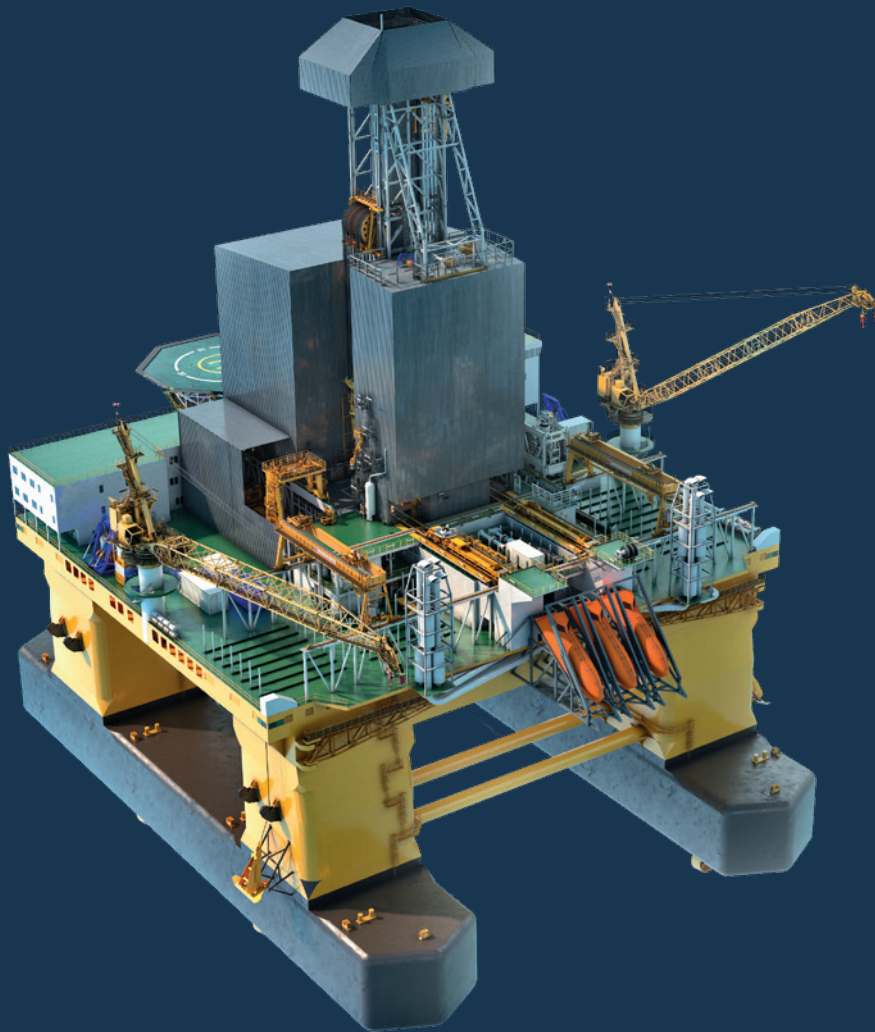


# *Frigstad D90™* *Mid Water HE (N)*

With Dual Cylinder Rig

Ultra Efficient Semi-Submersible Drilling & Completions Rig



- Full Dual Drilling, Quad Stands
- 14,000 ft. water depth, 1,600 ft. outfitted
- MPD system ready
- 101,200 hp Main Engines (configurable)
- 8 x 6.5 MW Thrusters, 12 knot transit speed
- DP3 with ER plus POSMOOR ATA,R
- 12 point mooring system
- Multi Machine Control
- Cuttings handling & storage system
- Full Condition Based Monitoring
- 13,700 t VDL
- 2 x 100 t main cranes
- Hybrid Rig Solutions
- Vertical racking of 60,000 ft. tubulars & 10,000 ft. of drilling riser
- Riser operating angle up to 10 degrees

**FRIGSTAD D90 Mid Water HE (N)****REGULATORY BODY APPROVALS**

SOLAS 2008, MARPOL 1973/78, IMO MODU CODE 2009, PSA, all with latest amendments

**CLASSIFICATION**

DNVGL ✕ 1A1 COLUMN STABILIZED DRILLING UNIT, DYNPOS-AUTRO,ER, POSMOR-ATA,R, CRANE-OFFSHORE (N), HELDK-SH (N), ECO, BWM-T, WINTERIZED BASIC -20°C, DRILL-N, DRILL-US, BIS, CLEAN, VIBR, COMF-MOU (N), RECYCLABLE, ISDS, F-AM, BATTERY (POWER)

**ENVIRONMENTAL OPERATING LIMITS**

Maximum Wind Velocity (Op / Surv)	70 knots / 100 knots	Air Gap (Operational/Survival)	15 / 18 m (49.2 / 59.04 ft)
Wave height Hs / Hmax	17.4 m / 36.89 m (57.09/121.03 ft)		

