

# Mudcat 50E Electric Dredge

## Product Specification Sheet



### GENERAL

Length (O.A.):	28 ft - 2 in (8.6 m)
Width (O.A.):	8 ft - 3 in (2.52 m)
Transport Width:	8 ft - 8 in (2.68 m)
Height (O.A.):	7 ft - 6 in (2.32 m)
Weight:	7,200 lbs. (3,300 kg) dry
Draft:	16 in (0.4 m)

### CUTTER ASSEMBLY

Mud Shield	Semi-enclosed; anti-turbidity
Drive System	Single low speed, high torque motor / gearbox
Auger Diameter	10.5 in (267 mm) without cutter knives 15 7/8 in (403 mm) with cutter knives
Auger Pitch	9 in (228 mm)
Auger Flighting	3/8 in (9.5 mm)
Speed:	Fixed at 60 RPM
Cutter Knives	Detachable heat-treated blades
Auger Torque	6,000 in-lbs. (680 N-m)

### WORKING CAPACITY

Traverse Speed:	7 ft-6 in (2.3 m) wide
Operating Depth:	17 ft (5.2 m) maximum

### PROPULSION

Double sheave hydraulic-driven winch 10 in (254 mm)

Traverse Speed:	0 - 30 FPM (0 - 9.4 m/min) maximum forward & reverse
Average Cutting Speed:	8 - 12 FPM (2.4 - 3.7 m/min)
Wire Rope Diameter:	3/8 in (9.5 mm)

### CONTROL SYSTEM

#### Wireless Radio Remote Control:

• Slurry Pump - On / Speed	• Auger - On
• Hoist - Up / Off / Down	• Travel - Fwd / Off / Reverse / Speed

### LADDER HOIST

Hydraulic winch with a maximum line pull of 4,000 lbs (17.8 kN) first layer

### ELECTRICAL SYSTEM

Electrical Requirement:	460 V - 3 Phase - 60 Hz - 92 FLA (standard) 380 V - 3 Phase - 50 Hz - 115 FLA (optional)
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### FLOATATION

Pontoons:	Two 28 in diameter x 24 ft (0.7 m diameter x 7.3 m) 10 gauge (3.4 mm) steel
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### SLURRY PUMP

Electric driven 50 HP (37 kW) submersible slurry pump with high chrome 650 Brinell volute and impeller. (Other material options available.)

Centrifugal Vortex Impeller:	Max solids diameter 3 in (76 mm)
Suction Diameter:	6 in (152.4 mm)
Discharge Diameter:	4 in (101.6 mm)
Nominal Pump Performance:	1,200 GPM (272 m <sup>3</sup> /hr) against 60 ft (18.3 m) head Up to 74 yds <sup>3</sup> /hr (57 m <sup>3</sup> /hr) of production at 30% solids content. Results may vary.

### HYDRAULIC POWER UNIT

15 HP (11 kW) electrical-driven hydraulic power unit  
30 gallons (110 liters) at full mark

Circuit One:	Auger, Travel, and Hoist Winch
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### FEATURES

- Cast Iron Pump
- Larger Sphere Passage
- Electric Submersible Pump
- 4-Wheel Liner Protection System
- Heavy Duty 10 Gauge Steel Hull
- Hydraulic Driven Traverse System
- Ladder Mounted Cutterhead
- Faster Cutting Speed
- Radio Remote Sense™
- Automated Remote Control Dredging
- 4-Moving Parts
- Customization

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### RADIO REMOTE SENSE™

[STANDARD FEATURE]

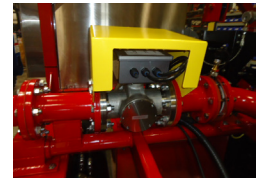
EDT has designed the Mud Cat™ product line to allow for remote control of the dredging operation via a portable hand-held transmitter called RADIO REMOTE SENSE™ (RMS). RMS controls the following functions: power on/off, travel direction and speed, slurry pump on/off and speed (if equipped with VFD), auger on/off and dredging depth. The hand-held transmitter may be operated up to 1,000 feet from the dredging unit. Current operating functions of the system will be indicated via a dredge mounted five-color light tree.



### SOLIDS SENSE™

[OPTIONAL FEATURE]

If your downstream operation needs a consistent slurry density for maximum productivity, EDT's SOLIDS SENSE™ is your answer. Adding SOLIDS SENSE™ to your dredging process will allow the system to automatically adjust the dredging functions to maintain a constant delivery of desired solids density. SOLIDS SENSE™ utilizes a density meter to monitor the slurry and react to composition changes faster than an operator, thereby increasing system efficiency and maintaining the desired slurry characteristic.



### AUTO SENSE™

[STANDARD FEATURE]

This incorporates metal plates that act as stops at the beginning and end of the traverse cable to set distance limits along the dredging area. With AUTO SENSE™ enabled, when the dredge contacts the forward cable stop, it will reverse direction until it contacts the rear cable stop, at which time the dredge will be placed in shut down mode.



### LATERAL SENSE™

[OPTIONAL FEATURE]

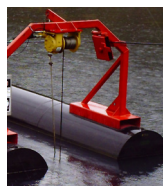
When your project requires automated lateral movement, LATERAL SENSE™ is the perfect complement to AUTO SENSE™. In combination with a rail and cable system, this feature allows for the automatic lateral shifting of the dredge after each linear pass. The utilization of AUTO & LATERAL SENSE™ allows the dredge to harvest an entire sediment pond automatically without requiring an operator's assistance.



### BOTTOM SENSE™

[OPTIONAL FEATURE]

EDT's BOTTOM SENSE™ system is designed to protect a pond's subsurface or liner. This feature allows the dredge to automatically raise the auger when the bottom is contacted and lower the auger when the bottom is not present, thereby maximizing production rates while preserving the subsurface integrity by following the bottom contours of the pond.



### AUTOMATED REMOTE CONTROL DREDGING

[OPTIONAL FEATURE]

Add as many options as you like and EDT will integrate them into a fully automated remote controlled dredging system. This is achieved through the addition of a shore mounted control station. The control panel allows the user to operate all on-board functions of the dredge while receiving continuous feedback from the unit's sensors and instrumentations. The shore panel features wireless communication to the on-board PLC, which eliminates the problems associated with hard wired systems. EDT can customize the shore panel control station to your specific project requirements.

