

MD6540

Rotary Blasthole Drill



Rated Capacity

Hole diameter	229-381 mm	9-15 in
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16 Meter Configuration

Depth single-pass	Up to 16.15 m	Up to 53 ft
Depth multi-pass	Up to 84.73 m	Up to 278 ft

20 Meter Configuration

Depth single-pass	Up to 19.86 m	Up to 65 ft 2 in
Depth multi-pass	Up to 65.58 m	Up to 215 ft 2 in

Operating Temperature

Minimum ambient rating – standard unit	-28° C	-20° F
Cold weather option	-40° C	-40° F
Maximum ambient rating – standard unit	52° C	125° F
Altitude	4572 m	over 15,000 ft

Pull-down/Hoisting Capacity

Pull-down capacity	Up to 489 kN	Up to 110,000 lbf
Hoist capacity	Up to 383 kN	Up to 86,000 lbf
Drilling feed/retract rate	0-37.5 m/min	0-123 ft/min
Cable type – DYFORM 8	29 mm	1.125 in

Rotary Drive System

Torque		
Standard HSLT	0-17 219 N·m	12,700 lbf-ft
LSHT option	0-20 880 N·m	15,400 lbf-ft
Rotation power	271 kW	363 hp

Compressor (Standard)

Type	Oil-flooded, single-stage screw	
Maximum operating pressure	6.9 bar	100 psi
Discharge flow maximum setting (sea level)	102 m ³ /min	3,600 ft ³ /min
Discharge flow minimum setting (sea level)	Adjustable down to 51 m ³ /min	Adjustable down to 1,800 ft ³ /min

Engine (Standard)

Manufacturer	Detroit Diesel	
Model	Series 2000 16V Tier 2	
Rated horsepower	899 kW (1,205 hp)	
Full load RPM	1,800	
Fuel tank	2055 L + 1234 L total 3289 L	543 gal + 326 gal total 869 gal

MD6540 Rotary Blasthole Drill Specifications

Operator's Cab

Location	Adjacent to the drill deck	
Type	One piece, three man; shock-mounted; integrated FOPS certified, fully electrical/electronic	
Floor area	4.4 m ²	47.3 ft ²
Height inside	2121 mm	83.5 in
Windows	Tinted thermopane glass in rubber mounting	
Number of windows	12	
Number of doors	Two with 2 (each) windows (included in above)	
Operator's seat	One swivel-type with armrests, headrest and retractable seat belt	
Helper's seat	Full-cushion type, collapsible, stow-away and removable	
Climate control	Roof-mounted, AC/heating/pressurizing unit	
Roof	Roof viewing hatch with window (protected with FOPS-certified cage)	

Undercarriage

Number of rollers on each side	11	
Rock guards	Standard full-length guards	
Maximum drive horsepower per track	268 kW	360 hp
Brakes	Spring set, hydraulic release	
Brake release	Automatic	
Tram speed maximum	2.09 km/h	1.3 mph
Gradeability mast down	66%	
Front	Three-point oscillating type	
Track adjustment means	Hydraulic with grease gun	
Track drive disconnect	Standard (manual)	

Mainframe, Decks and Walkways

Jacks, mast pivot and deck	Welded integrally to mainframe	
Tools and battery box	In-board extra-large toolbox (sunk in drilling deck)	
Machine deck	Access all sides	
Tow eyes	Welded, two front	

Leveling Jacks

Number	4	
Location	2 front, 2 rear	
Pad diameter	1067 mm	42 in

Drill Table and Work Deck

Table height off ground – drill on tracks	1854 mm	73 in
Wide walkways	Viewing hatch operated from the cab	
	In the drill deck; hydraulically	
Dust curtain	Hydraulic lifters front and rear	

MD6540 Rotary Blasthole Drill Specifications

Accessories, Tools and Handling Equipment

Drill Pipe (optional)

Diameter – customer specifications	194 mm 273 mm	7.625 in 10.75 in
Wall thickness	25 mm	1 in
Length – for 16 m mast	13.7 m	45 ft
Length – for 20 m mast (2 each on starter string)	9.1 m	30 ft
Threads	Depends on pipe size	

Adaptor Sub

Diameter	Depends on pipe diameter	
Wall thickness	25 mm	1 in
Length	927 mm	36.5 in
Top thread – API reg.	140 mm	5.5 in
Bottom thread	Depends on pipe diameter	

