

SECTION 15820VENTILATION FANSPART 1 - GENERAL1.1 DESCRIPTION

- A. Work Included: Provide and install ventilation fans of the types and arrangement as shown on the Drawings and as specified herein.
- B. Related Work Specified Elsewhere "HVAC - General" is specified in this Division.

1.2 QUALITY ASSURANCE

- A. Each fan shall be licensed by AMCA to bear the Certified Rating Seal.

PART 2 - PRODUCTS2.1 MATERIALS

- A. General: Refer to the Drawings for the following information (when applicable):
  - 1. Specific type and size of fan.
  - 2. Electrical characteristics - voltage and phase.
  - 3. Direct or belt drive.
  - 4. Requirement for explosion proof motors and wiring devices (Class I, Group D, Division 1).
  - 5. Requirements of explosion proof fan construction shall comply with AMCA Standards handbook Publication 99-86, construction type "B".
  - 6. Special corrosion resistant coatings.
  - 7. Additional accessories and specialties.
- B. Motors:
  - 1. Totally enclosed fan cooled (TEFC) unless noted otherwise.
  - 2. Integral thermal overload protection on single phase fractional horsepower motors
  - 3. Two speed motors shall be two winding style. Single winding two speed motors are not acceptable without specific approval of the Engineer.
- C. Belt Drive Units:
  - 1. Shaft seals (axial & vane axial).
  - 2. Belt guard (full belt enclosure).
  - 3. Motor cover (weatherproof for exterior mounted fans and fans in wet areas).
  - 4. Variable pitch sheave on motor.
  - 5. Idler wheel when required for belt adjustment.
  - 6. Adjustable motor base when required for belt adjustment.
- D. Roof Curbs:
  - 1. Required for all roof mounted fans unless an integral part of roof structure and so shown on the Architectural Drawings.
  - 2. 18 inches high.
  - 3. Supplied with fan.

4. Prefabricated all welded aluminum construction structurally reinforced to support fan.
  5. 1½ inch thick rigid fiberglass insulation.
  6. Wood blocking when required for fan installation.
- E. Inline Centrifugal Fans:
1. Acceptable Manufacturers
    - a. Greenheck Fan Corporation
    - b. Loran Cook Co.
    - c. Penn Ventilator
    - d. ACME
    - e. Or approved equal.
  2. Duct mounted, belt or direct driven as scheduled.
  3. Fan wheels, aluminum backward inclined.
  4. Housing, all aluminum construction.
  5. Mounting brackets and vibration isolations required for wall mounting or hanging from ceiling as shown.
  6. AMCA certified for both air and sound performance.
  7. Completely wired internally with leads brought to an external junction box.
  8. Belt drive fans shall have variable pitch sheaves selected with scheduled operating point midrange of the selected sheave.
- F. Power Roof Ventilators:
1. Acceptable Manufacturers:
    - a. Penn Ventilator Co. - Domex.
    - b. ACME
    - c. Loran Cook Co.
    - d. Greenheck Fan Corporation.
    - e. Or approved equal.
  2. Ventilator housings: Spun aluminum construction completely weather-proofed and securely seated on and fastened to the roof curb.
  3. Fan wheels: Aluminum Centrifugal, non-overloading, quiet-operating, statically and dynamically balanced.
  4. Gravity backdraft damper unless motor operated damper is required and shown on the Drawings.
  5. Aluminum Snow and insect screen.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Install as required in strict accordance with the manufacturer's instructions and recommendations and as shown on the Drawings.
- B. Provide each roof fan with screens.
- C. Provide flexible duct connections where shown on the Drawings.

3.2 ADJUSTING

- A. Adjust all fans and systems to conditions shown by changing dampers, and adjusting fan speeds.

END OF SECTION