



Remove product build-up, eliminate "hot spots", reclaim "lost" material, restore flow rates, and recover design capacity with SILO SOLUTIONS Vessel Cleaning Service from the Field Services Group of AIRMATIC INC. Our factory trained, skilled technicians, using proven MARTIN Silo Cleaning Technology, will improve your storage system and upgrade your plant efficiency.

WHY MARTIN[®] SILO CLEANING TECHNOLOGY

Prevents Hazardous Confined Space Entry

Keep your people out of the vessel. SILO SOLUTIONS crews are OSHA and MSHA certified for Confined Space Entry.

Eliminates Vessel Damage

Effective cleaning system and experienced specialists clean without damage to walls, bottoms, or linings.

Improved Cleaning Technology

High-performance cleaning system removes more material per hour thereby reducing time on your job.

No Outage Required

Many facilities stay in operation during vessel cleaning. Or we can work when your plant is shut down – even Sundays and holidays.

Turnkey Service

Your staff can get on to other duties; our fully equipped rigs bring all the personnel and equipment required.

Economical Solution

After set-up, single operator provides fast, efficient cleaning. No hidden charges for compressors or fuel.

Reduced Mobilization Charges

Save even more with multiple vessels, multiple plants, regional or national agreements, or flexible scheduling.

Satisfaction Guaranteed

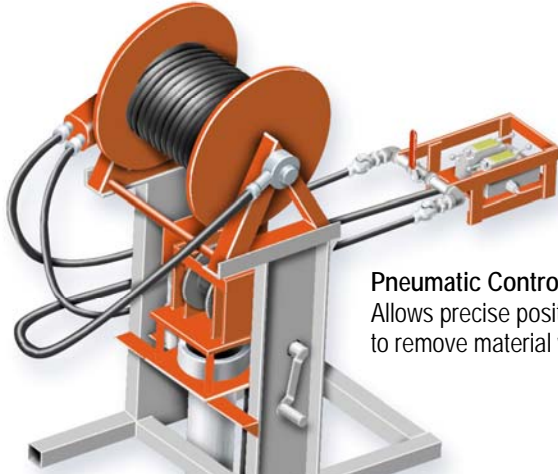
If not satisfied after one full shift that SILO SOLUTIONS Vessel Cleaning Service is the most economical method for removing non-flowing material, our crew(s) will return to headquarters and you won't be charged.



Storage Vessel Cleaning Services

Hose Reel

Separates from boom assembly for ease of transportation and set-up in tight quarters.



Pneumatic Controls

Allows precise positioning of cleaning head to remove material without risk to vessel.

Modular Boom

Extends to 30ft (9m), allowing cleaning of vessels up to 60ft (18m) in diameter from a single, central opening.

MARTIN BIN WHIP

Most cleaning projects are performed with a HD Bin Whip System. Other systems like – CHUNKBUSTER™ CO₂ Cartridges, and BIN DRILL™ Discharge Opener – are available as required.

- *Remove product build-up.*
- *Eliminate "hot spots".*
- *Reclaim "lost" material.*
- *Restore flow rates.*
- *Recover design capacity.*

Double Wire Braid Hose

Supplies strength for control. Air Motor provides powerful whip action to remove Even the most stubborn build-up from walls.

Cleaning Flails

Select from urethane-coated Rope whips with knuckles, or brass or steel chain to match stored material.



Bin Whip Requirements

Maximum Vessel Diameter (with single center access opening)	60ft (18m)
Maximum Vessel Height (to vessel discharge)	225ft (68.5m)
Minimum Opening	18in (450mm) square
Minimum Working Height	56in (1.4m)
Cleaning Unit Weight (Overall)	850 lb (385.5 kg)
Reel & Hose (by Sections)	267 lb (121.1 kg)
Air Unit	122 lb (55.3 kg)
Boom Modules	150 lb (68 kg)
Compressed Air Requirement	100 cfm @ 90 psi
Electrical Requirement	120 VAC (for lights)

Other Requirements

AIRMATIC may require an outage for equipment set-up or vessel cleaning, depending on your operation and material. AIRMATIC may require lift equipment to raise silo cleaning apparatus to the top of the vessel.

