



Metalfab, Inc.

Bulk Bag Unloaders

Metalfab...Bulk Bag Unloaders

The Best Available Value and Choice of Models for Complete and Positive Discharge of Dry Bulk Materials

Here's Why:

Rugged, Durable Construction for Years of Reliable Service

Metalfab Bulk Bag Unloaders are engineered to provide a safer, dependable, low cost, dust free means for emptying a wide variety of powders and other difficult to handle dry bulk materials from bulk bags. They are designed to accommodate lined, reusable, and disposable (one way) bags weighing up to 4000 lbs. plus, and will empty an entire bag of product into bins, hoppers, feeders, and conveyors on demand.

To assure discharge of product, the ruggedly built pyramidal-shaped unloader is mounted on wear resistant rubber isolators that eliminate transmission of vibration to the support stand or plant floor. A time tested, field proven Metalfab Vibrator is mounted to the unloader and can be adjusted to provide varying levels of force needed to discharge product from the bag. All Metalfab vibrators are ruggedly built and are available in TENV and explosion-proof enclosures.

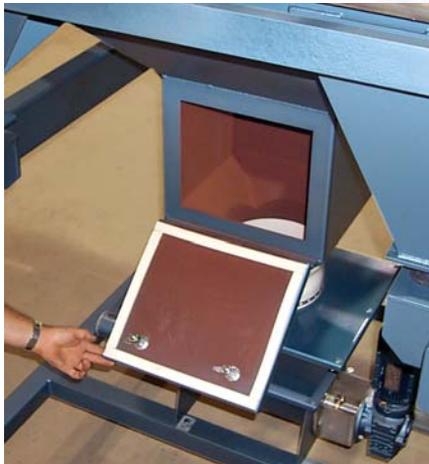


Bulk Bag Unloader

Simple, Safe, and Dust Free Operation

Metalfab Bulk Bag Unloaders are easily operated by one person—saving on labor and operating costs. Each unloader also features a thick elastomer inlet seal that accommodates different size bags. This flexible seal—unique to Metalfab Unloaders—contracts as the bag empties to ensure a dust free operation.

To start the unloading process, the operator lowers the bag containing the product onto the unloader, opens the door to the access chamber, reaches up and unties the bag drawstring. The operator then pulls the bag spout down before untying the spout and closing the access door. An in-house dust collector can be attached to a 4" diameter open dust port to provide additional assurance of a dust free atmosphere while the access door is open. The door is gasketed and easily closes with two T-handle vice closures. Activation of the vibrator allows the discharge process to begin—ensuring safe, dust free operation with no product waste.



Dust Tight Bag Access Door



Unique Flexible Inlet Seal

A Choice of Models to Meet Virtually Any Unloading Requirement



Basic Model

Metalfab Bulk Bag Unloaders are available in three standard models to suit varying application requirements and budgetary needs. Three 18" tall side guides attached to the unloader frame are available for each model and help the operator locate the bag during the loading procedure. They also help maintain the bag in proper position during discharge.

Basic Models are used for relatively free flowing materials. These vibrated or nonvibrated units include an access chamber with door, side guides, and unique flexible inlet seal. Contact parts are available in carbon steel, epoxy-coated carbon steel, and 304 or 316 stainless steel. The external structure is carbon steel that is primed and painted in blue enamel. If a dedicated plant hoist or forklift is used to position bags for emptying, the unloader can be supplied less the support frame and with four pedestals to mount the isolators to the customer supports.



Mid Level Model Shown with Optional MetaTech™ Feeder

Mid Level Models are offered with the unloader, inclusive of an access chamber and door, a complete support structure for the equipment and bulk bag, vibrator and isolators, and adjustable bag rack. The support structure holds the bag rack and can be adjusted vertically to accommodate any bag height. The bag rack holds the bag by its straps for loading, unloading and during discharge with a forklift or overhead plant hoist. Materials of construction and finish are the same as the standard model.



