



Air Components, Inc.

M & P Air Components, Inc. provides Components, Technologies, Guidelines, Sales and Technical Services for Industrial Air and Dry Solids Processes.

Our Goal is to provide Clients with the correct components selection and system design to achieve the best Utilization, Reliability, Safety and Economy for their plant processes.

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Technical Bulletin

Fan Installation

TB.50.0.04

Installation On A Concrete Foundation

The foundation mass should be 3 to 6 times the mass of the fan/motor assembly and should be level and smooth, extending 6 inches beyond the perimeter of the fan/motor assembly footprint.

The mass of the base must maintain the fan/drive alignment, absorb normal vibration, and resist lateral loads. The foundation requires firmly anchored fasteners such as anchor bolts.

Generally, fans up to 50 hp should be installed directly onto the foundation using Mason Super W Mini Neoprene pads between the foundation and the full contact surface of the fan footprint.

Depending on fan speed and pressures, fans between 50 and 75 hp should either be installed directly onto the foundation using Mason Super W Mini Neoprene pads, or using grout, such as 5 Star Epoxy.

Fans 75 hp and above should be installed directly onto the foundation using grout, such as 5 Star Epoxy.

Flexible isolation joints at the fan inlet and outlet should always be used - particularly for operation above 300F.

Inlet and outlet piping should be independently supported and level into and out of the fan.

If the foundation is "soft" and transmits energy to the fan location from other sources, use either rubber in shear or spring isolators to isolate the fan from movement in the foundation.

Installation On A Steel Structure Or Deck

The structure must have sufficient bracing to support the fan/motor assembly and prevent side or rotational sway.

The structure should be welded to maintain alignment of all members.

Generally, fans up to 25 hp should be installed using Mason Super W Mini Neoprene pads between the structure and the full contact surface of the fan footprint

Depending on fan speed and pressures, fans between 25 and 50 hp should be installed using either 1) Mason Super W Mini Neoprene pads between the structure and the full contact surface of the fan footprint, or 2) a unitary base with rubber in shear isolators.

Fans 50 hp and above should be installed using a unitary base with spring isolators.

Flexible isolation joints at the fan inlet and outlet should always be used - particularly for operation above 300F.

Inlet and outlet piping should be independently supported and level into and out of the fan.

When a unitary base is used, the u-base should be evenly supported on all sides in order to avoid uneven stress loadings to the fan.

All Installations

The fan assembly should only be lifted by its base, mounting supports, or lifting eyes.

Check the drive alignment, belt tension and all set screws and bolts for proper installation. Rotate the fan by hand to check for any rubbing or noise. If applicable, verify the wheel to cone clearance. Always follow all Safety Precautions, including Lock Out - Tag Out.

Level the fan using a level and machinist shims as follows:
1) Along the fan shaft using a starrett level, and
2) Perpendicular to the fan shaft from the housing to the outboard bearing or drive pedestal. When the fan is level in both planes, secure the fan/motor assembly.

In some cases, a resonance frequency may exist between the fan and the structural platform, piping or VFD controller. For critical process applications, a qualified millwright should be employed to check for resonance at start up.

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Blender Products, Inc.

