Cable Arm Inc.

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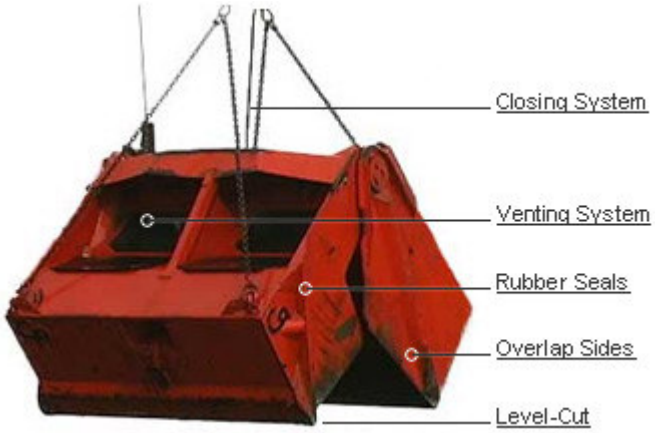
Environmental
Features
. Level-Cut
. Overlap Sides
. Closing System
. Venting System
. Rubber Seals
Add-ons
Photos
Navigational
Bulk Material
ClamVision

Clamshell Features

Cable Arm's Environmental Clamshells are designed with a variety of features that increase productivity and minimize redredging.



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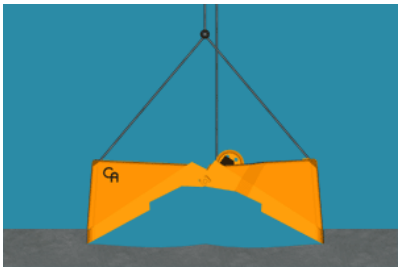
Level-Cut® Technology

In environmental dredging it is essential to remove contaiminated sediment in a uniform fashion. Our environmental clamshells feature a patented Level-Cut® footprint to make this possible.

Canada's Environmental Technology Verification program has verified our level-cut abilities. view fact sheet



As the clamshell closes, the sides draw together and the pivot point lifts, leaving a large rectangular footprint that is very close to level.

Each successive bite then overlaps the previous bite to ensure complete sediment removal.

Level-Cut® Video

See our patented Level-Cut technology in action. You will need RealPlayer.

Low Bandwidth Video

High Bandwidth Video

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Overlap Side Plates

As the clamshell closes, removed material attempts to squeeze out the sides of the bucket. This is often refered to as windrowing. To help elimate this problem our environmental clamshells feature overlapping side plates keeping material in place.

The overlapping side plates increase the cross-sectional area of the sides of the bucket, enclosing the material inside of the bucket with no where to go.

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Closing System

The Cable Arm clamshell works on a two-cable system. One cable is attached to four spreader cables, which control the opening and closing of the bucket. The second cable draws the clams together and lifts. Creating a level-cut in the sediment, which is essential for precision dredging.

Closing System Video

See our clamshell bucket's unique closing system. You will need RealPlayer.

Low Bandwidth Video

High Bandwidth Video

Unlike conventional clamshells, our Level-Cut® clamshells swing open under their own weight. This eliminates the need for counterweights, which:

. Lowers overall weight
. Increases payload

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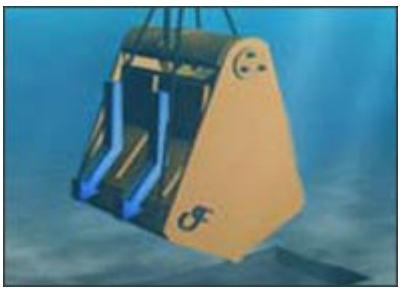
Venting System

Every Cable Arm clamshell is equipped with a passive venting system. This venting system serves 3 purposes:

Open While Lowering

While the bucket is being lowered, the vents open - allowing water to flow through. This reduces downward water pressure and helps to minimize resuspension.



Closed When Raising

When the bucket is raised, the vents close - reducing the possibility of water washing material out of the bucket.

Drain Excess Water

Once the bucket reaches the surface, excess water is drained through the vents, avoiding excess dewatering costs.

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Rubber Seals

To prevent material from being spilled, the sides of our environmental clamshells are equipped with strong rubber seals. These seals form a tight bond when the clamshell is raised that material cannot penetrate.

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. Dredge Cell
. WashTank
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Wash Tank

To keep material from being resuspended in the water column, material adhering to the sides of the clamshell must be removed. Cable Arm's environmental dredging system uses a wash tank to remove this material.

This can either be a stand alone wash tank manufactured by Cable Arm, or some other piece of equipment converted to a wash tank.

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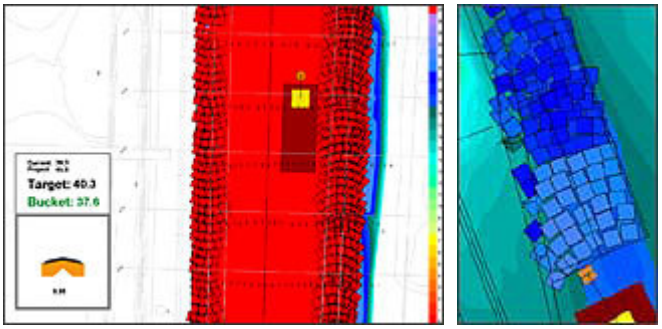
ClamVision

Cable Arm's ClamVision software, is a fully integrated dredge positioning system. ClamVision gives crane operators a real time view of the barge and clamshell bucket positions as they exist over the dredging project.

ClamVision displays a 3D, color coded surface derived from existing hydrographic survey data. Each bite is also recorded and color coded based on bite depth or bites left. Deeper bites cover more shallow bites for easier viewing. To further help the operator, an information box provides instant feedback showing current depth, final project depth, target depth, and current bucket depth.



Projects requiring uniform removal over a specified area can be difficult for some dredging systems. (Ex. the bottom is constantly sloping and the specifications call for 1 ft of material to be removed throughout.) ClamVision has a separate mode specifically for these situations. In this mode, color is no longer directly tied to depth, but is tied to the “distance to completion."