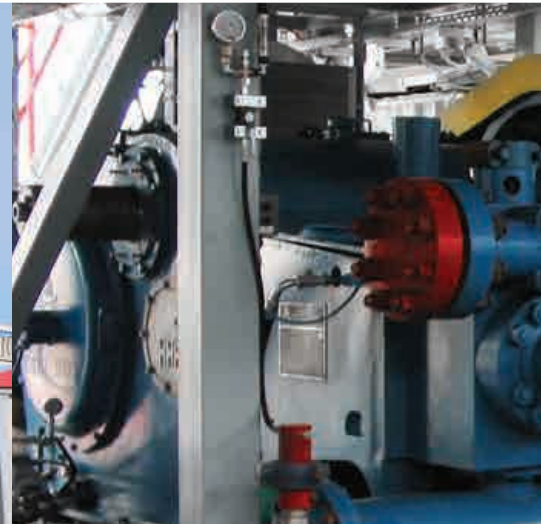


- Modular construction
- Variable rig layout
- Low total height:
only 108 ft (33 m) incl. substructure
- Small footprint:
approx. 10,645 ft² (989 m²) of basic
equipment
- Low noise emission
- Skiddable along the longitudinal axis
on cluster locations
- Safety system DIN EN 61508



DRILLING RIG

VDD 200.1 COMPACT



VDD 200.1 Compact Super Single with Automatic Pipehandling System

Hydraulic Top Drive

Top drive (rotary unit) and drawworks (carriage) are integrated in a carriage system. The carriage system is moved along the mast by a rack and pinion system. Carriage loads and torque are transferred via the racks and the mast.

Additionally, the carriage system is directly engaged using gear racks which are integrated into the mast. The top drive is equipped with a specially designed break/lock system which can prevent uncontrolled movement even in case of faulty lines or hoses as well as in breakdown of the hydraulic system.

Optional

- Casing drilling

Max. Depth

- 11,483 ft (3,500 m)

Mast

- Welded box type with two integrated gear racks on the sides
- Clear working height: 59.1 ft (18 m)
- Max. working load: 404,656 lbf (1,800 kN)
- Standard working load: 359,694 lbf (1,600 kN)
- Overall height incl. substructure: 108 ft (33 m)

Substructure

- 4 modules for 2 levels, height each 9.5 ft (2.9 m)
- 2 modules for rig floor, height each 9.5 ft (2.9 m)
- 1 auxiliary module for driller's cabin
- Footprint incl. clearance for cellar: 26.3 x 19.7 ft (8 x 6 m)
- Substructure opening: 9.9 ft (3 m)
- Height to bottom edge of rotary table support: 24.6 ft (7.5 m)
- Preventer stack lifting system: 2 x 44,063 lbf (2 x 196 kN)

Rotary Table

- Table opening: 37 1/2" (957 mm)
- Static capacity: 404,656 lbf (1,800 kN)
- Max. rpm: 10 min⁻¹
- Max. torque: 33,190 ft-lbf (45,000 Nm)

Top Drive

- Manufacturer: MAX STREICHER GmbH & Co. KG aA
- Static capacity: 404,656 lbf (1,800 kN)
- Max. torque: 40,566 ft-lbf (55,000 Nm)
- Max. rpm: 190 min⁻¹
- Max. circulation pressure: 5,000 psi (345 bar)

Tubular Handling Equipment

Pipehandler

- Tubular sizes: 2 1/2" to 20", up to range III

Iron Roughneck

- Manufacturer: NOV
- Pipe diameter (OD): 4 1/4" to 8 1/2"
- Max. make-up torque: 60,111 ft-lbf (81,500 Nm)
- Max. break-out torque: 80,026 ft-lbf (108,500 Nm)

Trip Time

- Up to 1,312 ft/h (400 m/h)

Power Generation

- 3 x 1,065 kVA AC generator ACG 1250-4-690
- Optional: converter unit to connect rig to grid



Hydraulic System

- 2 redundant power packs for top drive, drawworks and for all auxiliary appliances (pipehandler, elevator, support crane, auxiliary winch, etc.)

