

# DREDGERS & PUMPS GmbH

Innovative companies who combine knowledge and skilled personnel into the best dredge solutions, suitable products for our global customers.

Maintenance



Reclamation



Mining



All others



## What we can do for you!

Specialized in:

- 3D engineering and calculations
- Project management
- Production & Coating
  - Welding
  - 3D Casting
  - Machining
- Turn key projects
- Training and Support
- Global projects



Modern  
design



Production



Testing



Training

## Where we are!



Our facility in Ulft,  
the **Netherlands**:

- Engineering,
- Assembling,
- Training.



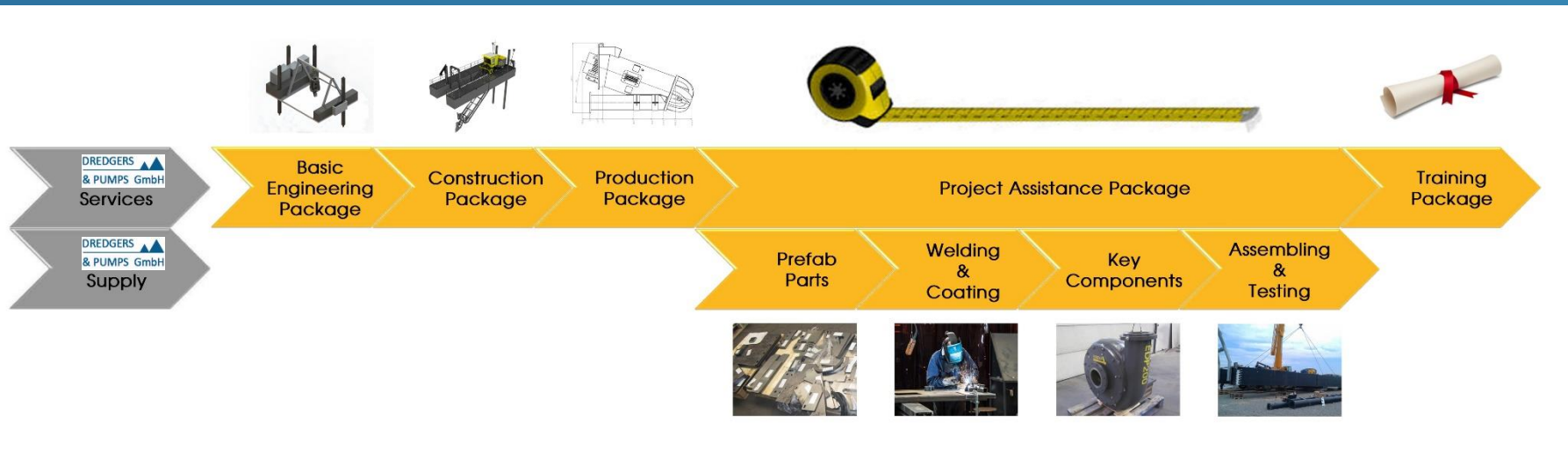
Our facility in Recklinghausen,  
**Germany**:

- Production,
- Assembling.

# DREDGE PROJECT

Our Dredger & Pumps **Service** is to run your project as easy as possible, step by step. We also fill in the gaps of your project.

Our Dredger & Pumps **Supply** of key components can deliver parts in your project or deliver a Turn-Key project.



Modular projects keeps you under control!

⇒ [Details](#)

⇒ [Next](#)

# DREDGE MINING PROJECT

What is needed and what we do...

Engineering

Project management



Delivery line

Separation plants

Dredge solutions

De-watering

Automatization

## Were we stand for!

- ✓ QUALITY CONTROL
- ✓ HEALTH
- ✓ SAFETY
- ✓ ENVIRONMENT
- ✓ EDUCATION / TRAINING



BEST PERFORMANCE !!!



... and many others liked our work  
of more than **25 years of**  
**experience.**

## Certificates & Rules

Certificates for safe work:

- CE
- TÜV
- Verein Berufsgenossenschaft
- Bergamt



Notified Bodies:

- Lloyds Register
- ES-TRIN 2019
- Bureau Veritas
- Nordic Standard

## DESIGN & PRODUCTION



Form idea  
to result.



