

CUTTER & SUCTION DREDGERS



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BELL A-FRAME DREDGER

BELL A-FRAME DREDGER 250

BELL A-FRAME DREDGER 300

BELL A-FRAME DREDGER 350



BELL® A-FRAME DREDGER

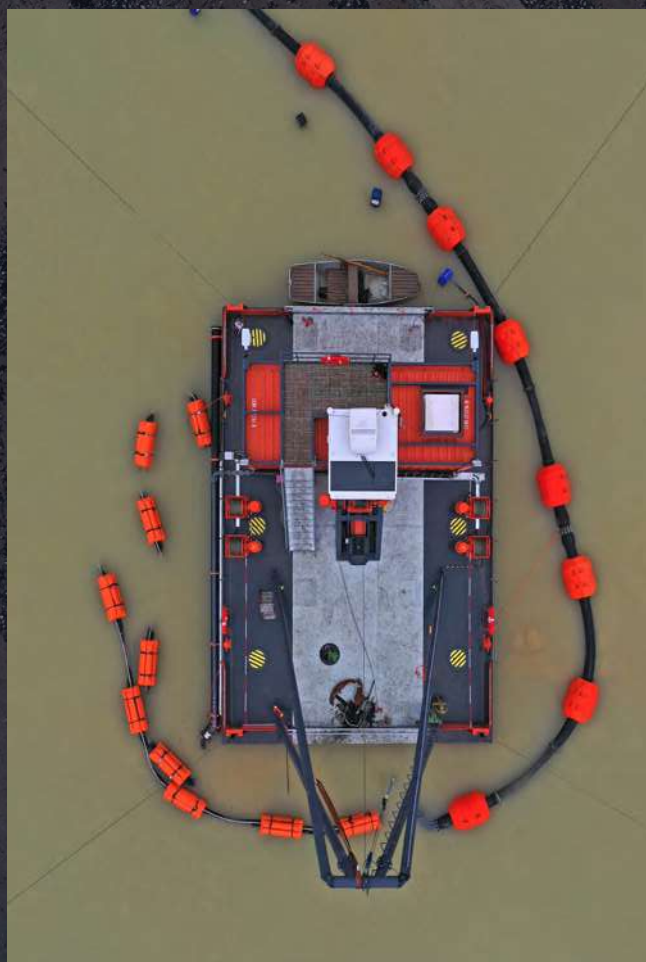
MAXIMUM DEPTH, MAXIMUM CONTROL

Bell A-frame dredgers are diesel or electric driven floating platforms that maneuver on 4 point mooring.

A Bell pump equipped with either a sand production head for loose soils or double cutter head for compact soils is suspended from an A-frame at the front of the pontoon.

The big advantage of this set-up is that you are able to reach great dredging depths.

With the control cabin placed on top of the engine room, maximum overview is ensured and a large open area on deck makes good access to the pump when doing maintenance.





GENERAL DATA

Engine brand	Volvo / CAT
Engine Power	400 kW
Emission class	Stage II/IIIA/ IIIB/IV/V
Height	9,2 m
Length	11,5 m
Width	7,8 m
Max. dredging depth	100 m
Fuel tank	2x 5000 L
Weight	41000 kg

