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GUIDE SPEC
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SPECIFYING COMPACT GI FANS

GENERAL

The fans shall be size _____ single-width single-inlet as designed and manufactured by The New York Blower Company. Fan wheels shall utilize radial blades and be constructed of either cast aluminum alloy for spark and corrosion resistance, or cast nickel-aluminum bronze alloy for spark, abrasion and corrosion resistance. 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 and licensed to bear the AMCA Certified Ratings Seal for Air Performance. Fans not licensed to bear the AMCA Seal for performance shall be tested, at supplier's expense, in an accredited AMCA laboratory. (Option: Only AMCA certified fans will be accepted.) Fans shall have a flat, relatively constant pressure characteristic for 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.

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. 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 heavy gauge, continuously welded construction. Housings with lock seams or partially welded construction are not acceptable.

BEARINGS

Bearings on Arrangement 1 and 9 are to be grease lubricated, precision anti-friction, self-aligning, pillow block design. Bearings shall be designed for an average minimum L-10 life of 350,000 hours 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 130% 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 cleaning, all surfaces are to be coated with an industrial grade baked alkyd enamel. Surfaces of 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, all fans shall receive a final test balance at the specified operating speed.

ACCESSORIES

Accessories shall be provided as in the plans and specifications.

Required accessories include:

- Wheel - Aluminum or Nickel Aluminum Bronze
- Spark-Resistant Construction - AMCA A (Arrangement 1 or 9) - AMCA B - AMCA C
- Drain
- Shaft Seal (Arrangement 1 or 9) - Ceramic Felt
- Teflon® Shaft Closure
- Flanged Inlet
- Flanged Outlet
- Outlet Transition
- Heat-Fan Construction
- Outlet Damper
- Safety Equipment (Arrangement 9) - Belt Guard
- Shaft and Bearing Guard with Extended Bearing Lubrication Fittings
- R-I-S Isolation (Arrangement 4 or 9)
- Unitary Base
- Isolation Bases - Spring - Rubber-In-Shear
- V-Belt Drive - Variable Speed - Constant Speed
- Outlet Companion Flange
- Weather Cover (Arrangement 4 or 9)

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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