



30,000 LITRES • 5,000 PSI • PLC CONTROLLED

MUD SYSTEM • TRAILER-MOUNTED

XDR 3060

Mud trailer — mixing, storage and high-pressure pumping on one road-legal chassis, run from the rig floor.

146 BBL

MAIN TANK — 23,250 L

42 BBL

PILL TANK — 6,750 L

20

STORED MUD RECIPES

In gauge

ROAD TRANSPORT, NO PERMITS

EXPLORATION DRILL RIGS PTY LTD
REDBANK, QUEENSLAND, AUSTRALIA

TRAILER SPECIFICATION
XDR.COM.AU

THE TRAILER

The whole mud system, *on one chassis.*

The XDR 3060 carries mixing, storage and high-pressure pumping on a single RVCS compliant trailer that travels **in gauge** — no permits, no escorts. A Volvo diesel drives a Jerih 600S triplex through an Allison transmission, and the whole system is **PLC controlled**, with every valve reporting its position to the screen.

30,000 l Total tank capacity — 188 BBL across two tanks	534 hp Volvo TAD1345VE at 2,100 rpm	5,000 psi Choke manifold working pressure, API 6A	30,000 kg GVM on twin Hendrickson axles
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STANDARDS, COMPLIANCE AND SCOPE

ROAD COMPLIANCE

RVCS compliant chassis with ADR compliant lighting and marking. In gauge for road transport at 14,060 × 2,495 × 4,300 mm, GVM 30,000 kg.

PRESSURE EQUIPMENT

Choke manifold valves API 6A certified, 2" at 5,000 psi working pressure. High pressure manifold built with 1502 fittings.

SCOPE OF SUPPLY

Any equipment not clearly specified in this document is not included in XDR's scope of supply.

PLATFORMS AND ACCESS

Tank top platform, platforms, handrails and stairs compliant with AS 1657.

HAZARDOUS AREA

IECEx rated ultrasonic tank level sensors. Spark arresting muffler and fibreglass lagging on all hot exhaust surfaces.

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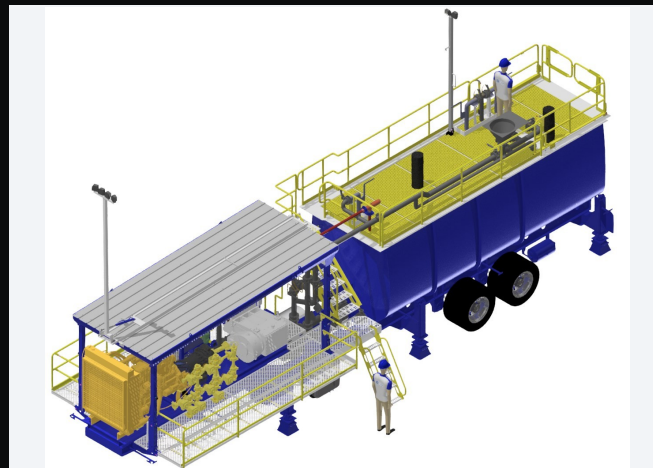
THE UNIT

Set up on six steadies. *Access on every side.*

Six manual hydraulic steadies with mechanical locks hold the trailer with the tanks full. Hydraulically operated platforms fold out on all sides of the engine and mud pump, so the whole plant stays reachable during operation and maintenance.



ENGINE ENCLOSURE AND DEPLOYED MAINTENANCE PLATFORM



GENERAL ARRANGEMENT – TANKS, HOPPER AND POWER END

01 / TRAILER AND POWER

EQUIPMENT	DESCRIPTION & SPECIFICATION – BASE PACKAGE	NOTES
01 Trailer	— Overall transport dimensions 14,060 mm (L) × 2,495 mm (W) × 4,300 mm (H) — GVM 30,000 kg — Custom designed and manufactured RVCS compliant chassis, complete with ADR compliant lighting and marking systems — Twin Hendrickson axles with Wabco EBS braking — SAF Holland king pin and landing legs	
02 Diesel engine	— One new Volvo TAD1345VE engine — 534 hp at 2,100 rpm — Front radiator mounted cooling system with pressure relief valve and mesh guard, as designed by the Volvo supplier — Air charger and air inlet shutoff valve — High ambient radiator assembly with fan, guard and fan control — Complete gauge panel with gauges, switches and sensors via the HMI screen — Electric starting; engine-mounted transmission oil cooler — Two 8D batteries with cables and connections in an enclosure, with electrical lockout — 24 V brushless alternator — Engine kill valve at the operator's control panel, connected to a positive air shutoff valve on the engine air intake	
03 Transmission	— One Allison Model 4700 OFS or equivalent — Built-in torque converter with single output shaft — Valve body configured to dual-mode power shift — Transmission control module (TCM) — PLC controlled gear changes and engine rpm — Engine, transmission and triplex pump mounted on a torque tube structure on the trailer gooseneck	
04 Exhaust and engine mounting	— Spark arresting muffler installed in the engine enclosure — Exhaust manifold, piping, turbocharger and spark arresting muffler covered with high-grade fibreglass to eliminate potential vapour ignitions while operating — Exhaust exits vertically through the roof with a rain cap — Engine and transmission mounted in an enclosure for safe, quiet operation, with noise reducing materials — Air flow baffles installed to ensure adequate engine cooling — 490 l fuel tank incorporated into the support structure	