Solves Storage Problems

LOW COST, LESS TIME, WITHOUT SAFETY RISKS

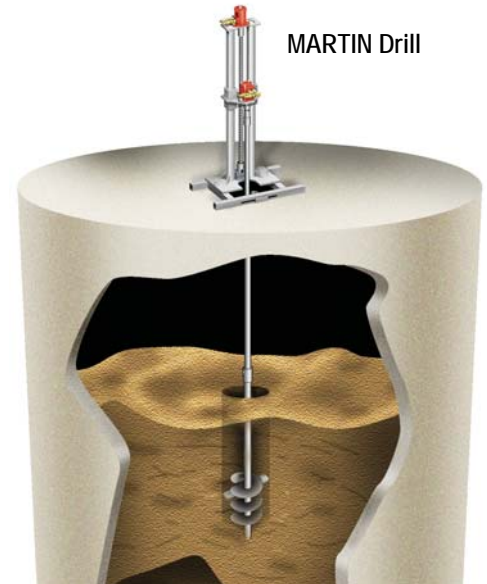
PROBLEM

Hazardous techniques
 Used to improve storage flow and capacity – like explosives, water, and air lances, and putting personnel inside the vessel.

SOLUTION

MARTIN Silo Cleaning Technology
 Eliminates entrapment and engulfment risk to plant personnel from confined space entry.

AIRMATIC Silo Cleaning technicians use remote control equipment from the top of the vessel to safely restore flow. These specialists are highly trained and safety-certified to current OSHA standards.



PROBLEM

Rat-holed, clinging, or built-up material interferes with product quality and restricts material flow.

SOLUTION

Heavy-duty MARTIN Bin Whip quickly removes hardened, non-flowing material from silo walls and feeders.

Precise, controlled cleaning head removes material from vessels up to 200' (60m) high. Boom reaches 28' (8.5m) from single 18" x 18" (450 x 450mm) opening in vessel top. Cleaning whips, chains, or brushes matched to material characteristics.

PROBLEM

Bridged or arched material Creates a "no flow" condition.

SOLUTION

MARTIN Drill
 Opens a flow channel through tough clogs.

Powerful hydraulic action of the MARTIN Drill bores through blockages, clearing a flow path at depths up to 150' (45m).



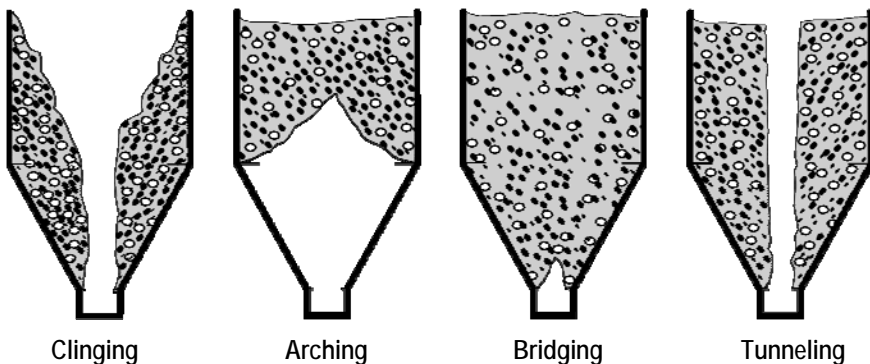
PROBLEM

Lumps of material
 Block the hopper discharge.

SOLUTION

MARTIN CHUNKBUSTER
 Dislodges blockages with powerful force of expanding CO₂ gas.

MARTIN CHUNKBUSTER uses non-explosive, 600 x expansion of CO₂ gas to fracture lumps, chunks, and compacted material, opening bin outlets and restoring flow.



The AIRMATIC / MARTIN TEAM – with a combined 125 years of experience in solving material flow problems – offers a full range of products and services to improve your plant's bulk solids handling processes.

Our Silo Solutions includes industry-leading technology like BIG BLASTER® Air Cannons, and MARTIN® Silo Cleaning Equipment, and pneumatic and electric rotary or linear vibration systems, combined with in-plant services, like:

- **Silo Cleaning Services**
- **"Turnkey" Installations**
- **Maintenance Services**

MARTIN® Silo Solutions from AIRMATIC INC means performance GUARANTEED to meet your expectations.



AIRMATIC's MATERIALS MANAGERMENTS GROUP is our Powder and Bulk Solids Handling Division for products and equipment used in the storage, transporting and processing of bulk solid materials. The equipment we offer includes conveyor components and accessories, power transmission and motion control products, level detection and measurement products, and vibrators and aerators to prevent or solve bulk solids flow problems. We offer over 10,000 line items in 8 product categories

We Make Bulk Materials Handling Cleaner, Safer, and More Productive.



Air Cannon Systems
Reducing cleanup labor and maintenance costs by removing residual material from conveyor belts.



Field Services
Improving the performance of material-handling systems through proper installation and maintenance.



Transfer Point Technologies
Improving belt conveyor efficiency by absorbing impact, preventing spillage, and improving belt tracking.



Belt Cleaning
Reducing cleanup labor and maintenance costs by removing residual material from conveyor belts.

AIRMATIC[®] INC.
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7317 State Rd Philadelphia, PA 19136-4292
24-hr Emergency Service 800.332.9770 x 2705
www.airmatic.com