



## **SERIES 83 GUIDE SPECIFICATION**

### **FIBERGLASS BELT DRIVE DOWNBLAST CENTRIFUGAL ROOF EXHAUSTER**

The Fiberglass Belt Drive Downblast Centrifugal Roof Exhauster shall be manufactured by Hartzell Air Movement, Series 83. The exhausters shall use the centrifugal FE wheel to improve performance in an exhauster application. Standard sizes are 12" through 40" and fans shall be completely assembled, packaged and ready to install. The 12" through 18" sizes are available as either roof mounted or wall mounted units. The 24" through the 40" sizes are only available as roof mounted units.

The resin used on the solid fiberglass FE wheel shall be Derakane 510-A vinylester. Blades shall be backward curved to provide non-loading, highly efficient operation. The wheel shall have a totally encapsulated aluminum core insert for secure attachment to the shaft. The wheel shall be one-piece, resin transfer molded, without hand lay-up or assembly components. The fan is suitable for temperatures up to 125° F.

Structural parts located in the airstream are either fiberglass resin or epoxy coated stainless steel. All fiberglass surfaces shall be constructed of Ashland Hetron 693 polyester resin and glass fiber with 3% antimony trioxide added to achieve Class I flame spread below 25. All fiberglass surfaces shall be protected with a minimum 10 mil thickness of chemical, flame, and ultraviolet resin. The entire housing shall have a finish coat of resin to provide superior protection and smooth airflow. All airstream hardware shall be 304 stainless steel. All hardware outside the airstream shall be zinc plated.

Fan shafts are turned ground and polished. Monel and 304 stainless steel shafts are available as options. Bearings shall be heavy duty, self-aligning ball bearings with a minimum 50,000 hours L10 life. A neoprene shaft seal is placed where the shaft leaves the housing.

Foot mount TEFC motors are standard. Motor and drive components are protected from the airstream. A conduit tube between the motor enclosure and the curb panel provides wiring access without an additional roof penetration.

The fan assembly shall be dynamically balanced at the Hartzell factory prior to shipping. Fans shall be balanced in accordance with AMCA Standard 204-96, fan application category BV-3 (comparable to 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. AMCA certification for sound and air performance is pending.

#### **ACCESSORIES:**

- Motors - Explosion proof, chemical duty, and other special motors can be furnished upon request.
- Disconnect Switch – Ships loose for field mounting.
- Bird Screen – 304 Stainless bird screen is available.
- Fiberglass Damper – Hartzell series FEP fiberglass end pivoted automatic or motor driven damper is available. The damper is to be mounted in a roof curb on a damper shelf.
- Hardware - Special corrosive conditions may require Type 316 stainless steel or Monel.
- Pre-Fabricated Curb - For roof top installation of roof ventilators.