M318C MH
M322C MH

Material Handler Wheel Excavators

	M318C MH	M322C MH
Cat® 3056E DIT ATAAC Diesel Engine		
Gross power	119 kW/159 hp	127 kW/170 hp
Net power	113 kW/151 hp	122 kW/164 hp
Operating Weight	21 460 kg	24 690 kg
Maximum Reach (stick pin)	11 000 mm	12 500 mm
Maximum Height (stick pin)	12 000 mm	13 300 mm

M318C MH and M322C MH Material Handler Wheel Excavators

The C Series incorporates innovations for improved performance and versatility.

Engine

✔ The new Cat 3056E DIT ATAAC electronically controlled engine provides increased horsepower to serve the advanced hydraulic system. Performance, reliability, durability, excellent fuel economy, and low sound levels help maximize working efficiency. The innovative cooling system is easy to clean and features increased cooling capacity through a temperature sensing on-demand fan. **pg. 4**

A Step Ahead in Environmental Considerations

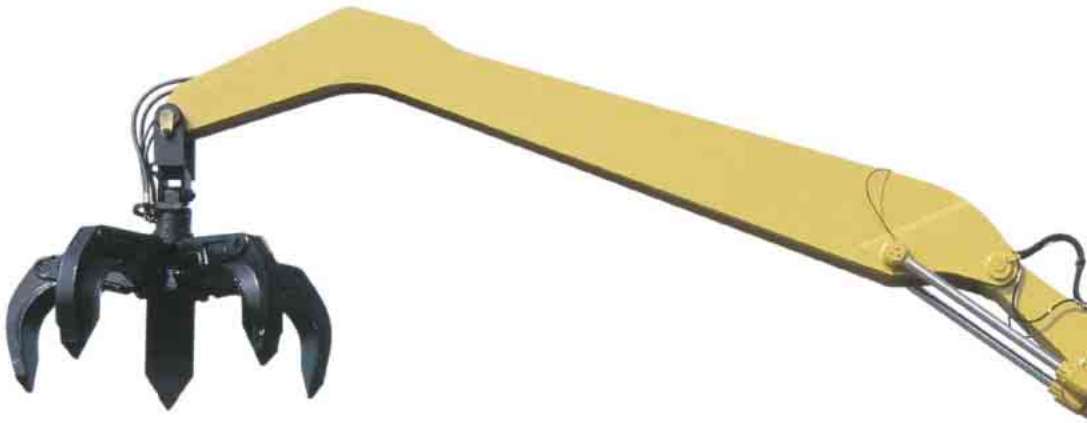
Helping to protect our environment, the engine has low operator and spectator sound levels. In addition the hydraulic system can be operated with biodegradable oil. Longer filter change intervals and more fuel efficiency also help reduce impact on our environment. **pg. 6**

Operator Comfort

✔ The new operator station design maximizes operator comfort and visibility. A new comfort seat with air suspension (optional), ergonomic joysticks, a new soft switch panel and the WEX Multipro monitor are some of the features that help allow the operator to work free of fatigue and so remain attentive to the job in hand. The operator station also offers more space to the side and the front and features automatic climate control. **pg. 8**

Hydraulics

The hydraulic system, featuring a separate swing pump and load-sensing system, provides maximum power and exceptional controllability leading to high performance in all applications. The technologically advanced Tool Control option adds work tool flexibility to the hydraulic system. Using the monitor panel in the cab, the operator can quickly select pre-programmed hydraulic settings to optimize performance of up to five different work tools. **pg. 5**



Increased lifting capacity, improved cycle times, and ease of operation lead to increased productivity and cost effective solutions.

✔ *New features*

Ease of Operation

✔ On the new WEX Multipro monitor panel, a variety of easy-to-read, language-based data is displayed. At all times, the operator can check the machine status allowing for continuous production optimization. **pg. 7**

Booms and Sticks

The box section design of all front-end structures, together with the optimum balance of durability and weight provide the strength needed for even the toughest application. Multiple boom and stick options allow you to pick the best match for your job. **pg. 12**

Work Tools

✔ An assortment of grapples and shears provide a total solution package to the end user. Built for performance and durability these tools deliver high productivity, long service life, and excellent value. **pg. 13**

Elevated Cab

Two cab risers are available to maximize viewing to all sides of the machine. A fixed cab riser offers 1200 mm of additional height or the hydraulic cab riser offers infinitely variable heights up to 2400 mm of additional height. **pg. 10**

Material Handling Undercarriage

✔ Welded outrigger design provides maximum stability for MH applications. Heavy-duty cylinder protection and box section design help provide excellent durability. Hydraulic hose routing inside of the frame prevents hose damage. A sealed and lockable toolbox is mounted between the steps. **pg. 11**

Maintenance and Reliability

All daily maintenance points, such as oil level or greasing ports, are accessible from ground level. A centralized greasing port located in the engine compartment provides protection, and allows the operator to grease the front linkage and swing bearing without climbing onto the machine. **pg. 14**

Complete Customer Service

Your Cat dealer offers a wide range of services that can be set up under a customer support agreement when you purchase your equipment. The dealer will help you choose a plan that can cover everything from machine and attachment selection to replacement. **pg. 16**

Cat 3056E DIT ATAAC Engine

The six-cylinder, turbocharged, air-to-air aftercooled and electronically controlled engine is built for power, reliability, low maintenance, excellent fuel economy and low emissions.

Turbocharged and Air-to-Air Aftercooled. The turbocharger packs more dense air into the cylinders for more complete combustion and lower emission improving performance and engine efficiency. These benefits are especially useful at high altitudes. The air-to-air aftercooler reduces smoke and emissions by providing a cooler inlet air for more efficient combustion. This also extends the life of the piston rings and engine bore.

Cooling System. Features an electronically controlled variable speed on-demand fan. The fan is driven by a hydraulic motor and its speed is determined by engine coolant and hydraulic oil. Cooler operating conditions allow lower average fan speeds resulting in reduced fuel consumption and lower noise levels. The electronic engine control continuously compensates for this varying fan load, providing consistent net horsepower, regardless of operating conditions. The fan and air conditioner condenser are both hinged for easier cleaning of the cores.

Engine Oil. Caterpillar® engine oil is formulated to optimize engine life and performance and is strongly recommended for use in Cat diesel engines. The engine oil change interval is increased to 500 hours.

Low Sound, Low Vibration. The 3056E design improves operator comfort by reducing sound and vibration. The M318C MH and M322C MH has been awarded the German Blue Angel for low operator and spectator sound levels.

- Operator sound level, L_{PA}, 72 db(A)
- Spectator sound level, L_{WA} 102 db(A)

Factory Remanufactured Parts. A large choice of factory remanufactured parts and dealer proposed repair options increase machine availability and reduce total repair costs.

Bosch Fuel Injection Pump. The new Bosch injection pump is electronically controlled and helps to reduce fuel consumption.

Service. The engine is longitudinally mounted on the right side to make it easier to access the oil filter, oil filler, oil drain valve, fuel filter, V-belt tightener, and the oil dipstick. All are accessible from ground level.

Hydraulics

Fast cycle times, increased lift capacity, and superior stability combine to maximize your productivity in any job.

Automatic Engine Control. Automatic Engine Control (AEC) reduces engine rpm if no operation is performed, maximizing fuel efficiency and reducing sound levels.

Dedicated Swing Pump. A separate dedicated variable displacement piston pump and fixed displacement piston motor power the swing mechanism. This closed hydraulic circuit helps to provide maximum swing performance without reducing power to the main hydraulic functions.

Caterpillar's XT-6 ES Hoses. To meet the critical flexibility and strength demands of wheel excavator applications, XT-6 ES hoses are installed in the high pressure hydraulic system. XT-6 ES hoses are made of four overlapping insulated wire spiral wraps bonded together for high abrasion resistance, excellent flexibility and easy installation. Hose routings are designed to protect from damage in this way reducing hose failure downtime. O-ring face seal couplings provide positive sealing for reliable and leak-free connections.

Auxiliary Hydraulic Valves. The versatility of the hydraulic system can be expanded with multiple valve options.

Multifunction Valve. The multi-function valve is the core of the innovative Tool Control system. This valve can be electronically programmed for flow direction (one or two ways), pressure and flow rate. The valve also features priority flow to maximize control of the work tool. This on-board electro-hydraulic functionality eliminates the need for manual readjustments to the auxiliary hydraulics each time a different tool is used.

Medium Pressure. A medium pressure valve is available for use with standard medium pressure tools.

Hydraulic Cylinder Snubbers. The hydraulic cylinder snubbers at the rod end of boom cylinders, both ends of stick cylinders, and bucket cylinder rod end cushion shocks, reduce sound and increase cylinder life, keeping the machine working longer.

Caterpillar Hydraulic Oil. Maximum protection against mechanical and corrosive wear in all hydraulic systems. Its high zinc content reduces wear, and extends pump life. Provided certain requirements are met (e.g. S•O•S^{sm} analysis every 500 hours), the hydraulic oil change interval is extended from 2000 hours to 4000 hours.

Controllability. The hydraulic system offers precise control of the M318C MH and M322C MH, reducing operator fatigue, improving operator effectiveness and efficiency, which ultimately results in enhanced performance.

Boom Damping. Boom damping on the MH boom provides increased stability and reduced cab vibration. This contributes to precise machine controllability.

Stick Regeneration Circuit. Stick regeneration circuits increase efficiency and help increase controllability for higher productivity and lower operating costs.

Environmentally Responsible Design

Caterpillar machines not only help you build a better world, they help maintain and preserve the fragile environment.

More Performance. The M318C MH and M322C MH are designed to provide more performance yet use less fuel than ever before. This means more work done in a day, less fuel consumed and minimal impact on our environment.

Low Exhaust Emissions. The Cat 3056E used in the M318C MH and M322C MH is a low emission engine designed to meet EU Stage II Off-Highway and US EPA Tier II emission regulations.

Quiet Operation. Not only is the cab quiet, but spectators outside hear less noise too. As a result of the new variable speed fan and remote cooling system all machines meet the German Blue Angel award for low sound operation.

Ozone Protection. To help protect the earth's ozone layer, the M318C MH and M322C MH's air conditioning unit uses only R-134a refrigerant which does not contain harmful chlorofluorocarbons (CFC's).

Biodegradable Hydraulic Oil. Available as an option, Caterpillar Biodegradable Hydraulic Oil (HEES™) is formulated from a fully saturated Hydraulic Environmental with Ester Synthetic base stock and selected additives. It has excellent high-pressure and high-temperature characteristics and is fully compatible with our hydraulic components and allows operation over a broad temperature range. Cat's HEES is fully decomposed by soil or water microorganisms, providing a more environmentally-sound alternative to mineral-based oils. This is available as an attachment.

Fewer Leaks and Spills. Lubricant fillers and drains are designed to minimize spills. Cat O-Ring Face Seals, XT Hose and hydraulic cylinders are all designed to help prevent fluid leaks that can reduce the machine performance and cause harm to the environment.

Longer Service Intervals. 500-hour engine service intervals and Cat Extended Life Coolant/Antifreeze mean that fluid renewal and disposal are less frequent.

Rebuildable Components. Many of the major components used in the M318C MH and M322C MH are designed for remanufacturing. This means you have high-quality, certified rebuilt replacement parts available at a fraction of the cost of new parts. There is less scrap for disposal.

Ease of Operation

Designed for simple, easy operation, the M318C MH and M322C MH allow the operator to focus on production.

WEX Multipro. New, compact Multipro enhances viewing while displaying a variety of easy-to-read and understandable information in various languages.

Pre-start WEX Multipro System. The Pre-start Multipro system alerts the operator of low coolant, engine oil or hydraulic oil levels, before starting the engine. When the engine key remains in the "ON" position for more than 2 seconds, a warning indicator and message are displayed if actual fluid levels are lower than required.

Filter and Oil Change Warnings. The filter and oil change warnings are displayed when the number of hours used reaches the maintenance interval.

Power Modes. There are three power mode settings. The operator can choose the best power setting for both engine and hydraulic power versus fuel efficiency.

