



XDR 110

OIL & GAS

RAPID RESPONSE WORKOVER RIG



The XDR 110 is an innovative, mid range model of XDR's Well Servicing fleet. Capable of lifting 110,000 lbs, the XDR 110 has been engineered to take on the toughest well servicing projects. Equipped with XDR's revolutionary **Power Drill**, the XDR 110 can perform well flushing, workover, completions and snubbing, resulting in **higher productivity at a reduced cost**. The rig is also configured Power Swivel ready.

Every XDR 110 is compatible with vertical wellhead configurations and offers **ease of access to site**, rapid deployment through **fast wellsite setup times** and **safer operations** with reduced crew numbers through **innovative design** and embedded control features. This rig package requires four crew to setup and operate.



1 RIG, 3 CAPABILITIES

- Workover
- Completions
- Snubbing



RAPID RESPONSE

- In gauge for Road Regulations
- 30 minute well set up
- Increased profitability



ENGINEERED FOR SAFETY

- No guy lines
- Automated processes
- Less human intervention

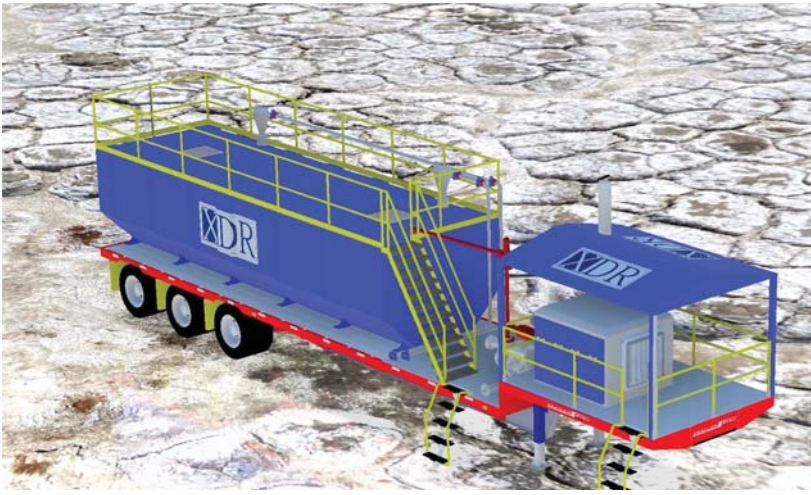
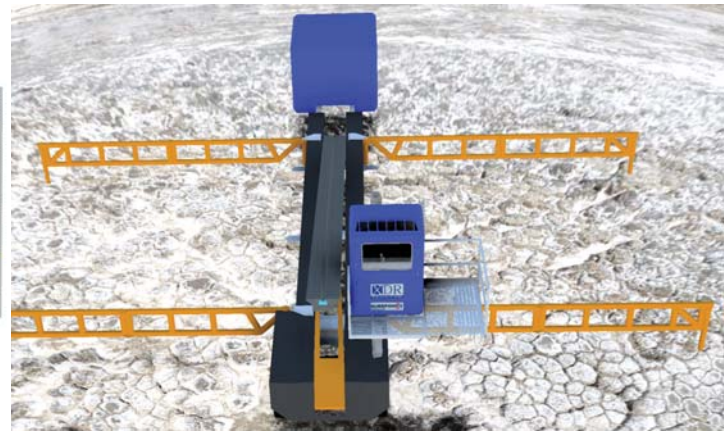
XDR

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Part of our philosophy is to package our clients on-site requirements into as few pieces of plant as possible. The XDR rig carries a free-standing cantilevered work deck, a variable height driller's platform with control panel and walkway all hydraulically actuated. The recently factory commissioned Power Drill and recently designed Hands Free Tripping System will integrate with the rig operating system.



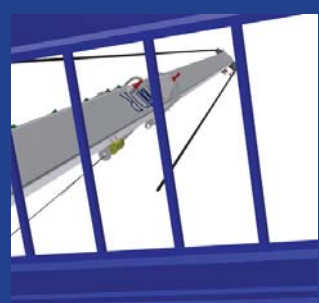
The Pipe Handler provides for BOP travelling storage and permanent location and operation of the Closing Unit on the goose neck part of the trailer. A recent innovation to the XDR package is the option of providing a Dog House, outside Zone 2, on the pipe handler which gives excellent sight to and access to the drill floor.

