



**AKITA**  
DRILLING

# RIG 523

1,500 hp Triple Mast Drilling Rig

## SUBSTRUCTURE

One Piece Step Down  
Floor Height: 16'-2" (4.93m)  
: 20'-2" (6.1m) with optional 4' pony sub  
Clear Height (beneath rotary beams): 13'-10" (4.22m)  
: 17'-10" (5.4m) w/opt 4' pony sub  
Rotary Capacity: 500,000 lbs (227 Metric Tons)  
Max Pipe Setback: 380,000 lbs (172 Metric Tons)

*Note: All floor heights above are based on the substructure sitting on 6" Mats and a 14" Skidding System Beams*

## MAST

142' (43.3m) telescoping lattice design  
Static Hook Load: 500,000 lbs (227 Metric Tons)  
Drill Line: 1-1/4"  
Racking Capacity: 22,500' of 4" DP (6,858m of 102mm DP)  
18,500' of 5" DP (5,639m of 127mm DP)

## DRAWWORKS

RIGMASTER E80AC 500,000 lbs (227 Metric Tons) w/ 8 lines  
Input Power: 1,500 hp AC Traction motor  
Main Brake: 1,500 hp AC traction motor (Dynamic)  
Aux Parking Brakes: Easton armature brake & drum / band brake system

## MUD PUMP #1

FB-1600 Type Triplex Pump Rated Power: 1,600 hp  
Stroke: 12" (305 mm)  
Input Power: (1) 1,500 hp AC traction motor  
Pressure Rating: 7,500 psi (51.7 MPa)

## MUD PUMP #2

FB-1600 Type Triplex Pump Rated Power: 1,600 hp  
Stroke: 12" (305 mm)  
Input Power: (1) 1,500 hp AC traction motor  
Pressure Rating: 7,500 psi (51.7 MPa)

## MUD TANKS

Two Tanks "Covered" w/ 1,000 bbls (159 m<sup>3</sup>) total capacity  
Shakers: (2x) MI Swaco Mongoose 4 panel dual-motion  
Mud Gas Separator: (x1) MI Swaco 48" (122mm) OD x 120" (305mm) tall  
Trip Tanks: 20 bbls (3.2 m<sup>3</sup>)

## SCALPING TANK (Optional)

Main Tank 280 bbls (33 m<sup>3</sup>)  
Trip Tank 80 bbls (9.5 m<sup>3</sup>) Capacity  
Shakers: (x2) MI Swaco Mongoose 4 panel dual motion

## BOP (NACE Standards)

CTI 11" (280mm) x 5,000 psi (34.5 MPa) WP Spherical Annular  
CTI 11" (280mm) x 5,000 psi (34.5 MPa) WP Double Ram  
CTI 11" (280mm) x 5,000 psi (34.5 MPa) WP Single Ram  
BOP Handling System

*Note: Alternate BOP Sizes are available*

## MANIFOLD

Pacific 3-1/8" x 2-1/16" 5,000 psi (34.5 MPa) c/w 1 Ea 2-9/16" manual chokes

## ACCUMULATOR

CTI 120 Gallons (454 Liters) 5 station, N2 Backup, (x2) pneumatic pumps and (x1) electric triplex pump

## TOP DRIVE

Tesco EX1 600 AC 350 Ton (317 Metric Tons) Max Speed: 220 rpm  
Continuous Drill Torque: 30,000 ft-lbs (40 kN-m)  
Max Torque (Make/Break): 45,000 ft-lbs (61 kN-m)  
600 hp AC induction motor & drive system w/ PLC  
Integral 250 ton 4 x 36" (910 mm) split block assembly

## IRON ROUGHNECK

NOV ST-80C Conn. Range: 4-3/4" (108 mm) to 8-1/2" (216 mm)  
Spin Speed: 75 RPM -nominal on 5" (127 mm) Drill Pipe  
Spin Torque: 1,750 ft-lbs (2,373 Nm)  
Maximum Make-Up Torque: 60,000 ft-lbs (81,500 Nm)  
Maximum Break-Out Torque: 80,000 ft-lbs (108,500 Nm)

## ROTARY TABLE

EDS 27-1/2" (700 mm) - 250 Ton with hydraulic drive for positioning tools only, Round Opening: 27-1/2" (70 cm)

## ROTARY MOUSEHOLE

90' (27.4 m) hydraulic assembly

## CATWALK MACHINE

Forum Energy Power Catwalk Tubular max length: 45 feet (13.7m)  
Max OD 20" (508 mm) Max Weight 10,000 lbs (4,536 kg)

## POWER SYSTEM

VFD, MCC, Woodward Generator Control (x3) Detroit Diesel MTU 16V2000, 1,350 BHP 1,800 RPM Engines, with Marathon 900 KVA Generators and (1x) Detroit Diesel Series 60: 685 BHP 1,800 RPM Engine with Marathon 600 KVA Generator

## TUBULARS

Drill Pipe: Supplied as needed, *per availability*  
Drill Collars and Heavy Weight: Supplied as needed, *per availability*

