

EDM 30K-HP Heli Portable Drill

Diamond Exploration Drill Rig



The EDM 30K HP Heli Portable Drill rig has been designed as a high capacity drill, to operate in remote and difficult locations only accessible by helicopter.

The EDM 30K HP can be disassembled and moved in 16 lifts of 700 kg or less.

The EDM 30K HP is a high capacity diamond drill rig powered by two CAT C4.4 engines.

The EDM 30K HP has been built with safety in mind and comes standard with many features not currently available on Heli Support Rigs these include, a rod spinner, rod spin guard with hydraulic cut-out to stop rotation the moment the spin guard is opened, wireline spooler and both a main winch and wireline winch over ride to prevent rods or the overshot accidentally being pulled through the drum.

A unique feature of this rig is its ability to slew on the spot enabling the rig to drill multiple hole from the same platform on different azimuths.

This Rig has been specifically designed to operate in remote locations and as such has been kept as simple as possible while maintaining a high performance and a very high level of safety for both the operators and crew.

Technical Specifications

Diesel Engine

Two Cat C4.4 Tier III
140hp @ 2.200 rpm
Tier IV options are available on request

Rig Base

Rig can be slewed $\pm 30^\circ$ from the longitudinal axis of the base enabling multiple holes to be drilled from the same position

Drill Mast

Capable of angles from vertical to 45°
Dual direct mounted feed Cylinder
Main Winch mounted on top of mast.

Rotation Top Drive Head

Hollow Floating spindle ID: 40 mm – $3\frac{1}{2}$ " API IF pin thread
Two speed, Low/High manual gear change
Low gear Max. displacement 5.781 Nm (4.330 Lbft) @190 rpm
High gear Min. displacement 915 Nm (675 Lbft) @1.250 rpm

Head Traverse

Driven by single hydraulic cylinder
Max speed up cylinder 730 mm/s (31in/s)
Max speed down cylinder 500 mm/s (39,5 in/s)
3,3 m (10.8 ft) stroke with rotation head

Feed Capacity

Pulldown 63,7 kN (15.000 Lbf)
Pullback 133,4 kN (30.000 Lbf)

Main Winch

Mounted on top of mast (Type Braden RW300)
Max pull 133,4 kN (30.000 Lbf)
Max speed 60 m/min
Failsafe brake mechanism (spring applied, hydraulic release)
6 m (20 ft) pull for diamond pipe and casing
Winch limiter system to prevent rod being pulled into drum

Wire Line Winch Mounted on Mast Dump Plate

Capacity 6 mm ($\frac{1}{4}$ ") rope: 1.600 m (5.250 ft)
Max average pull from full to empty drum 16,4 kN (3.680 Lbf)
Max average speed from full to empty drum 7 m/s (23 ft/s)
Automatic rope spooling device
Wireline override to prevent overshot being pulled over mast.

Control Cabinet

Good visibility at all mast angles
Easy self explanatory layout
Easy access for basic maintenance and repairs
Fully sealed control panel with all electrical instrumentation.

Hydraulic System

Main Hydraulic Pump Danfoss 75 cc Piston Pump
Secondary Hydraulic pump Danfoss 25 cc double gear pump
200 L Hydraulic Tank
Main Hydraulic Valve Parker K220 Pilot operated
Secondary Hydraulic Valve Danfoss PVG 32
Walvoil secondary Valves

Water Pump

American (Bean) AW1122BCD
140 l/min @ 7.000 kPa
(37 gal/min @ 1.000 psi)

Rod Break Out

Diaspan wrap spanner for N+, H+ and P+ casing

Rod Clamp & Slip Table

Hydraulic operated, self energizing rod clamp (UDR Type)
Easy to remove jaws
Common jaws (B+, N+, H+ and P+ casing)

Rod Spinner

Hydraulic operated
Self adjusting jaws ranging from N+ to PWT
2.980 kNm (2.200 lbft) breaking torque
Adjustable torque control

Rod Spin Guard

Cage off the rotating rods from operator/helper
Hydraulically interlocked with rotation
Can be set to either reduce rotation speed to 150 rpm or a complete stop when cage is opened

Theoretical rated diamond core depth on a vertical, clean and dry hole with a 10% capacity allowance

B+	2.041 m (6.697 ft)
N+	1.570 m (5.151 ft)
H+	1.065 m (3.494 ft)
P+	704 m (2.310 ft)

Dimensions

Platform Width:	2.850 mm (9,35 ft)
Platform Length:	4.750 mm (15,58 ft)
Mast length:	8.500 mm (27,88 ft)
Module Weight:	700 kg (1.543,24 lb)

Modules

- 1 Engine 1
- 2 Engine 2
- 3 Hydraulic Tank and Pumps
- 4 Water Pump and Cooler
- 5 Rig Base
- 6 Mast Pivot Structure
- 7 Wire line Module
- 8 Control Panel , with valves
- 9 Lower Mast Section
- 10 Foot Clamps, Rod Spinner and Breakout
- 11 Upper Mast Section
- 12 Main Winch
- 13 Feed Cylinder Assembly
- 14 Head Carriage
- 15 Rotation Head
- 16 Sub Base

Safety Features

Guards on all rotating equipment
Emergency stops on control cabinet and on all corners of machine
Rod spin guard with hydraulic interlock. Reduces rotation to 150 rpm when opened.
Heat guards on all exhaust manifolds and piping
Murphy shut down system which protects the following
Low engine oil pressure
High engine temperature
Low hydraulic tank oil level, low coolant level
Hydraulic Rod Spinner

Winch Limiter

Wireline winch limiter

Warranty

6 Months or 1.500 hrs Diesel engine

Rig performance is directly related to conditions encountered in the field.

Please contact an Exploration Drill Masters representative for detailed product information.