

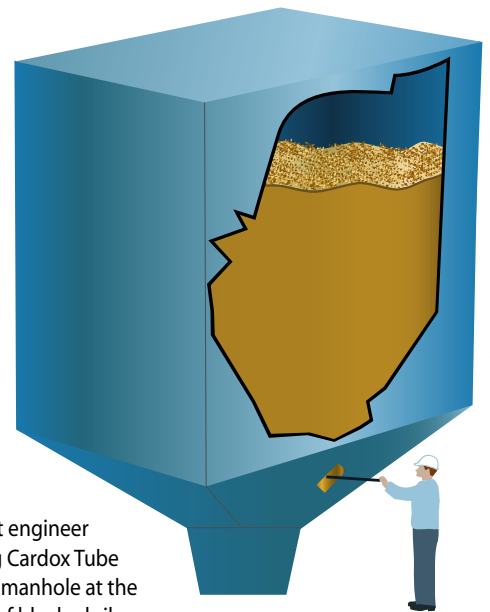
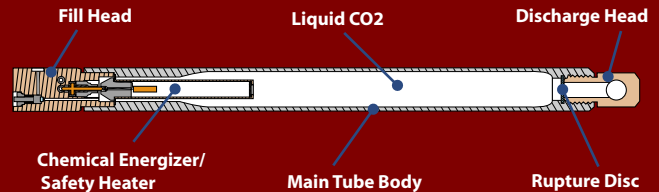
# Cardox Blockage Clearing System

*Removing tons of material safely and quickly.*

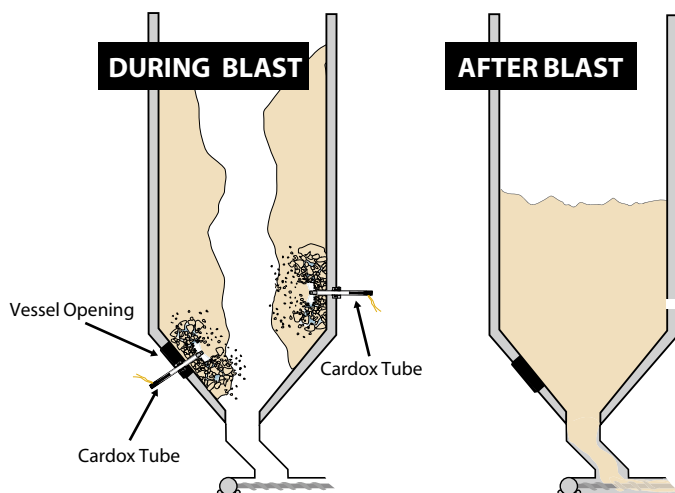
**CARDOX is the modern answer to the problem of removing solid material that is blocking a storage vessel. Originally developed to use in fiery coal seams, the CARDOX System utilizes a release of inert carbon dioxide gas, the same gas used in fire extinguishers, making it suitable for use with hazardous, flammable 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<sub>2</sub>) that is energized with a small electrical charge. The expanding CO<sub>2</sub> is released through a discharge nozzle, creating a powerful pushing force reaching pressures up to 39,000 psi. Tons of blockage can be dislodged by a single blast in milliseconds.



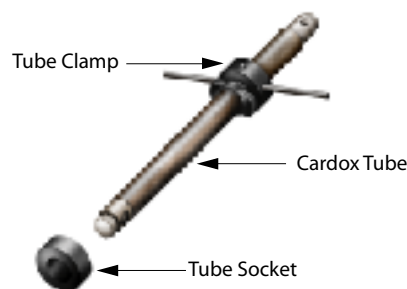
Pneumat engineer inserting Cardox Tube through manhole at the bottom of blocked silo.



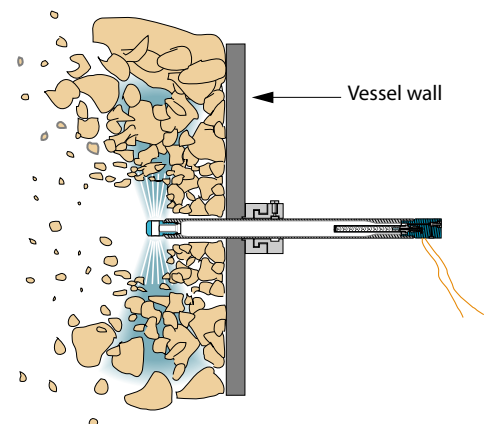
**When recurrent build-up occurs in given location inside vessel (cone, discharge port, etc.) permanent fittings can be installed on the outside of vessel to accommodate Cardox Tubes.**



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 in place until another buildup occurs.