

750HP ZJ30/1700-EZ (AC-VFD) Truck Mounted Drilling Rig

General Description

- Hook load: 382,000 lbs, 190 US ton (1700KN) with 10 lines
- Mast type: 123' (37.5m) two section telescoping type that is raised using hydraulic cylinders.
- Substructure type: Single section, swing up with screw jacks to secure one in position.
- Depth rating: 4 ½" Drill pipe: 9,800 ft (3000M), 5" DP 8,200 ft (2500M)
- Wind speed: No hook load & set back full of drill pipe: 68 mph (110 km/h)
- Setback capacity: 215,000 lbs, 107 US ton (960KN)
- Rig floor height: 23 ft (7.1M)
- Clear height below rotary beams: 19.7 ft (6M)
- Rotary table size: 27.5"
- Drill line size: 1 ⅝in (29mm)
- Draw works: JC30DB 750hp (600KW), disc brake, with energy consumption brake.
- Catheads: 2 ea Y15160, Mounted in mast section, rated at 33,067 ft lb ft lbs straight pull
- Winches: 2 x hydraulic winches Model YJ3B and YJ5B for use on the rig floor area & 2 x air winches one at monkey board and one at end of cat walk
- Martin Decker RigSense 2.0 drilling instrumentation system
- Gaitronics rig site communications system
- Mathey wireline unit complete with Totco 8 and 16 degree survey equipment
- Operating temperature: -20°C to +55°C (cold weather or desert modifications on request)

Top Drive

- TDS and drive unit: Tesco 250 HXI 700 (hydraulic) or 250 EMI 400 (electric) Top Drive system complete with electrical and hydraulic control systems, Guide rail, shipping containers, spares, tools and operation manuals

Main Transmission and Transfer Box

- Allison 6 speed S6610HR, Rated at 710 hp, input speed 2500 rpm
- JJX140, Max rotary speed 2100rpm, max output torque 10,360 ft lbs with 1:1 ratio

Power Package

- Carrier power 1 x Cat C-18, 630 hp (470 KW) @ 2100RPM, with water loss, low oil pressure, high water temperature and over speed protection, electrical-start
- Rig power and rating of generator sets: 3 x CAT3508B + SR4B Gen-sets, 1000kW ea, 1800 RPM

Electrical System

- Power system 600v, 50 Hz for VFD drives. 400V 50 Hz for DC Motor control and 230v 50 Hz for solids control system, lighting and general power

Mud Pumps Mud Pumps

- Mud Pumps: Qty 2 x 800hp triplex pumps c/w liner wash, charge pumps, suction strainer, suction dampener and pulsation dampener also reset relief valves with integrated bleed off line. Each pump is powered by 800hp AC motor

Drilling Control system

- Stainless steel clad Drillers cabin with high tech PLC control system is utilized to give precise control of the Variable Frequency Drives (VFD) to operate all rig functions
- Driller control system employs a drillers chair with two joysticks to control draw works hoisting and

lowering, the second to apply and release the disc brakes

- The driller controls the major rig functions such as the Mud Pumps and the Top Drive via simple, user friendly touch screen terminal and switch panels mounted within easy reach of the driller
- Drillers cabin console also houses all other interface devices such as video system monitor, intercom system, instrumentation system, hydraulic weight indicator and stand pipe pressure gauges

BOP and Control system

- Shenkai 13- $\frac{5}{8}$ " 5K Annular BOP, 13- $\frac{5}{8}$ " 5K Double Ram and Single Ram, Drilling Spool. Ram block assemblies. BOP Test Pump, (air powered) with hoses and chart recorder. BOP Test Base. BOP Stack Lifting device. Transport Skid. BOP Control Unit. BOP Control Unit remote Panel, (For Drill floor) Transport Skid for above control units. Choke and Kill Manifold 3-1/16" X 5K. 3-1/16" X 5K Manual and Hydraulic valves. JY-70A Remote Choke panel. 2-1/16" 5K Non-return Valve. Complete with high pressure fire proof hydraulic hoses and hand wheels

