

***Dredging  
Supply  
Company, Inc.***



***“The World’s  
Leader in Portable  
Dredges”***

# DREDGE

“An apparatus for scooping or sucking up mud, sand, rocks, aggregate and other materials, as in deepening or clearing channels, harbors, etc.”

For optimum efficiency, the operator must be able to excavate the bottom and place the excavated sediment into suspension, transport it to a designated disposal site and maneuver the dredge into position to allow for continuous excavation. Where bottom sediments are not free flowing, dredge owners and operators routinely utilize and benefit from excavating devices such as cutter heads, bucket wheel excavators, cutting jets and viscous excavators. Dredge pump manufacturers advise dredge owners of the production benefits available through the use of underwater pumps, suction jets and more efficient impellers, which increase the dredge's load-bearing capacity.

Dredge customers who have taken advantage of the latest mooring and maneuvering systems developed to increase productivity for specific deposits, can attest to their positive impact.



## ***About the Front Cover:***

*Dredging Supply Company, Inc. designed and manufactured the 18" (457mm) Custom Electric dredge for Renda Marine, Inc. to reclaim the Lake at White Rock located in Dallas, Texas. This White Rock project was completed one year ahead of schedule and under budget.*

## Who Is Dredging Supply Company, Inc.?

### Company History

Established in 1989 by Thomas "Tommy" Wetta and his two sons, William and Robert, Dredging Supply Company, Inc. (DSC) has unmatched experience in this highly specialized industry. DSC achieves continued growth through maintaining satisfied, repeat customers. Tommy has over 45 years of experience in the dredging industry. William "Bill" is a mechanical engineer whose accomplishments include a patent on the viscous excavator. Robert "Bob" has a finance background and specializes in parts replacement.

### DSC Staff

#### includes the following departments:

Accounting - A full professional staff with in-house CPA, Accounts Payable, Accounts Receivable and Financing  
Engineering - Engineers, Engineers-in-Training, Designers, Draftsmen and Technology Transfer  
Sales/Marketing - Technically oriented staff  
Production/Customer Satisfaction - Manufacturing, Quality Control, Parts, Electronics, Hydraulics, Mechanical and Fabrication

Dredging Supply Company's engineering, marketing and corporate office is located at 5700 Citrus Boulevard, Suite A-2 in Harahan, Louisiana, 70123. DSC owns and operates a five acre manufacturing facility in St. John the Baptist Parish, Louisiana. Several individuals at DSC are part owners of Best Equipment Technologies, a large steel fabrication facility in Mississippi, which provides most of DSC's steel work. DSC's manufacturing is augmented by subcontractors throughout the southern United States.

### Company Philosophy

At DSC, we are the world's leader in design and manufacture of portable dredges. We have earned this title with our hands-on philosophy. Providing satisfactory customer service and doing whatever it takes are two examples of DSC's pledge to its customers. DSC is committed to keeping

customers informed of the most recent trends in dredging, including new technology research.

DSC and its staff maintain active membership in the following organizations and associations:

**WEDA** - Western Dredging Association

**ARTBA** - American Road Transportation and Builders Association

**CIMA** - Construction Industry Manufacturers Association

**NSPE** - National Society of Professional Engineers

**LES** - Louisiana Engineering Society

**ASME** - American Society of Mechanical Engineers

**SAE** - Society of Automotive Engineers

**AISC** - American Institute of Steel Construction

**LCPA** - Louisiana Society of CPA's

Better Business Bureau

World Trade Center

Elmwood Business Association

St. John the Baptist Economic Development Association

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DSC has a patent on a viscous excavator used internationally in environmental clean up.

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DSC has submitted technical presentations at various seminars including the National Aggregate Association and the Phosphate Council.



*Left to right: Bill Wetta, Tommy Wetta and Bob Wetta*

## Why Choose DSC?

Dredging Supply Company, Inc. is owned and operated by engineers and is an interactive company which understands downtime, your production and bottom line. We work closely with our customers - our home telephone and beeper numbers are printed on our business cards! Each dredge is customized for optimum project performance. DSC provides free technical assistance including computerized dredge production print outs, pipeline analyses, project feasibility studies and cutter calculations. Our concern, experience and engineering sets DSC apart from our competitors.

- **Quality Personnel**
- **Skilled Technicians**
- **Vision**

Regardless of time differences around the globe, no matter where a customer (or the dredge) is located, accessibility is the DSC offering.

DSC follows both the letter and the spirit of OSHA and MSHA laws, rules and regulations to assure safety.

- **Value**
- **Quality**
- **Rapid Turn Around**
- **24 Hour Accessibility**
- **Engineering**
- **Hands-On**
- **Superior Custom Designs**
- **Dependable Service**



*Custom land based dredging system*

## ***What Can You Expect From DSC?***

Dredging Supply Company delivers the best customized product for your job needs. Coupled with our hands-on philosophy, superiority in design provides our customers with the assurance that DSC is the right choice.

We will work with your engineering team or from a basic hand-drawn design. (DSC has even designed a dredge, which developed through various stages from a paper napkin sketch!) First, DSC's trained personnel analyze your job specifics. Once your needs have been assessed, the design/build phase begins. Finally, the finished product undergoes quality inspection and testing. This phase serves a dual purpose: To familiarize the customer with dredge operation and performance, while providing valuable on-site training.

## ***The DSC Pledge***

- **Superior Design Customization**
- **Global Service**
- **Portability**
- **Technical Assistance**
- **Options**

DSC designs a variety of dredges. Combination, environmental, maintenance, articulating ladder, sand and gravel and various other mining dredges, including underwater pump, are available.

Customer consultation to help determine when to use a dredge as opposed to a crane, backhoe or dragline is also a DSC specialty. Often the dredge is a more efficient and effective method of excavation and transport.



