

MD5090

Track Drill



General Data

Hole diameter range	89 mm-127 mm	3.5 in-5.0 in
Hole depth maximum	22.1 m	72.5 ft
Engine	Cat [®] C9 Tier 3 224 kW (300 hp) @ 1,800 rpm	
Compressor	8.5 m ³ /min	300 ft ³ /min
Rock drill HPR4519	19 kW	25 hp

MD5090 Features

Pattern Coverage

Drill more with fewer set ups thanks to a sturdy boom system that is telescopic, has a 1.52 m (5 ft) extension, and swings 40 degrees to the left and right.

Power Group

Faster cycle times are achieved through ample horsepower, air capacity, and efficient operating systems.

Rock Drill

Cat Rock Drills are simple enough to be owner serviced yet renowned for their strength and long life in hard rock drilling with hydraulic powered percussion and rotation that covers a wide range of applications.

Cableless Design

The absence of a cab offers multiple advantages including maximum visibility, unrestricted boom swing, and lighter weight which translates into better maneuverability.

Serviceability and Customer Support

The no canopy design allows for quick access to service points making maintenance easy so equipment life cycle is long and resale value is retained. A wide range of Cat parts and service plans support your investment.

Contents

Large Pattern Coverage.....	4
Cableless Design.....	4
Boom and Feed.....	5
Rock Drill.....	6
Power Group.....	7
Undercarriage.....	8
Optional Dust Collection.....	9
Serviceability.....	10
Safety.....	12
Sustainability.....	13
Specifications.....	14
Standard and Optional Equipment.....	17



