

bulk bag filling & unloading



...a world of experience to meet your powder handling challenges



Industrial Equipment & Design Company

Bulk Bag Filling & Unloading

Bulk Bag Systems

If you manufacture products using or ending up in powders it may mean that one or more of your basic ingredients or final formulation comes to you or leaves in large bulk bags, super sacks or FIBC's of varying sizes. This means that you are faced with having to address the following challenges

- The safety issues associated with the lifting, handling, manipulating of the large heavy bags.
- Containment issues associated with the opening and closing of the bags so that the operator and surrounding environment are protected from dust and exposure to the product.
- How to best induce and control flow of the product out of the bag.
- How to best transfer the product from the bag into your process.
- How to best weigh the product being batched into your downstream process.
- How to most economically handle multiple ingredients received in bulk bags.

IEDCO designs and manufactures a complete family of bulk bag loaders and unloaders to meet your application specific needs. Systems may be supplied with integral hoists, load cells, bag agitation, various discharging valves and incorporate a range of feeding capability.



Custom Designed Bulk Bag Unloading Systems



At IEDCO we have developed a wide range of custom designs to provide reliable flow and to connect the outlet spout of the bulk bag to the system in a contained manner.

Our bulk bag unloaders are designed to fit our client's specific requirements, and we have built systems to handle all types and sizes of bulk bags.

These systems can consist of some or all of the following main components:

- Bulk Bag Unloader Frame
 - Bag Lift Frame with Liner Clamp
 - Bulk Bag Agitation Pan
 - Pneumatic Bag Spout Choker
 - Enclosed or Open Spout Access and Sealing System
 - Sanitary Butterfly or Rotary Valve
 - Central Control Panel
 - Cable or Chain Lift Hoist with Trolley
 - Adjustable Support Frame to Accommodate Different Sizes of Bulk Bags
 - Construction Materials Ranging from Mild Steel to 316 Stainless Steel
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“Zero-Lift” Bulk Bag Filling System

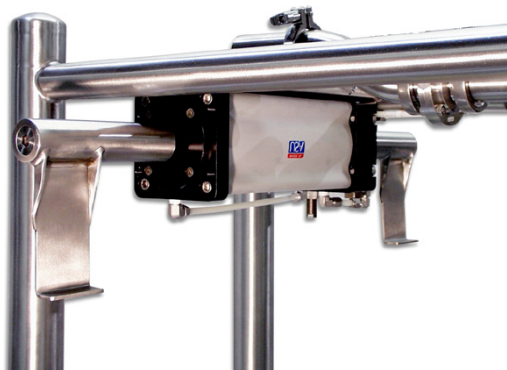
IEDCO’s “Zero-Lift” Bulk Bag Filling System has a custom designed base that permits the placement of pallets and the removal of the filled bulk bags using a pallet jack rather than a walking stacker or forklift.

The entire base is mounted on load cells and inflatable air bags, which permit loading and unloading in the lowered position.

When the air bags are activated, the platform is elevated off the floor, so as to not interfere with the weighing, and the bulk bag is filled in this position. Upon completion of the filling process, the platform is lowered, and the bulk bag is easily removed.

The “Zero-Lift” Bulk Bag Filler can consist of all or some of the following:

- Load Cells with Support Frame
- Weigh Deck with Air Bags
- Bag Support Frame
- Pneumatic Inflatable Fill Head
- Controls with Batch Controller
- Bag Inflation System
- Vibrators for Densification
- Nitrogen Inertion System

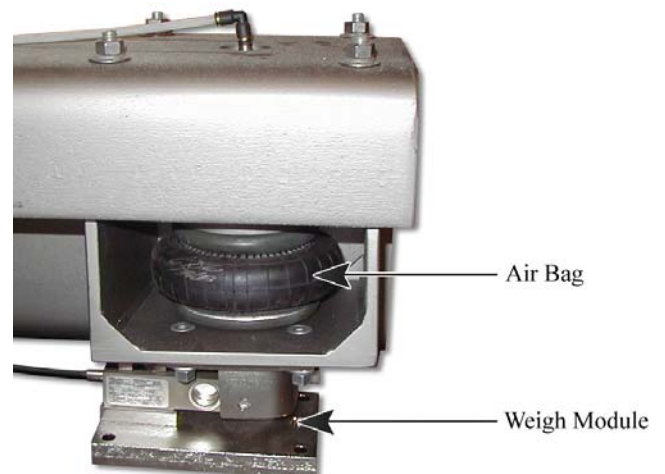


The bag support frame can be designed at specific heights or can be adjustable to serve a variety of bulk bag sizes.

- A-frame style supports are bolted to weigh deck outriggers.
- Top support frame houses the fill head and bag hooks.
- Two pneumatic actuators with four hooks to support bulk bag.
- The frames can be of 304 or 316 stainless steel construction.

We build a “U” shaped base frame to which load cells will be bolted, rather than directly to the floor. This permits all alignment to be done in our factory and greatly facilitates installation.

We provide a set of Mettler Toledo weigh modules to provide the highest degree of accuracy and reliability. An inflatable air bag will be mounted on top of each weigh module and then the weigh deck or platform will be bolted to the air bag. The air bags lift the unit off the ground when inflated, and allow for accurate readings by the scale system.





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Visval

Safe Bulk Logistics

IEDCO is the exclusive North American Integrator and Distributor for **Visval**, a Swiss company that has developed a revolutionary method for the automatic and contained discharging of bulk materials from FIBC's (bulk bags, super sacs, etc).

By combining the containment of cone-valve technology and the disposability of the FIBC, Visval's **SoliValve**[®] system operates on a "closed transfer" process that is nearly equal to a split butterfly valve in terms of containment. This system eliminates the typical operator interaction with the bulk bag spout during all phases of discharging, while providing a very high level of containment.

SoliValve[®] Technology

Working off established cone valve technology, Visval has improved upon the design and taken the technology to a whole new level of reliability, containment, and usability.

Features never before associated with bulk bags have been integrated into the SoliValve[®] (i.e.– fluidization of the bagged product **INSIDE** the bag during discharge).

Constructed of mostly stainless steel, the SoliValve has eliminated any hygiene and maintenance issues that are present with other cone valves and their elastomer bladders, liners and interiors.

Containment

The cone valve has always been known for its contained discharging ability, but, until now, has only been available for rigid IBC's.

Unlike conventional means of bulk bag discharging involving high operator interface with the bag, spout and ultimately the product, the SoliValve[®] virtually eliminates all operator involvement.

There are no spouts to untie (or cut), no tie boxes filled with product or manual valves to activate. Both the unsealing and sealing of the bulk bag with the SoliValve[®] System is achieved with full containment at the push of a button.

For the first time, the automatic and contained handling of all common bulk containers can be achieved via a universal active docking system.

See our Visval SoliValve brochure for more details.

