

Blancon's Silo Management function provides services to economically remove, loosen and clean compacted materials from silos and bulk storage containers. Through our highly qualified crews, using our unique Silo-Clean System, silos are delivered to the client in a condition deemed "safe for human-entry." Our technique consists of various silo cleaning methods with no human entry, which emphasis on efficiency, safety and health directly related to entering a confined space.

## The Blancon Silo Cleaning Solution

Ever since materials have been stored in silos and bunkers etc., the problems associated with buildup, contamination and infestation have caused major headaches. For many years, a solution had been sought that would be efficient, cost effective and most importantly, *safe*.

Previous, antiquated methods to clean silos and bins have included:

- ▶ Explosives and Shot-gun based solutions – Extremely dangerous approach with high potential for structural damage to silo and obvious handling hazards to the operator and plant.
- ▶ Human Entry - Using hand-held equipments or machines are potentially dangerous and today, under most circumstances, actual entry into the silo is contrary to Government Regulations under Confined Space Legislation.
- ▶ High Pressure Wet Cleaning - In industries such as coal, the creation of sludge due to washing down the storage silo and in turn the dry fine dust created by the drying sludge raises important environmental concerns and hazardous materials handling costs. With food and chemicals, the problems of rust, bacterial growth and dangerous reactions can also take place with this method of cleaning.

Our unique, proprietary *Blancon Silo-Cleaning System* uses compressed air and the only safety procedures that have to be adhered to are that of normal operating practices when using compressed air:

- ▶ Silos from 1 to 25,000+ tons have been cleaned using our techniques. The silos have ranged from round to square in shape, to bunkers and tanks, constructed from materials as varied as concrete, steel, corrugated iron, fiberglass and fabric.
- ▶ Contents that can be cleaned down can vary in particle size, consistency and density, from flour to mineral ores, coal, cement, sugar, stock feed, wood chip, fly ash and grains.
- ▶ Our techniques can handle build-ups extending from several hundred kilos of contaminating dust on the ceiling and walls of a silo to total chokes of hundreds of tons with products varying in consistency from soft or sticky to those resembling concrete.
- ▶ Potentially explosive products, hazardous or toxic can be safely removed through our method of cleaning with little to no direct contact.
- ▶ Regular or programmed cleaning can maintain maximum silo capacity, operational efficiency, reduce contamination and eliminate infestation.

For most applications on a single silo operation, factory air of 250 cfm at 100psi would be adequate for cleaning requirements. For more difficult products, larger silos or simultaneous, multi silo clean downs, air at larger volumes and pressures is required with the employment of a mobile compressor usually necessary.

The System operation is extremely cost effective due to the quick set up time, speed of operation with our crews being able to clean out 2, 3 or even 4 silos simultaneously depending on silo size, product, problems and plant layout.

## At a Glance

### If you own one of these...

- ▶ type: silo, bin, bunker or tank
- ▶ shape: round or square
- ▶ construction: concrete, steel, corrugated iron, fiberglass or fabric
- ▶ capacity: 1 – 25,000+ tons
- ▶ product: vary particle size, consistency or density
- ▶ industry: agricultural, chemical, food, mining, etc.

### ...and face one of these problems...

- ▶ flow problem: blockage is causing production slowdown or stoppage
- ▶ maintenance: inspection or repair is interrupted by built-up
- ▶ material change: a decision to store different product
- ▶ contamination: product is infested naturally or due to bad QC

### ...then Blancon is your ideal silo maintenance service partner

- ▶ Customer-oriented approach to silo maintenance projects
- ▶ Highly efficient solution with ability to clean multiple silos simultaneously
- ▶ Elimination of need for extremely dangerous solutions based on explosives and ammunition
- ▶ Superior power and effectiveness than *Gyro Whip*-type solutions
- ▶ No need for human entry during cleaning operations
- ▶ Ability to clean ceilings, included inverted cones
- ▶ Rigorous focus on safety and with ISO 9001 and 14001 certified operations