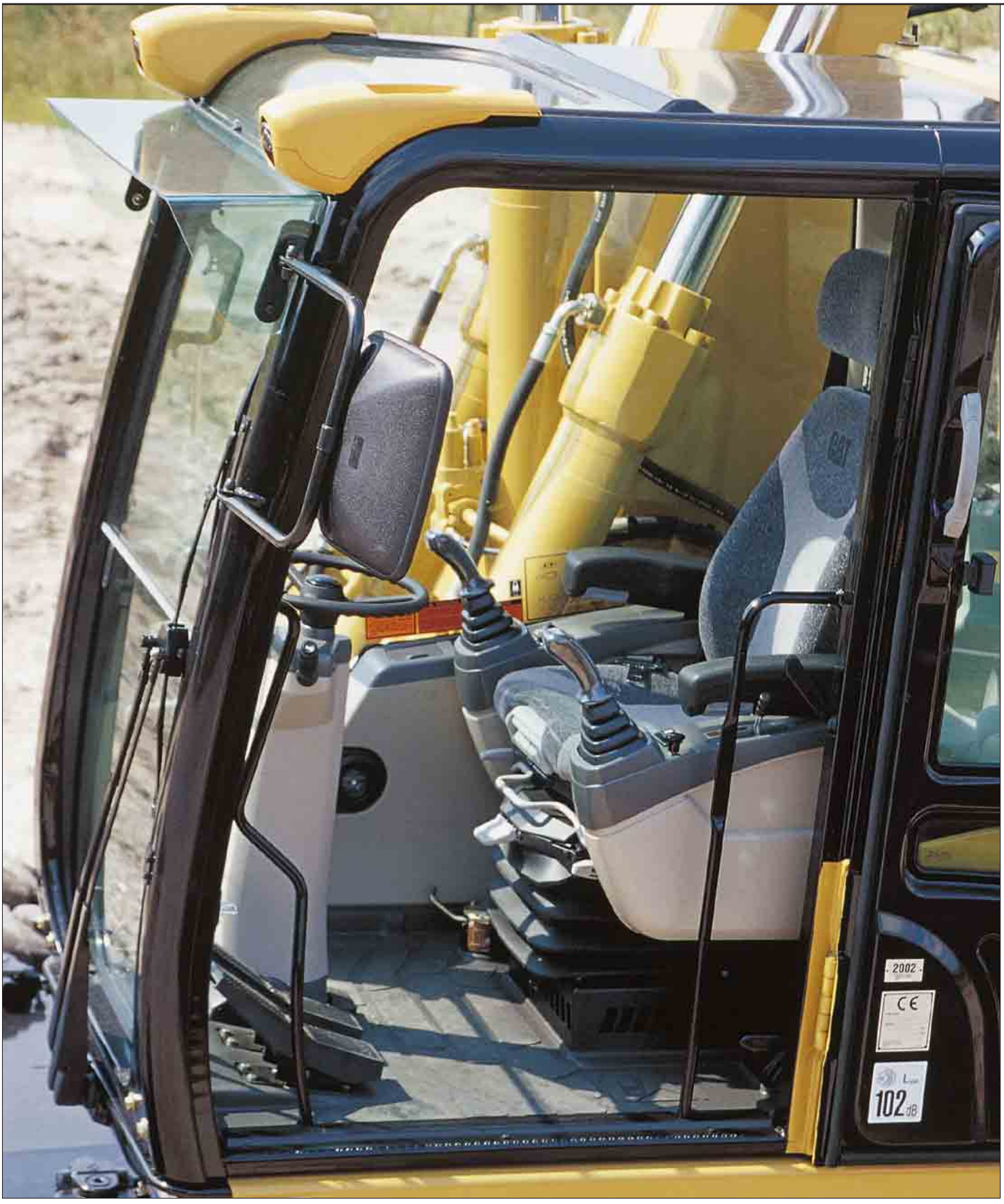
- **Economy (M318C/M322C).** This mode is often used for fine work, material sorting, and applications with limited space. The hydraulic speed is reduced which lowers swing aggressiveness. This mode also ensures minimum fuel consumption.
- **Power (M318C/M322C).** This mode is used for normal material loading and handling applications.
- **Travel (M318C).** The travel mode is automatically set when the travel pedal is actuated. It provides maximum speed and drawbar pull.
- **Maximum Power/Travel (M322C).** This mode is used for jobs demanding high powered lifting. It is also automatically set when the travel pedal is actuated. providing maximum speed and drawbar pull.

Integrated Tool Control System. The integrated Tool Control system allows the operator to quickly select a tool out of five pre-set combinations, eliminating the need to re-set these hydraulic parameters each time a tool is changed. Specific flow and pressure can be programmed easily as well as one-way/two-way hydraulic functions. Each of the five programmed tools can even be given a specific name.

Languages. 14 different languages are available on the M318C MH and M322C MH.

All-day operator comfort

The M318C MH and M322C MH interior layout maximizes operator space, provides exceptional comfort, and reduces operator fatigue.



Interior Operator Station. The M318C MH and M322C MH operator work station has low noise levels. The controls have been conveniently placed for easy adjustment and ease of operation. The seat design is ergonomic and adjustable and the ventilation system directs air where it is needed most.

Seat. The new wheel excavator seat with two-tone color design offers adjustable back rest, lumbar support, cushion length and cushion angle. Independently adjustable armrests and pilot controls allow tailored ergonomics to suit operator preference. Optional Comfort seat provides air suspension, seat heating, horizontal suspension and automatic adjustment for the operator's weight to help maximize comfort.

Consoles. Designed for simplicity and functionality, the left side console is tiltable for excellent access to the cab. Dozer blade and/or outrigger controls as well as the radio-off switch are located on the left console.

Automatic Climate Control. Fully automatic climate control adjusts temperature and air flow.

Greater Control Convenience. Each of the controls is positioned within easy reach of the operator. Joysticks control all implements and swing functions. Via the soft switch panel, the operator controls the oscillating axle, power modes, parking brake, automatic engine speed control, and other hydraulic functions are in an easy-to-read environment.

Cab Mounts. The cab shell is attached to the frame with resilient mounts, reducing vibration and sound.

Skylight. A unique large polycarbonate skylight provides excellent upward visibility.

Viewing Area. There is excellent viewing area through wide windows. The lower of the two-piece window can be opened separately for better air ventilation or be slid into the upper window to completely open the front bay. An optional one-piece window is available.

Wipers. Designed to maximize visibility in poor weather conditions. The parallel wiper system covers almost the complete front window without leaving unwiped areas in the immediate line of sight of the operator.

Large Storage Compartment. Located behind the seat, provides sufficient room for a cooling box. An optional cover is available to close off the storage space if preferred.

Easy Access. Conveniently located grab irons and large steps mounted to the undercarriage, together with the tiltable steering column and the tiltable left side console, provide easy access to the cab.

Elevated Cab

Fixed and hydraulic cab risers are available to maximize viewing to all sides of the machine.

Hydraulic Cab Riser. The hydraulic cab riser design provides the most suitable solution when high flexibility in cab height is needed. The lift arms on the hydraulic cab riser are box-section designed for greater cab stability. Two heavy-duty hydraulic cylinders provide quick and controlled up and down travel. With the cab in topmost position, the cylinders are retracted to ensure excellent stability. In the event of a hydraulic malfunction, the cab can be lowered using either a lever inside the cab or one on the frame at ground level. The linkage is a parallelogram design, which keeps the cab level in all positions.

Top Position. The top position raises the cab by 2400 mm. This provides optimal viewing to all sides in different applications such as scrap handling, log handling, and various load/unload tasks. The cab's position is infinitely variable.

Medium Position. The medium position places the cab forward by 500 mm more than in the travel position, for increased visibility.

Bottom Position. The bottom position is used for shipping and travel position. When equipped with a VA boom or one-piece-boom, this is the only position allowed for travelling on public roads.

Fixed Cab Riser. The fixed cab riser offers a very stable and comfortable method to raise the cab. The fixed cab riser lifts the cab by 1200 mm to offer better viewing to all sides. Well-positioned steps lead continuously from ground level to the raised cab. In shipping position, the cab is unmounted to meet national road regulations.

Undercarriage

Undercarriage and axle design provides maximum strength, flexibility and mobility.

Material Handling Undercarriage. The MH undercarriage provides maximum durability and a long life. A totally welded design, this undercarriage provides the stability needed for MH applications and is especially well suited for machines with a Hydraulic Cab Riser. The swing bearing is mounted directly in the center of the undercarriage to optimize lifting and reach in all directions. The four outriggers offer larger cylinders, optimized kinematics, increased spread. Hydraulic lines are routed through the frame and cylinders have heavy-duty guards to provide protection from damage.

Pin-On Undercarriage. The Pin-On undercarriage is also available on MH machines. This undercarriage provides the flexibility of adding a dozer blade if required. The dozer blade offers a large floor design to decrease ground pressure and reduce impact to the work surface. The dozer blade can be mounted either on the front or rear end.

Heavy Duty Axles. The front axles offer great oscillating and steering angles. The transmission is mounted directly on the rear axle for protection and optimum ground clearance.

Tool Box. A large sealed and lockable toolbox is mounted on the undercarriage between the steps on the machine's left side. A second optional toolbox is available for the right side.

Booms and Sticks

Improved strength and kinematics help bring higher production and efficiency to all jobs.

MH Booms and Sticks. The M318C MH boom (6200 mm) and M322C MH boom (6800 mm) have been redesigned to handle increased lifting capacities. The new stick range offers leading side plates to maximize protection of hydraulic lines. The lines are fitted in between the two side plates offering protection from damage.

M318C MH Sticks

- **Drop Nose Stick**. The drop nose stick (4900 mm) offers reach and lifting required for typical MH applications. The stick contains high pressure and medium pressure hydraulic lines.
- **Straight Stick.** The straight stick (4200 mm) offers a solution for sorting grapple applications. The stick contains high pressure and medium pressure lines and can be ordered with a cylinder for moving the grapple forward and back.

M322C MH Sticks

- **Drop Nose Stick.** The drop nose stick (4900 mm) offers reach and lifting required for typical MH applications. The stick contains high pressure and medium pressure hydraulic lines.
- **Long Drop Nose Stick.** The long drop nose stick (5900 mm) offers a solution when maximum reach is required. The stick contains high pressure and medium pressure hydraulic lines.
- **Straight Stick.** The straight stick offers (4800 mm) a solution for MH applications requiring an additional hydraulic function such as a sorting grapple. The stick contains high pressure and medium pressure lines and can be ordered with a cylinder to offer forward and back motion of the work tool.

Standard Booms and Sticks

A variable adjustable boom and curved one-piece boom are also available for the M318C MH and M322C MH with the following straight stick options:

- M318C (2200/2500/2800 mm)
- M322C (2200/2500/2900 mm)

Tool Control System, Quick Couplers, Generator Sets, and Work Tools.

User friendly, integrated electro-hydraulics make changing tools easy and quick and allow the operator to focus on efficient work.

Tool Controller. Five hydraulic pump flow and pressure settings can be preset on the WEX Multipro, eliminating the need to adjust the hydraulics each time a tool is changed. Selecting the proper setting from the WEX Multipro's menu instantly provides the operator with the optimal hydraulic settings for the specified tool.

Quick Coupler. Caterpillar Quick Couplers provide quick tool exchange time while maintaining top machine performance.

- The universal Quick Coupler hydraulic circuit avoids difficult and costly retro-fitting of Quick Coupler hydraulics and allows use of the most frequently used Quick Coupler systems. Ask your Cat dealer for more specific information.
- The hydraulic version is available in the standard and narrow version and makes it easy for the operator to switch tools without leaving the cab.
- The spindle version is a user friendly mechanical version that can later be converted into the hydraulic version if required. The spindle version is also available in the narrow and standard version.
- A lifting hook can be added to the Quick Coupler for maximum lift capacity.
- The new Cat CW-Series Quick Couplers make it possible for the operator to simply release one work tool and pick up the next, making your wheel excavator highly versatile. The Cat CW-Series Quick Couplers maximize machine efficiency in a cost-effective way.

Multi-Grapple. The Multi-Grapple with unlimited left and right rotation is the ideal tool for stripping, sorting, handling and loading. In combination with the MH straight stick and linkage, this grapple provides controlled forward and back movement.

Orange Peel Grapple. The most common tool for material handling applications, this grapple is available in a range of sizes and provides a solution for a wide range of material types. The grapple is free swinging and has unlimited left and right rotation.

Generator Set. The hydraulically driven generator set (12.5 kW) offers electric power needed for magnet applications. With a priority flow valve, the power from the generator is provided at a constant level.

Maximum Uptime – Service and Maintenance

Extended service intervals and easy access reduce operating costs.

Extended Service Intervals. M318C MH and M322C MH service and maintenance intervals have been extended to reduce machine service time, increase machine availability and reduce operating costs. Using S•O•S hydraulic oil change intervals can be extended from 2000 hours to 4000 hours. Engine coolant change intervals are up to 6000 hours when Cat Extended Life Coolant/Anti-Freeze is used.

