# MD6240 Rotary Drill





#### **Basic Specifications**

Hole Diameter Bit Load Hole Depth Single-pass (12 m/39 ft mast) Hole Depth Single-pass (15 m/49 ft mast) Engine Cat® C27 Tier 2 Compressor 152-244 mm (6-9.625 in) 24 000 kg (52,911 lb) Up to 12.80 m (42 ft)/Multi-pass Up to 55.47 m (182 ft) Up to 15.85 m (52 ft)/Multi-pass Up to 31.08 m (102 ft) 597 kW (800 hp) at 2,100 rpm 48 m<sup>3</sup>/min (1,700 ft<sup>3</sup>/min) 6.9 bar (100 psi)

#### **MD6240 Features:**

#### **Solid Structures**

A strong foundation for continuous drilling in harsh conditions, MD6240 is designed for long life with features such as a mast with double cut lacing, integral A-frame design, and a solid mainframe with low deflection rates in stress areas.

#### **Power Group**

Fast cycle times are achieved through top of class bit load, rotary head horsepower, bailing air and a multitude of time-saving systems for maximum efficiency.

#### **Carousel Pipe Rack**

Rapid pipe changes that are safe, efficient and completely controlled from inside of operator's cab. A hydraulic break out wrench and deck wrench assist in breaking thread connections quickly and effectively. Dual hammer Tricone Pipe Rack allows for rapid conversion between tricone and DTH drilling in less than five minutes.

#### **Operator Safety and Comfort**

Keep your operators comfortable, productive and safe in our spacious and quiet cabs with high visibility.

#### **Serviceability and Customer Support**

*Easy maintenance and a long life cycle is yours with high quality Cat Drills and reliable customer support.* 



# **Proven Performer**

Low-cost of ownership, highly productive and long lasting

#### **Contents**

4
6
8
10
11
12
14
15
16
19
/20
21
23



High productivity and low cost of ownership is yours with the MD6240 Rotary Drill. With bit load force of 24 000 kg (52,911 lb) and the capability to drill depths up to 55.47 m (182 ft) the MD6240 is well equipped to drill in hard or soft rock applications. Built to be reliable, safe and easy to service for years to come.

# **Solid Structures**

To withstand your harsh quarry and mining environments



Best built for long life, the MD6240 has heavy-duty structures. The mast, integral A-frame, and mainframe are durable providing a strong platform needed for drilling in harsh conditions. The MD6240 is equipped to perform in challenging environments and provides high availability, positively impacting your bottom line.

All welded structures comply with AWS 14.3 welding standard. The welded structures are inspected after the manufacturing process providing reliable, maintenance free and long lasting platform for the drill.

#### **Sturdy Mast**

- The mast is made of heavy-duty ASTM A500 Grade B steel tubing on all four chords and cross members, which creates a torsionally strong mast structure and reduces the material fatigue.
- All mast structures are designed with double-cut lacing in high stress areas to prevent cracking and assure long life.
- The mast can be raised or lowered with full pipe rack and full drill string on the rotary head, in less than 40 seconds.

## **Heavy-Duty Frame**

- The A-frame is an integral extension of the mainframe, providing a strong, low maintenance design.
- The mainframe design assures structural integrity. The main rails, made of ASTM A500, Grade B, rectangular steel tubing, are heavily cross-braced and reinforced in high stress areas.

## Undercarriage

- Three point oscillating suspension allows the drill to negotiate rugged, uneven terrain without transferring excessive torsional forces to the mainframe, and allows continued stability while tramming between holes.
- Tram speed is 2.0 km/h (1.25 mph). Gradeability is 48% with the mast down.
- Ground clearance: 610 mm (24 in)
- Bearing ground pressure: 0.83 bar (12 psi)







To achieve low cost, high efficiency drilling, your power group configuration is selected to match the needs of your specific geology and site conditions. We have numerous configurations for low pressure rotary drilling or high pressure DTH hammer drilling. Power groups are arranged in-line for easy access, from both sides, to the engine, compressor, hydraulic pumps, plumbing and other components, which translates into safer serviceability and lower maintenance cost.

## Engines

To match your application demands, MD6240 has three choices for engine sizes. Cat C27 ACERT™ @ 597 and 652 kW (800 and 875 hp) @ 2,100 rpm.

