

SECTION 15760

FAN COIL UNITS

PART 1 –GENERAL

1.1 WORK INCLUDED

A. Fan coil units.

1.2 REFERENCES

A. AMCA 99 - Standards Handbook.

B. AMCA 210 - Laboratory Methods for Testing Fans for Rating Purposes.

C. AMCA 230 - Field Performance Measurement of Fan Systems

D. AMCA 300 - Reverberant Room Method of Sound Testing of Fans.

E. AMCA 500 - Test Methods for Louvers, Dampers and Shutters.

F. ARI 410 - Standard for Forced-Circulation Air-cooling and Air Heating Coils.

G. ANSI/AFBMA 9 - Load Ratings and Fatigue Life for Ball Bearings.

H. ANSI/AFBMA 11 - Load Ratings and Fatigue Life for Roller Bearings.

I. NFPA 90A - Installation of Air Conditioning and Ventilation Systems.

J. SMACNA - Low Pressure Duct Construction Standards.

K. ASTM A525: Specification for General Requirements for Steel Sheet, Zinc Coated (Galvanized) by the Hot-Dip Process.

1.3 QUALITY ASSURANCE

A. Fan Performance Ratings: Conform to AMCA 210 and bear the AMCA Certified Rating Seal.

B. Store and protect conduits.

C. Store in clean dry place and protector from weather and construction traffic. Handle carefully to avoid damage to components, enclosures and finish.

1.4 SUBMITTALS

- A. Clearly define any exceptions to specifications and drawings
- B. Shop drawings shall indicate assembly, unit dimensions, weight loading, required clearances, construction details, and field connection details.
- C. Product data shall indicate dimensions, weights, capacities, ratings, fan performance, motor electrical characteristics, and gages and finishes of materials.
- D. Provide fan curves with specified operating point clearly plotted.
- E. Submit sound power levels for both fan outlet and casing radiation at rated capacity. Submit ACMA 300-85 test report for each fan and unit.
- F. Submit product data of filter media, filter performance data, filter assembly, and filter frames.
- G. Submit electrical requirements for power supply wiring including wiring diagrams for interlock and control wiring, clearly indicating factory-installed and field-installed wiring.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in factory-fabricated protective containers, with factory-installed shipping skids and lifting lugs.
- B. Store and protect conduits.
- C. Store in clean dry place and protect from weather and construction traffic. Handle carefully to avoid damage to components, enclosures, and finish.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Do not operate units for any purpose, temporary or permanent, until ductwork is clean, filters are in place, bearings lubricated, and fan has been test-run under observation.

PART 2 –PRODUCTS

2.1 MANUFACTURERS - FAN COILS

- A. International
- B. McQuay
- C. Trane

2.2 GENERAL

- A. Blow-through direct drive hideaway for ducted application or exposed finished cabinet as required.
- B. Fan, coil and filter sections.

2.3 CABINET

- A. Continuous galvanized steel base casing and inlet plenum, 1 inch filter frame for back return air. Baked enamel finish.

2.4 FANS AND MOTORS

- A. DWDI, forward curved, centrifugal.
- B. Statistically and dynamically balanced.
- C. Permanent split capacitor type with resilient mount, sleeve bearing with oilers, inherent thermal overload protection with automatic reset.
- D. Three-speed motor control switch mounted on fan coil.

2.5 COILS

- A. Extended surface plate aluminum fins, staggered 1/2-inch O.D. seamless copper tubes, 0.020 wall thickness.

2.6 DRAIN PAN

- A. Continuous galvanized steel, closed cell insulation, mastic seal, pitch to drain connection.
- B. Secondary drain pan with overflow pipe.

2.7 FILTERS

- A. 1 inch throw-away.

PART 3 –EXECUTION

3.1 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Anchor to structure with seismic restraints and provide seismic calculations in accordance with Vibration and Seismic Controls Section.

END OF SECTION