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GUIDE SPEC
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SPECIFYING PLUG FANS WITH ECF WHEELS

GENERAL

The fans shall be size _____ single-width single-inlet capable of unhooded operation as designed and manufactured by The New York Blower Company. Fan wheels shall utilize non-overloading airfoil blades in all sizes. Flat, single thickness blades are not acceptable. Unless otherwise directed, fans shall be in compliance with the layout shown on the drawings.

PERFORMANCE

Unhooded fan ratings shall be based on tests made in accordance with AMCA Standard 210 in an accredited AMCA laboratory. Fans shall have a sharply rising pressure characteristic extending throughout the operating range to assure quiet and stable operation from wide open to closed off. Fan brake horsepower shall be equal to or less than _____ BHP at _____ inches static pressure and _____ CFM at _____ density.

CONSTRUCTION

Support structures are to be fully assembled, heavy gauge, welded construction with integral mounting panel. Unassembled units are not acceptable. Inlet cones shall be aerodynamically designed and spun providing a minimum separation of air flow. Wheel diameters shall be in accordance with the standard dimensions adopted by AMCA for centrifugal fans.

BEARINGS

Bearings are to be grease lubricated, precision anti-friction, self-aligning, foot-mounted pillow block design. Flange mount bearings are not acceptable. Bearings shall be selected for an average L-10 life of 40,000 hours (200,000 hour L-50 life) when rated at the fan's maximum cataloged operating speed.

SHAFT

Shafts are to be ASTM A-108 steel, grade 1040/1045, precision turned, ground and polished. Grade 1018 steel is not acceptable. The shaft's first critical speed shall be at least 120% of the fan's maximum operating speed. The drive end of the fan shaft shall be countersunk for tachometer readings.

PAINT

All fan surfaces are to be thoroughly prepared prior to painting using a combination of high pressure chemical wash and hand and power tool cleaning as required. After cleaning, all surfaces are to be coated with an industrial grade, high temperature paint. Surfaces of bolted components not accessible after assembly shall be coated and allowed to dry prior to final assembly. Primer only will not be accepted.

BALANCE AND RUN TEST

All fan wheels shall be dynamically balanced on precision balancers. Prior to shipment, completed fans shall receive a final test balance at the specified operating speed and shall ship fully assembled.

CONFIGURATION/ACCESSORIES

Accessories shall be provided as in the plans and specifications.

Standard accessories include:

- Shaft Cooler with Guard

Required configuration/accessories include:

- 450° F. Construction
- 800°F. Uninsulated Construction
- 800°F. Insulated Construction
- 1000°F. Insulated Construction
- Shaft Extension (to accommodate up to a 6" insulation wall-for 800°F./1000°F. models)
- Shaft/panel Extension (up to a 6" panel thickness for 800°F./1 000° F. models)
- AMCAC SRC
- Safety Equipment - Belt Guard - Shaft/Bearing Guard
- Ceramic-Felt Shaft Seal
- Integral-Inlet Cone Mounting Assembly
- Housing
- Reduced Depth Inlet cone

FINAL INSPECTION

All fans shall receive a final inspection by a qualified inspector prior to shipment. Inspection to include: fan description and accessories, balance, welding, dimensions, bearings, connection points, paint finish and overall workmanship.

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