

IHC Beaver 1700 Cutter Suction Dredger



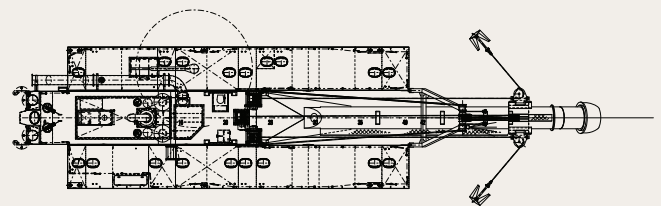
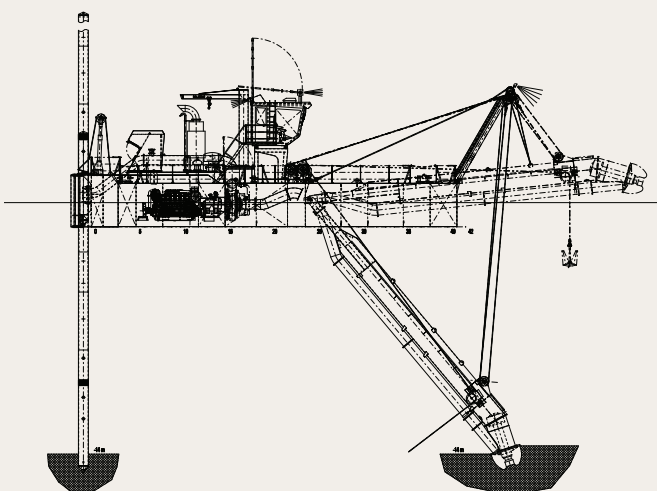
IHC beaver®

- The IHC Beaver 1700 is equipped with state-of-the-art technology:
- a Cutter Special® pump which combines a large ball passage with high suction performance and high efficiency
 - a single diesel engine providing efficient power supply for all consumers like dredgepump, hydraulic installation and 230V boardnet
 - environmentally friendly solutions like grease lubrication free bearings for all sheaves on board
 - improved maintenance properties by application of so called “white iron” wear parts for the dredge pump, non ferro sheaves for longer wire life
 - special attention for ergonomic controls and industrial design
 - the engine and the control cabin are placed on dampers for improved comfort and reduced noise.

The IHC Beaver 1700 C is built according rules and regulations of Bureau Veritas with notation “Coastal Area”.

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

The current range of standard dismantable cutter suction dredgers consists of “classic” models, executed with the dredge pump mounted in the centre pontoon, with power outputs ranging from 300 to 1,700 horse power. The hull consists of three pontoons, one main pontoon housing the engine room, and two side pontoons. All parts are dimensioned to allow the IHC Beaver to be transported by road, rail or sea.



The technology innovator.

IHC Beaver 1700 – Cutter Suction Dredger

Principal particulars

| | |
|--------------------------------------|----------------------|
| Length overall, ladder raised | 32.30m |
| Length over pontoons | 21.65m |
| Breadth | 7.87m |
| Depth | 2.44m |
| Side pontoons: | 19.00 x 2.40 x 2.42m |
| Mean draught with full bunkers | 1.45m |
| Maximum standard dredging depth | 14.00m |
| Internal diameter of suction tube | 550mm |
| Internal diameter of discharge pipes | 500mm |
| Total installed power | 1,249kW |

Dredge pump

| | |
|---|-------|
| Type HRCS 1200-250-500, single walled | |
| Prime mover: Caterpillar 3512B HD | |
| SCAC developing 1,249 kW (1,699 hp) continuous power at 1,600 rpm | |
| Dredge pump driven through combined pump block/reduction gearbox | |
| Ball clearance | 250mm |

Electrical installation

| | |
|------------------|---------|
| Voltage | 24V DC |
| Battery capacity | 400Ah |
| Voltage (50 Hz) | 230V AC |
| Capacity | 12.5kVA |

Cutter

| | |
|----------------------------|-----------|
| Type 10-CB-AL-1455-180-V04 | |
| Power at shaft | 170kW |
| Diameter | 1,455mm |
| Maximum speed | 30rev/min |

Winches

| | |
|--------------------------------|--------------|
| (ladder winch / swing winches) | |
| Line pull, 1st layer | 90 / 90kN |
| Max. line speed | 20 / 20m/min |
| Wire diameter | 22mm |
| Drum diameter | 457mm |
| Swing wires | 100m |
| Anchor weight | 500kg |

Spuds

| | |
|----------|---------|
| Length | 19m |
| Diameter | 559mm |
| Weight | 5,400kg |

Spud hoisting rams

| | |
|---------------------------------|-------|
| Force | 262kN |
| Ram stroke | 2.10m |
| Spud stroke (each time approx.) | 3.30m |

Swing width with 35° swing each side

| | |
|------------------------|-------|
| at max. dredging depth | 29m |
| at min. Dredging depth | 36.5m |

Deck crane

| | |
|---------------|-------|
| Lifting power | 30kN |
| Outreach | 3.25m |

Classification

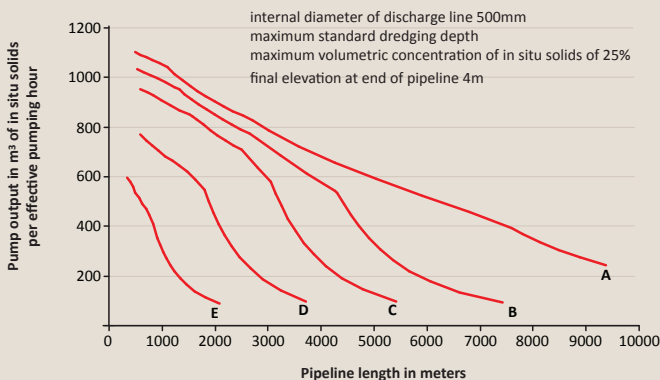
Bureau Veritas Class I, ✳ Hull dredger - no propulsion with notation 'Coastal Area' Engine installation after construction

Miscellaneous

Special tools are supplied for connecting and disconnecting pontoons and cutter ladder, and for maintenance of dredge pump, including impeller hook, and for maintenance of the diesel engine. Mechanical ventilation for the engine room. Temporary overload feature for cutter drive. Mechanical pump shaft seal, which does not require glandwater or grease lubrication.

Optional equipment

Anchor booms
Wedge piece for shallow dredging
Spud carriage installation
Swivel bend
Production measurement
Other equipment or design modifications for nearly any requirement



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 + gravel | 1.30mm | 2,100kg/m ³ |
| E gravel | 7.00mm | 2,200kg/m ³ |

Note:

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

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