Top Level Model

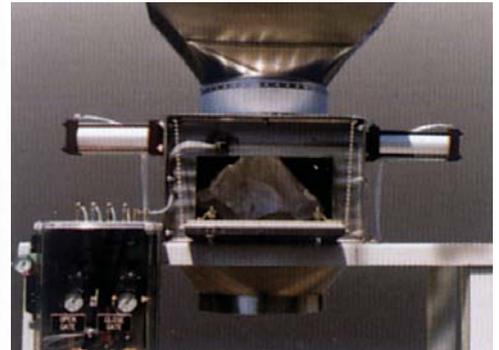
Top Level Models include the unloader with access chamber and door, support structure for the equipment and bulk bag, vibrator and isolators, and an extended overhead I-beam at the top of the unloader to support an integrated hoist and trolley. Hoists are normally electric with pneumatic hoists optional. Trolleys can be manual or electrically powered. All frames are structurally modified to support the added weight of the trolley and hoist. Materials of construction and finish are the same as the Basic and Mid Level Models. Metalfab also offers other unloader designs to handle smaller, larger or heavier bulk bags.

Accommodation of a Wide Range of Bag Styles and Sizes

Metalfab Bulk Bag Unloaders are also engineered to accommodate the wide range of bag styles and sizes found in today's marketplace. Several optional devices are available to accommodate the following type of bags and/or process operating conditions:

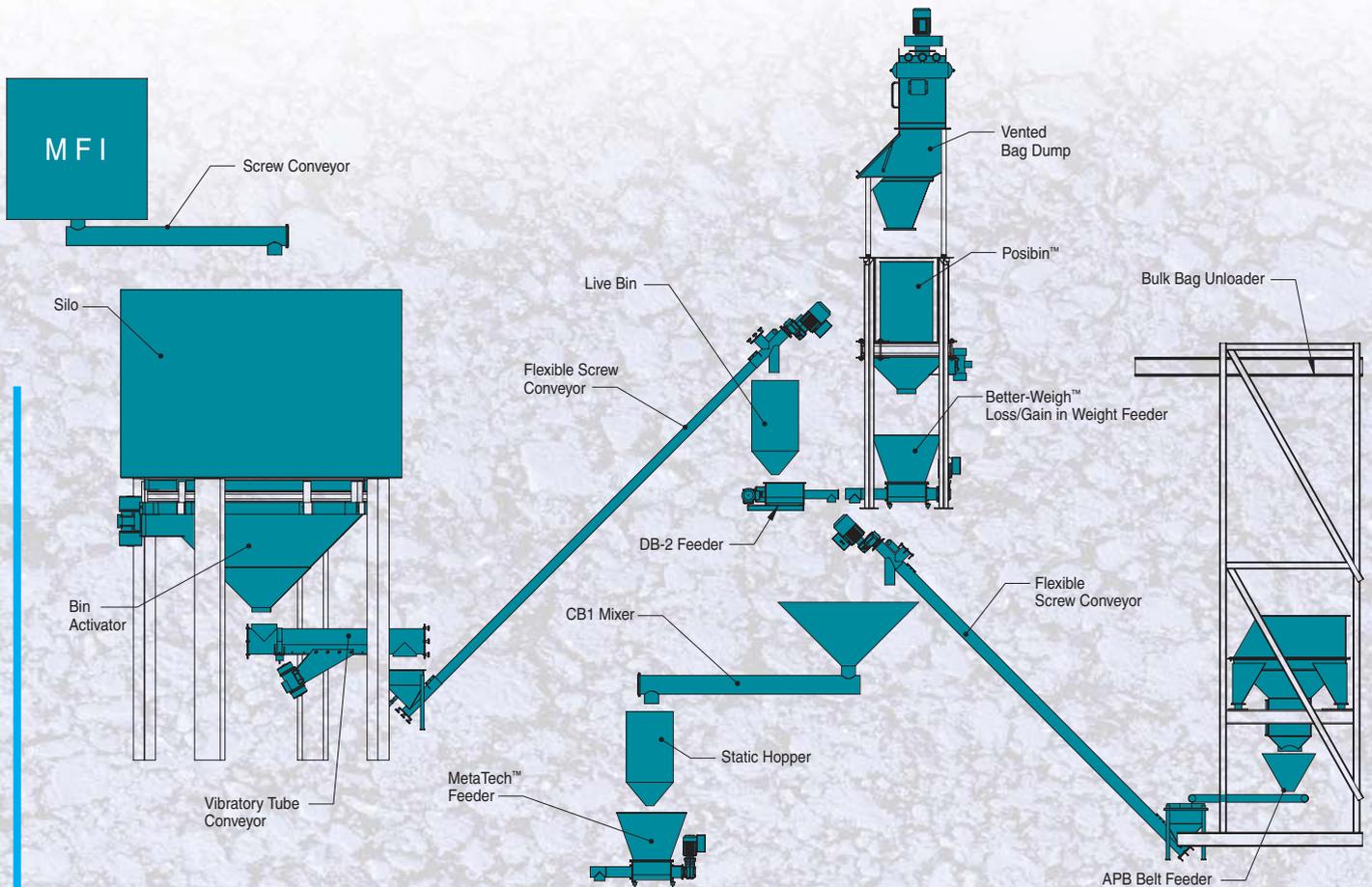
Disposable (One Way) Spoutless Bags are safely handled with Metalfab's integrated Four-Bladed Knife. Two designs—one bolted in place and the other vertically adjustable—are available. As a spoutless, nonrefillable bag is lowered into place, the knife blades symmetrically cut the bag into a four-sided flap opening through which product flows freely.

