



Technical Specification

PRD MAX DRILL 3000



A robust deep hole drilling rig with a pull up force of 32300 kg capable of drilling 6 ½” diameters up to 1000 m depth. Drilling hole size range from 6 ½” to 20”.

Note: The images provided here are for reference only and do not depict the exact specification outlined in this document.





Application	De-watering holes De-watering and monitoring holes in the mines Cathodic protection
Capacity	Hole Diameter : 165 - 508 mm (6 ½" - 20") Maximum Depth : 1000 m @ 165 mm (6 ½") diameter
Drilling Method	DTH and Rotary Drilling
Prime Mover*	Rig hydraulic system is powered from separate Deck Engine 260 hp
Platform Structure	Heavy I and C section welded steel structure covered with 5mm chequered plate
Mast Assembly	Strong structural steel twin tubular box type construction Mast Overall Length : 9000 mm Rotary Head Travel : 6800 mm Rod Handling : 6 m Centralizer Opening : 16" (406 mm) Expandable : 21" (533 mm) Split type
Mast Raising Cylinder	Mast is raised and lowered by two hydraulic cylinders
Mast Dumping	Mast is provided with forward dumping arrangement
Feed System	2 x Double acting hydraulic cylinder with 1:2 double rope reeving system Pull Up Force : 32300 kgf (71060 lb.f) @ 210 bar Pull Down Force : 21800 kgf (47960 lb.f) @ 210 bar Pull Up Speed : 43 m/min Pull Down Speed : 68 m/min





**Rotary Head Assembly
(Top Head Drive)**

Fabricated steel body with spur gear reduction and oil bath lubrication type gearbox along with top air entry and bottom entry mud swivel having ID: 90 mm spindle thread connection of API 6 5/8 IF driven by double hydraulic motor.

Maximum Torque : 9500 Nm

Rotation Speed : 0 - 100 rpm Fine controlled

Hydraulics

2 x Variable displacement piston pump for Feed and Rotation
1 x Fixed displacement pump for Auxiliary operations
1 x Fixed displacement pump for Hydraulic cooler
Pilot operated proportional control valve for Feed and Rotation

Maximum System Pressure : 3045 psi (210 bar)

Hydraulic Oil Cooler : 120 gpm

Hydraulic Tank Capacity : 950 litres

Control Panel

Swing out centralized control panel is at rear end of the equipment for convenient view of drill table provided with all necessary gauges, control system and emergency switch. Locking arrangement is provided for the safety of control panel.

Levelling Jacks

4 x Hydraulic levelling jacks are provided for quick setting and levelling with heavy duty telescopic guides
2 x Additional manual jacks are provided at rear end for stability while drilling
Locking check valves for safety with adequate capacity to withstand load

Breakout Wrench

Hydraulic operated breakout wrench is provided for fast breaking of rod joints





Water / Foam Injection Pump	Hydraulic operated water injection triplex pump with necessary fittings, pressure regulator, flow regulator check valve and suction filter are provided.
	Maximum Flow : 100 lpm
	Maximum Pressure : 40 kg/sq.cm
Single Rod Changer	Manually operated single rod changer to couple drill pipe to Rotary head
Winch	Hydraulic operated auxiliary winch to load drill pipe into rod changer with a lifting capacity of 1 ton.
	Winch on mast : 2 ton swing type winch to handle casing pipes.
Welding Machine	Hydraulic driven semi brushless welding alternator is provided for welding casing pipes
	Recommended Weld rod size : 2.5 mm to 5 mm only
	Weld current : 300 amps @ 60% duty cycle
	Optional single phase : 6.0 kVA @ 220v, 50 Hz
Airline Lubricator	A positive acting venturi type inline lubricator is provided for injecting oil to the down hole hammer.
	Tank capacity : 20 litres
	Working pressure : 350 psi
Recommended Air Compressor*	<u>Make</u> ELGI / Atlas Copco / Doosan
	<u>Compressor capacity</u> 1200 cfm - 330 psi (24 bar) 1500 cfm - 400 psi (27 bar) 1350 cfm - 365 psi (25 bar) / 425 psi (29 bar)



Mud Pump	<p>Engine operated PRD 250 Mud Pump (10" x 7")</p> <p>Stroke : 10" (254 mm)</p> <p>Liner size diameter : 7" (178 mm)</p> <p>Displacement (Max recommended) : 1980 lpm</p> <p>Maximum working pressure : 292 psi (20.53 kg/sq.cm)</p>
Additional Fitments	Night Lights, Tools box, Hammer stand
User Manual	Manual for Operation, Maintenance and Spare Parts
Truck Option*	<p>MAN 6x4 / 6x6</p> <p>SINOTRUK Howo 6x4 / 6x6</p> <p>Min 30 ton GVW Truck</p>
Mounting option*	Truck / Crawler / Skid / Trailer
Optional Attachments	<p><u>ICE Package</u></p> <ul style="list-style-type: none"> • Real time fuel monitoring system • Drilling progress monitoring • Drill efficiency indicator • Bit load sensing system • GPS location monitoring system • Power breakout system • Digital display in control panel • Centralized hydraulic test station • Real time hydraulic system status • Remote access through mobile app • Fire extinguisher and hose reel • Adaptable for all water well rig models
	Auxiliary winch on mast : 6 ton
	Hammer Opener : Hydraulic operated hammer opening device
	Mine safety features

**Combinations will vary according to our Design feasibility*







Happy Drilling Forever with PRD Rigs

