

***Hybrid PLUG & ABANDONMENT + HWO UNIT  
SPECIFICATIONS***



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:**

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- Year Built : 2019
- 500,000 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

## **INNOVATION TECHNOLOGY**

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- Hydraulic pipe laydown system for quick pipe stack, laydown and handling tubular with most safe pipe laydown area and fast.
- 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.

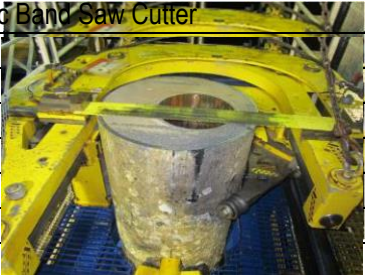



Specification	Details
<b>HYDRAULIC CASING JACK</b>	
Pulling capacity (lb)	500,000 lb. (4-legs mode)
Jack stroke (ft)	10 feet
Jack control system	4 (Four) legs with hydraulic selective functions HUSCO directional control with regenerative
Work window	6' x 500,000 lb.
Traveling Slip	500,000 lb. traveling plate capacity
Rotary torque (ft-lb)	5,000 to 22,000*
Rotary speed (rpm)	Zero (0) up to 80 rpm with bi-directional
Tubular handling range (in)	2-3/8" to 30"
Through bore (in)	32"
Through bore slips (in)	14"
<b>RIG STRUCTURE</b>	
Standard design	API RP4F
Work Basket	<ul style="list-style-type: none"> <li>▪ 700 cm x 1010 cm x 680 cm (WxLxH)</li> <li>▪ Tong trolley retractable with safety limit switch</li> <li>▪ Cold cutting trolley</li> <li>▪ LED lighting with DROP protection</li> <li>▪ Emergency lighting system</li> <li>▪ Anti-slip stairways c/w handrails</li> <li>▪ Fire extinguisher class "ABC"</li> <li>▪ Pipe Lack back to accommodate 6,000 feet of pipe</li> <li>▪ Integrated hydraulic control panel with Interlock</li> <li>▪ BOP remote control panel</li> <li>▪ 5 Tons Swingable Jib Crane</li> </ul>
Sub Structure	<ul style="list-style-type: none"> <li>▪ 614 cm x 765 cm x 460 cm (WxLxH)</li> <li>▪ Stationary Spider bowl with max. 700,000 lbs</li> <li>▪ 32" Through bore</li> </ul>
<b>CONTROL MODULE</b>	
Integrated Hydraulic Control Panel	<ul style="list-style-type: none"> <li>▪ Jack &amp; Rotary directional control valve</li> <li>▪ Spider bowl control valve</li> <li>▪ RPM control valve</li> <li>▪ Tong remote control</li> <li>▪ Weight indicator</li> <li>▪ Rotary torque gauge</li> <li>▪ Hydraulic system pressure gauge</li> <li>▪ Pumping pressure gauge</li> <li>▪ Cold Cutting remote control</li> <li>▪ Power Pack throttle control</li> <li>▪ Power Pack Emergency Shut Down control</li> </ul>
	
Remote BOP Control Panel	<ul style="list-style-type: none"> <li>▪ Manifold pressure gauge</li> <li>▪ Annular system pressure gauge</li> </ul>

