

SECTION 23 78 10 - WALL MOUNTED ROOM AIR CONDITIONING UNIT (AIR COOLED)

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Provide labor, materials, equipment and services as required for the complete installation designed in Contract Documents.

1.2 SUBMITTALS

- A. Room air conditioning unit, air cooled condenser and all accessories.
- B. Provide complete wiring diagrams. Installation details and requirements. Refrigerate piping schematics showing accessories.

1.3 QUALIFICATION

- A. Shall comply with New York State Energy Conservation Construction Code. Provide complete unit with U.L. listed label.

1.4 WARRANTY AND GUARANTEE

- A. Twelve (12) months on all parts and on hermetic refrigeration system from date of substantial completion.

PART 2 - PRODUCTS

2.1 AIR CONDITIONING UNIT

- A. Provide a complete system of computer room air conditioning including, but not limited to, indoor self-contained package unit, controls, air cooled condenser, piping and accessories.
- B. Unit shall be complete factory package unit for wall mounting with capacities specified and the following features:
 - 1. Welded steel cabinet lines with thermal acoustic insulation. Baked enamel finish of color selected by Architect.
 - 2. Fan shall be centrifugal type.
 - 3. The evaporator coil shall be constructed of copper tubes and aluminum fins designed to provide steps of cooling as scheduled.
 - 4. The refrigeration system shall consist of a hermetic compressor pressure safety switches, externally equalized expansion valve, and a refrigerant sight glass and moisture indicator.
- C. Optional Equipment:
 - 1. Condensate Pump: Provide condensate pump with capacity of 60 GPH

at 20 ft. head, complete with integral float switch, pump, motor assembly and reservoir.

- D. Microprocessor Control System:
 - 1. The thermostat (wall mounted) shall be microprocessor based with LCD numerical display to allow observation of room temperature.
 - 2. Control Parameters: Temperature Setpoint 65°F-85°F. Temperature Sensitivity $\pm 1^{\circ}\text{F}$ to $\pm 5^{\circ}\text{F}$.
 - 3. Monitoring: Normal Operating Modes (Cooling, Dehumidification) shall be indicated by the LCD display on the wall-mounted thermostat.
- E. Air Cooled Condenser:
 - 1. Self-Contained Air Cooled Condenser: The air cooled condenser shall be direct drive propeller fan type. The condenser shall be constructed of aluminum and contain a copper tube, aluminum fin coil with an integral electric control panel. The system shall be designed for 0°F ambient.
- F. Design Equipment: Daikin.
- G. Make: Daikin, Mitsubishi Electric, Sanyo, Carrier.

PART 3 - EXECUTION

3.1 GENERAL

- A. Provide and install per manufacturers written instructions.
- B. Mount condensing unit on equipment supports. This contract shall provide all necessary roofing work, and all work shall be performed in a manner to maintain existing roof system warranties.
- C. Connect water piping for drain as per manufacturers recommendation.
- D. Provide all interconnecting control wiring between air cooled condenser, thermostat, and computer room unit in accordance with manufactures recommendation and Section 230190 "Electric Wiring".

END OF SECTION