## MOVING SYSTEM

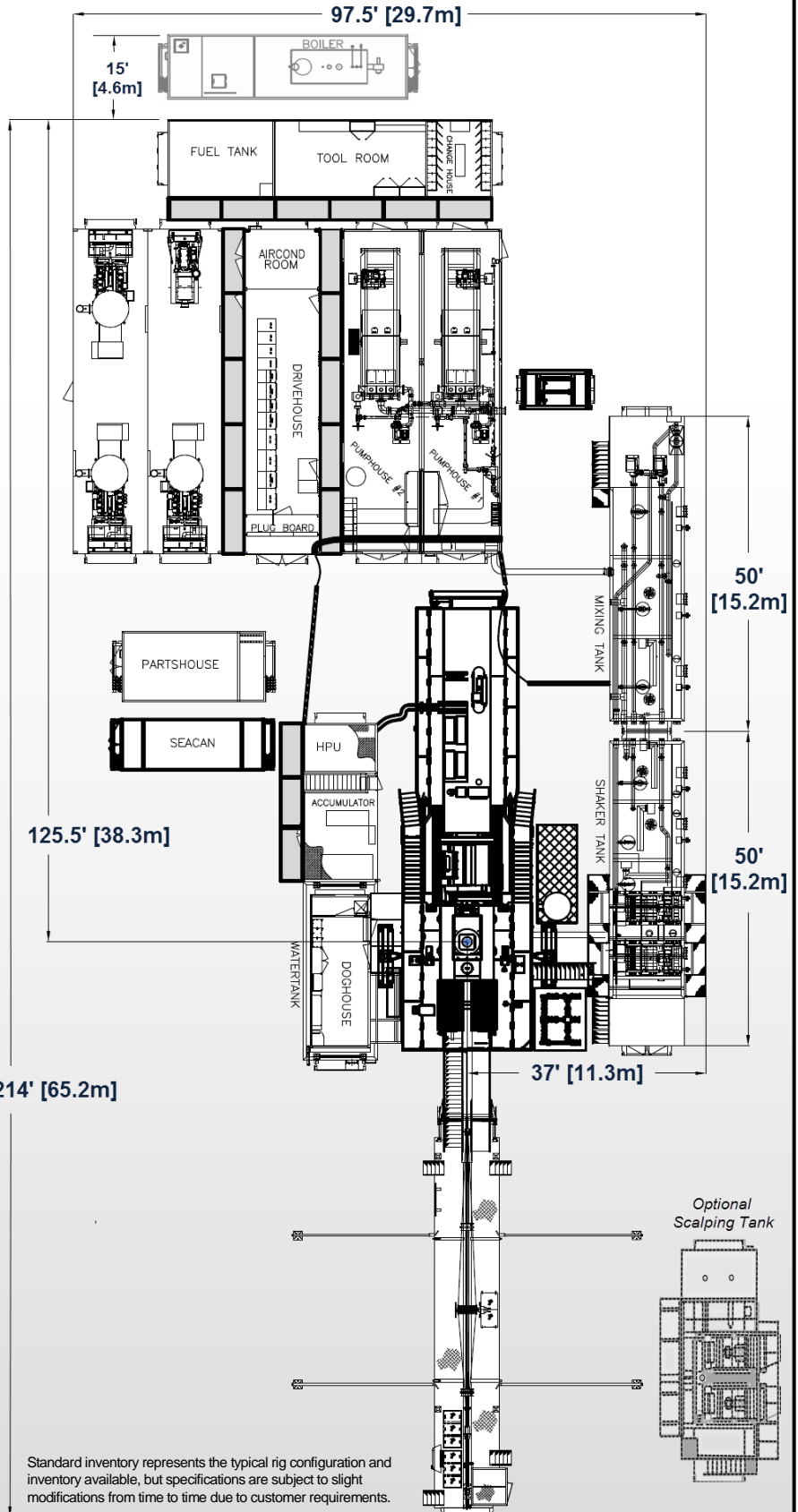
Hydraulic skidding system with rams and integrated skid beams.  
Dual zipper (x2) style umbilical [220 ft (67 m) displacement] connection for hydraulic and electrical supply.

## Miscellaneous

Water Tank: 400 bbls (47.7 m<sup>3</sup>) Fuel Tank: 17,000 Gals (64,352 Liters)  
Screw Compressor (x1) Boiler and Full Winterization

## TOOL / STORAGE / CAMP

Parts Storage Room and Tool House Room  
Rig Manager Trailer: One 14' x 44' (4.3m x 13.4m) Skid mounted



Standard inventory represents the typical rig configuration and inventory available, but specifications are subject to slight modifications from time to time due to customer requirements.

All ratings quoted herein are manufacture specifications. AKITA's normal operating parameters are 90% of manufactures mast rating and 80% of mud pump manufacturer pressure rating. Operation of rig equipment beyond these parameters requires approval from AKITA field office management.