

The CDC Design Portfolio

'Pocket' MODU with cantilever for well intervention, P&A and decommissioning. Cantilever maximum reach is 22.5 metres with a corresponding load capacity of ~1,500 t. Load capacity is available to be defined as required by client. <http://bit.ly/2fdi6fQ>

Mobile Production facility (MOPU) for small pools or as replacement for aging platforms where reservoir is still flowing. The MOPU is effectively self-installing, requiring little in the way of construction or infrastructure. The 6-Leg MOPU has a topside weight capacity of >11,000 t. The smaller 4-leg solution has a topside weight capacity of 7,000 t. Estimated installation period of 3 days, compared with many weeks to months for existing methods.

A production and storage MOPSOU, when MOPU topside weight capacity of 11,000 t is paired with the 6-Leg storage solution, a subsea storage capacity of approximately 30,000m³ is achievable (188,000 barrels). The smaller 4-Leg MOPSOU paired with 7,000 t topside weight capacity, provides subsea storage capacity starting at approximately 17,500m³ (110,000 barrels).

The topsides production MOPU/MOPSOU, when operating in tie-back can be minimal manning or unmanned. <http://bit.ly/2wbfZ2p>

Each vessel design begins with the proprietary hull. The CDC hull is DP2 self-propelled and is designed using block-modular principles meaning it is quicker, easier and cheaper to construct.

The CDC designs are protected IP in the UK, USA and South East Asia. The vessel designs, Chameleon, Heron and MOPU, have ABS Approval in Principle.

A detailed description of the CDC IP portfolio is available on request.

The CDC Team

Iain Steven is Managing Director supported by Jacqueline and Iain Mac. They are based in Glasgow, Scotland, with three additional silent shareholding partners.

To find out more about how CDC designs can boost your technological and innovative progression as well as giving your in-house designs a competitive advantage:

Call Iain on +86 137 6413 4383 (China) or +44 776 593 7933 (UK).

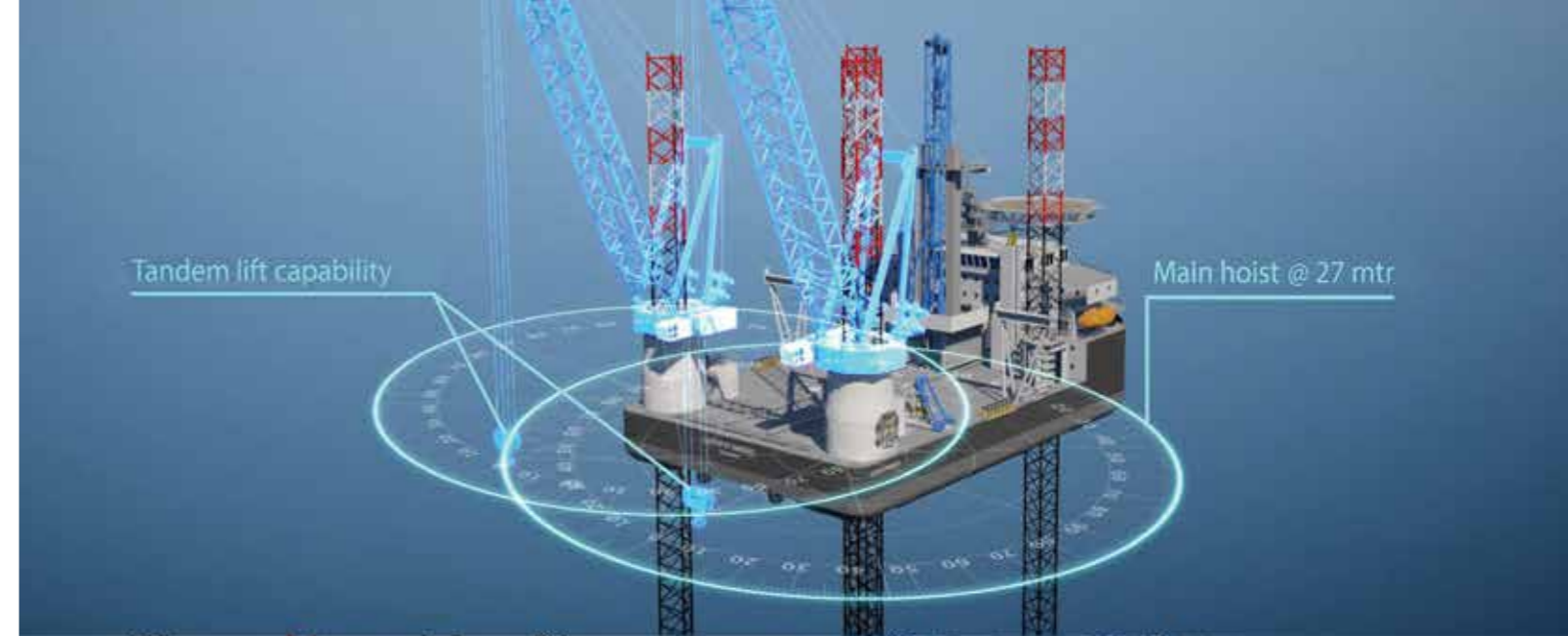
Alternatively you can reach Iain via:

Email: iain.steven@cedco.co

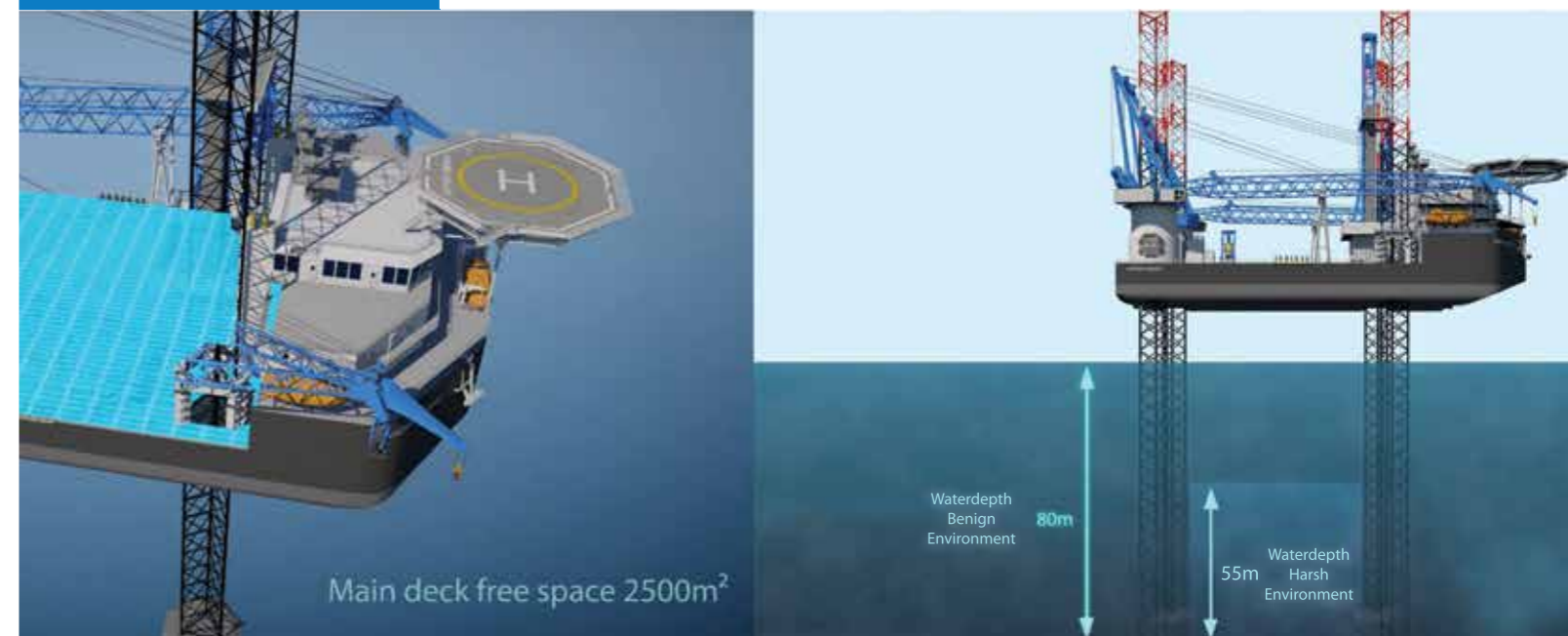
WeChat: CDC Scotland Ltd



CDC Scotland Ltd. 5 La Belle Place, Glasgow, G3 7LH, Scotland. Tel. +44 (0)141 354 7966
<https://cdcscotland.co.uk> @CDCScotlandLtd



CDC Scotland Ltd, marine engineering specialists delivering concepts and designs to increase the productivity and efficiency of vessels in offshore O&G and Renewables.