Easy, Wide Open Access. Gull-wing doors with pneumatically assisted lift cylinders lift up effortlessly for excellent access to the engine and all service points.

Easy to Clean Coolers. Flat fins on all coolers reduce clogging and make it easier to remove debris.

Ground Level Service. The design and layout of the M318C MH and M322C MH was made with the service technician in mind. The fuel water separator, engine oil filter, battery, radiator fluid level, fuel filter, engine oil gauge, hydraulic oil level, air cleaner and pilot system filter are all easily accessible at ground level allowing critical maintenance to be done quickly and efficiently.

Front Compartment. The front service compartment provides ground level access to the batteries, ATAAC, AC condenser and the air filter.

Swing-Up AC Condenser. Without using tools, the AC condenser swings up vertically to allow cleaning on both sides as well as clear access to the ATAAC.

Fuel Tank Drain. Located at the bottom of the upper frame, the fuel tank drain with a hose connection allows simple, spill free fluid draining.

Air Filter. Caterpillar Radial Seal air filters do not require tools to service them, thus reducing maintenance time. The air filter features a double-element construction and built-in precleaner for superior cleaning efficiency. When the air cleaner plugs, a warning is displayed on the monitor screen inside the cab.

Capsule Filter. The hydraulic return filter, a capsule filter, is situated inside the hydraulic tank. This filter prevents contaminants from entering the system when hydraulic oil is changed and keeps the operation clean.

Engine Inspection. The engine can be accessed from both ground level and from the upper structure. The longitudinal layout ensures that all daily inspection items can be accessed from ground level. The engine and pump compartment are separated by a steel wall.

Water Separator. The water separator removes water from fuel even when under pressure and is located in the engine compartment.

Remote Greasing Block. A greasing block located in the engine compartment with two grease points for the swing bearing and one for the front end attachment delivers grease to hard-to-reach locations.

Hydraulic Tank Drain. The hydraulic tank drain enables simple, spill-free fluid changes.

Handrails and Steps. Well-sized handrails and steps assist the operator in climbing on and off of the machine.

Diagnostics and Monitoring. The M318C MH and M322C MH is equipped with S•O•S sampling ports for the hydraulic system and engine oil. A connection for the Electronic Technician (ET) is conveniently located in the cab.

Anti-Skid "Punched-Star" Plate. An anti-skid punched-star plate covers the top of the steps and the upper structure to prevent slipping during maintenance.

Caterpillar Braided Harnesses. Designed and manufactured to resist the most severe conditions. Harnesses are made of large section, colored and number-coded wires, with the complete harness being protected by an abrasion resistant braiding. Harnesses are properly routed and securely clamped to ensure their reliability and life.

XT-6 ES Hoses. Premium quality rubber, precision 4-ply wire reinforcement and couplings are all unique features of Cat hoses which deliver top performance and long life. O-Ring face seals provide positive sealing for reliable and leak-free connections.

Caterpillar Batteries. Caterpillar maintenance-free, high output batteries are designed for high cranking power and maximum protection against vibration.

Fuel Filters. Cat high efficiency fuel filters with a Stay-Clean Valve™ feature cellulose/synthetic blend media that remove more than 98 percent of particles that are two microns or larger, increasing fuel injector life.

Electronic Technician (ET).
The electronic engine and machine controllers provide detailed diagnostic possibility for service technicians. The ability to store both active and intermittent indicators simplifies problem diagnosis and reduces total repair time, resulting in improved machine availability and lower operating cost. ET can be used to...

- access data stored in the engine and transmission controls via the Cat Data Link System
- display the status of parameters such as engine speed, gear engaged, control switch position, etc.
- view active and non-active diagnostic codes and clear them after repair
- perform diagnostic tests and calibrations of electro-hydraulic components
- view current configuration and change parameter settings
- flash new Caterpillar software into the Electronic Control Modules

A customer version of ET is also available for your fleet of Caterpillar equipment. Contact your Caterpillar dealer.

Caterpillar Product Link System Attachment. Product Link includes a transceiver module (on-board the machine), office application PC software, and a satellite communications network to track machine hours, location, and warnings. Product Link simplifies maintenance scheduling, fleet management, unauthorized machine usage or movement, and product problem event tracking and diagnosis (PL-201). Available in two versions, there is a Product Link system for most customers needs. See your Caterpillar dealer.

Scheduled Oil Sampling (S•O•S) Analysis. Caterpillar has specially developed S•O•S to help ensure better performance, longer life and increased customer satisfaction. It is a thorough and reliable early warning system which detects traces of metals, dirt and other contaminants in your engine, axle and hydraulic oil. It can predict potential trouble early, thus avoiding costly failures. Your Caterpillar dealer can give you results and specific recommendations shortly after receiving your sample. Each S•O•S test can provide specific types of diagnosis:

- **Oil condition analysis** identifies loss of lubricating properties by quantifying combustion products such as soot, sulfur, oxidation and nitrates.
- **Wear analysis** monitors component wear by detecting, identifying and assessing the amount and type of metal wear elements found in the oil.
- **Chemical and physical test** detects the physical presence of unwanted fluids (water, fuel, antifreeze).

Lower Operating Costs.
Improvements in operating costs provide a long-term investment.

Fuel Consumption. The new EU Stage II (US EPA Tier II), electronically controlled engine, new Bosh fuel injection system and new ATAAC combine to provide outstanding fuel consumption during both production and traveling. The Automatic Engine Speed Control reduces idle speed when the implements are not active to further improve fuel consumption.

Filter Change Intervals. 2000 hours hydraulic oil and 500 hours engine oil filter change intervals save time and money.

Hydraulic Oil Change Intervals.
With the aid of S•O•S sampling hydraulic oil change intervals can be extended from 2000 hours to an average of 4000 hours.

Your Caterpillar dealer can provide you with detailed calculations and simulations of how our low operating costs can benefit your particular application.

Complete Customer Support

Cat dealer services help you operate longer with lower costs.

Services. Customer Service is critical today in every business. That's why so many people buy Cat equipment. They know they are getting quality reliability and performance backed-up with the best Customer Service. Your Caterpillar dealer offers a wide range of services that can be set up under a Customer Support Agreement. The dealer will help you choose a plan that can cover the whole machine including work tools, to help you to get the best out of your investment.

Product Support. You will find a solution for your parts requirements at your dealer. Cat dealers utilize a worldwide network to find in-stock parts to minimize downtime. In addition your dealer can offer alternative solutions like Reman, Classic Parts and quality used parts to save money on original Caterpillar components.

Service Capability. Whether in the dealer's fully equipped shop or in the field, you will get highly trained service technicians using the latest technology and tools.

Maintenance. More and more equipment buyers are planning for effective maintenance before buying equipment. Choose from your dealer's wide range of maintenance services at the time you purchase your machine. Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as S•O•S Fluid Analysis and Technical Analysis help you avoid unscheduled repairs.

Selection. Make detailed comparisons of the machines you are considering before you buy. How long do components last? What is the cost of preventive maintenance? Your Cat dealer can give you precise answers to these questions to make sure you operate your machines at the lowest cost.

Purchase. Consider the financing options available as well as day-to-day operating costs. This is also the time to look at dealer services that can be included in the cost of the machine to yield lower equipment and owning and operating costs over the long run.

Operation. Improving operating techniques can boost your profits. Your Cat dealer has training material and ideas to help you increase productivity.

Replacement. Repair, rebuild or replace? Your Cat dealer can help you evaluate the cost involved so you can make the right choice.

Engine

	M318C	M322C
Cat 3056E DIT ATAAC diesel engine		
Ratings	2000 rpm	2000 rpm
Gross power	119 kW/159 hp	127 kW/170 hp
Net power		
ISO 9249	113 kW/151 hp	122 kW/164 hp
EEC 80/1269	113 kW/151 hp	122 kW/164 hp
Bore	100 mm	100 mm
Stroke	127 mm	127 mm
Displacement	6.0 liters	6.0 liters
Cylinders	6	6
Maximum torque at 1400 rpm	675 Nm	695 Nm

- The 3056E engine meets EU directive 97/68/EC Stage II emission requirements.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator.
- No engine derating is required below 3000 m altitude.

Swing Mechanism

	M318C	M322C
Swing speed	10.5 rpm	10.5 rpm
Swing torque	45.7 kNm	56.3 kNm
Maximum flow	112 l/min	112 l/min
Maximum pressure	310 bar	310 bar

Service Refill Capacities

	M318C	M322C
	Liter	Liter
Fuel tank capacity	385	385
Cooling	39	39
Engine crankcase	18	18
Rear axle housing (differential)	11	11
Front steering axle (differential)	8	8
Final drive		
Disk brakes	2	2
Drum brake	1.2	1.2
Powershift transmission	3	3

Cab

Cab/FOGS meets ISO 10262.

Hydraulic System

	M318C	M322C
Tank capacity	170 liters	225 liters
System	255 liters	350 liters
Maximum pressure		
Implements	350 bar	350 bar
Travel	350 bar	350 bar
Maximum flow	288 + 112 l/min	340 + 112 l/min
Pilot system		
Maximum pressure	31 bar	31 bar

Transmission

	M318C	M322C
1st gear, forward/reverse	9 km/h	9 km/h
2nd gear, forward/reverse	20 km/h	20 km/h
Creeper speed (first gear)	4 km/h	4 km/h
Creeper speed (second gear)	13 km/h	13 km/h
Drawbar pull	96.6 kN	110.1 kN
Maximum Gradeability	61.5%	60.5%

Tires

M318C
Standard
- Dual pneumatic 10.00-20

Optional
- 10.00-20 (dual solid rubber)
- 18R 19.5 XF (single)
- 600/40-22.5 (single)

M322C
Standard
- Dual pneumatic 11.00-20

Optional
- 10.00-20 (dual solid rubber)

Sound

Low sound, low vibration. The 3056E design improves operator comfort by reducing sound and vibration.
The M318C MH and M322C MH was awarded the German Blue Angel for low spectator sound levels.

Operator Sound

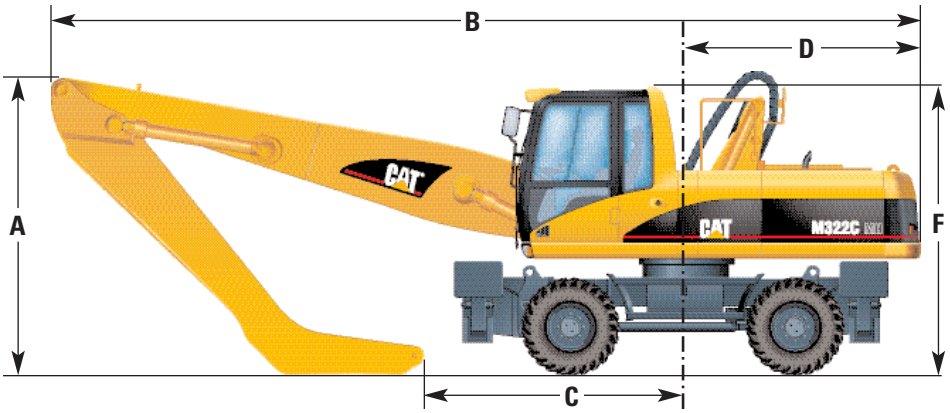
- The operator sound level measured according to the procedures specified in ISO 6396:1992 is L_{PA} 72 dB(A), for cab offered by Caterpillar, when properly installed and maintained and tested with the doors and windows closed.
- Hearing protection may be needed when operating with an open cab for extended periods or in a noisy environment.

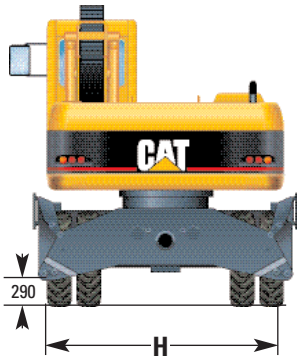
Exterior Sound

- The labeled spectator sound power level measured according to the test procedures and conditions specified in 2000/14/EC is L_{WA} 102 dB(A).

