CUTTER SUCTION DREDGES

Cutter Suction or Hydraulic dredges are floating platforms equipped with a rotating cutter that excavates the sea floor, feeding the loosened material into a pipe and pump system that transports the material and water slurry up to typical distances of five miles. Transport distances can be extended by the addition of booster pumps in the pipeline route.

This method is most suited where the disposal location is within an economic direct pumping distance from the dredging location, typically no more than six miles. These dredges can pump a slurry of all types of material: mud, sand, clay and rock. The ability to dredge stiff or hard material is dependant on the size and weight of the dredging equipment and the installed power of the cutter, the ability to pump heavy material is dependant upon the installed power and size of the pumping systems.

### TEXAS

**Dimensions**
- Length: 305 ft (93.0 m)
- Breadth: 66 ft (20.1 m)
- Depth: 15 ft (4.6 m)
- Draft: 11 ft (3.4 m)
- Overall Length: 355 ft (108.2 m)

**Operating Parameters**
- Dig Depth Range: 15 to 94 ft (4.6 to 28.7 m)
- Suction Diameter: 34 in (864 mm)
- Discharge Diameter: 30 in (762 mm)
- Ladder Weight: 670 tons (607,814 kg)

**Machinery & Power**
- Cutter Power: 4,000 hp (2,983 kW)
- Total Installed Power: 20,430 hp (15,233 kW)

### OHIO

**Dimensions**
- Length: 275 ft (83.8 m)
- Breadth: 72 ft (21.9 m)
- Depth: 16 ft (4.9 m)
- Draft: 9 ft (4.9 m)

**Operating Parameters**
- Dredging Depth: 11.5 to 79 ft (3.5 to 24.0 m)
- Suction Diameter: 34 in (864 mm)
- Discharge Diameter: 30 in (762 mm)
- Ladder Weight: 807 tons (732,098 kg)

**Machinery & Power**
- Cutter Power: 4,500 hp (3,355 kW)
- Total Installed Power: 15,750 hp (11,743 kW)
CAROLINA

Dimensions
Length: 263 ft (80.2 m)
Breadth: 65 ft (19.8 m)
Depth: 15 ft (4.6 m)
Draft: 11 ft (3.4 m)
Overall Length: 341 ft (103.9 m)

Operating Parameters
Dig Depth Range: 14 to 84 ft (4.3 to 25.6 m)
Suction Diameter: 34 in (864 mm)
Discharge Diameter: 30 in (762 mm)

Machinery & Power
Cutter Power: 3,000 hp (2,237 kW)
Total Installed Power: 15,620 hp (11,646 kW)

CALIFORNIA

Dimensions
Length: 208 ft (63.4 m)
Breadth: 50 ft (15.2 m)
Depth: 15 ft (4.6 m)
Overall Length: 291 ft (88.7 m)
Draft: 10.5 ft (3.2 m)

Operating Parameters
Dig Depth Range: 11.5 to 93 ft (3.5 to 28.3 m)
Suction Diameter: 34 in (864 mm)
Discharge Diameter: 30 in (762 mm)
Ladder Weight: 325 tons (294,840 kg)

Machinery & Power
Cutter Power: 2,400 hp (1,789 kW)
Total Installed Power: 18,972 hp (14,146 kW)

FLORIDA

Dimensions
Length: 190 ft (57.9 m)
Breadth: 60 ft (18.3 m)
Depth: 14 ft (4.3 m)
Overall Length: 524 ft (159.7 m)

Operating Parameters
Dig Depth Range: 25 to 95 ft (7.6 to 29.0 m)
Suction Diameter: 37 in (940 mm)
Discharge Diameter: 36 in (914 mm)

Machinery & Power
Cutter Power: 3,000 hp (2,237 kW)
Total Installed Power: 25,400 hp (18,938 kW)
<table>
<thead>
<tr>
<th>Ship</th>
<th>Dimensions</th>
<th>Operating Parameters</th>
<th>Machinery &amp; Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILLINOIS</td>
<td>Length: 220 ft (67.1 m)</td>
<td>Dig Depth Range: 11 to 75 ft (3.4 to 22.9 m)</td>
<td>Cutter Power: 1,785 hp (1,331 kW)</td>
</tr>
<tr>
<td></td>
<td>Breadth: 67 ft (20.4 m)</td>
<td>Suction Diameter: 34 in (864 mm)</td>
<td>Total Installed Power: 11,350 hp (8,464 kW)</td>
</tr>
<tr>
<td></td>
<td>Depth: 12.5 ft (3.8 m)</td>
<td>Discharge Diameter: 30 in (762 mm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overall Length: 309 ft (94.2 m)</td>
<td>Ladder Weight: 502 tons (455,407 kg)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Draft: 9 ft (2.7 m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALASKA</td>
<td>Length: 220 ft (67.1 m)</td>
<td>Dig Depth Range: 11 to 87 ft (3.4 to 26.5 m)</td>
<td>Cutter Power: 1,400 hp (1,044 kW)</td>
</tr>
<tr>
<td></td>
<td>Breadth: 56 ft (17.1 m)</td>
<td>Suction Diameter: 34 in (864 mm)</td>
<td>Total Installed Power: 11,315 hp (8,438 kW)</td>
</tr>
<tr>
<td></td>
<td>Depth: 12.5 ft (3.8 m)</td>
<td>Discharge Diameter: 30 in (762 mm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overall Length: 312 ft (95.1 m)</td>
<td>Ladder Weight: 335 tons (303,907 kg)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Draft: 8 ft (2.4 m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PONTCHARTRAIN</td>
<td>Length: 170 ft (51.8 m)</td>
<td>Dig Depth Range: 10 to 65 ft (3.0 to 19.8 m)</td>
<td>Main Pump Power: 4,000 hp (2,983 kW)</td>
</tr>
<tr>
<td></td>
<td>Breadth: 39 ft (11.9 m)</td>
<td>Suction Diameter: 28.5 ft (724 mm)</td>
<td>Total Installed Power: 6,000 hp (4,474 kW)</td>
</tr>
<tr>
<td></td>
<td>Depth: 10 ft (3.0 m)</td>
<td>Discharge Diameter: 27 in (686 mm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overall Length: 243 ft (74.1 m)</td>
<td>Ladder Weight: 175 tons (158,760 kg)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Draft: 7 ft (2.1 m)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dimensions
Length: 91.8 ft (28.0 m)
Breadth: 9.6 ft (2.9 m)
Depth: 4.6 ft (1.4 m)
Draft: 4.6 ft (1.4 m)

Operating Parameters
Dig Depth Range: 8.2 to 52.5 ft (2.5 to 16.0 m)
Suction Diameter: (600 mm)
Discharge Diameter: (550 mm)

Machinery & Power
Total Installed Power: 3,350 hp (2,498 kW)

Dimensions
Length: 112 ft (34.1 m)
Overall Length: 138 ft (42.1 m)
Draft: 4.0 ft (1.2 m)

Operating Parameters
Dig Depth Range: 4 to 45 ft (1.2 to 13.7 m)
Suction Diameter: 20 in (508 mm)
Discharge Diameter: 18 in (457 mm)

Machinery & Power
Cutter Power: 250 hp (186 kW)
Total Installed Power: 1,665 hp (1,242 kW)