

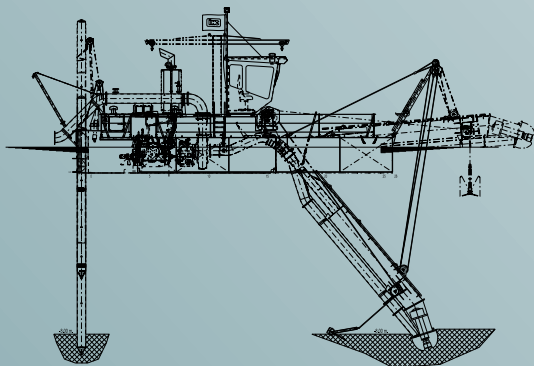


Rev A 110569929

Beaver[®] 40 cutter suction dredger

The Beaver[®] 40 is reliable, fuel 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 distribution with a single diesel engine
- a dredge pump with a large ball passage and excellent suction performance
- environmentally friendly solutions, such as LED lighting
- 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.



Reliable and efficient

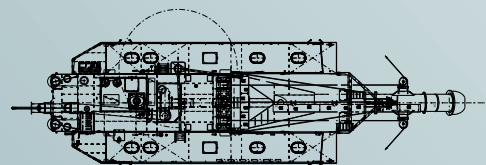
The Beaver[®] is well known for its robust construction, reliable operation and excellent performance. To date, Royal IHC has supplied more than 800 of these standard cutter suction dredgers worldwide.

Transportable and deliverable from stock

Beaver[®] dredgers can be dismantled for transport via road, rail or sea. A wide range of optional equipment is available, as well as complementary auxiliary equipment, such as work boats and discharge pipelines. These vessels are mostly delivered from stock.

Service and support

Royal IHC can provide a complete package of spare parts, maintenance support, equipment training programmes, dredging advisory services and dredge operators for hands-on instruction and commissioning.



Main parameters

| | |
|--------------------|-------|
| Dredging depth | 8.0m |
| Discharge diameter | 390mm |
| Total power | 483kW |

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 | 483kW |

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 |
| Engine type | Caterpillar C18 TA Acert |
| Heavy duty engine power | 483kW @ 1,800rpm |
| Specific fuel consumption | 212.9g/kWhr |

Electrical installation

| | |
|------------------|--------|
| Voltage | 24V DC |
| Battery capacity | 220Ah |

Cutter

| | |
|------------------------|---------------------|
| Type | IHC Lancelot 955-50 |
| 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 |

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

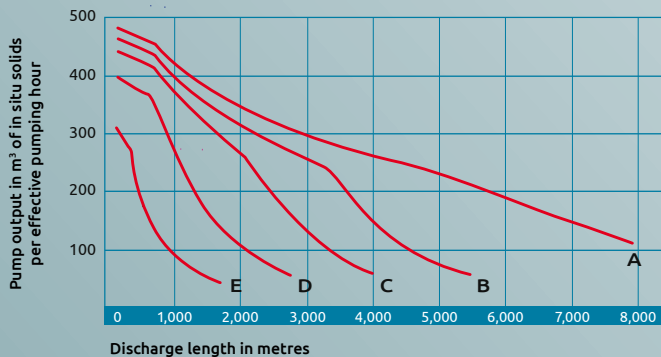
- standard design, allowing for short delivery times and competitive pricing
- spare parts available from stock
- durable heavy-duty marine engine compliant with IMO Tier II
- efficient fuel consumption
- fresh-water engine cooling system
- dredge pump driven through integrated bearing block, clutch 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
- dismountable and transportable by road, rail or sea
- 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 and diesel engine
- 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

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

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



Output calculated for:

| Soil type | Decisive grain size | Situ density |
|--------------------------|---------------------|------------------------|
| A Fine sand | 100µm | 1,900kg/m ³ |
| B Medium sand | 235µm | 1,950kg/m ³ |
| C Coarse sand | 440µm | 2,000kg/m ³ |
| D Coarse sand and gravel | 1.3mm | 2,100kg/m ³ |
| E Gravel | 7mm | 2,200kg/m ³ |

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 for dredging conditions outside these curves.