



Universal Fan & Blower Ltd.

FRBX - Radial Bladed Centrifugal Fan

- Fans to be FRP composite construction radial bladed centrifugal model **FRBX** as manufactured by **Universal Fan & Blower Ltd.** and shall be fabricated in accordance with ASTM Standard Specification D4167 Rev 97 (reapproved 2002) for Fiber Reinforced Plastic Fans & Blowers.
- Fan housing shall be of solid FRP composite one-piece construction (no center flange), molded using corrosion grade resins. Glass Veil will be used on all air stream surfaces giving a resin rich liner for optimum chemical resistance. Fasteners shall be 316ss. Where exposed to the fan air stream they will be fully encapsulated within the FRP laminate to achieve maximum torque capability with no deviation of the air stream surfaces. The housing shall be supplied with an undrilled outlet flange and a slip type inlet. The exterior of the fan housing shall have a UFBL grey gel coat finish containing U.V. inhibitor to prevent ultra violet light degradation.
- Fan wheel shall be radial bladed design of solid FRP construction with a wheel shroud plate. The wheel shall be positively locked onto a stepped shaft by means of a 316ss retaining plate which is protected from the airstream by FRP encapsulation. (Taper lock bushings or set screws are not acceptable). The wheel shall be balanced statically and dynamically as per ANSI/AMCA Standard 204.05 Balance Quality & Vibration Levels for Fans to grade G 6.3.
- Solid FRP fan inlet collar shall be designed for interfacing with the wheel shroud plate to maximize aerodynamic efficiency.
- Shafts will be 316ss accurately turned & ground. Sized so that the first critical speed is a minimum of 1.35 times the maximum operating speed.
- Shaft Seal shall be precision cut Teflon for a close tolerance fit to the fan shaft, encased within an FRP seal box with encapsulated 316ss fasteners.
- Bearings shall be pillow block design Selection based upon an AFMBA L₁₀ minimum life of 40,000 hrs or an average life of 200,000 hrs.
- Support structure shall be steel construction with a minimum two coat epoxy finish using Amercoat 370 high build coating with a dry film thickness of 6-8 mils. Color shall match the fan housing.
- Prior to shipment all fans shall be mechanically test run and trim balanced to ensure vibration levels are in keeping with ANSI/AMCA Standard 204.05

Note: The addition of UFBL Features to the standard fan will amend the specification accordingly