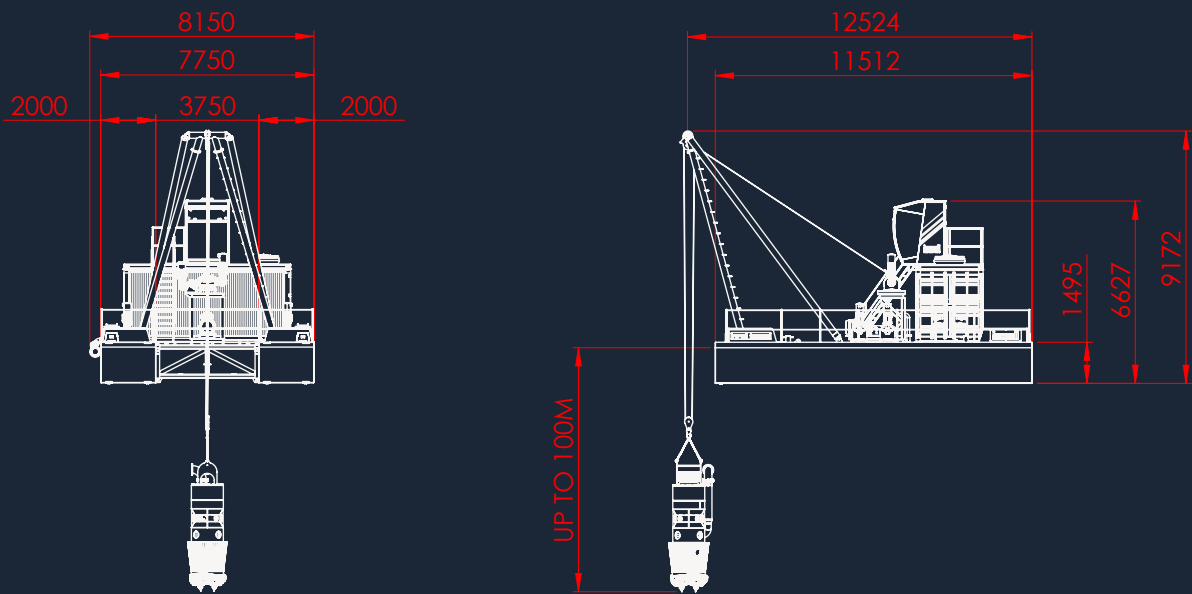
BELL PUMP

250

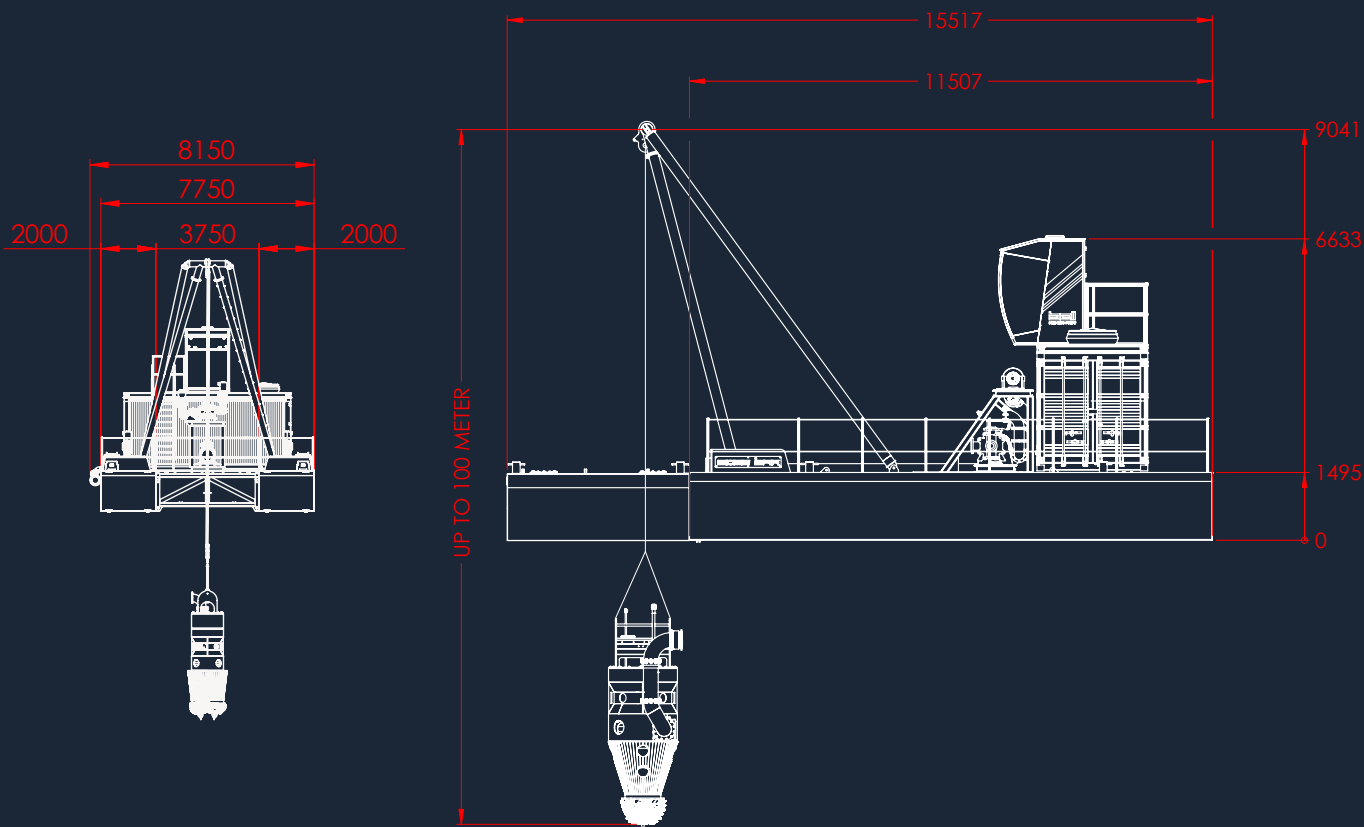
300

Mixture capacity (max)	1250 m³/h	2000 m³/h
Impeller speed (max)	900 rpm	750 rpm
Power at shaft (max)	190 kW	300 kW
Suction bore	250 mm	300 mm
Discharge bore	250 mm	300 mm
Spherical passage	130 mm	155 mm
Hydraulic pressure (max)	250 bar	300 bar
Voltage	400	400/690
Cutter power	2x 55 kW	2x 55 kW

MAIN DIMENSIONS BELL A-FRAME DREDGER 250



MAIN DIMENSIONS BELL A-FRAME DREDGER 300/350





BELL® ADVANTAGES A-FRAME DREDGER

ADVANTAGES OF THE BELL A-FRAME DREDGER

The Bell A-frame Dredger is capable of switching between dredge heads too. Depending on the type of soil, either the sand production head or double cutter head can be attached. But of course there are more advantages which makes the Bell A-Frame the best cutter suction dredger in its class.

A few of them are:

- Diesel driven or fully electric
- Practically no limit to the dredge depth
- Sand head or double cutter head
- Large open area on deck for maintenance
- User friendly control from the cabin