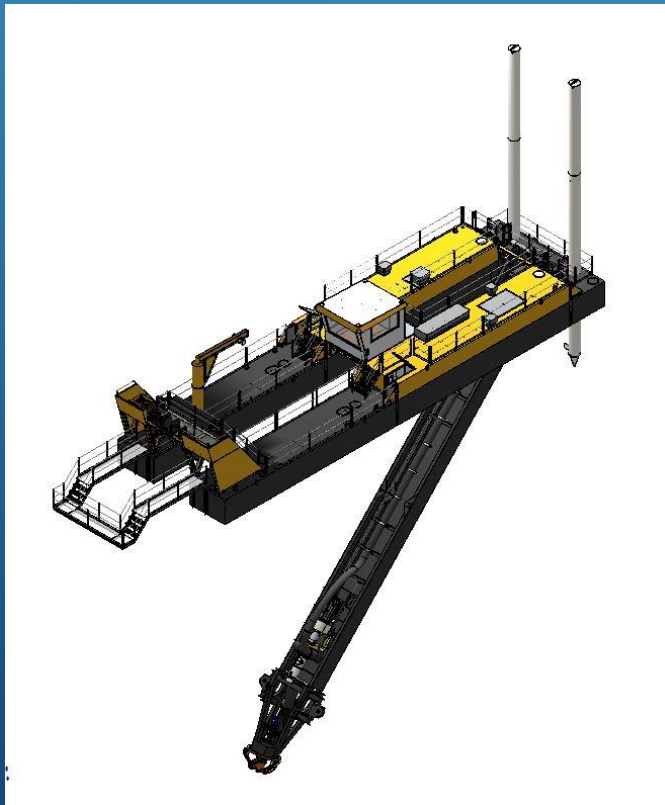


Our knowledge at Your Disposal!!

# CUTTER SUCTION DREDGERS

## DREDGE SOLUTIONS

### Cutter Dredger



Normal cutter suction dredger



## DREDGE SOLUTIONS

### Cutter & Water Jet Dredger



Cutter system

Diesel

Till 12 meters depth

Pump  $\varnothing$  250 mm

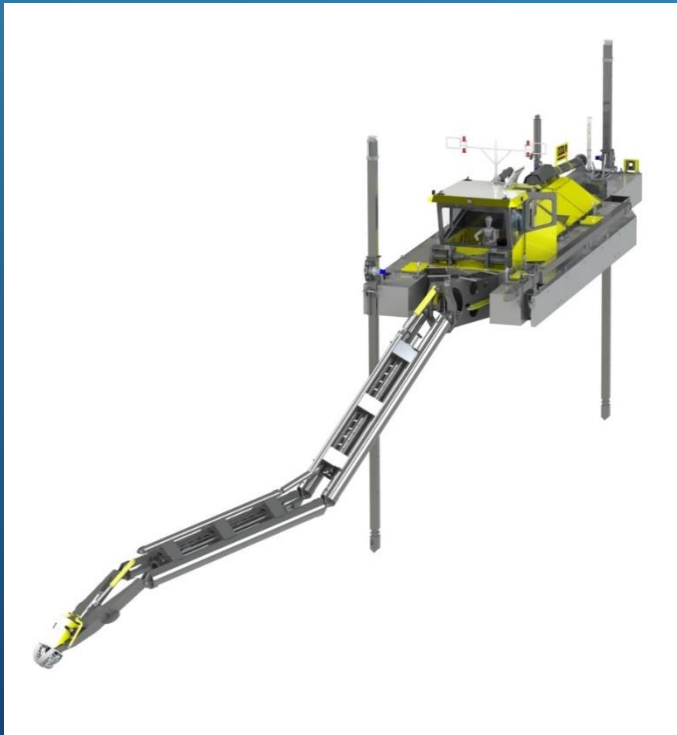
Location, the Netherlands



## DREDGE SOLUTIONS

### Swing Cutter Dredger

For harbor and river  
maintenance cutter head  
with optional water jet



## DREDGE SOLUTIONS

### Cutter Dredger Heads



The cutter cage can rotate in various speeds driven by **hydraulic** or **electric** motors.



On both sides are cable disks mounted to guide the mooring cables

Teeth for the job

Our knowledge at Your Disposal!!

