

# M313C

Wheel Excavator

**CAT**<sup>®</sup>



Cat<sup>®</sup> 3054E ATAAC diesel engine

Gross power 91 kW/122 hp

Net power 86 kW/115 hp

Operating Weight 12 950 to 14 550 kg

Bucket Capacities 0.22 to 0.72 m<sup>3</sup>

Maximum Reach at Ground Level 9030 mm

Maximum Digging Depth 5750 mm

Travel Speed 34 km/h

# M313C Wheel Excavator

*The C Series incorporates innovations for improved performance and versatility.*

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## Engine

- ✓ The new Cat 3054E 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**

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## 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**

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## 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**

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## 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**



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

- ✓ *New features*

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### 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**

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### Undercarriage

Pin-On design of outriggers and dozer blade allows for interchangeability and helps maximize flexibility to match the application requirements. Heavy-duty cylinder protection and box section design help provide excellent durability. A sealed and lockable toolbox is mounted between the steps. **pg. 10**

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### 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. 11**

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### Buckets and Teeth

- ✓ A wide variety of bucket types are available for the M300 C-Series. These aggressive bucket designs are matched to fit the high C-Series digging forces to improve productivity. **pg. 12**

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### Work Tools

- ✓ Buckets, grapples, hammers, and quick couplers 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**

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### 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**

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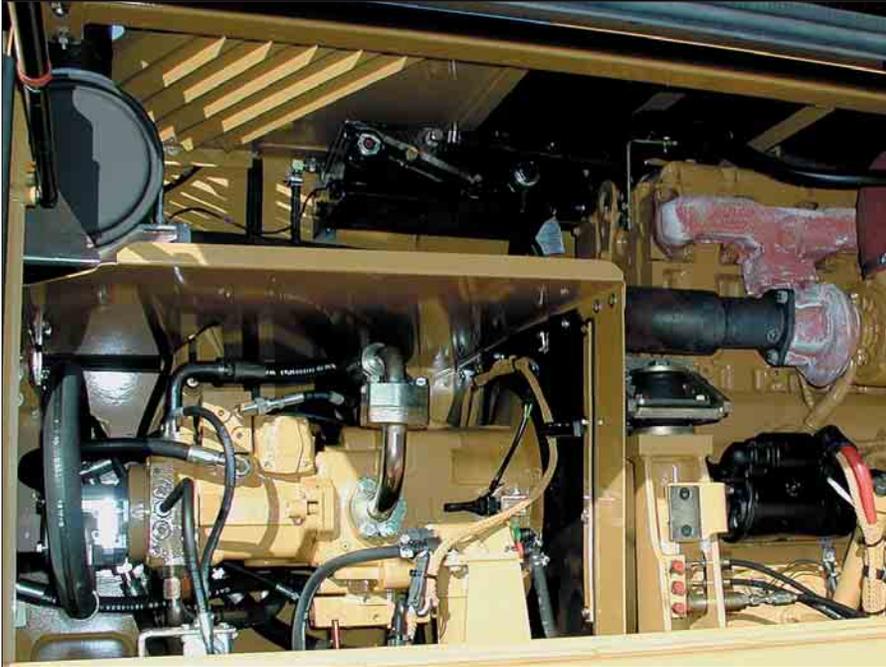
### Complete Customer Service

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. 17**



## Cat 3054E ATAAC Engine

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



**Powerful Performance.** The 3054E ATAAC engine delivers a net power of 86 kW (115 hp) at the rated speed of 2000 rpm, and meets all current worldwide emission standards.

**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 temperature. 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 3054E design improves operator comfort by reducing sound and vibration. The M313C has been awarded the German Blue Angel for low operator and spectator sound levels.

- Operator sound level,  $L_{PA}$ , 71 db(A)
- Spectator sound level,  $L_{WA}$  101 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 high bucket and stick forces 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.

**A 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 multifunction 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.

**Hammer.** The dedicated hammer valve is the best option for machines which will only require a hammer tool and do not need the flexibility provided by the multifunction valve.

**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<sup>sm</sup> 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 M313C, reducing operator fatigue, improving operator effectiveness and efficiency, which ultimately results in enhanced performance.

### 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 M313C is designed to provide more performance yet uses 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 3054E used in the M313C 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 M313C'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 M313C 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 M313C allows 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 Mode.** The economy mode is often used for lifting, pipe setting, grading, slope finishing and precise work. This mode helps ensure minimum fuel consumption.

**Power Mode.** This mode is used for normal truck loading and digging applications, trenching or hammer use.

**Travel Mode.** The travel mode is automatically set when the travel pedal is actuated. It provides maximum speed and drawbar pull.

