

SECTION 23 34 23 - POWER AND GRAVITY VENTILATORS

PART 1 - GENERAL

1.1 SUMMARY

1. **KROGER DIRECT BUY PROGRAM:** Owner supplied/Contractor installed.
 - a. The Kroger Company will supply the power and gravity ventilators.
 - b. Comply with requirements in Division 00 Section "General Conditions."
2. Contractor supplied items:
 - a. Items not provided by Owner necessary for a complete installation.
3. Contractor installed items:
 - a. Power and gravity ventilators.

1.2 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. NEMA Compliance: Motors and electrical accessories shall comply with NEMA standards.
- C. UL Standard: Power ventilators shall comply with UL 762.

1.3 SUBMITTALS

- A. The Owner will provide the following submittals for the Contractor's review. The Contractor shall review and return submittals as specified in Division 00 Section "General Conditions."
 1. Product Data: Including rated capacities, furnished specialties, and accessories for each type of product indicated.
 2. Shop Drawings: Equipment assemblies and dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

PART 2 - PRODUCTS

2.1 PRODUCTS

- A. Refer to Division 01 Section "Vendor Contact List" for contact information on power and gravity ventilators.
- B. See Drawings for schedule of equipment.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install power ventilators level and plumb.
- B. Support units using spring isolators having a static deflection of **1 inch (25 mm)**. Vibration- and seismic-control devices are specified in Division 20 Section "Vibration And Seismic Controls For Facility Services."
 - 1. Secure vibration and seismic controls to concrete bases using anchor bolts cast in concrete base.
- C. Install floor-mounted units on concrete bases. Concrete, reinforcement, and formwork requirements are specified in Division 03 Section "Cast-in-Place Concrete Slabs."
- D. Secure roof-mounted fans to roof curbs with cadmium-plated hardware.
- E. Ceiling Units: Suspend units from structure; use steel wire or metal straps.
- F. Support suspended units from structure using threaded steel rods and elastomeric hangers having a static deflection of **1-inch (25-mm)**.
- G. Install units with clearances for service and maintenance.
- H. Label units according to requirements specified in Division 20 Section "Common Work Results for Facility Services."
- I. Duct installation and connection requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of ducts and duct accessories. Make final duct connections with flexible connectors. Flexible connectors are specified in Division 23 Section "Air Duct Accessories."
- J. Install ducts adjacent to power ventilators to allow service and maintenance.
- K. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."
- L. Provide low voltage connections according to Division 26 Section "Low Voltage Electrical Power Conductors and Cables."

3.2 FIELD QUALITY CONTROL

- A. Perform the following field tests and inspections and prepare test reports:
1. Verify that shipping, blocking, and bracing are removed.
 2. Verify that unit is secure on mountings and supporting devices and that connections to ducts and electrical components are complete. Verify that proper thermal-overload protection is installed in motors, starters, and disconnect switches.
 3. Verify that cleaning and adjusting are complete.
 4. Disconnect fan drive from motor, verify proper motor rotation direction, and verify fan wheel free rotation and smooth bearing operation. Reconnect fan drive system, align and adjust belts, and install belt guards.
 5. Adjust belt tension.
 6. Adjust damper linkages for proper damper operation.
 7. Verify lubrication for bearings and other moving parts.
 8. Verify that manual and automatic volume control and fire and smoke dampers in connected ductwork systems are in fully open position.
 9. Disable automatic temperature-control operators, energize motor and adjust fan to indicated rpm, and measure and record motor voltage and amperage.
 10. Shut unit down and reconnect automatic temperature-control operators.
 11. Remove and replace malfunctioning units and retest as specified above.
- B. Start up units and test and adjust controls and safeties to insure proper operation. Replace damaged and malfunctioning controls and equipment.

END OF SECTION 23 34 23

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