



HUMBER WORK BOATS LTD.



Self Propelled
Backhoe Dredger
'Pat M'

BV CLASSED I 3/3 COASTAL · PC 1400 AQUADIGGER · MONTABERT VSS SHD HAMMER

Self Propelled Backhoe Dredger, PAT-M

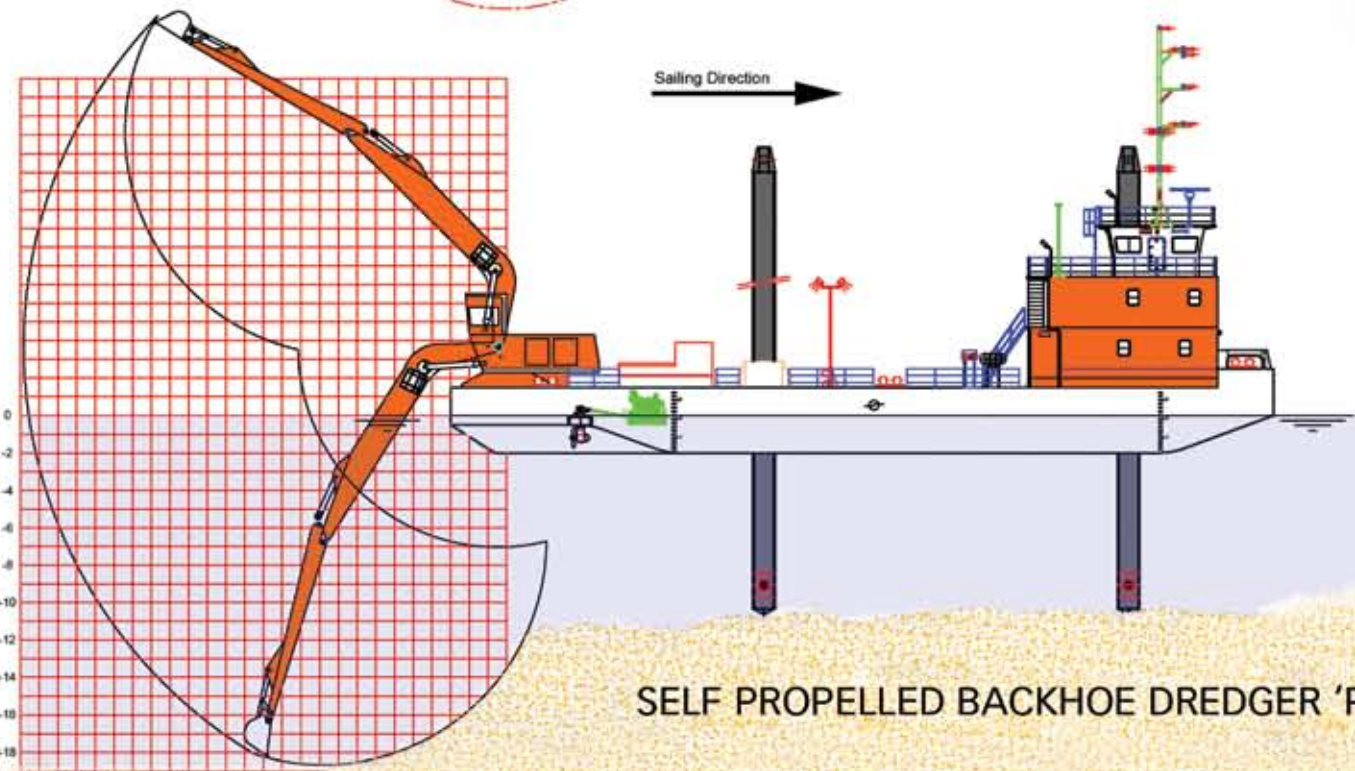
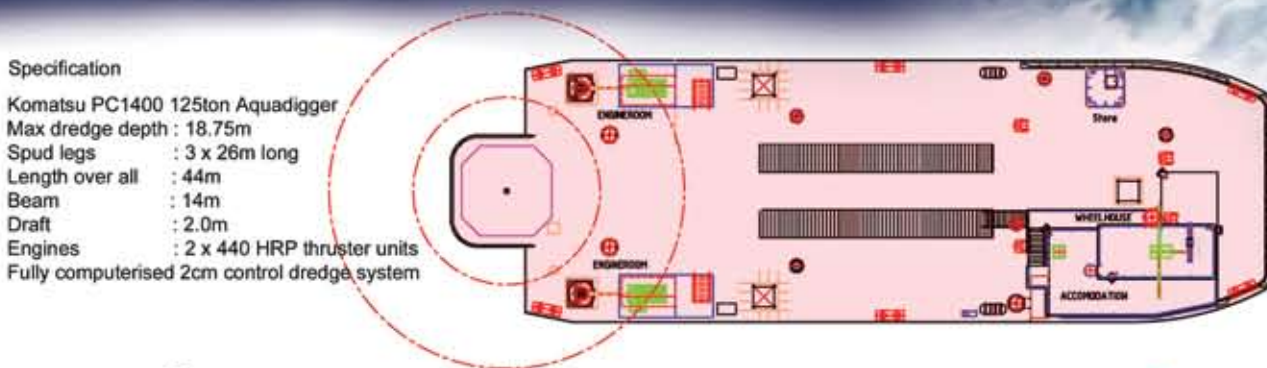
When you charter the 'Pat M' you charter a self propelled Backhoe Dredger built to Humber Work Boats specification by Shipyard De Donge in Holland in 2001. The 'Pat M' is a highly specialist backhoe type dredger. She is a Bureau Veritas classed self propelled ship and that means significant cost savings for the client as no tugs are involved either in mobilising to and from site or for moving around within the dredge area. The 'Pat M' is ideal for working in areas with close proximity to shipping movements.