## **MINING**

Sand  
Gravel  
Coal  
Gold  
Precious Metals  
Phosphate  
Salts

## **RECREATIONAL**

Marinas  
Lake Restraint

## **CONSTRUCTION**

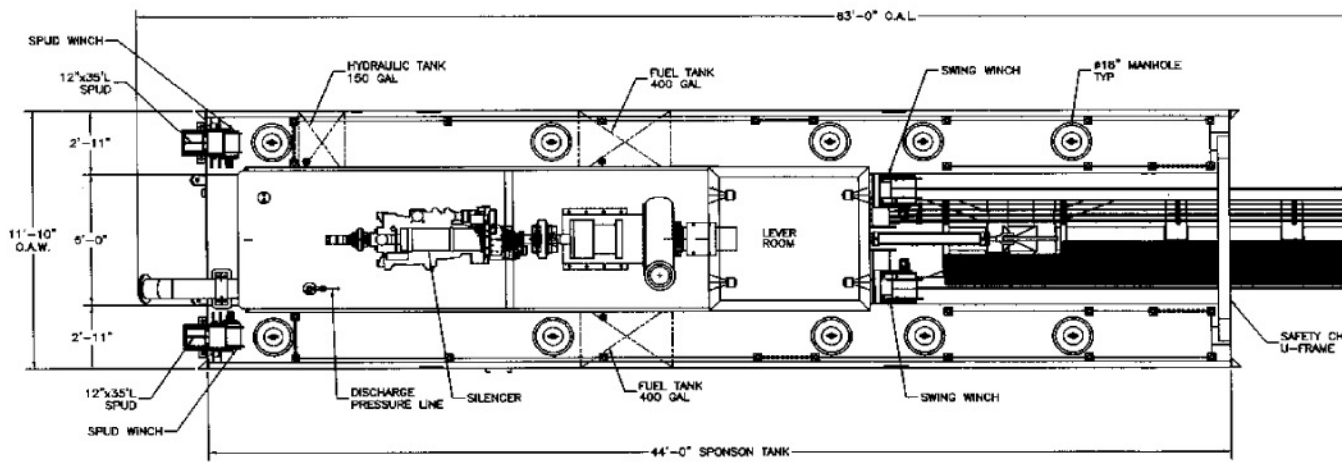
Harbors  
Docks  
Canals  
Landfill

## **ENVIRONMENTAL**

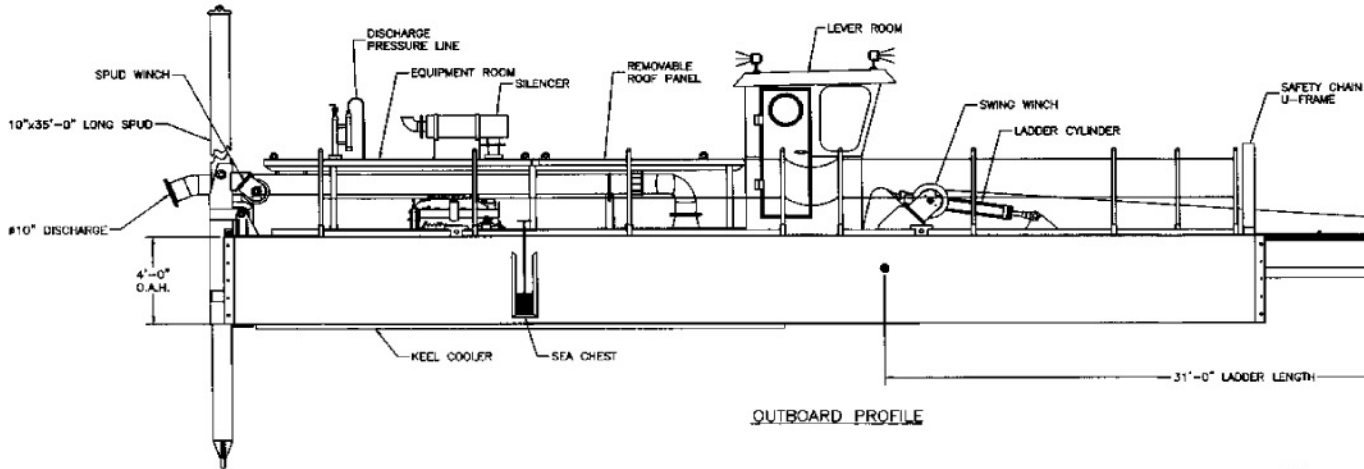
Bioremediation  
Wetlands Mitigation  
Hazardous Waste

## **AGRICULTURAL**

Drainage  
Irrigation Control



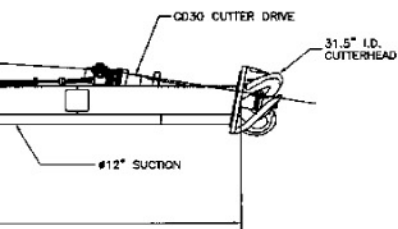
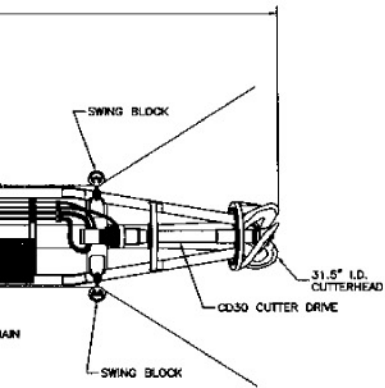
PLAN VIEW



OUTBOARD PROFILE

THIS DOCUMENT AND ALL INFORMATION CONTAINED HEREON IS THE PROPERTY OF DREDGING SUPPLY COMPANY, INC. AND MUST NOT BE MADE PUBLIC, DUPLICATED OR USED IN ANY WAY DETRIMENTAL TO OUR INTEREST. IT IS FURNISHED SUBJECT TO RETURN ON DEMAND UNLESS FURNISHED UNDER CONTRACT PROVISIONS.





DREDGING SUPPLY COMPANY  
DSC 12" x 10" SHARK DREDGER  
Scale: N.T.S. | Revision: 0 | Date: 8/20  
GENERAL ARRANGEMENT  
JOB # CSC-R97-002 | Drawn By: N.J.G. | DWG. # 97-002-001

