



PNEUMATIC CONVEYING SYSTEMS

## VIBRA PAD™ Aerators



### OVERVIEW

Vibra Pad aeration kits provide an economical, simple, and proven solution to assist with difficult to discharge materials from your hoppers, bins, silos or bulk carriers.

The Vibra Pad produces a unique a combination of vibration and aeration to induce ready flow in most non-free flowing materials which may tend to bridge, hang up or pack during discharges.

Optimal aeration is achieved with quick and simple adjustment of source air volume and pressure.

Installation into the discharge vessel wall is quick and simple using components and notes supplied with the aeration kit.

### APPLICATIONS

- Increases flows and rates from bins, hoppers, silos and bulk carrier dischargers via simultaneous aeration and vibration

### MATERIALS / CHARACTERISTICS

- Any materials which tend to pack between discharges; bridge or slow-flow during discharge

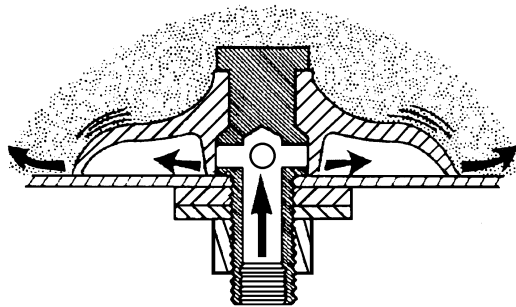
### BENEFITS & FEATURES

- Metered pad air not only aerates / fluidizes material, but also produces a resonating vibratory wave into the discharge element to further aid material flow
- Use during convey operations to improve material flow to the feeder, as well as between nonuse periods to maintain the aerated condition of the material
- Unique shape of the Vibra Pad boot provides excellent sealing qualities against a wide variety of bin wall surfaces
- Unaffected by moisture in material or supply air lines which may plug media-stye aeration devices
- Built-in check valve displaces air in an even circumference, eliminating material backflow into the source aeration lines
- Specify: Neoprene or silicon pad for your material. Stainless steel stud is standard. Silicon temperature rated to 400° F
- Easy installation. Factory installation patterns available
- Kits include manifold piping, plumbing, fittings, and for high pressure air, required hoses and shut-off valves, controls, solenoids and wiring are available separately

### REQUIREMENTS

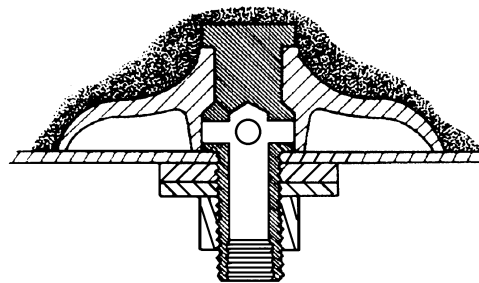
- 5-60 PSIG air

# VIBRA PAD™ Discharge Aerator



**AIR ON**

Air is introduced in the silo or bin through the Vibra Pad. As the air discharges in the material, it provides an aeration effect to fluidize the material. The positive air pressure keeps material from getting under the boot. The air flowing under the boot causes it to vibrate. The vibration of the boot helps move material that has the tendency to hang up or bridge.



**AIR OFF**

When the air is removed from the boot, the pressure of the material and the design of the boot forces the boot against the side of the bin. This prevents material from getting under the boot and into the air supply line.

## AIR CONSUMPTION

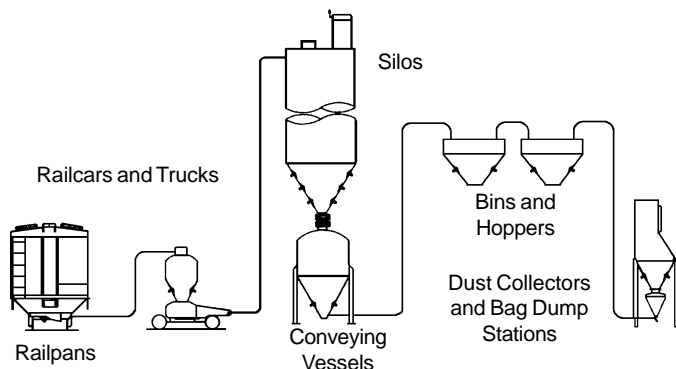
It is recommended that the Vibra Pad be operated by pulsing the air on and off. The actual CFM is calculated by multiplying the seconds of "on" time per minute, by the air flow at the supply pressure, times the number of pads used.

*For example, using (4) Vibra Pads with an "on" time of 2 seconds and an "off" time of 10 seconds at a supply pressure of 20 PSIG (60 seconds / 12 seconds total cycle time = 5 cycles per minute)*  
 $5 * .53 \text{ (air flow at 20 PSIG)} * 4 \text{ pads} = 10.60 \text{ cfm.}$

The actual on/off time is dependent on the application. Cyclonaire can help in determining the best operating settings.

		Cubic feet per aerator		
		Pulse time in seconds		
Continuous		1	2	3
PSIG	CFM			
60	55	0.93	1.83	2.75
50	40	0.67	1.33	2.00
40	30	0.50	1.00	1.50
30	20	0.33	0.67	1.00
20	16	0.27	0.53	0.80
15	13	0.22	0.43	0.65
10	10	0.17	0.33	0.50
5	5	0.08	0.17	0.25

## APPLICATIONS FOR THE VIBRA PAD



## TYPICAL INSTALLATION LAYOUT

