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**GUIDE SPEC**  
**GS-281**  
**June 2007**

## **SPECIFYING SERIES 45 GENERAL INDUSTRIAL FANS WITH DH WHEELS**

### **GENERAL**

The fans shall be size \_\_\_\_\_ single-width single-inlet as designed and manufactured by The New York Blower Company. Fan wheels shall utilize curved radial blades and tapered front plates for optimum efficiency and inherent stability. 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. 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 with drilled inlet and outlet flanges. 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. Wheel and inlet diameters and outlet areas shall be in accordance with the standard dimensions adopted by AMCA for industrial centrifugal fans. Designs not in accordance with AMCA Standard 99-2402 are not acceptable.

### **BEARINGS**

Bearings are to be heavy duty, grease lubricated, precision anti-friction ball or spherical roller, self-aligning, pillow block design. Bearings shall be selected for an average minimum L-10 life of 150,000 hours (750,000 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 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 coating with an industrial grade 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, 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:

- Shaft Seal - Ceramic Felt

Required accessories include:

- Cleanout Door - Flush Bolted - Raised Bolted
- Spark-Resistant Construction-AMCA A -AMCA B -AMCA C
- Drain
- Drain Plug
- Split Housing (Sizes 33 and Larger)
- Outlet Companion Flange
- Shaft Seal - Buna-N - Viton® - Teflon®
- Inlet Companion Flange
- External Inlet-Vane Damper (Sizes 29 and Larger)
- Heat-Fan Construction
- Special Diameter Construction
- Abrasion-Resistant Construction - 321 Minimum Brinell Alloy Scroll - 321 Minimum Brinell Alloy Housing - 321 Minimum Brinell Alloy Scroll Liners
- Bell Mouth Inlet
- Special Diameter Construction
- Outlet Damper - Parallel Blade - Opposed Blade
- Safety Equipment - Belt Guard with Tachometer Opening and Plug - Coupling Guard - Shaft and Bearing Guard with Extended Bearing Lubrication Fittings - Inlet Guard - Outlet Guard
- Unitary Base
- Isolation Bases - Spring - Rubber-In-Shear
- Drive - Variable V-Belt - Constant V-Belt - Flexible Coupling
- Inlet Box Assembly
- Inlet Box Damper

### **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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