Dimensions with MH Undercarriage

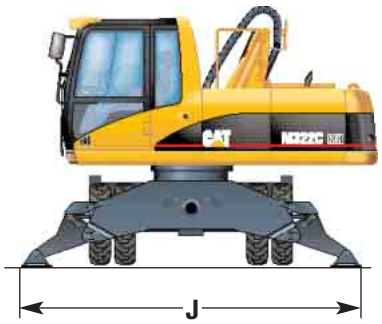
All dimensions are approximate – measured in mm

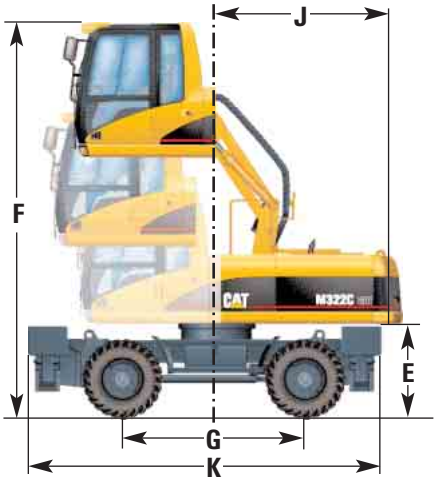




		M318C	M322C
		mm	mm
A	Shipping height		
	4900 mm drop nose stick	3480	3490
	4200 mm straight stick	3400	–
	5900 mm drop nose stick (removed)	–	3230
	5900 mm drop nose stick (installed)	–	3590
	4800 mm straight stick	–	3230
B	Shipping length		
	4900 mm drop nose stick	9060	9880
	4200 mm straight stick	9180	–
	5900 mm drop nose stick (removed)	–	9930
	5900 mm drop nose stick (installed)	–	15 055
	4800 mm straight stick	–	9930
C	Support Point		
	4900 mm drop nose stick	2770	3250
	4200 mm straight stick	3650	–
	5900 mm drop nose stick (installed)	–	12 230
	4800 mm straight stick	–	3080
D	Tail swing radius	2500	2820
E	Counterweight clearance	1307	1307
F	Cab Height		
	Standard cab	3230	3230
	with 1200 mm Fixed Cab Raiser*	–	4430
	with Hydraulic Cab Riser (lowered)	3230	3230
	with Hydraulic Cab Riser (raised)	5630	5630
G	Wheel base	2750	2750
H	Undercarriage width	2990	2990
J	Stabilizer width on ground	4360	4360
K	Undercarriage length	5250	5250

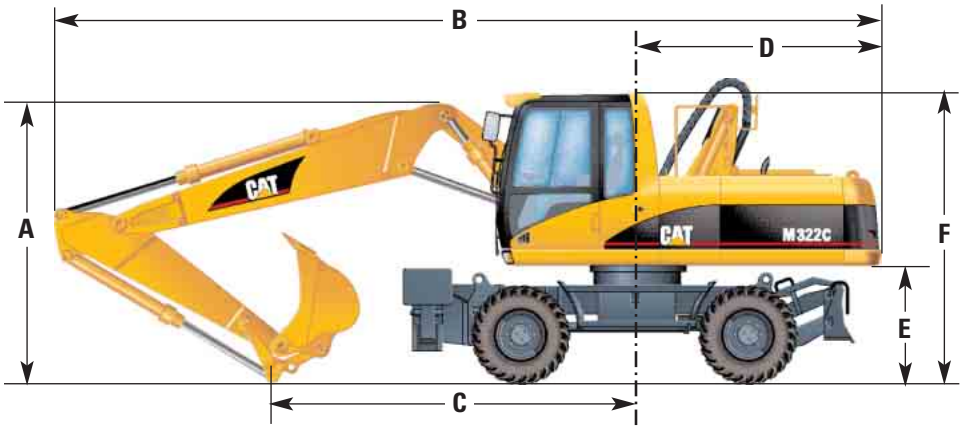
* Must be removed for shipping

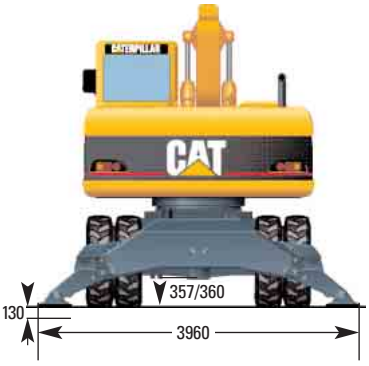




Dimensions with Standard Undercarriage

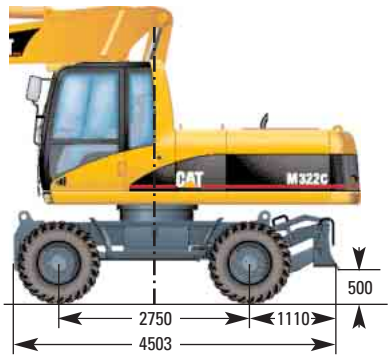
All dimensions are approximate – measured in mm



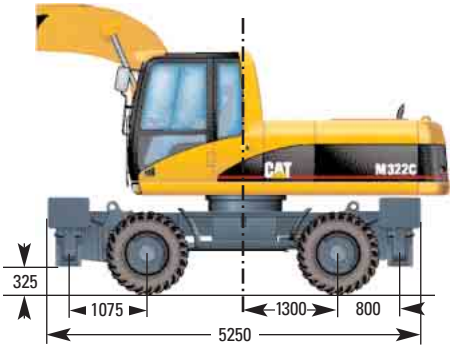


		M318C/M322C VA boom		M318C/M322C One-piece boom	
		mm	mm	mm	mm
A	Shipping height				
	2200 mm stick	cab height	3260	3190	3300
	2500 mm stick	cab height	3230	3210	3250
	2800 mm stick	3300	–	3330	–
	2900 mm stick	–	3250	–	3290
B	Shipping length				
	2200 mm stick	8870	9430	8870	9650
	2500 mm stick	8850	9440	8960	9640
	2800 mm stick	8820	–	8950	–
	2900 mm stick	–	9430	–	9650
C	Support Point				
	2200 mm stick	3920	4160	3810	4240
	2500 mm stick	3650	3660	3490	3720
	2800 mm stick	3510	–	3310	–
	2900 mm stick	–	3420	–	3440
D	Tail swing radius	2500	2750	2500	2750
E	Counterweight clearance	1307	1307	1307	1307
F	Cab height	3200	3200	3200	3200
	with 1200 mm Fixed Cab Raiser	4400	4400	4400	4400

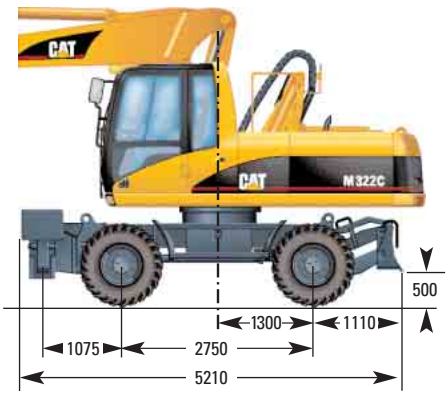
Undercarriage with dozer only



Undercarriage with 2 sets of outriggers



Undercarriage with 1 set of outriggers and dozer



Weights with MH Undercarriage

Average operating weights include MH undercarriage with 4 welded on stabilizers, MH boom, 5400 kg counterweight, 100% fuel, operator and grapple.

	M318C	M322C
	kg	kg
4900 mm stick	21 460	24 300
5900 mm stick	–	24 430
4200 mm straight stick	21 850	–
4800 mm straight stick	–	24 690

Weights with Standard Undercarriage

Average operating weights include a general purpose bucket, 4400 kg counterweight, 100% fuel and an operator.

	M318C	M322C
VA boom	kg	kg
rear dozer only	19 500	21 000
rear dozer, front outriggers	20 770	22 300
front and rear outriggers	21 100	22 700
One-piece boom		
rear dozer only	19 000	20 500
rear dozer, front outriggers	20 270	21 800
front and rear outriggers	20 600	22 200
Dozer blade	900	900
Outriggers	1300	1300
Counterweight	4000	4400/5400

Work Tools Matching Guide

When choosing between various work tool models that can be installed onto the same machine configuration, consider work tool application, productivity requirements, and durability. Refer to work tool specifications for application recommendations and productivity information.

			Boom	M318C – 6400 mm				M322C – 6800 mm					
			Undercarriage	MH		Standard		MH			Standard		
			Stick length (mm)	4900	4200	4900	4200	4900	5900	4800	4900	5900	4800
Clamshell Buckets Rehandling	GOS-25	0.46, 0.52, 0.58 m³											
		0.75, 0.90 m³											
		0.98, 1.14 m³											
	GOS-35	0.62 m³											
		0.70 m³											
		0.78 m³											
		1.05 m³											
		1.26 m³										N	
		1.46 m³				N	N					N	
		1.67 m³				N	N		N		N	N	N
Orange Peel Grapples (5 tines)	GSH-15	0.4, 0.5, 0.6 m³			N		N			N			N
		0.8 m³			N		N			N			N
	GSH-20	0.6 m³	N	N	N	N			N				N
		0.8 m³	N	N	N	N			N			N	N
		1.0 m³	N	N	N	N			N			N	N
Orange Peel Grapples (4 tines)	GSH-15	0.4, 0.5, 0.6, 0.8 m³			N		N			N			N
	GSH-20	0.6 m³	N	N	N	N			N				N
		0.8 m³	N	N	N	N			N				N
		1.0 m³	N	N	N	N			N			N	N
Multi-Grapples	VRG25/2, G315B		X		X		X	X		X	X		
	VRG30/2, G320B		X	N	X	N	X	X		X	X	N	

