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GUIDE SPEC
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SPECIFYING RTS FANS

GENERAL

The fans shall be size _____ single-width single-inlet as designed and manufactured by The New York Blower Company. Fan wheels shall be radial tip for optimum efficiency. Unless otherwise directed, fans shall be in compliance with the layout shown on the drawings.

PERFORMANCE

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. Fan brake horsepower shall be equal to or less than _____ BHP at _____ inches static pressure and _____ CFM at _____ density.

SOUND

Fan manufacturers shall provide sound power level ratings for fans tested and rated in accordance with AMCA Standards 300 and 301. Tests shall be performed in an accredited AMCA laboratory. Tests shall be performed in an accredited AMCA laboratory. Sound power ratings shall be in decibels (reference 10^{-12} watts) in eight octave bands. Sound power levels will be corrected for installation by the specifying engineer...dBA levels only are not acceptable.

CONSTRUCTION

Fan housings are to be constructed of 1/4 inch plate, continuously welded. Housings with lock seams or partially welded construction are not acceptable. Housings are to be reinforced with rigid bracing to increase structural integrity and prevent vibration. Housings shall include flanged inlets, flanged outlets, and shaft seals as standard. Housing inlet cones shall be aerodynamically designed and spun providing a minimum separation of air flow.

BEARINGS

Bearings are to be heavy duty, grease lubricated, precision anti-friction spherical roller, self-aligning, pillow block design. Bearings shall be selected for an average minimum L-10 life of 82,000 hours (410,000 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 125% of the fan's maximum operating speed. The drive end of the fan shaft shall be counter-sunk for tachometer readings.

PAINT

All fan surfaces are to be thoroughly prepared prior to painting using a combination of washing and hand and power tool cleaning as required. After finishing, all surfaces are to receive one prime coat and one finish coat of industrial grade alkyd enamel. 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.

ACCESSORIES

Accessories shall be provided as called for in the plans and specifications.

Standard accessories include:

- Flanged Outlet
- Shaft Seal - Ceramic Felt
- Flanged Inlet

Required accessories include:

- Bolted Cleanout Door - Flush - Raised
- Abrasion-Resistant Construction - Blades - Blade Liners - Scroll Liners - Metallized Cone
- Evase
- Drain
- Drain Plug
- Narrow-Width Construction
- Spark-Resistant Construction-AMCA A - AMCA B -AMCA C
- Split Housing
- Insulation Studs
- Shaft Seal - Buna-N - Viton® - Teflon®
- External Inlet-Vane Damper
- Inlet Box Assembly
- Inlet Box Damper
- Heat-Fan Construction
- Special Diameter Construction
- Outlet Damper - Parallel Blade - Opposed Blade
- Safety Equipment - Belt Guard with Tachometer Opening and Plug - Shaft and Bearing Guard with Extended Bearing Lubrication Fittings - Coupling Guard - Inlet Guard - Outlet Guard
- Unitary Base
- Vibration Isolation Bases - Spring - Rubber-In-Shear
- Constant V-Belt Drive
- Flexible Coupling

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, duct and base connection points, paint finish and overall workmanship.

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