She operates with highly experienced and qualified crew including qualified Master, engineer, drivers and deckhands operating well maintained robust dredging equipment, and is controlled by state of the art electronics. The new 'Dredgemaster' dredging control system includes 3D views of the seabed and generates a wealth of invaluable information for the operator and client. The Pat M has ten years of dredging activity in many countries and in different environments and carries a large stock of spares to minimise downtime.

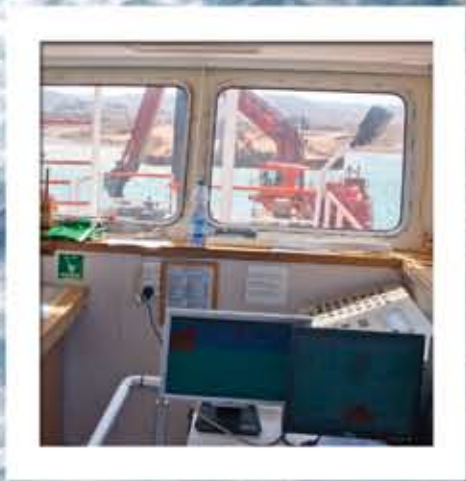
You will Charter under clearly defined BIMCO Supply Time contracts with transparent costs and no hidden surprises as can often be the case. Reliability, flexibility and experience are not specifically mentioned in the contract but with the Pat M they make the difference so crucial to our client base.

Specification

Komatsu PC1400 125ton Aquadigger
Max dredge depth : 18.75m
Spud legs : 3 x 26m long
Length over all : 44m
Beam : 14m
Draft : 2.0m
Engines : 2 x 440 HRP thruster units
Fully computerised 2cm control dredge system



Self Propelled Backhoe Dredger 'Pat M'



General Characteristics

- **Built by** Shipyard De Donge Yard Holland 2001
- **Flag State** The Bahamas
- **Port of Registry** Nassau
- **IMO Number** 9253698
- **Official Number** 8000335
- **Call Sign** C6RX6
- **Gross Tonnage** 606
- **Net Tonnage** 181
- **Length** 42.24 m **Beam** 14.0m **Depth** 3.5m **Draft** 2.55m
- **Fuel** Load 45 tons
- **Water** Load 30 tons
- **Class** Bureau Veritas I 3/3 (E) Special Service Multi Purpose Work Barge
- **Speed** 7.2 knots
- **ISPS** Certified
- **ISM** Certified