Max. material density 3000 kg/m³

Max. material density 1800 kg/m³

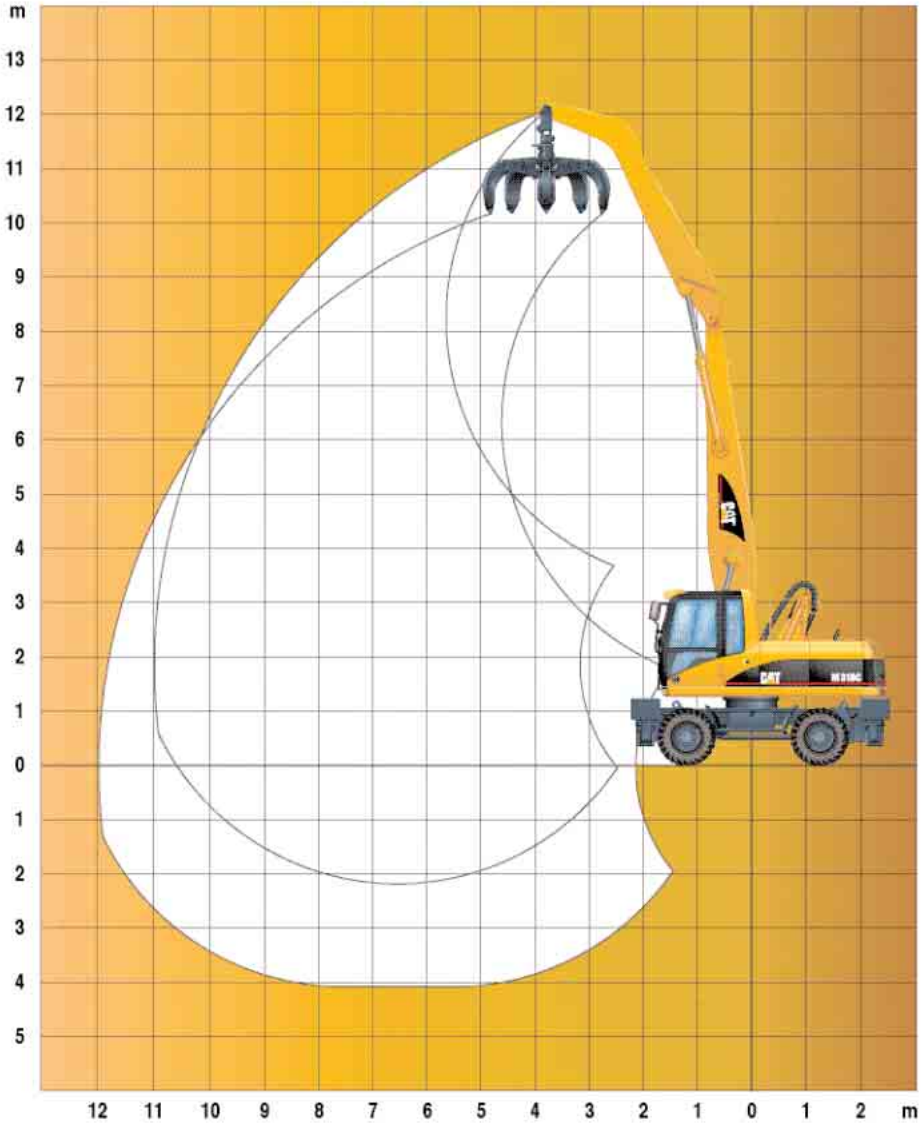
Max. material density 1200 kg/m³

Recommended

N Not recommended

X Not compatible

Working Ranges and Lift Capacities – M318C MH



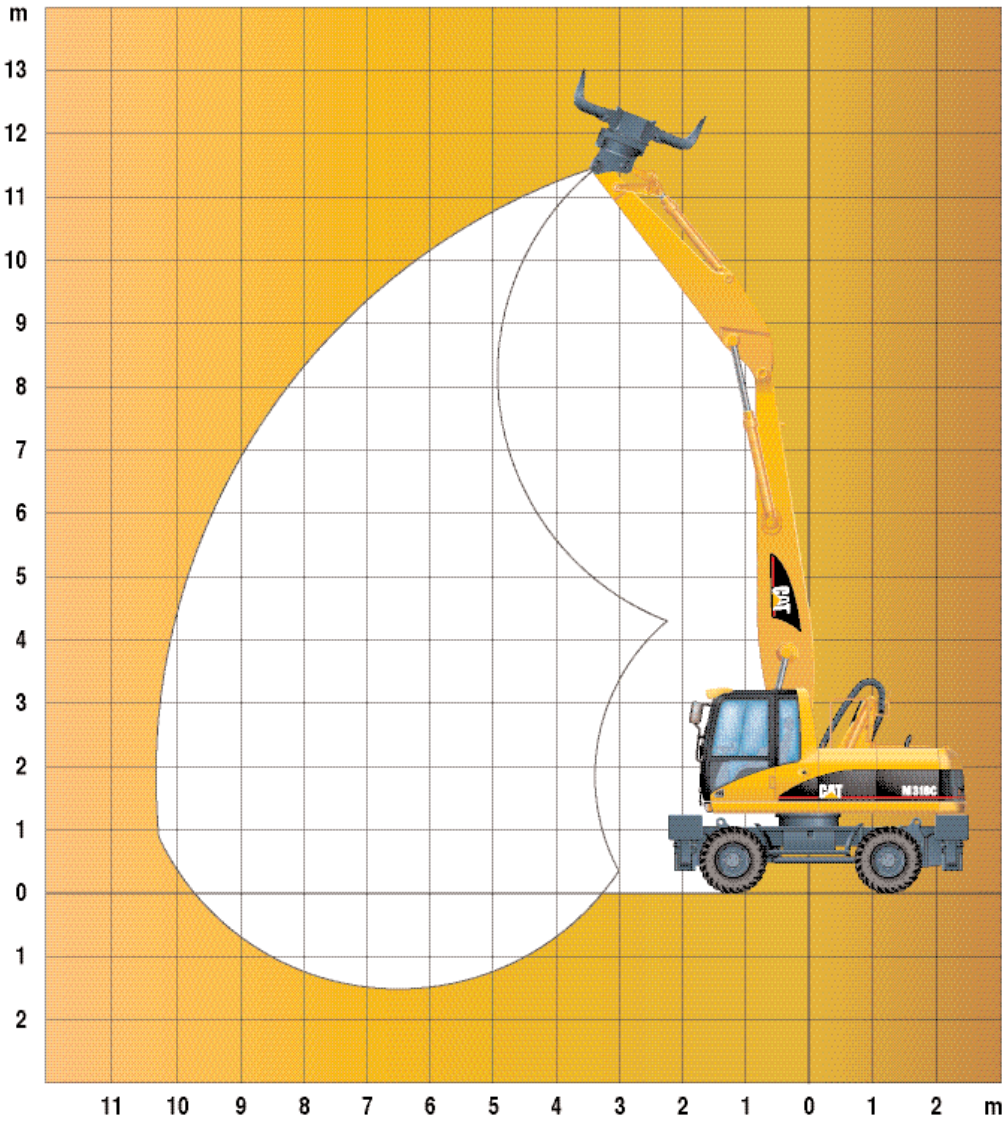
Undercarriage
Material Handling

Straight MH Boom
6200 mm

MH Stick
4900 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				m
10.5 m	All stabilizers up All stabilizers down					5700 *6000	4300 *6000									
9.0 m	All stabilizers up All stabilizers down					5800 *7300	4400 *7300	4000 *5900	3100 *5900							
7.5 m	All stabilizers up All stabilizers down					5800 *7600	4400 *7600	4000 *6600	3100 6200	3000 *5100	2200 4600			2700 *4100	2100 *4100	9.42
6.0 m	All stabilizers up All stabilizers down					5700 *7800	4300 *7800	4000 *6700	3000 6200	3000 5700	2200 4600			2400 *4000	1800 3800	10.18
4.5 m	All stabilizers up All stabilizers down			8600 *10400	6400 *10400	5500 *8300	4100 *8300	3900 *6800	2900 6100	2900 5600	2200 4500	2300 4400	1700 3600	2200 *4000	1600 3500	10.68
3.0 m	All stabilizers up All stabilizers down	16000 *17300	10900 *17300	8000 *11500	5800 *11500	5200 *8700	3800 8400	3700 *7000	2800 5900	2800 5500	2100 4500	2200 4300	1600 3500	2100 4100	1500 3300	10.95
1.5 m	All stabilizers up All stabilizers down			7400 *12100	5300 *12100	4900 *8900	3600 8000	3600 *7000	2600 5700	2700 5400	2000 4400	2200 4300	1600 3500			
0.0 m	All stabilizers up All stabilizers down	*3200 *3200	*3200 *3200	7000 *11400	4900 *11400	4600 *8500	3300 7800	3400 *6600	2500 5600	2700 *5200	1900 4300	2100 *3700	1600 3400			
-1.5 m	All stabilizers up All stabilizers down			6800 *8900	4700 *8900	4500 *7400	3200 *7400	3300 *5800	2400 5500	2600 *4300	1900 4200					

Working Ranges and Lift Capacities – M318C MH



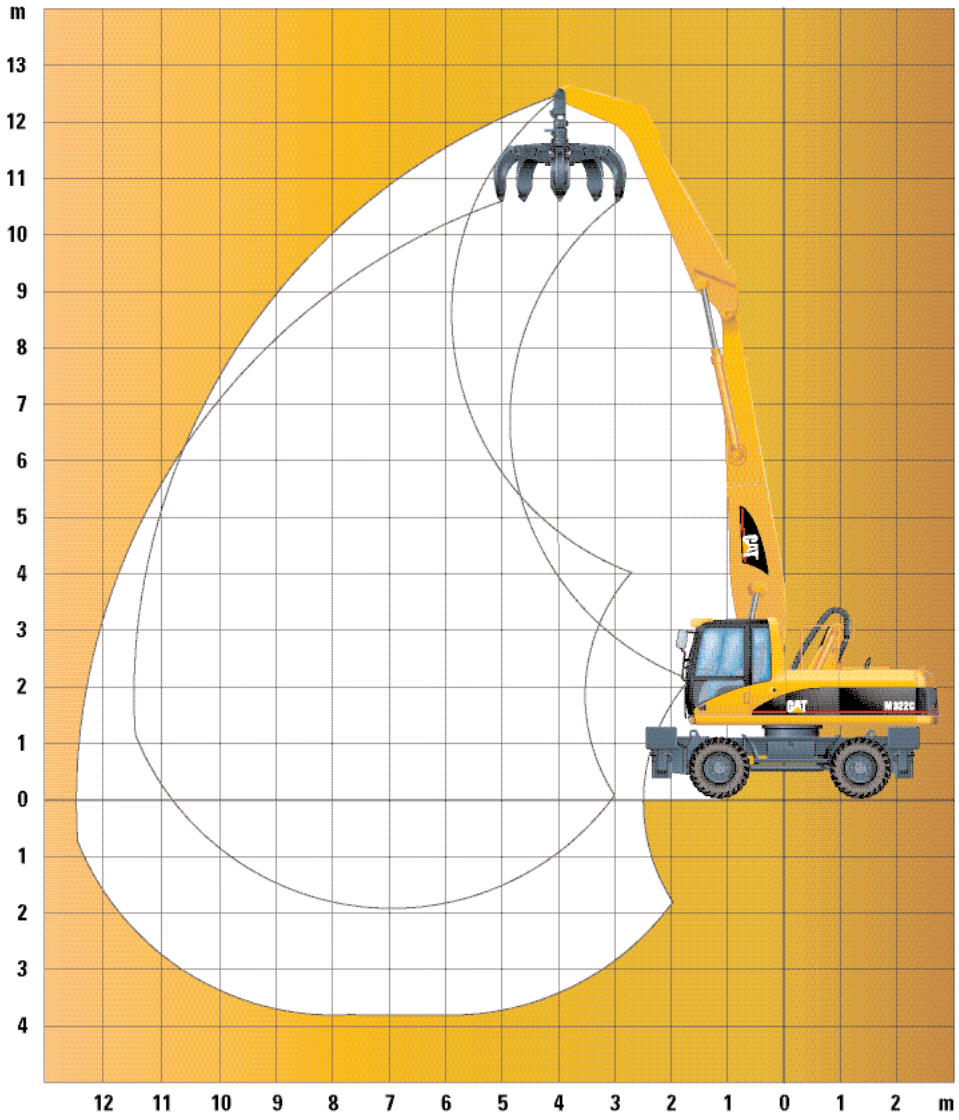
Undercarriage
Material Handling

Straight MH Boom
6200 mm

Straight MH Stick
4200 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				
																m
10.5 m	All stabilizers up All stabilizers down			*7600 *7600	6300 *7600											
9.0 m	All stabilizers up All stabilizers down					5400 *7500	4000 *7500									
7.5 m	All stabilizers up All stabilizers down					5400 *7700	4000 *7700	3700 *6500	2700 5900					2800 *4600	2100 4600	8.64
6.0 m	All stabilizers up All stabilizers down			8500 *9900	6300 *9900	5300 *7900	3900 *7900	3600 *6600	2700 5800	2600 5300	1900 4300			2400 *4500	1700 3900	9.46
4.5 m	All stabilizers up All stabilizers down	*13500 *13500	11400 *13500	8100 *10700	5900 *10700	5000 *8200	3700 *8200	3500 *6700	2600 5700	2600 5300	1800 4200			2100 4400	1500 3500	10.00
3.0 m	All stabilizers up All stabilizers down			7400 *11600	5300 *11600	4800 *8500	3400 7900	3400 *6700	2400 5500	2500 5200	1800 4100			2000 4200	1400 3300	10.28
1.5 m	All stabilizers up All stabilizers down			6800 *11600	4700 *11600	4500 *8500	3200 7600	3200 *6500	2300 5400	2400 *5100	1700 4000					
0.0 m	All stabilizers up All stabilizers down			6500 *8800	4400 *8800	4300 *7800	3000 7400	3100 *6000	2200 5200	2400 *4400	1600 4000					

