

# VIBRA SCREW INC.

## LIVE BOTTOM BINS

## LIVE BINS



**Vibra Screw® Inc.**

LBB / LB 4 4 23

LIVE BOTTOM BINS

Principle of Operation

The vibrating, or Bin Discharger, section of the Vibra Screw Live Bottom Bin incorporates an integral vibrating baffle, which promotes the flow of material from the upper regions of the static bin, and relieves head-load and compaction at the final outlet. This unique baffle eliminates all potential flow-stopping problems, such as bridging, ratholing, compaction, and agglomeration.

Material in the bin is kept constantly mobil as the vibrations from the baffle are transmitted upwards in all directions-the baffle acting like a wedge to enhance the horizontal impulses received from the gyratory assembly. The curvature of the baffle also encourages movement of the material to its periphery. The combination of the vibrating bin bottom and integral baffle assures mass flow.



Controlled Vibration

The Vibra Screw Live Bottom Bin is a self contained, preassembled, ready-to-operate unit combining a static cylindrical bib and a Bin discharger of the same diameter. It is designed to provide discharge of a wide variety of materials from storage into process, on a first-in, first-out basis.

Particularly suited to applications where segregation is a problem, units will handle everything from fibrous and flaky materials with bulk densities ranging from 5 to more than 200 lbs/ft³.

Vibra Screw Live Bottom Bins eliminate bridging and condition materials to constant bulk density for more consistent downstream feeding.

Two Basic Models and a Variety of Sizes

- 3 to 15 ft³ capacity, 5 sizes. Bulk density to 60 lb/ft³
- 25 to 750 ft³, a wide choice of sizes, Bulk density in excess of 200 lb/ft³
- Special designs to 1200 ft³ available.

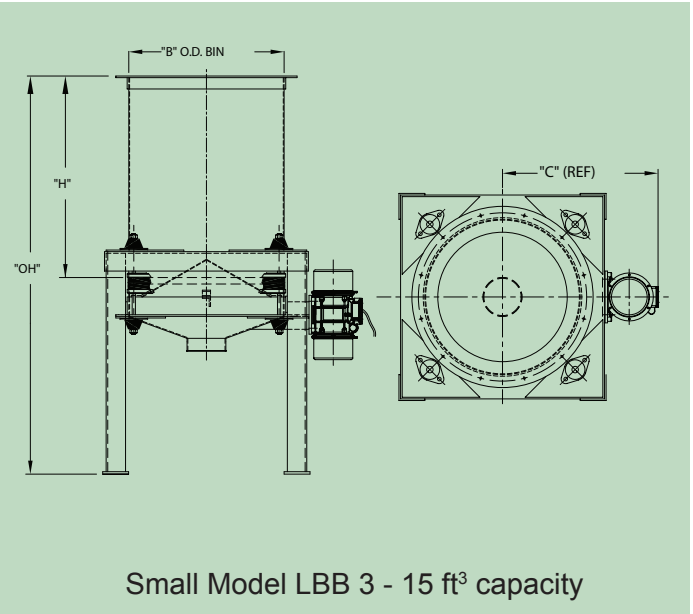
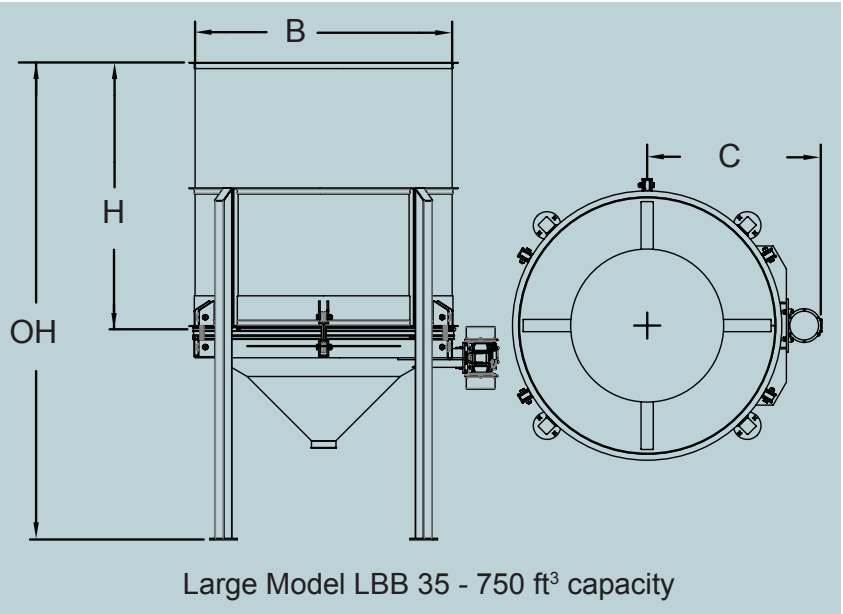
Standard designs of the smaller Live Bottom Bin incorporates a 20 to 30 inch diameter bin and Bin Discharger. Suspension rods with vibration isolators attach the two sections, affording complete freedom of movement for the Bin Discharger without affecting the static bin. A reinforced flexible sleeve closes the connection. Vibrations are of high frequency, but low amplitude, and operation of the unit is virtually noiseless.

