



Hybrid PLUG & ABANDONMENT + HWO UNIT

SPECIFICATION



RIG SPECIFICATION

With its modular designed and lighter load weight and footprint, Hybrid Plug & Abandonment Workover standalone unit mitigates the challenges that stem from limited space, excess well slot, pressure and remote, hard to reach locations.

KEY FEATURES:

- Year Built : 2010
- Year Refurbish & Upgraded : 2021
- Max. 460,000 lbs pulling capacity
- Intervention depth deep to 9,000 feet
- Self-contained for easy both land and sea transport
- Through bore up to 32 inches
- Handles 2-3/8" to 30" O.D. pipe, casing and conductor
- 5,000 to 22,000 ft-lb range of torque capabilities
- Self-racking, skidding, pipe laydown/ handling and Quick Jack features
- BOP pneumatic trolley system capable of sustain up to 44,000 lbs
- Quick pipe working with pneumatic Tong trolley system
- Max. 6 Tons Swing able Gin Pole (2.3 Tons at Well center)

INNOVATION TECHNOLOGY

- Quick stack tower allows for a safer and easier way to enter and exit the work basket
- Rig convertible to be Hydraulic Work Over (HWU) operation with less equipment interchangeable.
- Faster Rig up and Rig down with stackable unit designed.
- Guidewire not required.
- Self-erecting swingable Gin pole from horizontally by hydraulic piston



Vertical Pipe racking 2 racks x 160 Joints



Self-Erecting Swingable Gin Pole

- Complete unit assembled and tested for customer acceptance
- Construction complies with DNV 2.7.1, EN 12079, ABSC design calculations MODU, AISC, AWS
- All lifting eyes to be load tested to a minimum of 1.5 times the eye's rated safe working load.
- The unit and BOP stack will be configured in a modular arrangement.
- There is no need for guy wires due to the modular construction.
- There is no need for outrigger arms due to the modular construction.
- The unit is run on environmentally friendly oil.
- Each module is connected by fast lock connectors.
- The unit is sized such that it can pull conductors. (i.e. 500,000k pull)
- The platform cranes can rig this unit up without having to remove each piece of the frame.
- 320 Joint of 3 1/2" drill pipe can be racked vertically

Specification	Details
Stroke Jack	
pull capacity	460,000 lbs
Snub capacity	230,000 lbs
Stroke cylinders	Four 7 in x 10 ft
Max. Rotary with manual	20 000 ft/lb
lock Rotational speed	Zero (0) to 80 rpm bi-directional
Control system	HUSCO Split Spool with Regenerative
Stationary Slips	Capability Built in
Tong Pole	2.5 ton SWL, c/w Hydraulic actuator
Through bore	32 in, 12in through rotary
Flange size and rating	13 5/8in, 5,000 psi
Workbasket	
Working area	10 ft x 10 ft x 45 1/2 in
Operator panel to include	Dual face weight indicator Rig pressure gauge Five bank slip valve Reducing valve for slips Jack direction & speed Fuel kill Air kill , Air throttle
BOP control panel to include	BOP operator pressure gauge Counterbalance pressure gauge (left & right) Two (2) each counterbalance control valves Two (2) bank equalize & bleed off Two (2) bank winch & auxiliary control
Rotary	20 000 ft/lb max torque in low Directional valve
'V' Door	18" c/w rollers 30' x 8" Mouse Hole

