

# COSLPioneer



## COSL Drilling Europe AS

Vestre Svanholmen 4  
P.O. Box 34, 4064 Stavanger  
Telephone: +47 51 95 09 00  
Telefax: +47 51 95 09 01  
Email: [post@cosl.no](mailto:post@cosl.no)  
[www.cosl.no](http://www.cosl.no)

## Company Head Quarters

China Oilfield Services Limited  
P.O.Box 232, Beijing, China, P.R.C  
Postal Code: 101149  
[www.cosl.com.cn](http://www.cosl.com.cn)



# COSL



## General discription

The COSLPioneer is a semi-submersible drilling rig designed to operate in water depths up to 750 meter. The unit is designed for North Sea/ Norwegian Sea and world – wide use in harsh environments. Station keeping is maintained by an 8 line mooring system or by dynamic position mode maintained by 6 fixed pitch, variable speed thrusters (DP3).

- Hull: GM4000 design built at Yantai Raffles Shipyard, China
- Drilling structure and mud module: Delivered by National Oilwell Varco/ Nymo, Norway

### Classification:

- DNV +1A1 Column Stabilized Drilling Unit (N) and Well Intervention Unit (N)
- DRILL (N)
- DYNPOS-AUTRO
- POSMOOR-ATA
- CRANE
- HELDK-SH
- E0
- ECO

### Main dimensions:

- Overall length: 104,5 m
- Overall width: 65 m
- Main deck length: 81,5 m
- Main deck width: 65 m
- Helideck (diameter): 22,2 m
- Moonpool dimensions: 21,95 m x 7 m

### Draft:

- Operating draft: 17,75 m
- Survival draft: 15,75 m
- Transit draft: 9,2 m

### Displacement:

- Operating displacement: 36400 mT
- Survival displacement: 34700 mT
- Transit displacement: 26700 mT

### Rated water depth:

70 to 750 m. Currently equipped for 500 m

### Station keeping:

- DP system: Kongsberg Maritime SDP-22 + SDP-12 back up
- Thrusters: 6 x Wärtsila LIPS type FS3500-536 NU
- Thruster motors: 6 x 3800 kW Siemens H-Compact plus. 0-720 RPM
- Mooring: 4 double Rolls Royce winches for 90 mm wire

### Machinery:

- Engines: 6 x Wärtsila Vasa 12V32, 5110 kW ea, 720 RPM
- Generators: 6 x Siemens 1DK4536-8AL06-2, 4840 kW ea, 6.6 kV 60 Hz
- Emergency power: 1190 kW Mitsubishi S12R-MPTA.  
1425 kVA Newage Stamford PM734D
- Power distribution: 690V essential, 440V, 230V

### Accommodation:

120 single bed cabins

### Safety equipment:

- Lifeboats: 4 x 60 persons. Free fall lifeboats
- Mob boats: 2 x Watercraft WHFRB 6.50 DJ
- Lifafts: 4 x 30 persons

### Storage capacities:

- Ballast water: 13210 m<sup>3</sup>
- Fuel:
  - Pontoons 3208 m<sup>3</sup>
  - Surface 260 m<sup>3</sup>
- Drilling water: 2038 m<sup>3</sup>
- Potable water: 600 m<sup>3</sup>
- Active liquid mud (surface): 460 m<sup>3</sup>
- Reserve liquid mud (column): 200 m<sup>3</sup>
- Bulk Bentonite/Barite: 240 m<sup>3</sup>
- Bulk cement: 240 m<sup>3</sup>
- Base oil storage: 814 m<sup>3</sup>
- Brine storage: 200 m<sup>3</sup>

### Variable load:

4000 mT

### Transit speed:

10 knots





## Drilling systems

### Derrick:

- Hook load capacity: 650 ton (590 mT)
- Base: 35 ft x 35 ft (10,7 m x 10,7 m)
- Height (internal): 160 ft (48,8 m)
- Cladding: 0-14 m. 4,5 m at fingerbord level
- Racking capacity: 7500 m, 270 std 5 7/8" DP + 12 std 9 1/2" DC. Belly board installed

### Drawworks:

NOV AHD-4600. 4600 hp active heave compensated drawworks

### Topdrive:

NOV HPS 650-E-AC-SG. 650 ton (590 mT). 1000 hp.  
Max cont. torque: 55250 ft.lbs at 0-96 RPM. Max 180 RPM.  
Retractable dolly

### Rotary:

National D-605. 60,5" opening

### Traveling/ crown block:

60" sheaves for 12 lines.

