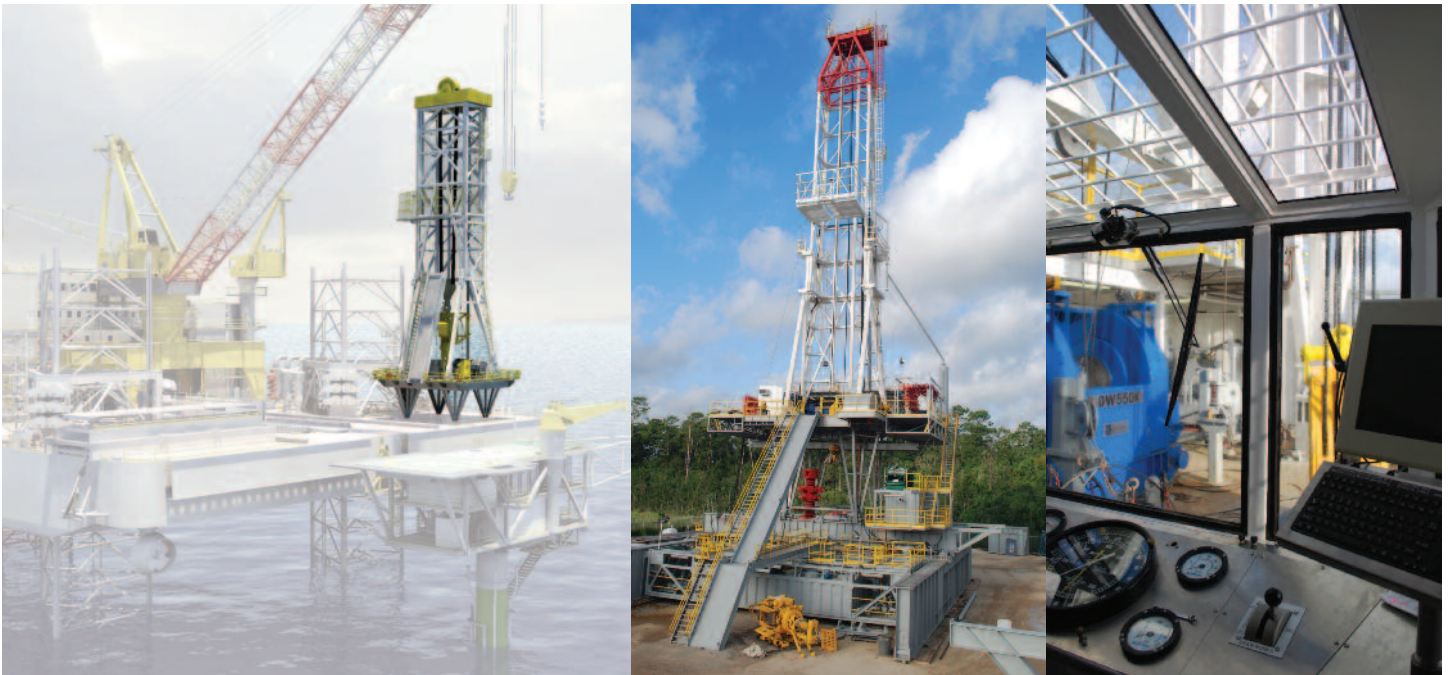




# Workover Rig



## Derrick and Substructure Specifications

### General

Derrick	317-tonne (350-ton, 700-kips), 38.7-m (127-ft) double racking
Hook	227-tonne (250-ton, 500-kips)
Rotary Load	227-tonne (250-ton, 500 kips)
Set-back	181-tonne (200-ton, 400 kips)
Combined Structure	317-tonne (350-ton, 700 kips)
Cantilevered Skid	Cantilever XY skid: 16.7-m by 9-m (55-ft by 30-ft)
Tender-Assist Skid	Capping beam XY skid: 9-m to 15-m (30-ft by 50-ft) between capping beams
Drawworks	LeTourneau® 249-tonne (275-ton, 550-kips) Model LDW550K, 10-lines 1,119 KW (1,500 hp) motor and electric brake.
Top Drive	LeTourneau 227-tonne (250-ton, 500-kips) Model L-DDTD
False Rotary Drive	952.5-mm (37½-in) pass through
Travelling Equipment	227-tonne (250-ton, 500 kips) hook/block
Rig Instrumentation	Electronic recorder with displays/alarms on floor and in offices
Fluids Measurement	Pit Volume (PVT), Fluid Returns Flow Increase (Flo-sho) and Pump Strokes
TDS Speed	TDS speed indicator 0-240 rpm
Weight Indicator	Martin-Decker® weight indicator (or equivalent)
Tong	139.7mm (5½") HSVS Eckel® Hydra-Shift® casing tong 60.3mm to 219mm (2-3/8" to 8-5/8")
Camera	Top-Drive Monitoring Camera
Pollution Control	Floor, drawworks, bell nipple equipped with drip pan Drain piped to two waste tanks
Air Hoists	(1) Ingersoll Rand® man-riding air winch (4) Ingersoll Rand Model K-5 winches
Tubing Equipment	60.3-mm to 172-mm (2-3/8" to 5") tubing or drillpipe