# WATER JET DREDGERS

## DREDGE SOLUTIONS

### Water Jet Dredger

Alpha dredgers  
up to 10 meter depth

Electric or diesel

Till 350 mm dredge pump

4 position / mooring winches

Ergonomically and safe



## DREDGE SOLUTIONS

### Water Jet Dredger

Water jet system

Electric

Till 25 meters depth

Pump  $\varnothing$  300 mm

Location, Germany





## DREDGE SOLUTIONS

### Water Jet Dredger



Water jet system

Electric / trafo

Till 25 meters depth

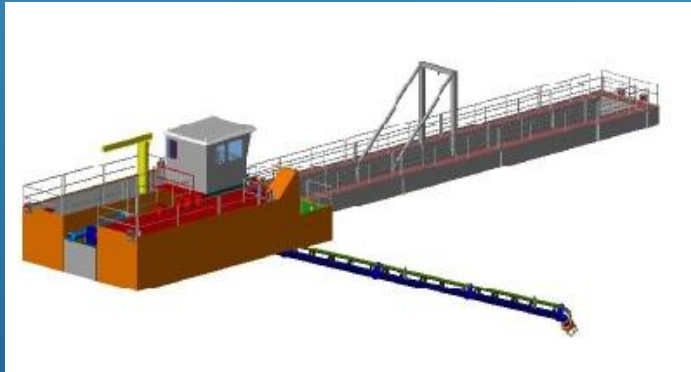
Pump  $\varnothing$  350 mm

Location, France



## DREDGE SOLUTIONS

### Water Jet Dredger



Water jet system

Electric / diesel

Till 25 meters depth

Pump  $\varnothing$  300 mm

Location, Germany



## DREDGE SOLUTIONS

### Water Jet Dredger

Water jet system

Electric / trafo

Till 40 meters depth

Pump  $\varnothing$  300 mm

Location, Germany



## DREDGE SOLUTIONS

### Water Jet Dredger

Water jet system

diesel

Till 12 meters depth

Pump  $\varnothing$  300 mm

Location, Azerbaijan



## DREDGE SOLUTIONS

### Water Jet Dredger



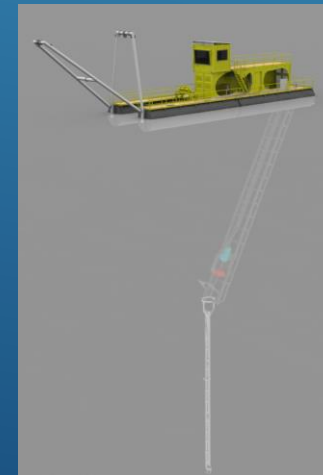
Water jet system

Electric

Till 50 meters depth

Pump  $\varnothing$  350 mm

Location Germany



## DREDGE SOLUTIONS

### Water Jet Dredger

Water jet system

Electric / trafo

Till 25 meters depth

Pump Ø 350 mm

Location, Germany



## DREDGE SOLUTIONS

### Water Jet Dredger



### Submersible Pump for high concentration!



- Water jet system
- Electric / trafo
- Till 80 meters depth
- Pump Ø 350 mm
- Location, Germany



## DREDGE SOLUTIONS

### Water Jet Dredger

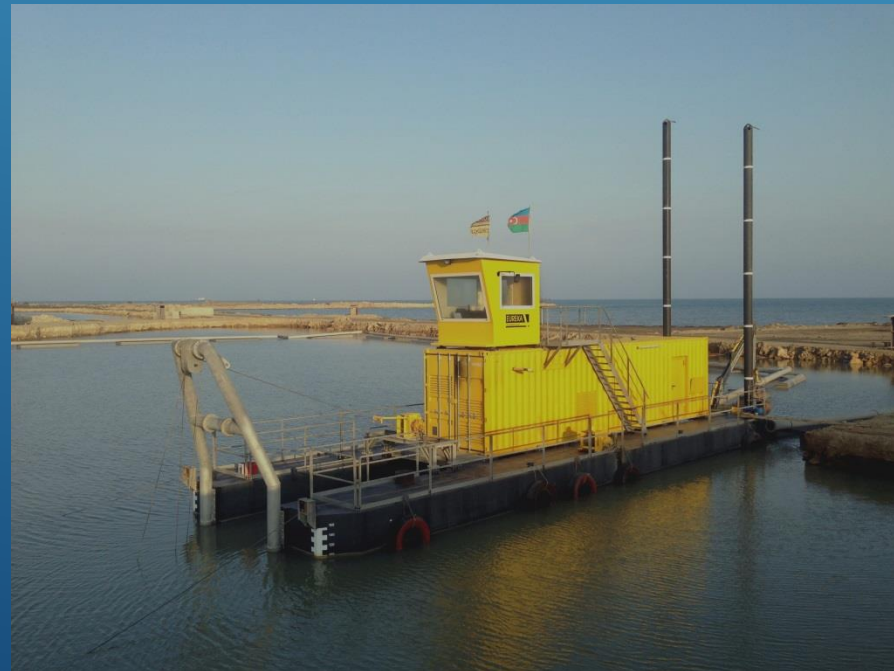
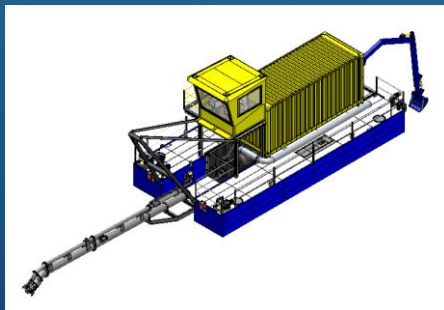
Water jet system

