



DRILLING TECHNOLOGY

- Triple Rig (Range II)
- Modular Design
- Small Footprint
- Fast Moving
- Self Erecting Mast
- Integrated AC-Driven Drawworks
- Automated Racking Board
- Certified Functional Safety and Anti-Collision System
- Hands-Off Technology
- Automated Pipehandling System



DRILLING RIG *VDD 500*



VDD 500 Triple Rig – Integrated Drawworks – Automated Catwalk System

Highlights

The VDD 500 Triple Rig is specifically designed for fast moving with self-erecting bootstrap mast (required crane capacity of 80 metric tonnes). The modular components consist of street legal loads. The design allows equipment and package interchange between rigs as well as variable rig layout. Automated catwalk system, automated setback, tubular connection make/break and tripping operations are conducted remotely from the driller's cabin. The air conditioned driller's cabin is equipped with a CCTV System, Hands-Off-Drilling via STREICHER ADDS (Automatic Drill Drive System) and STREICHER I-Drill (Data Acquisition System). Various options can easily be adapted to customise the rig.

Max. Drilling Depth

- ~ 24,600 ft (7,500 m) – Depending on Well Design

Mast

- STREICHER U-Shaped Mast
- Self Erecting Bootstrap Mast
- Clear Working Height: 98.4 ft (30 m)
- max. Hook Load: 500 short tons (454 metric tonnes)
- Auxiliary Winch: 11,000 lbs (5 metric tonnes)
- Overall Height incl. Substructure: 183.7 ft (56 m)

Substructure

- STREICHER Box-on-Box System
- Total: 8 Modules incl. Rig Floor
- Footprint: 39.4 x 32.8 ft (12 x 10 m)
- Substructure Inner Clearance: 13.1 ft (4 m)
- Height to Bottom Edge of Rotary Beams: 25.6 ft (7.8 m)
- BOP Handling System: 2 x 44,000 lbs. (20,000 kg)
- Setback Capacity: 16,200 ft (5,000 m)
- Quick Connectors for Module Stacking

Rotary Table (Assisting)

- STREICHER AC Driven Rotary Table
- max. Opening: 37 1/2" (952.5 mm)
- max. Rotary Load: 500 short tons (454 metric tonnes)
- max. Rotation Speed: 10 rpm
- max. Operating Torque: 33,200 ft-lbs. (45,000 Nm)

Drawworks

- max. Hoisting Capacity: 500 short tons (454 metric tonnes)
- Rated Power: 2,000 hp (1,492 kW)
- Main Brake: Regenerating via AC-Motors (4-Q)
- Auxiliary Brake: Mechanical Emergency Braking System

Top Drive

- max. Hoisting Capacity: 500 short tons (454 metric tonnes)
- max. Rated Power: 1,150 hp (858 kW)
- Continuous Torque: 51,400 ft-lbs. (69,700 Nm)
- Intermittent Torque: 71,500 ft-lbs. (96,900 Nm)
- max. Speed Rating: 256 rpm

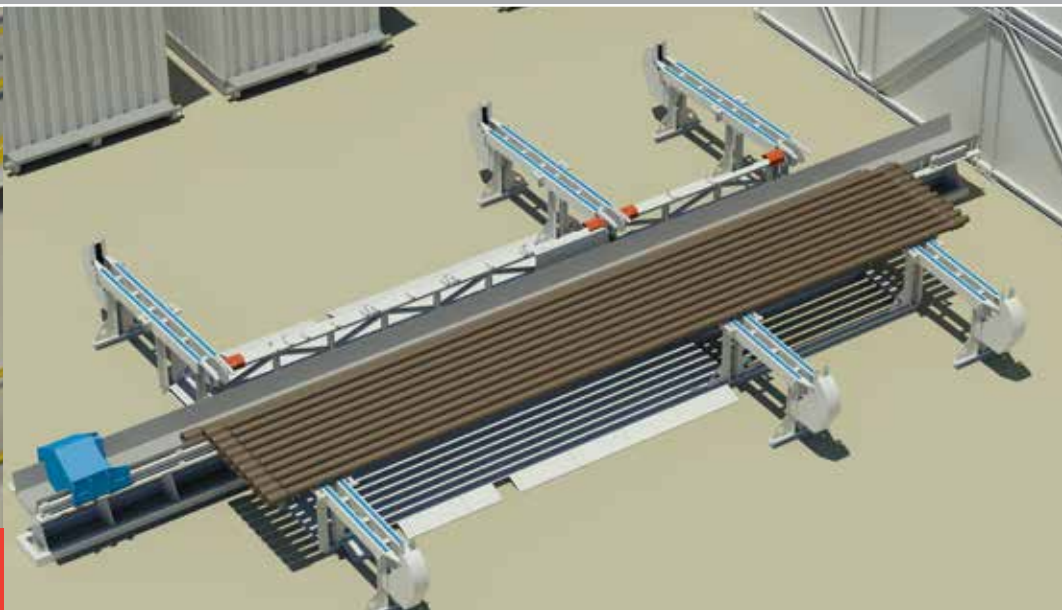
Tubular Handling Equipment

Automated Pipehandling System (Optional)