**Reliability**

**Durability**

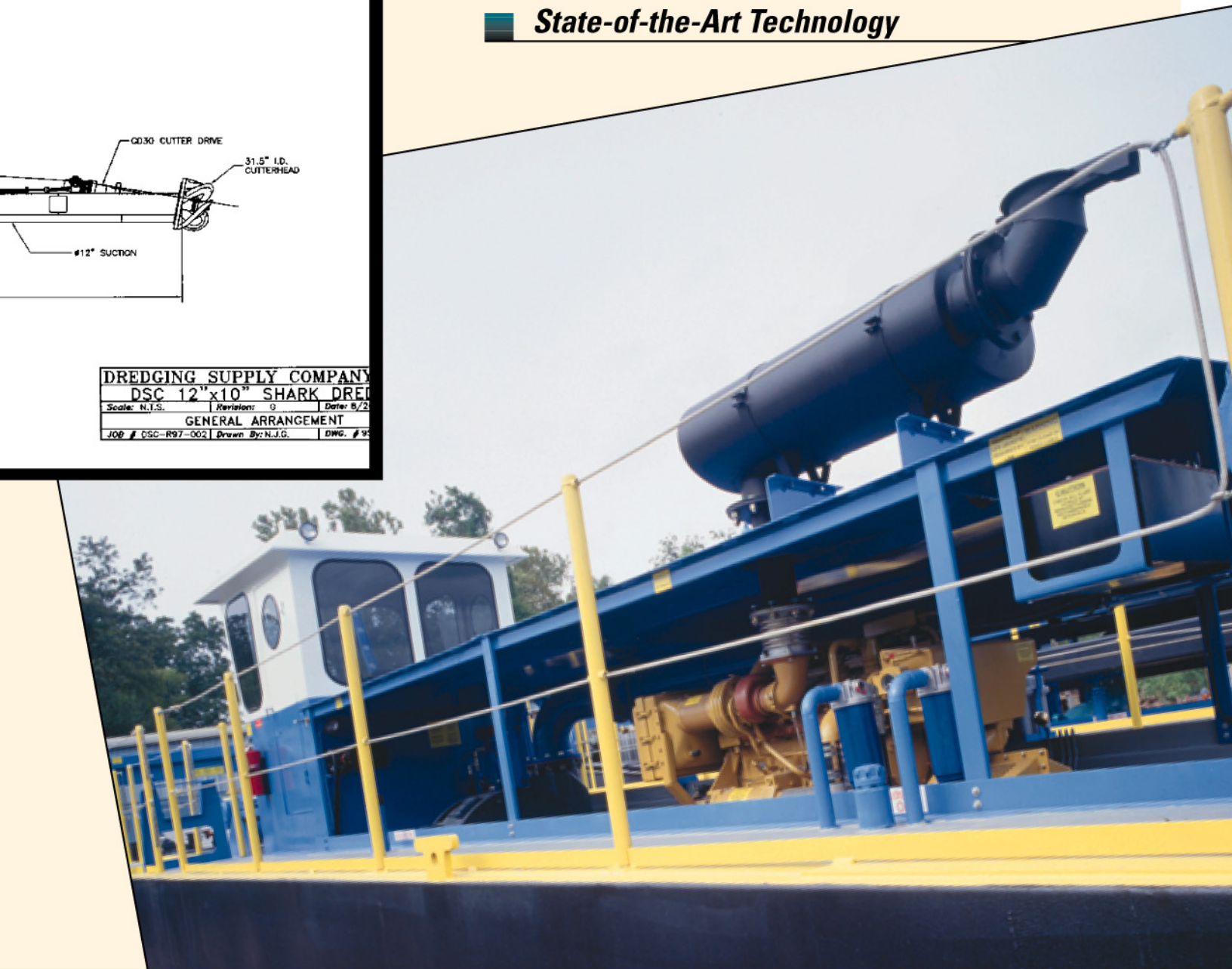
**Serviceability**

**Safety**

**Portability**

**Resale Value**

**State-of-the-Art Technology**



## Standard Product Line:

Our five most commonly used dredges are:



### Piranha

The Piranha class dredge offers the ultimate in portability for a true cutterhead dredge. This small rugged dredge is available in both 6" (152mm) and 8" (203mm) sizes. A 22'-0" (6.7m) cutterhead ladder and 8" (203mm) spuds are standard.



### Shark

The highly portable Shark class cutterhead dredge is designed for the demanding requirements of contractors and mining operations. The Shark is the most flexible in design allowing for a discharge range from 10" (254mm) to 16" (406mm). It is easily customized for a variety of job conditions. The Shark class dredge can dig deeper, pump farther and produce more than any of its competitors.



### Barracuda

Dredging Supply Company's Barracuda class portable dredge offers what no other production dredge can offer: conventional dredging with spuds and wires and articulating ladder operation with no external wires or cables. The Barracuda possesses the ability to easily change from conventional operation to articulating ladder operation in minutes. The wide range of discharge sizes from 8" (203mm) through 16" (406mm) is ideal for contracting, dock work, marinas and more.



### Moray

The 8" (203mm) Moray class dredge is a light contractor's dream machine allowing for easy change from conventional to articulating ladder. An auger attachment is also available.



### Marlin

Dredging Supply Company's Marlin class underwater pump mining dredge provides the most efficient pumping system at deeper depths. With these submerged pump machines, performance increases with mining depth. Available in 8" (203 mm) to 20" (508 mm), all Marlins are tailored to specific job/customer requirements.

## Superior Custom Designs

In addition to the standard product line, DSC manufactures specialized dredges to meet the customer's specific requirements.

Dredging Supply Company manufactures hydraulic suction or hydraulic cutting dredges. DSC dredges transport material using water rather than mechanical transportation via dragline or backhoe.



*Custom Console*



*Moray Dredge Console*

*8" (203mm) Piranha Portable Dredge*







*20" (508mm) Electric Marlin Class Dredge*

## ***How do we determine the best way to customize a dredge?***

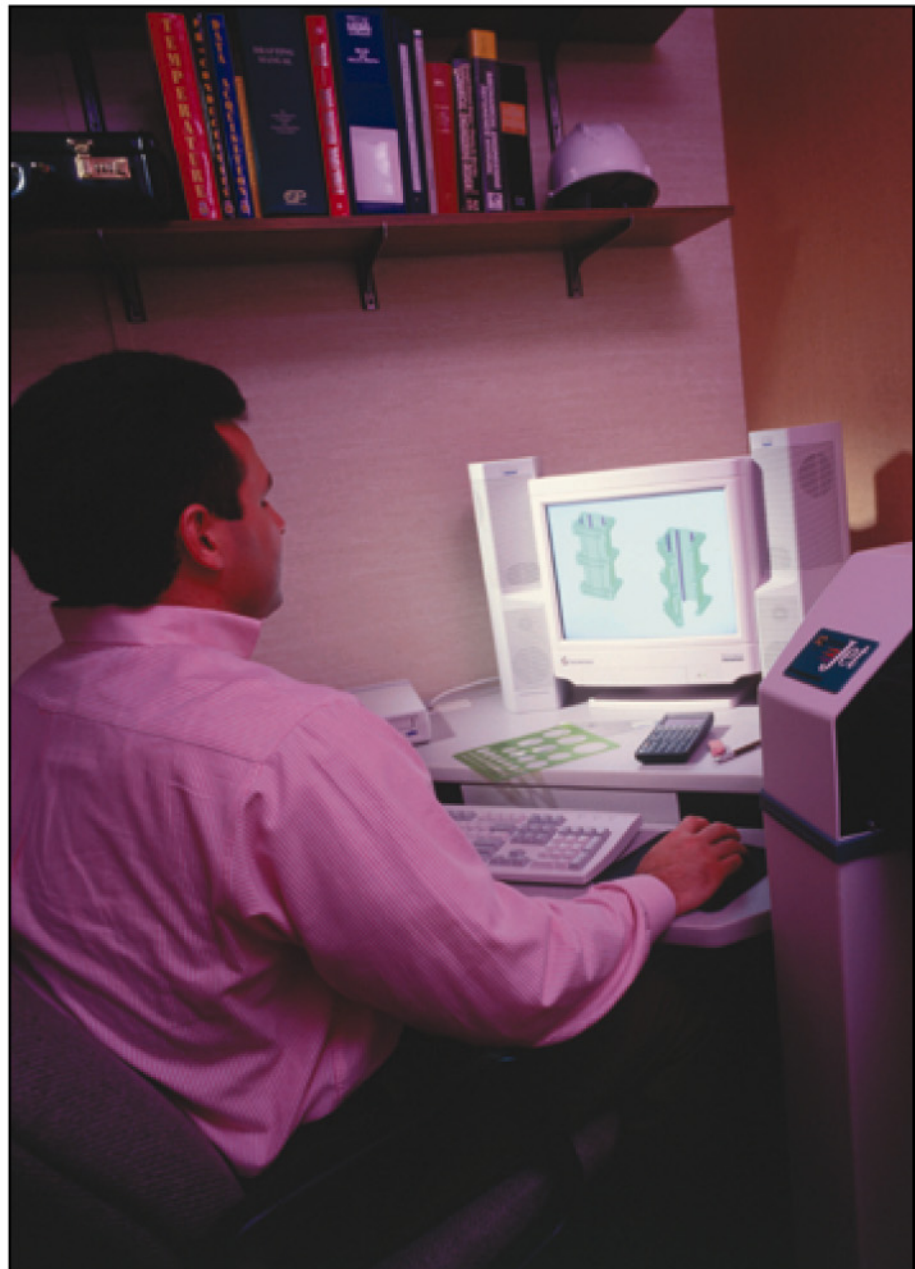
First, we consider what material is being excavated. Then, we look at the digging depth and pipeline length needed to move the material. Next, we consider the above water elevation and the desired rate at which the material should be moved. Finally, we review site conditions such as weather, current, wave/tidal activity and whether it will be manned, operated by remote control or automated. All these factors are incorporated into the design of a particular dredge, along with budget, delivery date, etc.

