The IHC Beaver® 45 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 cost per cubic metre
- an exceptional rate of pumping power
- first class ergonomics and diagnostics
- Cutter Special® pump that combines high efficiency and a large ball passage to provide a high level of availability
- low maintenance and efficient power distribution with a single diesel engine
- environmentally friendly solutions, such as LED lighting
- enhanced safety features.

RELIABLE AND EFFICIENT
The IHC 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
IHC 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
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: 10.0m (larger depth optional)
- Discharge diameter: 450mm (larger diameters optional)
- Total power: 895kW
**DIMENSIONS**

Length overall (ladder raised), approx. 26.60m  
Length over pontoons 16.96m  
Breadth 6.99m  
Depth 2.01m  
Mean draught with full bunkers 1.40m  
Maximum standard dredging depth 10.0m  
Suction pipe diameter 450mm  
Discharge pipe diameter 450mm  
Total installed power 895kW

**SWING WIDTH WITH 35° SWING EACH SIDE**  
At maximum dredging depth 23.5m  
At minimum dredging depth 29.0m

**DREDGE PUMP**

Type IHC HRCS 108-23-45, single-walled  
Engine type Caterpillar C32 TTA Acert  
Heavy duty power 895kW @ 1,800rpm  
Specific fuel consumption 205.9g/kWh  
Ball passage 225mm

**ELECTRICAL INSTALLATION**

Voltage 24V DC  
Battery capacity 400Ah

**CUTTER**

Type IHC Lancelot  
Power at shaft 110kW  
Diameter 1,330mm  
Maximum speed, approx. 34rpm

**LADDER AND SWING WINCHES**

Line pull, first layer 57kN  
Maximum line speed 25m/min  
Wire diameter 18mm  
Drum diameter 390mm  
Swing wires length 100m  
Anchor weight 360kg

**SPUDS**

Length 13.85m  
Diameter 457mm  
Weight 2,260kg

**SPUD HOISTING CYLINDERS**

Force 100kN  
Spud stroke (each time), approx. 3.5m

**DECK CRANE**

Lifting power 20kN  
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  
- white iron-wear parts for the dredge pump  
- 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  
- one-man operation  
- wide range of services and auxiliary equipment available (including work boats, boosters and pipelines).

**OPTIONAL EXTRA’S**

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

**PUMP OUTPUT**

Discharge pipe diameter = 450mm  
Dredging depth = 10.0m  
Maximum volumetric concentration of in situ solids of 25%  
Final elevation at end of discharge pipe = 4.0m

**Output calculated for:**

<table>
<thead>
<tr>
<th>SOIL TYPE</th>
<th>GRAIN SIZE</th>
<th>DECISIVE DENSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Fine sand</td>
<td>100μm 1,900kg/m³</td>
</tr>
<tr>
<td>B</td>
<td>Medium sand</td>
<td>235μm 1,950kg/m³</td>
</tr>
<tr>
<td>C</td>
<td>Coarse sand</td>
<td>440μm 2,000kg/m³</td>
</tr>
<tr>
<td>D</td>
<td>Coarse sand and gravel</td>
<td>1.3mm 2,100kg/m³</td>
</tr>
<tr>
<td>E</td>
<td>Gravel</td>
<td>7mm 2,200kg/m³</td>
</tr>
</tbody>
</table>

**NOTE**

Calculated output curves only indicate pumping capacity, based on the maximum 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.

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