



H₂-Hopper

4,200m³ hydrogen-powered hopper dredger

Dimensions

Length overall	91.00m
Load line length	84.95m
Breadth	24.50m
Hopper capacity	4,200m ³
Draught international freeboard	4.50m
Draught dredging mark	5.50m
Deadweight	6,400 tons
Hopper capacity	6,300 tons
Vessel speed loaded	11 knots
Accommodation	12 people

Dredge installation

Dredging depth	30m
Diameter suction pipe	1x 600mm
Submersible dredge pump	IHC HRLD 105-26-60
Onboard dredge pump	IHC HRMD 126-26-60
Impeller dredge pump	Curve® technology

Capacity

Fuel cells	3,600kW
Battery system	1,800kWh
Back-up generator set	550kW
Emergency generator set	65kW
Bow thruster	1x 350kW
Submersible dredge pump	1x 600kW
Onboard dredge pump	1x 1,600kW
Jet pumps	2x 210kW

Electrical installation

Voltage main system	1kV DC
Voltage auxiliary systems	400V AC, 50 Hz

Classification

Bureau Veritas I, ✘ Hull ✘ Mach, Hopper Dredger - Unrestricted Navigation, ✘ AUT-UMS

Features

- Fully powered by hydrogen and fuel cells
- storage of liquid hydrogen in double-walled vacuum insulated tanks (type-C)
- zero emission operation, no CO₂ and NO_x emissions
- multifunctional deployment on foreshore, beach replenishment and fairway maintenance
- focused on low energy consumption by a.o. the combination of a large carrying capacity, limited sailing speeds, dump capability at limited draught, submersible dredge pump, efficient propulsion systems, hull optimisation and automation.