### ***Technology***

The introduction of computer technology into the small dredging market has had a dramatic effect both on the initial dredge design and on the estimate of dredge production. Computer-aided design (CAD) has allowed the small dredge to compete favorably with other mining devices by eliminating much of the guess work during design. Structural programs analyze hull, ladder and spuds for structural integrity. Cutter programs design for the proper shape, size and speed for different materials. Computer drawings allow for designs which permit equipment to be best located for ease of maintenance, minimal space requirements and overall appearance.

Computer estimating of dredging jobs and productions go hand-in-hand with computer design. Basic information such as the required flow and pressure rates determine the necessity for booster pumps, suction jets and underwater pumps. These programs supply mining operations with an accurate range of expected production time, fuel consumption and maintenance needs before their dredging operation goes on line.

An assortment of job print outs is available in the field to assist in trouble shooting or customer requests.





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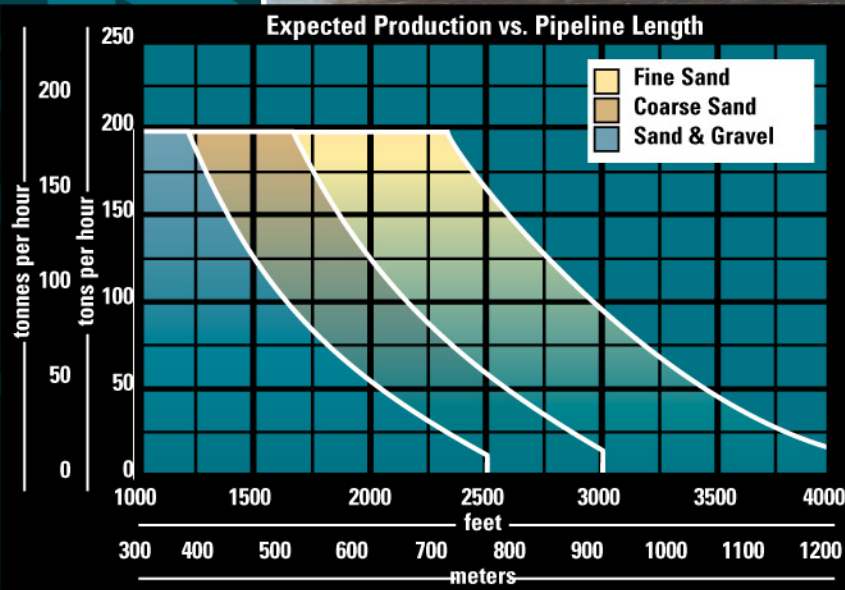
E-Mail: [dredge@dscdredge.com](mailto:dredge@dscdredge.com)

URL: <http://www.dscdredge.com>



# PIRANHA

## Portable Dredge



Dredging Supply Company's *Piranha* class portable dredge offers the ultimate in portability for a true cutterhead dredge. This small rugged dredge is available in both 6" (152mm) and 8" (203mm) sizes. A 22'-0" (6.7m) cutterhead ladder and 8" (203mm) spuds are standard.

- Chart based on 10" (254mm) SDR 17 polyethylene pipe
- Chart based on 15 feet (4.5m) digging depth and 10 feet (3m) discharge elevation
- Chart based on fine sand 125 micron, coarse sand 500 micron, gravel 8,000 micron

**Dredging  
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Company, Inc.**



# PIRANHA

## Portable Dredge

8" (203mm) Piranha Dredge

## SPECIFICATIONS

### General

|                              |                       |
|------------------------------|-----------------------|
| Overall length (with ladder) | 43'-0" (13.1 m)       |
| Overall width                | 11'-6" (3.51 m)       |
| Hull depth                   | 4'-0" (1.22 m)        |
| Height (trucking)            | 10'-6" (3.2 m)        |
| Mean draft (with fuel)       | 2'-4" (0.71 m)        |
| Fuel capacity                | 500 gallons (1,892 l) |
| Dry weight                   | 45,000 lb. (20 tons)  |

Single truck transportable

### Operating Conditions

|                               |  |
|-------------------------------|--|
| Digging depth:                |  |
| • Minimum                     | 2'-0" (0.61 m)   |
| • Maximum                     | 18'-0" (5.5 m)   |
| Swing width:                  |  |
| • Minimum depth               | 59'-0" (18 m)  |
| • Maximum depth               | 44'-6" (14 m)  |
| Nominal pump capacity (water) | 2500 GPM @ 165' TDH<br>568 m <sup>3</sup> /hr @ 50 m TDH |

### Dredge Pump

|                            |              |
|----------------------------|--------------|
| Suction diameter           | 10" (254 mm) |
| Discharge diameter         | 8" (203 mm)  |
| Impeller diameter          | 28" (711 mm) |
| Maximum particle clearance | 4" (102 mm)  |

Ni-hard wet end wear parts

### Prime Mover

- Caterpillar 3306T diesel, radiator cooled with residential grade silencer rated 250 BHP (186 kW) @ 2200 RPM.
- Caterpillar premium gauges, alarms and shutdown systems.
- Multi-plate disconnect clutch with power ban V-Belt drive.

### Cutter Drive

|   |                           |
|---|---------------------------|
| Sealed planetary drive with alloy cutter shaft and anti-friction bearings.                |                           |
| 32" (813 mm) outside diameter 5 blade basket cutter with replaceable cast serrated edges. |                           |
| Nominal drive torque  | 41,500 lb./in (4,689 N/m) |
| Cutter force  | 3,200 lbs. (14 kN)        |
| Cutter force per linear inch  | 160 lbs./in (28 N/mm)     |
| Cutter speed  | 0-40 RPM                  |
| Nominal drive power   | 23 hp (17kW)              |

### Hoisting

|  |  |
|--|--|
| Planetary swing winches with integral parking brake, tension control and API designed drums. |  |
| Line pull (bare drum)  | 5,150 lbs. (23 kN)                           |
| Line speed (bare drum)   | 75 ft./min. (23 m/min.)                      |
| Wire size and type   | 3/8" (10 mm) 6 x 37<br>power steel wire rope |
| Cable capacity   | 260' (79m)                                   |
| Double acting ladder lift hydraulic cylinder.  |  |
| Extending force  | 19,600 lbs. (87 kN)                          |
| Retracting force   | 36,800 lbs. (164 kN)                         |
| Extending speed  | 15 ft./min. (4.6 m/min.)                     |
| Retracting speed   | 20 ft./min. (6.1 m/min.)                     |

|   |  |
|---|--|
| Planetary spud winches with integral parking brake and API designed power up/power down drums |  |
| Line pull   | 2,100 lbs. (9.3 kN)                          |
| Line speed  | 100 ft./min. (30 m/min.)                     |
| Wire size and type  | 3/8" (10 mm) 6 x 37<br>power steel wire rope |

### Spuds

|   |                   |
|---|-------------------|
| Two (2) tubular steel power up/power down construction. |                   |
| Diameter  | 8" (203 mm)       |
| Length  | 22'-6" (6.9 m)    |
| Weight  | 800 lbs. (363 kg) |

### Hydraulic System

Independent circuits allow simultaneous cutter, swing and ladder/spuds operation.  
All circuits protected by suction strainer, return filters and relief valves.