The 25 to 750 ft³ capacity units are similar to the smaller models but are designed for continuous, heavy-duty service. Forged suspension hangers can support in excess of 80,000 pounds each.

Two vibrators to choose from.

Oil Lubricated and cooled Gyrator offered exclusively by Vibra Screw guaranteed for 50,000 hrs of use. The large force-generated eccentric weights are mounted on a massive shaft revolving in oversized, precision bearings. The drive motor is mounted in line with the eccentric weight assembly, but works through a floating coupling so that the motor bearings carry only the motor rotor. Motor life is several times that of typical shafted motor.

Grease lubricated gyrator A special designed rotating motor with oversized shaft, bearings and eccentric weights on the shaft generates centrifugal force. Force output is adjusted by changing the unbalance of the weights.



Large Model LBB 35 - 750 ft³ capacity

Small Model LBB 3 - 15 ft³ capacity

LIVE BOTTOM BIN DIMENSIONS INCHES (MM)				
Model	CU.FT(M)	H	OH	C
Small Model LBB 3 - 15 ft³ capacity				
LBB 20-3	3 (0.09)	16 1/2" (419)	46 1/8" (1172)	20" (508)
LBB 20-5	5 (0.14)	27 1/2" (699)	57 1/8" (1451)	20" (508)
LBB 28-10	10 (0.28)	28" (711)	58" (1473)	28" (711)
LBB 30-15	15 (0.42)	36 3/4" (934)	68 1/8" (1730)	28" (711)
Large Model LBB 25 - 750 ft³ capacity				
LBB 3-25	25 (0.71)	42" (1067)	81 3/8" (2067)	35" (889)
LBB 3-50	50 (1.42)	85" (2159)	124 3/8" (3159)	35" (889)
LBB 4-100	100 (2.83)	96" (2438)	141 3/8" (3591)	42" (1067)
LBB 5-200	200 (5.66)	122" (3099)	173 3/8" (4404)	48" (1219)
LBB 6-300	300(8.50)	127" (3226)	192 3/8" (4886)	55" (1397)
LBB 7-400	400 (11.33)	125" (3175)	193" (4902)	58" (1473)
LBB 8-750	750 (21.24)	179" (4547)	253 1/4" (6433)	65" (1651)
Models LBB 6-200 thru 7-400 have six suspension hangers Models LBB 8-400 thru 8-750 have eight suspension hangers				







### Principle of Operation

High-frequency, low-amplitude vibrations are applied to the ENTIRE Live Bin in a horizontal plane, perpendicular to the bin centerline. The integral baffle, which is located in the lower portion of the bin directly above the final outlet, relieves the head load of the material in the bin above. The material is kept in a state of mobility which eliminates arching, bridging and other causes of spasmodic flow.

### LIVE BINS

The Vibra Screw Live Bin is a fully assembled, self-contained, ready-to-operate unit incorporating a vibrated cone bottom and integral baffle. The entire bin and its contents are subjected to controlled vibration generated by a Vibra Screw Gyrator.

