

## **SERIES 31U GUIDE SPECIFICATION**

### **BELT DRIVE UTILITY DUCT FAN, STEEL**

The Belt Drive Utility Duct Fan, Steel shall be manufactured by Hartzell Air Movement, Series 31U. Standard sizes are 12" through 60".

The utility 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" through 48" shall have self-formed flanges with slotted mounting holes. Sizes 54" and 60" shall have rolled steel flanges. Fan housing shall be minimum 12 gauge rolled commercial quality carbon steel, continuously welded in compliance with AWS D1.1 standard. Standard coating shall be industrial grade air dry enamel paint.

The motor mounting base shall be adjustable to permit belt tensioning by adjustment of the motor position. Motor is to be available as an option with factory mounting as an option.

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 self-aligning, pillow block type and shall have extended lube tubes for relubrication for continuous service. Minimum L-10 bearing life shall be 50,000 hours with the fan mounted in a horizontal position and the motor mounted in the twelve o'clock position. Constant and variable pitch drive sheaves shall be available options on the fans. V-belt drives when supplied shall be supplied as components for field mounting with factory mounting as an option. Belts shall be heat, oil and static resistant, "V" type, and sized for continuous service.

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 Sound and Air Performance Rating Seal.

#### **ACCESSORIES:**

- Motors - TEFC and other special motors shall be furnished upon request. Motor shall ship loose.
- Drive Kit - Pre-selected fixed speed or variable speed belt drive kits shall be available for cataloged speeds. Drive selections shall have a minimum 1.4 service factor and be heat, oil, and static resistant. Drive kit shall ship loose.
- Accessory Mounting - Mounting of motors, belt drives and other "ship loose" accessories shall be available upon customer request.
- Inlet/Outlet Cone - Available for adapting fans to different size duct diameters.
- Inlet/Outlet Guard - Prevents access to rotating propeller.

- Companion Flanges - Mating flanges for duct fan.
- Mounting Feet - To facilitate floor, ceiling or wall mounting.
- Motor Cover - Covers are designed to protect motor and belts. Horizontal or vertical mounting must be specified for proper vent location.
- Belt Guard - Covers motor sheave and belts outside fan housing.