Proven Productive

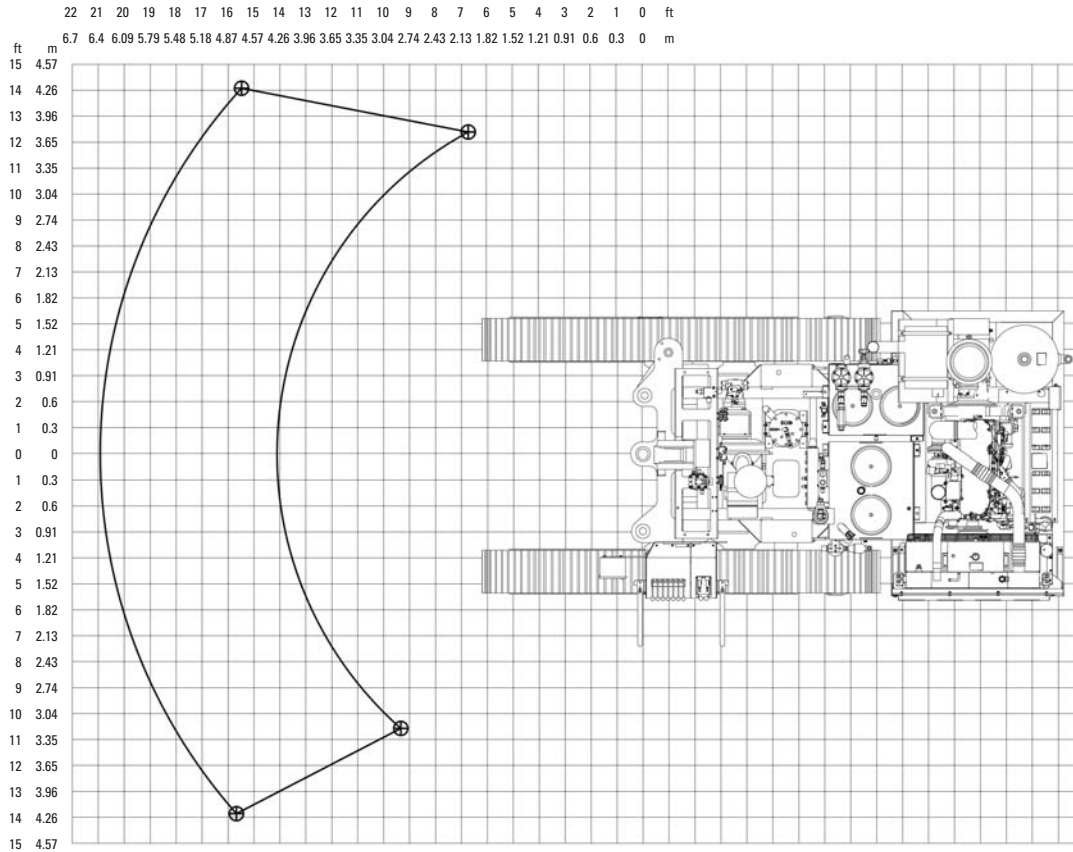
Fast Cycle Times



MD5090 delivers high productivity by getting more holes drilled with fewer set ups. These fast cycle times are achieved thanks to its top performing rock drill, large pattern coverage, and a power group that's ideally sized for drilling 89 mm-127 mm (3.5 in-5.0 in) holes. A non-cab, non-enclosure version, as shown, is lightweight and service accessible.

Large Pattern Coverage

Fewer Set-ups



Drill more holes with fewer set-ups thanks to a sturdy boom system that is telescopic, has a 1.52 m (5 ft) extension, and swings 40 degrees to the left and right.

For even greater flexibility in drill patterns, the MD5090 feed swings 36° L to 37° R and it also extends 0.9 m (3 ft).

Cableless Design

No Cab. No Limits.

Features

- Cost effective alternative to drills with cabs
- Highly maneuverable
- Lighter in weight
- Wide boom swing
- Large pattern coverage
- Easy to transport
- Excellent visibility



Boom and Feed

Extends Your Reach



A sturdy extendible boom and feed provides excellent pattern coverage and requires fewer setups. The heavy-duty boom is constructed of thick square tubing with steel plate reinforcements in key areas to add strength. The feed system resists torsion and thrust loads because it is built with diagonally braced high strength steel channels.

Features

- Boom length 3.81 m (12.5 ft)
- Boom extension 1.5 m (5 ft)
- Boom swing 40° L to 40° R
- Feed swing 36° L to 37° R

- Feed extension length 0.9 m (3 ft)
- Feed wear pads are replaceable
- Planetary gearbox feed drive speed 27.7 m/min (91 ft/min)
- Feed mounted control panel

Rock Drill

Reliable. Durable. Low Operating Cost.

Reliable Performer

Low cost of ownership and reliability are yours with renowned Cat Rock Drills. Building on a legacy of simplistic power, these drills have long life expectancy and are field serviceable. This combination of robust design and easy maintenance means more hours of reliable, low-cost operation. For added efficiency, the pistons are matched to the cross section of the rod so the wave form is properly matched for maximum energy transfer.

