

SECTION 23 34 00 HVAC Fans

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. The fan is the model scheduled with the capacities indicated. The fan shall be furnished with mounting hardware, a power cord, and a controller.
- B. Summary of Work
 - 1. Installation of the fan, miscellaneous or structural work (if required), field electrical wiring, cable, conduit, fuses and disconnect switches, other than those addressed in the installation scope of work, shall be provided by others. Factory installation services are available through Big Ass Fans.

1.2 RELATED SECTIONS

- A. 23 00 00 Heating, Ventilating, and Air Conditioning (HVAC)
- B. 26 00 00 Electrical

1.3 REFERENCES

- A. National Fire Protection Agency (NFPA)
- B. Underwriters Laboratory (UL)
- C. Canadian Standards Association (CSA)
- D. National Electric Code (NEC)
- E. International Organization for Standardization (ISO)

1.4 SUBMITTALS

- A. Product Data Sheets
- B. Revit Files
- C. Installation Instructions
- D. Schedule

1.5 QUALITY ASSURANCE

- A. Certifications
 - 1. The fan assembly, as a system, shall be Intertek/ETL-certified and built pursuant to the guidelines set forth by UL standard 507 and CSA standard 22.2 No. 113.
 - 2. Controllers shall comply with National Electrical Code (NEC) and Underwriters Laboratory (UL) standards and shall be labeled where required by code.
- B. Manufacturer Qualifications
 - 1. The fan and all accessories shall be supplied by Big Ass Fans, which has a minimum of 10 years of product experience.
 - 2. The manufacturer shall be ISO 9001-certified.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. The product shall be delivered in original, undamaged packaging with identification labels intact. The fan shall be new, free from defects, and factory tested.
- B. The fan and its components shall be stored in a safe, dry location.
- C. The control components shall be new, free from defects, and factory tested.

1.7 WARRANTY

- A. The manufacturer shall replace any products or components defective in material or workmanship for the customer free of charge (including transportation charges within the USA, FOB Lexington, KY), pursuant to the complete terms and conditions of the Big Ass Fans Warranty in accordance to the following schedule:

Main Fan Unit 5 years

+ All reasonable costs of repair or replacement will be paid or reimbursed provided customer obtains pre-approval.

++ See the complete warranty for more details.

PART 2 PRODUCT

2.1 MANUFACTURER

- A. Delta T LLC, dba Big Ass Fans, PO Box 11307, Lexington, Kentucky 40575. Phone (877) 244-3267.
Fax (859) 233-0139. Website: www.bigassfans.com

2.2 DESCRIPTION

- A. Complete Unit
1. Regulatory Requirements: The fan assembly shall be Intertek/ETL-certified and built pursuant to the guidelines set forth by UL standard 507 and CSA standard 22.2. No. 113.
 2. Function: The fan shall be designed for portable use or adaptable mounting in tight industrial spaces requiring localized air movement.
 3. Air Velocity: The fan shall be capable of delivering up to 613 fpm (186 mpm)
 4. Quality: Good workmanship shall be evident in all aspects of construction. Field balancing of the airfoils shall not be necessary.
 5. Sizes: The fan shall be available in three sizes: 20 inches (457 mm), 24 inches (610 mm), and 30 inches (762 mm).
 6. Color: The fan cage shall be black and the motor and blades shall be high-visibility yellow applied using a two-coat painting process of E-coat primer followed by industrial-grade powder coat.
 7. The fan shall require electrical input of 110–120 VAC, 60 Hz, 1 Φ .
- B. Motor
1. The fan motor shall be a 1/3 hp electronically commutated motor with electrical input of 110–120 VAC, 60 Hz, 1 Φ
 2. The motor shall be rated IP 65 for washdown cleaning.
 3. The motor shall be equipped with an 18 ft (5.5 m) cord that plugs into a standard wall outlet.
- C. Blades and Cage Assembly
1. The cage shall be available in three sizes: 25.8 inches (656 mm), 32 inches (813 mm), and 38.2 inches (969 mm).
 2. The blades and cage assembly shall be of washdown construction.
 3. The cage shall be OSHA-compliant and shall consist of two sections that are removable for cleaning and servicing.
 4. The fan shall be equipped with three steel blades available in three size options to correspond with the cage sizing: 20.5 inches (541 mm), 24.5 inches (622 mm), and 30.5 inches (775 mm)
- D. Mounting System
1. The fan shall allow for multiple mounting methods to accommodate a wide variety of airflow needs and building structures.
 2. All mounts shall be made from steel.
 3. Hardware used to mount the fan must be of sufficient strength and quantity to support the weight of the fan its method of attachment. Consult the install guide for details. For mounting hardware supplied by Big Ass Fans, no hardware substitutions are acceptable.
 - a. I-Beam Mount Kit: The I-Beam kit shall be suitable for horizontal and vertical I-beams, and shall be equipped with mounting hardware, conduit, and conduit clamps, motor adapter, and a safety cable kit.

- b. C-Channel Mount: The C-Channel Mount kit shall be suitable for mounting horizontally or vertically, and shall be equipped with mounting hardware, conduit, motor adapter, and a safety cable kit.
 - c. Swivel Mount: The Swivel Mount kit shall be suitable for mounting to a wall and shall be equipped with a swing arm, L-brackets, and mount hardware.
 - d. Wall Mount: The Wall Mount kit shall be suitable for mounting the fan to a wall using the provided hardware and customer-supplied mechanical anchors. The kit shall be equipped with a wall mount, swivel bracket, hardware, and a safety cable kit.
 - e. Pedestal Mount: The Pedestal Mount kit shall be suitable for portable use, and shall be equipped with a mount and base and hardware, and an optional wheel kit and handle to allow for safe relocation the fan.
- E. Controller
- 1. The fan shall be available with either an infinite variable speed controller or a timer control. The control cable shall be attached to the motor cable with a cord retainer to ensure a secure connection.
 - a. Infinitely Variable Speed Control: Includes a rotary dial for controlling the fan's speed.
 - b. Timer Control: Includes Hours and Speed pushbuttons to set the airflow and duration of operation (up to 1300 RPM for a maximum of 10 hours).
 - 2. AirEye Occupancy Sensor (AEOS)
 - a. AEOS uses a passive infrared detection to run the fan only when a space is occupied.
 - b. The sensor has an effective range of up to 40 ft (12.2 m) within a 90-degree radius.
 - c. LEDs display if AirEye is powered on and motion-detection activity.
 - d. An adjustable lock knob allows easy positioning of sensor.
 - e. Fan shuts off five minutes after occupants exit space.

PART 3 EXECUTION

3.1 PREPARATION

- A. The fan location shall meet the electrical requirements listed in the product installation guide.
- B. The fan location shall be free from obstacles such as lights, cables, and other building components.

3.2 INSTALLATION

- A. The fan shall be installed and operated according to the installation instructions.
- C. The fan cord shall not be run under carpeting or covered with rugs, runners, or similar coverings. The cord shall not be routed under furniture or appliances.
- D. The fan shall not be located where it will be continuously subjected to wind gusts or in close proximity to the output of HVAC systems or radiant heaters.

END OF SECTION