Diesel

Till 20 meters depth

Pump Ø 350 mm

Location, Iran





## DREDGE SOLUTIONS

### Water Jet Dredger

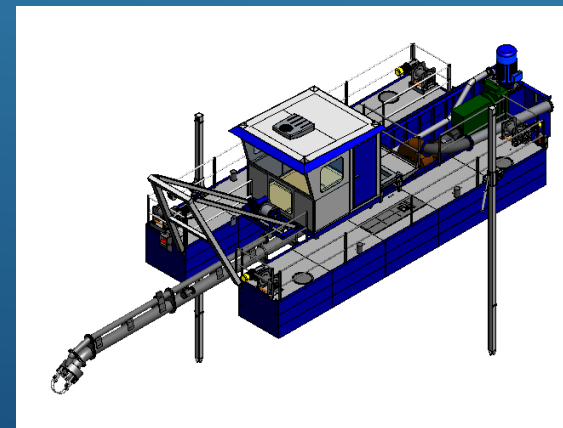
Water jet system

Diesel

Till 12 meters depth

Pump  $\varnothing$  250 mm

Location, Romania



## DREDGE SOLUTIONS

### Water Jet Dredger



Water jet system

Electric / trafo

Till 40 meters depth

Pump  $\varnothing$  350 mm

Location, Germany

## DREDGE SOLUTIONS

### Water Jet Dredger

Water jet system

Electric / trafo

Till 25 meters depth

Pump  $\varnothing$  350 mm

Location, Germany



## DREDGE SOLUTIONS

### Water Jet Dredger



Water jet system  
Electric / trafo  
Till 35 meters depth  
Pump  $\varnothing$  250 mm  
Location, Germany



## DREDGE SOLUTIONS

### Water Jet Dredger



Water jet system

Electric / trafo

Till 35 meters depth

Pump  $\varnothing$  350 mm

Location, the Netherlands



## DREDGE SOLUTIONS

### Water Jet Dredger

Water jet system

Electric / trafo

Till 35 meters depth

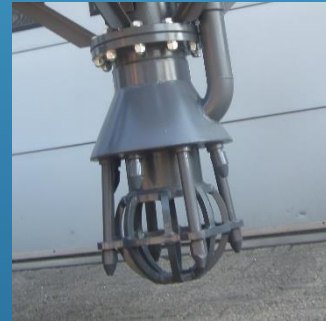
Pump  $\varnothing$  350 mm

Location, Germany



## DREDGE SOLUTIONS

### Water Jet Dredger Heads



Water beams to loosen the sand, combined with a stone protection bin to prevent oversized stones from entering the suction pipe.



Our knowledge at Your Disposal!!

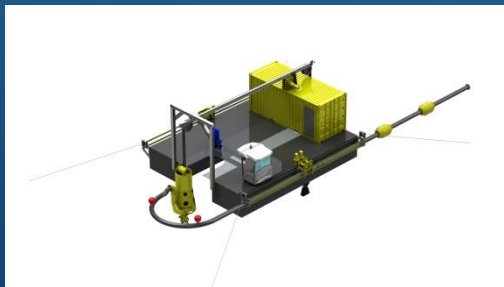
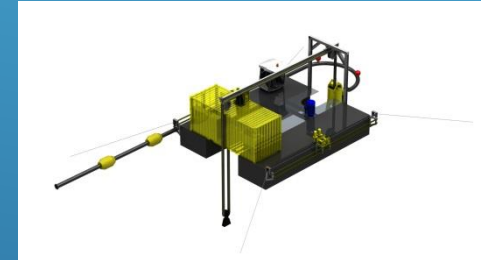
# SUBMERSIBLE PUMP UNITS



# DREDGE SOLUTIONS

## Submersible Pump Units on a cable

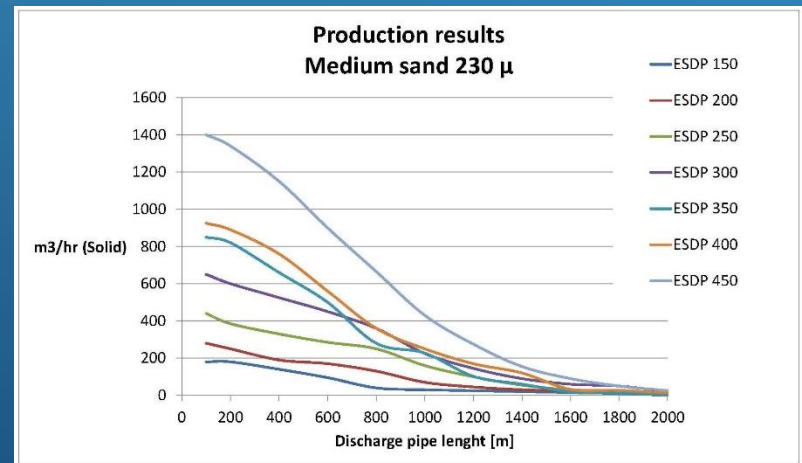
Installation possibility on your barge by hoisting cable winch.



# DREDGE SOLUTIONS

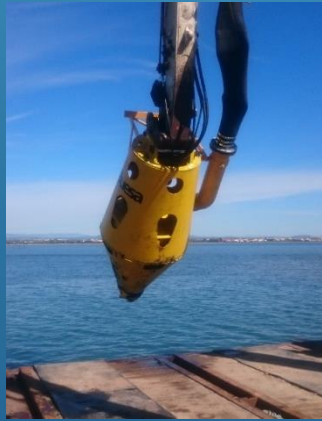
## Submersible dredge pump's

Production of a ESPD250	450-4500	m <sup>3</sup> /hr
Dredging sand and stones	50-600	m <sup>3</sup> /hr
Dredging material	101-1012	ton/hr
Dredging depth	50	m <sup>1</sup>
Dredge pressure (max.)	6	bar
Attached to	Excavator / cable	
Power source	Hydraulic/Electric	
Dredge Tools	WJ/Cutter/Auger/FH/Exc	



# DREDGE SOLUTIONS

## Submersible Pump Units on excavators



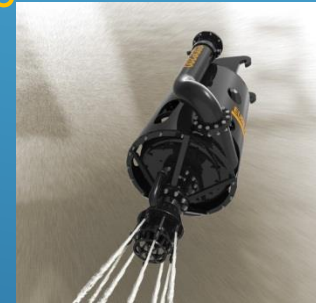
An excavator carrying a dredge pump to dredge from the site, by float crawlers or from barge.