Durable Design

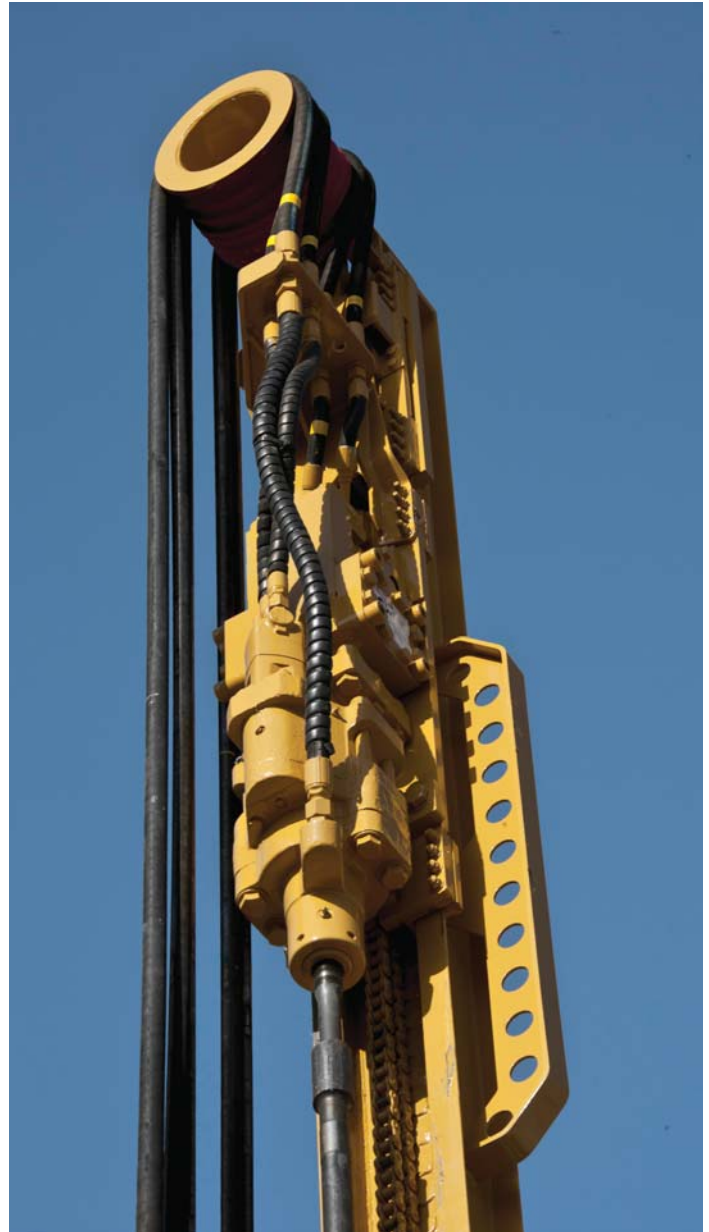
A simple design coupled with high strength materials yields exceptional durability.

- Having only half of the components of competitive models, there are fewer internal parts to wear
- There are four major housings bolted together with high strength flanges eliminating troublesome long tie rods
- Long life alloy bushings
- Fast response accumulators provide a smooth and efficient hydraulic oscillation
- Long leakage paths of the oscillator bearings yield high volumetric efficiency

Owner Serviceable

Cat Rock Drills are so simple that owner serviceability is a viable alternative and cost savings.

- Other models require downtime for round trip transportation to a clean room environment
- Only their OEM service technicians can perform the maintenance and repairs
- All maintenance and rebuilds can be done in your shop and some maintenance can even be done with the rock drill still mounted to the feed
- Accumulator assemblies may be replaced in the field
- Troubleshooting is easy since there are half the components of other drills



The MD5090 is equipped with the HPR4519 hydraulic powered percussion rock drill rated at 19 kW (25 hp) output energy with dual hydraulic variable rotation motors producing 908 N-m (670 lbf-ft) torque.



Power Group Delivers

Fast cycle times and maximum efficiency is yours with the MD5090 power group that combines generous engine horsepower, air capacity, and cooler.

Engine

Cat C9 Tier 3 engine producing 150 kW (300 hp) @ 1,800 rpm. The six (6) cylinder engine is water-cooled, electronically controlled, turbocharged, and air-to-air after-cooled.

Additional Engine Features

- Automatic three-position throttle control by power demand for fuel conservation
- Dual-element air filter
- Dual-fill 492 L (130 gal) fuel tank

Compressor

- Strong flushing power
- High pressure rating 8.5 m³/min (300 ft³/min) @ 10 bar (150 psi)
- Reliable rotary screw-type compressor
- Hydraulic motor driven
- Dual-element air filters with indicators

Cooler

- ATAAC side by side arrangement
- 52° C (125° F) ambient temperature
- Easy troubleshooting and cleaning of the coils
- 106 cm (42 in) large fan assembly

Hydraulics

- Two direct driven, variable displacement, pressure compensated axial piston pumps
- Two fixed displacement traction drive motors
- One fixed displacement compressor drive motor

Undercarriage

Strong Foundation



You can expect a long life due to the structural integrity of the MD5090 undercarriage. It provides reliable maneuverability with a low center of gravity, high ground clearance and independent track oscillation.

