Buchen GROUP

www.buchen-ics.com

CARDOX®

CO_2 Bulk breaking system

Series 37
Smaller tubes
1,200 bar pressure release

Series 57
Larger tubes
3000 bar pressure release

Often the quick and efficient method to disperse that troublesome plug, hang-up or blockage, or to compliment Binwhip and Bindrill- Safely

Cardox produces a controlled release of liquid CO_2 at up to 3,000 bar with the power to break set cement, rock and other hard compacted materials. Because it does not present a fire or explosion hazard, Cardox is widely used in locations where dust, chemicals or hazardous combustible materials are present. The expanding gas does not produce the high velocity shock wave of explosives, therefore will not damage vessel walls or produce flying debris.

SAFE NO CONFINED SPACE ENTRY

Access for tubes through entry points on outside of vessel and tube is securely fastened. The best way to avoid confined space entry hazards, is to avoid man entry altogether.

NO RISK OF VESSEL DAMAGE

The expanding gas is a heaving force and not an explosive blast. Will not transfer to vessel walls.

QUICK AND EASY

Light and easily transported, no heavy and cumbersome machinery. Easy access in tight spaces.

WORKS IN VARIETY OF MATERIALS

Soft as talc or hard as rock. Cardox will break and disperse it.

- hardened cement
- wood chips
- coal
- salt
- powder
- rock
- feed
- fly ash
- fertiliser
- hydrated lime
- soybean meal
- wheat meal

Safer
Faster
Easier

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CARDOX®

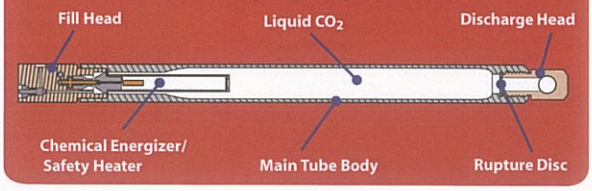
CO_2 Bulk Breaking System

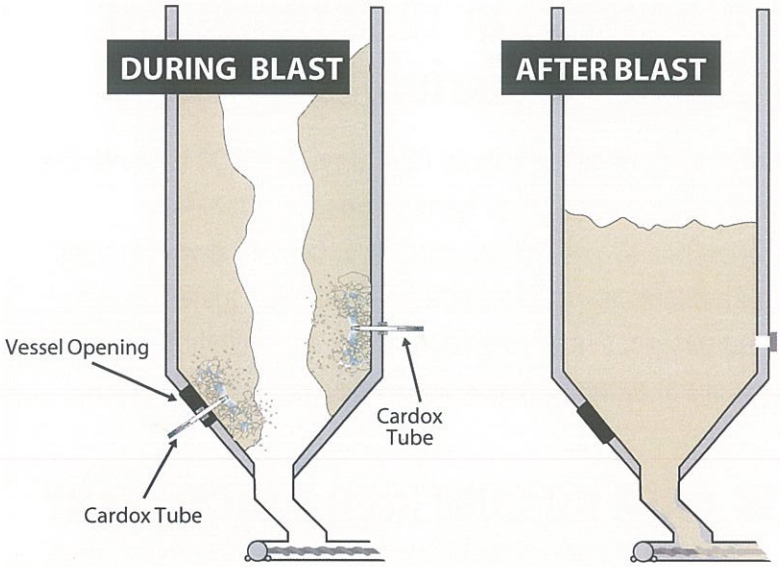
Bulk Breaking Technology

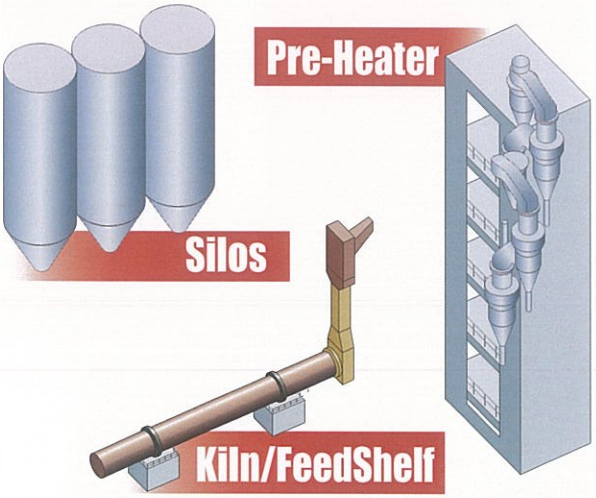
Cardox is the modern answer to the problem of removing solid material that is blocking a storage vessel. Originally developed to use in fiery coal seams. the Cardox System utilises a release of inert carbon dioxide gas, the same gas used in fire extinguishers, making it suitable for use with hazardous, flamable or combustible materials. The rapid release of carbon dioxide gas produces a powerful heaving force that pushes on the solid material effectively breaking it up into smaller particle sizes that can be removed and handled for further processing.

How the Cardox Tube Works

The Cardox system consists of a high-strength reusable steel tube filled with liquid carbon dioxide (CO_2) that is energised with a small electrical charge. The expanding CO_2 is released through a discharge nozzle, creating a powerful pushing force reaching pressures upto 3000 bar. Tons of blockage can be dislodged by a single blast in milliseconds.



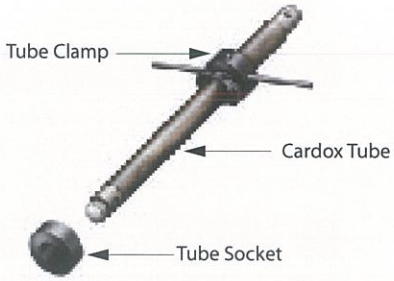




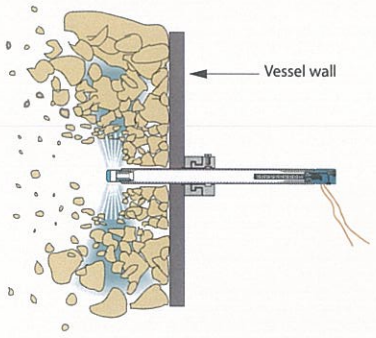
When recurrent build-up occurs in given location inside vessel (cone, discharge port, etc.) permanent fittings can be installed on the outside of vessel to accomodate Cardox Tubes.

Safer Faster Easier

Permanently fitted Tube Socket. When build up occurs sealing plug is taken out and tube inserted through socket.



Cardox Tube ready to be inserted into Socket. A sealing coupling is then quickly achieved using the mating Tube Clamp.



After achieving secure coupling, Tube is fired from a distance and build-up removed. Tube is then taken out and sealing plug put back nto place until another build-up occurs.

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