Bin and Silo Cleaning for All Materials



Whatever your bulk material characteristics – hydroscopic materials or powders, minerals, organic materials, fine or coarse granular particles – and whatever the bulk material handling equipment – bins silos, hoppers, bunkers, other storage vessels, even rotary kilns – **there is a Deca Bin or Silo Cleaning solution to match**.

Here are a few of the materials we work with the most.

Cement | Gypsum | Grain | Flour | Maize
Soybean | Sugar | Animal Feed | Coal
Fertilizer | Catalyst | Ore | Powder | Dust
Ash Aluminum | Zinc | Lime



Coal Silo Railcar Loading Area



Cardoxtube in Tube Holder



Multiple Locations of Cardox

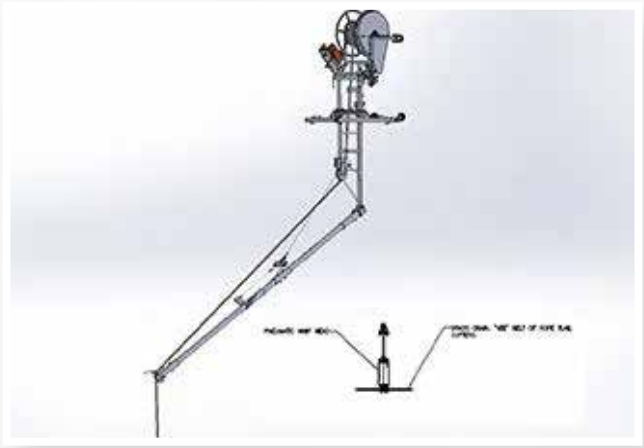


Cement Hopper

Pneumatic Whips For Bin & Silo Clearing

The Safe Choice for Bin and Silo Cleaning

Whether your storage vessel includes a vibrator or not, problematic materials can eventually create a clog or become impacted within the vessel, bringing material flow to a halt. The Pneumatic Whip Bin and Silo Cleaning System uses the power of compressed air to slice through compacted material and remedy blockages, arching, bridging, rat holing, or compaction.



Deca Vibrator provides preferred solutions for Bin and Silo Cleaning because our equipment does more than get the job done. It gets the job done right, every time.

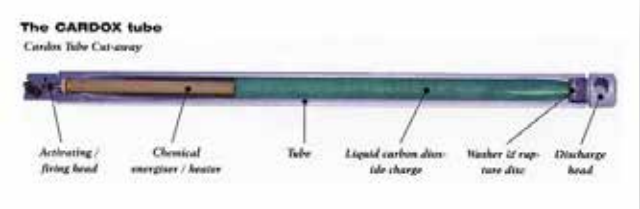
- Fast, Safe elimination of all types of bin backups.
- Handles difficult or dangerous highly compacted materials
- Quick assembly (takes only 20 minutes to assemble)
- Works with bins of all shapes and sizes
- Can be operated remotely from outside the bin
- Can be operated by only 2 people
- Low power requirements
- Proven effective on all types of products all over the world
- Can restore bin capacity to 100% when used as directed
- It is the safest storage cleaning system on the market

For routine silo cleaning, the pneumatic whip system can be installed through a small port on the top of the silo.

Cardox Systems for Loosening Cumulative Build-up

Efficient, Reliable & Safe Loosening of Powdered, Granular & Organic Material

As a solution that harnesses the rapid expansion of carbon dioxide from a liquid form to a gas – **expanding to 600 times the original volume** – strategically placed Cardox tubes have the ability to disperse very large material blockages. Because workers do not have to enter the clogged enclosure, there is no danger of exposure to heat, contaminated air, or loosened material falling on them to harm or even bury them. Unlike shotgun methods, there is no danger of being too close to a blast area, and unlike water injection there is no risk of being exposed to flying debris.





Non-explosive Cardox Systems are globally recognized as the most effective and reliable means of loosening accumulated powdered, granular, or solidified materials in diverse material handling and process applications. Deca is proud to partner with Cardox International, the original manufacturer, in offering the Cardox System for bin cleaning and other uses.

Because Cardox Systems work on the rapid expansion of CO_2 from a liquid to a gaseous form – generating pressures up to **40,000 psi** – they offer multiple advantages over other mechanical solutions or conventional explosives.

- SAFE. Instantaneous liquid-to-gas expansion provides a safer fracturing alternative to dynamite, and can be used safely in explosive environments and closer to sensitive areas without the same safety concerns.
- TIMESAVING. With the ability to be installed from the outside of a structure at regular operating temperatures, Cardox solutions eliminate the need for extended shutdowns to cool rotary kilns.
- ECONOMICAL. Reusable Cardox tubes can be discharged, removed, and recharged within minutes.
- EFFECTIVE. A few properly placed and actuated Cardox tubes can clear stubborn accumulations – such as compacted powders or hygroscopic materials in storage vessels, or ring formations in rotary kilns – all from the outside of the vessel.
- RELIABLE. Unlike air blasters that can lose up to 75% of their efficiency in cement plant applications, Cardox tubes are guaranteed to generate maximum pressure every time.

Force Vector is a sister company to Deca Vibrator, providing complementary products and services to our material handling equipment lines. We bring bin & silo cleaning equipment, and decades of experience in its application. By combining the Cardox CO^2 System and the Whip Systems, we'll help unclog and put your silos back to 100% capacity.

We Have a Solution for your Material Flow Needs

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