Each package includes:

- Fuel-filtration package to overcome harsh mining environments
- Pre-lube system for extra engine protection
- Dry type inlet air cleaner with safety elements
- Heavy duty muffler and muffler guard
- Manifold blanket covers
- Set of batteries
- Coolant conditioner
- Fuel tank





#### Compressor

For efficient flushing of cuttings and dust out of the bore hole, the air compressor delivers the right amount of bailing air based on hole diameter, depth and material density. Air-on-demand control system regulates air intake to match the amount of compressed air being used.

## Standard Compressor is Low Pressure for Rotary Drilling Mode

- Single stage, positive displacement, oil-flooded, single-stage screw type compressor
- Discharge air flow (sea level) 48 m³/min (1,700 ft³/min)
- Maximum operating pressure 6.9 bar (100 psi)

## Optional Compressor is High Pressure for DTH Hammer Drilling Mode

- High pressure, oil-flooded, two-stage screw type
- Discharge air flow (sea level) 33 m<sup>3</sup>/min (1,150 ft<sup>3</sup>/min); 38 m<sup>3</sup>/min (1,350 ft<sup>3</sup>/min); 43 m<sup>3</sup>/min (1,500 ft<sup>3</sup>/min)
- Maximum operating pressure 10.3/24.1/34.5 bar (150/350/500 psi)

## Cooler

For ample capability, our cooler systems are designed to assure unrestricted airflow and reduce excessive operating heat, which extends life of engine, compressor, and hydraulic components.

- Rated up to 52° C (125° F) ambient cooling capacity
- Split cooler
- Engine radiator
- Charge air cooler section
- Hydraulic oil cooler section
- Compressor oil section
- Replaceable cores
- Fan arrangements are suited to the powertrain configuration
- Mounted on an isolated skid to reduce vibration, limit load transfer and noise

## **Hydraulic System**

The pump drive is powered by direct input from the engine using a maintenance free rubber mounted coupling. The result is a longer power train life as less shock is absorbed. The coupling housing is fully enclosed with a hinged access hatch for visual inspection.

## **Hydraulic Pump Drive**

- Two axial piston pumps for the pulldown and rotation systems or track propel functions.
- One axial piston pump for the cooling fans and auxiliary functions.
- Two gear pumps supply power to the dust collector and water injection systems.

## Mast System Strong and sturdy



To assure long life, all mast structures are designed with double-cut lacing in high stress areas. There are several application-specific masts to choose from.

Mast Height	12 m (39 ft)	15 m (49 ft)
Pipe Length	10.67 m (35 ft)	15.24 m (50 ft) [two 7.62 m (25 ft) pipes]
Single Pass Depth	12.8 m (42 ft)	15.8 m (52 ft)
Pipe Diameter	114-178 mm (4.5-7.0 in)	114-178 mm (4.5-7.0 in)
Pipe Wall Thickness	19 mm (0.75 in)	19 mm (0.75 in)

## **Pulldown and Hoist**

A single, double-acting cylinder, cable pull-down system produces 22 680 kg (50,000 lb) of pull-down force and 22 680 kg (50,000 lb) of hoist force. The cylinder rod is fixed on both ends with a moving barrel, providing high efficiency and reducing feed system wear and maintenance.

- One variable displacement axial piston pump in an open loop system
- Bit load up to 24 000 kg (52,911 lb)
- Feed and hoist speed 0-39 m/min (0-129 ft/min)
- Weight on bit feed hold back control system

#### Cables

The MD6240 drill is designed with mast cables instead of chains. Cables have a predictable wear profile and do not unexpectedly fail. They can be repaired quickly and easily, and they absorb and evenly dissipate vibrations, which promotes longer mast life.

#### **Auto Tensioning**

A cable auto-tensioner ensures maximum cable service life with minimum maintenance by automatically keeping cables tight via a series of hydraulic cylinders applying constant pressure. Cables for the MD6420 are 2.85 cm (1 in) in diameter, and rated at 62.8 tons (138,450 lb) nominal strength.

## **Rotary Drill Head (1)**

Achieve optimal penetration rates with the ability to select the most suitable rotation speed for your application. One fixed displacement, axial piston motor provides 139 kW (186 hp) with rotation speed 0-220 rpm. Torque reaches 13 015 N·m (9,600 lbf-ft) with variable control. Heavy-duty, reliable drill head includes a 140 mm (5.5 in) bull-shaft connection to the drill string and has adjustable steel guides with replaceable pads for even travel on main chords. The long head carriage design ensures the rotary head rides the main chords evenly.