### Electrical System

- 24 VDC for starting, lighting and controls
- 12 VDC (4 amp maximum) for convenience and user furnished radios
- All circuits fused for protection
- Two 950 cold cranking amp batteries

### Lever Room

Spacious heated control room with two lockable doors, tinted windows, operator's chair, dredge alarms, engine gauges, operation gauges and fingertip controls.

### Optional Equipment

Lever room climate control, smooth or pick point cutter edges, Dredging Supply Company, Inc.'s patented Viscous Excavator, production measuring equipment, anchors, discharge hose and pipeline, Arctic weather package, propulsion package, various cutter and dredge pump knives and screens, slurry control valve, stern wire arrangement and booster pumps.

**NOTE:** Specifications may change due to continual product improvement.

**Photograph:** 8" (203mm) Standard Piranha  
**Chart:** Based on 8" (203mm) Standard Piranha



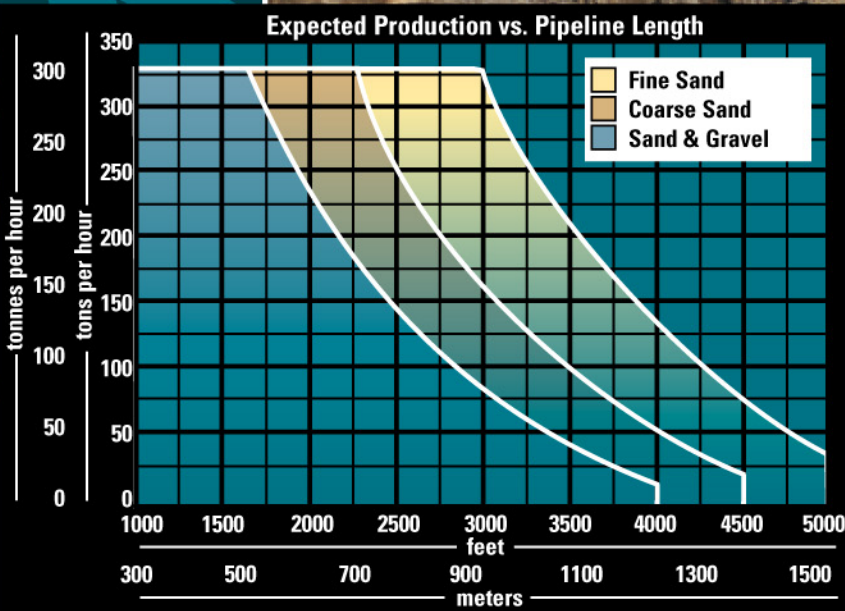
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# SHARK

## Portable Dredge



The highly portable **Shark** class cutterhead dredge is designed for the demanding requirements of contractors and mining operations. The Shark is the most flexible in design allowing for a discharge range from 10" (254mm) to 16" (406mm). It is easily customized for a variety of job conditions. The Shark class dredge can dig deeper, pump farther and produce more than any of its competitors.

- Chart based on 12" (305mm) SDR 17 polyethylene pipe
- Chart based on 25 feet (7.6m) digging depth and 10 feet (3m) discharge elevation
- Chart based on fine sand 125 micron, coarse sand 500 micron, gravel 8,000 micron

**Dredging  
Supply  
Company, Inc.**



# SHARK

## Portable Dredge

### 10" (254mm) Shark Dredge

## SPECIFICATIONS

#### General

|                              |                       |
|------------------------------|-----------------------|
| Overall length (with ladder) | 63'-0" (19.2 m)       |
| Overall width                | 11'-10" (3.61 m)      |
| Hull depth                   | 4'-0" (1.22 m)        |
| Height (trucking)            | 9'-6" (2.9 m)         |
| Mean draft (with fuel)       | 2'-8" (0.81 m)        |
| Fuel capacity                | 800 gallons (3,028 l) |
| Dry weight                   | 65,000 lb. (30 tons)  |
| Single truck transportable   |                       |

#### Operating Conditions

|                               |   |
|-------------------------------|---|
| Digging depth:                |   |
| • Minimum                     | 3'-0" (0.91 m)  |
| • Maximum                     | 28'-0" (8.5 m)  |
| Swing width:                  |   |
| • Minimum depth               | 86'-0" (26 m)   |
| • Maximum depth               | 64'-0" (20 m)   |
| Nominal pump capacity (water) |   |
|                               | 4,000 GPM @ 180' TDH<br>908 m <sup>3</sup> /hr @ 55 m TDH |

#### Dredge Pump

|                            |              |
|----------------------------|--------------|
| Suction diameter           | 12" (305 mm) |
| Discharge diameter         | 10" (254 mm) |
| Impeller diameter          | 32" (813 mm) |
| Maximum particle clearance | 5" (127 mm)  |

Ni-hard wet end wear parts

#### Prime Mover

- Caterpillar 3406C DITA diesel, keel cooled with residential grade silencer rated 460 BHP (343 kW) @ 2100 RPM.
- Caterpillar premium gauges, alarms and shutdown systems.
- Hydraulic multi-plate transmission for one lever pump engage/speed control.

#### Cutter Drive

|  |                           |
|--|---------------------------|
| Sealed planetary drive with alloy cutter shaft and anti-friction bearings.                   |                           |
| 37 1/2" (953mm) outside diameter 5 blade basket cutter with replaceable cast serrated edges. |                           |
| Nominal drive torque   | 85,000 lb./in (9,600 N/m) |
| Cutter force   | 6,070 lbs. (27 kN)        |
| Cutter force per linear inch   | 303 lbs./in (53 N/mm)     |
| Cutter speed   | 0-32 RPM                  |
| Nominal drive power  | 45 hp (34 kW)             |

#### Hoisting

|  |   |
|--|---|
| Planetary swing winches with integral parking brake, tension control and API designed drums. |   |
| Line pull (bare drum)  | 8,500 lbs. (38 kN)                        |
| Line speed (bare drum)   | 75 ft./min. (23 m/min.)                   |
| Wire size and type   | 1/2" (13 mm) 6 x 37 power steel wire rope |
| Cable capacity   | 435' (133 m)                              |
| Double acting ladder lift hydraulic cylinder.  |   |
| Extending force  | 28,200 lbs. (125 kN)                      |
| Retracting force   | 53,000 lbs. (236 kN)                      |
| Extending speed  | 14 ft./min. (4.3 m/min.)                  |
| Retracting speed   | 18 ft./min. (5.5 m/min.)                  |

|   |   |
|---|---|
| Planetary spud winches with integral parking brake and API designed power up/power down drums |   |
| Line pull   | 5,150 lbs. (23 kN)                        |
| Line speed  | 100 ft./min. (30 m/min.)                  |
| Wire size and type  | 1/2" (13 mm) 6 x 37 power steel wire rope |

#### Spuds

|   |                     |
|---|---------------------|
| Two (2) tubular steel power up/power down construction. |                     |
| Diameter  | 12" (254 mm)        |
| Length  | 36'-9" (11.2 m)     |
| Weight  | 1,950 lbs. (884 kg) |

#### Hydraulic System

Independent circuits allow simultaneous cutter, swing and ladder/spuds operation.  
All circuits protected by suction strainer, return filters and relief valves.