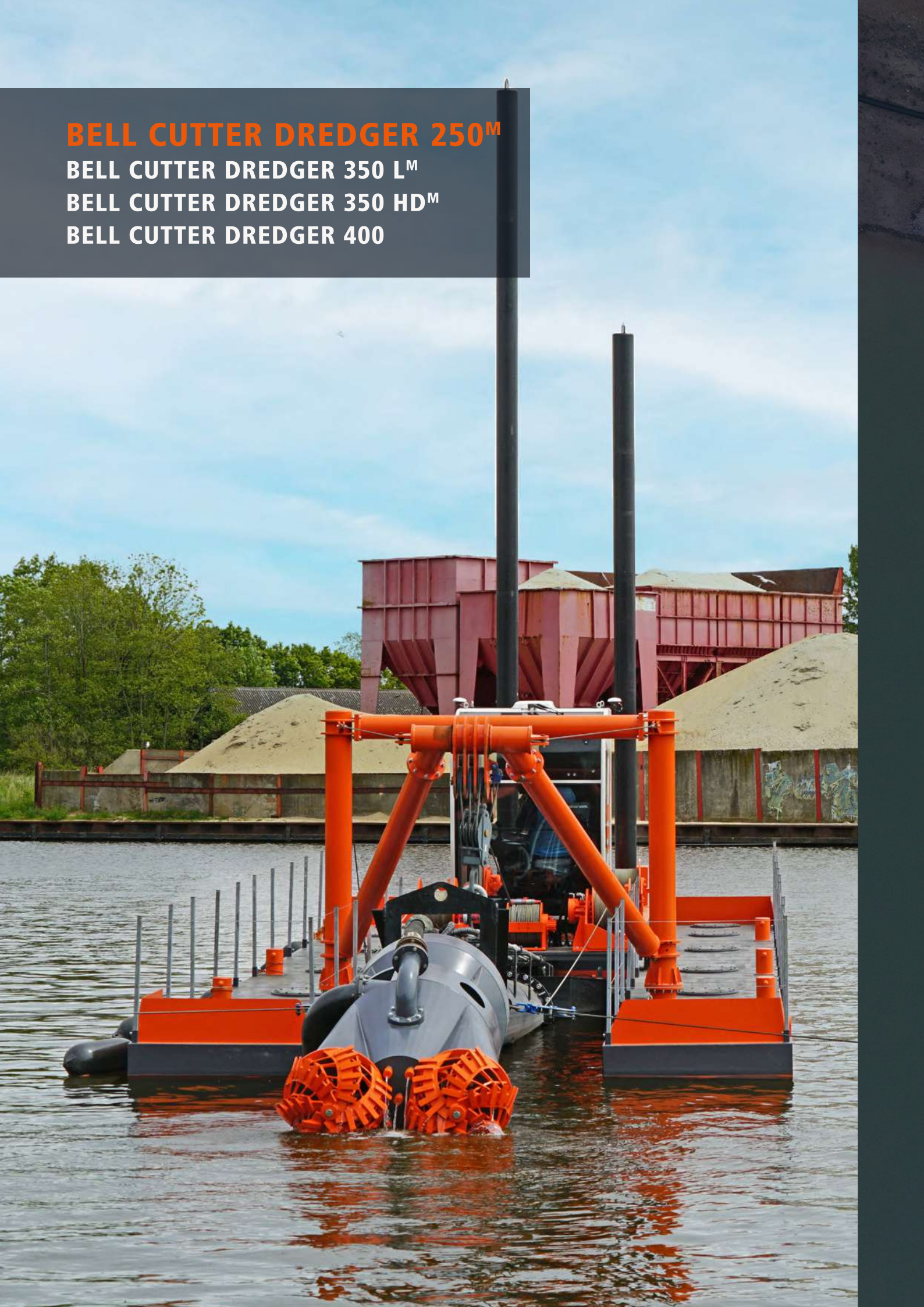


BELL CUTTER DREDGER 250^M

BELL CUTTER DREDGER 350 L^M

BELL CUTTER DREDGER 350 HD^M

BELL CUTTER DREDGER 400





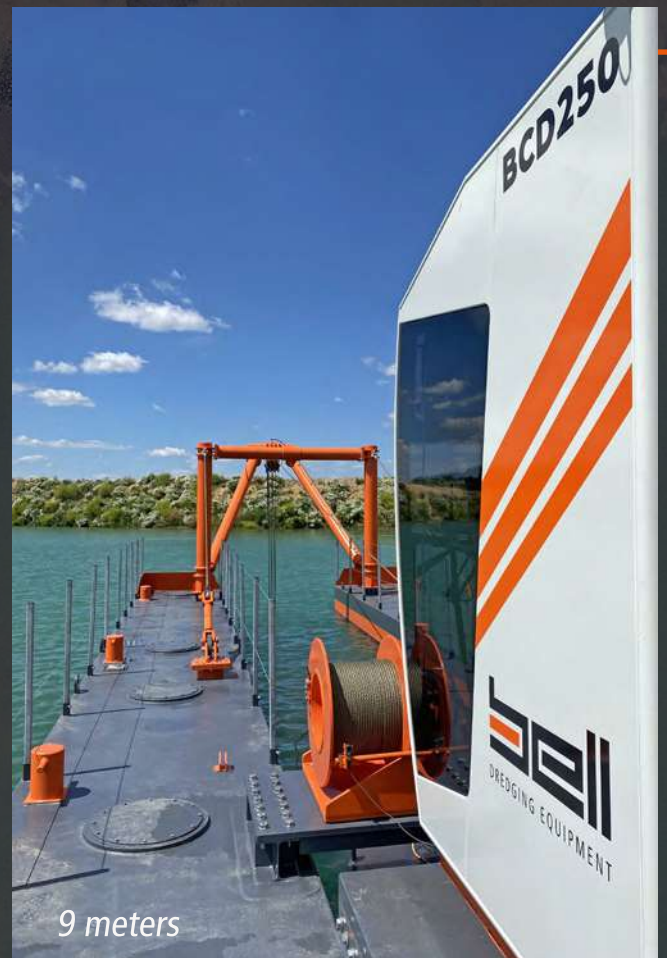
15 meters

BELL® CUTTER DREDGER 250^M (multifunctional)

MULTIFUNCTIONAL DREDGER

We are proud to introduce the BCD 250^M, an updated design of the Bell Cutter Dredger (BCD) 250.

A Multifunctional dredge with suction and cutting depth up to 9 or up to 15 meters. It's available in two variations: diesel driven or fully electric. It has a total installed power of 405 kW and is able to produce 1250 m³/h of mixture. The BCD 250^M is multifunctional because three of our dredge heads can be installed for all different types of soil. The water jet assisted cutter head for compact layers of sand, and clay. The water jet assisted double cutter head with double cutter power for even harder materials, and the water jet assisted sand production head for loose materials like silt, sand and gravel.



