

VENTILATOR VG



AIR-THERM INC.

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GRAVITEC THERMODYNAMIC NATURAL VENTILATION SPECIFICATION

1. DESCRIPTION:

- The ventilator shall be of the Gravitec VG type (continuous operating) as manufactured by Air-Therm Inc. They shall be the sizes shown on the drawings.

2. QUALITY ASSURANCE AND CONTROL:

- The level of quality assurance associated with the requirements of ISO 9002 shall be applied to the contract using the practices, resources and activities proprietary to Air-Therm construction system.

3. SUBSTITUTIONS:

- No substitutions will be considered unless written request for approval has been submitted by the bidder and has been received by the designer at least ten days prior the bid date. Any proposed substitutions should meet the standards set by the specifications.

4. PERFORMANCE:

- The ventilators shall have coefficient of discharge of 0,65. The ventilators shall be designed to perform as specified regardless of wind capacity or direction.

5. DESIGN:

- The ventilator shall be design to Industrial standards and adhere to ALL pertinent sections of the Building Code of _____ Ventilator shall be of a design developed and fabricated by Air-Therm specifically for industrial environmental conditions and quality standards.
- The ventilators shall be weather resistant under normal positive operating conditions.
- The ventilator shall be capable of self-cleaning action by the elements, with previsions for carrying water, and normal wind transported material outside the ventilator.

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- The total air path through the ventilator shall allow free unconstrained air passage. The aerodynamic shape of the ventilator shall be designed to aid the laminar exhaust flow of air.
- The ventilator shall be equipped with wind jump diaphragms to afford efficient ventilation regardless of wind direction.
- The ventilators shall have a cap peak flash and shall have gutters complete with downspouts spaced not over 20 feet centers, to drain precipitation from caps without clogging. Drains shall be of Air-Therm Omega design so that fastening holes are within the drainage area. The Caps and Gutters shall utilize the Air-Therm triple protection
- Weather Gap system with all fasteners installed through non-skinning 2nd stage system.
- Optional, the ventilator shall be equipped with a single damper or two dampers (butterfly) register that when fully open acts as a dynamic air splitter. In its closed position the register shall allow sufficient air flow to off gas 5% of total capacity.
- Optional, damper shall be operated by motor.

6. MATERIALS:

- All framing and internal bracing shall be not less than ¼" ASTM 44W carbon steel.
- The ventilator frames shall be SEALED WELDED.
- Frame bolting shall be no less than ASTM A325 type 1 structural bolts
- The ventilator cladding shall be 20 or 22 gauge steel or 5052-H32 grade aluminum to withstand environmental conditions. All flashings shall be made of the same material.

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- Roll Profiled Material shall be corrugated shape profiled to 7/8" depth.
- The ventilator cladding shall be fastened utilizing self-tapping grade 304 stainless steel # 14 screws with metal washer and zero UV weather seal.
- Flashings shall be connected utilizing Air-Therm triple protection methodology to ensure long term weather resistance.
- Flashings shall be shop prepared with Sure-Fit system for easy site preparation and installation in order to ensure a better installation and assured long term weather resistance.
- If Required, Stack and Damper section shall be fitted with insulating material for winter closure and maintenance of building warmth.

7. ACCESSORIES:

- Ventilators shall be equipped with 1/2" mesh, 19 GA, galvanized BIRD-SCREEN.
- DAMPERS operating systems shall be of a HEAVY INDUSTRIAL type as supplied by Air-Therm, to ensure long life and easy operation, including rack arms, yokes, pinions, properly design shafting, hanger bearings, couplings, mounting plates, and other parts.

8. MATERIAL CONTROL:

- Material received shall be verified as correct against delivery dockets and material certificates.

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9. FABRICATION MANUFACTURING PROCEDURES:

- All fabrication shall be carried out according to written procedures.
- Inspection documents shall be kept updated and available for inspection.
- all material shall be identified.

10. INSTALLATION AND ERECTION:

- Install Gravitec Ventilator type VG and accessories in conformance with approved drawings and Air-Therm specifications.

11. DEFECTIVE MATERIAL:

- All deficiencies shall immediately be tagged as such.
- All defective material shall be segregated.
- All defective material shall be noted in the fabrication logbook.
- Corrective action shall be taken to prevent the recurrence of defective material.