Swingable Ginpole package
Single winch with Hydraulic motors
3/8 in cable, 250 ft per drum Capacity per drum 2000 lb Timken ball bearing swivels Speed 1 meter per second Hydraulically Actuated Failsafe Brake
Two section steel tube design, TOP 50' above basket handrail
Hydraulic rise & lower winch
Heavy duty construction 8,000 lb SWL, 6 Tons Test Load
Left and right swing feature for pipe laying down or storage in vertical pipe rack
Horizontally assemble and self erecting by hydraulic piston
Built-in standpipe 2" 1502 Weco connections
Tong Arm
Rating 2.5 ton
Tong arm set at 14 feet over work basket
Hydraulic raise & lower
Hoses & Hose Basket
Skid mounted with lift eyes
35ft from power pack to jack and workbasket
System hoses rated for 3,600psi
Snap-tite brand gds on all hoses (unless permanently attached)
Basket square tube construction with four point lift eyes
Power pack (X2) Zone 2 Operations
Skid mounted with protection frame
Four point lift eye
Forklift tubes and access ladder
Detroit D60 engine rated for 500c ambient air temperature
Pumps for 397-gpm hydraulic circuit with Denison vane pumps on 4 pump gearbox
Main system equipped with horse power matching unloader system
Hydraulic reservoir 500-gallon capacity c/w filter, strainers, temperature gauge, sight glasses, severe duty breather
Heat exchanger system oil to water with external bypass sized to cool hydraulic oil within normal operating hydraulic oil temperature at 50 deg c ambient air temperature
Accumulator system: two (2) each, 10 gallon nitrogen charged accumulators for BOP emergency backup
Remote controls: engine throttle, fuel kill, air intake over speed, emergency kill Air compressor: 12 cfm with 30 gallon reservoir capacity Air starter with remote supply isolation valve and lubricator

Power pack (X2) Zone 2 Operations(Continue)	
Exhaust system complete with spark arrestors	
Denison relief and unloading valves	
Vent/load control valves for selective venting (dump overloading valves) of all pumps	
Pressure gauges	Main system : 2 ea (0-3,000 psi) Counterbalance : 2 ea (0-3,000 psi) Main relief : 1 ea (0-5,000 psi) Bop system : 1 ea (0-5,000 psi) Auxiliary system : 2 ea (0-5,000 psi) Tong system : 1 ea (0-5,000 psi)
Fuel tank	
500 gallon capacity	
Skid mounted with lift eyes	
Tool Container with Zoned lighting	
Dimensions: 8ft (h) x 12ft (l) x 8ft (w)	
Four point lift eyes c/w certified sling	
Work table with vise	
Complete set of spares, tools and consumables	
Accumulator Bank	
Skid mounted with four point lift eyes	
40 gallon capacity	
20 ft connection hoses	
Snubbing bowl model 460/500	
For pipe sizes 3-1/2 in to 26 in	
Mounting studs and nuts per bowl	
Rated for 500,000 lbs	
Recommended quantity five (5) each (operating – 4 each / spare – 1 each) 3 in bore pipe centralizer/guide plates for each slip bowl Four (4) snubbing bowl adapter 7.63 in x 5.50 in set Four (4) snubbing bowl adapter 5.50 in x 3.50 in set	
Work Window	
8 ft inside clearance	
500,000 lbs capacity	
Bolt pattern for stripper bowl and two (2) snubbing bowls	
Two (2) piece guide tube with upper and lower bolt flanges Slip Window	

6 ft inside clearance
Bolt pattern for stripper bowl and two snubbing bowls
Hydraulically actuated slides to move snubbing bowls in and out for easy access
Lower jack workbasket
10 ft x 10 ft x 45- 1/2 ft u-shaped construction 3 ft
3 ft landing area for ladder system
Window workbasket
10 ft x 10 ft x 45-1/2 ft u-shaped construction
3 ft x 3 ft landing area for ladder system
Skidding Substructure (Upper)
Dimensions 10' x 10'
Racking board capacity 2 x 160 joint 3 1/2" drill pipe
Come with BOP Trolley
2 ea x 20 Tons chain hoist for hanging BOP
BOP skid along with substructure
3' x 3' ladder landing area
Skidding Substructure (Lower) Movement X,Y
axis including hydraulic clamps and jacks Beam
Span 55'
Skidding stroke 16"
Adjustable clamps 650mm – 850mm cap beam widths



RIG SPECIFICATION