Bit Sub

Diameter	Depends on pipe diameter	
Wall thickness	25 mm	1 in
Top thread	Depends on pipe diameter	
Bottom thread	Depends on pipe diameter	

Table Bushing

Roller deck bushing

Pipe Rack (inside the mast)

Typical configuration	5-pod pipe carousel for up to 235 mm (9.25 in) outside diameter	
Typical configuration	4-pod pipe carousel for 273 mm (10.75 in) outside diameter	

Winch

Rating		
Rated winch	3629 kg	8,000 lb
Optional	5443 kg	12,000 lb
Cable size	16 mm	0.625 in
Auto shut-off	Located in crown, automatically shuts off winch when ball weight is seated	

Options

Dust Collection

Designed for high-capacity air systems, the Dry Dust Suppression System uses a fan-wheel arrangement with aggressively pitched fins/vanes that provide 173 m³/min (6,100 ft³/min) air flow and can develop up to 508 mm (20 in) water vacuum at the deck inlet.

Water Injection

Hydraulic pump and motor arrangement with below-deck tanks 2922 L (772 gal) capacity.

Cold Weather Package

Temperatures to: –40° C –40° F

Heating and Circulation

Drainage for water-injection system temperatures to: –40° C –40° F

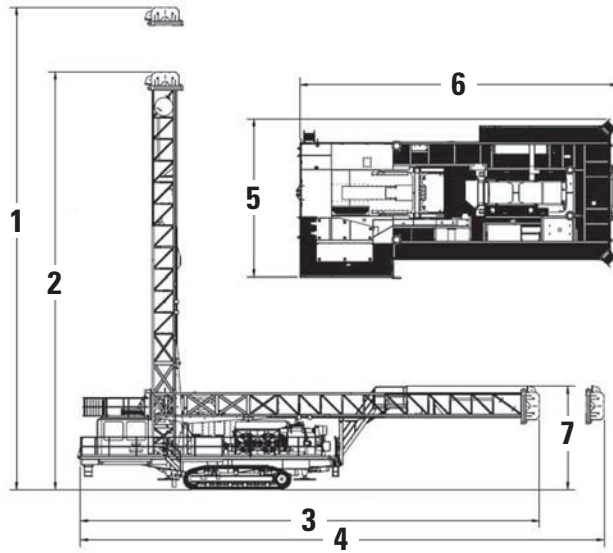
Note: Final dimensions, GVW and corresponding load-out vary based on options selected and final configuration.

Performance ratings are based on 100% efficiency, and on engineering specifications and calculations in accordance with accepted industry standards. These capacities will vary with drilling conditions. All specifications are subject to change without notice.

MD6540 Rotary Blasthole Drill Specifications

Dimensions

All dimensions are approximate.



1	26.84 m	88'1"	5	7.31 m	24'0"
2	23.24 m	76'3"	6	14.73 m	48'4"
3	25.55 m	83'10"	7	5.73 m	18'10"
4	29.15 m	95'8"			

MD6540 Rotary Blasthole Drill Standard Equipment

Standard Equipment

The MD6540 crawler-mounted blasthole drill designed to drill up to 381 mm (15 in) diameter holes depending on application with rated pulldown capacity up to 49 895 kg (110,000 lb), hoist capacity 39 009 kg (86,000 lb).

ENGINE/COMPRESSOR

- Detroit Diesel Series 2000 16V engine 899 kW (1,205 hp) @ 1,800 rpm
- Additional fuel filtration
- Single stage Sullair compressor 101.9 m³/min @ 6.9 bar (3,600 ft³/min @ 100 psi) with split coolers
- Standard spiral valve on compressor allows variable air volume control

MAST

- Up to 381 mm (15 in) hole diameter
- Up to 49 895 kg (110,000 lb) pulldown capacity
- Up to 53 845 kg (118,709 lb) bit load
- Patented HOB0 (Hydraulically Operated Break Out) wrench operated from the cab (variable grip)
- Auto cable tensioning system
- 30 degree angle drilling package with mast locks in 5 degree increments
- Grid mesh in back of mast
- Hydraulically operated pipe catcher