9 meters



15 meters

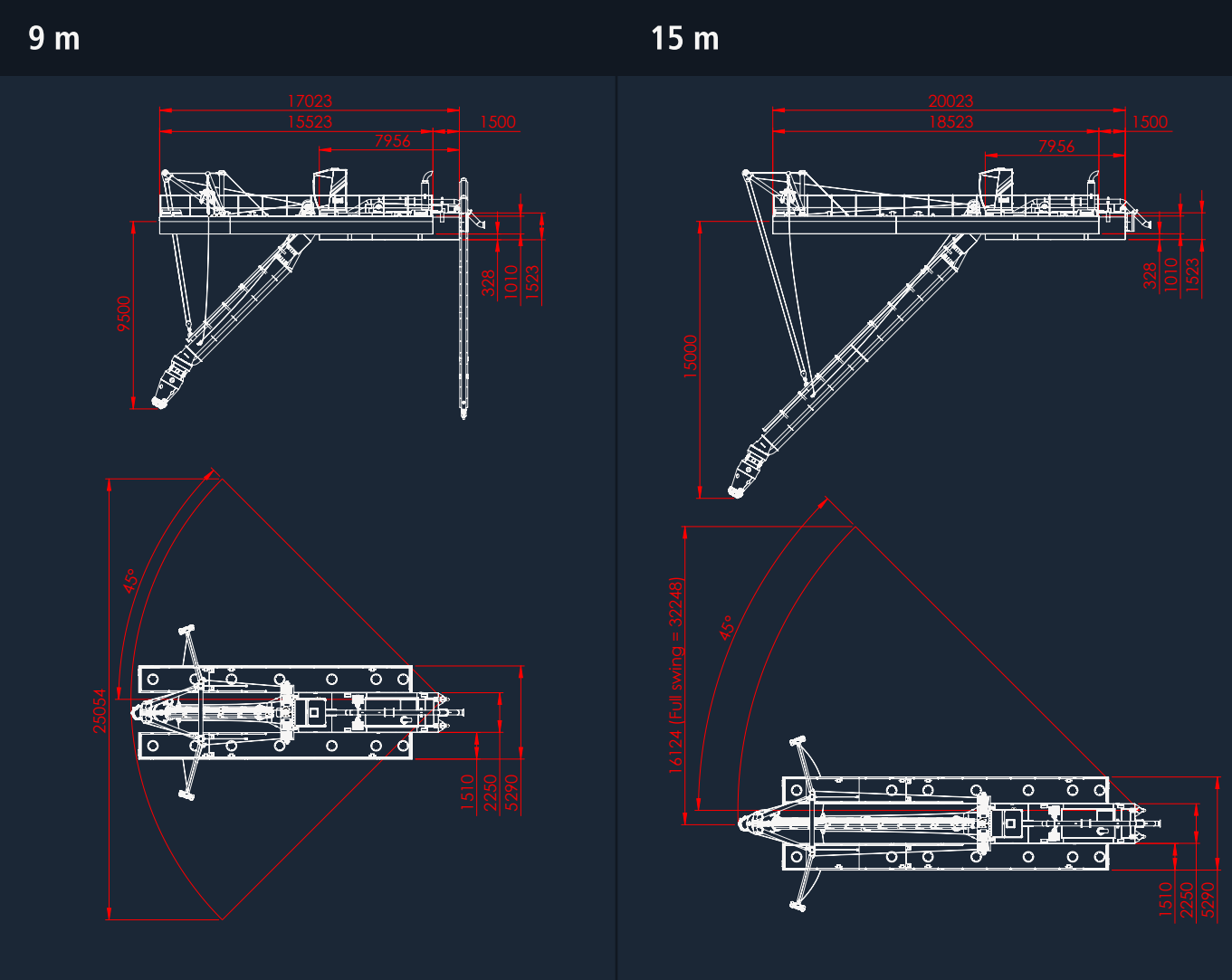
GENERAL DATA

Engine brand	Volvo / CAT
Engine power	390 kW
Emission class	Stage II/IIIA/ IIIB/IV/V
Total weight	41.500 kg
Height	4 m
Length	22 m
Width	4,7 m
Max. dredging depth	9-15 m
Fuel tank	2x 5000 L

BELL 250 PUMP

Mixture capacity (max)	1250 m³/h
Impeller speed (max)	900 rpm
Power at shaft (max)	190 kW
Suction bore	250 mm
Discharge piping	250 mm
Spherical passage	130 mm
Cutter power	55 kW

MAIN DIMENSIONS BELL CUTTER DREDGER 250^M





BELL[®] ADVANTAGES BCD 250^M

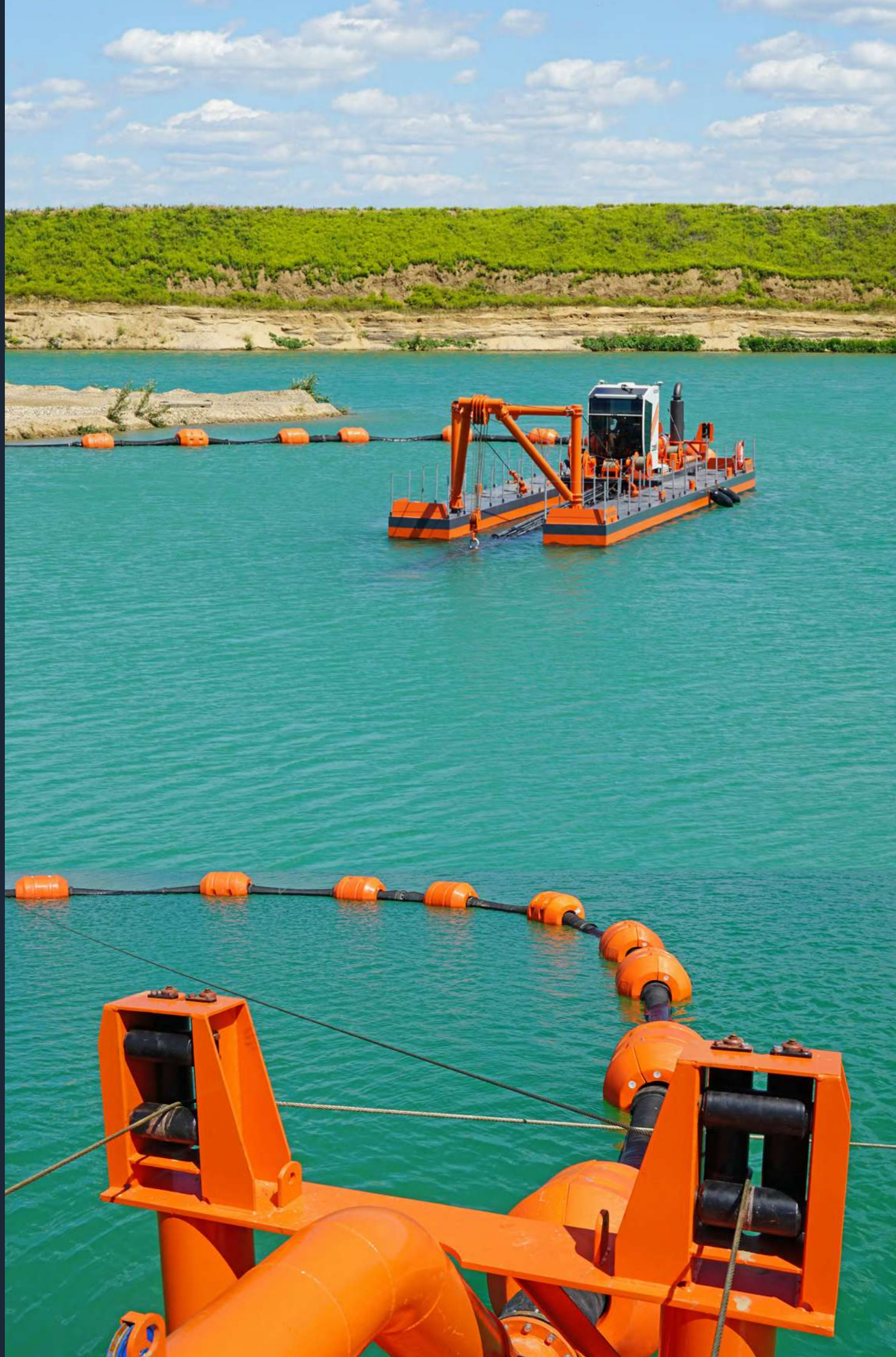
ADVANTAGES OF THE BELL MULTIFUNCTIONAL DREDGER

Being able to switch between three different dredge heads is what gave this dredger its multifunctional title. But of course there are more advantages which makes the BCD 250^M the best cutter suction dredger in its class.