Working Ranges and Lift Capacities – M322C MH



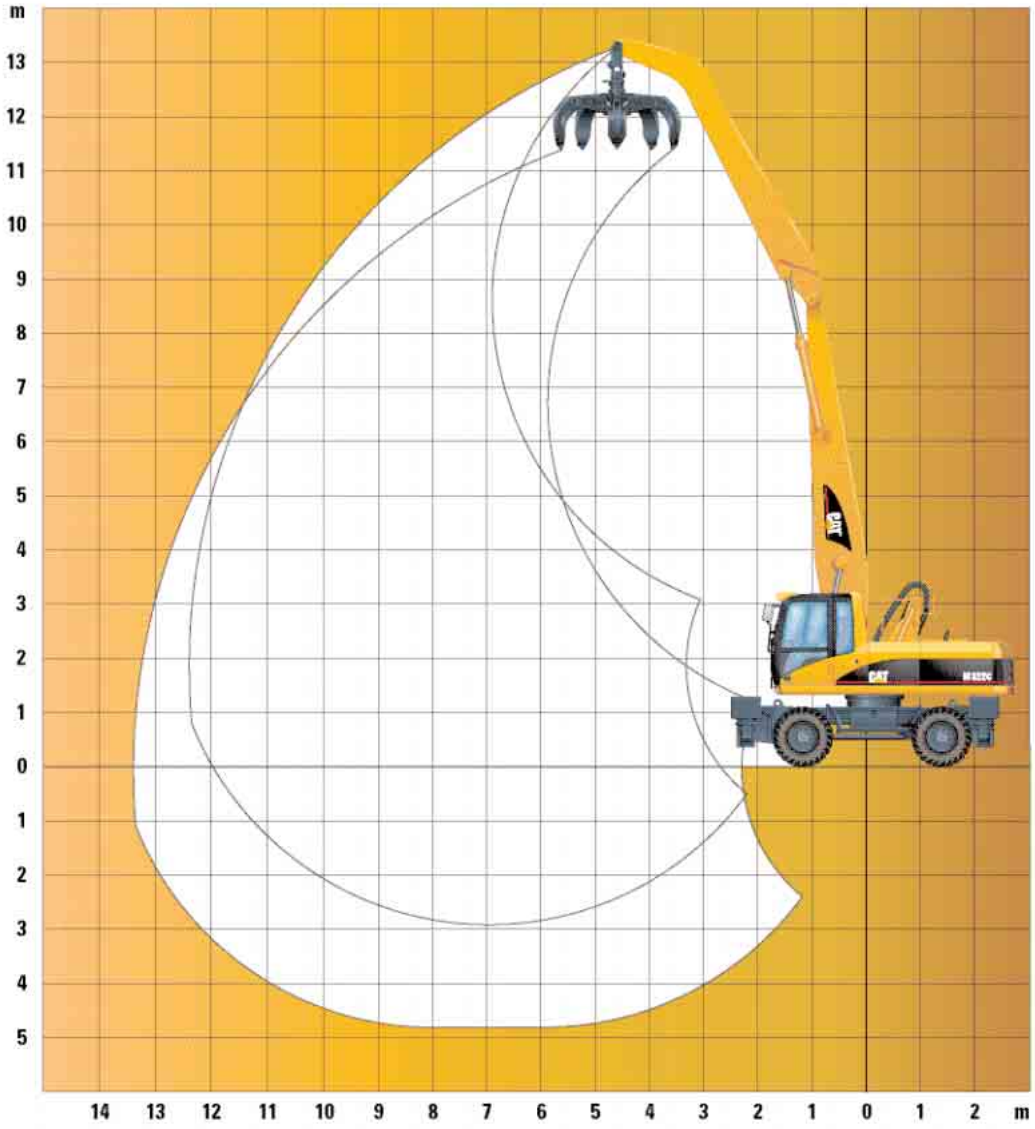
Undercarriage
Material Handling

Straight MH Boom
6800 mm

MH Stick
4900 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				m
10.5 m	All stabilizers up All stabilizers down					6800 *8500	5300 *8500	4700 *5900	3600 *5900							
9.0 m	All stabilizers up All stabilizers down					6900 *8600	5400 *8600	4900 *7500	3800 7300							
7.5 m	All stabilizers up All stabilizers down					6900 *8700	5400 *8700	4800 *7500	3800 7300	3600 *6500	2800 5400			3000 *5100	2300 4500	10.02
6.0 m	All stabilizers up All stabilizers down					6700 *9000	5200 *9000	4800 *7600	3700 7200	3600 *6500	2700 5400	2700 5100	2100 4200	2600 4900	2000 4000	10.74
4.5 m	All stabilizers up All stabilizers down			10100 *12200	7600 *12200	6500 *9500	4900 *9500	4600 *7800	3500 7100	3500 6500	2700 5300	2700 5100	2000 4200	2400 4600	1800 3700	11.22
3.0 m	All stabilizers up All stabilizers down			9400 *13500	6900 *13500	6100 *10000	4600 9700	4400 *8000	3300 6800	3400 6300	2500 5200	2700 5000	2000 4100	2300 4400	1700 3600	11.47
1.5 m	All stabilizers up All stabilizers down			8600 *13900	6200 *13900	5700 *10200	4300 9300	4200 *8000	3100 6600	3200 6200	2400 5100	2600 4900	1900 4000			
0.0 m	All stabilizers up All stabilizers down			8100 *9500	5800 *9500	5500 *9700	4000 9000	4000 *7600	3000 6400	3200 *6000	2300 5000	2600 *4600	1900 4000			
-1.5 m	All stabilizers up All stabilizers down					5300 *8400	3900 *8400	3900 *6600	2900 6300							

Working Ranges and Lift Capacities – M322C MH

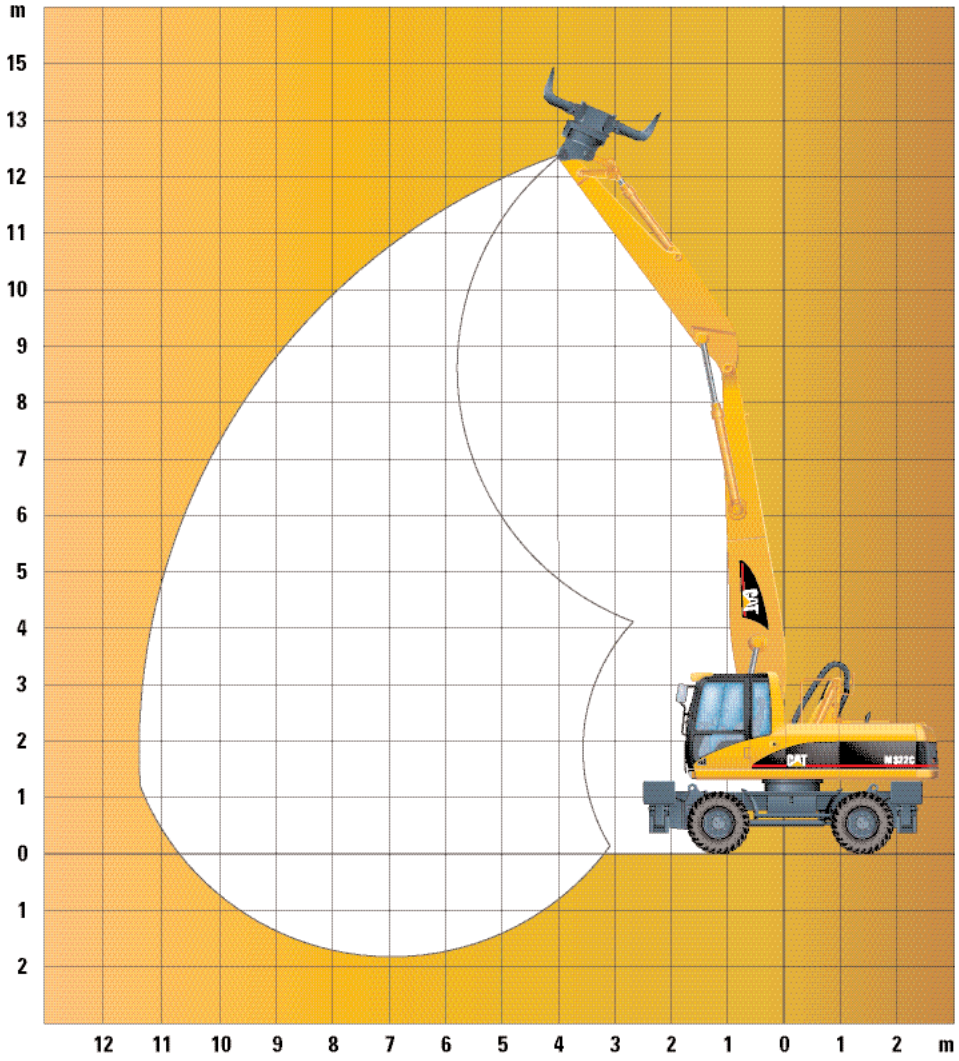


Undercarriage
Material Handling

Straight MH Boom
6800 mm

MH Stick
5900 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m				m
12.0 m	All stabilizers up All stabilizers down					6900 *6900	5400 *6900											
10.5 m	All stabilizers up All stabilizers down							5000 *6800	3900 *6800									
9.0 m	All stabilizers up All stabilizers down							5000 *7000	3900 *7000	3700 *6200	2900 5600							
7.5 m	All stabilizers up All stabilizers down							5000 *7000	3900 *7000	3700 *6200	2900 5600	2800 5200	2200 4300			2500 *4100	1900 3900	11.11
6.0 m	All stabilizers up All stabilizers down							4900 *7200	3800 *7200	3700 *6300	2800 5500	2800 5200	2100 4300			2300 *4000	1700 3500	11.76
4.5 m	All stabilizers up All stabilizers down					6700 *8900	5200 *8900	4700 *7500	3700 7200	3500 *6400	2700 5400	2800 5100	2100 4200	2200 4100	1600 3400	2100 *4000	1600 3300	12.20
3.0 m	All stabilizers up All stabilizers down			9900 *12500	7400 *12500	6300 *9600	4800 *9600	4500 *7800	3400 7000	3400 6400	2600 5200	2700 5000	2000 4100	2200 4100	1600 3400	2000 3900	1500 3200	12.43
1.5 m	All stabilizers up All stabilizers down			9000 *13600	6600 *13600	5900 *10000	4400 9500	4300 *7900	3200 6700	3300 6300	2500 5100	2600 5000	1900 4000	2100 4100	1600 3300			
0.0 m	All stabilizers up All stabilizers down	*3800 *3800	*3800 *3800	8300 *13600	5900 *13600	5500 *10000	4100 9100	4100 *7800	3000 6500	3100 6100	2300 5000	2500 4900	1900 4000	2100 *3700	1500 3300			
-1.5 m	All stabilizers up All stabilizers down			7900 *9700	5600 *9700	5300 *9200	3800 8800	3900 *7200	2900 6300	3000 *5700	2200 4800	2500 *4400	1800 3900					



Undercarriage
Material Handling

Straight MH Boom
6800 mm

Straight MH Stick
4800 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				m
10.5 m	All stabilizers up All stabilizers down					6600 *8300	5000 *8300									
9.0 m	All stabilizers up All stabilizers down					6700 *8400	5200 *8400	4600 *7200	3500 7100							
7.5 m	All stabilizers up All stabilizers down					6700 *8500	5100 *8500	4600 *7200	3500 7100	3300 *6200	2500 5200			2800 *4900	2100 4400	9.91
6.0 m	All stabilizers up All stabilizers down					6500 *8800	5000 *8800	4500 *7400	3400 7000	3300 *6300	2500 5100	2500 4800	1800 3900	2400 4700	1800 3800	10.64
4.5 m	All stabilizers up All stabilizers down			9900 *12000	7300 *12000	6200 *9300	4700 *9300	4300 *7600	3300 6800	3200 6200	2400 5000	2500 4800	1800 3900	2200 4400	1600 3500	11.12
3.0 m	All stabilizers up All stabilizers down			9000 *13200	6600 *13200	5800 *9800	4300 9400	4100 *7700	3100 6600	3100 6100	2300 4900	2400 4800	1700 3800	2100 4200	1500 3400	11.38
1.5 m	All stabilizers up All stabilizers down			8200 *13500	5900 *13500	5400 *9900	4000 9000	3900 *7700	2900 6300	3000 6000	2200 4800	2300 4700	1700 3800			
0.0 m	All stabilizers up All stabilizers down			7700 *9000	5400 *9000	5100 *9300	3700 8600	3700 *7200	2700 6100	2900 *5600	2100 4700	2300 *4200	1600 3700			
-1.5 m	All stabilizers up All stabilizers down					5000 *7900	3500 *7900	3600 *6200	2600 6000							

Lift Capacities – M318C MH

All weights are in kg.

