EQUIPMENT DATA SPECIFICATION
AIR CONDITIONER
HC20C

Waste Water Treatment Package

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SPECIFICATION

1.0 SCOPE

This specification covers the minimum general and specific requirements for the Air Conditioner unit for electrical enclosures used in all levels of water treatment, disposal or purification.

2.0 REQUIREMENTS

• Type of Heat Exchange	Compressor based air conditioner	
• Ambient Operating Temperature	60°F – 131°F	
• Approvals and Stamps	UL, cUL, CE	
• NEMA Type	4X	
• Voltage	220-240 VAC, 60 Hz, 50A Inrush, 12.47A Running 440-480 VAC, 60 Hz, 25A Inrush, 6.30A Running	
• BTU Rating	20,000 BTUH, Nominal	
• Material Type	NEMA 4X:	304 or 316 Stainless Steel, #4 Finish
• Construction	Chassis: Shroud:	Rigid, insulated, closed loop Seam welded, sloped top, insulated
• Condensate Removal	Active evaporation utilizing superheated refrigerant coil	
• Refrigerant	R407C	
• Refrigerant Metering	Thermal expansion valve	

- Refrigerant Service Ports: High pressure
  Low pressure
- Digital Controller
  - Controls
    - Cooling set point
    - Cooling set point differential
    - Compressor protection:
      - Anti-short cycle delay
      - Condenser high temperature limit
      - Evaporator low pressure limit
    - Probes displayed:
      - Evaporator temperature
      - Condenser temperature
    - Auxiliary set points:
      - Heater
      - Dry contact
    - Auxiliary set point differential
  - Alarms
    - Enclosure probe failure (P1)
    - Condenser probe failure (P2)
    - Maximum temperature for 3 minutes (HA)
    - Minimum temperature for 3 minutes (LA)
    - Condenser high temperature for 3 minutes (HA2)
    - Condenser low temperature for 3 minutes (LA2)
    - Evaporator low pressure for 2 minutes (CA)
- Compressor Head Pressure Control: Pressure controlled condenser fan switch
- Compressor Protection: Thermal/current overload switch (self-resetting)
- Condenser Filter: Expanded aluminum, 250 micron, 60% efficiency
- Electrical Connection: Terminal block
  Power On/Off switch
- Dimensions: 230 V: 48"H x 15.86"W x 15.03"D
  480 V: 57.67"H x 15.86"W x 15.03"D
- Unit Weight: 230 V: 170 lbs.
  480 V: 250 lbs.
- Shipping: Corrugated packaging and pallet

3.0 OPTIONS

• High Capacity Condenser Filter	2" Pleated, 304 Stainless steel mesh, 250 micron, 94% efficiency
• Louvered Security Filter Cover	Prevent tampering by unauthorized persons
• Filter Hood	Additional wash down protection
• Integrated Heater	500W 1000W 1500W
• Refrigeration Circuit Protection	Electrostatic epoxy coated coils
• Low Ambient	For operation at ambient temperatures below 60°F
• Dry Contact (Operation when enclosure temperature exceeds maximum limit)	Normally open Normally closed Normally open & normally closed
• Custom Programming	Factory programming of digital controller for Celsius temperature or deviation from default settings
• External Heat Output	100 W – 950W
• High Ambient	For operation at ambient temperatures above 131°F
• Open Door Kill Switch	Disables power to air conditioner when equipment enclosure door is open
• Adjustable Temperature Probe	Monitor & maintain temperature at any point inside equipment enclosure
• Controller Communication Output	Modbus RTU Ethernet/IP
• Vibration Package	Protects air conditioner components from effects of moderate or severe vibration
• Hazardous Location Package	Class 1, Division 2, Groups B, C, & D
• Redundant System	Alternating operation of two air conditioners including backup mode in the event that one unit fails

4.0 ACCESSORIES

• Replacement Filters	Standard High Capacity
• Alarm & Controlling Web Server	XWEB300D-8B000 – for up to 6 air conditioners XWEB300D-8F000 – for up to 18 air conditioners

5.0 CODES AND STANDARDS

• ANSI/UL 484	Room Air Conditioners (Special Purpose)
• ANSI/NFPA 70	National Electrical Code
• CSA-C22.2 No. 236-M90	Heating and Cooling Equipment
• CSA-C22.2 No. 117	Room Air Conditioners (Special Purpose)
• CAN/CSA-C22.1	Canadian Electrical Code, Part I.
• EN Harmonized European Standards	
o EN 378-1 through -4	Refrigerating Systems and Heat Pumps
o EN 60204-1	Electrical Equipment of Machinery
o EN 60529, IP	IP Code
o EN 61000-3-11	Electromagnetic Compatibility
o EN 61000-6-2	Emission
o EN 61000-6-4	Immunity
• Hazardous Location Standards	
o ANSI/UL 1203	Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations
o UL 698	Industrial Control Equipment for Use in Hazardous (Classified) Locations
o ANSI/UL 877	Circuit Breakers and Circuit-Breaker Enclosures for Use in Hazardous (Classified) Locations
o UL 886	Outlet Boxes and Fittings for Use in Hazardous (Classified) Locations
o ANSI/UL 894	Switches for Use in Hazardous (Classified) Locations
o ANSI/UL 1002	Electrically Operated Valves for Use in Hazardous (Classified) Locations
o ANSI/UL 1010	Receptacle-Plug Combinations for Use in Hazardous (Classified) Locations
o ANSI/UL 913	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous (Classified) Locations
o ANSI/ISA-12.12.01	Non-Incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
o UL 1604	Electrical Equipment for Use in Class I and II, Division 2, and Class III Hazardous (Classified) Locations
o ANSI/NFPA 496	Purged and Pressurized Enclosures for Electrical Equipment
o IEC 60529	Classification of Degrees of Protection Provided by Enclosures
o CSA-C22.2 No. 30-1986	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
o CSA-C22.2 No. 25-1966	Enclosures for Use in Class II Groups E, F and G Hazardous Locations
o CAN/CSA-E61241-1-1-2002	Limitation - Specification for Apparatus Electrical Apparatus for Use in the Presence of Combustible Dust - Part 1-1: Electrical Apparatus Protected by Enclosures and Surface Temperature
o CAN/CSA-C22.2 No. 157-1992	Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
o CSA-C22.2 No. 213-1987	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
o ANSI/NFPA 496	Purged and Pressurized Enclosures for Electrical Equipment