Dredge tools can be changed very easy to adapt to the environment.

The excavator can be moved and driven the dredge pump.



Multi functional dredge pump



Excavator needed

ESDP 150	=	14 †
ESDP 200	=	25 †
ESDP 250	=	35 †
ESDP 300	=	70 †
ESDP 350	=	75 †

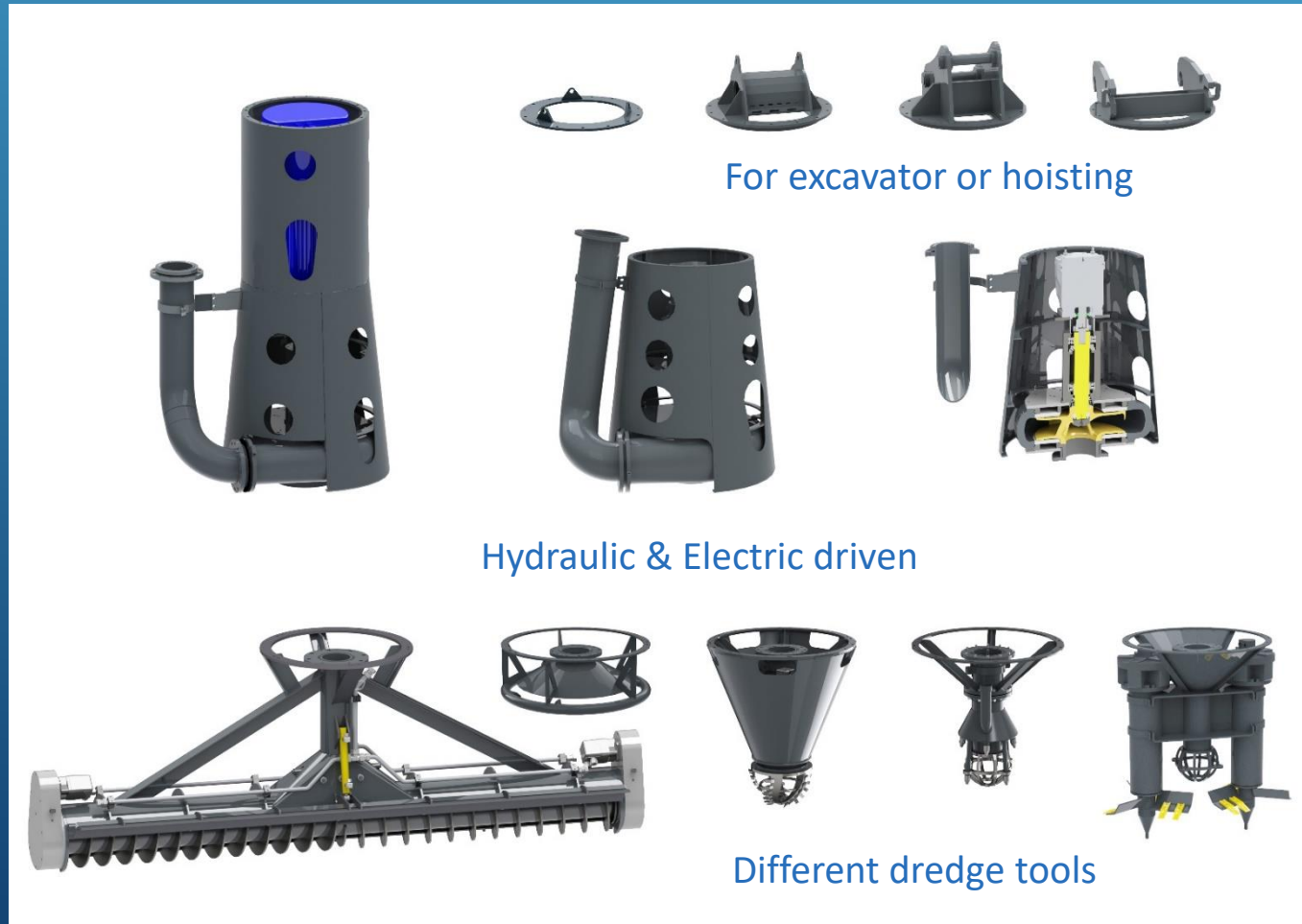
or use power packs



⇒ [Next](#)

## DREDGE SOLUTIONS

### Submersible Pump Units on excavators



Always fit for  
the job!

Our knowledge at Your Disposal!!

