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The sound of silence for air handling equipment **Compact, efficient FlowGrid air-inlet grill from ebm-papst significantly reduces noise spectrum for axial and centrifugal fans**

Farmington Conn., December 2013 – Whether it's heat pumps in the home, condensers in supermarket refrigerators or ventilation systems on the production floor, [FlowGrid](#), the innovative patent-pending air-inlet grill from ebm-papst, is dramatically reducing noise levels for fans installed within limited-space air moving equipment.

ebm-papst will formally introduce FlowGrid at booth 667 during [AHR Expo 2014](#), to be held at New York City's Javits Center January 21-23.

What the company's [AxiTop diffuser](#) does on the pressure side (outlet) of the fan, [FlowGrid does on the suction side \(inlet\)](#). Easily mounted to ebm-papst fans, its open grill design straightens airflow to minimize turbulence before the air hits the axial or centrifugal impeller blades. FlowGrid is ideal for fans installed within flat and central air handling units, air purifiers and heat pumps with centrifugal fans, or air-water heat pumps, condensers and V-shaped condensers with axial fans.

"FlowGrid is the result of our extensive airflow testing for inlet conditions with a wide variety of customers' axial and centrifugal fans across dozens of applications," said George Riker, business development. "By improving the aerodynamic conditions external to the fan, FlowGrid reduces the adverse effects of these inlet conditions and minimizes noise."

Here's how noise happens within a fan, and how FlowGrid corrects it. When the walls of a device such as an air handler, heat exchanger or heat pump are different distances from the fan, powerful vortices combine in the narrowest areas to form so-called 'vortex strings.' These turbulences then hit the rotating blades of the fan, generating noise – specifically a broadband noise and additional narrowband, tonal frequency components, known as propeller noise or tonal noise.

Mounted on the air intake side of the fan, the FlowGrid weakens these 'vortex strings' as they flow through the device. This reduces sound pressure across the entire sound frequency range and especially in the low frequency tonal range. Apart from reducing overall sound pressure, the most drastic reduction is in low-frequency blade-passing noise (the sum of the fan speed and the number of blades) caused by blades cutting through turbulence within small space applications such as heat exchangers. The FlowGrid grill has been proven in certain applications to reduce overall sound pressure levels by as much as 3.9 dB(A), and these blade passing frequencies by up to 16 decibels.

With FlowGrid, ebm-papst is making a clear contribution to active noise reduction – a big part of its [GreenTech](#) philosophy. It can help manufacturers and ventilation specifiers comply with noise regulations and improve the environment for employees who work near ventilation equipment. The innovative air-intake grills, which require less acoustic insulation, work with both axial and centrifugal fans without reducing their performance. Using them can help to reduce or entirely avoid the use of cost-intensive, passive noise-reduction measures.

About ebm-papst Inc.

ebm-papst is the world's leading source for engineered air movement products, providing a "total solution" approach and extensive in-house resources.

With its U.S. headquarters in Farmington, Conn. and offices in major cities throughout North America, the company's



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highly-skilled and experienced team of professionals solve heating, cooling and ventilation challenges for industries and applications including ventilation and air conditioning, refrigeration, gas and heating, household appliances, IT and telecom, industrial and transportation, and more.

The ebm-papst way of doing business offers models for sustainability, efficiency, product innovation, skill development and community involvement. The company's [GreenTech](#) philosophy drives economic and ecological improvement in every product they develop. For more information, contact sales@us.ebmpapst.com or call 860.674.1515.