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**Custom Air Conditioning Units**

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Custom Air Conditioning Units

1. General
  - 1.1. WORK INCLUDED
    - 1.1.1. Conform to Section 20 05 00.00 - GENERAL INSTRUCTIONS FOR MECHANICAL SECTIONS.
2. Products
  - 2.1. MATERIALS
    - 2.1.1. Custom air handling units shall be Haakon, Engineered Air, Inginia, TMI, or Ventrol and shall be as described in the Air Plant Composition Schedules and associated Schedules. **Mafna** may be used as a substitute manufacturer subject to approval.
    - 2.1.2. Provide factory assembled air handling units in configuration as indicated on drawings. Unit shall include all specified components installed at the factory. Field fabrication of units and their components will not be accepted. Provide sheet metal caps on all openings for on-site pressure testing.
    - 2.1.3. Casings downstream of the heating coil shall be constructed of minimum 50 mm (2 in.) thick, acoustical thermal panels. Panels shall be minimum 1.6129 mm thick (0.0635 in. - 16 gauge) G90 galvanized or satin coat steel for the exterior wall. The inner wall shall be minimum 0.8534 mm thick (0.0336 in. - 22 GSG gauge) perforated G90 galvanized or satin coat steel. The insulation shall be 50 mm (2 in.), minimum 48 kg/cu.m. (3 lb.) density fibreglass complete with neoprene face. All flanged panel surfaces shall be sealed during assembly with strips of 3 mm (1/8 in.) thick sealer to provide an airtight unit. External caulking is not acceptable. All seams shall be turned inward to provide a clean flush exterior finish.
    - 2.1.4. Casings up to and including the heating coil shall be constructed of minimum 50 mm (2 in.) thick, acoustical thermal panels. Panels shall be minimum 1.6129 mm thick (0.0635 in. - 16 GSG gauge) G90 galvanized or satin coat steel for the exterior wall. The inner wall shall be minimum 0.8534 mm thick (0.0336 in. - 22 GSG gauge) solid G90 galvanized or satin coat steel. The insulation shall be 50 mm (2 in.), minimum 48 kg/cu.m. (3 lbs.) density fibreglass complete with neoprene face. All permanently joined flanged panel surfaces shall be sealed during assembly with strips of 3 mm (1/8 in.) thick sealer to provide an airtight unit. External caulking is not acceptable. All seams shall be turned inward to provide a clean flush exterior finish.
    - 2.1.5. Provide insulation weld pins on 400 mm (16 in.) centers (maximum) or insulation shelves on 600 mm (24 in.) centers (maximum) to prevent insulation sag for units designed for 100% outdoor air and/or for units over 4719 L/s (10,000 cfm).