# TRAIL HOPPER SUCTION DREDGERS

## DREDGE SOLUTIONS

### Trailing Hopper Suction Dredger

The hopper **sucks and carries the solid materials**. This is mainly sandy material.

Delivery is by **hopper doors, rain bow, delivery line** or external pump with hydrants.

This is a **combination of a dredger and a barge carrier**. Alternative is a cutter dredger and a barge on each side.



## DREDGE SOLUTIONS

### Trailing Hopper Suction Dredger

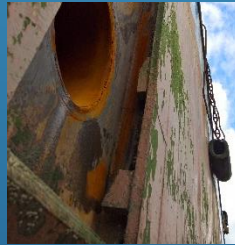


The Single suction  
pipe

## DREDGE SOLUTIONS

### Trailing Hopper Suction Dredger

The gandy and  
slide





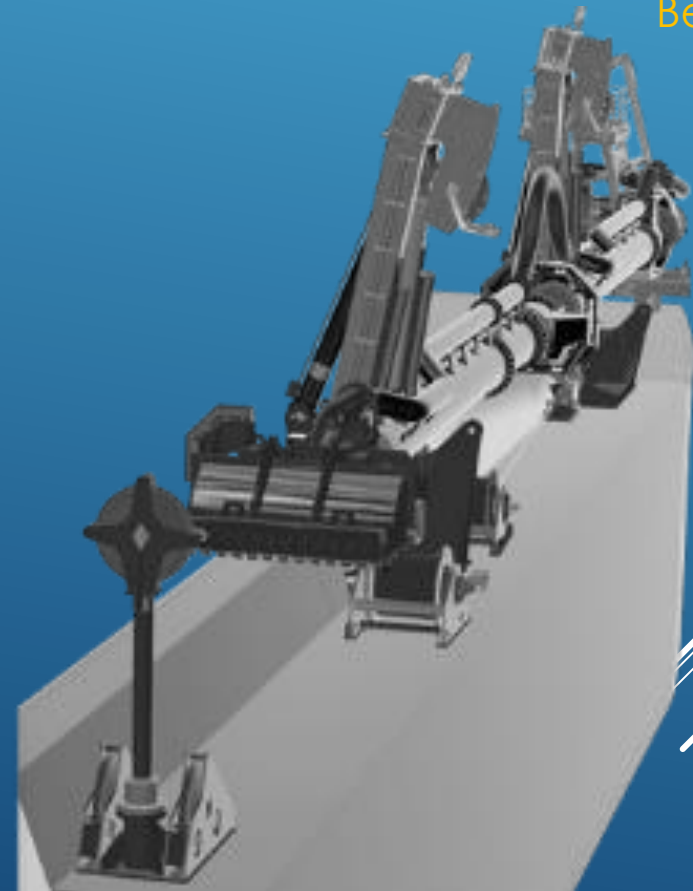
## HOPPER DREDGER

### Coastal & Harbor

Request  
Possibilities  
Best option

#### Dredge requirement:

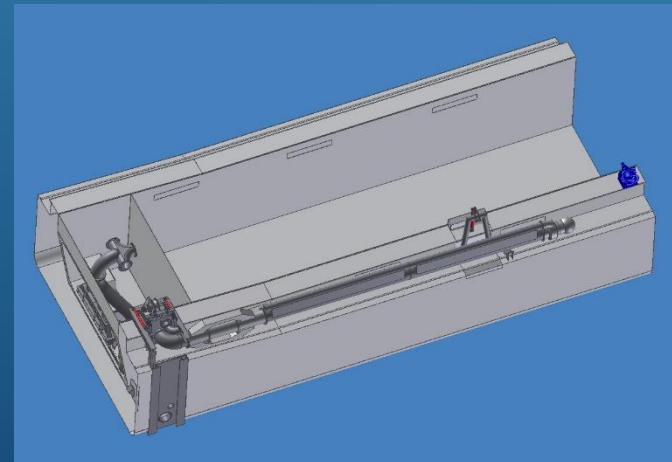
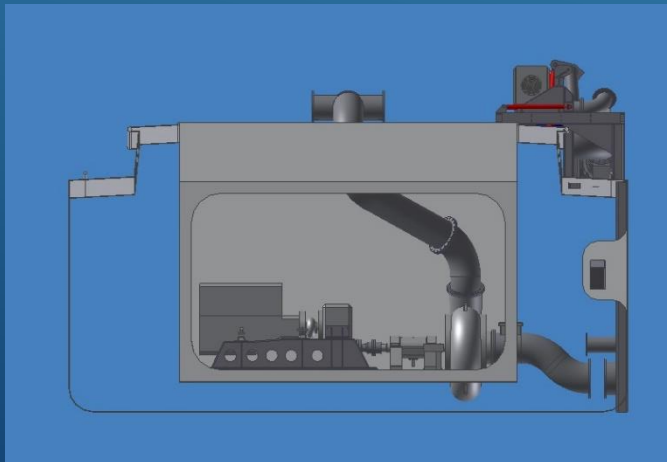
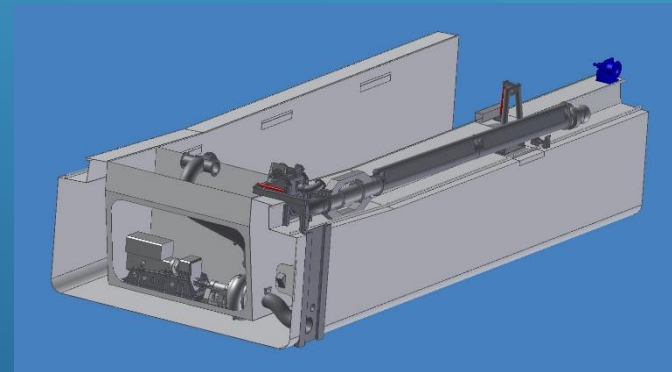
- Dredging depth max. 6 m
- Hopper capacity abt. 90 m<sup>3</sup>
- Speed abt. 7 kn
- Loading time abt. 90 minutes
- Loading material is sand <2 mm
- Dredge equipment operational from the wheel house