**PRINCIPAL PARTICULARS**

Length of pontoons	130 m (426.51 ft)	Displacement (Operational)	113,668 t (125,297 st)
Width & Length, Pipe Rack deck	93 x 99.5 m (305.1 x 326.4 ft)	Displacement (Survival)	102,627 t (113,126 st)
Height to Pipe Rack Deck (ABL)	50.3 m (165.02 ft)	Displacement (Transit)	85,563 t (94,317 st)
Draft (Operational)	28.3 m (92.84 ft) or 25.3 m (83.0 ft)	Water depth (max)	14,000 ft (4,267 m)
Draft (Survival)	22.3 m (73.16 ft)	Drilling depth (max)	60,000 ft (18,288 m)

**STORAGE CAPACITIES**

Bulk Mud	540 m <sup>3</sup> (19,069 ft <sup>3</sup> )	Drill Water	6,133 m <sup>3</sup> (38,575 bbls)
Bulk Cement	540 m <sup>3</sup> (19,069 ft <sup>3</sup> )	Potable Water	2,235 m <sup>3</sup> (14,058 bbls)
Sack Material	9,000 sacks	Open Pipe Rack Deck Area	4,916 m <sup>2</sup> (52,915 ft <sup>2</sup> )
Base Oil	1,145 m <sup>3</sup> (7,201 bbls)	Variable Deck Load (max oper.)	13,700 t (15,102 st)
Liquid Mud / Brine, Upper Hull	1,507 m <sup>3</sup> (9,478 bbls)	Variable Deck Load (max transit)	9,500 t (10,472 st)
Liquid Mud / Brine, Pontoon	3,034 m <sup>3</sup> (19,083 bbls)	Payload (max operational)	25,444 t (28,047 st)
Diesel Fuel Oil	10,278 m <sup>3</sup> (64,646 bbls)	Cuttings	600 m <sup>3</sup> (21,189 ft <sup>3</sup> )

**ACCOMMODATION / OFFICE**

Total capacity of 200 persons, all with single person bedrooms and daylight windows. Large office spaces and service facilities.

**MATERIAL HANDLING**

Deck Cranes	Two (2) 100 t deck cranes. Two (2) Gantry Cranes Aft for handling tubulars, marine risers and Slipjoints.
Cargo Handling and Logistics	Two (2) 6 t cargo elevators & several forklifts to service storage and machinery areas on pipe rack deck and inside the deck box and pipe rack deck including: engine rooms, mud pump room, cement unit room, workshops, sack storage, warehouse, galley stores etc.

**MARITIME SYSTEMS**

Main Power / Emergency Power	Eight (8) Main Engines each with 9,440 kW output capacity. Total installed power is approx. 75,520 kW.
Power Distribution	11 kV AC main switchboards 60 Hz
Thrusters	Eight (8) tilted 6.5 MW Fixed Pitch VFD Azimuth Thrusters for propulsion
Dynamic positioning	DYNPOS AUTRO with ER
Mooring System	Four (4) triple drum wired mooring winches with 600 m of 83 mm wire and twelve (12) fairleads for connection to preset mooring system (POSMOOR-ATA,R)

**DRILLING SYSTEMS**

Drilling Rig	Dual cylinder rig, 2 x 1,500 st, with full dual handling capabilities. Setback for 60,000 ft quadruple drill string / casing in triple stands and 10,000 ft of Riser (130 ft stands). Two (2) diverters with flow lines.
Rotary Table	Two (2) 75.5" rotary with independant drive
Top Drives	Two (2) top drives, each with 1,000 st.
Direct Acting Tensioners	Six (6) hydraulic cylinders riser tensioner mounted on skid system 1,800,000 lbs tensioning capacity. (Skidable at full load)
BOP and Riser	BOP: One (1) 18 3/4" 15K, with 6 cavities (outfitted). Two (2) x 20K BOP rated. Riser: 65 ft joints with C&K, booster & hydraulic lines. Riser vertically racked in setback for 10,000 ft, 130 ft stands (2 x 65 ft length). Storage onboard for total of 14,000 ft. Rig equipped with 1,600 ft of riser.
Drill String	Wired drill strings with subs, drill collars, heavy weight drill pipes (OFE).

**DRILLING FLUID SYSTEMS**

Mud Pumps and Treatment System	Three (3) Mud Pumps (space for 5 ea.), Triplex, 2,200 HP, 7,500 psi wp. Six (6) shale shakers, one (1) gumbo conveyer, four (4) degasser units and two (2) trip tanks. Storage of 600 m <sup>3</sup> cuttings in column with direct off-loading to supply vessels through dedicated bulk hoses. Space for 2 x desilters and 2 x centrifuges.
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**OTHER**

Helicopter Deck Capacity	Designed for Sikorsky S61/S92, M18 and EH 101 aircraft. Latest CAP 437 regulations.
Life Saving Equipment	Six (6) free-fall lifeboats with total capacity of 420 person (98 kg, 21" seats). Sixteen (16) inflatable life rafts with capacity of 25 persons each. One (1) fast rescue boat.

**Note: The details included in this specifications are subjected to change without notification**

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