Solids Control System

- BBL capacity: 4 tank, 1,230 BBL (196M³). One additional brake cooling water tank and trip tank
- 3 each Brandt King Cobra Linear Shale Shakers with 3rd shaker incorporating 1 each Brandt King Cobra Mud Cleaner (16 x 4" de-silter cones rated for 1000GPM and 2 x 12" de-sander cones rated for 1000GPM)
- Qty 1 Ea Model Brandt DG-12 Vacuum Degasser with 5 hp, 50 hz, 230/460 volt, 3 phase, explosion proof electric motor rated for 1200 GPM complete with JP-12 Jet Pump Educator
- Mix hopper: Qty 2 DN150 x Jet hoppers
- 14 total. 13 x HM-15, 20 hp (15KW) and 1 x 7 hp (5.5 KW)
- Centrifugal pumps: Qty 2- 6 x 8 x 12 1/2" impeller, 100 hp (75KW) (de-silter, de-sander pumps)
- Centrifugal pumps: Qty 2- 6 x 8 x 13" impeller, 100 hp (75KW) (mix pumps)
- Centrifugal pumps: Qty 2- 6 x 8 x 13" impeller, 100 hp (75KW) (charge pump)
- Centrifugal pumps: Qty 2- 3 x 4 x 9" impeller, 15 hp (11KW) (water pump)
- Centrifugal pumps: Qty 2- Cooling pumps
- Poor Boy degasser: Qty 1- NQF1200/0.7
- Mud Guns: Qty 11- mud guns supplied

Handling Tools and Equipment

- Drill pipe and casing elevators, Bails, Slips for drill pipe and casing, Manual drill pipe and casing tongs, Pipe spinner, Casing power tong, Hydraulic unit, Swivel/Kelly unit with drive bushings, rotary table bushings and inserts, pipe racks, bit breakers

Air System

- 2 X Air compressors 50 hp (Sullair LH12-50) and air dryer system with reservoir in compressor house as well as additional reservoir located on carrier

Auxiliary Tanks

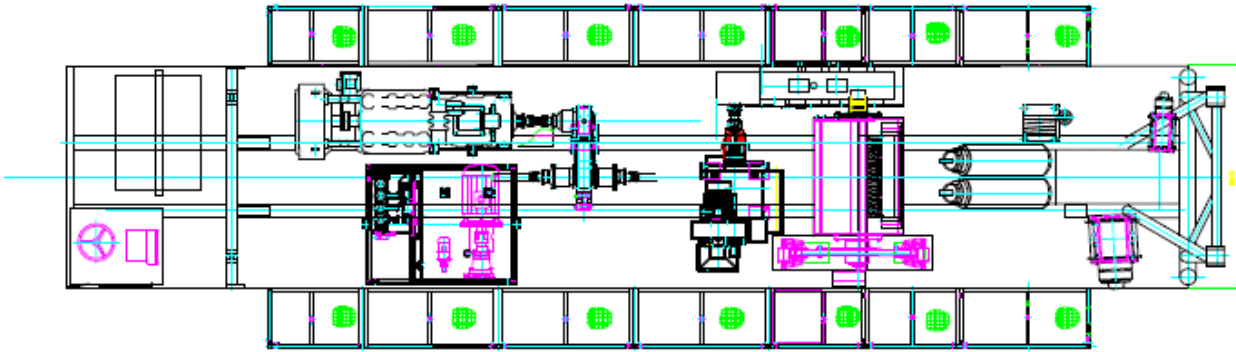
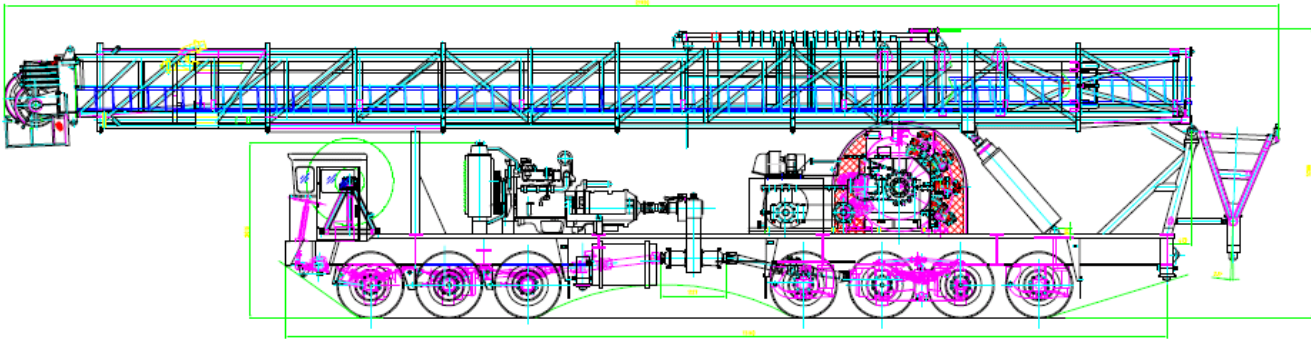
- Water tank: 314 bbl (50m³) including 2 x pumps
- Diesel Fuel tank: 314 bbl (50m³) including 2 x transfer pumps

Rig Move

- Max. Road speed (limited): 45km/h
Max. Climbing gradient: 26%
Approach/Departure Angle: 26°/18°, Min. ground clearance: 311mm and Min. turning radius: 19.5m

Technical Drawings

Side and Top View



Layout View