Our Mud Tank trailers are fitted with a 30,000 litre tank, mud pump, high pressure manifold and diesel engine in one package. The Mud System may be controlled from the Mud Pump trailer and/or the Dog House.

Additional compressors, generators and ancilliary equipments are all packaged according to our clients requirements.



Our on-board air conditioned Dog House allows for clear site of the Work Platform, Mast and Crown





XDR 110 System Package features and benefits over conventional workover rigs:

The XDR 110 Workover Rig:

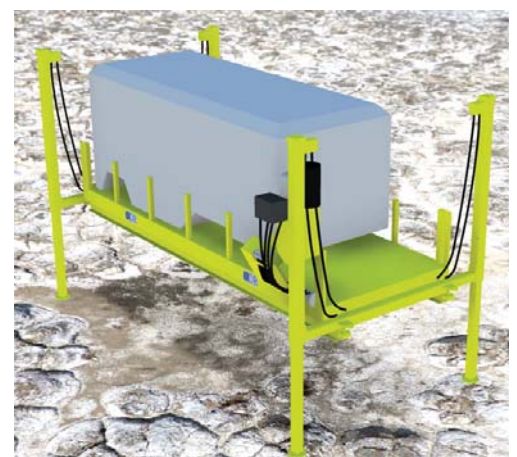
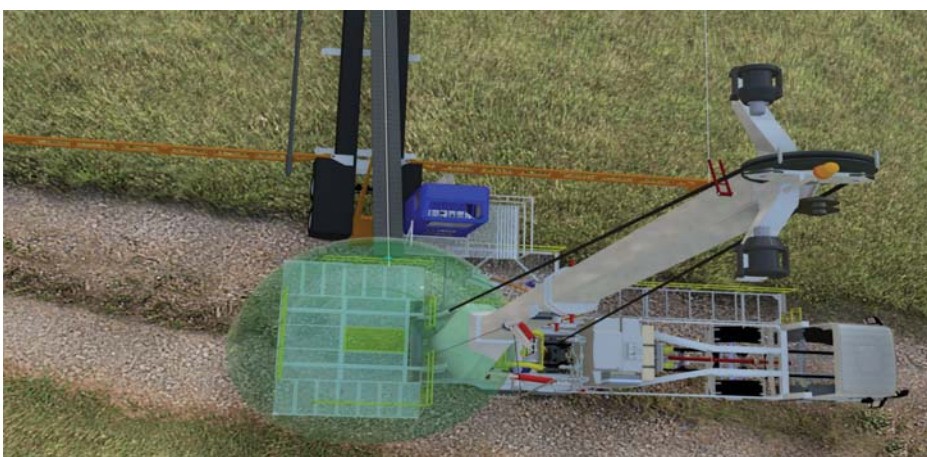
- o 30 Minute fully setup for the rig and less than 3 hours set up for the total package including the rig.
- o Customizable to clients requirements.
- o In gauge for NHVR requirements.
- o Settable PLC controlled upper and lower winch stops, with auto ramping to allow for maximum winch speed.
- o Tripping times greatly reduced, 100 joints/hr has recently been achieved by the XDR 75 rig.
- o Integrated rig, catwalk, mud system.
- o Reduced crew numbers. Rig set-up requires three people and workover operations require 4 people for continuous operations.
- o Lower maintenance due to engineering design.
- o Compliant to Standards as listed on DRI's official quote.
- o In country training, parts and service.
- o 1 Rig with 4 capabilities, flushby, completions, workover, snubbing.
- o Onboard sandline winch, no need for additional plant.
- o 2 x 3,000kg Tugger winches at the top of the mast, which are also used as the Torsion reins for Power Swivel use.
- o Jib winch, 3,000kg capacity, at top of base mast.
- o Cantilever workfloor, hydraulically operated from 0.8m for ease of setup with hand rails.
- o Engineered For Safety - no travelling block, redundancy on winch control, auto reduction on winch lift capacity depending on mast angle, conforming to Australian and API Standards.

