



Dredge Profile – Arc Option

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I am going to explain a rarely used yet powerful option in dredge profile - “arc” mode.

FIGURE 1. DREDGEPACK®
Profile Setup

It gives you many choices to configure. For each arc you have to define the center, radius, and sweep angle and the center beam direction.

Choices for the arc centers are located in the combo box labeled as “Center”. It contains a list of all available vessels, the current target, and ‘automatic mode’.

- **If your choice is a vessel**, the selected vessel will be the arc center. The arc radius will be the distance from the selected vessel to dredge tool mobile.
- **If the selected vessel is the dredge tool itself**, the radius edit box becomes active and you have to enter the radius manually.
- **Current target** will place arc center in the current target position.
- The “**Automatic**” option will look for a special device driver that provides arc center (it is usually installed on spud).

FIGURE 2. *Center Beam Direction*

The next thing to decide is the Profile Orientation. It can be the digging tool ('Vessel' - the most probable choice), current line, or center line (if it is available). The sweep angle is calculated from the arc radius and profile width. (The profile width must be less than $2\pi \times \text{radius}$.)

The program creates a set of equally spaced points along the arc with the distance less than the matrix cell size.

The matrix and channel depth is calculated for each point.

The profile picture is obtained by rectifying arc points in the profile plane.