CHAMELEON 3 MAU

Particulars and General Specifications

Classification: ABS (American Bureau of Shipping) – AIP
 Self Elevating - Self Propelled – Unrestricted Service, with following notations:
 +A1 - Self Elevating, MOU, AMS, ACCU, DPS-2, DFD (Dual Fuel ready).

Basic Outline Technical Specifications

Dimensions	Form Factor Ex. 1		
Length Overall	89.4 m	(293 ft)	99.6 m
Length Waterline	86.4 m	(283 ft)	99.6 m
Breadth	50.4 m	(165 ft)	58.0 m
Hull Depth	8 m	(26.25 ft)	8.0 m
Hull Draft	6.1 m	(20 ft)	5.0 m
Hull Draft (incl. Catamaran, Spud Can fairing)	8.0 m	(27.6 ft)	
Length between Leg centers:	50.4 m		63.0 m
Breadth between Leg centers:	37.8 m		45.8/38.3m
Leg Length / Water Depth (26 m Air Gap)	a) 122 m (400 ft)	80 m (262 ft)	
	b) 127 m (416 ft)	80 m (262 ft)	

CDC 6 Chord Leg Design available

Leg Length / Water Depth (26 m Air Gap)	i) 147 m (482 ft)	100 m (328 ft)
(Increase in leg length / water depth)	ii) 164 m (538 ft)	120 m (393 ft)
Vessel length / breadth is scaled accordingly)	iii) 187 m (613 ft)	140 m (459 ft)

Working Areas

Deck Space (Main Deck clear, without cantilever)	2,500 m ² (27,000 ft ²)
Other Areas of Outside Deck Available	400 m ² (4,000 ft ²)

Performances

Economical Service Speed	6.5 knots
Maximum Speed (Large Engine Variant)	10.5 knots
Operating Ambient	(-10°C) to +45°C
Accommodation	180 - 200 personnel
Helideck – CAP 437 for	Sikorsky S-61N / S-92 / Super Puma / EC 225H

Weights

Hull Weight	8,770 t
Leg & Spud Can Weight (127m)	3,300 t
Cantilever and Drill Weight Allowance	2,200 t
Light Weight	10,970 t
Estimated VDL	3,000 t
Max Elevated Weight	14,000 t (approx)
Max Displacement	17,000 t (approx)

Leg & Jacking Features

Electric Rack and Pinion Elevating Speed - (BLM)	0 to 1.2 m / min (4.0 ft / min)
- (GUSTO)	1.2 m / min (4.0 ft / min)

Standard Leg & Jack House –	4 Layers BLM D110H 12 Jacking units per leg 24 pinions @ 204 t
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Standard 3 Chord Leg & Jack House –	3 Layers Gusto - GDR11-100/8 18 Jacking units per leg 18 pinions @ 250 t
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CDC Advanced Leg & Jack House –	3 Layers BLM D60H 18 Jacking units per leg 36 pinions @ 157 t
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Rated Deck Loadings

Main Deck	10 t / m ²
Landing decks / accommodation top	1.2 t / m ²
Bulkhead Loading (mean)	30 t / m

Operations Fluid Volumes

Drilling Fluids:- Drill Water / Base Oil	
Brine / Completion Fluid	1,392 m ³
Active Fluids up to SG 2.2 in Agitated Tanks	
Mud / Completion Fluid	714 m ³
Hazardous Drain	119 m ³
Contaminated Drain	117 m ³
Combi / Waste / Dirty / Bilge / Clean Drain	341 m ³
Bulk – P - Tank	
(Barite / Bentonite / Cement 2 + 2 x 45 m ³)	180 m ³

Service Fluid Volumes

Fuel	1,120 m ³
Potable Water	565 m ³
Ballast	~3,000 m ³

Cantilever Capacity @ Extension Distance

CDC Cantilever Capacity @ 22m	>1500 t
Cantilever Beam extension length (up to)	22.5 m
Well Center Transverse Skid – Drill Floor Deck	~+/-7.2

Crane Capacities

Around the Leg Crane	>750 t
Z - Pedestal	60 t

Moon Pool

Capacity for through centre line Moonpool up to 7 m x 9 m

Navigation & Communication

Kongsberg Integrated Vessel Control & DP	K-Pos, K-Chief, K-Thrust, K-Safe
Full Worldwide Unrestricted Service Equipped Navigation Suite	
GMDSS Sea Area A3	
Harris CAPROC (or similar)	
Inmarsat - Fleet 77 (or similar)	