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## Advantages of Blancon's Silo Cleaning Service

The advantages of our service are manifold. First, our techniques allow us to clean silos that *Whip*-based solutions cannot serve, such as silos with hard blocks and materials (e.g., clinker silos). Additionally, our solution allows us to clean ceilings, inverted ceilings, cones, air slides, corners etc. which *Whip*-based solutions are notoriously ineffective or incapable of cleaning. Second, we eliminate all need for explosives or ammunition – an antiquated and extremely dangerous approach. Lastly, the benefits of our services are found in the economic, safety and health value that we provide:

### Economic

- ▶ 2 - 5 times faster cleaning, minimum production disruption & reduce downtime
- ▶ able to clean more than one bulk storage at the same time
- ▶ reclaim & recycle product (subject to QC), which could help offset or reduce the cleaning cost
- ▶ reduce cost connected to "entry into a confined space legislation"
- ▶ greater standard of cleanliness (especially for food industry)
- ▶ improve storage capacity by eliminating blockage
- ▶ able to offer in turnkey basis to reduce client in-house labor cost
- ▶ able to assist & fulfill client factory QA and ISO compliance



### Safety

- ▶ no need for human-entry in confined space
- ▶ flammable, explosive, hazardous or toxic products can be safely removed
- ▶ no special safety measure, only standard operating procedures when using air compressor
- ▶ no damage to the ceiling, wall, lining, bottom or air slide

### Hygiene

- ▶ dry process, no water, no chemical and no explosives
- ▶ environmental friendly and no contamination

## Select Client Showcases – World-wide Successes

Our technique is well-proven has been effectively used over a wide range of industry sectors and clients, world-wide, from Europe to the Far East (additional and specific client references available upon request).

Cement	Minerals	Coal	Sugar	Stockfeed	Flour
▶ Lafarge	▶ Alcoa	▶ Flinders Power	▶ Coca Cola	▶ Coprice Feeds	▶ Nestlé Manufacturing
▶ Holcim	▶ A.C.I. Glass BHAS	▶ Leigh Creek Coalfield	▶ Cadbury-Schweppes	▶ Inghams Enterprises	▶ Kelloggs
▶ Heidelberg Cement	▶ Copper Mines of Tasmania	▶ Queensland Alumina	▶ APM	▶ Milne Feeds	▶ Buttercup Bakeries
▶ Australian Cement	▶ M.I.M.	▶ Red Head Colliery	▶ CSR Sugar	▶ Ridley Corp	▶ Gazelle Foods
▶ Blue Circle Cement	▶ Pasminco		▶ Sugar Australia	▶ Riverina Stockfeeds	▶ Graincorp
▶ Malaysian Cement Bhd	▶ Penrice Soda			▶ Sapragal	▶ Paradise Foods
				▶ Wesfeeds	

## High-light of Materials Our System Is Able to Handle

Silos have been effectively cleaned down to regain 100% capacity after 20-30 years of continuous build up. In many cases, product that has been "written off" many years previously can be re-cycled.

▶ Cement & clinker	▶ Flours	▶ Ores	▶ Sugar	▶ Coal	▶ Foods
▶ Grains	▶ Protein	▶ Coffee	▶ Hay	▶ Liquids	▶ Chemicals
▶ Plaster	▶ Meals	▶ Dusts	▶ Woodchip	▶ Seeds	▶ Sands
▶ Minerals	▶ Plastics	▶ Glass	▶ Nuts	▶ Cottonseed	▶ Detergent

*\* Select list of clients served by Blancon and its system partners*

## About Blancon

Blancon delivers a broad set of quality-oriented, leading edge commercial and industrial maintenance and cleaning solutions. Our solutions can help companies across industry sectors address on-going and one-time maintenance needs, such as Industrial Maintenance & Cleaning, Water Treatment, Facility Management & Anti-graffiti, Indoor Air Quality & White Room Maintenance and Silo Cleaning.

Blancon is headquartered in Madrid, Spain, and ISO 9001 & ISO 14001 certified.



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