Vibration conditions the material to a uniform bulk density, eliminating arching, bridging and ratholing and preventing material from jamming or compacting at the outlet.

The Live Bin is designed to provide positive discharge of micron-sized to fibrous and flaky materials on a first-in, first-out basis - assuring mass flow and eliminating material segregation.

### VERSATILITY

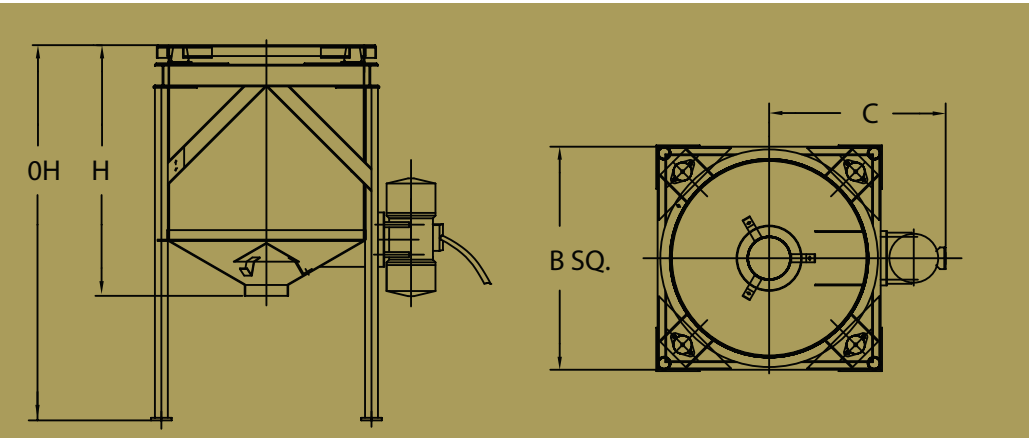
Vibra Screw Live Bins may be operated on their own support legs, or can be hung from overhead steel - thus are readily adaptable for scale mounting. They may be used to discharge to any feeder or process line, or whatever a surge or storage bin is called for. They are also highly useful as batching, portable or weigh bins.

Because the design of the Live Bin does not require a flexible sleeve, it is especially suitable for sanitary applications. Overall rugged design and construction assures years of continuous, maintenance-free operation. The factory-assembled Live Bin is ready to incorporate into new or existing installations.

### TWO MODELS

Live Bins are available in two basic models in a variety of sizes. The smaller model provides capacities from 3 to 15 ft³ and the larger units, capacities from 25 to 100 ft³.

The smaller Live Bins, available in five sizes, incorporate 20 - 30 inch diameter bins. The larger available in four sizes -incorporate 36 to 60 inch diameter bins.



LIVE BIN DIMENSIONS INCHES (MM)					
Model	CU.FT(M)	H	OH	B	C
Small Model LB 3 - 15 ft³ capacity					
LB 20-3	3 (0.09)	23" (584)	35" (889)	25" (635)	21" (534)
LB 20-5	5 (0.14)	35" (889)	47" (1194)	25" (635)	21" (534)
LB 24-8	8 (0.22)	35 3/4" (908)	47 3/4" (1213)	30" (762)	27 1/2" (698)
LB 30-15	15 (0.42)	43" (1092)	55" (1397)	36" (914)	28 1/2" (724)
Large Model LB 25 - 750 ft³ capacity					
LB 36-25	25 (0.71)	46" (1168)	69" (1753)	41" (1041)	34" (864)
LB 48-50	50 (1.42)	61 1/2" (2159)	84 1/2" (2146)	53" (1346)	40" (1016)
LB 48-75	75 (2.12)	85 1/2" (2172)	108 1/2" (2756)	53" (1346)	40" (1016)
LB 60-100	100 (2.83)	77" (1956)	100" (2540)	65 1/2" (1664)	46" (1168)



### General Features and Options for Live Bins and Live Bottom Bins

#### CONTACT MATERIALS

- Carbon Steel
- 304 Stainless Steel
- 316 Stainless Steel
- Abrasion Resistant Steel
- High Nickel Alloy

