

CUTTER SUCTION DREDGER



TECHNICAL SPECIFICATION

No.	Item	Description	Remark
1.	<u>General Principle</u>		
	(1). Overall Length	38.95m	
	(2). Side Pontoon Size	29m	
	(3). Main Pontoon Size	18m	
	(4) Breadth	8.0m	
	(5). Depth	2.2m	
	(6). Mean Draft	1.5m	
	(7). Dredging Depth	14m	
	(8). Pumping Distance	1500m	
	(9). Pump Flow Capacity	4500-5000m ³ /h	
	(10). Solid Capacity	800-1000m ³ /h	
	(11). Suction Pipe Dia	550mm	
	(12) Discharge Pipe Dia	500mm	
2.	<u>Main Pontoon</u>		
	(1). Dimension (L*B.D)	17.5m*3.6m*2.2m	
	(2). Bottom Plate Thick	10mm	CCSB marine plate
	(3). Side Wall Thick	8mm	CCSB marine plate
	(4). Front and Rear	12mm	CCSB marine plate
3.	<u>Side Pontoon</u>		
	(1). Dimension (L*B.D)	29m*2.2m*2.2m	

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No.	Item	Description	Remark
	(2). Bottom Plate Thick	8mm	

	(3). Side Wall Thick	6mm	
	(4). Front and Rear Thick	8mm	
4.	<u>Main Engine</u>		Drive the dredge pump only.
	(1). Make	JICHAJ	
	(2). Model	A12V190ZLC	Marine Engine
	(3). Type	V12	
	(4). Continuous Power/rpm	1200kw @ 1450 rpm	
	(5). Fuel Consumption	140L/h	
	(6). Cooling Style	Water Cooling	
5.	<u>Auxiliary Engine</u>		Drive hydraulic pump & axle generator
	(1). Make	JICHAJ	
	(2). Model	G6190ZLC	Marine Engine
	(3). Type	6V	
	(4). Continuous Power/rpm	450kw @ 1450 rpm	
	(5). Fuel Consumption	60L/h	
	(8). Cooling Style	Water Cooling	

6.	<u>Axle Alternator</u>		
	(1). Model	FURI	
	(2). Power	50kw	
7.	<u>Harbor Generator</u>		

	(1). Make	WEICHAI HUADONG	Silent type. < 70 db(A)
	(2). Power	30kw	
	(3). Fuel Consumption	8L/h	
	(4). Cooling Style	Air Cooling	
8.	<u>Battery</u>		
	(1). Make	SAIL	
	(2). Voltage	24V/220V/380V	
	(3) Battery Capacity	195Ah	
	(4). Quantity	8sets	
9.	<u>Dredge Pump</u>		
	(1). Pump	SHIJIAZHUANG DELIN PUMP	
	(2). Model	450	
	(3). Type	Centrifugal Pump	
	(4). Solid Capacity	800-1000 m ³ /h	
	(5). Suction Pipe Diameter	550mm	
	(6). Discharge Pipe Diameter	450mm	
	(7). Head	40-65m	

	(8) . RPM	400-500rpm	
	(9). Water Flow Capacity	4500-5000m ³ /h	
10.	<u>Gearbox</u>		
	(1).Model	LJ320	
	(2) . Gear Ratio	3:1	

11.	<u>Cutter</u>		
	(1) . Style	Hydraulic Motor+ Planetary Gearbox	
	(2). Cutter Power	170kw	
	(3) . Crown Diameter	1700mm	
	(4). Cutter Out Diameter	2000mm	
	(5).Blades	5pcs	Material: ZG35SiMn
	(6) . Cutter Teeth	48pcs	Material: ZGMn13
	(8). RPM	20rpm	
12.	<u>Ladder Winch</u>		Hydraulic Drive
	(1).Winch Motor Type	XULI	
	(2). First Layer Pull	10 Ton	
	(3). Wire Rope Dia	26mm	
	(4). Wire Rope Capacity	120m	
	(5). Wire Speed	0-20m/min	
13.	<u>Swing Winch</u>		Hydraulic Drive
	(1).Winch Motor Type	XULI	
	(2). First Layer Pull	10 Ton	

	(3). Wire Rope Dia	26mm	
	(4). Wire Rope Capacity	120m	
	(5). Wire Speed	0-20m/min	
	(6). Quantity	2 sets	
14	<u>Spud</u>		
	(1). Material	Seamless Steel Pipe	

	(2). Spud Length	17.5m	
	(3). Spud Diameter	630mm	
	(4). Weight	6ton	
	(5). Quantity	2sets	
15	<u>Cylinder</u>		
	(1). Cylinder Stroke	2.5m	
	(2). Cylinder Dia	160mm	
	(3). Working Pressure	16Mpa	
	(4). Travel Speed	0.2m/s	
16.	<u>Deck Crane</u>		
	(1). Loading Capacity	5 Ton	
	(2). Boom Turning Radius	4.5m	
17.	<u>Anchor</u>		
	(1). Weight	HHP Anchor; 1000Kg	

18.	<u>Operation Cabin</u>		
	(1). Operation Board	Control all dredger movement commands and monitor equipment running conditions, PLC system from Siemens.	
	(2). Adjustable Chair	For the dredger master. Leather.	
	(3). A/ C	First floor and second floor each set.	
	(4). Lounge	First first-floor cabin has space for four people to rest.	

19.	<u>Hydraulic System</u>		
	A. System Introduction	The hydraulic system is designed to supply power for winches, cutters, spud cylinders and anchor boom. The hydraulic pump is driven separately by an auxiliary engine. System working Pressure is 16MPa.	
	B. Hydraulic Winch Motor	It has excellent working performance and a durable usage life.	
	C. Hydraulic Pump/Valve	Nanjing	
20.	<u>Painting Principle</u>		
	Introduction	Do sand blasting before welding. Use good-quality marine paint with greater thickness. The paint system is 3 or 4 layers with minimum thickness of 400 microns on the below water line area	

21.	<u>Electrical System</u>		
	Introduction	All electrical components are from famous brands such as Omron and CHINT. Equip overload protection box to control safety. Use high-quality electrical marine-type cables (smoke and halogen free).	
22.	<u>Navigation Tool</u>		
	(1). Elec-mag Compass	Equipped	
	(2). VHF-Radiotelephone	Equipped	



