



Technical Specification

PRD MAX DRILL 4000



A super performer bore hole drilling rig with a pull up force of 42200 kg capable of drilling 6 ½" diameter up to 1350 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 : 1350 m @ 165 mm (6 ½") diameter
Drilling Method	DTH and Rotary Drilling
Prime Mover	Rig hydraulic system is powered from separate Deck Engine Make: Cummins Model: NTA855BC
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 : 10000 mm Rotary Head Travel : 7300 mm Rod Handling : 6 m Centralizer Opening : 16 "(406 mm) Expandable : 28" (711 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 : 42200 kgf (92840 lb.f) @ 210 bar Pull Down Force : 18500 kgf (40700 lb.f) @ 210 bar Pull Up Speed : 17 m/min Pull Down Speed : 34 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.

Tilting Rotary Head with locking system will be provided
Rotary Head Motor Make: Danfoss/Bondioli Pavesi(Italy)

Maximum Torque : 11900 Nm

Rotation Speed : 0 - 120 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
Hydraulic Hose Make: Manuli, Parker, GATE depends on the application.
High Tensile reinforcement spiral hose.
Hydraulic pump make: Danfoss

Maximum System Pressure : 3480 psi (240 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 hydraulic jacks are provided at rear of truck cabin for more stability
2xAdditional hydraulic jacks are provided to support Mast
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
Winches	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 Welding electrode : 4mm Weld current : 40-180 ADC Auxiliary electricity : 1-phase: 230 VAC/3.0 kVA 3-phase: 400 VAC/6.0 kVA Make: Dynaset(Europe)
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
Mud Pump	Hydraulic operated PRD 250 Mud Pump (10" x 7") onboard Stroke : 10" (254 mm) & Liner size diameter : 7 " (178 mm) Displacement (Max recommended) : 1980 lpm Maximum working pressure : 292 psi (20.53 kg/sq.cm) Make: Laxmi 250 model Valve for Mud drilling operation to be fixed in Control panel





	Mud pump suction with Stainless steel quick release coupling to be provided
User Manual	Manual for Operation, Maintenance and Spare Parts
Truck Option	SINOTRUK Howo 371HP 8x4 LHD
Rig color	Yellow-Drill rig structure & Mud pump Black-Hydraulic jacks, Rotary Head
Extra attachments	Tools box Mine safety features like Silencer guard, Whiplash, Hose spiral, Emergency switch(1 x control panel and 2xside platform), Battery cut off switch, Lock Out Tag Out System(LOTO) for Truck & Deck Engine, Handrails Mast Ladder, Safety guard for Hydraulic pump, Welding machine & Water pump, Hoist lift safety stop, Night lights(Top of Mast-4 no's; Rear of truck cabin-2 no's; Rear jacks-2 no's), Dust flap behind control panel to cover hose pipes Chain for propeller shaft Centralizer lock pin to be welded with chain for fall safety

**Combinations will vary according to our Design feasibility*





HAPPY DRILLING FOREVER WITH PRD RIGS

