



SILO CLEANING SERVICES

A LEADING PROVIDER OF SILO CLEANING SERVICES

DGC offers a highly specialized service for cleaning contaminated and clogged-up bulk storage containers in the manufacturing, mining and mineral processing industries.

These services, which involve the safe and efficient removal of compacted materials, are coupled with consulting services, the adoption of preventative maintenance procedures, and the formulation of proper cleaning schedules.

Our Silo Cleaning Services are executed using cutting-edge equipment that is fast, efficient, and safe, as the cleaning operations require no human entry into the storage vessel at any time. The company's services are designed to safely remove compacted materials from any size or shape of silos, bins, hoppers, tanks, reactors and chimneys.



SPECIALIST EXPERTISE IS CRITICAL TO THE SUCCESS OF ANY SILO MANAGEMENT SYSTEM.

DGC BELIEVES THAT, THROUGH INNOVATION AND NEW TECHNOLOGIES, THE COMPANY'S SILO CLEANING SERVICES CAN REPLACE THE TRADITIONAL UNSAFE METHODS USED,

BY AVOIDING HAVING PERSONNEL WORK INSIDE THE UNSAFE CONFINED SPACES.



SILO MANAGEMENT

- Whether it be cement, coal, soda ash, fertilizer, plaster, animal feed, salt, or clay, substances kept in silos attract moisture, which causes the material to bind and adhere to the walls or form clumps.
- As the moist product dries, it can harden and starts to break up, producing lumps that can block the valve outlets. This results in the build-up of debris, which restricts the flow of material, causing capacity reduction and production stoppages (so lumps can be removed from the valve areas or air slides). This is a typical case for DGC's Silo Cleaning Services.
- In addition to providing relevant experience and know-how, Silo Cleaning Services require highly specialized equipment. DGC adopts a combination of specialist cleaning systems.

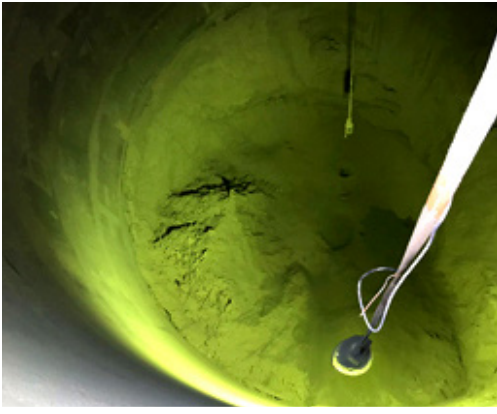
TECHNOLOGIES

Our company adopts a combination of silo cleaning technologies, including the SiloWhip system, which can be used in combination with the Cardox CO2 system.

HOW THE CARDOX CO2 SYSTEM WORKS

The Cardox System has a variety of different tubes for specific applications. Cardox tubes are filled with liquid carbon dioxide - CO2 (exactly the same as a fire extinguisher). When energized by the application of a small electrical charge, the chemical heater instantly converts the liquid carbon dioxide to a gas. This conversion expands the CO2 volume and builds up pressure inside the tube until it causes the rupture disc at the end of the tube to burst. This releases the CO2 - now 600 times the original volume - through a special discharge nozzle to create a powerful heaving force, at pressures up to 40,000 psi (3,000 bar). All this takes place in milliseconds!

This instantaneous build-up in pressure reaches the yielding pressure of the rupture (shear) disc which bursts, releasing a heaving mass of carbon dioxide which breaks the surrounding material. By selecting the thickness of the rupture disc, the power of the tube can be regulated to suit all conditions. After recovery the tube, the heater, washer, and rupture disc are replaced, the liquid carbon dioxide is recharged and the tube is ready to be used again.



HOW THE SILOWHIP SYSTEM WORKS

The SiloWhip System is powered by hydraulics (or pneumatics) and is controlled from the top of the silo; on the outside. The system is composed of a whipping head, boom telescope, hose, and other accessories.

The whipping head is suspended inside the silo and used to efficiently clear material build-ups using the pneumatic or hydraulic driven rotary cutter. The system has 360-degree rotation capabilities and an operating depth of up to 50 meters. A range of cutters is used depending on the type of material a silo contains. Cleared material simply falls to the base of the silo for extraction.

BENEFITS

The company's Silo Cleaning Services adopt a combination of specialist cleaning systems, which create a number of advantages including the following:

SAFETY

- No human entry in confined space making it 100% safe
- Ability to safely remove flammable, explosive, hazardous, or toxic products
- No special safety measures are required, only standard operating procedures when using our system
- The systems do not cause damage to facilities or the environment
- Compliance with Government Health and Safety Regulations

HYGIENE

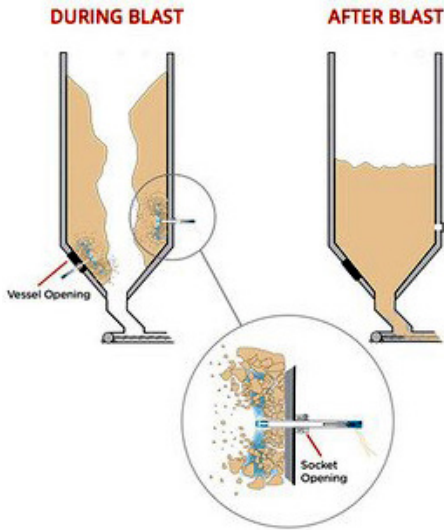
- Dry process, no water, and no chemical
- Environmentally friendly and no contamination
- Regular cleaning will ensure that quality control of all storage areas is maintained
- Higher standards of cleanliness
- Hygiene ensuring that silo cleaning is undertaken timeously prior to possible product contamination, build-up of material, and lost bin capacity

ECONOMICAL

- Reduce costs connected to "entry into confined space legislation"
- The system allows reclamation or recycling of vessel contents, this could reduce cleaning costs
- Improve storage capacity by eliminating build-ups and blockages
- Able to offer turnkey service to enable reduction of in-house labour cost
- Able to assist and fulfil your factory QA and ISO compliances

SPEED

- Faster than conventional methods
- Reduce time taken out of productive work
- Ability to clean more than one silo at the same time
- Materials removed from scaling to total blockage
- Production enhancement by overcoming blockages without disrupting production



INDUSTRIES & APPLICATIONS

Our vessel cleaning services, generally referred to as Silo Cleaning Services, are used in manufacturing, mining, construction, and agricultural facilities on a wide range of bulk materials to:

- Remove Product Build-Up
- Restore Flow Rates
- Recover Design Capacity
- Prevent Cross-Contamination
- Reclaim "Lost Material"
- Eliminate Combustion-Generating "Hot Spots"
- Decommission Storage Vessels at Facility Conversions or Shut-Downs

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