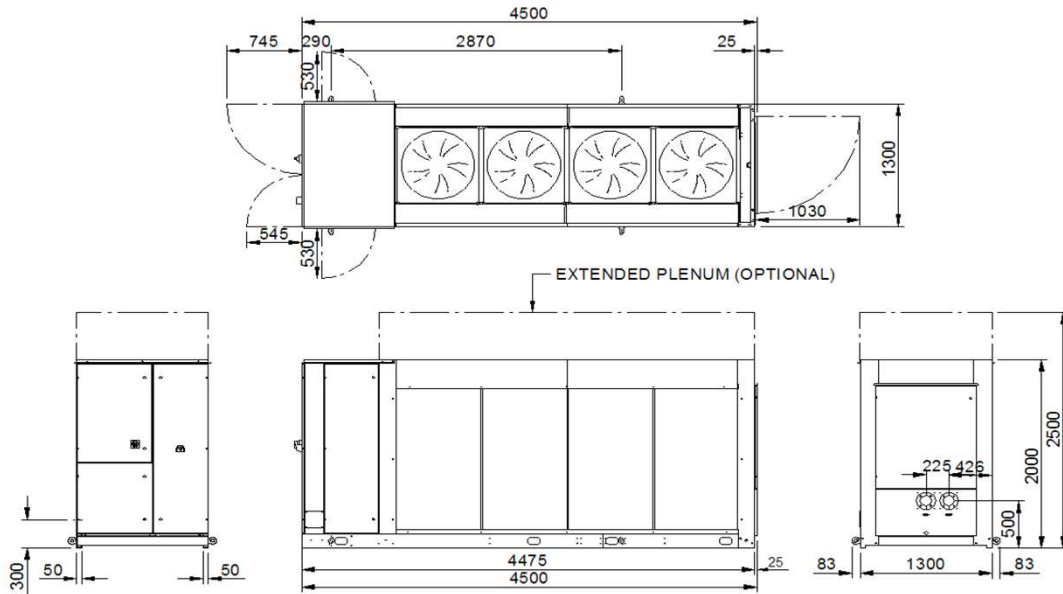
The Sound Pressure data quoted is only valid in free field conditions, where the unit is installed on a reflective base. If the equipment is placed adjacent to a reflective wall, values may vary from those stated, typically increasing by 3dB for each side added. All data excludes the sound emitted by the pump if selected.

**Weighted Sound Power Level with Directivity**

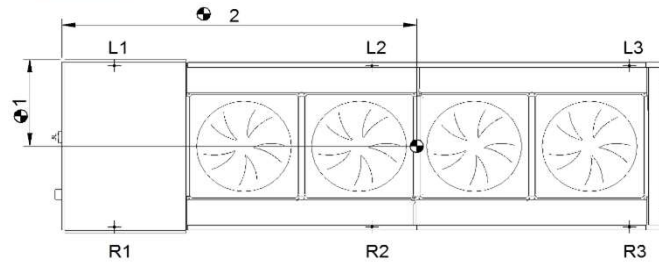


**PHYSICAL DATA**

**DIMENSIONS**



**POINT LOADS**



L1 =	272	[kg]	R1 =	281	[kg]
L2 =	288	[kg]	R2 =	307	[kg]
L3 =	181.1339498	[kg]	R3 =	193.3510873	[kg]
L4 =	-	[kg]	R4 =	-	[kg]
L5 =	-	[kg]	R5 =	-	[kg]
L6 =	-	[kg]	R6 =	-	[kg]
L7 =	-	[kg]	R7 =	-	[kg]
L8 =	-	[kg]	R8 =	-	[kg]

**CENTRE OF GRAVITY**

C of G 1 =  [mm]

C of G 2 =  [mm]

**NOTES**

Calculation based on standard unit, for units fitted with enclosure, pump, tank and expansion vessel options, please contact Airedale.

## ECODESIGN - PERFORMANCE BREAKDOWN

### SSCEE

Model:		UCCL150DX-4AMM
Outdoor Heat Exchanger:		Air
Indoor Heat Exchanger:		Water
Type:		Compressor driven vapour compression
Driver of Compressor:		Electric Motor
Rated Cooling Capacity:	[kW]	144.6
SSCEE:	[%]	159.7%

Performance Data		Ambient	
Declared Cooling	35°C	[kW]	144.2
Declared EER			2.72
Declared Cooling	30°C	[kW]	121.8 / 83.6
Declared EER			3.52 / 3.89
Declared Cooling	25°C	[kW]	91.6 / 42.8
Declared EER			4.86 / 4.14
Declared Cooling	20°C	[kW]	47.0 / 0.0
Declared EER			5.22 / 0.00

Power Consumption in other modes other than 'Active Mode'			
P <sub>OFF</sub>	[kW]		0.035
P <sub>TO</sub>	[kW]		0.720
P <sub>CK</sub>	[kW]		0.128
P <sub>SB</sub>	[kW]		0.065

Supporting Information			
Degradation Coefficient:			0.9
Capacity Control:			Staged
Sound Power Level:	[dB(A)]		80.3
Air Flow Rate:	[m³/h]		53207
Emissions of nitrogen oxides:			N/A
GWP of Refrigerant:			675
Standard Rating Conditions:			Low temperature application

### Contact Details:

Airedale, Leeds Road, Rawdon  
Leeds, LS19 6JY