- B-4 excavator track pad and chain
- Wide triple grouser track pads 380 mm (15 in)
- Ground clearance 431 mm (17 in)
- Track gauge 2042 mm (80.4 in)
- Max speed 4.0 km/h (2.4 mph)
- Gradeability 35°
- Track oscillation $\pm 10^\circ$
- Hydraulically released spring applied disc brakes



Optional Dust Collection

Contain It – Quickly and Quietly



Powered to clear holes up to 127 mm (5 in), the optional dry dust collection system effectively manages rock fragments and dust and is easy to clean and service.

Features

- Sealed pick up pot prevents cuttings from escaping above the hole
- Vacuum generated air flow carries the materials
- Feed mounted precleaner separates cuttings from dust
- Filtration area is 28 m² (304 ft²) and separates the solid particles from the clean air
- Abrasive resistant dust hose is 12.7 mm (5 in)
- One bolt removal for replacement of dust seal
- Easy bottom access to filters and air valves

Serviceability

Smart and Simple





Designed to offer you safe and efficient service access, Cat Track Drills have well-organized electrical and hydraulic arrangements. Logically located components allow for easy maintenance. As a result, equipment life cycle is longer, operating costs are lower, and re-sale value is retained.

Features

- No enclosure allows for quick access to service points
- Grease reservoir is easily accessible for changing coupling grease
- Pump for filling hydraulic tank
- Service areas are designed with three points of contact for safety

Well Organized Electrical and Hydraulic Designs

- Color coded valves and blocks for easy identification and troubleshooting
- Point to point wiring reduces mean time to repair
- Bulk head fitting to allow for shorter run hoses
- Hydraulic hoses labeled by diameter and length and spaced for easy wrench access

Supported by World-class Cat Dealer Network

From helping you choose the right machine to keeping your equipment up and running, your Cat dealer provides the best in sales and service.

- Preventive maintenance programs are available to maximize your return on investment, achieve full equipment life cycle, and managing costs
- Guaranteed maintenance contracts help you forecast your businesses needs and strategically plan for service and parts expenses
- Best-in-class parts availability because Cat dealers understand the value of your uptime
- Operator training to help boost your productivity
- Genuine Cat Remanufactured parts are available



Safety

Protect Your Investments



The MD590 is designed with safety features that provide a secure work environment for your operators and service technicians.

Safety Features

- Emergency stop on the feed
- Non-slip, heavy duty steps and handles are strategically placed
- Ground-level access to service points
- Well-organized electrical and hydraulic designs
- Excellent visibility
- All proper guards in place
- Spring-applied, hydraulically released brakes

Operator Training

- High quality manuals for operation, maintenance, and service
- Classroom style training available
- Hands-on training with your local Cat dealer