Technical and Dredging Data

- **Maximum Dredge Depth** Bucket 18.75m with Hydraulic Grab 21 metres
- **Excavator:** Komatsu PC1400 Aquadigger on pedestal
- **Dredge Equipment** 14m boom 10 & 7 m dippers
4 x Dredging Buckets 2.5m³ to 3.3m³
Hydraulic Grab
Montabert V55 Hydraulic Rock Hammer
- **Propulsion** 2 x Cummins N14M Engines 648KW
2 x 360 HRP Thrusters
- **Spud Legs** 3 x 26m legs hydraulically powered
- **GMDSS Equipment** **VHF** Furuno FM8500
MF/HF Furuno FS1570/150
Inmarsat Furuno Felcom 15
MSI ICS Nav – 5
LSA ICOM GM1500E
- **Dredge Electronics** RTK - GPS interfaced with Gyrocompass, Tide Gauge, Dredgemaster Backhoe Control System
- **Survey Equipment** - Trimble MS750 , Hydro Nav Software



A snap shot of Projects Completed

Casablanca, Morocco

Dredging works associated with the construction of a new multi use terminal. General deepening of the approach channel and berthing pocket, along with a trench for the jetty wall caissons.



Arzew, Algeria

Dredging a trench on a gradient for an outfall pipeline through sand and rock, from the seaward end up to the cofferdam on the shoreline. It also included shaping the raised platform for the end diffuser.



I.M.T. Arzew, Algeria

Dredging a trench to bury a cooling water pipeline for a fertiliser plant, which included digging up to the shore cofferdam and a complex slope section for the end diffuser platform.



Cap D' Jinet, Algeria

Dredging of a trench for a water pipeline for a water desalination plant. This required dredging an approach channel and then dredging from the natural shoreline outward, with complex slope sections in ground that is mainly sand.



Ponta Delgada Azores

Capital Dredge of a berthing pocket for a new inter island ferry and International Cruise Ship Terminal. Works consisted of general dredging of blasted and non blasted rock for the berth pocket approach and trenching for the jetty caisson foundations.



Arzew and Mostaganem, Algeria

Two similar jobs, dredging a trench for pipe lines off the coast. As the first job at Arzew was completed successfully and ahead of schedule we received a follow on job near Mostaganem. We were also assisting in the laying of the pipeline.



Jorf Lasfar, Morocco

Dredging works for new multipurpose terminal including dredging the berthing pocket, levelling stone in the trench and positioning a barge for accurately dumping stone.



Puerto de la Cruz Tenerife

Capital Dredging Associated with a new container terminal for the local Port Authority together with general maintenance dredging in three separate locations and dredging to repair storm damage to a land reclamation project outside the port.



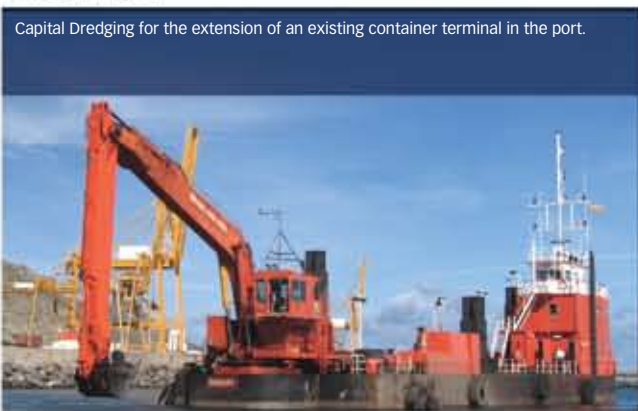
Jorf Lasfar, Morocco

Dredging within the port of Jorf Lasfar for a new multi purpose terminal. Works included dredging the berthing pocket, approach channel, and the trench for the jetty wall caissons and the positioning for dumping stone for the jetty footings and levelling the stone.



