

Why is Fei important in fan system selection?

Integrating FEI into fan system selection allows engineers to optimize energy consumption, reduce operating costs, and ensure compliance with evolving energy codes. For many years, brake horsepower (BHP) has been used as the primary fan energy metric to compare fan power requirements and schedule fans.

What are the minimum Fei values for a non embedded fan?

Both ASHRAE 90.1-2019 and IECC-21 set minimum FEI values for compliance. Many states have already adopted 90.1-2019 and IECC-21, and several others are in the process of doing so. Non embedded fans with a motor nameplate horsepower of less than 1.0 hp (0.75 kW) or with a fan nameplate electrical input power of less than 0.89 kW.

Do you have Fei requirements for fans embedded in non-regulated equipment?

The DOE will also have FEI requirements for fans embedded in nonregulated equipment. FEI is a powerful engineering tool for designing energy-efficient, code-compliant ventilation systems. Even if your state has not yet adopted a code that requires FEI, update equipment schedules to include FEI.

Are higher Fei fans quieter?

Courtesy: Greenheck Higher FEI fans are usually quieter. FEI can be increased by upsizing the fan and reducing the fan speed, resulting in quieter operation. FEI quickly highlights inferior fan systems during the submittal review. A small difference in FEI can indicate a significant difference between comparable fan systems.

What does Fei mean on a fan?

FEI provides a single energy metric that describes the full fan system, including the impact of any belts, pulleys, motors or VFDs. Anything between incoming power and outgoing air power affects the FEI value (see Figure 1). Figure 1: This image compares FEI fan power consumption with brake horsepower. Courtesy: Greenheck What is FEI?

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Electronic system designers and heat transfer engineers can evaluate several different fan performance curves to determine the fan types and motors needed to cool their specific application. Other factors that may affect ...

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Scholars in related domains have shown significant interest in the utilization of phase change cold storage technology in cold storage. Fan et al ... it is possible to achieve ...

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