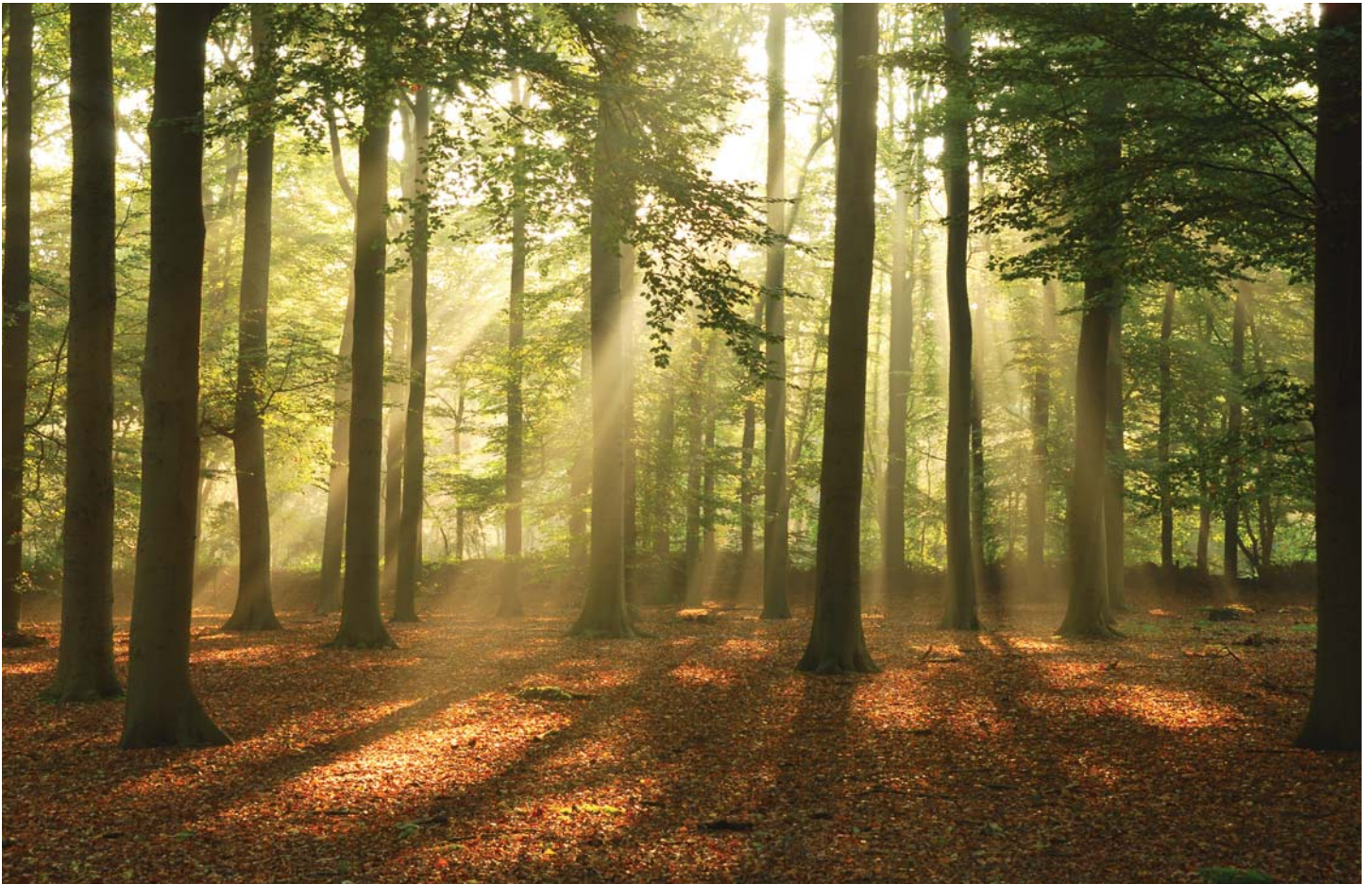
Sustainability

Today's Work, Tomorrow's World

While helping you increase the efficiency and productivity of your operation, Cat Drill designs help minimize the environmental impact of mining. We strive to provide products, services and solutions that use our natural resources wisely.

MD5090 Sustainability Features

- Fuel economy is achieved with three speed throttle control
- Durable components offer longer life and less waste
- Remanufactured parts are available
- Major components can be rebuilt



MD5090 Track Drill Specifications

General Data

Hole diameter range	89 mm- 127 mm	3.5 in- 5.0 in
Hole depth maximum	22.1 m	72.5 ft
Engine	Tier 3; 6-cylinder in-line, electronically controlled, turbocharged, water-cooled, 224 kW (300 hp) @ 1,800 rpm	
Compressor	140 L/sec @ 10 bar	300 ft ³ /min @ 150 psi
Rock drill HPR4519	19 kW	25 hp

Dimensional Specifications and Weights

Shipping height	3.12 m	10.25 ft
Shipping length	10.31 m	33.83 ft
Shipping width	2.59 m	8.5 ft
Shipping weight (base machine)	18 597 kg	41,000 lb

Undercarriage

B-4 excavator		
Spring applied disc brakes		
Triple rock grousers		
Wide triple grouser pads	380 mm	11.8 in
Gradeability	35°	
Ground clearance	431 mm	17 in
Ground pressure	0.65 bar	9.5 psi
Track gauge	204 cm	80.4 in
Tram maximum speed	4 km/h	2.4 mph
Track oscillation	±10 deg	