## **Angle Drilling**

The MD6240 can drill in angles up to 25 degrees (in 5 degree increments). Dual mast locks are located above the deck and hydraulically operated dust curtains are available for angle drilling.

## Pipe Rack Carousel (2)

The hydraulically operated carousel-type pipe changer is located outside of the mast structure, and all functions are controlled from a console in operator's cab, which assures efficient and safe drill string changes and storage.

The carousel provides automatic indexing of drill pipes in relation to the rotary head.

- Pipe diameter 114-178 mm (4.5-7.0 in)
- 12 m (39 ft) mast arrangement 4 pods; 10.67 m (35 ft) long pipe
- 15 m (49 ft) mast arrangement 2 pods; 15.24 m (50 ft)/ two 7.62 m (25 ft) long pipe

## **Pipe Positioner**

To help you align the pipe string while adding or detaching pipes, or in angle hole drilling, our automatic pipe positioner, hydraulically activates to guide the pipe straight through the deck bushing.

## Hammer/Tricone Pipe Rack

To accommodate differences in rock consistency, a patented Hammer/Tricone Pipe Rack allows for rapid conversion between tricone drilling for soft drilling conditions, and DTH drilling, for hard rock, in less than five minutes.

## Hydraulically Operated Break Out and Deck Wrench (3)

Adding to your productivity the HOBO works in concert with a highly effective deck wrench.

- Mounted on the outside mast structure
- Four-cylinder system for swing-adjust-rotate-clamp
- Operated from inside the cab

## **Overhead Winch**

To assist in safe and efficient handling of drill pipes, bits, subs and other heavy accessories, there is an auxiliary winch system with capacity to hoist up to 1587 kg (3,500 lb) capacity. Operation is from the operator's cab, or optional remote control.





## **Dust Collection** Largest chamber in the industry



For efficient dust collection MD6240 has a dust collector rated at 127 m³/min (4,500 ft³/min) and separate water injection system. Both dry and water injection systems can be mounted on the same drill.

- Water injection system options:
- Three tanks totaling 1271 L (336 gal) mounted under the front deck or
- One tank 1514 L (400 gal) mounted on top-deck (mounted in place of Dry Dust Collector)

## **Dust Curtain**

With the largest dust chamber in the industry, the MD6240 has a total enclosed area of 4.17 m<sup>2</sup> (44.89 ft<sup>2</sup>) and is surrounded by heavy rubber curtains. This provides ample space for dust containment while deep hole drilling and the resulting cutting piles. Optional hydraulic front and rear dust curtain lifters are available to ensure cuttings are not pulled back into the hole while tramming from point to point on the blast pattern.

- Material 6 mm (0.25 in) rubber nylon reinforced
- Split for excess with 305 mm (12 in) overlap
- Dust deflector is a natural rubber seal, 13 mm (0.5 in) thick, 356 mm (14 in) diameter



## **Fully Equipped Cab** For operator safety and comfort



## Safe and Effortless Operation

To limit operator fatigue the MD6240 controls are ergonomic. The FOPS certified cab has tinted safety glass windows and a closed circuit camera system for 360° visibility. Two heavy-duty doors provide quick egress to the drill table or the main deck.

## **Additional Safety Features**

- 45° control console, in relation to deck, assures good overview of drill table
- Closed-circuit camera system
- Two heavy-duty swing doors for convenient cab access
- Low sound and vibration levels

- Emergency ingress/egress
- Multiple engine stops
- Four leveling jacks ensure a minimum of three machine points of ground contact at all times
- The pipe handling system is designed so breaker plate is located at operator's eye level
- All auxiliary functions are controlled by fingertip toggle switches and marked with "no language barrier" symbols describing each function
- Fixed folding trainers seat
- Window washers and wipers

## **Spacious and Quiet Cab**

For comfortable and efficient operation, the MD6240 cab offers operators 3 m<sup>2</sup> (32 ft<sup>2</sup>) of floor area allowing ample room with a swiveling operator's seat equipped with armrests and a headrest. The ergonomic console provides well organized controls labeled with international ISO symbols for each function. The cab is shock mounted and insulated for quiet operation below 80 dB(A). Heated and air conditioned, operator comfort is attainable in all climates.