	<ul style="list-style-type: none"> <li>▪ System pressure gauge</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Pneumatic actuator handle</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Annular BOP control</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Pipe Ram control</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Kill line HCR valve control</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Choke line HCR valve control</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Low air pressure alarm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Low hydraulic pressure alarm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Remote manifold pressure adjustment</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Remote Annular pressure adjustment</li> </ul>
Remote Skidding Remote Control Panel	<ul style="list-style-type: none"> <li>▪ Remote X-Y directional control</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Separate control AUX and Main skid</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Safety interlock system</li> </ul>
<b>ROTARY TABLE</b>	
Through bore (I.D)	<ul style="list-style-type: none"> <li>▪ 11 inch with max torque 22,000 ft.lbs in low RPM</li> </ul>
Through bore (I.D)	<ul style="list-style-type: none"> <li>▪ 14 inch with max torque 12,000 ft.lbs in low RPM</li> </ul>
Rotation speed (RPM)	<ul style="list-style-type: none"> <li>▪ 80/152 rpm</li> </ul>
Maximum compressive capacity	<ul style="list-style-type: none"> <li>▪ 170,000 lbs</li> </ul>
Cooling system	<ul style="list-style-type: none"> <li>▪ Hydraulic inter cooler</li> </ul>
Max working pressure (PSI)	<ul style="list-style-type: none"> <li>▪ 3,000 psi</li> </ul>
Driven mechanism	<ul style="list-style-type: none"> <li>▪ Chain driven system with maintenance less</li> </ul>
<b>HYDRAULIC PIPE LAYDOWN SYSTEM</b>	
Loading capacity	<ul style="list-style-type: none"> <li>▪ 5,000 kg</li> </ul>
Design method	<ul style="list-style-type: none"> <li>▪ Modular skid along with rig structure</li> </ul>
Pipe angle	<ul style="list-style-type: none"> <li>▪ 0 to 90 degrees by horizontal and vertical</li> </ul>
Maximum pipe carry length	<ul style="list-style-type: none"> <li>▪ 45-50 feet (13-15 m.)</li> </ul>
Maximum pipe carry size (O.D)	<ul style="list-style-type: none"> <li>▪ Up to 30 inch</li> </ul>
Drops protection	<ul style="list-style-type: none"> <li>▪ Hydraulic claws system with hydraulic lock pins</li> </ul>
Operating pressure	<ul style="list-style-type: none"> <li>▪ 3,000 psi</li> </ul>
Boom up speed	<ul style="list-style-type: none"> <li>▪ 12-15 second @ 110 GPM</li> </ul>
Boom down speed	<ul style="list-style-type: none"> <li>▪ 12-15 second @ 92 GPM</li> </ul>
<b>POWER TONG</b>	
5 1/2" MCCOY	<ul style="list-style-type: none"> <li>▪ Remotely operated</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Mounted on travelling trolley on work basket</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Pneumatic trolley control by Jack operator</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Not necessary tong pole and arm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Safety limit switch to prevent any engaging</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Tubular handling range 2-1/16" to 5.5"</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Maximum torque 18,000 ft.lb</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Equipped with load cell and torque gauge</li> </ul>
14" CLINCHER	<ul style="list-style-type: none"> <li>▪ Remotely operated</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Mounted on travelling trolley on work basket</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Pneumatic trolley control by Jack operator</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Not necessary tong pole and arm</li> </ul>

# RIG SPECIFICATION



	<ul style="list-style-type: none"> <li>▪ Safety limit switch to prevent any engaging</li> <li>▪ Tubular handling range 4-1/2" to 14"</li> <li>▪ Maximum torque 50,000 ft.lb</li> <li>▪ Equipped with load cell and torque gauge</li> </ul>
<b>COLD CUTTING</b>	
<p>Hydraulic Band Saw Cutter</p> 	<ul style="list-style-type: none"> <li>▪ Pipe cutting range 2-3/8" to 32" O.D.</li> <li>▪ Operating pressure 1,500 psi</li> <li>▪ Automatic hydraulic clamp system</li> <li>▪ Reciprocating cutting with automatic water coolant</li> <li>▪ Auto/Manual feed</li> <li>▪ Remote control operation</li> <li>▪ Handless operation</li> </ul>
<p>Hydraulic Dual Pin Cutter</p> 	<ul style="list-style-type: none"> <li>▪ Min./Max. Bore hole size 4"/6"</li> <li>▪ Swing gate quick clamping range for 16" to 32" O.D.</li> <li>▪ Drilling holes in single or multiple grouted casing</li> <li>▪ Automatic water coolant feeding</li> <li>▪ Auto/Manual feed</li> <li>▪ Remote control operation</li> <li>▪ Handless drill bit replacement with hydraulic break out</li> <li>▪ Operating pressure 1,050 psi</li> </ul>
<b>ZONE II DIESEL DRIVEN POWER PACK</b>	
<ul style="list-style-type: none"> <li>▪ DETROIT Engine Hydraulic Power, rated for 500/600 Hp @ 2,500rpm</li> <li>▪ PYROBAN system for hazardous area rated to temperature class T3, 200°C</li> <li>▪ Separated into 2 skids, Engine and Hydraulic, to minimize weight per unit.</li> <li>▪ Skid mounted with protection frame and spill tray underneath</li> <li>▪ Automatic shutdown for high exhaust temperature 200°C</li> <li>▪ Automatic shutdown for high coolant temperature 100°C</li> <li>▪ Engine over speed safety switch</li> <li>▪ Low lubricating oil shutdown</li> <li>▪ Automatic fuel shut off for any automatic shutdown</li> <li>▪ Fuel consumption approx. 91 Liters/hour</li> <li>▪ Max hydraulic pressure 4,000 psi/ 2,800 rpm</li> <li>▪ 500 Liters Fuel tank</li> <li>▪ Noise isolation and reduction system</li> <li>▪ ESD shutdown</li> </ul>	
<b>ADDITIONAL EQUIPMENT (IF REQUIRED)</b>	
<ul style="list-style-type: none"> <li>▪ 11" or 13-5/8" 5000 psi BOPE</li> <li>▪ Diesel Generator Zone II</li> <li>▪ Diesel Compressor Zone II</li> <li>▪ Downhole Fishing Equipment</li> <li>▪ Tubular Handling Equipment</li> <li>▪ Choke and Pumping Manifold</li> <li>▪ Poor Boy Degasser/ Gas Buster</li> <li>▪ PVT and Flow Show Monitoring System</li> </ul>	