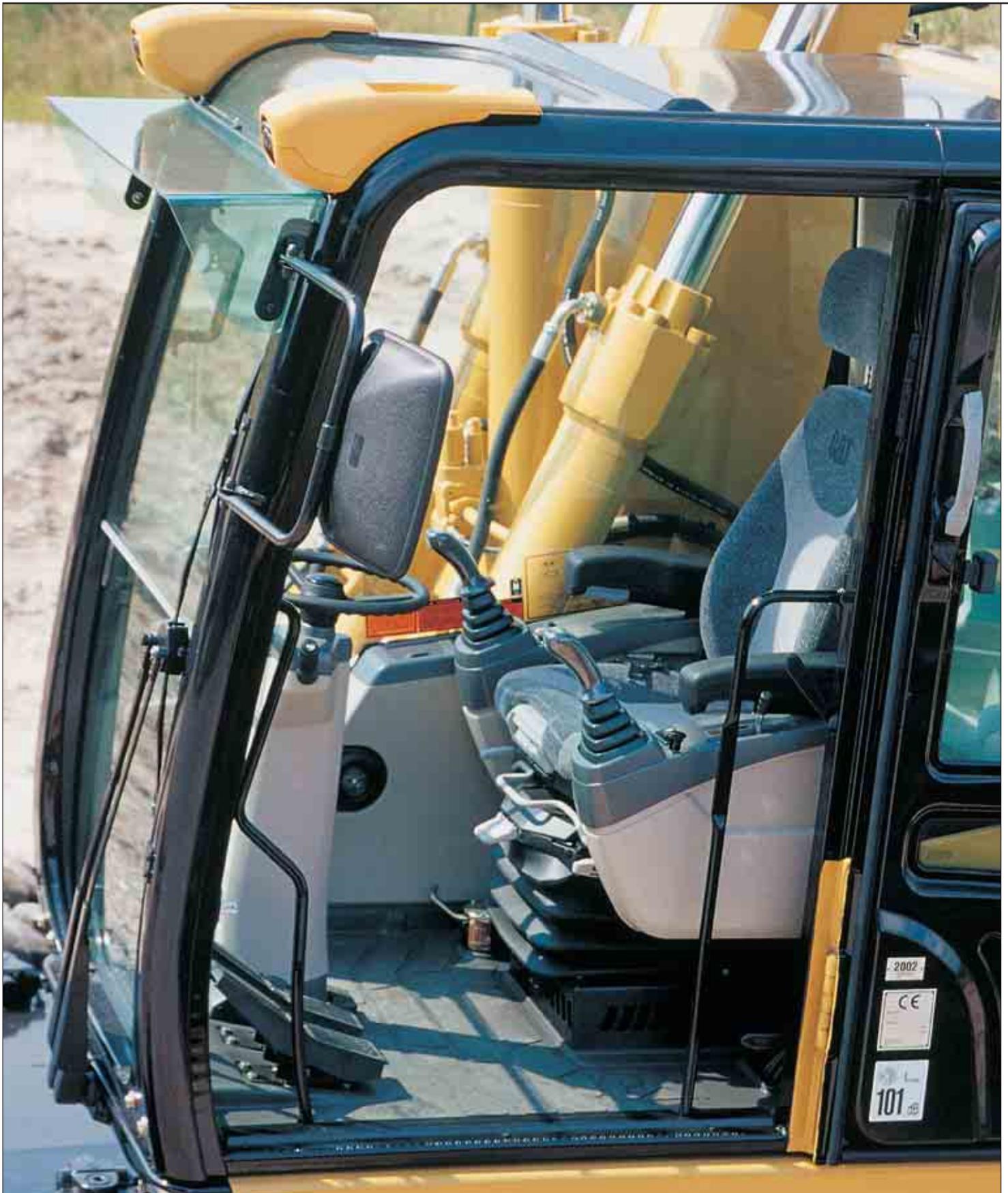
### **Integrated Tool Control System.**

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 M313C.

## All-day operator comfort

*The M313C interior layout maximizes operator space, provides exceptional comfort, and reduces operator fatigue.*





**Interior Operator Station.** The M313C operator work station is quiet, controls have been placed conveniently for easy adjustment and ease of operation. The seat design is ergonomic and ventilation is highly effective.

**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.

## Undercarriage

*Undercarriage and axle design provides maximum strength, flexibility and mobility on wheels.*



**A Strong Undercarriage.** The welded frame provides excellent rigidity and long life. Efficient hydraulic lines routing, transmission protection and heavy-duty axles make the undercarriage perfect for wheel excavator applications. Both outriggers and dozer blade are pin-on for maximum flexibility.

**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.

**Outriggers.** Recommended for maximum operating stability when digging and lifting, the outriggers can be individually controlled to level the machine on slopes. Featuring pin-on design, heavy-duty cylinder guards, and optimized kinematics, the outriggers can be mounted on the front, rear or on both ends of the machine.

**Dozer Blade.** A useful addition for leveling and clean-up work, it can also be used to stabilize the machine during digging applications. The large dozer floor and the parallel design provide minimal ground pressure reducing impact to the work surface. Featuring a pin-on design, heavy-duty cylinder guards, and optimized kinematics, the dozer blade can be mounted either on the front or the rear end.

**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.*



**Booms and Sticks.** Built for performance and long service life, Caterpillar booms and sticks are large, welded, box-section structures with thick, multi-plate fabrications in high-stress areas.

**Flexibility.** The choice of two booms and three different sticks means that the M313C offers the right combination of reach and digging forces for all applications.

**One-piece Boom.** The one-piece boom (5020 mm) fits best for all standard applications such as truck loading and digging. A unique straight section in the curve of the side plate reduces stress flow and helps increase boom life.