# **Serviceability and Customer Support**

Easy and safe to access all service points

TANK VIE



#### Large Main Deck

The MD6240 large deck (front and rear) plus wide walkways assure a safe operating area and more efficient maintenance. Access to walkways are on both sides of drill for quick access to all major components for daily pre-start checks, preventive maintenance and adjustments. The stationary drill table/rear deck (mast/cab area) provides access to the mast area and to the main deck during all drilling modes, including angle drilling. Immediate access to the power group including the engine, compressor, hydraulic pumps, plumbing and other components, translates into better serviceability and lower maintenance cost.







## Supported by World-class Cat Dealer Network

With the support of the Cat global dealer network, you can rely on unmatched service, integrated solutions, after-sales support, fast and efficient parts fulfillment, and world-class remanufacturing capabilities.

The Cat Parts and Service Network offers you the most comprehensive product support system in the industry. Everything we do is designed to keep you up and running longer, for less. Cat authorized and certified mechanics are trained in the latest diagnostic equipment, tools and service techniques. They know exactly what to look for, and exactly how to fix it.

One of the prime cornerstones of the Cat Parts and Service Network is availability. No matter where you are, no matter what day of the week or time of day, Cat Parts and Service is never far away. At each location, you have instant access to everything from information on maintenance options, engine selection and repair, to a full range of genuine Cat Parts and Remanufactured components.

The fact is, a vast majority of the parts you'll ever need are on hand at your local dealer, right off the shelf. And in the rare event a specific part is not on hand, your dealer can usually get it to you within 24 hours, utilizing our computerized parts location network.

From helping you choose the right machine to knowledgeable ongoing support, Cat dealers provide the best in sales and service.

- Preventive maintenance programs and guaranteed maintenance contracts
- Best-in-class parts availability
- Operator training to help boost your production
- Genuine Cat Remanufactured parts



We know keeping operators safe is a priority. Throughout Cat Drills you will find features that are designed to do just that.

- Operators are comfortable, more productive and safe in our spacious and quiet cab
- Cab is FOPS certified with tinted safety glass windows and a closed circuit camera system for 360° visibility
- The Carousel Pipe Rack is controlled from inside of operator's cab
- A hydraulic break out wrench and deck wrench assist in breaking thread connections from inside the cab
- Three point oscillating suspension allows the drill to negotiate rugged, uneven terrain without transferring excessive torsional forces to the mainframe, and allows continued stability while tramming between holes
- Power groups are arranged in-line for easy access, from both sides, to the engine, compressor, hydraulic pumps, plumbing and other components, which translates into safer serviceability
- Mast uses cables which have a predictable wear profile and do not unexpectedly fail like chains
- An auxiliary winch system for up to 1587 kg (3,500 lb) capacity, assists in handling of drill pipes, bits, subs and other heavy accessories and equipment from the cab or via remote control
- Two heavy-duty doors provide quick ingress/egress from cab to the drill table or the main deck
- Ground-level machine isolation and lock out box
- Multiple engine stops
- · Four leveling jacks ensure a minimum of three machine points of ground contact at all times



Sustainable development for Caterpillar means leveraging technology and innovation to increase efficiency and productivity with less impact on the environment and helping you do the same – enabling your businesses to become more productive by providing products, services and solutions that use resources more efficiently.

## **Engines with Advanced Technology**

Cat ACERT engines with advanced technology have lower emissions without compromising performance or fuel efficiency.

## **Extended Life**

Mast structure is designed for long life and is a base for major overhauling and continued use after standard operational life. Jack casing structures, A-frame/mast pivot and the deck are integrally welded to the mainframe assuring a sound structural base with the ability to be rebuilt.

## **Sustainability Features**

Fuel savings is achieved with our variable speed fans that match cooling demand. The coolers have replaceable cores.

The pump drive is powered by direct input from the engine using a maintenance free rubber mounted coupling. The result is a longer power train life as less shock is absorbed.