Bag Liners are easily handled with a pneumatically-powered, rubber covered pulley assembly held in bearings and fixed to the center of the bag rack with two "quick action" clamps. When the lined bag is placed into proper position for discharge, the bag is suspended from the bag rack while the liner is clamped to the pulley. In operation, the pulley's air powered rotary actuator maintains a constant "pull" on the liner to prevent it from exiting the bag along with product. It also retracts the liner into the bag when it is empty. A four-way manual valve, air filter, and regulator are supplied by Metalfab and are mounted in the area of the unloader.



Partially Empty Bags occasionally need to be removed from the unloader. The bag spout often contains product that is difficult to tie off manually. To deal with this problem, Metalfab offers a closure device that has two horizontally-opposed, pneumatically-operated cylinders with semicircular shutoff blades which rest on horizontal guides. These blades are housed in a dust tight enclosure with an inlet equal in diameter to the bag spout and an outlet of the same size or larger. During operation, the bag spout extends 12"-16" below the shutoff blades and can be closed off within seconds when the operator activates the pneumatic closure device while product is flowing from the bag. The access chamber is then opened, allowing the operator to tie off the spout manually. The Metalfab closure device also features an integral, door-mounted safety switch, which is activated when the door is open to prevent the "locked" blades from advancing or retracting while the door is open. All these optional devices are available in the same product contact parts as the unloader to eliminate product contamination.





A Versatile Design that Accommodates Other Metalfab Downstream Equipment

Looking for a dedicated system to handle batching operations or a complete system designed to regulate flow or meter the discharge of product into a continuous process? Metalfab has the engineering experience and downstream equipment to meet most dry bulk material handling applications.

Should batching by weight be a requirement, Metalfab Bulk Bag Unloaders can be mounted on a specially designed counter-balanced weigh platform designed to match the unloader. Its counter balanced feature and digital weight resolver enable the operator to discharge batches as low as 40 lbs. with accuracies of $\pm 1/4$ – $1/2\%$ at two sigma. Many control options are available with the system to suit specific customer needs.

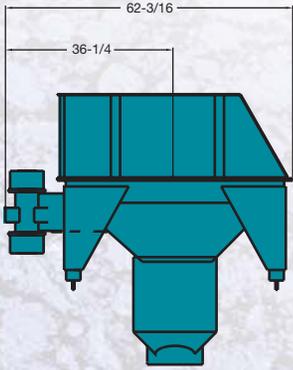
In continuous operations, Metalfab Bulk Bag Unloaders can discharge product directly into a trouble-free Metalfab MetaTech™ Feeder, with only two moving parts.

A hopper on the feeder can be sized for an approximate ten minute supply to permit bag changes without interruption of product feed.

Metalfab also offers a wide range of other dry bulk material handling equipment—bin activators, Convey-All™ FSC-Flexible Screw Conveyors and VTC-Vibratory Tube Conveyors, Posibins™, and hoppers—that can be integrated into a system to meet exact customer requirements.