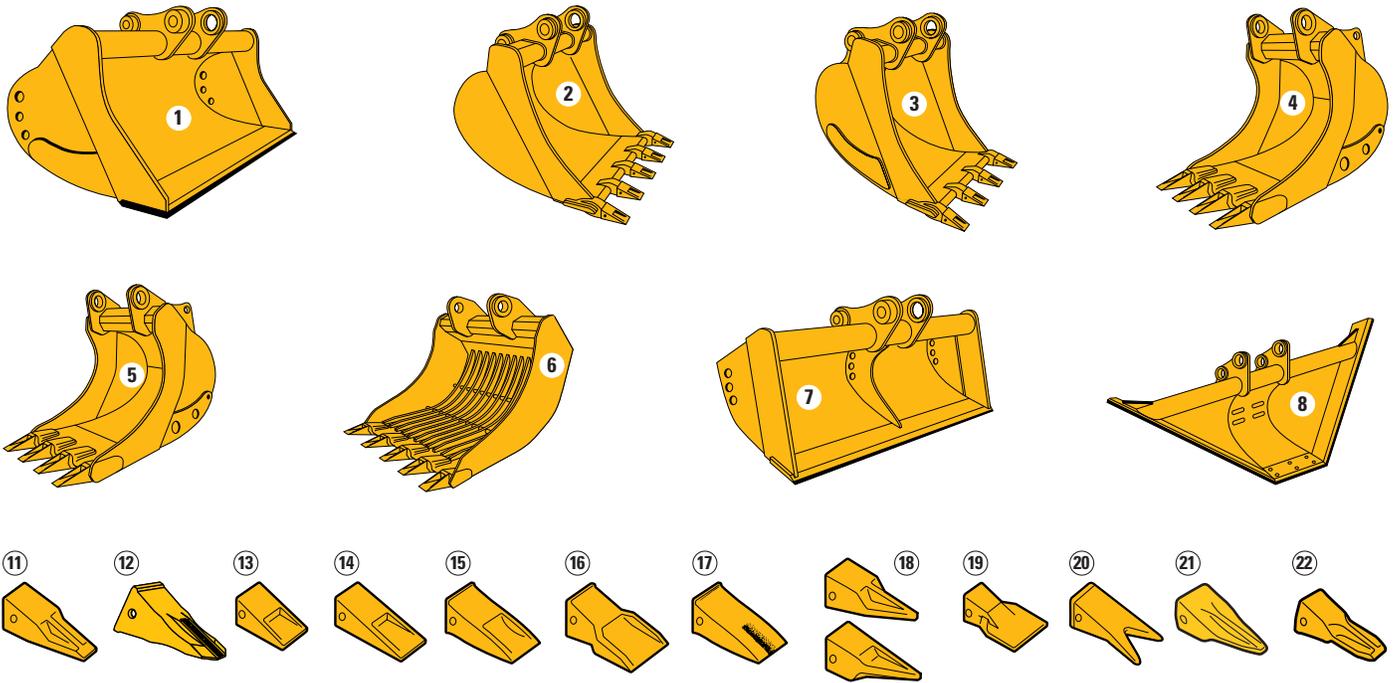
**Hydraulically Adjustable Boom (VA).** The VA boom (4815 mm) offers improved visibility and machine roading balance. When working in tight quarters or lifting heavy loads, the VA boom offers the best flexibility.

**Sticks.** Three different stick lengths are offered to match different applications.

- **Short stick** (2000 mm) for maximum breakout force and lifting capability
- **Medium stick** (2300 mm) as standard for most applications
- **Long stick** (2600 mm) to match reach and depth requirements

# Buckets and Teeth

A wide variety of buckets help optimize machine performance. Purpose designed and built to Caterpillar's high durability standards.



**1 Utility Light (LU).** Low cost earth working bucket for floor, bank and ditch finishing.

**Utility Standard (SU).** Demolition and construction bucket handles bricks and broken concrete, as well as trench filling, floor leveling and bank finishing.

**2 Excavation/Trenching (X).** Digs and loads soft to medium materials such as clay and earth. Features weld on tip adapters, hardened cutting edge and side bars.

**3 Extreme Excavation/Trenching (EX).** Digs and loads compact/abrasive materials like earth/rock, sand/clay, sand/gravel, coal, chalk and low abrasion ores. Features bigger ground engaging tools, plus abrasion resistant steel for all wear parts.

**4 Rock Loading (RL).** Loads large blocks of rock and other abrasive materials. Features longer floor plate and increased side bar curvature for better stability under load.

**5 Block Handling (BH).** Handles pre-shaped blocks of quarry marble and granite. Features increased tip radius, deep-cut side bars for long-floor platform.

**6 Skeleton Light (SL).** For soft and moist soils and for applications where separation of materials, e.g., branches, peatmoss, is required.

**Skeleton Heavy Duty (SH).** As S.L., but for more demanding separation work such as sorting rock from sand or gravel on demolition sites.

**7 Ditch Cleaning (DC).** Wide, light bucket used mainly with long-reach configurations to clean water beds and banks.

**8 Trapezoidal (T).** To prepare and maintain small irrigation ditches. Features angled sides to shape ditch banks in one operation.

**All Cat buckets** can be fitted for Caterpillar Quick Coupler.

## Tip selection

- 11** Penetration
- 12** Penetration Long Life
- 13** Short
- 14** Long
- 15** Heavy-duty Long
- 16** Heavy-duty Abrasion
- 17** Heavy-duty Long Life
- 18** Sharp / Corner Sharp
- 19** Wide
- 20** Twin Sharp
- 21** Long Sharp
- 22** Penetration Plus

## Tool Control System, Quick Couplers and Work Tools

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

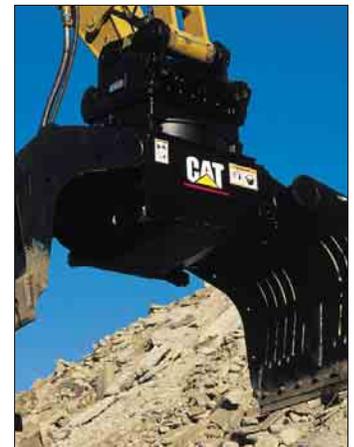
**Tool Controller.** Five hydraulic pump flow and pressure settings can be preset on the WEX Multipro, eliminating the need to adjust the hydraulics each time a tool is changed. Selecting the proper setting from the WEX Multipro's menu instantly provides the operator with the optimal hydraulic settings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



**Hammer.** Cat hammers with a wide variety of tools provide the perfect match of maximum life, efficiency and productivity.