## Derrick and Substructure Specifications *(continued)*

### Well Control Equipment

BOP	Cameron Iron Works® (CIW) 346mm (13-5/8") 5M Annular BOP CIW 346mm, 690-bar (13-5/8" 10M ) BOPs with pipe, blind and shear rams. Shear rams outfitted with booster. Telescoping bell nipple capable of mating to annular Three-way 346mm (13-5/8") flow cross with five (5) 77.8m, 690-bar (3-1/16", 10M) manual and (1) 77.8mm, 690-bar (3-1/16", 10M) hydraulic valves (2) 20-tonne (22-ton, 44-kips) air driven BOP hoists BOP transport dolly with 10M test stump Portable 1,034-bar (15M) BOP pressure test unit with charts Hydraulic bolt torque tools for BOP 1363-liters (360-gallons) accumulator unit (1363-liters or 360-gallons from 24-bottles) (1) air pumps and one electric triplex pump (2) remote units 77.8mm, 690-bar (3-1/16" diameter, 10M) choke manifold with surge tank Targeted turns, pressure gauge, divert to gas buster (1) remote adjustable choke and two manual adjustable chokes
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### Circulating System

Circulating Pump	Triplex pump 127mm x 356mm (5" x 14") Lewco® Model WH-2214, 1641.2 KW (2,200 hp) AC motor rated for 517-bar (7,500 psi), pulsation dampener with two (2) 860 KW (1,150 hp) AC motors
Kill Pump	Triplex pump 95.3mm x 230.2mm (3-3/4" x 8") SPM® model TWS2250, 1641.2 KW (2,200 hp) AC motors 1,304-bar (15,000-psi), pulsation dampener, one 1641KW (3,000-hp) AC motor
Well Servicer Fluids	94-m <sup>3</sup> (800-bbls) active circulating system with agitators and pumps Re-circulating, 8.8-m <sup>3</sup> (75-bbl) trip tank with gauge Slug/pill tank. Mixing hopper – high jet type Mud/gas separator (poor-boy gas buster) with returns to tank (1) Model FLC-503 Derrick® "Linear Motion" Flow Line Cleaner (600 gpm) on Trip Tank

### Miscellaneous

Compressed Air	(3) Quincy's® Series 500 screw-type air compressors 8.6-bar (125-psi) and 14.2-m <sup>3</sup> /min (500 cfm) each
Welding Shop	(2) 500-amp Lincoln Electric® welding units Normal oxy-acetylene equipment
Maximum Deck Area	1060-m <sup>2</sup> (11400-ft <sup>2</sup> )
Minimum Deck Area	618-m <sup>2</sup> with 3-m vertical clearance (6658-ft <sup>2</sup> with 10-ft vertical clearance)
Max. Covered Deck (Below)	370-m <sup>2</sup> (4000 ft <sup>2</sup> )
Variable Deck Load	2,722-tonnes (3000-tons)
Uniform Deck Load	2.64-tonnes/m <sup>2</sup> (540-lbs/ft <sup>2</sup> )

### Storage Capacities

Drill Water	1044-m <sup>3</sup> (8,900-bbl) capacity
Potable Water	342-m <sup>3</sup> (2,100-bbls) capacity
Brine Water Storage	657-m <sup>3</sup> (5,600-bbls) capacity
Ballast Water	5397-m <sup>3</sup> (34,200-bbls) capacity
Diesel Fuel	470-m <sup>3</sup> (4,000-bbls) capacity
Lube Oil	4.5- m <sup>3</sup> (28 bbls) capacity
Sludge Storage	17.8-m <sup>3</sup> (110 bbls) capacity
Dirty Oil Storage	11.3-m <sup>3</sup> (70 bbls) capacity
Sack Storage	152-m <sup>3</sup> (5,000-sacks or ft <sup>3</sup> ) capacity
Max. Usable Deck	1060-m <sup>2</sup> (11400-ft <sup>2</sup> )
Min. Usable Deck	619-m <sup>2</sup> (6658-ft <sup>2</sup> )
Covered Storage	370-m <sup>2</sup> (4000-ft <sup>2</sup> ) below deck