A few of them are:

- Dredge pump located under water for higher production
- Easily replaceable discharge pipe (not running through the engine room!)
- Spacious wide-view control cabin
- Up to 15 meters cutting depth
- Optional spudpole carrier see page 28







BELL CUTTER DREDGER 250^M

BELL CUTTER DREDGER 300-350 L^M

BELL CUTTER DREDGER 300-350 HD^M

BELL CUTTER DREDGER 400



BELL® CUTTER DREDGER 300-350 L^M & 300-350 HD^M

POWER THROUGH ANY SOIL

We are proud to introduce the BCD 300-350 L^M and the BCD 300-350 HD^M.

Both models are available in diesel-driven or fully electric versions and can be equipped with three interchangeable dredge heads for different types of soil.

The BCD 300-350 L^M serves as the light version, offering excellent efficiency, maneuverability and easy transport. With an installed power of 450 kW, a cutting depth of up to 9 meters, and a suction depth of up to 15 meters, this version is ideal for standard dredging operations in sand, silt, and clay.

The BCD 300-350 HD^M is the heavy-duty version, specifically built for the toughest environments. Equipped with 735 kW of installed power, it has a cutter power (110 kW) and can reach cutting depths of up to 15 meters and suction depths up to 21 meters. Its reinforced construction and larger fuel capacity make it perfectly suited for challenging conditions and remote operations.

Our water jet assisted cutter head is used for compact layers of sand, and clay. The water jet assisted double cutter head with double cutter power for even harder materials and dredge efficiency in both swinging directions. Finally the sand production head can be installed for loose materials like silt, sand and gravel.

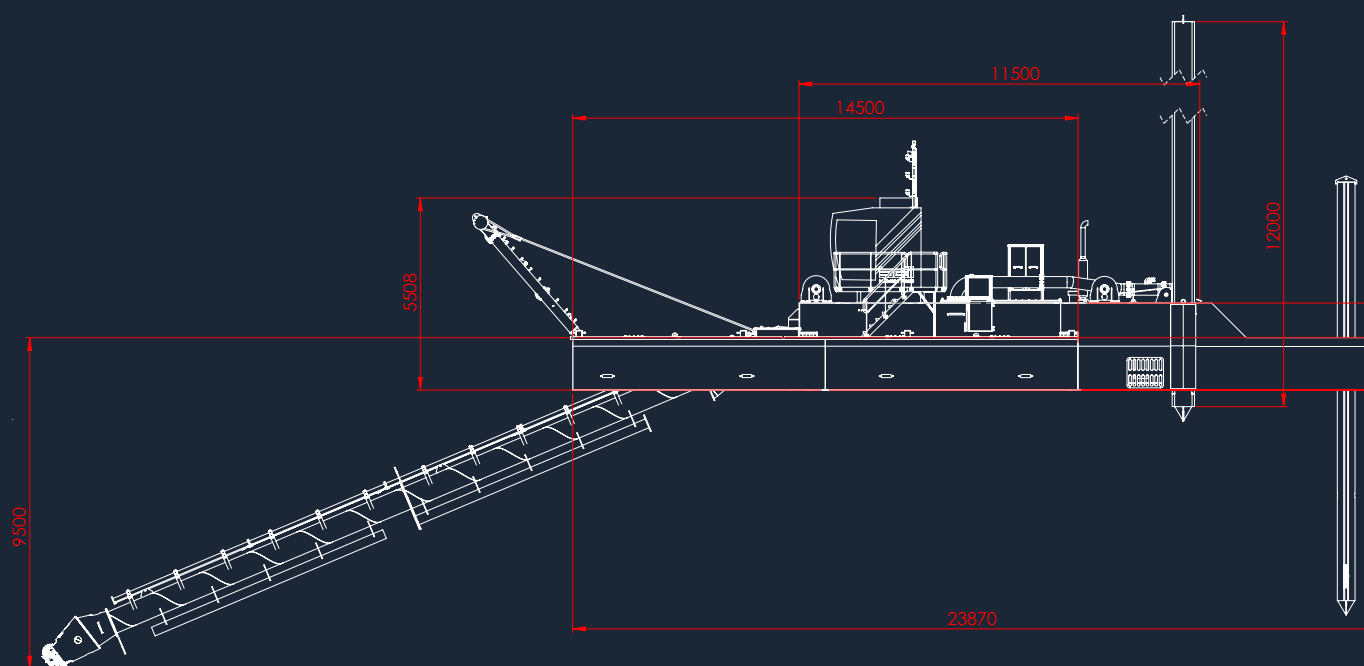


GENERAL DATA	300-350 L ^M	300-350 HD ^M	BELL PUMP	300
Engine brand	Volvo / CAT	Volvo / CAT	Mixture capacity (max)	2000 m ³ /h
Installed power	450 kW	735 kW	Pump speed (max)	750 rpm
Emission class ¹	Stage II/IIIA/IIIB/IV/V	Stage II/IIIA/IIIB/IV/V	Power at shaft (max)	300 kW
Weight (diesel/hydraulic)	60 ton	120 ton	Suction bore	Ø350 mm
Max. cutter depth	9 m	15 m	Discharge bore	Ø300 mm
Max. suction depth	15 m	21 m	Spherical passage	155 mm
Fuel tank	2x 5 ton	2x 11 ton	Hydraulic pressure (max)	300 bar
Cutter power (standard)	55 kW	110 kW	Voltage ²	400/690

¹ Other emission classes on request

² Other voltages on request

MAIN DIMENSIONS BCD 300-350 L^M & 300-350 HD^M



BELL® ADVANTAGES 300-350 L^M & 300-350 HD^M

ADVANTAGES OF THE BCD 300-350 L^M & BCD 300-350 HD^M

Being able to switch between three different dredge heads is what gave these dredgers their multifunctional title. But of course there are more advantages which makes them the best cutter suction dredgers in their class.

A few of them are:

- Spacious wide-view control cabin
- Up to 18 meters cutting depth
- Up to 21 meters dredging depth
- High cutter power
- Large volume high pressure water jet
- Optional spudpole carrier see page 28



BELL CUTTER DREDGER 250^M
BELL CUTTER DREDGER 350 L^M
BELL CUTTER DREDGER 350 HD^M
BELL CUTTER DREDGER 400





BELL®

CUTTER DREDGER 400

MAXIMUM POWER, MAXIMUM PERFORMANCE

The Bell Cutter Dredger 400.