**Demolition and Sorting Grapple.** The demolition and sorting grapple with unlimited left and right rotation is the ideal tool for stripping, sorting, handling and loading.

**Clamshell.** For some trenching applications or jobs being performed on inner city roads, a clamshell provides an ideal solution. The free-swinging tool makes it possible to dig small sized holes easily.

## Maximum Uptime – Service and Maintenance

*Extended service intervals and easy access reduce operating costs.*



**Extended Service Intervals.** M313C 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 M313C 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 M313C 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.

#### **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.

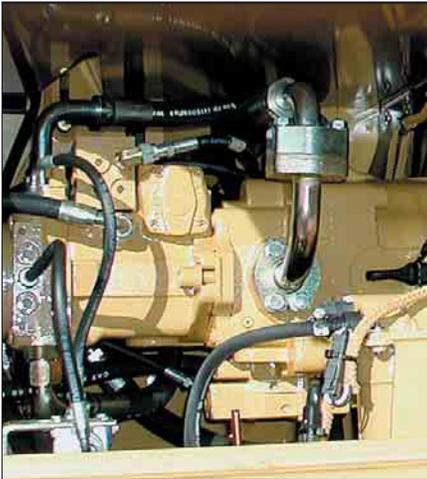
#### **Scheduled Oil Sampling (S•O•S)**

**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** detect 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 Bosch 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.

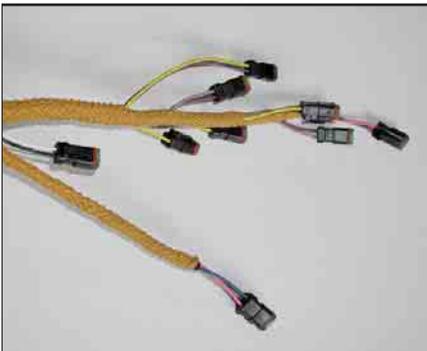
### **Hydraulic Oil Change Intervals.**

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.

## Maximum uptime – Reliability

*Caterpillar standard features help to increase machine uptime.*



### **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 exclusive reusable 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.

## 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

Cat 3054E ATAAC diesel engine	
Ratings	2000 rpm
Gross power	91 kW/122 hp
Net power	
ISO 9249	86 kW/115 hp
EEC 80/1269	86 kW/115 hp
Bore	105 mm
Stroke	127 mm
Displacement	4.4 liters
Cylinders	4
Maximum torque at 1400 rpm	500 Nm

- The 3054E 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

Swing speed	9.5 rpm
Swing torque	34.8 kNm
Maximum flow	80 l/min
Maximum pressure	310 bar

## Tires

- |                                |  |
|--------------------------------|--|
| Standard                       |  |
| ■ Dual pneumatic 10.00-20      |  |
| Optional                       |  |
| ■ 10.00-20 (dual solid rubber) |  |
| ■ 18R 19.5 XF (single)         |  |
| ■ 600/40-22.5 (single)         |  |

## Hydraulic System

Tank capacity	96 liters
System	165 liters
Maximum pressure	
Implements	350 bar
Travel	350 bar
Maximum flow	190 and 80 l/min
Pilot system	
Maximum pressure	31 bar

## Transmission

1st gear, forward/reverse	9 km/h
2nd gear, forward/reverse	20/25/30/34 km/h
Creeper speed (first gear)	4 km/h
Creeper speed (second gear)	13 km/h
Drawbar pull	75 kN
Maximum Gradeability	69%

## Service Refill Capacities

	Liter
Fuel tank capacity	235
Cooling	30
Engine crankcase	9
Rear axle housing (differential)	11
Front steering axle (differential)	8
Final drive	
Disk brakes	2
Drum brake	1.2
Powershift transmission	3

## Cab

Cab/FOGS meets ISO 10262.

## Sound

Low sound, low vibration. The 3054E design improves operator comfort by reducing sound and vibration. The M313C 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  $L_{PA}$  71 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  $L_{WA}$  101 db(A).