TOP DRIVE

- See Mandatory Selections

OPERATOR'S CAB

- Integrated FOPS
- Totally enclosed and insulated two-man extra large cab
- Rubber shock mounted to absorb vibration during drilling
- Excellent visibility
- Full front drill deck window with protective cage
- dB(A) rating of 72 or less
- Two (2) hinged doors with heavy duty door latching system
- Twelve (12) windows – with window tint and window shades on five (5) windows
- 4.4 m² (47.3 ft²) floor space and walkway/railing around it
- Ergonomic operator's console with split control panel and full instrumentation
- Operator's console with stainless steel panels and back-lit gauges
- Ergonomic operator's seat with head and arm rests, and with retractable seat belt
- Air suspension
- All electric controls for drilling, tramming, leveling plus auxiliary functions
- Auxiliary functions operated by fingertip switches
- Hydraulic drive, roof mounted air conditioning/heating/pressurizing unit
- Roof window with protective cage
- Windshield wipers and washer tank kit
- Stereo kit (CD, radio, AM/FM and iPod port) complete with speakers
- Cab ladder and roof platform plus railing
- Drill performance and monitoring/diagnostics system complete with full interlock system
- Auto level and single-pass auto drill function/processing
- Closed circuit camera system (two cameras) with color screen monitor
- Storage box
- Electric horn (activated by push button inside the cab)

(continued)

MD6540 Rotary Blasthole Drill Standard Equipment

Standard Equipment (cont'd)

The MD6540 crawler-mounted blasthole drill designed to drill up to 381 mm (15 in) diameter holes depending on application with rated pulldown capacity up to 49 895 kg (110,000 lb), hoist capacity 39 009 kg (86,000 lb).

UNDERCARRIAGE

- Excavator type heavy duty tracks with planetary drive, integral brake, and cushioned idler
- 900 mm (35.4 in) wide, triple grousers
- Full length chain guides/rock guards

MAINFRAME, DECKS AND WALKWAYS

- Main frame made of high strength low alloy box-section plate
- Reinforced in high stress areas
- Main deck and wide walkways provide easy access to all components around the drill
- Rear deck is stationary during both angle and vertical drilling modes
- Viewing hatch in the rear deck, hydraulically operated from the cab
- Complete walk-around platform/walkway for entire rig
- Cascading (self leveling) stairs at cab, access ladder at rear deck and two ladders on front deck
- Four (4) hydraulic leveling jacks – front jacks @ 1524 mm (60 in), rear jacks @ 1219 mm (48 in)
- Heavy duty tow hooks (front end) and lifting lugs
- Mast access stair/platform
- Extra large inboard tool chest/bit box
- Rear deck pipe loader guide
- Hydraulically operated front and rear dust curtains
- Automatic lubrication system
- Fuel tanks under engine (3289 L/869 gal)
- Jib crane with controls mounted on rear deck
- Fast fill full service center/box
- 4 × 8D maintenance free batteries
- Slide-out battery tray with four (4) batteries
- Remote jump start terminals

CAROUSEL

- Hydraulically operated from the cab
- No moveable parts
- Semi-automatic indexing

COOLING (SINGLE, FRONT-END MOUNTED)

- Maximum ambient cooling capacity of 52° C (125° F)
- Variable speed fan arrangement for coolers

HYDRAULIC SYSTEM

- Two (2) variable displacement axial piston pumps, in closed loop, which operate the drill rotation, pulldown/hoist and tram.
- One (1) high pressure piston pump, in load sense, for all auxiliary functions
- One (1) high pressure tandem gear pump, in open loop, for cooler fans (2 fans per cooler)
- Dual filtration and additional loop filters between pumps and motors
- Hydraulic tank capacity 1363 L (360 gal)

DRILL ACCESSORIES (TRICONE/ROTARY)

- Heavy duty shock sub, with top sub adaptor
- Roller deck bushing
- Bit sub
- Horseshoe bushing
- Bit basket
- Lifting bail
- Auto tool wrench (deck wrench)

DUST SYSTEM

- See Optional Equipment and select the required system

PAINT

- Standard Caterpillar colors

MISCELLANEOUS

- Backup alarm
- Filter kit for 50-hour preventive maintenance.
- Seventeen (17) LED night lights
- Handrails with side boarding ladders
- Outside cab platform for easy access and full walk around

MD6540 Rotary Blasthole Drill Mandatory Attachments

Mandatory Attachments (Installed at Factory)

Select one from each group. Mandatory attachments may vary. Consult your Cat® dealer for specifics.

