

BDU-HPRA Specification

TYPICAL SPECIFICATIONS

Model: BDU-HPRA

Description: Fan shall be a spun aluminum and G90 Galvanized, roof mounted, belt driven, upblast centrifugal exhaust ventilator. Fans up to and including models with a 24" nominal wheel and a 2HP (Single Phase) or 3 HP (Three Phase) motor are suitable for wall mounting.

Application: Centrifugal roof exhausters are engineered to discharge grease laden vapors, fumes and other contaminants vertically away from the building.

Certifications: All models shall be ETL Listed and comply with UL705 (electrical) and UL762 Standards and CSA Std C22.2, No 113. Fan shall bear the AMCA certified ratings seal for sound and air performance.

Construction:

Housing

The fan windband shall be constructed of heavy gauge aluminum or G90 Galvanized and shall be spun on an automatic lathe to provide consistent dimensions. Horizontal and vertical internal supports shall be used to securely fasten the windband to the discharge apron to provide rigidity for hinging and added strength to reduce shipping damage. The discharge apron shall have a rolled bead for added strength.

Base

The base shall be constructed of galvanized steel for improved rigidity. Base corners shall be welded to provide strength and support for hinging and cleaning and to prevent leakage into the building.

Wheel

The fan wheel shall be centrifugal backward inclined and non-overloading. Wheels shall be balanced in two planes and done in accordance with AMCA standard 204-96, *Balance Quality and Vibration Levels for Fans*. The wheel blades shall be aerodynamically designed to minimize turbulence, increase efficiency and reduce noise. The wheel blades shall be welded to the wheel inlet cone. In the event that balancing weights are required they shall be riveted to the blades or wheel. The wheel inlet shall overlap the fan base inlet for maximum performance and efficiency. The wheel shall be firmly attached to the motor shaft with two set screws.

Motor & Motor Compartment

Motors shall be heavy duty ball bearing type, mounted out of the airstream and furnished at the specified voltage, phase and enclosure. Motor mounting plate shall be constructed of heavy gauge galvanized steel and isolated from the fan structure with vibration isolators. The motor compartment shall be cooled by outside air drawn through an extruded aluminum conduit tube. To seal the conduit tube passage and prevent noise silicone rubber grommets shall isolate the conduit tube from the fan housing. The motor compartment shall be of a two-piece construction with the top cap having quick release clips to provide quick and easy access to the motor compartment.

Shaft & Bearings

Shafts shall be precision ground and polished. Heavy duty, pre-lubricated bearings shall be selected for a minimum (L10) life in excess of 200,000 hours of operation at maximum cataloged operating speed. They shall be designed for and individually tested specifically for use in air handling applications.

Belts & Drives

Belts shall be oil and heat resistant, non-static type. Drives shall be cast type, precision machined and keyed and secured attached to the fan and motor shafts. Drives shall be sized for a minimum of 150% of the installed motor horsepower. Fan operating speed shall be factory set using adjustable pitch motor pulleys; motors over 2 HP will come standard with double groove pulleys.

Grease Spout

A grease spout made of aluminum tubing shall be welded to the fan housing. The weld shall be factory tested to ensure it will not leak.

Nylon Washers

To provide a tight seal all fasteners in the fan housing shall be backed with nylon washers.

Safety Disconnect Switch

A safety disconnect switch shall be standard on all BDU-HPRA units with open drip proof motors. Switches shall be installed in a NEMA3R enclosure and mounted to exterior of windband for easy access.

Product: Fan shall be model BDU-HPRA as manufactured by RUPP Air Systems.