## DREDGE SOLUTIONS

### Trailing Hopper Suction Dredger

The gantry and  
slide



Our knowledge at Your Disposal!!

# DREDGE AUTOMATISATION

# AUTOMATIZATION

## Direct Manual Control

Manual joysticks and switches can control the dredger from the steer house.



Engine control panel & view

## PUMP CONTROL

### Pump control & Suction Pipe Automatic

There are several automatic control program's possible:

1. Dredge-o-mat: input of vacuum, pressure, depth  
output: suction winch control.
2. Dredge-o-mat+ : Dredge-o-mat plus output  
pump RPM
3. Dredge-o-mat de Lux: Dredging by all  
parameters incl. delivery line



## AUTOMATIZATION

### Depth & Location Control

There are several automatic control program's possible:

- Positioning program by GPS and echo depth
- Positioning and motion program based on a dredge profile of the mine



Our knowledge at Your Disposal!!

# DREDGE PUMPS

# HOPPER DREDGER

## Dredge pump, selection.

Capacity of the dredge pump, delivery pressure, stone sizes and the pump position are important fact's to select the right pump.



Pump capacity				Delivery		Dredge Pump	Dredge Pump	Power supply	
Solids [ton/hr]	Solids [m³/hr]	Mixture [m³/hr]	Pressure [bar]	Pipe dia [mm]	Velocity [m/s]	EDP	clearance [cm]	Electric [kW]	Diesel [HP]
50	29	600	Low < 4	175	4,5	EDP 200	< 11	80	107
150	86	850	High > 4	200	4,9			160	215
100	57	1100	Low < 4	250	4	EDP 250	< 16	160	215
250	143	1600	High > 4	300	4,1			200	268
200	114	1500	Low < 4	300	3,8	EDP 300	< 19	250	335
450	257	2000	High > 4	325	4,4			350	469
300	171	1600	Low < 4	300	4,1	EDP 350	< 18,5	350	469
600	343	2450	High > 4	350	4,6			500	671
350	200	1900	Low < 4	350	3,6	EDP 400	< 22	350	469
700	400	3000	High > 4	400	4,3			510	684
500	286	2750	Low < 4	400	4	EDP 450	< 28	510	684
1000	571	4500	High > 4	450	5,1			700	939
900	514		Low < 4	500	0	EDP 550	< 29		
2000	1143		High > 4	550	0				
2000	1143		Low < 4	575	0	EDP 650	< 40,5		
4000	2286		High > 4	650	0				
3000	1714		Low < 4	650	0	EDP 750	< 40,5		
4500	2571		High > 4	750	0				

