

# Cat<sup>®</sup> MD6640

Hole Diameter 270-349 mm (10.625-13.75 in)

**Proven Performer**

**High-production Drill with Longevity**



**Market-leading and highly productive, MD6640 drills hole diameters ranging from 270-349 mm (10.625-13.75 in) with single pass depths up to 21.3 m (70 ft) and multi-pass depth up to 42.6 m (140 ft). It can Angle Hole Drill to 25 degrees and has a bit load of 54 431 kg (120,000 lb) or 64 000 kg (141,096 lb). Cat<sup>®</sup> MD6640 maintains the largest population for ultra-class drills with more than 70,000 hours (one with 141,000 hours) in the field and over 25 of our rotary drills are still operating at more than 20+ years of age. That is longevity.**

## Reliable with Industry Leading Durability

### Undercarriage

Cat 390 Excavator style undercarriage helps minimize downtime and reduce customers' owning and operating costs.

- All rollers and idlers are "sealed for life" which means they do not require periodic lubrication like the former model
- Double grouser track shoes provide more traction and allow the drill to be more aggressive in positioning
- 32% more drawbar pull, increasing the steering performance of the machine
- 56% more gradeability
- Longer undercarriage creates lower ground bearing pressure
- New positive pin retention system eliminates pin walking
- Constant tensioning on the tracks via automatic hydraulic tensioning
- Dual axles with a fixed rear axle and oscillating front yoke provide flexibility to propel over rough terrain and reduce main frame twisting, greatly reducing maintenance

### Mainframe

MD6640 excels at structural design in the harshest mining environments.

- High-strength steel construction
- A deep section box girder
- A-lugs, front leveling jack casings and the main vertical plates are a single unit
- Stiffer frame than rolled I-beam eliminates twisting and lowers maintenance required
- Front jack towers are integrated into the main frame to further enhance stiffness and provide a smooth connection for the transmission of mast brace loads into the main frame

### Mast

A key performance advantage on MD6640 is the mast system. There are three mast height options: 18.3 m (60 ft), 19.81 m (65 ft), and 21.33 m (70 ft). Advanced design elements include:

- Square tubular members have twice the bending strength of angle iron
- Welded square tubular members, in a lattice configuration, reduce stress concentration at welds
- Torsion box reinforcements are incorporated every five feet, increasing mast rigidity for hard rock drilling and angle hole applications
- Mast rack is made from alloy steel that has been forged, machined before being thru-hardened, quenched and tempered
- Rigid A-frame is pinned to main frame with high strength steel pins and the mast bracing is controlled from operator's cab console
- Hardened steel bushings for the mast, A-frame and mast brace pin connections

### Rack and Pinion System

Providing constant pressure at the drill bit, mast machinery integrates the pulldown and rotary drive into one system, eliminating the higher maintenance associated with chain or cable systems.

- Hoist/pulldown machinery is located on a substantial structural base that withstands the pulldown and vibration created in the drilling process
- Powered by a 102 kW (137 hp) DC mill motor, capable of applying the pulldown force required to achieve 63 975 kg (141,000 lb) bit loading
- Puts more weight over the bit

**BUILT FOR IT.<sup>™</sup>**



# Cat® MD6640 – Hole Diameter 270-349 mm (10.625-13.75 in)

## Machinery House

- Designed for ease of maintenance
- Ventilation system for clean, cool air is drawn from the front of the house by a 530 m<sup>3</sup>/min (18,700 ft<sup>3</sup>/min) filtering and pressuring unit
- Self-cleaning filter and pressurizing unit provides a pressurized and temperature controlled environment for machinery and electrical systems
- Three removable roof hatches facilitate easy exchange of major components
- Two doors positioned at opposite ends of the house for quick access/egress
- Interior walls painted with oil and detergent resistant paint
- Anti-skid floor paint in all work areas
- Decals and nameplates available in various languages
- Inside and outside lights

## Cab

- Spacious FOPS cab is mounted on pads to isolate it from vibration
- Insulated walls for less than 80 dB(A)
- Air-exchange unit provides heating, cooling and defogging operations
- Pressurization unit filters incoming air and controls dust infiltration into the cab
- High visibility including overhead sky view
- Roof mounted air-exchange HVAC provides heating, cooling, de-fogging and pressurization
- Fourteen (14) blue-green tinted single-pane safety glass windows with industrial strength wipers provide a panoramic view of the drill deck, and unobstructed sight-line to pipe handling operations
- Ergonomic, six-way adjustable operator's seat equipped with a mechanical swing suspension and footrest
- Adjacent trainer's seat provides optimum visibility and facilitates communication during operation
- Controls grouped by function and positioned with the operator and machine operation in mind
- Self-diagnostic program alerts operators that a fault has occurred and identifies the source of the fault

## Life Cycle/Rebuildable

Lowest lifetime cost per ton through:

- Rebuildable components
- Designed for long structural life – multiple lifetimes through rebuild
- High degree of serviceability – maximizes machine uptime
- Largest population for ultra-class drills with more than 70,000 hours (one with 141,000 hours) in the field and over 25 of our rotary drills are still operating at more than 20+ years of age

## Fit for Harsh Environmental Conditions

- Equipped for operation at temperatures ranging from –40° C to 50° C (–40° F to 122° F) at full efficiency based on the selected weather packages in Cold or Hot Weather Packages Sections
- Operation at altitudes up to 3048 m (10,000 ft) – with 85 m<sup>3</sup>/min (3,000 ft<sup>3</sup>/min) compressor
- Operation at altitudes up to 5200 m (17,060 ft) – with 108 m<sup>3</sup>/min (3,800 ft<sup>3</sup>/min) compressor

### Basic Specs

Hole Diameter	270-349 mm	10.625-13.75 in
Single-Pass Depth	19.81 m	65 ft
Multi-Pass Depth	39.6 m	130 ft
Bit Load	63 956 kg	141,000 lb
Feed and Hoist Speed	23 m/min	75 ft/min
Rotation Speed	125 rpm	
Rotation Torque	17 489 N·m	12,900 lbf-ft
Electric Motor	447-597 kW	600-800 hp 4160V/7200V or 50-60 Hz
Compressor Air Flow	85 m <sup>3</sup> /min	3,000 ft <sup>3</sup> /min
	4.5 bar	65 psi
Compressor Option	108 m <sup>3</sup> /min	3,800 ft <sup>3</sup> /min
	4.5 bar	65 psi
Approximate Working Weight	154 224 kg	340,000 lb

## Cat MD6640 Key Points

- Efficient and comfortable cab for maximum operator productivity
- Faster mobility than competitive models
- Minimized vibration by the use of proven Programmed Drill Control option with the optional cushioned centralizer and shock sub
- Rack and Pinion System for constant bit load pressure and rotary drive system with increased torque
- Quick drill pipe changes with a Drillstring Changeout System
- Angle hole drilling to 25 degrees
- Extended life with rebuildable design

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