

SECTION 15741

DUCTLESS SPLIT AIR CONDITIONERS

PART 1 DESIGN DIRECTIVES

1.1 QUALITY ASSURANCE

- A. Capacity ratings for condensing units shall be in accordance with ARI Standard 210 "Standard for Commercial and Industrial Unitary Air-Conditioning Equipment".
- B. Condensing units shall meet or exceed the minimum COP/Efficiency levels as prescribed in ASHRAE 90A "Energy Conservation in New Building Design" and shall be listed by UL and have UL label affixed.

1.2 EXTENDED WARRANTY

- A. Provide 5 years written warranty, signed by manufacturer, agreeing to replace/repair, within warranty period, motors/compressors with inadequate or defective materials and workmanship, including leakage, breakage, improper assembly, or failure to perform as required; provided manufacturer's instructions for handling, installing, protecting, and maintaining units have been adhered to during warranty period. Replacement is limited to component replacement only, and does not include labor for removal and reinstallation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, provide ductless split air conditioners from the following:
  - 1. Carrier Air Conditioning; Div of Carrier Corp.
  - 2. Mitsubishi Electric
  - 3. Sanyo Air Conditioning Products

2.2 OUTDOOR UNIT

- A. Unit casings shall be designed for outdoor installation and complete with weather protection for components and controls, and complete with removable panels for required access to compressors, controls, condenser fans, motors, and drives. Additional features include steel, galvanized or zinc-coated, for exposed casing surfaces, treated and finished with manufacturer's standard paint coating.
- B. Reciprocating hermetic-or scroll type compressor, designed for air-cooled condensing, crankcase heater, and internal vibration isolation.
- C. Operating and safety controls shall include high and low pressure cutouts, automatic restart upon power failure, and condenser fan motors with thermal and overload cutouts. Provide magnetic contactors for compressor and condenser fan motors. Low ambient controls to operate unit to 0°F. Winter start control to provide a 3 minute time delay bypassing the low pressure cut out switch.

2.3 INDOOR UNIT

- A. Indoor, direct expansion, wall or ceiling mounted fan coil. Unit shall be a complete cooling coil, fan and motor, piping connectors, electrical controls, microprocessor control system, and integral temperature sensing.
- B. Cabinet shall have integral supply & return grilles in a high impact polystyrene enclosure. Insulate cabinet for thermal and acoustic performance.
- C. Direct drive blower with user selected, motor driven, vertical air sweep deflector.
- D. Microprocessor control system capable of controlling the room temperature, fan speed, and run self-diagnostics.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install condensing units in accordance with manufacturers installation instructions. Install units plumb and level maintaining manufacturer's recommended clearances.
- B. Support:
  - 1. Install ground-mounted units on reinforced concrete pad, 4" larger on each side than condensing unit.
  - 2. Install roof-mounted units on equipment supports. Anchor unit to supports with removable fasteners.

3.2 DEMONSTRATION

- A. Start-up ductless split air conditioners in accordance with manufacturer's start-up instructions. Test controls and demonstrate compliance with requirements. Replace damaged or malfunctioning controls and equipment.
- B. Train Owner's personnel on start-up and shut-down procedures, troubleshooting procedures, servicing, and preventative maintenance schedule and procedures. Review with the Owner's personnel, the data contained in the Operating and Maintenance Manuals.

END OF SECTION 15741