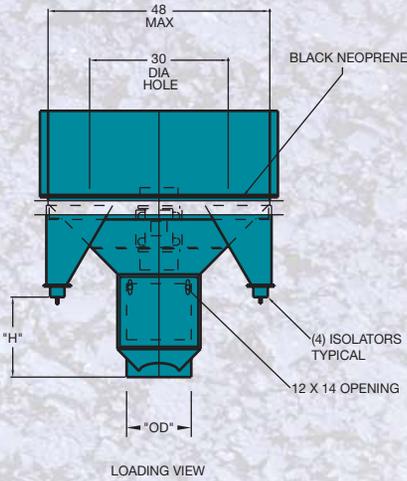


Specifications/Dimensions



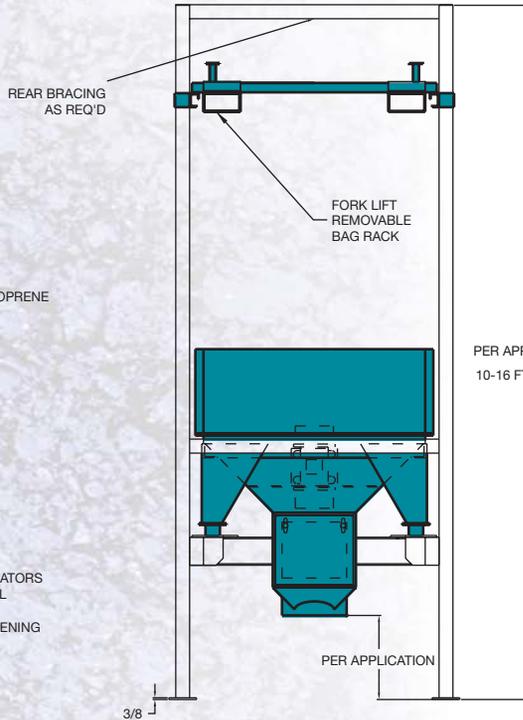
SIDE VIEW

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8	16
10	16-1/2
12	17-1/4
14	18
16	18-1/2

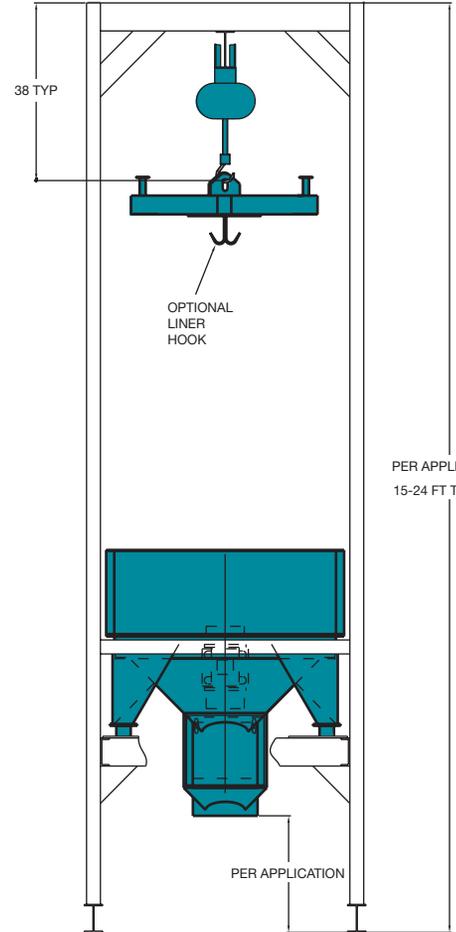


LOADING VIEW

Basic Model



Mid Level Model



Top Level Model

Contact Parts: Carbon steel, epoxy-coated carbon steel, 304 or 316 stainless steel

External Structure: Carbon steel that is primed and painted blue enamel

For more information and a quotation on Metalfab Bulk Bag Unloaders

call 800-764-2999, in NJ 973-764-2000, Fax: 973-764-0272, or e-mail: sales@metalfabinc.com

Visit our web site at www.metalfabinc.com for PDF downloads of literature and/or PDF/CAD drawings or write:



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