#### Electrical System

- 24 VDC for starting, lighting and controls
- 12 VDC (4 amp maximum) for convenience and user furnished radios
- All circuits fused for protection
- Two 1,000 cold cranking amp batteries

#### Lever Room

Spacious heated control room with two lockable doors, tinted windows, operator's chair, dredge alarms, engine gauges, operation gauges and fingertip controls.

#### Optional Equipment

Lever room climate control, PLC automation, dredge/booster remote control, electro-proportional hydraulic controls, smooth or pick point cutter edges, Dredging Supply Company, Inc.'s patented Viscous Excavator, production measuring equipment, anchors, discharge hose and pipeline, Arctic weather package, propulsion package, various cutter and dredge pump knives and screens, slurry control valve, stern wire arrangement and booster pumps.

**NOTE:** Specifications may change due to continual product improvement.

**Photograph:** Custom 10" (254mm) Shark  
**Chart:** Based on 10" (254mm) Standard Shark



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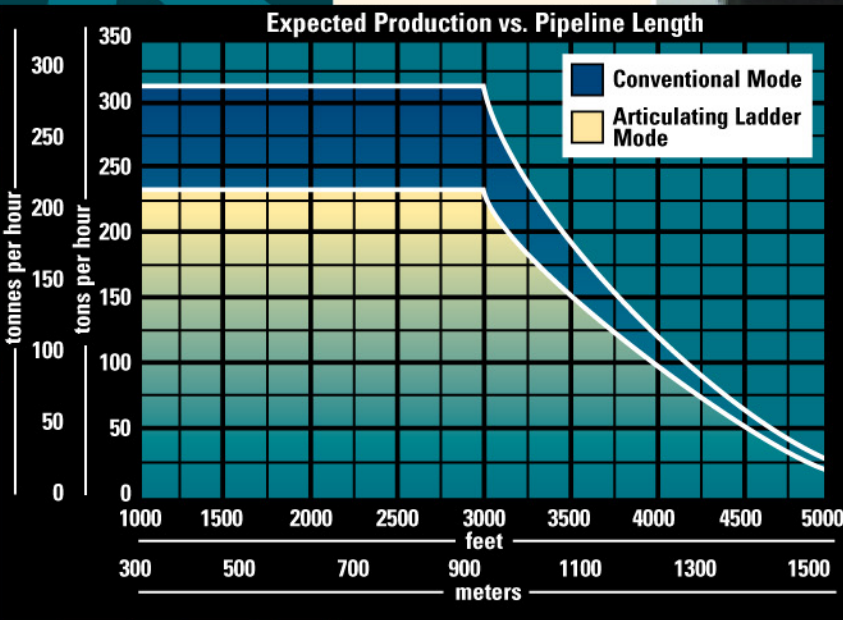
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**E-mail:** dredge@dscdredge.com





# BARRACUDA

## Portable Dredge



Dredging Supply Company's **Barracuda** class portable dredge offers what no other production dredge can offer: conventional dredging with spuds and wires and articulating ladder operation with no external wires or cables. The Barracuda possesses the ability to easily change from conventional operation to articulating ladder operation in minutes. The wide range of discharge sizes from 8" (203mm) through 16" (406mm) is ideal for contracting, dock work, marinas and more.

- Chart based on 12" (305mm) SDR 17 polyethylene pipe
- Chart based on 25 feet (7.6m) digging depth and 10 feet (3m) discharge elevation
- Chart based on fine sand 125 micron





# BARRACUDA

## Portable Dredge

### 10" (254mm) Barracuda Dredge

## SPECIFICATIONS

#### General

|                              |                       |
|------------------------------|-----------------------|
| Overall length (with ladder) | 58'-4" (17.8 m)       |
| Overall width                | 17'-8" (5.38 m)       |
| Width (trucking)             | 11'-10" (3.61 m)      |
| Hull depth                   | 4'-0" (1.22 m)        |
| Height (trucking)            | 9'-6" (2.9 m)         |
| Mean draft (with fuel)       | 2'-8" (0.81 m)        |
| Fuel capacity                | 800 gallons (3,028 l) |
| Dry weight                   | 75,000 lb. (34 tons)  |

Single truck transportable

#### Operating Conditions

|                                |   |
|--------------------------------|---|
| Digging depth:                 |   |
| • Minimum                      | 3'-0" (0.91 m)  |
| • Maximum                      | 20'-0" (6.1 m)  |
| Swing width (swinging ladder): |   |
| • Minimum depth                | 26'-0" (7.9 m)  |
| • Maximum depth                | 17'-0" (5.2 m)  |
| Swing width (conventional):    |   |
| • Minimum depth                | 79'-0" (24 m)   |
| • Maximum depth                | 65'-0" (20 m)   |
| Nominal pump capacity (water)  | 4,000 GPM @ 180' TDH<br>908 m <sup>3</sup> /hr @ 55 m TDH |

#### Dredge Pump

|                            |              |
|----------------------------|--------------|
| Suction diameter           | 12" (305 mm) |
| Discharge diameter         | 10" (254 mm) |
| Impeller diameter          | 32" (813 mm) |
| Maximum particle clearance | 5" (127 mm)  |

Ni-hard wet end wear parts

#### Prime Mover

- Caterpillar 3406C DITA diesel, keel cooled with residential grade silencer rated 460 BHP (343 kW) @ 2100 RPM.
- Caterpillar premium gauges, alarms and shutdown systems.
- Hydraulic multi-plate transmission for one lever pump engage/speed control.