Capable of pumping 3500 cubic meters of mixture per hour, the BCD400 is the largest multifunctional cutter suction dredger we manufacture. With 500kW installed power on the dredge pump and a standard cutter power of 210kW, this machine will get the job done. Its higher pumping capacity and increased cutter power ensure maximum efficiency, even in the most demanding dredging conditions.



GENERAL DATA 400

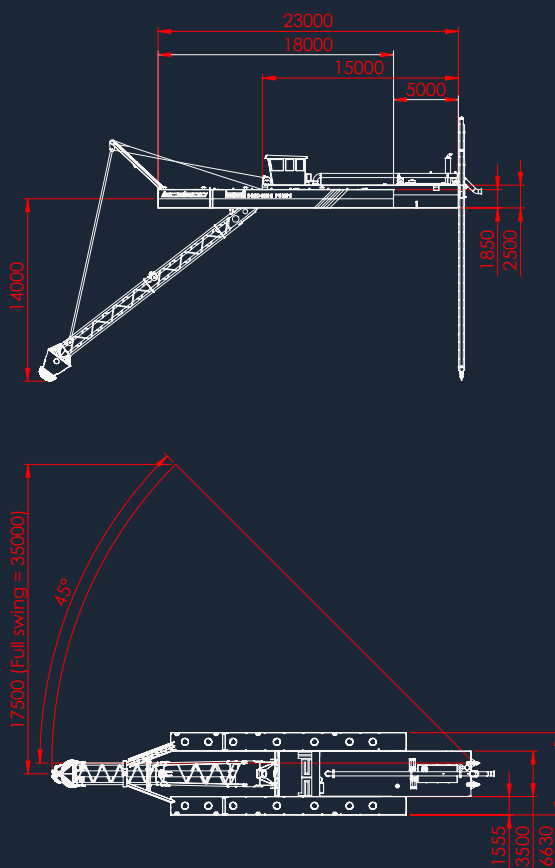
Engine brand	Volvo / CAT
Power on pump	551 kW
Emission class ¹	Stage II/IIIA/ IIIB/IV/V
Weight (diesel/hydraulic)	135,5 ton
Max. cutter depth	15 m
Max. suction depth	21 m
Fuel tank	2x 11 ton
Cutter power (standard)	110 kW
Cutter power (heavy duty)	180 kW

BELL PUMP 400

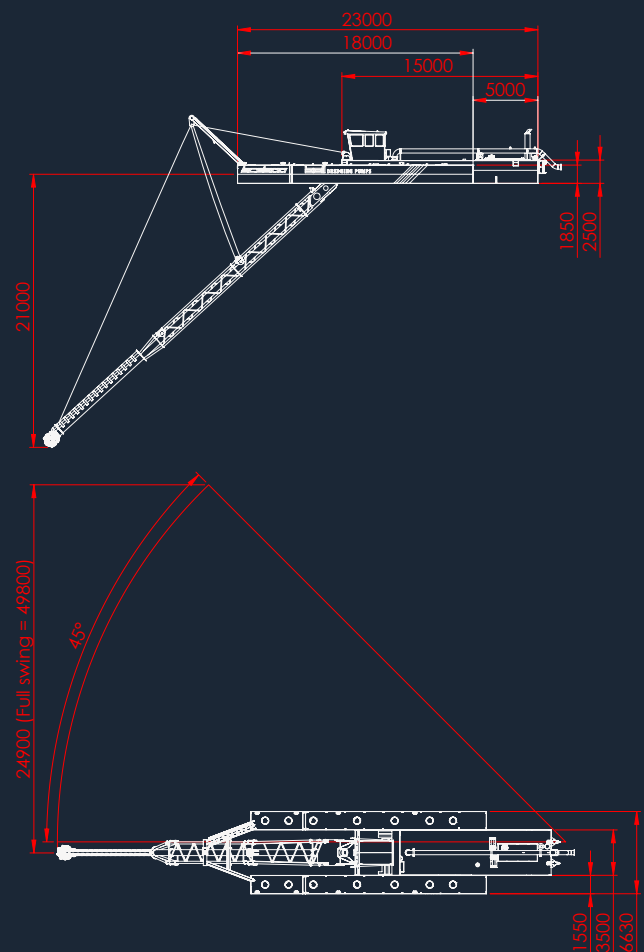
Mixture capacity (max)	3500 m ³ /h
Pump speed (max)	600 rpm
Power at shaft (max)	500 kW
Suction bore	Ø450 mm
Discharge bore	Ø400 mm
Spherical passage	210 mm
Hydraulic pressure (max)	300 bar
Voltage ²	400/690

MAIN DIMENSIONS BCD 400

Cutter head



Sand head





BELL® ADVANTAGES BELL CUTTER DREDGER 400

ADVANTAGES OF THE BCD 400

Being able to switch between three different dredge heads is what gave these dredgers their multifunctional title. But of course there are more advantages which makes them the best cutter suction dredgers in their class.

A few of them are:

- Spacious wide-view control cabin
- Up to 18 meters cutting depth
- Up to 21 meters dredging depth
- High cutter power
- Large volume high pressure water jet
- Optional spudpole carrier see page 28





APPLICABLE BELL® HEADS

BELL CUTTER HEAD

The Bell cutter head, seen in the picture below, is a high torque cutter used for agitating compact layers of soil, sand and clays. It is not only able to do this at 9 meters deep like other cutter dredgers from this class, but up to max. 15 meters deep. Besides this it is equipped with water jet nozzles in and around the rotating head to keep it clean and create a better mixture under water.