The XDR Pipe Handler

- o Capable of handling rod from 5/8" up to 4.5" tubing.
- o Capable of storing rod and pipe in carousels for ease of site movement.
- o Capable of tripping in or out 100 joints per hour.
- o BOP Closing Unit Permanently stored on trailer step deck.
- o BOP and Pressure stump stored onboard Pipe Handler for transport
- o The rigs A/C Dog House transported and operated from the side of the Pipe Handler.

The XDR Mud System

- o Fully controllable from the Mud Trailer or the rigs control panel
- o Automated flushing manifold on board the XDR rig. Enables reverse circulation with the flip of a switch on the main operators panel. Hydraulically operated choke allows choke control from the dog house.



Technical Specifications for the XDR 110 Workover Rig:

Rig and Deck Dimensions	Packed up rig dimensions: 12.5 m long, 2.5 m wide, 4.3 m high. Fully fabricated plate deck/ four levelling jacks, rear jacks outrigger style, working window of 16m
Mast	Telescopic box section Mast with 4 locking pins; crown sheave height above ground 22 metres. Variable operating mast angle gives 500mm mast range at full load
Hook Load	Operating hook load of 50,000 Kg (110,000 lbs.). The Pick-up hook load mast at 10 degrees past vertical is 5,000 Kg (11,023 lbs.). Overpull to 120,000lbs
Cantilever Work Platform	Variable from ground 1.2 to 4.2 metres - Cantilevered style work platform hydraulically operated lift & tilt and wings and provided with two sets of sliding stairs.
Operators Platform	Variable from 2.1 to 3.5 metres. Hydraulic Walkway to Operators side of rig including stand-up handrails. An alternative option to have an A/C dog box on the pipe handler that is elevated to the height of the work deck with access to the work deck.
Winches	50,000 Kg (110,000 lbs.) variable speed hydraulic draw works (single line pull) 40mm rope, with overpull of 120,000 lbs. Sandline Winch 1,000 metre (8mm rope) - swabbing, net payload at 1,000 metres, 1,200 Kg (2,640 lbs). 2 x 2,000kg Tugger Winches Jib Winch 3,000 Kg (6,612 lb.) located at the top of mast outer boom 11 metres above ground
Power Unit	Mercedes Benz Actross 476 HP or 600 HP diesel engine provides the power for the Rig via the PTO.
Main Hydraulic Pumps	The hydraulic pumps are electro-hydraulic displacement controlled. "S" configuration with extra boost flow capabilities to remove heat load, or equivalent.
Fluid Pumps	5000 psi test pump. Hydraulically Driven.
Deck Water Manifolds & Water Tank	Option to have 3000 psi manifold, 60mm x 5mm, 4 hydraulically actuated ball valves to divert flow through choke & pipe/annulus. 1502 hammer union connections for connection to well hosing. 2,000 Litres water onboard. Tank charge pump for off-board water supply, 4" intake,
Mast Stand Pipe	Up mast 5,000 psi stand pipe from horsehead at top of mast outer boom to deck connection hammer union.
Control System	PLC - Digital display monitors pump flow, core functions and prevents winch overwind. All rig functions and gauges including pressure testing. All engine controls - Shut down in panel/telescopic mast locked indicator. 2 Emergency stops on rig, including remote emergency stop located at muster point. Emergency rig saver with remote control.
Standards	During the design and quotation stage for our products we will closely with QGC to understand your specific build standards and requirements. An indicative list is API 4F, API 9B, API 8C, AS3000, AS 1418, AS 4024
Safety Features	Rig auto level, crown saver, auto lift weight capability reduction dependant on the mast angle, over lift capacity control, redundancy on PLC controls, auto shut out of setup functions when in winching mode.

Rig Carrier

The rig carrier for the XDR 110 is the Mercedes Benz Actros 4148 or 4160. The Actros was chosen due to a number of unique specifications:

1. The Actros engine produces 476 HP or 600 HP and this is channeled through the PTO providing 426 HP or 529 HP to power all operations on the XDR 110.
2. The thermo cooling pack allows the rig to operate stationary at full power, in 50 degree celsius ambient temperature.
3. The Actros' chassis is custom-built by Mercedes for the XDR 110, this allows the rig to operate without the need for transport permits across Australia.

These technical specifications are based on theoretical engineering calculations. Actual capacity will depend on specific calculations and materials. Exploration Drill Rigs Pty Ltd reserves the right to change or make modification to designs and specifications without prior notice or obligation.



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