

Next Generation Ultra-Fast Moving Land Rig PDQ™-F500

Rig Rating (HP):	1000 HP
Rig Rated Depth (ft.):	14,000
Hook Load (lbs):	500,000
Top Drive System:	250 Ton AC
Drawworks:	Gear Driven AC
Hands-Free Pipe Handling System	
Mud System:	1000 bbls
BOP Stack:	11" 10,000 psi
Power transfer type:	AC—VFD—AC



PDQ™-F500: Ultra-Fast Moving Land Rig Package

Features:

Skillfully engineered to move faster and rig-up quicker, utilizing the latest technology and industry-proven equipment to maximize performance, safety and reliability of your operations.

Fuel efficient with PLC-aligned fuel management systems: adaptable and capable of utilizing any combination of Diesel with Natural Gas, Liquefied Natural Gas or directly by Highline power.

Off-line stand building ability to pick up and make up drill pipe, HW drill pipe and Drill Collars into triple stands to specified torque requirements.

Automated pipe handling system able to deliver drill pipe and HW drill pipe and Drill Collars hands-free to mouse hole, well center, or racking boards while drilling.

Minimal location size and build requirements with efficient rig layout and substructure footprint. Minimal location reclamation due to compact footprint and no reserve pit build requirements.

Efficient drilling fluid cleaning, solids control and mixing equipment, with ability to mix at high rate with shear capabilities utilizing Bulk Silos, Super Sacks and pre-wetting.

Radial Induction System utilized for continuous tank cleaning.

Quality workmanship with industry-leading partnerships.

All PDQ™ models able to be tailored to Client specifications.

Rig Moves:

Rig Moving operations, rig-up, rig-down and transport operations completed without crane equipment or gin pole oilfield tandem trucks.

Trailerized skids reduce equipment requirements and minimize total rig move duration.

Stairways, walkways and cable trays designed to travel attached to primary structures and allow for quick rig-up/down.

Hydraulic self-pinning, dogging, and latching mechanisms with safety devices included for rapid rig-up and rig-down operations.

All hydraulic, electrical, pneumatic, and fuel lines arranged inside of purpose-built cable trays, and integrated into swing arms and grasshopper for quick connect and disconnect.

QHSE:

Hands-Free Operations.

Compact location size and Zero-Discharge cuttings system incorporated to minimize environmental impact.

Personnel at or below 6 ft. during rig-up and rig-down operations.

Spill containment systems included for accidental spill and fluid containment on rig components and modules.

HVAC System with winterization operating -40C to +55C with wind loading at 81 MPH with setback and 107 MPH without setback.



Land Rig: PDQ™-F500

MAST

Mast Height (ft.):	158
Mast Clear Height (ft.):	147
Width at Base (ft.):	12.5
Hookload Capacity (lbs):	500,000 on 10 lines
Mast Raising Type:	Single-Stage Hydraulic Cylinders
Racking Capacity (Stds):	144 (5 in. DP) & 8 (8 in. DC)

SUBSTRUCTURE

Substructure Height (ft.):	25
Substructure Clear Height (ft.):	20.5
Substructure Base (ft.):	60.0 Long x 31.2 Wide
Drillfloor Area (ft.):	41.3 Long x 36.0 Wide
Substructure Raising Type:	Single-Stage Hydraulic Cylinders
Rotary / Casing Load (lbs.):	500,000
Setback Load (lbs.):	450,000
BOP Handling Capacity (lbs.):	100,000

DRAWWORKS

Type:	Gear-Driven AC
Horsepower Rating AC (HP):	1000 (Continuous)
Max Working Speed (RPM):	2300 (Continuous)
Max Motor Speed (RPM):	3000
Transmission:	Single-Speed (Multi-Speed – OPTION)
Hoist Speed Max Load (FPM):	74 (134 FPM @ 270,000 lbs)
Drill Line Diameter (in.):	1-1/4
Max Single Line Pull (lbs.):	87,900