BELL DOUBLE CUTTER HEAD

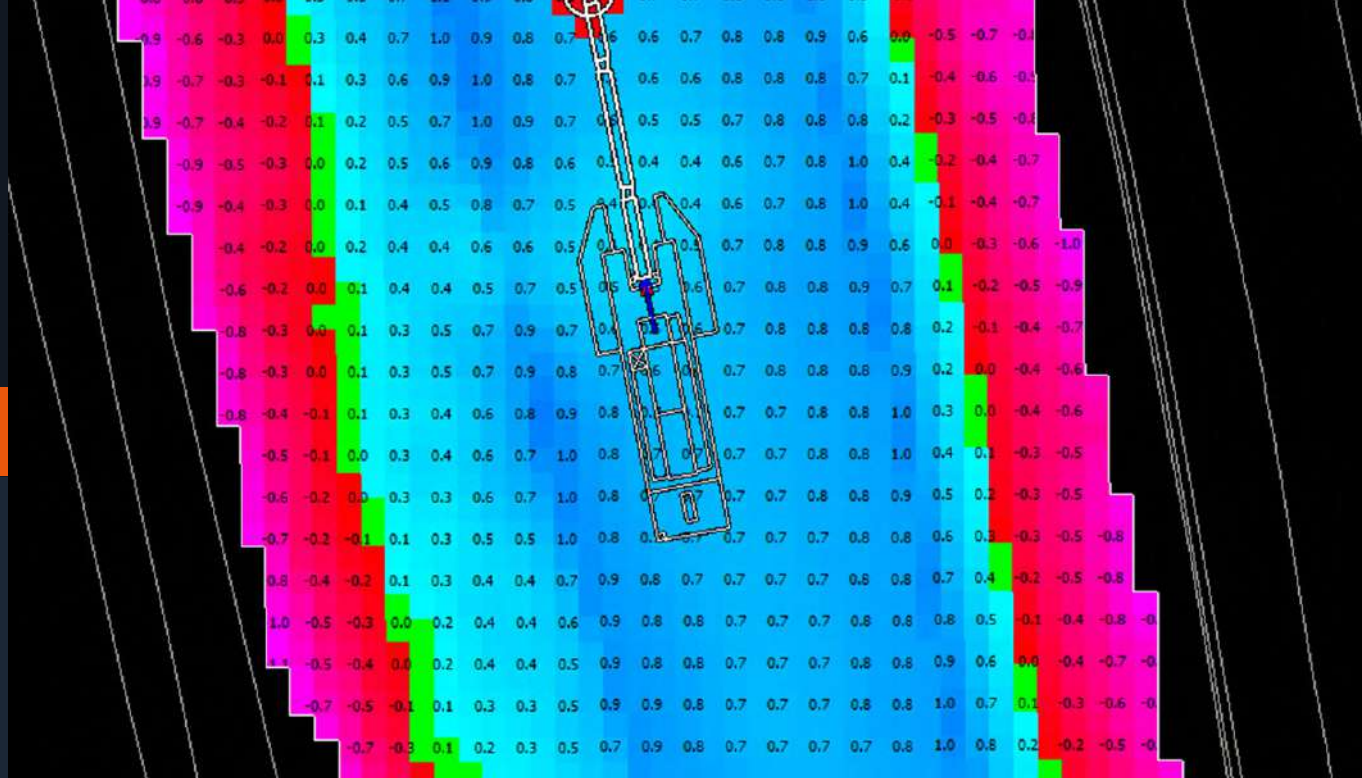
The Bell double cutter head, seen in the picture below, was originally developed to use free hanging but has proven to be very successful in a fixed set-up too. With double the cutter power and 16 bar on the 11 water jet nozzles in and in between the rotating heads, the hardest soil layers can be dredged.



BELL SAND PRODUCTION HEAD

Maximum production when dredging loose layers of silt, sand and gravel, is ensured by the Bell sand production head. Seen in the picture below, 8 water jet nozzles around the cage create a high solids mixture under water which is pumped away with maximum efficiency.



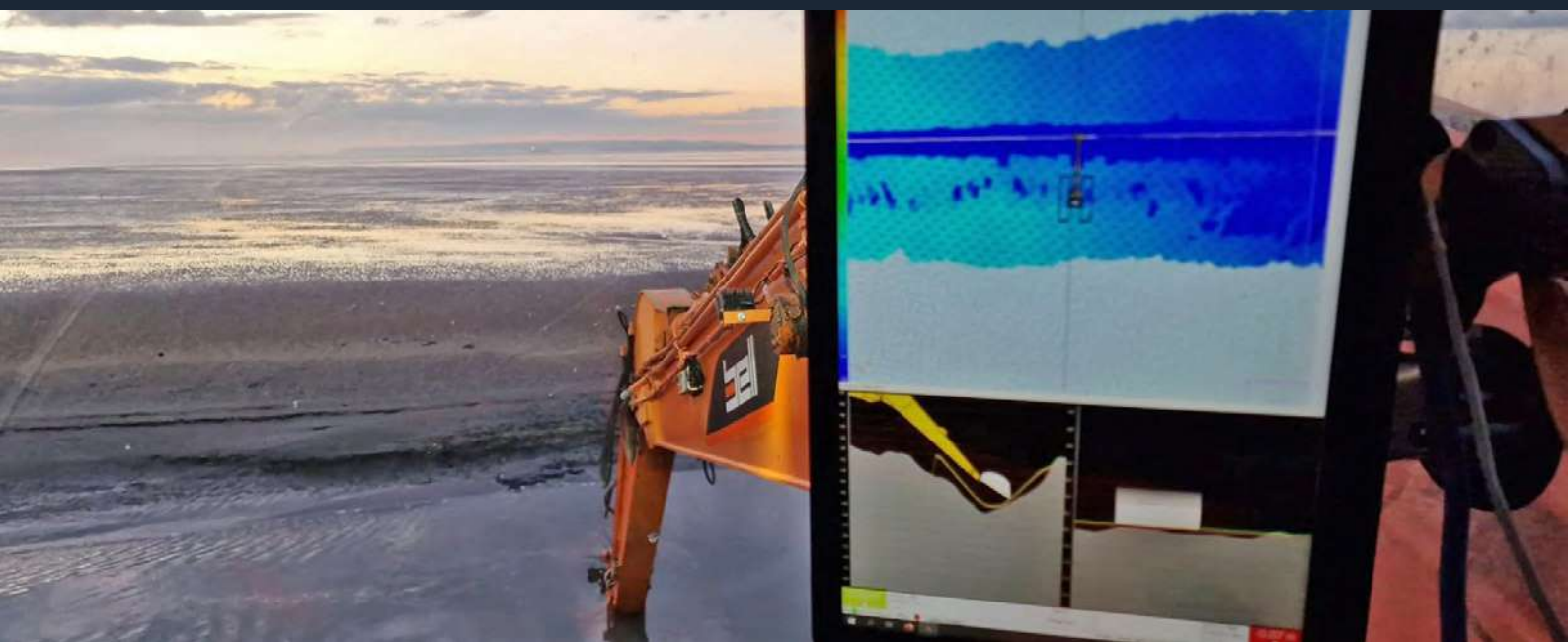


BELL® AVAILABLE OPTIONS

BELL® DREDGE COMPUTER

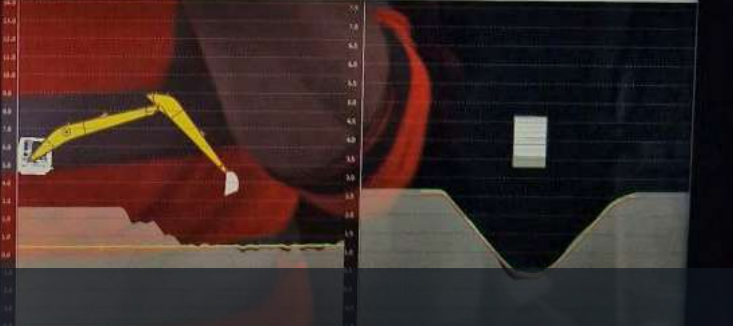
SPECIFICATIONS

- Industrial Intel Computer
- Internal (G)PS/GLONASS (RTK) receiver
- Industrial GSM/GPRS/UMTS Modem
- Wide range of accessories and sensors