## **MD6240 Rotary Drill Specifications**

152-244 mm	6-9.625 in
Up to 55.47 m	Up to 182 ft
Up to 15.85 m	Up to 52 ft
	152-244 mm Up to 55.47 m Up to 15.85 m

#### **Operating Temperature**

Minimum ambient rating (standard)	−1° C	30° F
Cold weather option	–40° C	–40° F
Maximum ambient rating (standard)	52° C	125° F

## Pull-down/Hoisting Capacity

Rated pull-down capacity	Up to	Up to
	222 kN	50,000 lbf
Rated hoist capacity	Up to	Up to
	222 kN	50,000 lbf
Drilling feed/retract rate	0-39.3 m/min	0-129 ft/min
Head travel (12 m/39 ft)	14.54 m	572.4 in
Head travel (15 m/49 ft)	17.60 m	693.0 in
Cable type 25 mm (1 in)	DYFORM 8	
Automatic cable	Hydraulic cyli	nder, tensioning

## **Rotary Drive System**

Torque	0-13 015 N·m	0-9,600 ft-lb
Horsepower capacity	135 kW	182 hp

## Compressor (Standard)

Туре	Oil-flooded, single-stage screw	
Discharge air flow (sea level)	48 m³/min	1,700 ft³/min
Maximum operating pressure	6.9 bar	100 psi

## **Compressor (Optional)**

Type (high pressure)	Oil-flooded, two-stage screw	
Discharge air flow (sea level)	33 m <sup>3</sup> /min (1,150 ft <sup>3</sup> /min); 38 m <sup>3</sup> /min (1,350 ft <sup>3</sup> /min); 43 m <sup>3</sup> /min (1,500 ft <sup>3</sup> /min)	
Maximum operating pressure	10.3/24.1 bar         150/350 ps           or 10.3/24.1/         or 150/350           34.5 bar         500 psi	

## Engine (Standard) – C27 Tier 2

Manufacturer	Caterpillar	
Model	C27 Tier 2	
Rated horsepower	597 kW	800 hp
Optional rated horsepower	652 kW	875 hp
Fuel tank	2986 L	765 gal

## **Operator's Cab**

Туре	Shock-mounted; two-man, integrated FOPS certified	
Floor area	3 m <sup>2</sup>	32.4 ft <sup>2</sup>
Height inside	1943 mm	76.5 in
Windows (tinted safety glass in rubber mounting)	6 mm	0.25 in
Number of windows	10	
Number of doors	2 with windo (included abo	
Climate control	Wall-mounted, AC/heating/ pressurizing unit	
Other	Window wip	ers and washers

## **MD6240 Rotary Drill Specifications**

Undercarriage		
Number of lower rollers	12	
Rock guards/chain guides	Standard full	-length guards
Maximum drive horsepower per track	152 kW	204 hp
Brakes	Spring set, hy	draulic release
Tram speed maximum	2.0 km/h	1.25 mph
Gradeability mast down	48%/25.6 deg	grees
Front axle	Three-point oscillating type	
Mainframe		
Jacks, mast pivot and deck	Welded integrally to mainframe	
Machine deck	Access both sides	
Mainframe – Leveling Jack	(S	
Number	4	
Lift capacity	290 kN	65,300 lbf
Pad diameter	610 mm	24 in
Drill Table and Work Deck		
Table height off ground	1321 mm	52 in
Dust Suppression		
Dust collector capacity	127 m³/min	4,500 ft³/min

• Both dry and water injection can be mounted on the same drill

## **Accessories, Tools and Handling Equipment**

Drill Pipe (Optional, Price-Adder) – 12	m (39 ft) mast arra	angement
Diameter (customer specification)	114-178 mm	4.5-7.0 in
Wall thickness	19 mm	0.75 in
Length	10.67 m	35 ft
Threads	Depends on pipe diameter	
Drill Pipe (Optional, Price-Adder) – 15	m (49 ft) mast arra	angement
Diameter (customer specification)	114-178 mm	4.5-7.0 in
Wall thickness	19 mm	0.75 in
Length	7.62 m	25 ft
Threads	Depends on pipe diameter	
Top Adapter Sub		
Diameter	Depends on pip	be diameter
Length	711 mm	28 in
Top thread (API Reg.)	140 mm	5.5 in
Bottom thread	Depends on pip	be diameter
Bit Sub		
Table bushing	One (1) piece in deck bushing o	

## **Pipe Rack (outside the mast)**

Туре	Carousel, with stationary pods and breaker plates
12 m (39 ft) mast arrangement	4 pods; 10.67 m (35 ft) long pipe
15 m (49 ft) mast arrangement	2 pods; 7.62 m (25 ft) long pipe

## Winch System

Capacity	1587 kg	3,500 lb
Cable size	13 mm	0.5 in

## **MD6240 Rotary Drill Specifications**

## Dimensions

All dimensions are approximate.