TOP DRIVE

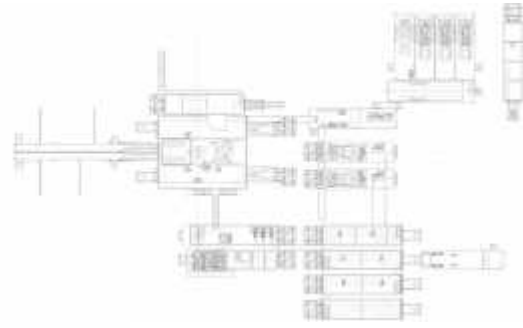
Type	250 Ton AC
Static Capacity (lbs.):	500,000
Horsepower Rating AC (HP):	400 (Continuous Duty)
Continuous Drilling Torque (ft-lb):	21,000
Make Up Torque (ft-lb):	32,000
Breakout Torque (ft-lb):	32,000
Max Operating Speed (RPM):	200
Quill ID (in):	2-1/2

ROTARY TABLE

Table Opening (in.):	27-1/2
Max. Static Load (lbs.):	500,000
Max. Speed (RPM):	300
Rotary Table Drive:	Hydraulic

IRON ROUGHNECK

Roughneck:	Type 80 Floorhand
Type:	Well-Center
Tubular Range (in.):	2-7/8 DP to 8-1/2 DC
Torque M/U & B/O (ft-lb):	65,000 & 80,000
Max Spinner Speed (RPM)	110



MUD SYSTEM

Triplex Pump Type:	Triplex, 1300 HP (2 ea.)
AC Power Rating (HP):	1500 (1 ea. 1500 Cont. Duty) Shale
Shaker Type (GPM):	Linear or Dual Motion (3 ea.)
D-Sand, D-Silt & D-Gasser:	2 x 10", 16 x 4", Vacuum Standpipe
Pressure (PSI):	5000
Total Mud System (bbl.):	1300

BOP EQUIPMENT

Annular (in. x PSI):	11 x 5000
Double Ram Gate (in. x PSI):	11 x 10,000
Single Ram Gate (in. x PSI):	11 x 10,000
BOP Closing Unit (Gal / Station):	260 / 10
Choke & Kill Manifold (in. x PSI):	3-1/16 x 10,000
Hyd. Adj. Choke (in. x PSI):	3-1/16 x 10,000 (2 ea. w/ console)
Manual Adj. Choke (in. x PSI):	3-1/16 x 10,000
Mud Gas Separator (in.):	48 x 144 with 6 in. Vent Line

POWER SUPPLY SYSTEM

Engine Type:	Caterpillar 3512 (3 ea.)
Horsepower Rating (HP @ RPM):	1477 @ 1200
Generator Type (Frame/Hz):	Caterpillar (847 / 60)
Generator Rating (KVA/PF/Volt):	1750 / 0.7 / 600
Generator Type (OPTION):	KATO 6P6-3300
Generator Rating (KVA/PF/Volt):	1950 / 0.7 / 600
Radiator Gen. Thermal Dynamics:	OPTION Model 4872 Split core
Emergency Engine/Genset:	Caterpillar C-15 (1 ea.)
Diesel-Natural Gas Blending:	OPTION

DRILLING INSTRUMENTATION

Drillers Controls:	PLC based with Ergonomic Driller's Station / Touch Screen / Joy Stick / CCTV Monitor & Video Capture / PVT Monitoring
Transfer Type:	AC – VFD – AC
System:	Control / Display / Data Logger/ Power Management

OTHER EQUIPMENT

Deadline Anchor Type (in.):	E- 1-1/4
Primary HPU (GPM@PSI):	160 @ 3000
Hyd. Catheads M/U & B/O (ft-lb):	65,000 & 80,000
Hyd. Drill Line Spooler (ft.):	7500 (1-1/4 in. wireline)
Air Supply System (CFM @ PSI):	229 @ 125 (screw type) 700 @ 40 (radial type)