

CSD 650

Specifications

Main Particulars

| | |
|-----------------------------|-----------------|
| Length overall | 47 m |
| Length over deck | 35 m |
| Breadth, molded | 10,5 m |
| Depth main pontoon | 2,9 m |
| Design draught | 1,98 m |
| Dredging depth min/max | 3 / 18 m |
| Suction pipe inner diameter | 700 mm |
| Discharge pipe inner dia. | 650 mm |
| Total weight | 420 ton |
| Total installed power | 2914 kW |

Dredging Components

| | |
|--------------------------|--------------------------|
| Cutter head | VOSTA T1 |
| Cutter power | 450 kW |
| Dredge pump | VOSTA LMG600-1625 |
| Dredge Pump Power | 1864 kW |
| Side winch | 2 pcs |
| Pulling force max. | 240 kN |
| Spud system | |
| Working and holding spud | |

Deck Equipment

| | |
|------------|--------------|
| Deck crane | 7 ton |
|------------|--------------|

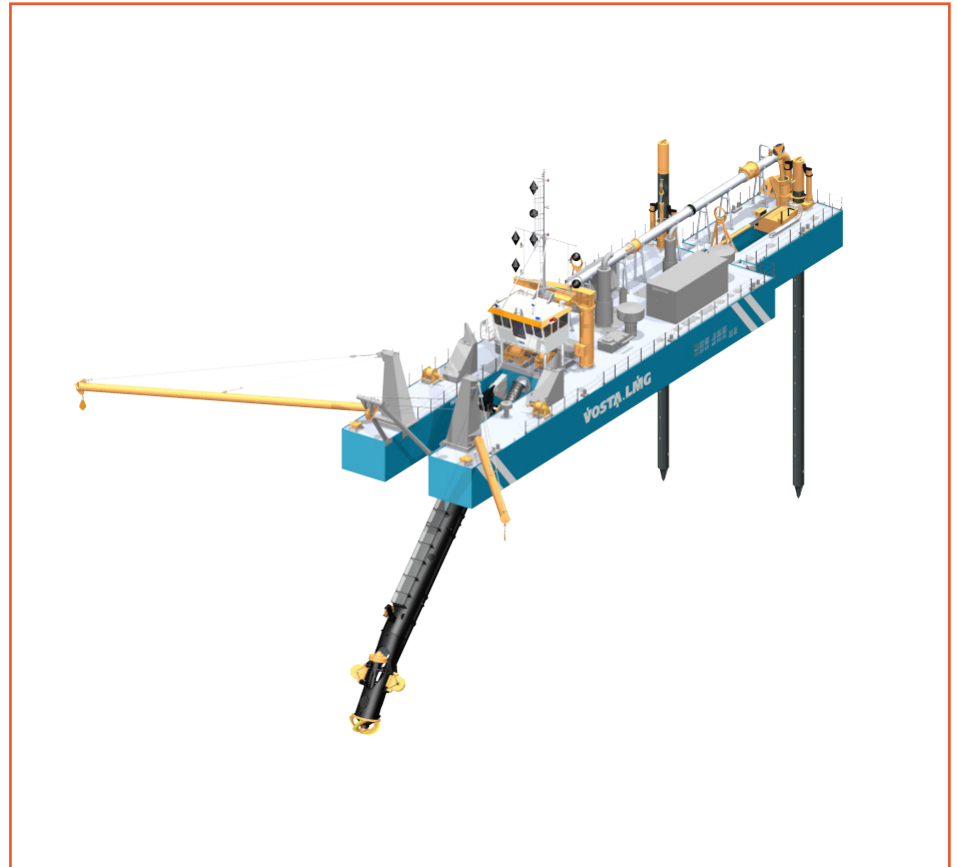
Electrical System

| | |
|-----------------------|-----------------------|
| Main generator | (PF0,8) 64 ekW |
| Ship's main voltage | 400 V |
| Ship's main frequency | 50 Hz |

Main Drives

| | |
|--------------------|----------------|
| Diesel engines | |
| Dredge pump engine | 1864 kW |
| Auxiliary engine | 954 kW |

The standard dismantable cutter dredger CSD 650 is well equipped to operate in a wide range of coastal zones with several materials up to compact sand clay. It is specialized for maintenance and land reclamation work also in shallow water areas. The dredger is optimized for dredging compact soil.