Undercarriage
Standard

Boom
6200 mm

Stick
4900 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m			9.0 m			10.5 m						m
10.5 m	2 sets stab down							*6000		*6000													
	Rear dozer up							5900		4100													
	Rear dozer down								*6000	4600													
	Rear stab down								*6000	5400													
	Dozer and stab down							*6000		*6000													
9.0 m	2 sets stab down							*7300		*7300	*5900		5500										
	Rear dozer up							6000		4200	4100		2900										
	Rear dozer down								*7300	4700		*5900	3200										
	Rear stab down								*7300	5500		*5900	3800										
	Dozer and stab down							*7300		6700	*5900		4700										
7.5 m	2 sets stab down							*7600		*7600	*6600		5500	*5100		4100				*4100		3800	9.42
	Rear dozer up							6000		4200	4200		2900	3100		2100				2800		1900	
	Rear dozer down								*7600	4700		*6600	3200		5000	2400					*4100	2200	
	Rear stab down								*7600	5500		6100	3900		4500	2800					*4100	2600	
	Dozer and stab down							*7600		6700	*6600		4700	*5100		3500				*4100		3200	
6.0 m	2 sets stab down							*7800		*7800	*6700		5500	*5800		4100				*4000		3300	10.18
	Rear dozer up							5900		4100	4100		2900	3100		2100				2500		1700	
	Rear dozer down								*7800	4600		*6700	3200		5000	2400					*4000	1900	
	Rear stab down								*7800	5400		6000	3800		4500	2800					3600	2300	
	Dozer and stab down							*7800		6600	*6700		4600	*5800		3400				*4000		2800	
4.5 m	2 sets stab down				*10400		*10400	*8300		7600	*6800		5400	*5800		4000	*4600		3200	*4000		3100	10.68
	Rear dozer up				9000		6100	5600		3900	4000		2700	3000		2000	2300		1500	2300		1500	
	Rear dozer down					*10400	6800		*8300	4400		6600	3100		4900	2300		3800	1800		3700	1700	
	Rear stab down					*10400	8200		*8300	5200		5900	3700		4400	2800		3400	2100		3300	2100	
	Dozer and stab down				*10400		10200	*8300		6400	*6800		4500	*5800		3400	4600		2600	*4000		2600	
3.0 m	2 sets stab down	*17300		*17300	*11500		*11500	*8700		7300	*7000		5200	*5800		3900	*4600		3100	*4100		2900	10.95
	Rear dozer up	17100		10300	8400		5500	5400		3600	3800		2600	2900		2000	2300		1500	2100		1400	
	Rear dozer down		*17300	11900		*11500	6300		*8700	4100		6400	2900		4800	2200		3800	1700		3500	1600	
	Rear stab down		*17300	15200		*11500	7700		8200	4900		5700	3500		4300	2700		3400	2100		3200	2000	
	Dozer and stab down	*17300		*17300	*11500		9600	*8700		6100	*7000		4300	*5800		3300	4500		2600	*4100		2400	
1.5 m	2 sets stab down				*12100		11100	*8900		7000	*7000		5000	*5600		3800	*4300		3100				
	Rear dozer up				7700		5000	5100		3300	3700		2400	2800		1900	2300		1500				
	Rear dozer down					*12100	5700		*8900	3800		6200	2800		4700	2100		3700	1700				
	Rear stab down					*12100	7000		7900	4600		5500	3400		4200	2600		3300	2100				
	Dozer and stab down				*12100		8900	*8900		5800	*7000		4200	*5600		3200	*4300		2600				
Ground	2 sets stab down	*3200		*3200	*11400		10600	*8500		6700	*6600		4900	*5200		3800	*3700		3000				
	Rear dozer up	*3200		*3200	7300		4600	4800		3100	3500		2300	2700		1800	2200		1400				
	Rear dozer down		*3200	*3200		*11400	5300		*8500	3600		6100	2600		4600	2100		3700	1600				
	Rear stab down		*3200	*3200		*11400	6600		7600	4400		5400	3200		4100	2500		3300	2000				
	Dozer and stab down	*3200		*3200	*11400		8400	*8500		5500	*6600		4000	*5200		3100	*3700		2500				
-1.5 m	2 sets stab down				*8900		*8900	*7400		6600	*5800		4800	*4300		3700							
	Rear dozer up				7100		4400	4700		3000	3400		2200	2700		1800							
	Rear dozer down					*8900	5100		*7400	3400		*5800	2600		*4300	2000							
	Rear stab down					*8900	6400		7400	4300		5300	3200		4100	2500							
	Dozer and stab down				*8900		8200	*7400		5400	*5800		3900	*4300		3100							

Load Point Height | Load Radius Over Front | Load Radius Over Rear | Load Radius Over Side | Load at Maximum Reach

* Limited by hydraulic rather than tipping load.
The above loads are in compliance with hydraulic excavator lift capacity ratings standard ISO 10567, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all tools and lifting accessories must be deducted from the above lifting capacities.

Undercarriage
Standard

Boom
6200 mm

Stick
4200 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m			9.0 m			10.5 m						
																							m
10.5 m	2 sets stab down				*7600		*7600																
	Rear dozer up				*7600		6000																
	Rear dozer down					*7600	6800																
	Rear stab down					*7600	*7600																
	Dozer and stab down				*7600		*7600																
9.0 m	2 sets stab down							*7500		7500													
	Rear dozer up							5600		3800													
	Rear dozer down								*7500	4300													
	Rear stab down								*7500	5100													
	Dozer and stab down							*7500		6300													
7.5 m	2 sets stab down							*7700		7600	*6500		5200							*4600		4000	8.64
	Rear dozer up							5600		3800	3800		2500							2900		1900	
	Rear dozer down								*7700	4300		6400	2900								*4600	2200	
	Rear stab down								*7700	5200		5700	3500								4400	2700	
	Dozer and stab down							*7700		6300	*6500		4300							*4600		3300	
6.0 m	2 sets stab down				*9900		*9900	*7900		7500	*6600		5100	*5500		3700				*4500		3400	9.46
	Rear dozer up				8900		6000	5500		3700	3700		2500	2700		1700				2500		1600	
	Rear dozer down					*9900	6700		*7900	4200		6400	2800		4600	2000					4200	1800	
	Rear stab down					*9900	8200		*7900	5000		5700	3500		4100	2500					3800	2300	
	Dozer and stab down				*9900		*9900	*7900		6200	*6600		4300	*5500		3100				*4500		2800	
4.5 m	2 sets stab down	*13500		*13500	*10700		*10700	*8200		7200	*6700		5000	*5500		3700				*4500		3100	10.10
	Rear dozer up	*13500		10800	8400		5500	5200		3500	3600		2400	2700		1700				2200		1400	
	Rear dozer down		*13500	12600		*10700	6300		*8200	3900		6200	2700		4600	2000					3800	1600	
	Rear stab down		*13500	*13500		*10700	7700		8100	4800		5500	3300		4100	2400					3400	2000	
	Dozer and stab down	*13500		*13500	*10700		9600	*8200		6000	*6700		4100	*5500		3100				*4500		2500	
3.0 m	2 sets stab down				*11600		11200	*8500		6900	*6700		4800	*5400		3600				*4200		2900	10.28
	Rear dozer up				7800		5000	4900		3200	3500		2200	2600		1600				2100		1300	
	Rear dozer down					*11600	5700		*8500	3700		6000	2600		4500	1900					3600	1500	
	Rear stab down					*11600	7100		7800	4500		5400	3200		4000	2400					3200	1900	
	Dozer and stab down				*11600		9000	*8500		5700	*6700		4000	*5400		3000				*4200		2400	
1.5 m	2 sets stab down				*11600		10500	*8500		6600	*6500		4700	*5100		3500							
	Rear dozer up				7100		4400	4600		2900	3300		2100	2500		1600							
	Rear dozer down					*11600	5100		*8500	3400		5900	2400		4400	1800							
	Rear stab down					*11600	6500		7400	4200		5200	3000		3900	2300							
	Dozer and stab down				*11600		8300	*8500		5400	*6500		3800	*5100		2900							
Ground	2 sets stab down				*8800		*8800	*7800		6300	*6000		4500	*4400		3500							
	Rear dozer up				6800		4100	4400		2700	3200		2000	2400		1500							
	Rear dozer down					*8800	4800		*7800	3200		5700	2300		4300	1800							
	Rear stab down					*8800	6100		7200	4000		5100	2900		3800	2200							
	Dozer and stab down				*8800		8000	*7800		5100	*6000		3700	*4400		2800							

Load Point Height | Load Radius Over Front | Load Radius Over Rear | Load Radius Over Side | Load at Maximum Reach

* Limited by hydraulic rather than tipping load.
The above loads are in compliance with hydraulic excavator lift capacity ratings standard ISO 10567, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all tools and lifting accessories must be deducted from the above lifting capacities.

Lift Capacities – M322C MH

All weights are in kg.

Undercarriage
Standard

Boom
6800 mm

Stick
4900 mm

	Undercarriage configuration	4.5 m			6.0 m			7.5 m			9.0 m			10.5 m						m
10.5 m	2 sets stab down				*8500		*8500	*5900		*5900										
	Rear dozer up				7100		5100	4900		3500										
	Rear dozer down					*8500	5600		*5900	3900										
	Rear stab down					*8500	6600		*5900	4500										
	Dozer and stab down				*8500		7900	*5900		5400										
9.0 m	2 sets stab down				*8600		*8600	*7500		6500										
	Rear dozer up				7200		5200	5000		3600										
	Rear dozer down					*8600	5700		*7500	4000										
	Rear stab down					*8600	6700		7200	4700										
	Dozer and stab down				*8600		8000	*7500		5600										
7.5 m	2 sets stab down				*8700		*8700	*7500		6500	*6500		4900				*5100		4000	10.02
	Rear dozer up				7100		5100	5000		3600	3700		2600				3100		2100	
	Rear dozer down					*8700	5700		*7500	4000		5900	2900					4900	2400	
	Rear stab down					*8700	6700		7200	4700		5300	3500					4400	2900	
	Dozer and stab down				*8700		8000	*7500		5600	*6500		4100				*5100		3400	
6.0 m	2 sets stab down				*9000		*9000	*7600		6400	*6500		4800	5500		3700	*4900		3600	10.74
	Rear dozer up				7000		5000	4900		3500	3700		2600	2800		2000	2700		1900	
	Rear dozer down					*9000	5500		*7600	3900		5900	2900		4500	2200		4400	2100	
	Rear stab down					*9000	6500		7100	4600		5300	3400		4100	2600		3900	2500	
	Dozer and stab down				*9000		7800	*7600		5500	*6500		4100	5400		3200	*4900		3100	
4.5 m	2 sets stab down	*12200		*12200	*9500		8900	*7800		6300	*6600		4700	5500		3700	4900		3300	11.22
	Rear dozer up	10600		7300	6700		4700	4700		3400	3600		2500	2800		1900	2500		1700	
	Rear dozer down		*12200	8200		*9500	5200		7700	3700		5800	2800		4500	2200		4000	1900	
	Rear stab down		*12200	9800		*9500	6200		6900	4400		5200	3300		4100	2600		3600	2300	
	Dozer and stab down	*12200		11900	*9500		7500	*7800		5300	*6600		4000	5300		3100	4800		2800	
3.0 m	2 sets stab down	*13500		*13500	*10000		8500	*8000		6000	*6600		4600	*5400		3700	*4500		3200	11.47
	Rear dozer up	9800		6600	6300		4400	4500		3200	3500		2400	2700		1900	2400		1600	
	Rear dozer down		*13500	7400		*10000	4900		7500	3500		5600	2700		4400	2100		3900	1800	
	Rear stab down		*13500	9000		9600	5800		6700	4200		5100	3200		4000	2500		3500	2200	
	Dozer and stab down	*13500		11100	*10000		7100	*8000		5100	*6600		3900	5300		3100	*4500		2700	
1.5 m	2 sets stab down	*13900		12700	*10200		8100	*8000		5800	*6400		4500	*5100		3600				
	Rear dozer up	9000		5900	5900		4000	4300		3000	3400		2300	2700		1800				
	Rear dozer down		*13900	6700		*10200	4500		7300	3300		5500	2600		4400	2100				
	Rear stab down		*13900	8200		9200	5500		6500	4000		4900	3100		3900	2500				
	Dozer and stab down	*13900		10300	*10200		6700	*8000		4900	*6400		3800	*5100		3000				
Ground	2 sets stab down	*9500		*9500	*9700		7800	*7600		5700	*6000		4400	*4600		3500				
	Rear dozer up	8500		5500	5700		3800	4200		2800	3300		2200	2600		1800				
	Rear dozer down		*9500	6300		*9700	4300		7100	3200		5400	2500		4300	2000				
	Rear stab down		*9500	7800		8900	5200		6300	3900		4800	3000		3900	2400				
	Dozer and stab down	*9500		*9500	*9700		6400	*7600		4700	*6000		3700	*4600		3000				
-1.5 m	2 sets stab down				*8400		7600	*6600		5500										
	Rear dozer up				5500		3600	4100		2700										
	Rear dozer down					*8400	4100		*6600	3100										
	Rear stab down					*8400	5100		6200	3800										
	Dozer and stab down				*8400		6300	*6600		4600										

Load Point Height | Load Radius Over Front | Load Radius Over Rear | Load Radius Over Side | Load at Maximum Reach

* Limited by hydraulic rather than tipping load.
The above loads are in compliance with hydraulic excavator lift capacity ratings standard ISO 10567, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all tools and lifting accessories must be deducted from the above lifting capacities.