BELL® SOUNDER SYSTEM

BELLSounder is designed to be a simple and rugged hydrographical survey solution with the basic functions of an echo sounder. Depending on the connected sensors, BELLSounder will function as a dual or a single frequency echo sounder. Powered by either an internal Trimble or a Hemisphere GNSS receiver, it provides the perfect solution for a hydrographic survey solution. The BELLSounder consists of a rugged Peli Case that provides a protected housing for every environment.



PRODUCTION INSTRUMENTATION

Flow measurement together with non-nuclear density measurement calculate very accurately the exact production of solid material of the Bell dredgers. Suitable for salt water and fresh water, in every kind of dredging or mining application and accurate with all densities and grain sizes.





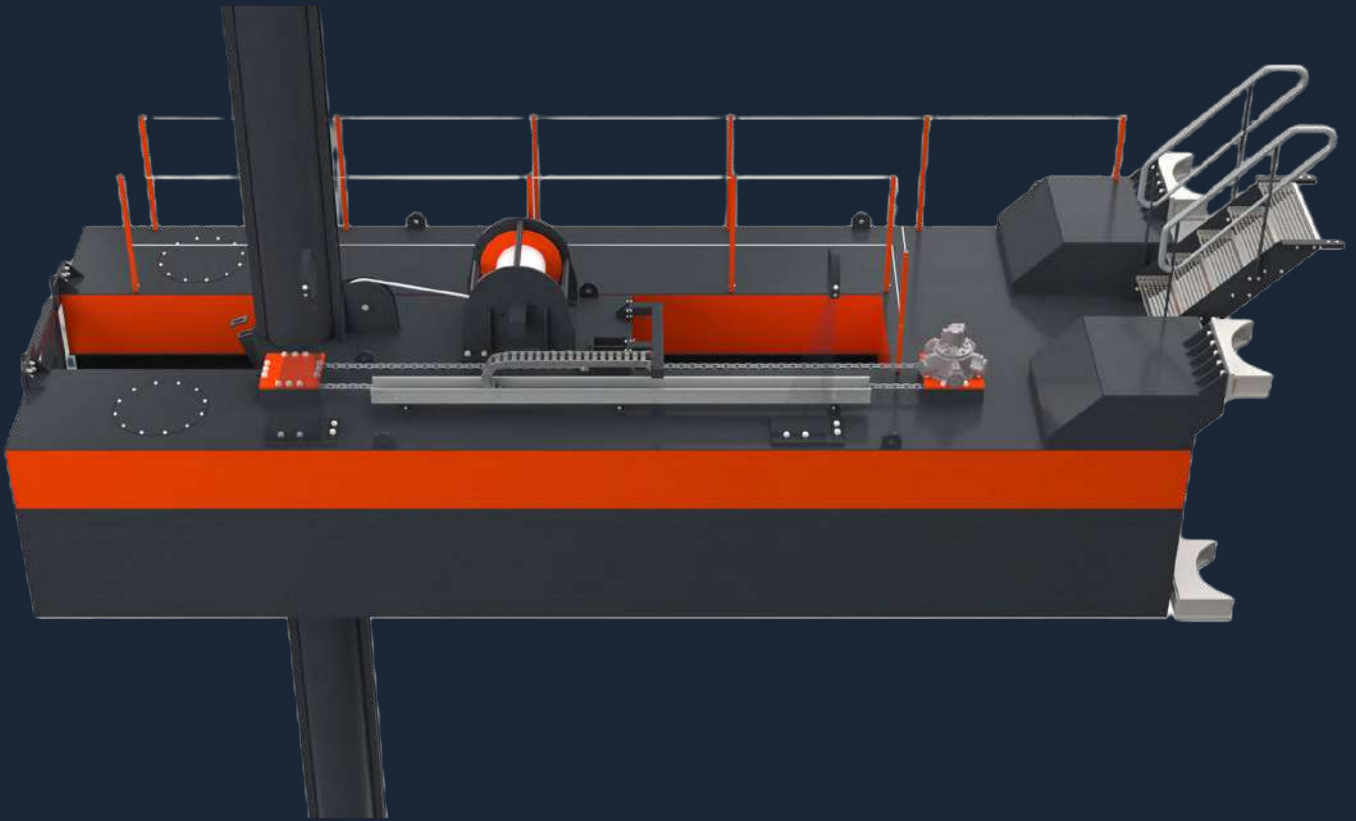
BELL® SPUD POLE CARRIER

BELL CUTTER HEAD

When working in narrow waterways a Bell Spud Carrier is necessary to move the dredger forward during the dredging process. The spud carrier can be attached to the back of the Bell Cutter Dredger and uses one of the spud poles in a chain operated carriage to move the dredger in longitudinal direction.

GENERAL DATA

Traveling speed	3 m/min
Traveling distance	3,2 m
Max spud pole length	18 m
Weight spud carrier	9800 kg
Width spud carrier	3 m
Length spud carrier	8,2 m
Height spud carrier	1,5 m
Torque traveling motor	3625 Nm
Max hydraulic pressure	300 bar
Max hydraulic flow	92 l/min



ADVANTAGES OF THE SPUD POLE CARRIER

- Hydraulic operated
- Hydraulic-powered chain drive
- Long lasting wearing parts
- Spud pole safety sensor
- Standardized spare parts
- Greaseable bearings
- Designed for easy coupling and uncoupling
- Equipped with stair and safety railing





BELL® CONTROL CABINS

A climate controlled, spacious cabin with comfortable chair and windows 180 degrees from left to right ensures maximum operator comfort. The dredger is controlled with two joysticks and all aspects of the dredging process are monitored on two tablet screens. A rear view camera is installed on the backside of the cabin.

CUTTER DREDGER 250^M



A-FRAME DREDGER



CUTTER DREDGER 300-350 L^M / 300-350 HD^M & 400





102025



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