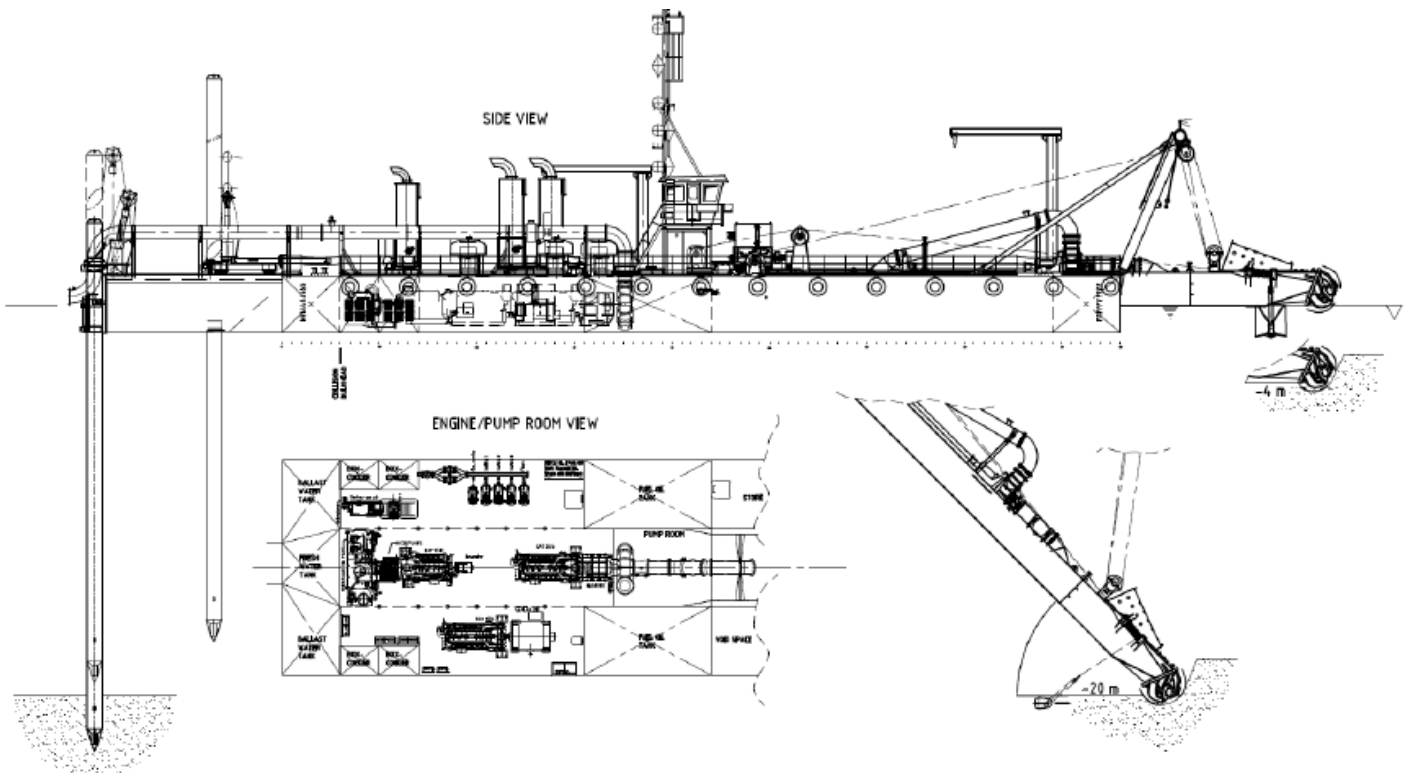
Options

| |
|-------------------------------|
| Spud tilting system |
| Anchor Booms |
| Swivel bend |
| Dredge monitoring system |
| Production measuring system |
| Harbor set |
| Spud carrier |
| Mooring equipment |
| Propulsion system |
| Accommodation, 4 crew |
| Hydrophore |
| Lavatory |
| Classification inland waters |
| Classification coastal waters |
| Additional gland pump |

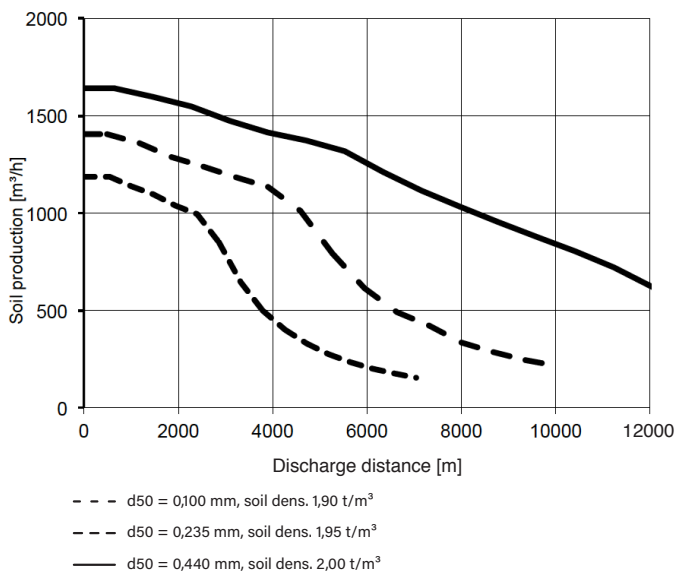
Dedicated functions*:

- Lowest price per cubic meter at a wide range of jobs
- Optimization of shallow water operation
- Minimization of vibration level
- Maximum of allover operation efficiency due to:
 - Optimization of anchor/spud maneuver
 - Operation with high efficient cutter head with special patented cutter teeth of highest wear resistance
 - Operation with high efficiency dredge pump with optimized suction performance
 - Operation with approved dredge control/monitoring system, automation of dredging process

*) to get all functions optional equipment required



Production Diagram CSD 650



Estimated dredge pump production diagram

| | |
|-------------------------|------------------------|
| Dredge pump type | VL 600-1625 |
| Pump shaft power | 1864 kW |
| Nominal speed | 410 rpm |
| Suction pipe diameter | 700 mm |
| Discharge pipe diameter | 450 mm |
| Pump elevation | 0 m |
| Pipe elevation | 4 m |
| Dredging depth | 18 m |
| Water density | 1025 kg/m ³ |
| Density solids | 2650 kg/m ³ |
| Max. soil concentration | 30 % |

Remarks

- production curves for reference only
- free flowing sand conditions considered
- production limitation due to soil/cutterhead not considered