<b>1</b> 15 m (49 ft) machine height mast vertical	21.68 m	71.11 ft
<b>2</b> 12 m (39 ft) machine height mast vertical	18.63 m	61.10 ft
<b>3</b> 12 or 15 m (39 or 49 ft) machine height mast horizontal	4.51 m	14.80 ft
4 Cab height from ground level	3.48 m	11.40 ft
<b>5</b> 15 m (49 ft) machine length mast horizontal	21.68 m	71.11 ft
<b>6</b> 12 m (39 ft) machine length mast horizontal	18.63 m	61.10 ft
<b>7</b> 12 m (39 ft) mast bottom to crown	16.40 m	53.83 ft
15 m (49 ft) mast bottom to crown	19.45 m	63.83 ft
8 Ground level to upper winch arm	4.51 m	14.80 ft
9 Overall machine width	5.06 m	16.59 ft
<b>10</b> Machine length (less mast and mast rest)	10.20 m	33.45 ft
<b>11</b> Mast rest length	2.19 m	7.21 ft

Based on MD6240 with 12 m (39 ft) and 15 m (49 ft) mast arrangement.

## **MD6240 Standard Equipment**

#### **Standard Equipment**

The MD6240 is designed to drill from 152-244 mm (6-9.625 in) diameter holes with rated pulldown and hoist capacity up to 22 680 kg (50,000 lb), in Rotary or Down the Hole applications.

#### ENGINE

- · Metal turbo and exhaust manifold covers
- Engine pre-lube
- Additional filtration
- Coolant conditioner

#### MAST

- 152-270 mm (6-10<sup>5</sup>/<sub>8</sub> in) hole diameter
- Up to 22 680 kg (50,000 lb) rated single cylinder pulldown/hoist system
- Up to 24 000 kg (52,911 lb) bit load with one pipe in the drill string
- Patented HOBO (Hydraulically Operated Break-Out) wrench operated from the cab
- Auto cable tensioning system
- 25° angle drilling package and mast locks
- Winch system 1587 kg (3,500 lb) capacity

#### **TOP DRIVE**

- Single motor
- Rotation speed 0-100 rpm
- Up to 13 016 N·m (9,600 ft-lb) torque

#### **OPERATOR'S CAB**

- Integrated FOPS
- Totally enclosed, insulated, two-man cab
- Two (2) hinged doors with heavy duty freezer type door latch system
- Ten (10) windows (safety glass, tinted)
- Windshield wiper and washer kit
- Ergonomic operator's console with full instrumentation
- Ergonomic operator's seat with head and armrests, retractable seat belt, air suspension mount
- · Electric over hydraulic drill functions
- Auxiliary functions operated by fingertip toggle switches
- More than 3 m<sup>2</sup> (32.4 ft<sup>2</sup>) of floor space
- Excellent visibility
- dB rating of 80 or less
- Wall mounted air conditioner/heater/ pressurizer, belt driven
- Rubber shock-mounts to absorb vibration
- Electric horn activated by push button in the cab
- Gel cell maintenance free battery
- Document holder inside the cab

#### UNDERCARRIAGE

- Excavator type, with 12 lower rollers
- 750 mm (29.5 in) triple grousers
- Full length chain guides/rock guards

#### **MAINFRAME AND DECK**

- Made of heavily cross-braced rectangular steel tubing
- Rear deck is stationary during both angle and vertical drilling modes
- Viewing hatch in rear deck, hydraulically operated from cab to help spotting holes
- Four (4) hydraulic leveling jacks (152 cm/60 in)
- Dust chamber clean-out door
- Centralized lubrication system (34 points)
- Additional mast rests mounted on non-drill end
- 1325 L (350 gal) fuel tank under engine - Additional fuel tank available as option
- 1570 L (415 gal) additional fuel tank under compressor
- 4 × 8D batteries

#### CAROUSEL

• Hydraulically operated from the cab

#### **COOLING – SPLIT COOLER ARRANGEMENT**

• Maximum ambient cooling capacity of  $52^{\circ}$  C (125° F) with replaceable cores

#### **HYDRAULIC SYSTEM**

- Two (2) variable displacement axial piston pumps, in closed loop system, that operate the drill rotation, pulldown/hoist system, and tram functions
- Double-gear pump, in open loop system, for all auxiliary functions and fan circuit
- Dual filtration