Capacity

Delivery

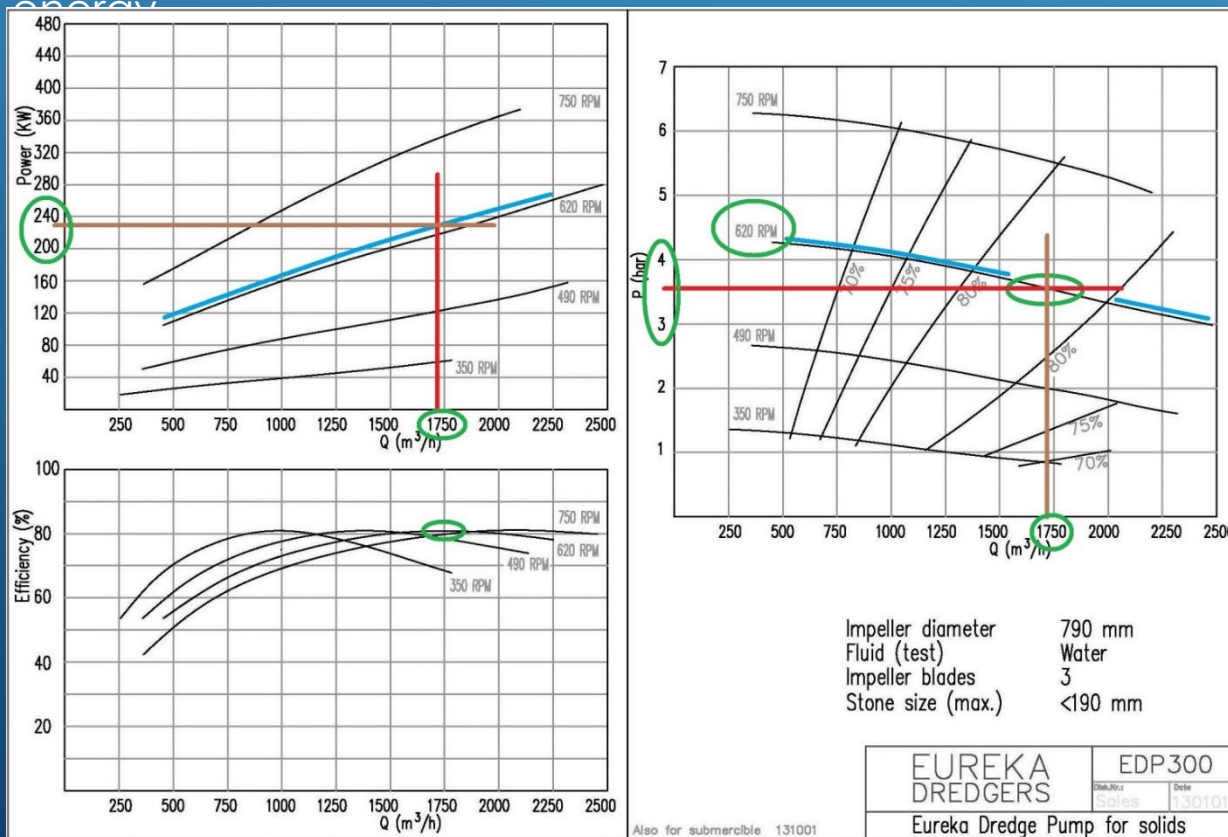
Pump type



# Service & Supply

## Dredge pump, selection.

Every dredge pump should work at it's optimal area to avoid cavitation, excessive wear and give the best performance for it's energy



Depending on the available power, pressure limits and performance of the pump, we calculate the pump to get the correct revelation's and opening of the end of the delivery pipe.



Our knowledge at Your Disposal!!

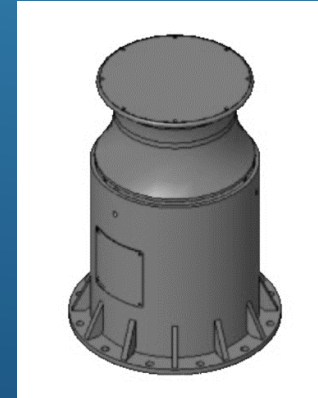
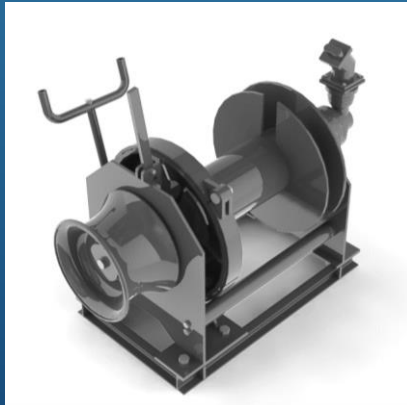
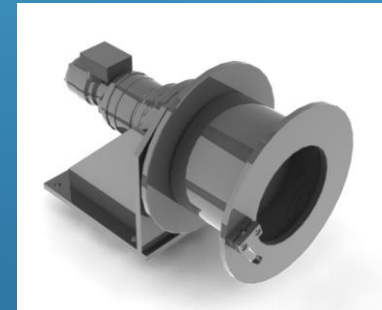
## DREDGE AUXILIERIES

## PROJECT NAME

### Auxiliary equipment

#### Description:

- Generators
- Anchor winch
- Capestants
- Deck crane



# WORK BOATS

Easy to transport



## DELIVERY LINE

### Delivery pipes and floats

The delivery pipe needs to be smooth and a good flow inside the pipe.



## DE-WATERING

### Delivery into Separation Pool / Geo tubes

Dewatering system is simple and gives an easy possibility to wash the sand incase of salt water.

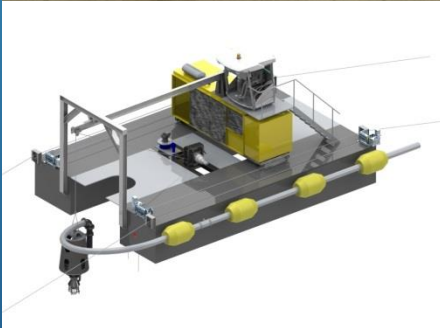


**Let time do it!**

Your problem is our challenge!!

**How can we  
help you?**





**DREDGERS & PUMPS GmbH**  
Thank you for your attention!