#### Cutter Drive

Sealed planetary drive with alloy cutter shaft and anti-friction bearings.  
37 1/2" (953mm) outside diameter 5 blade basket cutter with replaceable cast serrated edges.

|                              |                           |
|------------------------------|---------------------------|
| Nominal drive torque         | 85,000 lb./in (9,600 N/m) |
| Cutter force                 | 6,070 lbs. (27 kN)        |
| Cutter force per linear inch | 303 lbs./in (53 N/mm)     |
| Cutter speed                 | 0-32 RPM                  |
| Nominal drive power          | 45 hp (34 kW)             |

#### Hoisting

Double acting hydraulic swing cylinder for swinging ladder operation

|                  |                          |
|------------------|--------------------------|
| Extending force  | 39,200 lbs. (174 kN)     |
| Retracting force | 25,100 lbs. (112 kN)     |
| Extending speed  | 19 ft./min. (5.8 m/min.) |
| Retracting speed | 30 ft./min. (9.1 m/min.) |

Planetary swing winches with integral parking brake, tension control and API designed drums.

|                        |   |
|------------------------|---|
| Line pull (bare drum)  | 8,500 lbs. (38kN)                           |
| Line speed (bare drum) | 75 ft./min. (23m/min.)                      |
| Wire size and type     | 1/2" (13mm) 6 x 37<br>power steel wire rope |
| Cable capacity         | 435' (133m)                                 |

Double acting ladder lift hydraulic cylinder.

|                  |                          |
|------------------|--------------------------|
| Extending force  | 19,600 lbs. (87 kN)      |
| Retracting force | 36,800 lbs. (164 kN)     |
| Extending speed  | 15 ft./min. (4.6 m/min.) |
| Retracting speed | 20 ft./min. (6.1 m/min.) |

Planetary spud winches with integral parking brake and API designed power up/power down drums

|                    |  |
|--------------------|--|
| Line pull          | 5,150 lbs. (23 kN)                           |
| Line speed         | 100 ft./min. (30 m/min.)                     |
| Wire size and type | 1/2" (13 mm) 6 x 37<br>power steel wire rope |

#### Spuds

Three (3) tubular steel power up/power down construction.

|          |                     |
|----------|---------------------|
| Diameter | 10" (254 mm)        |
| Length   | 29'-9" (9.1 m)      |
| Weight   | 1,550 lbs. (700 kg) |

#### Hydraulic System

Independent circuits allow simultaneous cutter, swing and ladder/spuds operation. All circuits protected by suction strainer, return filters and relief valves.

#### Electrical System

- 24 VDC for starting, lighting and controls
- 12 VDC (4 amp maximum) for convenience and user furnished radios
- All circuits fused for protection
- Two 1,000 cold cranking amp batteries

#### Lever Room

Spacious heated control room with two lockable doors, tinted windows, operator's chair, dredge alarms, engine gauges, operation gauges and fingertip controls.

#### Optional Equipment

Lever room climate control, PLC automation, dredge/booster remote control, electro-proportional hydraulic controls, smooth or pick point cutter edges, Dredging Supply Company, Inc.'s patented Viscous Excavator, production measuring equipment, anchors, discharge hose and pipeline, Arctic weather package, propulsion package, various cutter and dredge pump knives and screens, slurry control valve, stern wire arrangement and booster pumps.

**NOTE:** Specifications may change due to continual product improvement.

**Photograph:** 10" (254mm) Custom Barracuda  
**Chart:** Based on 10" (254mm) Standard Barracuda



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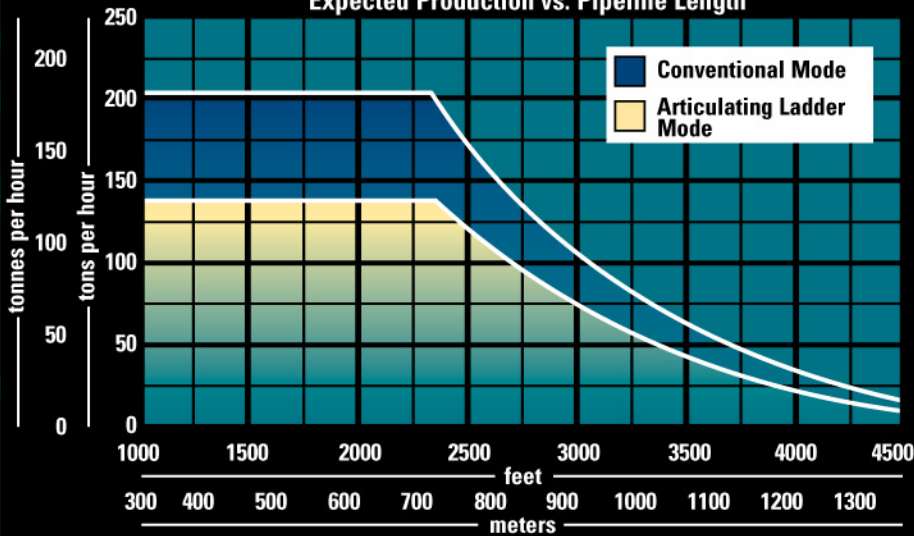


# MORAY

## Portable Dredge



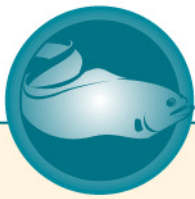
Expected Production vs. Pipeline Length



Dredging Supply Company's 8" (203mm) **Moray** class dredge is a light contractor's dream machine allowing for easy change from conventional operation to articulating ladder. An auger attachment is also available.

- Chart based on 8" (203mm) SDR 21 polyethylene pipe
- Chart based on 15 feet (4.5m) digging depth and 10 feet (3m) discharge elevation
- Chart based on fine sand (100 micron grain size)

**Dredging  
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# MORAY

## Portable Dredge

## 8" (203mm) Moray Dredge

# SPECIFICATIONS

### General

|   |                       |
|---|-----------------------|
| Overall length (with ladder)                | 42'-0" (12.8 m)       |
| Overall width (conventional/auger/trucking) | 10'-6" (3.20 m)       |
| Overall width (swinging ladder)             | 17'-4" (5.28m)        |
| Hull depth                                  | 3'-10 1/2" (1.18 m)   |
| Height (trucking)                           | 10'-6" (3.2 m)        |
| Mean draft (with fuel)                      | 2'-8" (0.81 m)        |
| Fuel capacity                               | 400 gallons (1,514 l) |
| Dry weight                                  | 38,000 lb. (17 tons)  |

Single truck transportable

### Operating Conditions

Digging depth:

- Minimum 2'-0" (0.61 m)
- Maximum 16'-0" (4.9 m)

Swing width (swinging ladder):

- Minimum depth 18'-6" (5.6 m)
- Maximum depth 12'-0" (3.7 m)

Swing width (conventional):

- Minimum depth 58'-0" (18 m)
- Maximum depth 43'-6" (13 m)

Nominal pump capacity (water) 2,000 GPM @ 185' TDH  
454 m<sup>3</sup>/hr @ 56 m TDH

### Dredge Pump

|                            |                  |
|----------------------------|------------------|
| Suction diameter           | 8" (203 mm)      |
| Discharge diameter         | 8" (203 mm)      |
| Impeller diameter          | 19 3/4" (502 mm) |
| Maximum particle clearance | 3 1/2" (89 mm)   |

Ni-hard wet end wear parts

### Prime Mover

- Caterpillar 3116 diesel, radiator cooled with residential grade silencer rated 260 BHP (194 kW) @ 2600 RPM.
- Caterpillar premium gauges, alarms and shutdown systems.
- Close-coupled closed loop hydrostatic transmission dredge pump drive and variable displacement hoisting and cutter hydraulic drive.