Power Train

Tier 3; 6-cylinder in-line turbocharged, water-cooled, 224 kW (300 hp) @ 1,800 rpm		
Ambient temperature capability	52° C	125° F
Dual element air filter		
Fuel tank (dual fill)	492 L	130 gal

Cooler Package

Four vertical sections; compressor, engine, hydraulic and air after cooler		
Sized for ambient capability of 52° C (125° F)		
Fan assembly	106 cm	42 in

Hydraulic System

Two (2) pressure compensated, axial piston pumps		
Convenient pressure gauges installed		
Hydraulic tank	405 L	107 gal

Air Compressor

Hydraulically driven		
Screw type compressor	140 L/sec @ 10 bar	300 ft ³ /min @ 150 psi
Dual filter elements		

Optional Dust Collecting System

Dust collector sized to clean holes up to 127 mm (5.0 in) diameter		
Hydraulic motor powered, dry dust collecting system		
Filter area	28 m ²	304 ft ²
Pneumatic filter purge system		
Abrasive resistant suction hose	127 mm	5 in
Reverse pulse filter cleaning system		
Feed-mounted dual axis precleaner		
Dust pickup pot		

Boom System

Boom length	3.81 m	12.5 ft
Boom extension	1.5 m	5 ft
Boom swing	40° L to 40° R	
Boom lift above horizontal	36°	
Boom dump below horizontal	29°	

Feed System

Model HUFH16 hydraulic motor driven steel channel feed		
Manual drill steel rack		
Power centralizer		
Manual inclinators		
Will accept 6.1 m (20 ft) starter steel		
Set up for 38 mm or 45 mm drill steel		
Feed extension	0.91 m	3 ft
Feed swing	36° L to 37° R	
Dump	139° from 0° of boom	
Two (2) feed channels	17.78 cm	7 in
Feed rate	27.7 m/min	91 ft/min
Chain force	3347 kg	7,379 lb

Rock Drill

HPR4519 hydraulic powered percussion rock drill		
Output energy @ 240 rpm	19 kW	25 hp
Dual hydraulic variable rotation motors producing 908 N·m (670 lbf-ft) torque		
Weight	299 kg	660 lb
Rod diameter	45 mm	
Percussion pressure up to	200 bar	2,900 psi
Blow rate	2,500-2,700 bpm	

Optional HPR5123 Rock Drill

Output energy @ 160 rpm	23 kW	31 hp
Dual hydraulic variable rotation motors producing 1356 N·m (1,000 lbf-ft) torque		
Weight	397 kg	877 lb
Rod diameter choices	45 mm or 51 mm	
Percussion pressure up to	200 bar	2,900 psi
Blow rate	2,500-2,700 bpm	

