



Beaver[®] 40E cutter suction dredger

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The Beaver[®] 40E is a fully electrically powered version of the standard Beaver[®]. With zero emissions and limited noise disturbance, the Beaver[®] E fully complies with the latest environmental regulations and is therefore also suitable to work in the most sensitive environments.

In comparison to conventional diesel powered dredgers, the electrically powered dredger is more energy efficient. The dredger is ready to go instantly, because the electrical dredge pump drive delivers its full power immediately and doesn't require pre-heating. The electrical dredge pump drive also requires less maintenance.

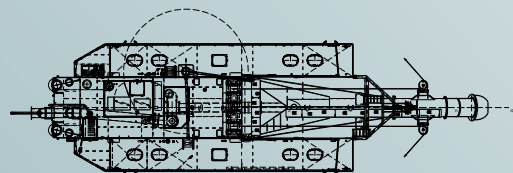
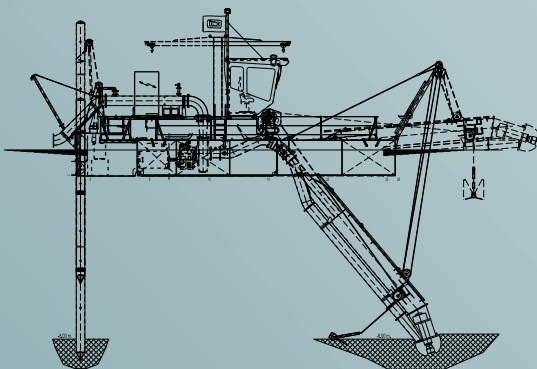
Sticking to the heart of the Beaver[®]: a highly efficient and straightforward dredger, technical changes have been kept to a minimum. The Beaver[®] E is suitable for all common dredging projects, such as land reclamation, maintenance dredging and aggregates dredging. All current standard Beavers[®] types are available in an electrical version.

The Beaver[®] 40E is reliable, efficient and has low maintenance costs. This robust and highly productive dredger is equipped with state-of-the-art technology, including the following key features:

- low maintenance and efficient power consumption
- a dredge pump with a large ball passage and excellent suction performance
- environmentally friendly solutions
- white iron-wear parts for the dredge pump
- first class ergonomics and diagnostics
- safe operation using PLC controls and interlocks
- easy to operate for a single person from the operator's seat
- control cabin placed on dampers to improve comfort and reduce noise
- dismantlable for transport via road, rail or sea.

Uncover the potential

Whatever the challenge, at IHC Dredging we support you to find the optimal solution. Offering a wide range of dedicated vessels, equipment and services, we improve efficiency across your entire operation and work together towards a more sustainable performance.



Main parameters

Dredging depth	8.0m (larger depth optional)
Discharge diameter	390mm (larger diameters optional)
Total power	700kVA

Dimensions

Length overall (ladder raised), approx.	20.5m
Length over pontoons	13.41m
Breadth	5.72m
Depth	1.51m
Side pontoons	11.00 x 1.47 x 1.47m
Mean draught with full bunkers	1.10m
Maximum standard dredging depth	8.0m
Suction pipe diameter	390mm
Discharge pipe diameter	390mm
Total installed power	549kW

Swing width with 35° swing each side

At maximum dredging depth	18.0m
At minimum dredging depth	22.5m

Dredge pump

Type	IHC 900-175-350, single-walled
E-Motor power	450 kW

Electrical installation

Power supply	3x 690 Vac
Power	700kVA
Voltage	230Vac / 24V DC
Battery capacity	110Ah

Cutter

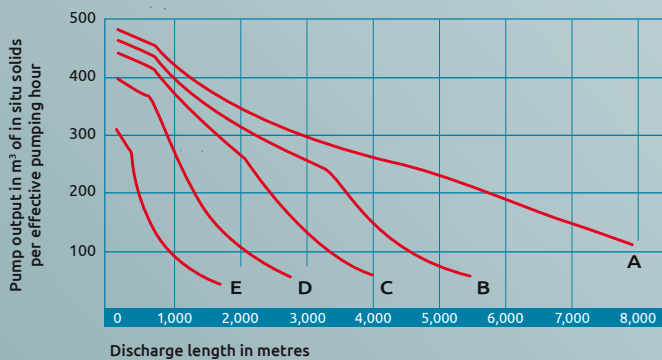
Type	IHC Multi purpose 955-50-10CB
Power at shaft	55kW
Diameter	955mm
Maximum speed, approx.	35rpm

Ladder and Swing winches

Line pull, first layer	40kN
Maximum line speed	20m/min
Wire diameter	16mm
Drum diameter	326mm
Swing wires length	100m
Anchor weight	240kg

Pump output

Discharge pipe diameter = 400mm
Dredging depth = 8.0m
Maximum volumetric concentration of in situ solids of 20%
Final elevation at end of discharge pipe = 4.0m



Spuds

Length	11.0m
Diameter	368mm
Weight	1,369kg

Spud hoisting cylinders

Force	60kN
Spud stroke (each time), approx.	3.1m

Deck crane

Lifting power	15kN
Outreach	2.80m

Other features

- spare parts available from stock
- dredge pump driven through integrated bearing block, clutch and reduction gearbox
- cutter drive accepts temporary overload, resulting in high maximum cutter power
- reliable hydraulic system
- completely assembled and fully tested afloat before delivery
- ready for operation on arrival at site
- special tools are supplied for connecting and disconnecting pontoons and the cutter ladder, and for maintenance of the dredge pump
- wide range of services and auxiliary equipment available (including work boats, boosters and pipelines)
- access to operations monitoring module (3 years with option to extend).

Optional extras

- spud-carriage installation
- anchor booms
- swivel bend
- non-return valve and vacuum-relieve valve
- production measurement, automation and positioning system
- increased discharge pipeline diameter
- increased dredging depth
- life-cycle support packages (incl. training, technical support, etc.)
- optional packages: comfort (including air conditioning), HSE (health, safety and environment), nautical and inventory plus.

Output calculated for:

Soil type	Decisive grain size	Situ density
A Fine sand	100µm	1,900kg/m³
B Medium sand	235µm	1,950kg/m³
C Coarse sand	440µm	2,000kg/m³
D Coarse sand and gravel	1.3mm	2,100kg/m³
E Gravel	7mm	2,200kg/m³

Note

Calculated output curves only indicate pumping capacity, based on the average available power on the pump shaft and free-flowing material. In actual practice, properties may vary from free-flowing, easily excavated to compacted, hard-to-excavate material. When used for estimation actual outputs, the nature of the material to be dredged and local job conditions must be considered. Please consult IHC Dredging for dredging conditions outside these curves.