

EDM 45K-D Series Drill

Crawler Mounted Diamond Exploration Drill Rig



The EDM 45K-D Track Mounted Diamond Drill rig has been designed as a high capacity diamond drill with a small footprint and good maneuverability.

The EDM 45K-D is a high capacity Top Drive Diamond Drill Rig with a 7 m (23 ft) stroke powered by a Cummins QSB 6.7. The EDM 45K-D has been designed with a jack up base that allows the rig to easily be loaded on to a standard flatbed truck or trailer for long distance moves.

The compact rig design allows it to be loaded into a 40' HC container with minimal fuss.

The EDM 45K-D has been built with safety in mind and comes standard with many features not currently available on many rigs this size, including, 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 / sheaves.

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 very high level of safety for both the operators and crew.

The EDM 45K-D is also simple to operate and maintain.

The EDM 45K-D has an optional certified FOP control cabin seating the operator and an off-sider in the most advantageous site location all while isolating them from the many hazards traditionally associated with drilling including noise, dust, falling objects, rotating drill string and harsh weather conditions.

Technical Specifications

Diesel Engine

Cummins QSB 6.7 260 HP
Tier III and IV options available upon request

Crawler

14T Sejin
Two Speed 4.5 k/h (2.8 m/h) Hi , 2,5 k/h (1,56 m/h) Low
Caterpillar D3 Compatible Running Gear
Brevini Final Drives

Drill Mast

Capable of angles from vertical to 45°
Single Feed Cylinder 2:1 Feed System
Main Winch mounted on top of mast.

Rotation Top Drive Head

Hollow Floating spindle ID: 68mm – 3 ½" API IF pin thread
Two speed, Low/High manual gear change
Low gear Max. displacement 6.713 Nm (4.952 Lbft) @ 190 rpm
Low gear Min. displacement 4.406 Nm (3.250 Lbft) @ 300 rpm
High gear Max. displacement 1.610 Nm (1.188 Lbft) @ 817 rpm
High gear Min. displacement 1.057 Nm (779 Lbft) @ 1.250 rpm

Head Traverse

Driven by single hydraulic cylinder
Max speed up cylinder 790 mm/s (31in/s)
Max speed down cylinder 1.000 mm/s (39,5 in/s)
7,2 m (23 ft) stroke with rotation head

Capacity

Pulldown 75,6 kN (17.000 Lbf)
Pullback 200 kN (45.000 Lbf)

Main Winch

Mounted on top of mast (Type Braden RW300)
Max pull 178 kN (40.000 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 (¼") rope: 2.000 m (6.500 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

Pivoting Control Cabinet off rear right corner of machine
Good visibility at all mast angles
Folding drillers jump up stand and protective roof
Slews behind for transport
Easy self explanatory layout
Easy access for basic maintenance and repairs
Fully sealed control panel with all electrical instrumentation.

Control Cabin (Optional)

Ergonomic heated/air conditioned operators cabin
Additional seat for helper
Locks behind Rig for transport
Easy self explanatory layout
Easy access for basic maintenance and repairs
Extending boom allows operator to be up to 5 m away from hole
FOPS Rated cabin

Hydraulic System

Main Hydraulic Pump Parker 145 cc Piston Pump
Secondary Hydraulic pump Parker 105 cc Piston Pump
300 L Hydraulic Tank
Main Hydraulic Valve Danfoss PVG2 56 Pilot operated
Secondary Hydraulic Valve Danfoss PVG 32

Water Pump

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

Rod Break Out

Metzke MB550 double breaker, Slews in and out of mast
Metzke Makorbreak Hydraulic breakout wrench

Rod Clamp

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

Rod Spinner 4½" (5½" Optional)

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

Rig Base

Extendable hydraulic jacks with 1,8 m (72") Stroke cylinders enabling rig to be loaded onto any flatbed truck or trailer
Compact design enabling Rig to be loaded into 40" HC container with minimum fuss

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

| | |
|----|--------------------|
| B+ | 3.000 m (9.842 ft) |
| N+ | 2.355 m (7.727 ft) |
| H+ | 1.597 m (5.241 ft) |
| P+ | 1.056 m (3.464 ft) |

Dimensions

| | |
|---------------------|------------------------|
| Platform Width: | 2.300 mm (7 ft 6 in) |
| Rig Overall Length: | 12.000 mm (39 ft 6 in) |
| Height: | 2.600 mm (8 ft 6 in) |
| Mast length: | 10.100 mm (33 ft 2 in) |
| Approx. Weight: | 23.000 kg (50.700 lb) |

Safety Features

Guards on all rotating equipment
Anti slip grid mesh on all work platforms
Hand rails on all work platforms
Emergency stops in control cabin 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
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
Wire line 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.