Undercarriage
Standard

Boom
6800 mm

Stick
4800 mm

	Undercarriage configuration	4.5 m			6.0 m			7.5 m			9.0 m			10.5 m						
																				m
10.5 m	2 sets stab down				*8300		*8300													
	Rear dozer up				6800		4800													
	Rear dozer down					*8300	5400													
	Rear stab down					*8300	6300													
	Dozer and stab down				*8300		7600													
9.0 m	2 sets stab down				*8400		*8400	*7200		6300										
	Rear dozer up				6900		4900	4800		3300										
	Rear dozer down					*8400	5500		*7200	3700										
	Rear stab down					*8400	6500		7000	4400										
	Dozer and stab down				*8400		7800	*7200		5300										
7.5 m	2 sets stab down				*8500		*8500	*7200		6300	*6200		4600				*4900		3900	9.91
	Rear dozer up				6900		4900	4700		3300	3400		2400				2900		1900	
	Rear dozer down					*8500	5400		*7200	3700		5600	2700					4700	2200	
	Rear stab down					*8500	6400		7000	4400		5100	3200					4300	2600	
	Dozer and stab down				*8500		7700	*7200		5300	*6200		3900				*4900		3200	
6.0 m	2 sets stab down				*8800		*8800	*7400		6200	*6300		4600	*5300		3500	*4800		3400	10.64
	Rear dozer up				6700		4700	4700		3200	3400		2300	2600		1700	2500		1600	
	Rear dozer down					*8800	5300		*7400	3600		5600	2600		4300	1900		4200	1900	
	Rear stab down					*8800	6200		6900	4300		5000	3200		3800	2400		3700	2300	
	Dozer and stab down				*8800		7500	*7400		5200	*6300		3800	5100		2900	*4800		2800	
4.5 m	2 sets stab down	*12000		*12000	*9300		8600	*7600		6000	*6300		4500	*5200		3500	*4700		3100	11.12
	Rear dozer up	10300		7000	6400		4400	4500		3100	3300		2200	2500		1700	2300		1500	
	Rear dozer down		*12000	7900		*9300	5000		7500	3500		5500	2500		4200	1900		3800	1700	
	Rear stab down		*12000	9500		*9300	5900		6700	4200		4900	3100		3800	2300		3400	2100	
	Dozer and stab down	*12000		11700	*9300		7200	*7600		5000	*6300		3700	5100		2900	4600		2600	
3.0 m	2 sets stab down	*13200		*13200	*9800		8200	*7700		5800	*6300		4300	*5100		3400	*4300		3000	11.38
	Rear dozer up	9400		6300	6000		4100	4300		2900	3200		2100	2500		1600	2200		1400	
	Rear dozer down		*13200	7100		*9800	4600		7200	3300		5400	2400		4200	1900		3700	1600	
	Rear stab down		*13200	8700		9300	5600		6400	3900		4800	3000		3700	2300		3300	2000	
	Dozer and stab down	*13200		10800	*9800		6800	*7700		4800	*6300		3600	5000		2800	*4300		2500	
1.5 m	2 sets stab down	*13500		12400	*9900		7800	*7700		5500	*6100		4200	*4800		3300				
	Rear dozer up	8600		5500	5600		3700	4100		2700	3100		2000	2400		1600				
	Rear dozer down		*13500	6400		*9900	4200		7000	3100		5200	2300		4100	1800				
	Rear stab down		*13500	7900		8900	5200		6200	3700		4700	2800		3700	2200				
	Dozer and stab down	*13500		9900	*9900		6400	*7700		4600	*6100		3500	*4800		2800				
Ground	2 sets stab down	*9000		*9000	*9300		7500	*7200		5400	*5600		4100	*4200		3300				
	Rear dozer up	8100		5100	5400		3500	3900		2500	3000		1900	2400		1500				
	Rear dozer down		*9000	5900		*9300	4000		6800	2900		5100	2200		4100	1700				
	Rear stab down		*9000	7400		8500	4900		6000	3600		4600	2700		3600	2200				
	Dozer and stab down	*9000		*9000	*9300		6100	*7200		4400	*5600		3400	*4200		2700				
-1.5 m	2 sets stab down				*7900		7300	*6200		5300										
	Rear dozer up				5200		3300	3800		2700										
	Rear dozer down					*7900	3800		*6200	2800										
	Rear stab down					*7900	4700		5900	3500										
	Dozer and stab down				*7900		6000	*6200		4300										

Load Point Height | Load Radius Over Front | Load Radius Over Rear | Load Radius Over Side | Load at Maximum Reach

* Limited by hydraulic rather than tipping load.
The above loads are in compliance with hydraulic excavator lift capacity ratings standard ISO 10567, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all tools and lifting accessories must be deducted from the above lifting capacities.

Lift Capacities – M322C MH

All weights are in kg.

Undercarriage
Standard

Boom
6800 mm

Stick
5900 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m			9.0 m			10.5 m			12.0 m				
																								m
12.0 m	2 sets stab down							*6900																
	Rear dozer up							5100																
	Rear dozer down						*6900	5700																
	Rear stab down						*6900	6700																
	Dozer and stab down							*6900																
10.5 m	2 sets stab down								*6800			6700												
	Rear dozer up								5100			3700												
	Rear dozer down									*6800		4100												
	Rear stab down									*6800		4800												
	Dozer and stab down										*6800	5700												
9.0 m	2 sets stab down								*7000			6700	*6200			5000								
	Rear dozer up								5200			3800	3800			2700								
	Rear dozer down									*7000		4200		6000		3000								
	Rear stab down									*7000		4800		5500		3600								
	Dozer and stab down										*7000	5800	*6200			4300								
7.5 m	2 sets stab down								*7000			6700	*6200			5000	*5500			3800			3500	11.11
	Rear dozer up								5200			3700	3800			2700	2900			2000			1800	
	Rear dozer down									*7000		4100		6000		3000		4600		2300		*4100	2000	
	Rear stab down									*7000		4800		5500		3600		4200		2700		3800	2400	
	Dozer and stab down										*7000	5700	*6200			4300	5500			3300			2900	
6.0 m	2 sets stab down								*7200			6600	*6300			4900	*5500			3800			3100	11.76
	Rear dozer up								5100			3600	3800			2700	2900			2000			1600	
	Rear dozer down									*7200		4000		6000		3000		4600		2300		3800	1800	
	Rear stab down									*7200		4700		5400		3500		4200		2700		3400	2200	
	Dozer and stab down										*7200	5600	*6300			4200	5500			3200			2700	
4.5 m	2 sets stab down							*8900	*7500			6400	*6400			4800	*5500			3800	4500		2900	12.20
	Rear dozer up							7000	4900			3500	3700			2600	2800			2000	2300		1500	
	Rear dozer down									*7500		3900		5900		2900		4600		2200		3700	1700	
	Rear stab down									*8900		5500		5300		3400		4100		2600		3200	2000	
	Dozer and stab down										*8900	7800	*7500			4100	5400			3200	4300		2500	
3.0 m	2 sets stab down						*12500	*9600	*7800			8800	*7800			4700	5500			3700	4400		2800	12.43
	Rear dozer up						10300	6600	4700			4600	3500			2500	2800			1900	2200		1400	
	Rear dozer down				*12500					*9600	7600	5100		5700		2700		4500		2100		3600	1700	
	Rear stab down				*12500					*9600	6900	6100	4300	5100		3300		4000		2600	3300		1900	
	Dozer and stab down						*12500					7400	*7800			4000	5300			3100			2400	
1.5 m	2 sets stab down						*13600	*10000	*7900			8300	*7900			4500	*6500			3600	*4200		2900	
	Rear dozer up						9400	6100	4400			4200	3000			2300	3400			1800	2200		1500	
	Rear dozer down				*13600					*10000	7400	4700	3400	5500		2600		4400		2100		3600	1700	
	Rear stab down				*13600					9400	6600	5600	4100	5000		3100		3900		2500	3200		2000	
	Dozer and stab down						*13600					6900	*7900			3800	5200			3000	*4200		2500	
Ground	2 sets stab down	*3800			*13600			*10000	*7800			7900	*7800			5700	*6300			4400	*3700		2900	
	Rear dozer up	*3800			8700			5700	4200			3800	4200			2800	3300			2200	2100		1400	
	Rear dozer down			*3800			*13600	6400		*10000	7100	4300		5400		3200		4300		2500		3500	1600	
	Rear stab down			*3800			*13600	7900		9000	6300	5300	3900	4800		3900		3900		2400	3200		2000	
	Dozer and stab down	*3800			*13600			10000	*9200			6500	*7800			4800	*6300			3700	*3700		2400	
-1.5 m	2 sets stab down				*9700			*9200	7600	*7200		5500	*5700			4300	*4400			3500				
	Rear dozer up				8300			5500	3600	4000		2700	3200			2100	2600			1700				
	Rear dozer down					*9700			*9200		6900	3100		5300		2400		4200		1900				
	Rear stab down					*9700			8700		6200	3700		4700		2900		3800		2400				
	Dozer and stab down				*9700			9600	*9200			4600	*5700			3600	*4400			2900				

Standard Equipment

Standard equipment may vary. Consult your Caterpillar dealer for specifics.

Operator Station

Ash tray with cigarette lighter
Bi-level air conditioner with automatic climate control
Bolt-on FOGS capability
Coat hook
Drink holder
Filtered ventilation
Floormat, washable
Fully adjustable suspension seat
Heater and defroster
Intermittent, parallel wiper and washer for upper and lower windows
Joysticks, adjustable
LH console, tiltable with hydraulic lock
Light, interior
Literature holder
Low fuel indicator light
Openable side window
Openable two-piece front windscreen
Parking brake
Radio mounting (loudspeakers, antenna)
Polycarbonate skylight
Power supply 12V – 7A
Retractable seat belt
Sliding door window
Steering column, tiltable
Storage compartment suitable for a lunch box
Sun screen

Language display WEX Multipro

Clock with 10 day backup battery
Filter/fluid change information
Gauges for fuel level, engine coolant temperature and hydraulic oil temperature
Headlights indicator
Indicator for engine dial setting
Pre-start level check for hydraulic oil, engine oil and coolant
Turn signal indicator
Warning messages
Working hour information

Undercarriage

Fully hydraulic braking system
Hydrostatic transmission, two speed 4 wheel drive with on-the-go shifting
Internal oil disk brakes front, drum brakes rear
Lockable oscillating front axle
Pin-on design preparation for dozer blade and outriggers
10.00-20 14PR tires
Tool box
Two-piece drive shaft

Engine

Automatic engine speed control
Automatic starting aid
Cat 3054E DIT ATAAC Stage II engine, turbocharged with air-to-air aftercooler
Creeper speed
Muffler

Hydraulics

Cat XT-6 ES hoses
Manual work modes (economy, power, travel)
Oil cooler
Separate swing pump
Stick regeneration circuit
Variable displacement, load-sensing hydraulic system

Electrical

Alternator, 75A
Boom working light
Cat Electronic Machine Controller
Heavy-duty maintenance-free batteries
Horn
Main shut-off switch
Roading lights

Other equipment

Automatic swing brake
Mirrors, frame and cab
Door locks and caps locks with Caterpillar one-key security system

Optional Equipment

Optional equipment may vary. Consult your Caterpillar dealer for specifics.

Operator Station

Falling objects guard
Fixed cab riser (1200 mm)
Fixed one-piece front windscreen
Headrest
Hydraulic Cab riser (2400 mm)
Lid for storage compartment
Overload warning device
Travel speed lock
Vandalism guard
Visor, rain protection, polycarbonate
WEX comfort seat with seat heating and air suspension

Electrical

Back-up alarm
Refueling pump
Rotating beacon
Working lights, cab mounted (front and rear)

Booms and Sticks

Material Handling boom
M318C (6200 mm), M322C (6800 mm)
Straight MH stick
M318C (4200 mm), M322C (4800 mm)
Drop nose MH stick
M318C (4900 mm),
M322C (4900/5900 mm)
One-piece boom
M318C (5350 mm), M322C (5650 mm)
VA boom
M318C (5260 mm), M322C (5440 mm)
Sticks
M318C (2200/2500/2800 mm),
M322C (2200/2500/2900 mm)

Undercarriage

Dozer blade, front or rear mounted
MH undercarriage with 4 welded outriggers
Optional tires
Outriggers, front or rear mounted
Rear disc brakes
Second tool box
Spacer rings

Hydraulics

Anti-drift valves (VA boom, stick, bucket)
Auxiliary hydraulic circuit lines for medium and high pressure
Control group for quick coupler
Hammer valve
Hydraulic lines for quick coupler – boom and stick
Lowering control devices for boom and stick
Multifunction valve, provides up to 5 programmed tools and tool selection from the cab (including hammer function)
Synthetic ester based biodegradable hydraulic oil

Other equipment

Cat Machine security system
Cat Product Link
Custom paint
Generator Set

M318C MH and M322C MH Wheel Excavators

HEHH2878 (07/2003) hr

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