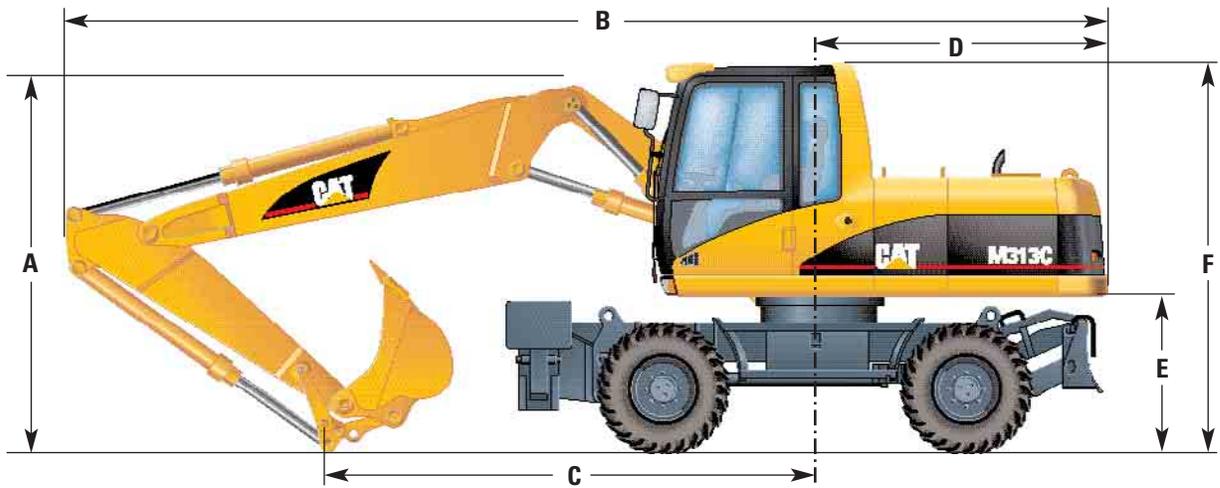
## Weights

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

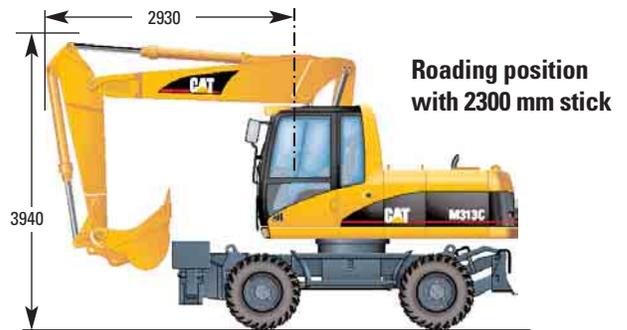
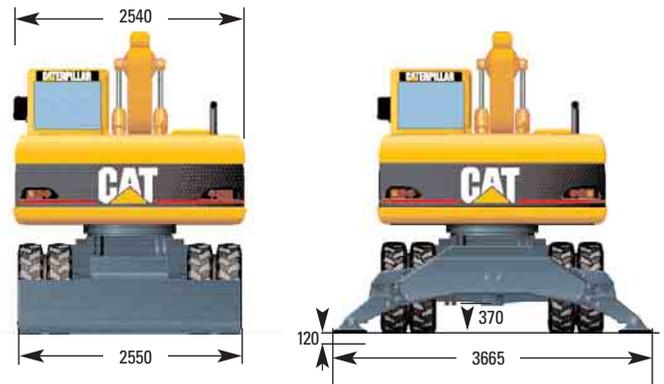
VA boom	kg
rear dozer only	13 600
rear dozer, front outriggers	14 400
front and rear outriggers	14 550
One-piece boom	
rear dozer only	12 950
rear dozer, front outriggers	14 000
front and rear outriggers	14 150
Dozer blade	645
Outriggers	890
Counterweight	2900

# Dimensions

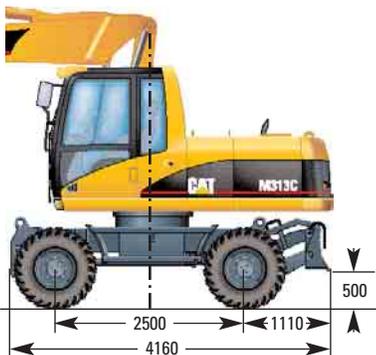
All dimensions are approximate – measured in mm



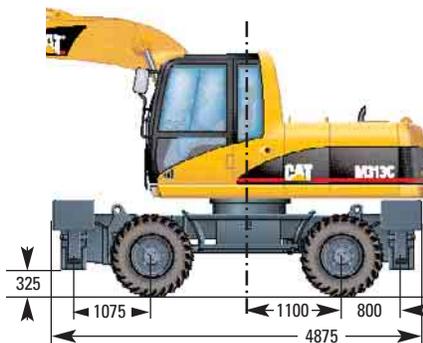
	VA boom mm	One-piece boom mm
<b>A</b> Shipping height		
2100 mm stick	cab height	cab height
2400 mm stick	cab height	cab height
2600 mm stick	cab height	cab height
<b>B</b> Shipping length		
2000 mm stick	8310	8090
2300 mm stick	8300	8080
2600 mm stick	8290	8090
<b>C</b> Support Point		
2000 mm stick	3820	3480
2300 mm stick	3470	3120
2600 mm stick	3320	3950
<b>D</b> Tail swing radius	2049	2049
<b>E</b> Counterweight clearance	1232	1232
<b>F</b> Cab height	3120	3120



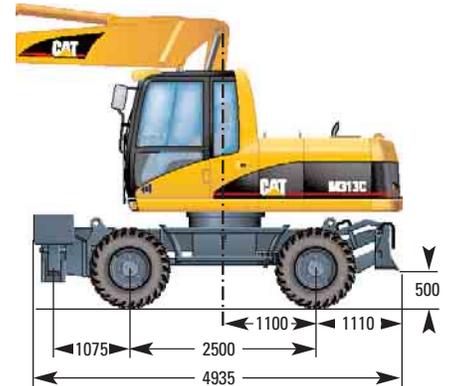
## Undercarriage with dozer only



## Undercarriage with 2 sets of outriggers



## Undercarriage with 1 set of outriggers and dozer



# Bucket Specifications

Contact your Caterpillar dealer for special bucket requirements.  
Buckets are available to fit the Cat quick coupler.

## Buckets without Quick Coupler

Bucket type/stick length	Width	Weight	Capacity (SAE)	Variable adjustable boom 5020 mm			One-piece boom 4815 mm		
	mm	kg	m <sup>3</sup>	2000 mm	2300 mm	2600 mm	2000 mm	2300 mm	2600 mm
Excavation	600	310	0.28						
	750	356	0.38						
	900	399	0.49						
	1000	422	0.56						
	1100	458	0.64			×			
	1200	481	0.72		×	N		×	×
Extreme Excavation	1200	491	0.72		×	N		×	×
Ditch Cleaning	2000	424	0.54						
Ditch Cleaning, tiltable	1800	405+330	0.47			×			
	2000	440+330	0.40						