### Cutter Drive

Sealed planetary drive with alloy cutter shaft and anti-friction bearings.  
30" (762 mm) outside diameter 5 blade basket cutter with replaceable cast serrated edges.

|                              |                           |
|------------------------------|---------------------------|
| Nominal drive torque         | 32,300 lb./in (3,649 N/m) |
| Cutter force                 | 2,690 lbs. (12 kN)        |
| Cutter force per linear inch | 134 lbs./in (24 N/mm)     |
| Cutter speed                 | 0-40 RPM                  |
| Nominal drive power          | 20 hp (15 kW)             |

### Hoisting

Double acting hydraulic swing cylinder for swinging ladder operation

|                  |                          |
|------------------|--------------------------|
| Extending force  | 27,600 lbs. (123 kN)     |
| Retracting force | 16,800 lbs. (75 kN)      |
| Extending speed  | 12 ft./min. (3.7 m/min.) |
| Retracting speed | 20 ft./min. (6.1 m/min.) |

Planetary swing winches with integral parking brake, tension control and API designed drums for conventional operation.

|                        |   |
|------------------------|---|
| Line pull (bare drum)  | 5,150 lbs. (23 kN)                        |
| Line speed (bare drum) | 65 ft./min. (20 m/min.)                   |
| Wire size and type     | 3/8" (10 mm) 6 x 37 power steel wire rope |
| Cable capacity         | 260' (79m)                                |

Double acting ladder lift hydraulic cylinder.

|                  |                          |
|------------------|--------------------------|
| Extending force  | 15,900 lbs. (71 kN)      |
| Retracting force | 28,000 lbs. (125 kN)     |
| Extending speed  | 10 ft./min. (3.0 m/min.) |
| Retracting speed | 12 ft./min. (3.7 m/min.) |

Planetary spud winches with integral parking brake and API designed power up/power down drums

|                    |   |
|--------------------|---|
| Line pull          | 2,100 lbs. (9.3 kN)                       |
| Line speed         | 78 ft./min. (24 m/min.)                   |
| Wire size and type | 3/8" (10 mm) 6 x 37 power steel wire rope |

Double acting spud carriage cylinder 3'-2" (0.96 m) travel

|                  |                          |
|------------------|--------------------------|
| Extending force  | 4,800 lbs. (21 kN)       |
| Retracting force | 4,800 lbs. (21 kN)       |
| Extending speed  | 12 ft./min. (3.7 m/min.) |
| Retracting speed | 16 ft./min (4.8 m/min.)  |

### Spuds

Two (2) or three (3) tubular steel power up/power down construction.

|          |                   |
|----------|-------------------|
| Diameter | 8" (203 mm)       |
| Length   | 22'-6" (6.9 m)    |
| Weight   | 800 lbs. (363 kg) |

### Hydraulic System

Closed loop dredge pump circuit with infinite electronic speed control. Pressure compensated cutter, swing, ladder/spud circuits for simultaneous operation. All circuits protected by suction strainer, return filters and relief valves.

### Electrical System

- 24 VDC for starting, lighting and controls
- 12 VDC (4 amp maximum) for convenience and user furnished radios
- All circuits fused for protection
- Two 950 cold cranking amp batteries

### Lever Room

Heated control room with lockable door, tinted windows, operator's chair, dredge alarms, operation gauges and fingertip electro-proportional controls.

### Optional Equipment

Horizontal auger arrangement, lever room climate control, smooth or pick point cutter edges, Dredging Supply Company, Inc.'s patented Viscous Excavator, production measuring equipment, anchors, discharge hose and pipeline, Arctic weather package, propulsion package, various cutter and dredge pump knives and screens, slurry control valve, stern wire arrangement and booster pumps.

**NOTE:** Specifications may change due to continual product improvement.

**Photograph:** 8"(203mm) Standard Moray Class Dredge

**Chart:** Based on 8"(203mm) Standard Moray Class Dredge



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# MARLIN

## Underwater Pump Mining Dredge



1

Dredging Supply Company's **Marlin** class underwater pump mining dredge provides the most efficient pumping system at deeper depths. With these submerged pump machines, performance increases with mining depth. Available in 8" (203 mm) to 20" (508 mm), all Marlin's are tailored to specific job/customer requirements.



2



3

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# MARLIN

## Underwater Pump Mining Dredge

## SPECIFICATIONS

### Advantages

- Ease of Maintenance Due to Dredge Pump Location
- Highest Production Capability at Same Flow Rate
- Increased Digging Depth
- Lower Cost/Ton
- Reduced NPSHR (Net Positive Suction Head Required)
- Increased NPSHA (Net Positive Suction Head Available)
- Forward Lever Room Reduces Operator Noise and Increases Visual Capability
- Flexible Design
- Diesel or Electric

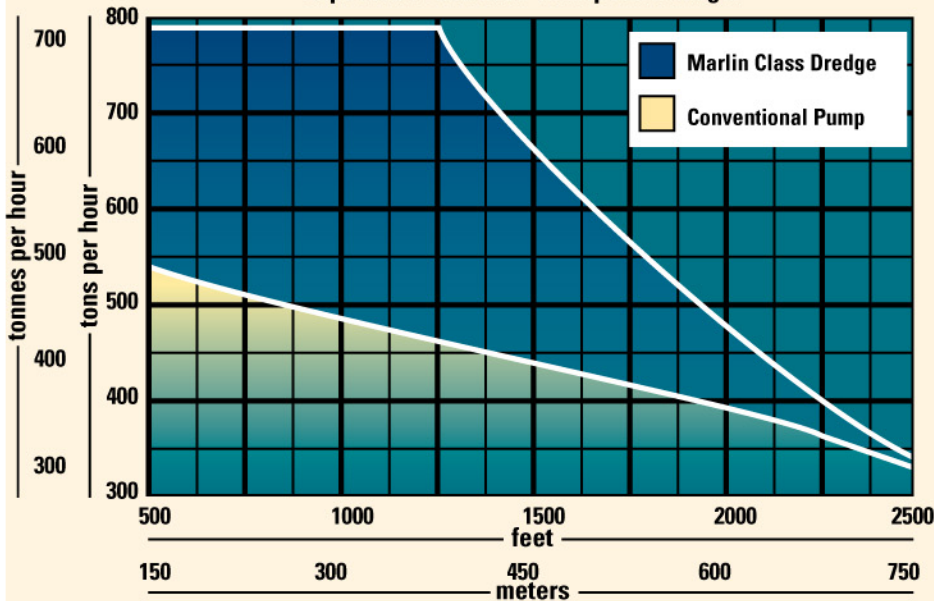
### General

Specifications vary on each machine for each job. The Marlin is best to use when digging depth exceeds 30' (9.1 meters) or viscous materials are being dredged.

### Optional Equipment

Lever room climate control, PLC automation, dredge/booster remote control, electro-proportional hydraulic controls, smooth or pick point cutter edges, Dredging Supply Company Inc.'s patented Viscous Excavator, production measuring equipment, anchors, discharge hose and pipeline, Arctic weather package, propulsion package, various cutter and dredge pump knives and screens, slurry control valve, stern wire arrangement and booster pumps.

Expected Production vs. Pipeline Length



- Chart based on 14" (356mm) SDR 17 polyethylene pipe
- Chart based on 50 feet (15.2m) digging depth and 40 feet (12.2m) discharge elevation
- d50 grain size 500 micron, d85 grain size 8,000 micron

### Photographs:

- 1 20" (508mm) Electric Marlin Class Dredge
- 2 12" (305mm) Deep Mining Marlin Class Dredge
- 3 12" (305mm) Shallow Mining Marlin Class Dredge



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