- Automated Catwalk System
- Tubular Sizes: 2 3/8" to 24", up to Range III (max. 48 ft/14.4 m)
- Without Modifications or Adjustment Work for Diameter Changes
- Fully Automated in Sequences

Iron Roughneck

- Tubular Connection OD Range: 3 1/2" to 9 3/4"
- max. Make-up Torque: 100,000 ft-lbs. (135,582 Nm)
- max. Break-out Torque: 120,000 ft-lbs. (162,698 Nm)



Automated Racking Board (Optional)

- max. Lift Capacity: 23,000 lbs. (7,000 kg)
- Tubular Range: 3 1/2" to 11" Body OD
- Weight: 15,000 lbs. (4,570 kg)

Power Generation

- Generator Set: 4 x 1,750 kVA
- STREICHER AC-Drive and Monitoring System (ACDM)
- Integrated Day Tank + Automated Fuel Supply
- Converter Unit to Connect Rig to Grid

Data Acquisition System

- Comprehensive System to Acquire and Digitally Store all Relevant Drilling and Operating Parameters
- Remote Diagnostic System

Mud System

Mud Pumps

- 3 x 1,600 hp (3 x 1,194 kW) AC-Drive (VFD Controlled)
- Module Includes Charge Pump, Suction- and High-Pressure Dampener, Low- and High-Pressure Piping and Valves

Mud Tanks

- Overall Tank Capacity: 1,447 bbls (230 m³)
- Suction Tank: 315.8 bbls (50 m³)
- Mix Tank: 94.3 bbls (15 m³)
- Pill Tank: 31.4 bbls (5 m³)
- Intermediate Tanks: 2 x 506 bbls (2 x 80 m³)

Mud Treatment

- 3 Shale Shakers
- 1 Mud Cleaner (Desander/Desilter + Shale Shaker)
- 1 Mud/Gas Separator
- Mixing Unit Integrated in a Mud Tank

Additional Options

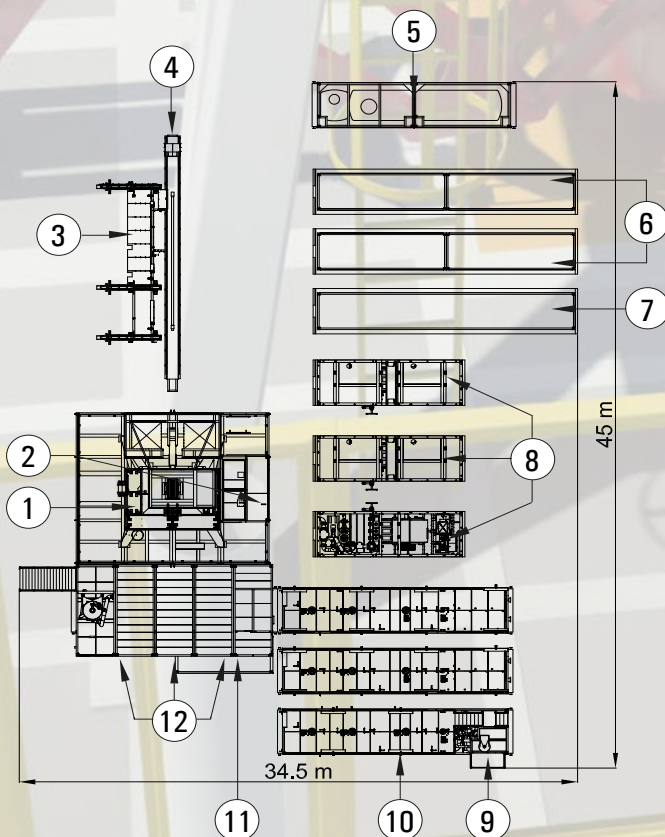
- STREICHER Load-Torque-Cell:
Direct Measurements with Tolerance < 1 %
- Automated Catwalk System
- Sound Proofing of Generator Packages
- Optional Fast Moving Transport System
- Third Party Inspections and Certificates
- Vacuum Degasser
- Centrifuges
- Well Control System
- Downhole Equipment
- Different Type of Roughneck
- Casing Drilling
- Additional Mud Pumps
- Modules Trailer Mounted

Applied Standards and Regulations

- Machinery Directive 2006/42/EC
(CE – declaration of conformity)
- Pressure Equipment Directive 97/23/EC
- Explosion Proof Equipment Directive 94/9/EC (ATEX)
- Low Voltage Equipment 2006/95/EC
- Electromagnetic Compatibility 2004/108/EC
- Functional Safety IEC 61508
- Drilling and Well Servicing Structures API Spec. 4F
- Drilling and Production Hoisting Equipment API Spec. 8C
- GOST



Footprint



Rig Component

1. Mast
2. Driller's Cabin
3. Pipe Feeder
4. Pipehandler
5. Fuel Tank
6. Generator Sets
7. AC-Drive and Monitoring System (ACDM)
8. Mud Pumps
9. Mixing Unit
10. Mud Tanks
11. Cutting Box
12. Solids Control Unit