

Shakti

BIN ACTIVATOR



INTRODUCTION:

It is a common experience that most materials stored in bins, hoppers or silos do not easily flow through discharge opening. When called upon to flow, the materials tend to plug, bridge or rat-hole because of their inherent characteristics, environmental conditions or undesirable surrounding vibrations. The conventional solutions employed, viz., electromagnetic vibrators, air/ steam jets, pounding on the bin body or even manual poking of material from top or through discharge opening, are largely inefficient, noisy and lead to intermittent and erratic discharge of materials. The use of above techniques results in,

- * Loss of production
- * Down-time on part of down-stream equipments
- * Worker fatigue due to additional strenuous work and/or unpleasant vibrator noise.
- * Contamination, dusting and spillage of product
- * Damage to structure due to repeated heavy pounding
- * Impaired product quality and down-stream process wherever flow rates and charging time are important.

SHAKTI BIN ACTIVATOR ELIMINATES THESE PROBLEMS TO ASSURE YOU POSITIVE CONTINUOUS FLOW WITHOUT ANY OPERATIONAL HEADACHES.

CONSTRUCTION AND WORKING:

SHAKTI Bin Activator provides ON DEMAND, positive, trouble free, continuous discharge from storage, of wide range of difficult to handle materials in a variety of densities and particle sizes. Available in preassembled form, this bin activator is built up of a specially profiled discharge head which is flexibly hung from bin. The gap between the bin and discharge head is sealed by an elastic sleeve.

A specially engineered gyrator with matched characteristics imparts powerful vibrations of low amplitude and high frequency to the discharge head and hence to the material but not the bin. The horizontal vibratory thrust unpacks the contained material and throws it towards discharge opening where it falls down easily by gravity. The discharge head resolves the horizontal thrusts into strong vertical impulses which extend far up into main bin to cause loosening of contained material. The whole phenomena is silent and demands very little power and attention.

FEATURES:

- * Discharges material continuously at a uniform rate on FIRST IN, FIRST OUT' basis without segregation.
- * Material is handled gently without damaging particles.
- * Material gets deaerated and conditioned to uniform bulk density. This aspect is particularly important for bagging and packaging operations. Uniform density and flow rate facilitate precise filling and speed up these operations.
- * Bin activator offers an advantage of headroom saving. Unlike

static bins, the bin activator permits higher cone angle. Hence the use of bin activator results in increased storage capacity.

- * Unlike in cases where compressed air/steam jets are used to loosen the material, use of our bin activator does not cause product contamination, wetting or dusting.
- * Besides saving labour costs, this device consumes minimum power and hence is economical.
- * It is totally reliable, rugged and safe device and is ideally suitable for continuous day-in and day-out operations. It operates quietly with virtually no maintenance.

SHAKTI Bin Activator being available in preassembled form, can be rapidly installed by bolting/welding on to existing steel or concrete bins of any shape, round or square. The bin activators are available in standard sizes right from 300 MM diameter to 3600 MM diameter. The bin activators can be supplied separately or as a self contained ready to operate integrated unit by combining a static bin and a bin activator. This package called as SELF DISCHARGING BIN, is available in volumetric capacity ranging from 30 litres to 20,000 litres. The SELF DISCHARGING BINS can be designed to be supported on rigid legs or suspended from a suitable structure.

The Standard units are made of carbon steel, however 304 and 316 stainless steel can also be considered if customer so desires. The external and internal surfaces can be painted with enamel paint, epoxy paint or any other paint and colour of customer's choice. The standard motors are of totally enclosed and non vented type and work on 440 V, 30, 50 C/S. Here too variations in specification can be considered in accordance with the requirements of application. The standard elastic sleeve is made of white food quality neoprene rubber.

Besides BIN ACTIVATORS and SELF DISCHARGING BINS other products manufactured by SHAKTI ENGINEERS^{are} BIN UNLOADERS, FLEXIFEEDERS, VIBRO-METERING FEEDERS, VIBRO BLENDERS and completely integrated and automated CONTINUOUS BLENDING SYSTEMS.

You are most welcome to try your powders and granules on our demonstration unit free of charge and without obligation. Do contact us for the further clarification and consultation. It will indeed be our pleasure to assist you in your projects.

Since it is the company's policy to be continuously on the lookout to effect improvements on its products, the description in this leaflet is subject to alterations without notice.

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