### Drillers control cabin:

NOV Cyberbase system with 2 operating stations

### Pipehandling system

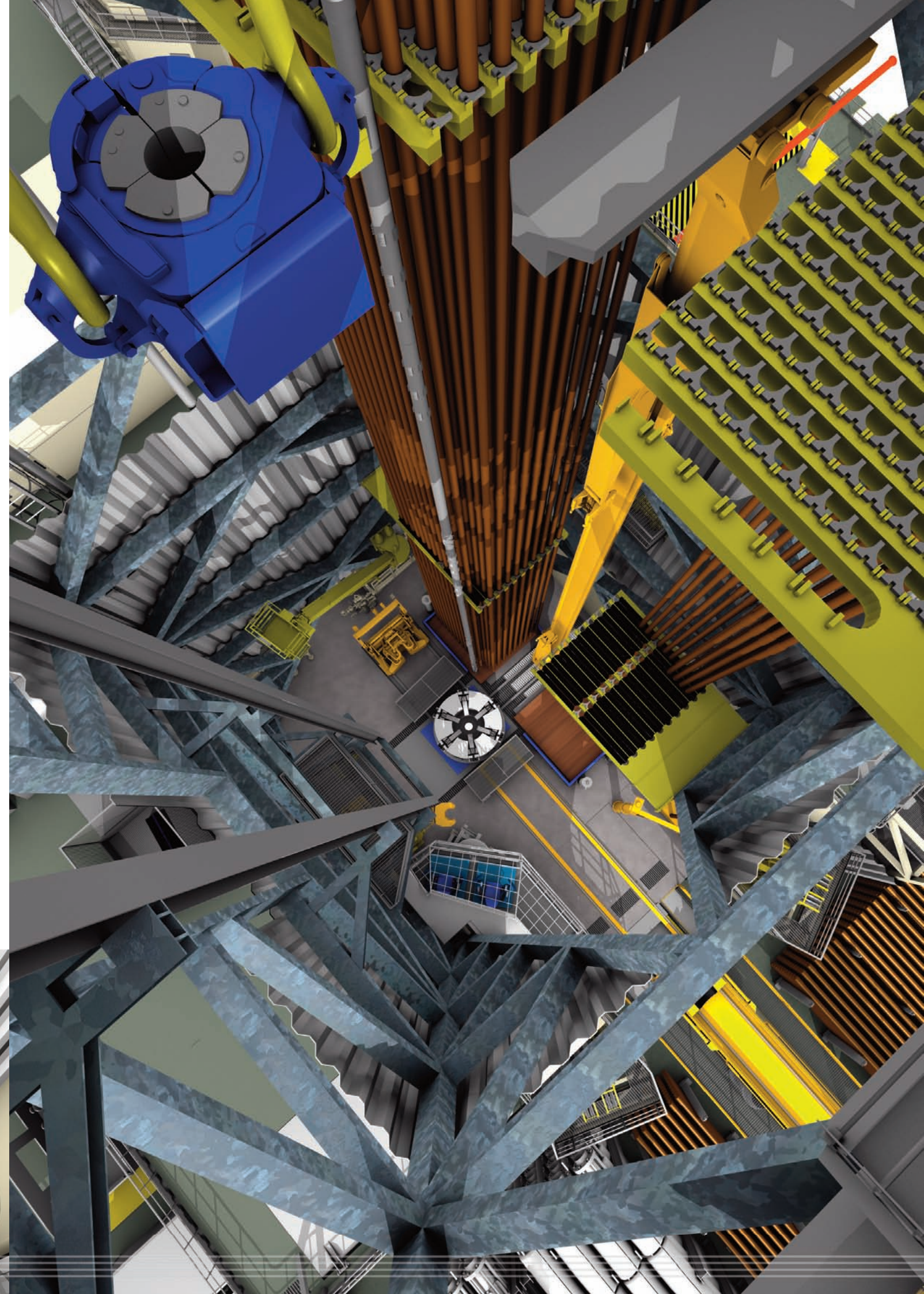
- Piperacker: NOV hydraracker HR-III-XY
- Iron roughneck: NOV MPT-200 with mud bucket. 200 KNm break out torque.  
Range: 2 7/8" – 9 3/4"
- Catwalk machine: NOV PR25-60LS with tail in arm. Fully equipped for tubular and riser handling
- Manipulator arm: NOV DFMA-P-2500. 3 1/2" – 9 5/8" gripper head and 47" riser handling head

### Crane:

- Platform crane: 2 ea NOV Molde crane OC3500LE. Capacity: 80 mT at 20 m.  
Max radius: 50 m
- Pipehandler 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: 3 x NOV HEX 240 pumps. 2540 hp, 3915 l/min, 7500 psi each.  
Fixed liner size
- Shale shakers: 5 x 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





## Sub sea equipment

### BOP/ X-mas tree handling:

- 2 x 60 mT overhead crane. STB of Moonpool
- 300 mT BOP elevator system/ main skid
- 300 mT BOP skid. Designed to carry the BOP from parked position to the BOP elevator/ main skid
- 300 mT LMRP skid. Designed to carry the LMRP/ X-mas tree from parked position to the BOP elevator/ main skid
- 100 mT X-mas tree cantilever transport/ skidding system
- 420 mT riser hang-off trolley
- 2 x 15 mT overhead crane. PS of Moonpool

### BOP:

- BOP stack: Shaffer NXT.18  $\frac{3}{4}$ ", 15K
- Upper ram body: Extended double ram (shear seal & CSG shear) with 22" operators, 5K Poslock operators
- Lower ram body: Triple rams with 14" operators, Ultralock II
- Annular preventer: Shaffer, Wedge Cover Spherical, 10K
- Hydraulic control: Sub Sea Pods for all functions. Alternative acoustic and ROV controls for critical functions. 5K Booster for shear rams. Hydraulic fluid return to surface

### Riser:

- Shaffer 21" FT-E Riser system
- 50 ft joints
- 2 x 3" ID chokelines, 4" boost line, 2 x 2,3" ID hydraulic return lines
- 500 m riser (50% with buoyancy)

