



## **SERIES 31 – GUIDE SPECIFICATION**

### **BELT DRIVE UPBLAST SMOKE VENTILATOR**

The Belt Drive Duct Fan, Steel shall be manufactured by Hartzell Air Movement, Series 31. Standard sizes are 12" through 96".

The duct fan propeller shall be an airfoil design, cast of 319 aluminum in compliance with Federal Specification QQ-A-601E and ASTM B26. Propellers shall be retained on the fan shaft utilizing a split taper bushing.

Sizes 12"-48" with 215T frame motor or smaller shall have self-formed flanges with slotted mounting holes. All others shall have rolled steel flanges. The motor shall be mounted on a continuously welded motor base. The motor base shall be adjustable to permit belt tensioning by adjustment of the standard open end drip proof motor position.

Fan shafts shall be ground and polished carbon steel. Bearings shall be located in a drive compartment on the negative pressure side of the propeller, drawing outside ambient air in and over the belts and bearings. Bearings shall be heavy duty, self-aligning, ball or roller type; depending on fan size, motor HP and performance. Bearings shall have extended lube tubes and be relubricable for continuous service and have a minimum L-10 life of 50,000 hours. Variable pitch drive sheaves shall be standard on fans up to and including 10 HP and belts shall be "V" type, heat, oil and static resistant and oversized for continuous service.

Fan housing shall be minimum 12 gauge rolled commercial quality, carbon steel and continuously welded in compliance with AWS D1.1 standards. Standard surface coating system shall be industrial grade air dry enamel paint. Standard construction shall be capable of 200° F.

The fan assembly shall be dynamically balanced at the Hartzell factory prior to shipping. Fans shall be balanced to the American National Standards Institute, Std. S2.19-1989 "Balance Quality of Rotating Rigid Bodies", and Grade G6.3. Fans shall be manufactured in accordance with Hartzell's standard quality assurance procedures. Fan performance shall be based on tests conducted in Hartzell's AMCA accredited test laboratory and in accordance with the latest revision of AMCA Standard 210 for air performance and AMCA Standard 300 for sound. Fans shall be licensed to bear the AMCA Certified Air Performance Rating Seal.

#### **ACCESSORIES:**

- Special Construction - Available in stainless steel, or aluminum.
- Protective Coatings - Hot dipped galvanized, Nupon epoxy, inorganic zinc, and catalyzed coal tar epoxy are available upon request.
- Motors - TEFC and other special motors can be furnished upon request.
- Inlet/Outlet Bell - Minimizes inlet and outlet pressure losses, thus optimizing airflow.
- Inlet/Outlet Cone - Available for adapting fans to different size duct diameters.
- Inlet/Outlet Guard - Prevents access to rotating propeller.
- Belt Guard - Covers motor sheave and belts outside of fan housing.
- Companion Flanges - Mating flanges for duct fan.
- Access Door - For inspection of the propeller and fan bearings.



- Mounting Feet - To facilitate floor, ceiling or wall mounting.
- Isolator Brackets (Horizontal or Vertical) - Brackets used to mount vibration isolators.
- Vibration Isolators (Horizontal or Vertical Mount) - Rubber-in-shear or spring type available.
- Stack Cap and Curb Panel - Converts duct fan to upblast roof ventilator with backdraft dampers.
- Sound Muffler - Provides attenuation of excessive noise.
- Shaft Seal and Slinger - Neoprene seal and slinger prevent contaminants from entering bearing compartment.
- Lifting Lugs - Provides means to lift and handle fans.
- Combination Motor Cover and Belt Guard - Covers are vented. Specify horizontal or vertical mounting.