#### **DRILLING ACCESSORIES (TRICONE/ROTARY)**

- Top sub adapter
- Table bushing
- Bit sub [note: 12 m/39 ft configuration: 342 cm (135 in) S-S, 15 m/49 ft configuration: 152 cm (60 in) S-S]
- Horseshoe bushing
- Bit basket
- Hoist plug (lifting bail)
- Auto tool wrench/deck wrench

#### **DUST SYSTEM**

• See Optional Equipment and select the required system

#### PAINT

• Standard Caterpillar Colors

#### OTHER

- Backup alarm
- Filter kit for 50-hour preventive maintenance
- Two (2) hard copy sets Operator/Service/ Maintenance/Parts/Engine manuals, in English
- One Link-One Parts manual on CD, Operator and Service manual in pdf
- Seven (7) 60-watt LED lights for night drilling
- Side walkways and handrails with side boarding ladder
- Tool box, mounted under walkway (tools not included)
- Lift kit
- Towing hooks (front end)
- Battery disconnect

#### **Mandatory Options – Installed at Factory**

#### **ENGINE/COMPRESSOR CHOICES**

- Engine/compressor
- C27 (Tier 2) 597 kW (800 hp) @ 2,100 rpm with single stage compressor 48.1 m<sup>3</sup>/min @ 6.9 bar (1,700 ft<sup>3</sup>/min @ 100 psi)
- Spiral valve feature on 48.1 m<sup>3</sup>/min (1,700 ft<sup>3</sup>/min) compressor allows regulation of the air capacity
- C27 (Tier 2) 597 kW (800 hp) @ 2,100 rpm with two stage compressor 32.6 m<sup>3</sup>/min @ 10.3/24.1 bar (1,150 ft<sup>3</sup>/min @ 150/350 psi) split coolers
- C27 (Tier 2) 597 kW (800 hp) @ 2,100 rpm with two stage compressor 38.3 m<sup>3</sup>/min @ 10.3/24.1 bar (1,350 ft<sup>3</sup>/min @ 150/350 psi) split coolers
- C27, Tier 2, 652 kW (875 hp) @ 2,100 rpm with two stage compressor 42.5 m<sup>3</sup>/min @ 10.3/24.1 bar (1,500 ft<sup>3</sup>/min @ 150/350 psi)
- C27 (Tier 2) 652 kW (875 hp) @ 2,100 rpm with two stage compressor 38.3 m<sup>3</sup>/min @ 10.3/34.4 bar (1,350 ft<sup>3</sup>/min @ 150/500 psi) split coolers

#### **MAST AND CAROUSEL CHOICES**

- Mast and carousel 12 m (39 ft) arrangement: Up to 12.8 m (42 ft) single pass hole depth
- Mast to suit 10.67 m (35 ft) long pipe plus long bit sub for up to 12.8 m (42 ft) single pass, drill on tracks, changing bit above deck
- Four pipe carousel using 10.67 m (35 ft) pipes allowing total hole depth up to 55.47 m (182 ft)
- 114 mm (4<sup>1</sup>/<sub>2</sub> in) diameter, 19 mm (<sup>3</sup>/<sub>4</sub> in) wall thickness pipes (drill pipe not included) ranges to 178 mm (7 in) diameter, 19 mm (<sup>3</sup>/<sub>4</sub> in) wall thickness pipes (drill pipe not included)
- Mast and carousel 15 m (49 ft) arrangement: Up to 15.8 m (52 ft) single pass hole depth
- For two (2) 7.62 m (25 ft) drill pipe and bit sub for 15.8 m (52 ft) single pass, with a two pipe carousel using 7.62 m (25 ft) pipes allowing total hold depth up to 31.1 m (102 ft)
- 114 mm (4<sup>1</sup>/<sub>2</sub> in) diameter, 19 mm (<sup>3</sup>/<sub>4</sub> in) wall thickness pipes (drill pipe not included) ranges to 178 mm (7 in) diameter, 19 mm (<sup>3</sup>/<sub>4</sub> in) wall thickness pipes (drill pipe not included)

#### **Optional Choices – Installed at Factory**

#### DRILLING ACCESSORIES KIT FOR HAMMER DRILLING (IN LIEU OF ROTARY DRILL ACCESSORIES)

• Shock sub and adaptor, bit sub, two-piece table bushing, horseshoe bushing, hoist plug, bit basket, hammer oil injection system with 113.5 L (30 gal) tank

#### **DUST COLLECTION**

- Dust Collector 4500 Series
- Water injection system for dust suppression with three (3) tanks totaling 1271 L (336 gal) mounted under the front deck
- Water injection system for dust suppression with total 1514 L (400 gal) tank mounted on top-deck (mounted in place of Dry Dust Collector)
- Note: Dry Dust Collector and water injection on the same drill can be selected only with below deck tanks.

