

Reinventing the industrial blower

Today, industrial blowers are the workhorses of the process industry. These high volume, low pressure air producers are being used by the hundreds in some operations for a variety of applications from material handling to aeration. However, despite the prevalence of industrial blowers, there is a downside: blowers can create noise levels that rival jet engines if not properly designed or enclosed. Therefore, finding an industrial blower package that has been properly designed and optimized to reduce sound output is necessary to prevent dangerous ambient noise levels and sound vibrations that can damage other equipment throughout the system.

For many manufacturers, pneumatic conveying systems powered by blowers are superior to mechanical systems because they are easier to use, more flexible in application, easier to reconfigure, and use fewer moving parts. Such systems are capable of moving everything from fine, granular powders and chemicals to more bulky products such as plastic pellets and food products.

Industrial blowers are also extensively used in the municipal wastewater industry where air is injected into wastewater to agitate it and keep all particles in suspension while the water is held for treatment.

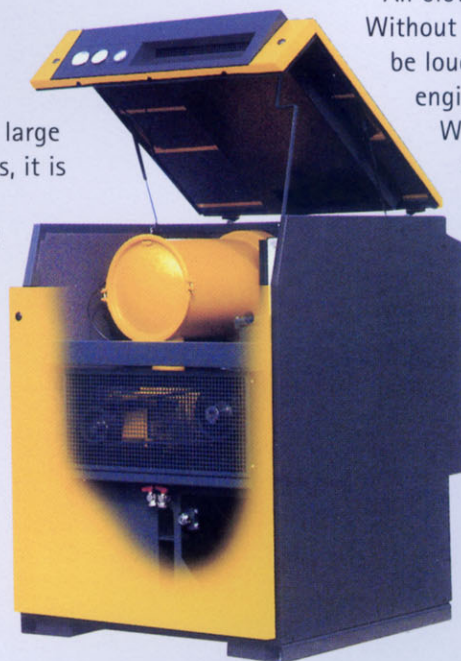
For these and other processes that utilize a large quantity of blower units, it is important to consider the amount of valuable floor space dedicated to these units. A typical blower requires at least 40" of space on all sides, in addition to their base footprint, for maintenance access and cooling. Of greater concern, improperly designed and applied blowers can produce objectionable noise levels in the form of low frequency vibrations or standing waves in the conveyor tubing which can discharge enough energy to cause damage to the products being conveyed as

well as conveyor system components. Multiply this by the quantity of blowers operating at the same time and magnitude of the problem become clear.

"All blowers are noisy. Without silencing, they can be louder than jet engines," said Calvin Wallace, sales manager for Omega Blowers. "Noise control is an increasingly important issue for workers and neighboring communities."

As a result, there is a demand for manufacturers to produce blowers with reduced noise

levels and packages that take up less floor space and improve operating costs. Without appropriate design and noise reduction devices, operations that require dozens, even



hundreds of blowers, may incur avoidable maintenance costs, unforeseen wear on products and system components, and worker discomfort due to prohibitive ambient sound.

"There are two sources of noise in a blower," explains Wallace. "There is pulsation noise from the pressure differential, and mechanical noise from the gears and bearings."

Despite the concern regarding noise output, most blower systems are often sold without any type of sound-absorbing enclosure. Unlike the air compressor market, where products are sold as complete end products, the blower industry has traditionally sold bare shaft blowers, putting the burden of engineering the system package on in-

plant personnel. As a result, a blower package, complete with enclosures and related components, direct from the factory, is still the exception today.

Recently introduced is a high efficiency, compact, tri-lobe rotary blower in a factory-enclosed package that is designed to reduce blower space requirements while lowering installation costs and simplifying maintenance.

The unit is a redesign of the traditional rotary blower package, combining the company's rotary lobe blower technology and unique package arrangement with a sound absorbing enclosure that provides easy access for routine maintenance.

Unlike conventional packages, the blower features system and utility con-

nections on the back of the unit and places all maintenance points on the front. This redesign makes installation easier, faster and less expensive. This allows blower packages to be stacked together side-by-side and located against the wall (without the minimum 40" on all sides normally required for maintenance and cooling purposes). This saves valuable floor space.

"The (blower) package design is a new breed in the world of fabricated blower packages," says Wallace.

By Ed Sullivan, Technology Writer at Power PR. For more information on the Com-pak Plus, contact Kaeser Compressors, Inc., at 800-777-7873 or email kaeser2@kaeser.com.