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## **PART 1 GENERAL**

### **1.1 REFERENCE STANDARDS**

- .1 American National Standards Institute/Air Movement and Control Association (ANSI/AMCA)
  - .1 ANSI/AMCA Standard 99 (Latest Edition), Standards Handbook.
  - .2 ANSI/ASHRAE 51 (ANSI/AMCA 210) (Latest Edition), Laboratory Methods of Testing Fans for Aerodynamic Performance Rating.
  - .3 ANSI/AMCA Standard 300 (Latest Edition), Reverberant Room Method for Sound Testing of Fans.
  - .4 ANSI/AMCA Standard 301 (Latest Edition), Methods for Calculating Fan Sound Ratings from Laboratory Test Data.

### **1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for roof and wall exhausters and include product characteristics, performance criteria, physical size, finish and limitations.
  - .2 Include :
    - .1 Fan performance curves showing specified point of operation.
    - .2 Sound rating data.

### **1.3 MAINTENANCE MATERIAL SUBMITTALS**

- .1 Extra Materials:
  - .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
    - .1 Furnish list of individual manufacturer's recommended spare parts for equipment, include:
      - .1 Bearings and seals.
      - .2 Addresses of suppliers.
      - .3 List of specialized tools necessary for adjusting, repairing or replacing.

### **1.4 DELIVERY, STORAGE, AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:

- .1 Store materials off ground in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
- .2 Store and protect roof and wall exhausters from nicks, scratches, and blemishes.
- .3 Replace defective or damaged materials with new.

## **PART 2 PRODUCTS**

### **2.1 SYSTEM DESCRIPTION**

- .1 Performance Requirements:
  - .1 Catalogued or published ratings for manufactured items: obtained from tests carried out by manufacturer or those ordered by manufacturer from independent testing agency signifying adherence to codes and standards in force. Provide confirmation of testing.
  - .2 Capacity: flow rate, total static pressure Pa, r/min, W, model and size and sound ratings as indicated on schedule.
- .2 Statically and dynamically balanced. Constructed to ANSI/AMCA Standard 99.
- .3 Sound ratings: comply with ANSI/AMCA Standard 301, tested to ANSI/AMCA Standard 300.
- .4 Performance ratings: based on tests performed in accordance with ANSI/AMCA Standard 210, unit to bear AMCA certified rating seal.
- .5 Bearings: sealed lifetime iolite ball bearings or heavy duty grease lubricated ball or roller bearings of self aligning type with oil retaining, dust excluding seals and a certified minimum rated L10 life of 80,000 hours.

### **2.2 ROOF EXHAUSTERS**

- .1 Centrifugal belt or direct driven as indicated.
  - .1 Housings: spun aluminum complete with resilient mounted motor and fan.
  - .2 Impeller: aluminum non-overloading.
  - .3 Adjustable motor sheave.
  - .4 12 mm mesh 2.0 mm diameter aluminum birdscreen.
  - .5 Automatic gasketed aluminum backdraft dampers.
  - .6 Disconnect switch within fan housing.
  - .7 Continuous curb gaskets, cadmium plated or stainless steel securing bolts and screws, and 400mm high roof curbs where indicated. Hinge curb plate for access to internals for maintenance.
  - .8 Roof curb for sloped roof, 350 mm high.

**PART 3 EXECUTION**

**3.1 EXAMINATION**

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for roof and wall exhausters installation in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate in presence of Departmental Representative.
  - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

**3.2 INSTALLATION**

- .1 Install in accordance with manufacturer's instructions.

**3.3 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

**END OF SECTION**