

# TRANSFER OF SOLIDS FROM BULK BAGS (FIBCs) TO MIXING VESSELS

## SYSTEM FEATURES

- Bulk bag (FIBC) unloader
  - Pneumatic or electric hoist and trolley
  - Bag lifting frame
  - Bag outlet spout closing valve
  - Bag outlet spout sealing clamp and containment housing
  - Material flow promotion arms
  - Fluidizing hopper
- Powder Pump unit
  - Static dissipative
  - Maintains inert environment
  - Controlled transfer rate
- PLC-based controls
  - Class 1, Division 2, Group C & D
  - Clear and intuitive HMI displays
  - Customized programming available

## HOW DOES IT WORK?

Bulk bags (or Flexible Intermediate Bulk Containers) are commonly used to supply relatively large amounts (vs. sacks or drums) of solids to manufacturing facilities. These solids must often be transferred into a mixing vessel for dissolution in a solvent. When the solids, and/or the solvent are flammable, explosive or toxic, special care must be taken when conducting the transfer operation.

DDPS has developed a total system solution that enhances:

- Operator Safety
- Environmental Protection
- Process Control
- Product Quality
- Housekeeping and Maintenance

The solids are removed from the FIBC in a contained manner, and pneumatically conveyed at a controlled rate to the receiving vessel. There, our Powder Pump system allows them to be delivered without exposure or introducing oxygen, if necessary.



## COMMON APPLICATIONS

- Specialty Chemical and API Reactions
- Pigment & Paint Blending
- Petrochemicals Manufacturing
- Food and Flavors Mixing
- Electrical Component Manufacturing

## BENEFITS TO USERS

DDPS' Bulk Bag Transfer system eliminates the need to:

- Manually charge multiple small sacks or drums of material
- Lift multiple material containers to vessel manway levels
- Open vessel manway for solids charging
- Clean-up fugitive or residual dust from empty containers or spillage
- Pre-weigh batch weight(s) of solid(s)

## SYSTEM ENHANCEMENTS

- Hydraulic conditioners to break-up solidified materials inside FIBC
- Solids delumper for additional size reduction
- Load cells for batch weight monitoring and control
- Custom hoppers to address bridging or rat-holing
- Electrical grounding and oxygen content monitoring systems

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## SCHEMATIC OF TYPICAL FOOTPRINT

This system represents a basic application with typical dimensions. DDPS can provide additional functionalities to create a customized solution to handle unique process requirements. [Contact us online](#) or fill out our [Powder Handling and Containment Questionnaire](#) so we can discuss the needs of your business.

