

# CUTTER SUCTION DREDGER CSD 450



## DREDGE YARD

### MAIN PARTICULARS

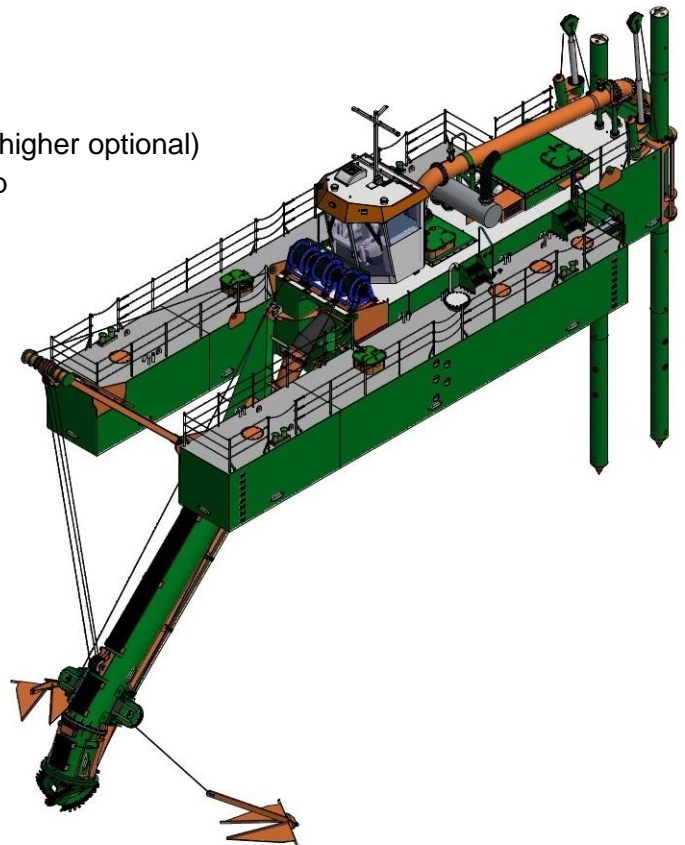
Type of dredger	Cutter Suction Dredger	
Pontoons	Three dismountable pontoons	
Transport	Dismountable on flat tracks	
Suction Pipe	500 mm	20 inch
Discharge pipe	450 mm	18 inch
Suitable for dredging	Clay, Medium Sand and Coarse sand	
Dredging depth	10 m	32.2 ft
Depth is extendable	12 m	39.4 ft

### POWER UNIT

Diesel engine	CAT C32	
Engine type	Marine Engine	
Engine tier	EPA tier 3 emissions (higher optional)	
Engine power	895 kW	1200 hp
Cooling	Water cooling	
Engine speed	1800 rpm	

### MAIN DIMENSIONS

Length overall	26.2 m	86.0 ft
Number of pontoons	3	
Length over pontoons	18.10 m	59.4 ft
Width overall	6.60 m	21.6 ft
Depth main pontoon	2.45 m	8.0 ft
Depth side pontoons	1.80 m	5.9 ft
Design draught	1.4 m	4.6 ft



## DREDGE PUMP

Type	DREDGE YARD DY450	
Configuration	Single stage centrifugal pump	
Position	Inside main pontoon	
Suction diameter	450 mm	18 inch
Discharge diameter	400 mm	16 inch
Impeller number of vanes	3	
Dredge pump motor power	634 kW	850 hp
Dredge pump	400-600 rpm	
Wear material	High wear resistant	
Drive	Direct drive through a single stage gearbox	
Gearbox	Single stage vertical offset with integrated clutch	
Shaft Seal	Stuffing box	

## DREDGE CUTTER HEAD

Type	DY-1510C Multipurposed	
Configuration	Crown type interchangeable teeth	
Cutter ring diameter	1.51 m	4.95 ft
Cutter motor power	112 kW	150 hp
Cutter motor speed	0-35 rpm	
Cutting system	3 type of replaceable teeth Narrow teeth, pick points and chisel	

