

## High capacity vessel

**MHWirth provides a robust and flexible equipment base for two main types of deepwater drillship solutions. Both the drawworks based solution and a RamRig™ (cylinder) hoisting solution can be delivered with single or dual wellcentres.**

Our designs are based on our ability to operate in some of the harshest conditions in the world. Our drillships can be adopted to suit the majority of deepwater hulls in the market.

To meet the future requirements, our drillship packages are prepared to handle riser, choke and kill system and 8 Ram BOPs up to 20 K, and mud system up to 10K. They are all designed for efficient and safe operations, capable of handling most operations with full redundancy by means of dual activity wellcenters.

Conventional deepwater drillships can be delivered with any combination of compensation system (drawworks and/or top compensated).

The drawworks based systems are available up to 1 500 short tons (1 361 mT) hoisting capacity, with single gear drive and 16 lines drill line system.

Our RamRig™ solutions have active/passive compensation built into the hoisting cylinders. They can be delivered with up to 2 000 short tons (1 814 mT) lifting capacity and four gears and integrated, power independent passive compensation, yielding the ideal solution combining high capacity and proficient operations. The RamRig™ solutions offer excellent active/passive motion compensation characteristics and high speed with integrated boost function. The RamRig™ solutions are available with set-back at drillfloor or down the hull.

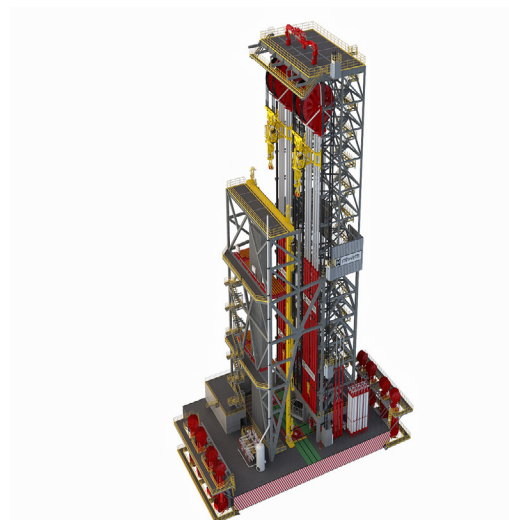
All our deepwater drill ships are equipped with light-weight and extremely compact triplex API Spec 7K gear-driven mud pumps. Our quick connection QTR™ 4000 LS riser offers excellent performance, even on 20K applications and provides flexible riser handling, such as in-hull/on deck, length and weight alternatives.

## Benefits

- Flexible design to suit demands
- Highly energy efficient RamRig™ hoisting systems
  - Lower installed power and fuel consumption compared to conventional hoisting systems
  - Energy regeneration system
- In-house engineering resources ensuring full system integration and commissioning capabilities
- Extensive project experience for complete drilling packages (DES and DSM) provided on EPC basis
- Cost efficiency through remote diagnostics and condition based maintenance



# Deepwater Drillship Concepts | High capacity vessel



## Technical Specifications

	1250/1000 Conventional	1500/1250 Conventional	1500/1000 RamRig™	1750/1250 RamRig™	2000/1250 RamRig™
Main capacities	Drilling depth > 40 000 ft (12 200 m) Operational water depth 12 000 ft (3 600 m)				
Net hoisting capacity	1 250/1 000 short tons (1 134/907 mT)	1 500/1 250 short tons (1 361/1 134 mT)	1 500/1 000 short tons (1 361/907 mT)	1 750/1 250 short tons (1 587/1 134 mT)	2 000/1 250 short tons (1 814/1 134 mT)
Hoisting system	Single gear drawworks GH 9000 - 16 lines GH 6000 - 14 lines	Single gear drawworks GH 9000 - 18 lines GH 9000 - 16 lines	6 x cylinders B 4 x cylinders B 3 gears/2 gears Max. 8.2 fps (2.5 m/s)	6 x cylinders A 4 x cylinders A 3 gears/2 gears Max. 8.2 fps (2.5 m/s)	8 x cylinders B 4 x cylinders A 4 gears/2 gears Max. 8.2 fps (2.5 m/s)
Compensation	Top mounted 750/500 short tons (680/454 mT) or AHC drawworks	Top mounted 750/500 short tons (680/454 mT) or AHC drawworks	Passive compensation by means of mineral oil accumulators and N <sub>2</sub> pressure vessels, fail-safe even at full black-out. Active compensation by hydraulic power unit and active drive of accumulators. Extreme accuracy.		
Derrick size	60.0 x 80.0 x 210.0 ft (18.4 x 24.4 x 64.0 m) or 52.5 x 69 x 210.0 ft (16.0 x 21.0 x 64.0 m)		52.5 x 69.0 x 213.0 ft (16.0 x 21.0 x 65.0 m) Optional height 230.0 ft (70.0 m)		52.5 x 84.3 x 233.0 ft (16.0 x 25.7 x 71.0 m)
Well centre distance/ Net lifting height	Nominally 40.0 ft (12.2 m) Net 175.0 ft (53.5 m)		39.4 ft (12.0 m)/157.5 ft (48.0 m) Optional lifting height 174.0 ft (53.0 m)		49.9 ft (15.2 m)/ 177.0 ft (54.0 m)
Set-back	Minimum 52 000 ft DP/8 stands DC/15 000 ft landing string and casing stands 1 929 - 2 535 short tons (1 750 - 2 300 mT)		63 000 - 88 830 ft (19 200 - 27 000 m) up to 6 5/8 in DP (adjustable) 33 stands DC/BHA Typical 12 600 - 18 500 ft (3 840 - 5 640 m) 14 in casing (adjustable)		
BOP/kill & choke system	Up to 7 ram, footprint 20 x 16 ft (6.1 x 5.2 m), weight 500 short tons (450 mT)/15 000 psi (1 034 bar)	Up to 8 ram, footprint 22 x 20 ft (6.6 x 6.1 m), weight 660 short tons (600 mT)/ 15 000 psi or 20 000 psi (1 034 or 1 379 bar)			
Risers	75 or 90 ft (22.86 or 27.4 m) joints stored horizontally in hull or on deck. Riser handled with dedicated gantry crane(s) or by rig crane with riser yoke. Complete delivery including all pups, flex joints and valves and 2 each TJ's with +/-65 ft (19.81 m) stroke.				

Data is subject to confirmation by the manufacturer.