



CORING & RC · TRUCK OR TRACK · PLC MONITORED

EXPLORATION DRILLING · MULTI PURPOSE

XDR 800_H

Multi-purpose drill rig — built for the rigours of diamond drilling, with PLC monitoring of the functions that matter.

1,080 m

HOLE DEPTH IN HQ CORE

14,400 kg

PULL BACK, VARIABLE

4,980 N·m

DRIVE HEAD TORQUE, LOW RANGE

250 hp

CUMMINS QSB 6.7

THE RIG

Built for diamond. *Ready for hammer.*

The XDR drill rig platforms have evolved over thirty years of rugged field testing in the Australian outback. The 800H is built specifically for the rigours of diamond drilling — and with a rod loader and bins fitted it will take on hammer work as well. It carries on-board PLC monitoring of the key drilling functions, including a main winch that knows exactly where the pulling plug is.

10.3 m Square hollow section mast	7.5 m Drill head travel, on a hydraulic slide	10,000 kg Main winch, single line pull	240 bar Operating pressure — 3,500 psi
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DRILLING CAPACITY — CORING, WIRELINE

ROD / CORE BARREL	ROD SIZE (MM)	CORE SIZE (MM)	HOLE DEPTH (M)
B	OD 55.6 ID 46.1	36.4	2,060
N	OD 69.9 ID 60.3	47.6	1,630
H	OD 88.9 ID 77.8	63.5	1,080

Depths depend on rock type, drilling technique, tools and overall conditions. The figures above are based on 90% of hydraulic efficiency.

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THE MACHINE

Truck or track. *Seven metre deck.*

A fully welded channel and RHS base with four levelling jacks, on a 7 metre deck, available in both truck and track mounts. The mast is square hollow section, 10.3 m long, with 7.5 m of drill head travel on a hydraulic slide and hydraulically operated tapered foot clamps.



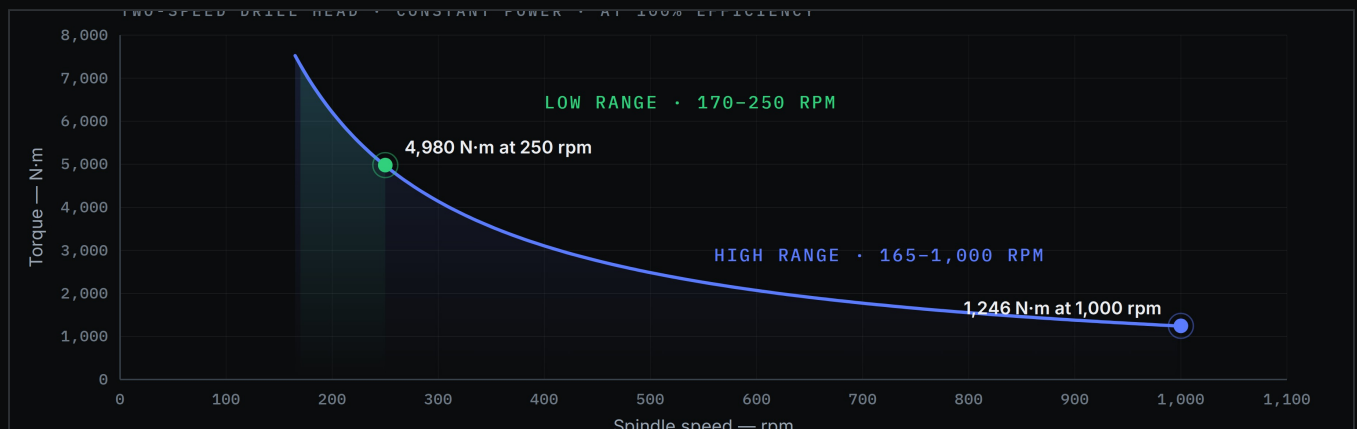
MAST ERECTED ON SITE, CONTROL PANEL SWUNG OUT TO THE DRILLER'S POSITION



MAIN WINCH DRUM AND MAST HEAD – 16 MM NON-ROTATING ROPE

01 / MAST, FEED AND DRIVE HEAD

EQUIPMENT	DESCRIPTION & SPECIFICATION – BASE RIG	NOTES
01 Base	- Fully welded structure — channel and RHS - Four levelling jacks 7 metre deck	
02 Mast	- Square hollow section mast - Mast length 10.3 m - Drill head travel 7.5 m, on a hydraulic head slide 16 mm non-rotating wire ropes with hydraulic tensioning - Hydraulically operated tapered foot clamps	
03 Feed	- Variable feed and pressure control - Pull back 14,400 kg, variable - Pull down 9,200 kg, variable	
04 Dump mast	- Heavy duty 2 metre mast dump - UHMWPE slides	
05 Drive head	- Two-speed floating hollow spindle drill head - Variable speed piston motor, pressure lubricated - Gears hardened and ground High range — 165 to 1,000 rpm at 1,246 N·m Low range — 170 to 250 rpm at 4,980 N·m	NOTE The same drive head as the XDR 1200H