02 / PUMPING

EQUIPMENT	DESCRIPTION & SPECIFICATION – BASE PACKAGE	NOTES
05 Triplex pump	— Jereh 600S horizontal triplex plunger pump with 4.0" plungers — Suction mounted pulsation damper, as per the manufacturer's instructions	
06 Charge pumps	— Two 11 kW 415 V charge pumps — Discharge manifold configured for 100% redundancy if one centrifugal pump fails — One pump charges while the other mixes; functions swap by changing the valve sequence	
07 Transfer / mix pump	— One 11 kW 415 V transfer and mixing pump	
08 High pressure manifold	— Manufactured using 1502 fittings — Swing type check valve — Digital pressure gauge and sensor — Hydac type pulsation damper — Oteco shear type pressure relief valve	
09 Suction piping	— 6" suction piping to the onboard charge and transfer / mix pumps — 4" outlets on both tanks for external pumps — Y-strainer in the intake line to the triplex — 3" intake on the 4" line to the charge pump, to allow remote pumping to the triplex — Blanking caps on all suction and drain points, fitted with secondary retention	

03 / VALVES AND TANKS

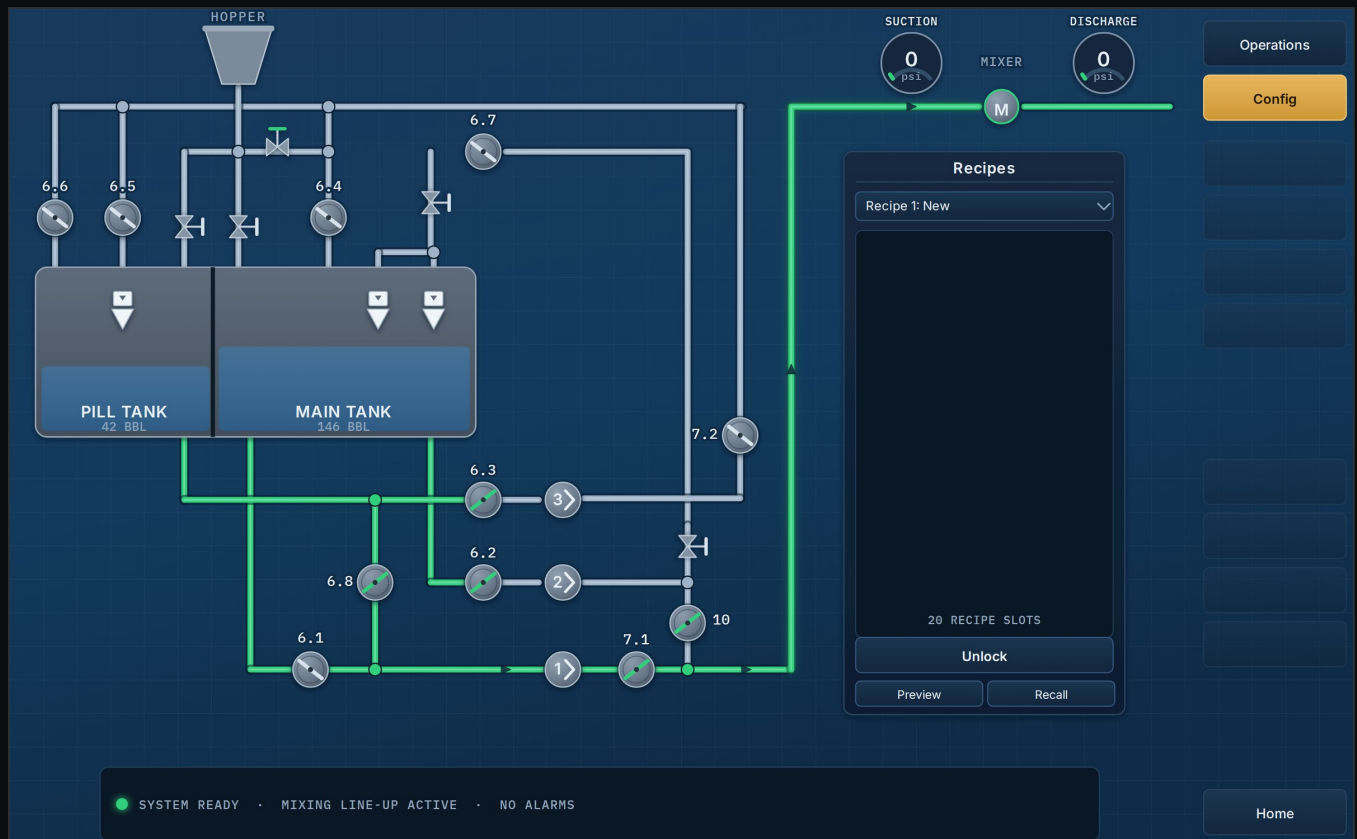
EQUIPMENT	DESCRIPTION & SPECIFICATION – BASE PACKAGE	NOTES
10 Pneumatic valves	— Full PLC control of operational valves using pneumatic actuators — Valve position feedback with PLC display of valve position — Pre-set valve positions to enable quick operational changes and minimise errors — Full manual control of each valve for complete flexibility	
11 Choke manifold	— Frame mounted, eight valves at 2" × 5,000 psi working pressure — Manually operated slab gate, API 6A certified, bi-directional — One choke valve — 5 tonne rated whip checks at each hose connection point	
12 Mud tanks	— Tank dimensions 6 m (L) × 2.4 m (W) × 2.5 m (H) — All internal surfaces polymer lined — Main tank 23,250 l (146 BBL) — two 6" suction outlets, two 4" external suction / fill outlets, one 4" drain and cleaning port — Pill tank 6,750 l (42 BBL) — one 6" suction outlet, two 4" external suction / fill outlets, one 4" drain and cleaning port — Permanent tank top platform within transport height, compliant with AS 1657 — Non-slip grating to prevent water build-up and reduce slip risk — Pallet storage on the rear tank floor with direct access to the mixing hopper — Davit arm 3" sockets in the tank platform for safe confined space access — Ladder in each tank	
13 Mud tank equipment	— Two jet mud guns in the main tank; one in the pill tank — Venturi type mud mixer and hopper — Two IECEx rated ultrasonic or equivalent tank level sensors, one per tank	
14 Well returns	— Well pressure relief gate valve and piping to tank — 1502 connection to tank — Manual valves to direct flow to either the main tank or the pill tank	