Fuel Storage

- 1 fuel tank: 126 bbl (20 m³), with automatic refill system for generators
- Optional: 2x

Data Acquisition System

- Comprehensive system to acquire and digitally store all relevant drilling and operating parameters
- Remote diagnostic system for drilling rig

Blow Out Prevention Equipment (Example)

Stack Configuration

- 1 annular preventer T3 13 5/8", 5,000 psi (345 bar)
- 1 double ram preventer T3, 13 5/8", 10,000 psi (690 bar) with 4x 3 1/16" outlets, rams for 3 1/2" and 5" drill pipe, 2 7/8" to 5" VBR, 7 5/8" casing rams, blind shear rams, other ram sizes optional
- Optional: 1 single ram preventer 13 5/8", 10,000 psi (690 bar)

Accumulator Unit

- Manufacturer: T3
- Capacity: 240 gal
- Working pressure: 3,000 psi (207 bar)
- 2 remote controls

Degasser

- Poor boy degasser, optional vacuum degasser

Choke Manifold

- Rated working pressure: 10,000 psi (690 bar)
- Nominal diameter: 3 1/16"

Drill Pipe

- Will be supplied as required by the customer

Mud System

Mud Pumps

- 2 x Hong Hua HHF 1000
- 10" stroke, 4 1/2" to 6 3/4" piston
- Input power for each pump: E-Motor, 986 HP (735 kW)
- 2 centrifugal charging pumps, 60 HP (45 kW)

Mud Tanks

- 1 tank with integrated mixing unit 314.4 bbl (50 m³)
- 2 tanks 377.4 bbl (60 m³) and 188.7 bbl (30 m³) divided into 7 compartments 3 x 188.7 bbl (30 m³), 3 x 94.3 bbl (15 m³), 1 x 31.4 bbl (5 m³) variable use as active, mix and pill tanks
- 1 hopper
- 2 mixing and transfer centrifugal pumps, 74 HP (55 kW)
- Optional upgradeable

Solids Control System

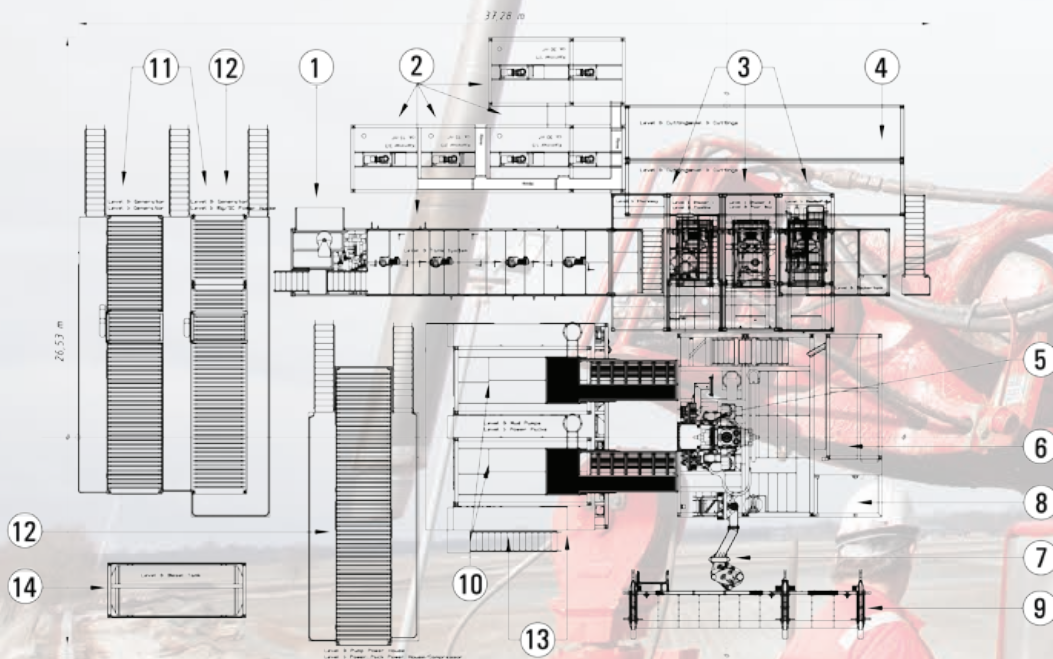
- 3 x 4-panel shale shakers
- 1 x flo-divider
- Optional: vacuum degasser, centrifuge

Air system

- 1 compressor: Atlas Copco GA 30C3
- Max. volume: 28.3 bbl (4.5 m³)
- Max. pressure: 188.5 psi (13 bar)



Layout of Drilling Rig VDD 200.1 Compact



Rig Components

1. Mixing Unit
2. Mud Tanks
3. Solids Control Unit
4. Cutting Box
5. Mast
6. Driller's Cabin
7. Pipehandler
8. Support Crane
9. Pipe Rack
10. Powerpacks (Level 1)
11. Generators
12. Powerhouse
13. Mud Pumps (Level 0)
14. Fuel Tank