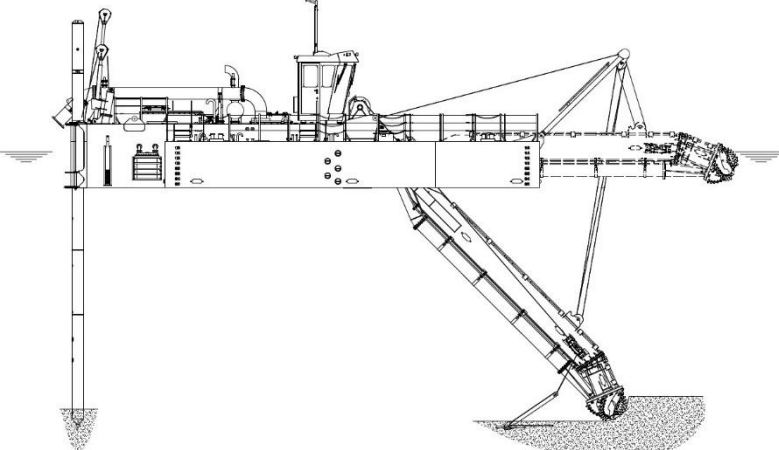
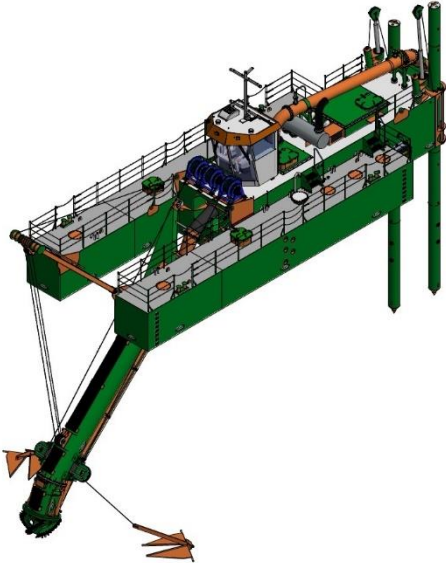
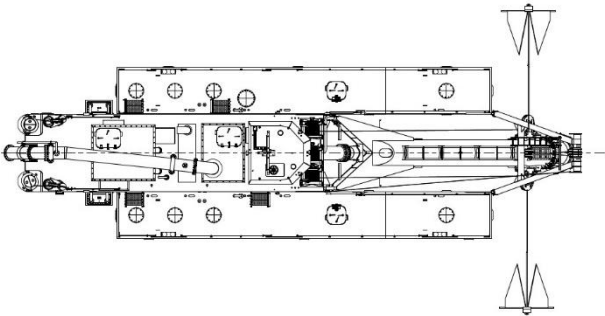


## DREDGING WINCH

Type of winch	Drum winch	
Movement	Swing left and right 35 degrees	
Number of winches	2 unit	
Wire pull	65 kN	14,612 lbs
Hauling speed	0-15 m/min	0-49 ft/min
Wire diameter	18 mm	11/16 inch
Drive	Hydraulic motor	
Range at min depth	29.5 m	96.8 ft
Range at max depth	24.0 m	78.7 ft

### LADDER HOISTING WINCH

Type of winch	Drum winch	
Number of winches	1 unit	
Wire pull	65 kN	14,612 lbs
Hauling speed	0-15 m/min	49 ft/min
Wire diameter	18 mm	11/16 inch
Drive	Hydraulic motor	



### DREDGE SPUDS

Spud Length	13.8 m	45.3 ft
Spud diameter	457 mm	18 inch
Spud weight	2386 kg	5260 lbs
Cylinder lifting force	150 kN	33,72 lbs
Cylinder stroke	1.5 m	4.9 ft
Spud stroke	2.4 m	7.9 ft