04 / CONTROL AND SITE SYSTEMS

EQUIPMENT	DESCRIPTION & SPECIFICATION – BASE PACKAGE	NOTES
15 Control system	— Full PLC control of the mud pump system — Operator setpoints for flow and pressure requirements — Digital readouts for charge pressure, discharge pressure and discharge flow rate — Digital readouts for main tank and pill tank levels — Electronic stroke counter	
16 Hydraulic system	— One 24 V electric-hydraulic power pack for setup and pack-up — Six manual hydraulic steadies with mechanical locking devices, to keep the trailer safe with the tank full — Two manually actuated hydraulic platforms — One manually actuated hydraulic light tower	
17 Electrical system	— 415 V supply for the charge pumps; all lighting 24 V — Two strip lights above the engine area for operations and maintenance — One light with emergency backup over the operator's area and stairs — Four LED floodlights on the hydraulically actuated light tower, 7.9 m above ground — Two LED floodlights on the manual light tower above the mud tank, 3.1 m above the tank top — Four welded earthing pucks, 50 mm diameter, 25 mm high, M10 thread	
18 Operator's area	— Control desk and operating area under roof, sheltering the operator — Hydraulically operated platforms on all sides of the engine and mud pump, for complete maintenance and operational access at all times — Platforms, handrails and stairs all compliant with AS 1657	
19 Storage	— Storage for six lengths of 2" 5,000 psi hard line	

The line-up, *as it actually is.*

Every operational valve is PLC controlled through a pneumatic actuator and reports its position back, so the mud screen shows the real state of the system rather than what was commanded. Live flow, charge and discharge pressure and both tank levels update as it runs, and up to twenty mud recipes can be stored, edited and recalled.



MUD SYSTEM SCREEN – LIVE LINE-UP, VALVE POSITIONS, TANK LEVELS AND RECIPE CONTROL



One operating system for the *whole site*.

Xenon sits at the heart of every piece of XDR third-generation oilfield equipment — built to increase productivity, cut non-productive time, add layers of safety and simplify troubleshooting. The standard operating system is scalable with the packages below.