## Buckets and Quick Coupler

Bucket type/stick length	Width	Weight	Capacity (SAE)	Variable adjustable boom 5020 mm			One-piece boom 4815 mm		
	mm	kg	m <sup>3</sup>	2000 mm	2300 mm	2600 mm	2000 mm	2300 mm	2600 mm
Excavation	500	280	0.22						
	600	300	0.28						
	750	334	0.38						
	900	373	0.49						
	1000	396	0.56			×			
	1100	432	0.64			×			×
Extreme Excavation	1200	455	0.72		×	N		×	N
	1200	465	0.72		×	N		×	N
Ditch Cleaning	1800	459	0.63			×			×
	2000	520	0.83		N	N		N	N
Ditch Cleaning, tiltable	1800	637	0.51			×			×
	2000	674	0.57		×	N		×	N



Max. Material density  
1800 kg/m<sup>3</sup>



Not recommended for dozer down  
stabilization only



Not recommended for free on  
wheels operation

# 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.

			Variable adjustable boom 5020 mm									One-piece boom 4815 mm								
			Dozer lowered			2 sets of stabilizer lowered			Dozer and stabilizer lowered			Dozer lowered			2 sets of stabilizer lowered			Dozer and stabilizer lowered		
Without quick coupler		Stick length mm	2000	2300	2600	2000	2300	2600	2000	2300	2600	2000	2300	2600	2000	2300	2600	2000	2300	2600
Hammers	H100																			
	H115s				×			×			×			×			×			×
Multiprocessor	MP15		×	×	×			×			×	×	×	×			×			×
Crusher	VHC-30		×	×	×			×			×	×	×	×			×			×
Pulverizer	VHP-30		×	×	×							×	×	×						
Demolition and sorting grapple	VRG20/2				×															
	VRG-25/2		×	×	×			×			×	×	×	×			×			×
Digging clamshell bucket	GGs-25																			
	GGs-35		×	×	×							×	×	×						
Rehandling clamshell bucket	GOS-25	0.46 m <sup>3</sup>																		
		0.52 m <sup>3</sup>	×	×	×								×	×						
		0.58 m <sup>3</sup>	×	×	×							×	×	×						
		0.75 m <sup>3</sup>	×	×	×							×	×	×						
Orange peel grapple (5 tines)	GSM25	0.40 m <sup>3</sup>	×	×	×							×	×	×						
		0.50 m <sup>3</sup>	×	×	×			×			×	×	×	×			×			×
	GSH-15	0.40 m <sup>3</sup>	×	×	×							×	×	×						
		0.50 m <sup>3</sup>	×	×	×			×			×	×	×	×			×			×
<b>With quick coupler</b>																				
Quick Coupler	CW-20																			
	CW-20S																			
Hammers	H100				×			×			×			×			×			×
	H115s				×			×			×			×			×			×
Multiprocessor	MP15		×	×	×	×	×	×	×	×	×	×	×	×			×	×	×	×
Crusher	VHC-30		×	×	×	×	×	×	×	×	×	×	×	×			×			×
Pulverizer	VHP-30		×	×	×	×	×	×	×	×	×	×	×	×						
Demolition and sorting grapple	VRG20/2		×	×	×							×	×	×						
	VRG-25/2		×	×	×	×	×	×	×	×	×	×	×	×			×			×
Digging clamshell bucket	GGs-25		×	×	×									×			×			
	GGs-35		×	×	×			×			×	×	×	×						
Rehandling clamshell bucket	GOS-25	0.46 m <sup>3</sup>	×	×	×							×	×	×						
		0.52 m <sup>3</sup>	×	×	×							×	×	×						
		0.58 m <sup>3</sup>	×	×	×							×	×	×						
		0.75 m <sup>3</sup>	×	×	×			×			×	×	×	×			×			×
Orange peel grapple (5 tines)	GSM25	0.40 m <sup>3</sup>	×	×	×							×	×	×						
		0.50 m <sup>3</sup>	×	×	×			×			×	×	×	×						
	GSH-15	0.40 m <sup>3</sup>	×	×	×			×			×	×	×	×			×			×
		0.50 m <sup>3</sup>	×	×	×			×	×	×	×	×	×	×			×	×	×	×

 Recommended

 Not Recommended

# Lift capacities

with 5200 mm Variable adjustable boom and Quick Coupler CW. All weights are in kg.