#### External Support Brackets

Carbon Steel

#### Flexible Sleeves (for Live Bottom Bins)

Standard, 2 ply polyester, for temperatures to 325°F (163°C)

#### Optional

- White Nordel, 2ply polyester, food grade, for temperatures to 325°F (163°C)
- Silicone, Nomex ply, for temperatures to 500°F (260°C)
- Molded flanged sleeves for pressures to 14.9 psi (i Bar), Standard sleeve for pressures to 10 PSI (0.7 Bar)

#### MOTOR

Supplied with 6 ft neoprene covered cable - chemical Type  
Standard: 230 or 460 totally enclosed, non-ventilated.

#### Optional:

- Explosion Proof, Class 1, group D, Class 2, Group F & G
- Severe Duty
- Special Voltages on Request
- Pneumatic, Hydraulic

#### OUTLET SIZES

Based on required flow rate or connections to downstream equipment

#### COATINGS (Internal & External)

Note: All surfaces are sandblasted in Vibra Screw's modern sandblasting department prior to coating

#### Optional, external:

- Epoxy paints
- Corrosion resistant paints
- Customer specified special pains or colors

**Standard, internal:** Stainless steel units uncoated, carbon steel units coated with rust preventative.

#### Optional internal:

- Epoxy paint, standard food grade white
- Other customer specified epoxy coating
- Teflon coating (DuPont) as specified
- Kel-F (3M)
- Rubber, ceramic lining
- Sanitary construction

#### OUTLET NOZZLES

Live Bottom Bins can be supplied with available nozzles to feed a belt or vibrating pan feeder







# Keeping Dry Materials Moving

With a wealth of knowledge and experience in the use of controlled vibration to process dry bulk materials, Vibra Screw engineers have devised systems to handle most materials -- probably your material included.

As the leader in dry solids processing, our name is recognized and trusted worldwide in such diverse industries as:

## **FOODS**

Flour, Soy, Meal, Sugar, Vitamin Supplements

## **MINING**

Aggregate, Kiln Feed, Crushed Ores, Coal, Lime

## **CHEMICAL**

Pigments, Additives, Starch, Carbon Black

## **STEEL**

Foundry Sand, Ores, Binders, Ferrous & Non-Ferrous Additives

## **FOREST PRODUCTS**

Chips, Sawdust, Waste-byproducts

## **PLASTICS**

Regrind, Virgin, Colorant, Talc

## **ENVIRONMENTAL CONTROL**

Filter Aids, Resource Recovery, Lime, Soda Ash, Activated Carbon, Fly Ash, Solid Wastes, Scrap

## **ORDNANCE**

Ammonium Nitrate, Oxidizing Salts, Solid Base Propellants, Ammonium Perchlorate, HMX, RDX

## **AGRICULTURE**

Cattle Feed, Soy Bean Meal, Nutritional Supplements, Mill Feed, Spent Grain

## **PHARMACEUTICALS**

Calcium Carbonate, Aspirin, Sodium Bicarbonate, Ascorbic Acid



**VIBRA SCREW INC.**

755 Union Blvd. Totowa, NJ 07512

973-256-7410

info@vibrascrew.com

www.vibrascrew.com

*The most trusted name in dry solids processing*

# The Vibra Screw Product Line

**For additional information, ask for literature on the following:**

- AccuFeed
- Batching Systems
- Bin Activator
- Bulk Bag Filler
- Bulk Bag Unloader
- DE Feeder
- Heavy Duty Screw Feeder
- Loss-In-Weight Feeder
- Live Bottom Bin
- Live Bin
- Live Bin Screw Feeder
- Pan & Tube feeder
- Portable Bin Unloader
- Screener
- Storage Pile Activator
- VersiFeeder
- Vibra-Blender
- Vibrating Screens
- Volumetric Belt Feeder
- Weigh Belt Feeder
- Water Treatment Systems



## **THE VIBRA SCREW GUARANTEE**

If your Vibra Screw equipment doesn't perform in the service for which it was sold, we'll refund your money. Ask any other equipment manufacturer to put that in writing.

**No time limits. No conditions.**