

# Catalog

## 1500m Semi-Submersible Drill Rig





# 1500m Semi-Submersible Drill Rig

1500m Semi-Submersible Drill Rig will be designed for work in cold climate with class notation ICE-T and Winterized Basic with covers of working areas and lifeboat stations. Additional ventilation, heat tracing and heating will be included to satisfy rules and regulations for cold climate.



## General Description

1500m Semi-Submersible Drill Rig is a semi-submersible drilling rig designed to operate in water depths up to 1500 meters and drilling depths to 7500 meters. The unit is designed for North Sea/ Norwegian Sea and world – wide use in harsh environments. Station keeping is maintained by dynamic positioning by 6 fixed pitch, variable speed thrusters (DP3) or by an 8 line mooring system.

## Hull: GG 5000 design

## Classification

DNV +1A1 Column Stabilized Drilling Unit (N)  
DRILL (N)  
DYNPOS-AUTRO  
POSMOOR-ATA  
CRANE (N)  
HELDK-SH  
E0  
CLEAN  
WINTERIZED BASIC  
ICE-T





## Main dimensions

|                      |               |
|----------------------|---------------|
| Overall length:      | 104.5 m       |
| Overall width:       | 70.5 m        |
| Main deck length:    | 83.1 m        |
| Main deck width:     | 69.5 m        |
| Helideck (diameter): | 27.75 m       |
| Moonpool dimensions: | 21.95 m x 7 m |

## Draft

|                  |        |
|------------------|--------|
| Operating draft: | 17.5 m |
| Survival draft:  | 15.5 m |
| Transit draft:   | 9.75 m |

## Displacement:

|                         |               |
|-------------------------|---------------|
| Operating displacement: | 40710 m.t.    |
| Survival displacement:  | 38759 m.t.    |
| Transit displacement:   | 30830 m.t.    |
| Rated water depth:      | 100 – 1500 m. |

## Storage capacities

|                                      |                      |
|--------------------------------------|----------------------|
| Ballast water:                       | 13000 m <sup>3</sup> |
| Fuel:                                | 3200 m <sup>3</sup>  |
| Drill water:                         | 1360 m <sup>3</sup>  |
| Potable water:                       | 800 m <sup>3</sup>   |
| Active liquid mud (surface):         | 750 m <sup>3</sup>   |
| Reserve liquid mud (column/pontoon): | 1170 m <sup>3</sup>  |
| Bulk Bentonite/Barite:               | 400 m <sup>3</sup>   |
| Bulk Cement:                         | 400 m <sup>3</sup>   |
| Base oil:                            | 1050 m <sup>3</sup>  |
| Brine:                               | 1160 m <sup>3</sup>  |
| Slop:                                | 350 m <sup>3</sup>   |
| Variable load:                       | 5000 m.t.            |
| Transit speed:                       | 10 knots             |



### Station keeping

|                         |  |
|-------------------------|--|
| <b>DP system:</b>       | Fully redundant DP system with back-up   |
| <b>Thrusters:</b>       | 6xRolls-Royce Ulstein Aquamaster UUC 355 |
| <b>Thruster motors:</b> | 6x3800kW, 0-720 RPM                      |
| <b>Mooring:</b>         | 4 double mooring winches for 90 mm wire. |

### Machinery

|                            |   |
|----------------------------|---|
| <b>Engines:</b>            | 6xRolls-Royce Bergen Engine B3240V12A                 |
| <b>Generators:</b>         | 6xSiemens 1DK4536-8AL05-Z, 5535 kW ea, 6.6 kV, 60 Hz. |
| <b>Emergency power:</b>    | Supplied by the main generators.                      |
| <b>Power distribution:</b> | 690 V essential, 440 V, 230 V                         |
| <b>Accommodation:</b>      | 130 single bed cabins                                 |

### Safety equipment:

|                    |   |
|--------------------|---|
| <b>Lifeboats:</b>  | 4 x 65 persons. Free fall lifeboats       |
| <b>MOB boats:</b>  | 2 ea. Forward and Aft                     |
| <b>Life rafts:</b> | Escape chutes with rafts for 130 persons. |



## Drilling systems

### Derrick

- Hook load capacity 750 ton (680 mT)
- Base 35 ft x 35 ft (10.7 m x 10.7 m)
- Free height (internal) 160 ft (48.8 m)
- Cladding 0-14 m. 4.5 m at fingerboard level
- Racking capacity 7500 m, 270 std 5-7/8" DP + 12 std 9-1/2" DC.  
Belly board installed Drawworks NOV AHD 750-5750. 5750 hp active heave compensated drawworks Topdrive NOV HPS-03-750-2AC-KT. 2 x 1100 hp.  
Max cont. torque: 68900 ft.lbs at 0-152 RPM. Max 300 RPM.

### Retractable dolly

Rotary National D-605. 60.5" opening

Traveling block/crown block 72" Sheaves. 12 lines

Drillers control cabin NOV Cyberbase system with 2 operating stations

### Pipehandling system

- Piperacker NOV HydraRacker HR-III-XY
  - Iron roughneck NOV MPT 200 with mud bucket. 200 KNm break out torque.  
Range 2-7/8" - 9 3/4"
  - Catwalk machine NOV PR25-60LS with tail in arm.  
Fully equipped for tubular and riser handling
  - Manipulator arm NOV DFMA-P-2500. 3-1/2" - 9-5/8" gripper head and 47" Riser handling head
  - Pipe handler Crane NOV Knuckle boom crane with 20" and 30" yoke + riser yoke.  
Capacity: 24.2 mT at 17.7 m. Max radius: 26.6 m
- Mud treatment and supply  
Mud pumps 3x NOV HEX 240 pumps. 2540 hp, 3915l/min, 7500 psi each.
- Fixed liner size  
Shale shakers 5x VSM 300 Thule shakers  
Degasser M-I Swaco CD 1400 degasser  
Mud mixing NOV fully automated mixing system.  
Sack slitting machine and big bag slitting machine





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