Stick 2000 mm		Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
																		
6.0 m	Rear dozer up				*4100		3300	3200		2000								
	Rear dozer down				*4100	*3800		*3300	2300									
	Rear stab down				*4100	*4100		*3300	2800									
	2 sets stab down Dozer and stab down				*4100 *4100	*4100 *4100		*3300 *3300	*3300 *3300	3300 3300								
4.5 m	Rear dozer up	*4500		*4500	*4700		3300	3300		2000								
	Rear dozer down		*4500	*4500	*4700	*4700	*3800		*3900	2400								
	Rear stab down		*4500	*4500	*4700	*4700	*4500		*3900	2900								
	2 sets stab down Dozer and stab down	*4500 *4500		*4500 *4500	*4700 *4700		*4700 *4700	*3900 *3900	*3900 *3900	3900 3500								
3.0 m	Rear dozer up	*6800		5800	5000		3200	3300		2000				2100		1200	7.83	
	Rear dozer down		*6800	6800		*5500	3700		*4200	2300					*2100	1400		
	Rear stab down		*6800	*6800		*5500	4400		*4200	2900					*2100	1800		
	2 sets stab down Dozer and stab down	*6800 *6800		*6800 *6800	*5500 *5500		*5500 5300	*4200 *4200	*4200 *4200	4100 3500				*2100 *2100	*2100 *2100	*2100 *2100		
1.5 m	Rear dozer up	*7800		5700	*4900		3200	3200		2000				2000		1100	7.94	
	Rear dozer down		*7800	6700		*6000	3700		*4400	2300					*2100	1400		
	Rear stab down		*7800	*7800		*6000	4300		*4400	2800					*2100	1700		
	2 sets stab down Dozer and stab down	*7800 *7800		*7800 *7800	*6000 *6000		*6000 *5300	*4400 *4400	*4400 *4400	4100 3500				*2100 *2100	*2100 *2100	*2100 *2100		
Ground	Rear dozer up	*9400		5500	5000		3000	3100		1900				2000		1200	7.73	
	Rear dozer down		*9400	6600		*6100	3500		*4400	2200					*2300	1400		
	Rear stab down		*9400	8200		*6100	4300		*4400	2700					*2300	1800		
	2 sets stab down Dozer and stab down	*9400 *9400		*9400 *9400	*6100 *6100		*6100 *5300	*4400 *4400	*4400 *4400	4100 3400				*2300 *2300	*2300 *2300	*2300 *2300		
-1.5 m	Rear dozer up	9800		5300	4900		2900	3000		1800				2300		1300	7.15	
	Rear dozer down		*10 000	6400		*6200	3400		*4200	2100					*2500	1600		
	Rear stab down		*10 000	8200		*6200	4200		*4200	2600					*2500	2000		
	2 sets stab down Dozer and stab down	*10 000 *10 000		*10 000 *10 000	*6200 *6200		*6200 5300	*4200 *4200	*4200 *4200	4000 3300				*2500 *2500	*2500 *2500	*2500 *2500		
-3.0 m	Rear dozer up	*9700		5300	4700		2800											
	Rear dozer down		*9700	6400		*5200	3300											
	Rear stab down		*9700	8100		*5200	4000											
	2 sets stab down Dozer and stab down	*9700 *9700		*9700 *9700	*5200 *5200		*5200 *5200											

## Stick 2300 mm

Stick 2300 mm		Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
																		
6.0 m	Rear dozer up				*3700		3400	3300		2000								
	Rear dozer down				*3700	*3700		*3300	2300									
	Rear stab down				*3700	*3700		*3300	2800									
	2 sets stab down Dozer and stab down				*3700 *3700	*3700 *3700		*3300 *3300	*3300 *3300	3300 3300								
4.5 m	Rear dozer up	*3700		*3700	*4200		3300	*3300		2100								
	Rear dozer down		*3700	*3700	*4200	*4200	3800		*3800	2400								
	Rear stab down		*3700	*3700	*4200	*4200	4200		*3800	2900								
	2 sets stab down Dozer and stab down	*3700 *3700		*3700 *3700	*4200 *4200		*4200 *4200	*3800 *3800	*3800 *3800	3800 3500								
3.0 m	Rear dozer up	*7200		5800	5000		3200	3300		2100	2200			1300	*1800	1100	8.08	
	Rear dozer down		*7200	6700		*5300	3700		*4100	2400			*2900	1500	*1800	1400		
	Rear stab down		*7200	*7200		*5300	4400		*4100	2900			*2900	1900	*1800	1700		
	2 sets stab down Dozer and stab down	*7200 *7200		*7200 *7200	*5300 *5300		*5300 *4100	*4100 *4100	*4100 *4100	4100 3500	*2900 *2900		*2900 *2900	2900 2400	*1800 *1800	*1800 *1800		
1.5 m	Rear dozer up	*8200		5700	4900		3200	3200		2000	2100			1200	*1900	1100	8.19	
	Rear dozer down		*8200	*6600		*6000	3600		*4300	2300			*3300	1500	*1900	1300		
	Rear stab down		*8200	8100		*6000	4300		*4300	2800			3100	1800	*1900	1600		
	2 sets stab down Dozer and stab down	*8200 *8200		*8200 *8200	*6000 *6000		*6000 *5300	*4300 *4300	*4300 *4300	4100 3500	*3300 *3300		*3300 *3300	2800 2300	*1900 *1900	*1900 *1900		
Ground	Rear dozer up	*9300		5600	5000		3000	3100		1900	2100			1900		1100	7.98	
	Rear dozer down		*9300	6600		*6100	3600		*4400	2200			*2800	1400	*2000	1300		
	Rear stab down		*9300	8200		*6100	4400		*4400	2700			*2800	1800	*2000	1700		
	2 sets stab down Dozer and stab down	*9300 *9300		*9300 *9300	*6100 *6100		*6100 5300	*4400 *4400	*4400 *4400	4100 3400	*2800 *2800		*2800 *2800	2800 2300	*2000 *2000	*2000 *2000		
-1.5 m	Rear dozer up	9700		5300	4900		2900	3000		1800				2100		1200	7.43	
	Rear dozer down		*9900	6400		*6200	3400		*4300	2100					*2300	1500		
	Rear stab down		*9900	8200		*6200	4200		*4300	2600					*2300	1800		
	2 sets stab down Dozer and stab down	*9900 *9900		*9900 *9900	*6200 *6200		*6200 5400	*4300 *4300	*4300 *4300	4000 3300				*2300 *2300	*2300 *2300	*2300 *2300		
-3.0 m	Rear dozer up	9900		5300	4700		2700											
	Rear dozer down		*10 100	6400		*5700	3200											
	Rear stab down		*10 100	8200		*5700	4000											
	2 sets stab down Dozer and stab down	*10 100 *10 100		*10 100 *10 100	*5700 *5700		*5700 5200											

**Stick**  
2600 mm

		Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m			
																					
6.0 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down				*3200			*3200	*3200	*3200										
4.5 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down				*3600			*3600	*3600	*3600										
3.0 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down	*7000		5900	5000			3200	3200	3200										8.38
1.5 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down	*8000		5700	4900			3100	3200	3200										8.48
Ground		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down	*8900		5600	4900			3100	3200	3200										8.28
-1.5 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down	9600		5300	4900			2900	3000	3000										7.75
-3.0 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down	9800		5300	4700			2700	2900	2900										
-4.5 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down	*6100		5200																



\* 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

with 5050 mm One-piece boom and Quick Coupler CW. All weights are in kg.

