

ENERCRET

Ameresco – Manchester Heat Pump Schemes Arcadia Library & Leisure Centre

Title: Heat Pump Schedule

Doc No: EP2012d-ENR-M-SH-XX-001

Issue: Detailed Design

Rev : P01

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HEAT PUMP SCHEDULE											
SCHEDULE REF	EP2012d	ENR	M	SH	XX	001	P01				
PROJECT	AMERESCO MANCHESTER CITY COUNCIL					PROJ NO: EP2012d					
SYSTEM	ARCADIA LIBRARY & LEISURE CENTRE				UNIT REF	HP 01,02 & 3					
GENERAL	NUMBER OF HEAT PUMPS LOCATION					3 Nr Duty Ground floor external compound					
PERFORMANCE	HEATING DUTY (EACH MACHINE) MINMIUM CAPACITY MINIMUM COP AT SELECTED LOAD FOR 65/55 F&R TEMPERATURES NUMBER OF INDEPENDENT REFRIGERANT CIRCUITS					38.8 kW Each 100% 2.15 1					
REFRIGERANT	REFRIGERANT MAX. REFRIGERANT CHARGE					R407C 13 kg					
CONDENSER	FLUID TYPE NUMBER OF PASSES SPECIFIC HEAT (ANTIFREEZE PERCENTAGE) FLUID TEMP FLOW (OUTLET) FLUID TEMP RETURN (INLET) FLUID FLOW RATE (PRESSURE DROP) FOULING FACTOR CONDENSER COIL CONSTRUCTION CONNECTIONS (FLOW AND RETURN)					Water 1 4.19 kJ/kg K (0 %) 65°C 55 °C 1.02 kg/s (2.35 kPa) 0.000 m²k/kW Plate 50 mm diameter					
EVAPORATOR	FLUID TYPE SPECIFIC HEAT AIR TEMP (ON COIL) AIR TEMP FLOW (OFF COIL) EVAPORATOR COIL CONSTRUCTION					Refrigerant 4.19 kJ/kg K -3 °C NA Finned coil					
PRESSURE	FLUID WORKING FLUID TEST					2.0 bar (gauge) 3.0 bar (gauge)					
COMPRESSOR(S)	TYPE NUMBER OF COMPRESSORS CAPACITY CONTROL TYPE OPERATING POWER INPUT (EACH AT SELECTED LOAD) MAX POWER INPUT (EACH)					Hermetic scroll 1 N/A 18.1 kW Fuse rating to be 25% above operating power for defrost cyl					
ELECTRICAL	POWER SUPPLY UNIT RUNNING CURRENT (AT SELECTED LOAD) UNIT STARTING CURRENT (AT SELECTED LOAD) STANDBY POWER POWER FACTOR					400 V / 3Ph / 50Hz 38A 99A 0.030 KW 0.820					
ACOUSTICS	SOUND POWER LEVEL (LwA) SOUND PRESSURE LEVEL AT 10m (LpA)					80dB(A) Low noise 49dB(A) Low noise					
DIMENSIONS	LENGTH x WIDTH x HEIGHT (MAXIMUM) OPERATING WEIGHT					1114 x 2110 x 1330 mm 564 kg					
ACCESSORIES	REFRIGERANT SAFETY RELIEF VALVE INPUT FROM BMS - START/STOP OUTPUT TO BMS - COMMON FAULT BACNET OVER IP GATEWAY COMPRESSOR SOFT STARTER AV MOUNTINGS LIFTING POINTS HOURS RUN METERS MAIN ELECTRICAL ISOLATOR REFRIGERANT LEAK DETECTION POWER FACTOR CORRECTION AND MIN VALUE HEAT PUMP COMMISSIONING HYDRONIC MODULE					Factory fitted, discharge to atmosphere Yes Yes Yes Yes Yes Yes Yes Yes No No Yes No					
NOTES 1. TEST CERTIFICATES TO BE PROVIDED 2. NAMEPLATES TO SHOW TEST AND WORKING PRESSURES 3. UNIT TO COMPLY WITH PRESSURE SYSTEM SAFETY REGULATIONS 4. UNIT TO COMPLY WITH EMC REGULATIONS 5. WIRING TO COMPLY WITH BS 7671 6. SELECTION BASED ON CARRIER AQUASNAP 61AF 055B 7. UNITS TO BE CAPABLE OF DUAL TEMPERTURE OUTPUT AT 65/55 DEG C AND 45/35 DEG C F&R 8. UNITS TO BE EUROVENT CERTIFIED											
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