TWO-SPEED DRIVE HEAD – BOTH SPECIFICATION POINTS SIT ON THE SAME CONSTANT-POWER CURVE. LOW RANGE TRADES SPEED FOR TORQUE

02 / WINCHES AND HYDRAULICS

EQUIPMENT	DESCRIPTION & SPECIFICATION – BASE RIG	NOTES
06 Main winch	— PLC controlled, with a digital display showing the exact position of the pulling plug and automatic stop — eliminating the risk of pulling drill rods or casing into the main winch — Capacity 10,000 kg single line pull — 16 mm non-rotating rope, 35 × 7 construction — Winch limiter and speed limiter; wire rope overrun cut out — Two-stage main winch stop — Planetary reduction gearbox; fail-safe brake complete with over-centre valve	
07 Wireline winch	— Capacity 1,400 m of 8 mm non-rotating rope, 18 × 7 construction — Radial piston motor — Planetary reduction gearbox complete with over-centre valve	
08 Pumps	— 1 × main pump — Kawasaki 140 cc, pressure compensated load sensing — 2 × auxiliary Kawasaki pumps — GPM high pressure gear pump	
09 Valves	— AMCA APV22 proportional load sensing valve — Sauer Danfoss auxiliary valves — Operating pressure 240 bar (3,500 psi)	
10 Hydraulic tank, filtration and cooling	— 600 l tank capacity — Full flow, pressure and return line filtration — All circuits 10 micron absolute — Hydac fan driven oil cooler, combi cooler with the engine	

LOAD SENSING THROUGHOUT

The main pump, both auxiliaries and the proportional valves are all pressure-compensated load sensing. The pumps deliver only the flow the circuit asks for, so the rig is not burning engine power across a relief valve when the head idles — which shows up as fuel burn and oil temperature over a season.

03 / CONTROL, ENGINE AND SAFETY

EQUIPMENT	DESCRIPTION & SPECIFICATION – BASE RIG	NOTES
11 Control system	— All rig functions and gauges at the panel, including water flow and pressures — All engine controls, with shut down in the panel — On-board PLC monitoring of key drilling functions — Rotation speed display and water flow display — Three emergency stops — one on the panel, one either side of the rig	
12 Engine	— Cummins Diesel QSB 6.7 litre custom pack — 250 hp at 2,100 rpm	
13 Water pump	— FMC John Bean L09-18HD-BCD — Variable speed, maximum 250 l/min at 70 bar	



THE DRILLER'S CONTROL PANEL, SWUNG OUT TO THE WORKING POSITION

14 / SAFETY AND FINISH

- Guarding to table with rotation shut off
- Guarding to all rotating items
- Rig safety rails including toe kicks
- Enclosed pulleys
- Driller's operating platform
- Fold-down ladder to deck
- Rig lighting
- Two-pack paint system

Every rig function, engine control and gauge sits on one panel, driven directly. The PLC sits alongside rather than in the way — monitoring the key drilling functions, limiting the winch and displaying rotation speed and water flow, while the driller keeps a direct hand on the machine.

Back-reaming gets the string back.

BACK-REAMING — STANDARD

When a hole collapses onto the string, the back-reaming function reams up through the collapsed section to recover the rods. It is the difference between a delay and a lost hole, and it is part of the base rig.

Everything specified on pages 4 to 6 is included in the base rig. The items below are quoted separately.

Rod loader and bins

Fitting a rod loader and bins allows the 800H to undertake hammer drilling operations alongside its diamond coring work.

Track mount

The 800H is available on a track mount as well as truck, for ground where a truck cannot follow.



THE 800H ON SITE — 7 METRE DECK, MAST ERECTED, CONTROL PANEL SWUNG OUT

WHY OPERATORS SPECIFY IT

Proven components, *watched functions.*

The winch knows where the plug is

PLC control gives the driller a digital readout of the exact position of the pulling plug, with automatic stop. Pulling drill rods or casing into the main winch stops being possible rather than being something the crew has to watch for.

Back-reaming recovers the string

When a hole collapses on the string, the back-reaming function reams up through the collapsed section to recover it — instead of losing the rods and the hole.

Thirty years in the field

The XDR platforms have evolved over thirty years of rugged field testing and evaluation in the Australian outback, using proven components from world-recognised manufacturers.

Diamond first, hammer optional

Built specifically for the rigours of diamond drilling, with the option of a rod loader and bins to take on hammer work.

Truck or track

The same rig on a 7 metre deck, mounted whichever way the ground demands.

Load sensing throughout

Pressure-compensated main pump and proportional load sensing valves, so the rig delivers only the flow the circuit asks for.

SUPPLIED BY

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SCOPE

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

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

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