Puerto de Marin Spain

Capital Dredging for the extension of an existing container terminal in the port.



Valencia Spain

Dredging a trench to 22m and stone levelling for jetty caissons, and general maintenance dredging within the port.



Leixoes Portugal

General Capital Dredging of blasted and non blasted material to deepen the port to -12.5 metres. Work was also done on the River Douro deepening the shipping channel and preparing caisson beds.



Hydrographic Surveying Services

- Bathymetry** - Navigation, Construction and Environmental
- Side Scan Sonar** - Object Detection and Condition
- Post Processing** - Hypack Chart Preparation, Volume Reporting
- Construction Support** - RTK GPS Positioning



HWB has a proven history of carrying out surveying services in the UK, Europe and North Africa. The surveying services client list includes harbour and port authorities, European construction companies, Utilities and other underwater asset owners. To date we have completed a range of work from small scale bathymetric surveys to full pipeline inspection, anchorage clearance reporting and positioning services for cable lay operations. We have also specified equipment to meet clients contract requirements and provide training to allow clients employees to undertake their own bathymetry.

Montabert V55 SHD Hammer



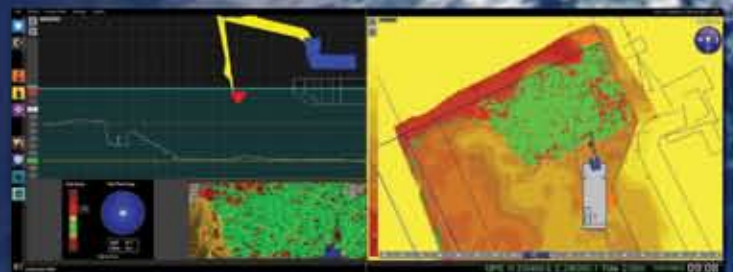
Specifications		Units	V55 SHD
Suitable for carrier (Weight)	min	t	35
	max	t	60
Operating weight		kg	3480
Height with standard tool and bracket		mm	3465
Width	top	mm	720
	bottom	mm	416
Tool diameter		mm	170
Flow	min	l/mn	240
	max	l/mn	320
Blow frequency	min	blow/mn	440
	max	blow/mn	1045
Operating pressure	max	bar	165
Relief valve pressure setting	min	bar	210
Acceptable back pressure		bar	6
Inside hose diameter	HP	mm	32
	BP	mm	36
Protection against blank firing			YES
AUTOPOWER			YES
OPTIPOWER			YES
Tool lubrication			Lubrication station
Super dust			YES

'DredgeMaster' Backhoe Software

- Multi View 3D Underwater Tool Tracking
- DXF/DWG Chart Import
- Complex XYZ Client Design Import
- XYZ Survey Data Import



Plan View Overview 3 - D Model



Excavator Driver Cab View

Photo Book

Casablanca Morocco, December 2010



View from the cab, Arzew 2010



Moroccan sunset, Jorf Lasfar 2009



Jorf Lasfar, Morocco 2009



Arzew, Algeria 2010



Cap D' Jinet, Algeria, 2010



Off the Algerian Coast 2010



Jorf Lasfar, Morocco 2009



Gran Canaria 2007





HUMBER WORK BOATS LTD

Humber Work Boats Ltd has been operating from its facility on the South Bank of the River Humber in the UK for more than forty years. During that time they have developed an enviable reputation for quality of service on time and on budget with an ever expanding client base containing many internationally recognised businesses from Port Operators, Construction Groups, and Oil Companies to State Authorities.



Head Office
Humber Work Boats Limited
North Killingholme Haven, Grimsby
North East Lincolnshire DN40 3LX.
Telephone: +44 (0)1469 540156
Fax: +44 (0)1469 540303
www.humberworkboats.co.uk
sales@humberworkboats.co.uk