MAST SELECTIONS 20 METER CONFIGURATION

- 19.86 m (65'2") Single Pass Hole Depth using 2 × 9.14 m (30 ft) S-S drill pipes and 310 cm (122 in) long bit sub
 - 65.5 m (215 ft) Total Hole Depth multi pass using carousel
 - Carousel for five (5) 9.14 m (30 ft) long S-S × 219 mm (8⁵/₈ in) OD pipes
 - All hole depths with drill on tracks, changing bit above the deck
 - Winch 1587 kg (3,500 lb) capacity
- 19.86 m (65'2") Single Pass Hole Depth using 2 × 9.14 m (30 ft) S-S drill pipes and 310 cm (122 in) long bit sub
 - 65.5 m (215 ft) Total Hole Depth multi pass using carousel
 - Carousel for five (5) 9.14 m (30 ft) long S-S × 235 mm (9¹/₄ in) OD pipes
 - All hole depths with drill on tracks, changing bit above the deck
 - Winch 1587 kg (3,500 lb) capacity
- 19.86 m (65'2") Single Pass Hole Depth using 2 × 9.14 m (30 ft) S-S drill pipes and 310 cm (122 in) long bit sub
 - 56.4 m (185 ft) Total Hole Depth multi pass using carousel
 - Carousel for four (4) 9.14 m (30 ft) long S-S × 273 mm (10³/₄ in) OD pipes
 - All hole depths with drill on tracks, changing bit above the deck
 - Winch 1587 kg (3,500 lb) capacity

MAST SELECTIONS 16 METER CONFIGURATION

- 16.15 m (53 ft) Single Pass Hole Depth using 13.7 m (45 ft) S-S drill pipe and 396 cm (156 in) long bit sub
 - 84.73 m (278 ft) Total Hole Depth multi pass using carousel
 - Carousel for five (5) 13.7 m (45 ft) long S-S × 219 mm (8⁵/₈ in) OD pipes
 - With drill on tracks – changing bit above the deck
 - Winch 3492 kg (7,700 lb) capacity
- 16.15 m (53 ft) Single Pass Hole Depth using 13.7 m (45 ft) S-S drill pipe and 396 cm (156 in) long bit sub
 - 84.73 m (278 ft) Total Hole Depth multi pass using carousel
 - Carousel for five (5) 13.7 m (45 ft) long S-S × 235 mm (9¹/₄ in) OD pipes
 - With drill on tracks – changing bit above the deck
 - Winch 3492 kg (7,700 lb) capacity
- 16.15 m (53 ft) Single Pass Hole Depth using 13.7 m (45 ft) S-S drill pipe and 396 cm (156 in) long bit sub
 - 84.73 m (278 ft) Total Hole Depth multi pass using carousel
 - Carousel for four (4) 13.7 m (45 ft) long S-S × 273 mm (10³/₄ in) OD pipes
 - With drill on tracks – changing bit above the deck
 - Winch 3492 kg (7,700 lb) capacity

TOP DRIVE GROUP (must select one)

- Top drive – high speed/low torque
 - Two (2) motors
 - Rotation speed 0-150 rpm
 - Torque up to 17 219 N·m (12,700 lbf-ft)
- Top drive – low speed/high torque
 - Two (2) motors
 - Rotation speed 0-124 rpm
 - Torque up to 20 880 N·m (15,400 lbf-ft)

MACHINE DECAL LANGUAGE GROUP (must select one)

- Machine Decal Group – English
- Machine Decal Group – Spanish

MD6540 Rotary Blasthole Drill

Optional Attachments (Installed at Factory)

Optional attachments may vary. Consult your Cat dealer for details.

DRILLING

- Drill pipe (see Drill Pipe Price List)

DUST COLLECTION OPTIONS

- 3600 dust collector with precleaner, (tandem model HDE 1800's in Series)
- Water injection system for dust suppression with 2922 L (772 gal) below deck tanks not available with dust collector

FLUIDS

- Drill pipe thread lubrication

COLD WEATHER AIDS

- Heating system (self-contained heater for engine coolant, water, hydraulic oil, fuel)

MISCELLANEOUS

- Luncheonette – microwave/refrigerator
- Custom paint (contact factory)
- Winch remote control pendant (control outside cab)
- 24V to 110 volt AC inverter
- Remote jump start terminals
- Mechanical tool kit (reference TV014590)
- Extreme hot weather lubricant upgrade (compressor oil)
- Extreme hot weather lubricant upgrade (hydraulic oil)
- Tow bar assembly
- Lanyard attachment (cable with travelling hook) on mast
- Ground level pull cable shut down
- High pressure wash-down pump with hose reel

Materials and specifications are subject to change without notice.

Featured machines in photos may include additional equipment.

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com.

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