

METADRILL MD150
Multi-Purpose Geotechnical Drill Rig

METALLURGY AND DRILLING FZE
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METADRILL MD150

Multi-Purpose Geotechnical Drill Rig

Drilling Depth Range

Diamond core (Wire line)

NQ-Size - 150 Meters

HQ-Size - 90 Meters

PQ-Size - 60 Meters

Standard Penetration Test (SPT)

Automatic SPT Unit is installed on drilling rig mast

63.5 Kg Drop Hammer

Falling Height 760 mm

1-30 blows/min.

Incorporates a separate single acting cylinder to lift the SPT

*Note: Diamond core drilling Depth are based on Straight, Vertical, Clean fluids fill holes.
Above drilling capacities may vary according to subsurface conditions & drilling techniques.*

Prime Mover

Engine	JOHN DEER
Model	4045TFU20
Power	90Kw / 120HP
Speed	2000 RPM
Engine type	Diesel turbo charged
Cooling	Air to oil
Emission Norms	Non-Certified
Fuel Tank	120 liters

Mast & Feed

Mast Construction	The mast is made of Rectangular beams.
Feed Type	Single double acting Hydraulic cylinder with wire reeving system.
Mast raising	Two independent hydraulic cylinders
Head travel length	3.4 meters
Mast length	5 meters
Rod hosting length	3 meters
Pull up force	5000 Kg
Pull down force	3750 Kg
Pull up speed	9 m/min
Pull down speed	14 m/min
Drilling Angle	90°

Rotary Head

Model	Vertical Drive
Torque & Speed	3000Nm @ 0- 80 rpm (Low Speed Gear) * 250 Nm @ 0- 900 rpm (High Speed Gear) *
Gear Box	Two speed gear manual change
Drive Motor	Hydraulic – Fixed displacement
Lubrication	Yes
Mounting	Hydraulic Slide
Speed control	Steeples speed control can be very precise Improves bit life time.

*Note: Rotary Head torques and speeds are infinitely variable in each gear range as indicated
Output Speeds & torques are on 100% efficiency, Actual rotation speed is effected by
Engine Rpm and motor displacement settings*

Tool Winch

Hoisting Capacity	2500 Kg (Bare drum)
Hoisting speed	28 meters/min
Cable diameter	12mm (1/2" inch)
Cable length	14 meters (48 ft)
Drive motor	fixed displacement
Mounting	Deck

Wire Line Winch

Hoisting Capacity	500 Kg (Bare drum)
Line speed	142 meters/min
Cable diameter	6 mm
Cable length	80 meters/ 150 meters /200 meters
Drive motor	Fixed displacement
Mounting	Mast

Water Pump

Type	Triplex Piston Pump
Power	Hydraulic operated
Max flow	120 LPM
Max pressure	30 Bar

Rod Clamp

Capacity	PW
Jaw Sizes	PQ/HQ/NQ
Mode of operation	Hydraulic operated Dual Breakout

Hydraulic Pump

Main pump	1 No
Type	Piston pump
Displacement	Fixed
Auxiliary pump	2 Nos
Type	Gear Pump
Displacement	Fixed

Hydraulic oil cooler

Type	Air to Oil
Heat Rejection	25 KW
Drive	Hydraulic*
Construction	Steel
Hydraulic Tank	220 liters

Control panel

Gauges	Feed pressure, Rotation pressure & Water pressure,
Indicator	Power meter & Volt meter.
Engine speed	Lockable control handle for controlling engine RPM.
Stop	Emergency engine stop
Rotation control	Manually adjustable control for rotation Speed.
Water pump	Fine control valve has been provided on the panel
Direction Control	Hydraulic operated spring & detent for Mast tilting/Rotation/ Feed/Main Winch/Wire line Winch/Stabilizer/SPT

Tool Box

Steel double decker Unit Toolbox with lockable doors
Dimensions per unit: 360 mm x 1000 mm x 360 mm

Jack Legs

Type	Cylinder type construction welded to base frame
Quantity	4 No's
Fixing	Bolted to Main Base Frame
Lifting Capacity	4000 Kg

Safety

House guard	High density plastic Spiral Guard for sliding Hoses.
Emergency	Emergency stop fitted on three different locations to Switch of the engine.

Rig Lighting

Tower mounted flood lights 2nos
Front side of rig 1no

Approximate Weight/Dimensions

Weight	4000 Kgs (Bare rig)
Weight	5000 Kgs (Including Crawler)
Length	5000 mm (long Mast In horizontal when rested And Straight.
Width	2250 mm
Height	2500 mm (Mast Down)

Rig Carrier Option

Crawler
Skid
Trailer