

## SECTION 23 74 14

### FAN COIL UNITS

#### PART 1 - GENERAL

##### 1.01 SUMMARY

- A. Factory assembled, two pipe, room fan coil unit, suspended in above ceiling for ducting installation.

##### 1.02 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of fan coil units of types and sizes required, whose products have been in satisfactory use in similar service for not less than 3 years.
- B. Unit shall be tested and certified in accordance with ARI Standard 440 and base unit UL certified.
- C. Each coil shall be factory tested for leakage at 300 psig air pressure with coil submerged in water.
- D. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation. All equipment wiring shall comply with NEC requirements.

##### 1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for induction air terminal units, including specifications, capacity ratings, dimensions, weights, materials, accessories furnished, and installation instructions.
- B. Maintenance Data: Submit maintenance data and parts list and control. Include this data, product data, shop drawings, and wiring diagrams.

##### 1.04 SPECIAL SEISMIC CERTIFICATION

- A. Equipment shall be designed, tested and certified in accordance with CBC regulations to meet the SDS factor indicated by the Developer/Design Builder's structural consultant. Submit certification.

#### PART 2 PRODUCTS

##### 2.01 MANUFACTURERS

- A. York
- B. Carrier
- C. Trane

##### 2.02 FAN COIL UNITS

- A. Factory assembled, horizontal, blow-thru type fan coil for furred-in, ducted installation. Unit shall be complete with water coil, fan, motor, and drain pan.
- B. Unit shall have factory installed plenum section and throwaway side access filter. The plenum shall be rear air return, shall enclose the fan/motor assemblies, and shall be lined with 1/2 inch fiberglass insulation. Unit shall have a removable panel to provide access to fan/motor assemblies and unit identification label.

- C. Fans: Direct driven, double width fan wheels with forward curved blades shall be statically and dynamically balanced. Scrolls shall be constructed of galvanized steel. Fan wheels shall be constructed of galvanized steel.
- D. Coils: Standard base unit shall be equipped with a 3 row or 4 row coil for installation in a two pipe system. Coils shall have 1/2 inch copper tubes, aluminum fins bonded to the tubes by mechanical expansion, and a working pressure of 250 psig. Each coil shall have a manual air vent and sweat connection for 5/8 inch OD copper tubes.
- E. Motors: Fan motors shall be 3 speed, 120V, single phase, 60 Hz, permanent split capacitor type, with sleeve type bearings and oversized oil reservoirs to ensure lubrication.
- F. Drain pan shall include a second drain connection located above the main drain connection to act as an indicator that the main drain is plugged.

### PART 3 EXECUTION

#### 3.01 INSPECTION

- A. Examine areas and conditions under which fan coil units are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected.

#### 3.02 INSTALLATION OF FANS

- A. General: Except as otherwise indicated or specified, install induction air terminal units in accordance with manufacturer's installation instructions and recognized industry practices to insure that units serve their intended function.
- B. Coordinate work with work of walls, and ceiling, as necessary for proper interfacing.
- C. Ductwork: Refer to Division 23 "Ductwork". Connect ducts to fans in accordance with manufacturer's installation instructions.
- D. Piping: Refer to Division 23 "Hydronic Piping Specialties."

#### 3.03 FIELD QUALITY CONTROL

- A. Testing: After installation of fan coil units has been completed, test each unit to demonstrate proper operation of units at performance requirements specified. When possible, field correct malfunctioning units, then retest to demonstrate compliance. Replace units that cannot be satisfactorily corrected.

#### 3.04 ADJUSTING AND CLEANING

- A. Cleaning: Clean factory-finished surfaces. Repair any marred or scratched surfaces with manufacturer's touch-up paint.

END OF SECTION