#### DRILLING

- Drill pipe
- Roller deck bushing
- Two-piece (split) deck bushing
- Rotary head RPM gauge, digital
- Rotary torque control
- Rotary/hammer shock sub
- Rock oiler injection system (for Tricone); 113.56 L (30 gal)
- Pipe guide roller assembly mounted on drill deck (rear deck)
- Dual purpose carousel (hammer Tricone pipe rack)

#### FLUIDS

- · Wiggins fuel only
- Wiggins full service (fuel, hydraulic oil, coolant, engine oil)
- Automatic lubrication system (34 points)
  Drilling pipe thread lube system, activated from inside the cab

#### SYSTEM PROTECTION

- Additional loop filters between pumps and motors
- Hydraulic diagnostic test station
- Engine mounted stop
- · Ground level engine shutdown
- Rotating beacons (one on mast crown, one on cab, one on front-end)

#### **COLD WEATHER AIDS**

- WEBASTO system (self-contained heater for engine coolant, water, hydraulic oil, fuel)
- Cab floor heater (electric fan with heater core utilizing engine coolant)
- Heating and circulation/drainage system for water injection installation, for -40° C (-40° F) with gate valve activated by temperature sensor
- $\bullet$  Cold weather package for temperatures down to –40° C (–40° F)
- Two-speed fan arrangement for coolers
- Electric heating elements for heating of fuel and water tanks, coolant, hydraulic oil tank
- Insulation of bottom of the cab and fuel tanks
- Compressor regulators enclosed in insulated box with electric heating element
- Inlet control cylinder enclosed in a box with electric heating element
- Cab floor heater electric fan with heater core utilizing engine coolant
- Thermo-glass in cab
- Dead-end arctic hoses @ pivot points
- -Cold weather lubricants
- Water injection hose (if water injection selected) with insulated sheath-electric heater
- -40 kW (54 hp) diesel gen-set or on-board transformer to power heating package (mine site to provide plug)

#### **Optional Choices – Installed at Factory (cont'd)**

#### **INDICATOR SYSTEMS**

- Mast lock indicator
- Jack retract indicators
- Tram interlock, jacks (with indicator)
- Tram interlock, head-position (pipe-in-hole)
- Pipe rack interlock
- Filter indicators, centrally mounted in cab (hydraulic, compressor, air intake)

#### **MISCELLANEOUS**

- 24 to 12 volt converter
- Extra lighting package (5 additional 60 watt LED lights)
- Blowdown hose with nozzle
- Hydraulic rear dust curtain lifting system
- Hydraulic front dust curtain lifting system
- CE conformity kit
- Special paint

- Closed circuit camera system with two cameras for front and rear mounting and monitor in cab
- Radio AM/FM, CD player and USB port for I-pod
- Radio C.B. with antenna
- XIR cab glass upgrade
- Thermal double-pane glass upgrade
- Cab window shades
- Remote jump start terminals
- Electric horn activated by push button in the cab
- · Gel-cell maintenance free battery upgrade
- Main drill window cage
- Lanyard attachment cable with traveling hook on mast, and personnel harness
- Tram remote control (pendant/cable) for operation of tram controls from ground
- Winch remote control pendant (control outside cab)

- 24V to 110V or 220V AC invertor
- Mechanical tool kit (reference TV014590)
- Three-point harness kit for operator's seat
- Water injection flow meter
- Cab manometer
- Extreme hot weather lubricant upgrade (compressor oil)
- Extreme hot weather lubricant upgrade (hydraulic oil)
- Basic engine shut down timer
- Murphy EMS panel mounted in cab-dash
  - EMS lap top harness/terminal mounted inside cab
  - Mirror kit (includes three bolt-on mirrors)
  - Slope indicator mounted in cab to indicate forward and lateral angle
  - Hydraulic oil temperature gauge mounted in dash
  - Document holder mounted inside the cab

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

© 2015 Caterpillar 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. AEHQ6886-04 (02-2015) Replaces AEHQ6886-03