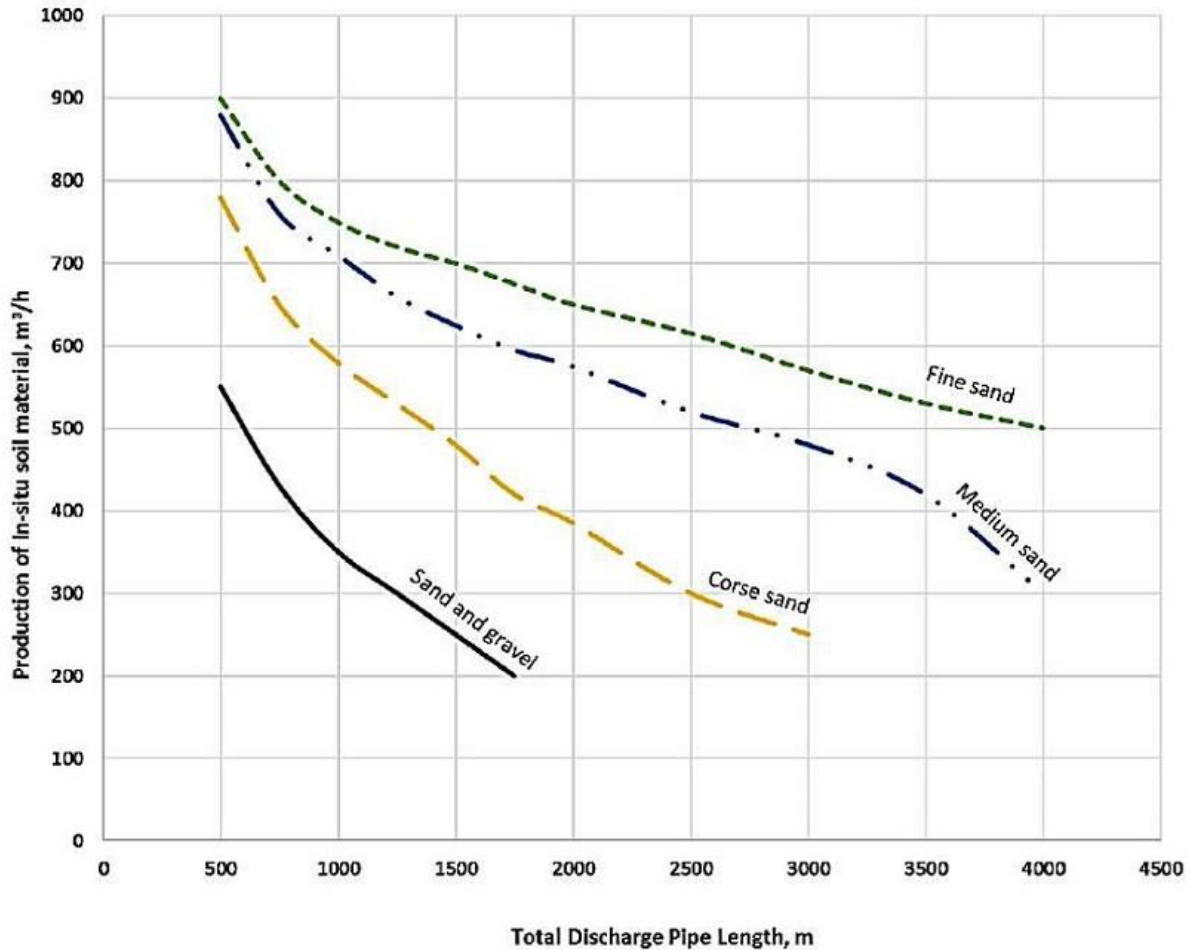
## FUEL

Type Diesel fuel  
 Tank capacity 16,000 liters 4226 gallon

## DREDGER OPERATING CABIN

Total area 3.0 m<sup>2</sup> 32.3 sq-ft  
 Cooling Ventilation fan ( a/c optional )  
 Lights 1x interior light and 2x flood light  
 Additional Screen wipers  
 Instrumentation Dredging depth indication  
 Discharge pressure gauge  
 Vacuum pressure gauge

**CSD450 - G2  
 Production Curve**



## Material Type

Fine Sand	$d_{50} = 100 \mu\text{m}$	$\rho = 1.90 \text{ t/m}^3$
Medium Sand	$d_{50} = 235 \mu\text{m}$	$\rho = 1.95 \text{ t/m}^3$
Coarse Sand	$d_{50} = 440 \mu\text{m}$	$\rho = 2.00 \text{ t/m}^3$
Sand and Gravel	$d_{50} = 1300 \mu\text{m}$	$\rho = 2.20 \text{ t/m}^3$