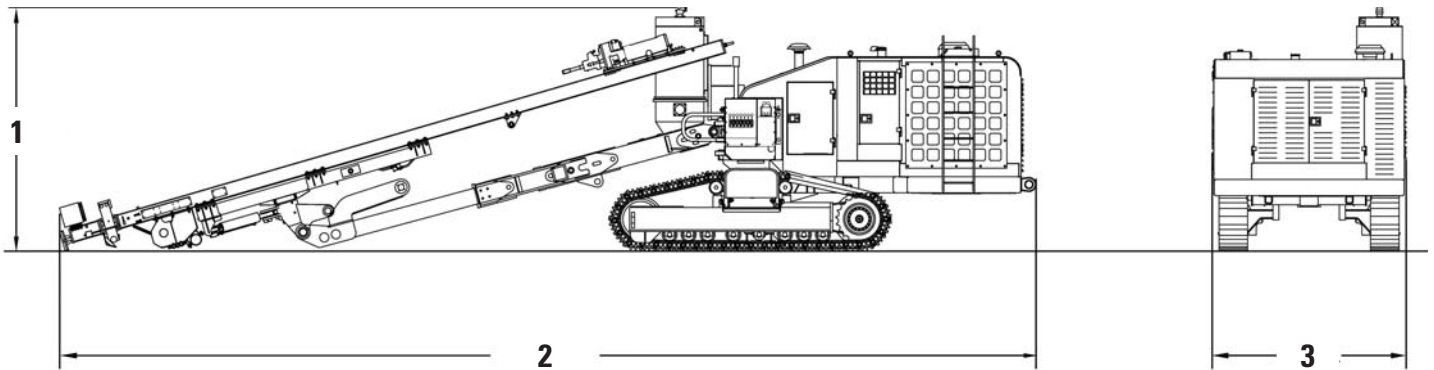
Safety

- Feed swipe rope engine shut off
- All proper guards in place
- Spring-applied, hydraulically released disc brakes
- Ground-level access to service points and well-organized electrical and hydraulic designs
- Heavy duty steps and handles are strategically placed and non-slip

MD5090 Track Drill Specifications

Dimensions

All dimensions are approximate.



1 Shipping Height	3.12 m	10.25 ft
2 Shipping Length	10.31 m	33.83 ft
3 Shipping Width	2.59 m	8.5 ft

Standard Equipment

Standard equipment may vary. Consult your Cat dealer for details.

TRACK UNDERCARRIAGE

- Hydraulic, motor driven, track assemblies with 380 mm (15 in) grousers, hydraulic cylinder controlled oscillation, hydraulic released, spring applied, disc brakes, triple rock grousers

POWER

- Cat C9 Tier 3, six (6) cylinder, electronically controlled, water-cooled, turbocharged and air-to-air after-cooled diesel engine rated at 224 kW (300 hp) @ 1,800 rpm includes intake heater for cold weather starting
- Engine speed automatically controlled by power demand

HYDRAULIC SYSTEM

- Two (2) direct driven, variable displacement, pressure compensated axial piston pumps
- Two (2) fixed displacement traction drive motors
- Fixed displacement compressor drive motor

COOLER

- ATAAC side by side arrangement
- 52° C (125° F) ambient temperature
- 106 cm (42 in) large fan assembly

COMPRESSOR

- Hydraulic motor-driven 140 L/sec @ 10 bar (300 ft³/min @ 150 psi) screw-type compressor

BOOM SYSTEM

- 3.81 m (12.5 ft) telescopic boom with 1.5 m (5 ft) extension
- 0.91 m (3 ft) feed extension complete with a drill positioner and a universal feed table

FEED SYSTEM

- Model HUFH16 hydraulic motor-driven steel channel chain feed complete with the power centralizer, manual inclinators and manual drill steel rack
- HUFH16 feed will accept 6.1 m (20 ft) steel for 18.5 m (60.7 ft) single pass without a hose reel
- 38 mm or 45 mm drill steel
- Pre-split capabilities

ROCK DRILL

- Model HPR4519 hydraulic powered percussion drill with an energy/frequency combination that covers a wide range of applications
- Hydraulic motor powered variable speed rotation

CONTROLS

- Drill, feed and blowing air controls are mounted on the feed mast
- Tram and boom controls are mounted at the tram station

Optional Equipment

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

- Dust collector complete with feed-mounted precleaner
- Power operated pickup pot
- Complete sheet metal enclosure
- Dual boom positioner controls (mounted on feed)
- Drill, feed and boom controls mounted on swing arm in lieu of feed mount
- Electronic two-axis angle indicator

- Power coupling greaser
- Rear-mounted water injection system utilizing a 303 L (80 gal) pressurized tank
- HPR5123 rock drill in lieu of HPR4519
- Model HUFH14 hydraulic motor-driven steel channel chain feed complete with the power centralizer, manual inclinators and manual drill steel rack

- Linear rod changer for 3.66 m (12 ft) steel on HUFH14 feed
- Rod changer conversion kit 51 mm to 45 mm
- Single grousers
- Dual tram controls mounted at control box

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

AEHQ6954 (01-2013)

© 2013 Caterpillar Inc.
All rights reserved

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

CAT, CATERPILLAR, SAFETY.CAT.COM, their respective logos, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

