

SECTION 23 34 23

POWER VENTILATORS

TAG: Axial Wall Mount

PART 1 - GENERAL

1.1 SUMMARY

- A. Axial Wall Mount fan(s) shall be a direct drive, wall mounted, propeller exhaust fan.

1.2 SUBMITTALS

- A. The manufacturer assumes no liability for the use or results of use of this document. This specification is to be reviewed by the engineer to confirm requirements of the project and building codes are met.
- B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice.

1.3 QUALITY ASSURANCE

- A. ETL Listed and complies with UL705 (electrical) Standards and CSA Std C22.2, No 113.
- B. Fan shall bear the AMCA certified rating seal for air performance.
- C. The propeller will be balanced in accordance with AMCA standard 204.96- Balance Quality and Vibration Levels for Fans.

1.4 WARRANTY

- A. All units are provided with the following 2-year standard warranty from date of shipment.
- B. This warranty shall not apply if:
 - 1. The equipment is not installed by a qualified installer per the manufacturer's installation instructions shipped with the product.
 - 2. The equipment is not installed in accordance with Federal, State, and Local codes and regulations.
 - 3. The equipment is misused, neglected, or not maintained per the manufacturer's maintenance instructions.
 - 4. The equipment is not operated within its published capacity.
 - 5. The invoice is not paid within the terms of the sales agreement.
- C. The manufacturer shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment. Should any part of the equipment prove to be defective in material or workmanship within the 2-year warranty period, upon examination by the manufacturer, such part will be repaired or replaced by the manufacturer at no charge. The buyer shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without manufacturer's prior authorization. All returned equipment shall be shipped by the buyer, freight prepaid to a destination determined by the manufacturer.

PART 2 - PRODUCTS

2.1 GENERAL ASSEMBLY

- A. The fan shall be factory assembled, tested, and shipped as a complete unit.
- B. The following specifications, delivering all capacities scheduled and conforming to the design indicated herein. Alternate layouts or dimensional changes will not be accepted.

2.2 CONSTRUCTION

- A. Fan shall be of riveted and bolted construction utilizing corrosion resistant fasteners.
- B. The unit shall include a G90 galvanized steel fan panel with an integral spun venturi.
- C. The fan panel shall have pre-punched mounting holes for ease of installation.
- D. The fan shall bear a permanently attached nameplate displaying model and serial number of unit for future identification.
- E. The unit shall be factory tested after assembly.

2.3 PROPELLER

- A. Precision pitched propeller shall have steel blades attached to a hub.
- B. The hub shall be securely fastened to the motor shaft utilizing a minimum of two set screws.

2.4 MOTOR

- A. Motor Type: Totally Enclosed Air Over Electronically Commutated Motor (TEAO-ECM).
- B. Motor Type: Open Drip Proof (ODP).
- C. Totally Enclosed Fan Cooled (TEFC) motor driven by a Variable Frequency Drive.
- D. Motor shall be permanently lubricated and rated for continuous duty.
- E. Furnished at the specified voltage, phase, and enclosure. Motor speed shall be variable, controlled using an integrated speed controller.

2.5 ECM EXHAUST WIRING PACKAGES

- A. ECM Wiring Package - Exhaust - Manual or 0-10VDC Reference Speed Control -MSC- (TELCO), CCW Rotation
- B. ECM Wiring Package - Manual or 0-10VDC Reference Speed Control (TELCO Motor), CCW Rotation
- C. ECM Wiring Package - PWM Signal from ECPM03 Prewire (TELCO Motor), CCW Rotation
- D. ECM Wiring Package-Exhaust - Manual or 0-10VDC Reference Speed Control (NIDEC Motor)
- E. ECM Wiring Package-Exhaust - PWM Signal from ECPM03 Prewire (NIDEC Motor)

2.6 CONTROL OPTIONS

- A. MSC TWO SPEED option to be enabled – TELCO
- B. RTC 0-10V Settings: Changes "APP" is set to "PuLS". "LSPD" is set to "0", "re" is set to "0-10" to use with 0-10V signal. (Nidec)

- C. RTC 0-10V Settings: Changes "APP" is set to "PuLS". "LSPD" is set to "0", "re" is set to "0-10" to use with 0-10V signal. (TELCO)

2.7 OPTIONS AND ACCESSORIES

- A. Thermostat Control.
- B. Gravity Backdraft Damper (Exhaust).
- C. Motor Grounding Kit – Shaft Grounding Ring. Epoxy mounted to face of motor.
- D. Motorized Backdraft Damper (Exhaust or Supply).
- E. Motorized Louver Damper (Exhaust).
- F. Painted Coatings: Tan enamel coating on outside of Weather Hood only.
- G. Painted Coatings: White epoxy coating on outside of Weather Hood only.
- H. Front Guard Screen.
- I. Supply Configuration with Louver Damper assembly.
- J. Supply Configuration with Weather Hood assembly.
- K. Wall box assembly with guard screen (includes hanging brackets and lifting lugs).
- L. Wall collars (set of 8).
- M. Weather Hood assembly with Guard Screen (Exhaust).
- N. Class B Spark Resistant Construction.
- O. Class C Spark Resistant Construction.

2.8 VFD OPTIONS

- A. VAV Package with Manual Control (VFD included).
- B. VAV Package with Static Pressure Control (VFD included).
- C. VAV Package with Preset or Reference Speeds (VFD included).
- D. VFD unit mounted.
- E. VFD factory mounted and wired in exhaust fan.
- F. Unit mounted VFD for use with ECPM03.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine all areas and conditions under which package(s) are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

3.2 INSTALLATION

- A. Install the package in accordance with manufacturer's instructions, drawings, written specifications, manufacturer's installation manual, and all applicable building codes.

3.3 CONNECTIONS

- A. Electrical connections conform to applicable requirements in Division 26 Sections.

3.4 SYSTEM START-UP

A. System start-up is performed by a factory-trained Service Technician.