01	Transmits selected parameters from any piece of XDR plant on site to anywhere in the world — equipment activity, hydraulic fluid levels, mud flows, pit volume totalisation and trending graphs.
Xenon Live Telemetry	
02	Gives the rig operator control of the plant on site from the rig control cabin.
Xenon Live Integration	
03	Repetitive tasks — magazine to catwalk, catwalk to rig floor — run from the site office. One operator runs the magazines and catwalk from a climate-controlled environment via PC or laptop. VOIP links the site team live. Fewer people are needed at the rig site, and they work out of harm's way. Programmed in C#, ISO/IEC 23270 compliant.
Xenon Live Remote Control	
04	Monitors the mechanical movement of moving parts and alerts the maintenance department to prepare spares — hydraulic, engine and gearbox oils, drawworks rope change and triplex pump lubrication.
Xenon Live Maintenance	
05	Tracks up to 175 data points and stores more than 12 months of operation. After an incident the CSV files graph directly, showing joystick positions, hydraulic pressures, hook loads and other parameters that contributed to it.
Xenon Live Black Box	

Xenon is XDR's control and telemetry brand — the PLC that runs the machine, the telemetry that streams off it, and **Xenon Prevent**, the back end that watches it. Prevent reads the rig's live telemetry and judges it against norms written by XDR's own engineers, working from the signal map taken from the rig's own control program. Deterministic safety checks — chassis stability, hook load against interlock state — sit above an AI layer that cross-references pressures, the loads they serve and the control states they depend on into subsystem findings. Issues become numbered cases with memory rather than alarms that fire and vanish, so the crew hears about the new, the worsening and the neglected, and is left alone otherwise.

Twelve additions to the *base package*.

Everything specified on pages 4 to 7 is included in the base package. The items below are quoted separately.

Xenon Live Integration	Complete control of the mud pump system from the XDR rig driller's console. Wireless communication for ease of setup and operation, with safety interlocks to prevent dual control.
150NB (6") mixing system	All mixing pipework supplied as 150NB (6") pipework and valving, with a matching 150NB (6") Venturi mixer.
High pressure hose reel	One hydraulically driven hose reel at the rear of the trailer, with 30 m of 5,000 psi hose and integral 1502 hammer union fittings. Bypass plug valve fitted in the event of failure.
6,000 psi Cameron gauge	One 6,000 psi Type F Cameron gauge with 1502 hammer union, fitted to the high pressure pipework.
Charge pump electrical disconnects	Marechal electric plugs and sockets fitted to all pumps for ease of maintenance, IP67 rated.
Charge pump strainers	Three suction Y-strainers in the suction circuit — one per pump, between the isolation valve and the pump.
Spares toolbox	One toolbox for mud pump critical spares, compartmentalised to prevent damage during transport. Customisable to suit customer requirements.
Jack pad storage	Storage for six jack pads, 600 × 600 × 50 mm, for the jack stools.
Well returns sand traps	Two well returns sand traps, one per tank, with removable stainless steel basket strainers accessed from the tank platform.
Additional fuel storage	A further 300 l of fuel capacity, bringing the total to 800 l.
Additional forward lights	Two additional floodlights on the engine canopy pointed forward. Standard 24 V LED, running as working lights rather than emergency lights.
Trailer fitout	Four wheel chocks to suit trailer weight requirements, with storage. Ring type wheel nut indicators on all wheel nuts, and a placard showing required wheel nut torques.

WHY OPERATORS SPECIFY IT

Built to arrive, *set up and run.*

In gauge for road transport

The complete unit travels within legal road dimensions on an RVCS compliant chassis with ADR lighting and marking — no permits, no escorts, no waiting on daylight.

Valves that report back

Every operational valve is PLC controlled through a pneumatic actuator and reports its position back to the control system, so the screen shows the line-up as it actually is.

Real-time flow on the HMI

Live flow, charge and discharge pressures and both tank levels are displayed on the mud screen as the system runs, alongside an electronic stroke counter.

Run from the driller's console

Xenon Live Integration gives the rig operator complete control of the mud system from the rig, over a wireless link, with safety interlocks preventing dual control.

Twenty stored recipes

The system holds up to twenty mud recipes, all editable, recalled on the HMI — repeatable mixes without re-entering setpoints on every well.

SUPPLIED BY

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SCOPE

Any equipment not clearly specified in this document is not included in XDR's scope of supply.

Specifications are subject to final configuration and to agreement of applicable standards prior to issue of the supply agreement. Tank capacities are as placarded on the trailer.

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