

Restores material flowability at low cost

The Model K Vibra-Jet[®] bin aerator, when installed on any storage silo, bin or hopper, can be extremely versatile and effective in getting dry bulk materials, like fine cement, to gravity feed more reliably at a very low cost. Materials which tend to pack, bridge or hang up can be made to flow freely and instantly upon demand.

Balances the natural negative pressures during discharge

Model K Vibra-Jet bin aerators installed at strategic locations on a discharge cone of a storage silo, bin or hopper direct high or low pressure compressed air along the bin wall to reduce the coefficient of friction which exists between the bin wall and the stored material. The compressed air, which is injected in short high-pressure bursts, fully balances the natural negative pressures created during the normal discharge process. By controlling the compressed air pressure and volume, materials once thought to be difficult to handle now gravity feed easily, quickly and automatically.

Maximizes performance and energy

Because every material is unique to itself, the Model K Vibra-Jet bin aerator has the extreme flexibility to throttle the compressed air as required to handle almost any dry bulk solid material which is finer than 20 mesh (800 micron), regardless of its bulk density. This feature also maximizes process performance and minimizes the compressed air demand, plus it reduces the overall energy requirements.

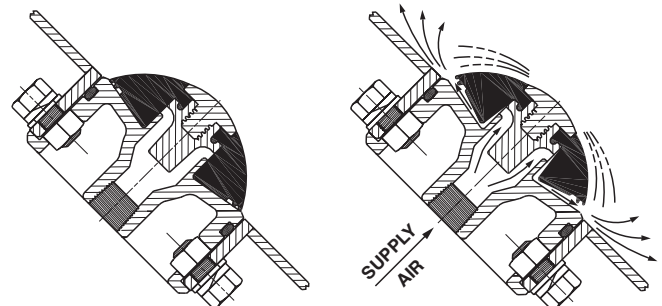


Three seals extend life and reliability

Some unique construction features have been designed into the Model K Vibra-Jet bin aerator to prevent backfeeding and truly set it apart from all other types of bin aerators available. This is extremely important because as the very fine dry bulk materials become fluidized and more flowable they can, under certain circumstances, backfeed into the air source. To prevent this from happening, the Model K Vibra-Jet bin aerator has incorporated three seals. A primary seal at the outer edge and a secondary seal next to it provide an almost impermeable wall to prevent material from trying to backfeed under the gasket. Then, a third and final seal backs up the other two to provide additional assurance against possible backfeeding, even under the most severe of applications. This provides added reliability and extends the life dramatically.

How the Model K Vibra-Jet bin aerator works

High-pressure compressed air is introduced into the bin through the Vibra-Jet bin aerator in timed bursts to coincide with the start of the discharge process. The positive flow of compressed air dislodges the stored material and keeps it moving. In addition to cleaning material from the bin walls, the rubber boot vibrates slightly to keep itself clean. Since the bursts of compressed air are generally less than .5 seconds, very little compressed air is required.



Air Off Cycle

Air On Cycle

Construction features

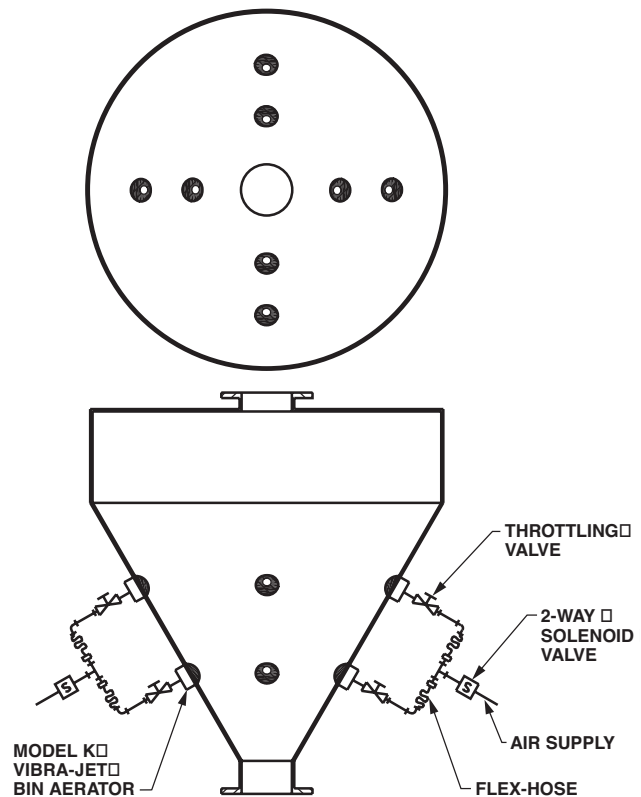
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|----------------------|-----------------------|------------------|-------------------|
| ■ Low cost | ■ Easily installed | ■ Low energy | ■ Low maintenance |
| ■ Self cleaning | ■ Variable flow | ■ Triple seals | ■ Rugged |
| ■ Low pressure drop | ■ Adjustable | ■ Uses plant air | |
| ■ Abrasion resistant | ■ Corrosion resistant | ■ Low profile | |

Mounting arrangement

Model K Vibra-Jet bin aerators are normally mounted on the discharge cone of a storage silo, bin or hopper. Typically they are located in four vertical rows, at a spacing which will vary depending upon the discharge cone angle and the difficulty of the material being handled. However, in most applications, the spacing of the Vibra-Jet bin aerators from the discharge outlet to the first row will be about 22 inches (56cm). This spacing will then continue approximately 22 inches (56cm) center to center and up vertically as far as is needed or desired. Upon request, Dynamic Air will assist you in designing a Vibra-Jet bin aeration system for your bin, silo or hopper and we can test your specific material at our facility.

Quick easy installation

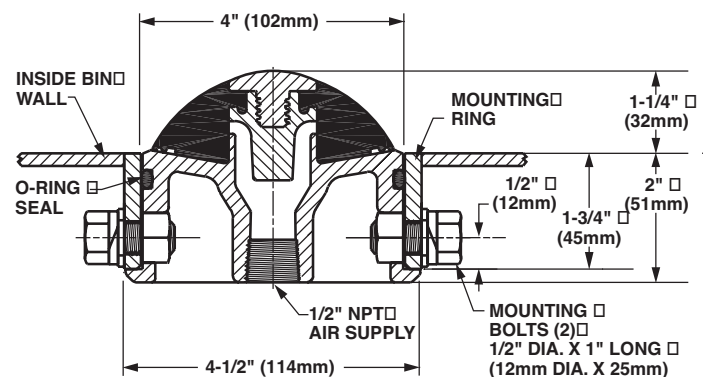
The Model K Vibra-Jet bin aerator is easily and quickly installed using a 4 inch (102mm) mounting ring welded to the bin wall and secured with two 1/2 inch (12mm) bolts. An o-ring on the nylon Vibra-Jet bin aerator body produces a leak-proof mounting seal.



Typical Round Tank Mounting Arrangement

Dimensions and specifications

1. Model K Vibra-Jet bin aerators are available in both black and white nylon, gray polypropylene, PVC and CPVC construction. Optional food grade construction is also available.
2. Specific air consumption, pressure and volume required will vary according to each application.
3. Mounting ring can be purchased as an option, or certified drawings will be provided upon request.
4. Operating temperature: standard 200° F (93° C), optional high temperature series 350° F (177° C)
5. Shipping weight 32 ounces (.90 kilograms)



Mounting Detail

Dynamic Air Conveying Systems® and Vibra-Jet® are U.S. registered trademarks of Dynamic Air Inc., St. Paul, MN.

Specifications subject to change without notice.
U.S. Patent + 6,007,234. Foreign patents pending.
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