Stick 2000 mm		Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
																		
4.5 m	Rear dozer up				*4400			3200	3200									
	Rear dozer down						*4400	3700		*3800								
	Rear stab down						*4400			*3800								
	2 sets stab down				*4400			*4400	*3800									
	Dozer and stab down				*4400			*4400	*3800									
3.0 m	Rear dozer up				4900			3000	3100						*1900		1300	7.58
	Rear dozer down						*5300	3500		*4100					*1900	*1900	1500	
	Rear stab down						*5300	4300		*4100					*1900	*1900	1500	
	2 sets stab down				*5300			*5300	*4100						*1900	*1900	1500	
	Dozer and stab down				*5300			*5300	*4100						*1900	*1900	1500	
1.5 m	Rear dozer up				4700			2800	3000						*2000		1200	7.70
	Rear dozer down						*6000	3200		*4400					*2000	*2000	1500	
	Rear stab down						*6000	4000		*4400					*2000	*2000	1800	
	2 sets stab down				*6000			*6000	*4400						*2000	*2000	2000	
	Dozer and stab down				*6000			*6000	*4400						*2000	*2000	2000	
Ground	Rear dozer up				4600			2600	3000						*2100		1300	7.47
	Rear dozer down						*6100	3100		*4400					*2100	*2100	1500	
	Rear stab down						*6100	3900		4400					*2100	*2100	1900	
	2 sets stab down				*6100			*6100	*4400						*2100	*2100	2100	
	Dozer and stab down				*6100			*6100	*4400						*2100	*2100	2100	
-1.5 m	Rear dozer up	*7300		4800	4500			2600	2900						2500		1500	6.87
	Rear dozer down		*7300	5800				3100		*3900					*2500	*2500	1700	
	Rear stab down		*7300	*7300				3900		*3900					*2500	*2500	2100	
	2 sets stab down	*7300		*7300	*5600			*5600	*3900						*2500	*2500	2500	
	Dozer and stab down	*7300		*7300	*5600			5000	*3900						*2500	*2500	2500	
-3.0 m	Rear dozer up	*5600		4900	*4100			2700							*2500		1900	5.74
	Rear dozer down		*5600	*5600				3200							*2500	*2500	2300	
	Rear stab down		*5600	*5600				3900							*2500	*2500	2500	
	2 sets stab down	*5600		*5600	*4100			*4100							*2500	*2500	2500	
	Dozer and stab down	*5600		*5600	*4100			*4100							*2500	*2500	2500	

## Stick 2300 mm

Stick 2300 mm		Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
																		
6.0 m	Rear dozer up							*2400		2000								
	Rear dozer down									*2400								
	Rear stab down									*2400								
	2 sets stab down									*2400								
	Dozer and stab down									*2400								
4.5 m	Rear dozer up								3200									
	Rear dozer down									*3700								
	Rear stab down									*3700								
	2 sets stab down									*3700								
	Dozer and stab down									*3700								
3.0 m	Rear dozer up				5000			3000	3100						*1600		1200	7.82
	Rear dozer down						*5100	3500		*4000					*1600	*1600	1500	
	Rear stab down						*5100	4300		*4000					*1600	*1600	1600	
	2 sets stab down				*5100			*5100	*4000						*1600	*1600	1600	
	Dozer and stab down				*5100			*5100	*4000						*1600	*1600	1600	
1.5 m	Rear dozer up				4700			2800	3000						*1700		1200	7.94
	Rear dozer down						*5900	3300		*4300					*1700	*1700	1400	
	Rear stab down						*5900	4000		*4300					*1700	*1700	1700	
	2 sets stab down				*5900			*5900	*4300						*1700	*1700	1700	
	Dozer and stab down				*5900			5200	*4300						*1700	*1700	1700	
Ground	Rear dozer up	*4000		*4000	4600			2600	3000						*1900		1200	7.72
	Rear dozer down		*4000	*4000			*6200	3100		*4400					*1900	*1900	1400	
	Rear stab down		*4000	*4000			*6200	3900		4400					*1900	*1900	1800	
	2 sets stab down	*4000		*4000	*6200			*6200	*4400						*1900	*1900	1900	
	Dozer and stab down	*4000		*4000	*6200			5000	*4400						*1900	*1900	1900	
-1.5 m	Rear dozer up	*7300		4800	4500			2600	2900						*2200		1400	7.14
	Rear dozer down		*7300	5800				3100		*4100					*2200	*2200	1600	
	Rear stab down		*7300	*7300				3800		*4100					*2200	*2200	2000	
	2 sets stab down	*7300		*7300	*5700			*5700	*4100						*2200	*2200	2200	
	Dozer and stab down	*7300		*7300	*5700			4900	*4100						*2200	*2200	2200	
-3.0 m	Rear dozer up	*6300		4900	*4500			2600							*2600		1800	6.08
	Rear dozer down		*6300	5900				3100							*2600	*2600	2100	
	Rear stab down		*6300	*6300				3900							*2600	*2600	2500	
	2 sets stab down	*6300		*6300	*4500			*4500							*2600	*2600	2600	
	Dozer and stab down	*6300		*6300	*4500			*4500							*2600	*2600	2600	

**Stick**  
2600 mm

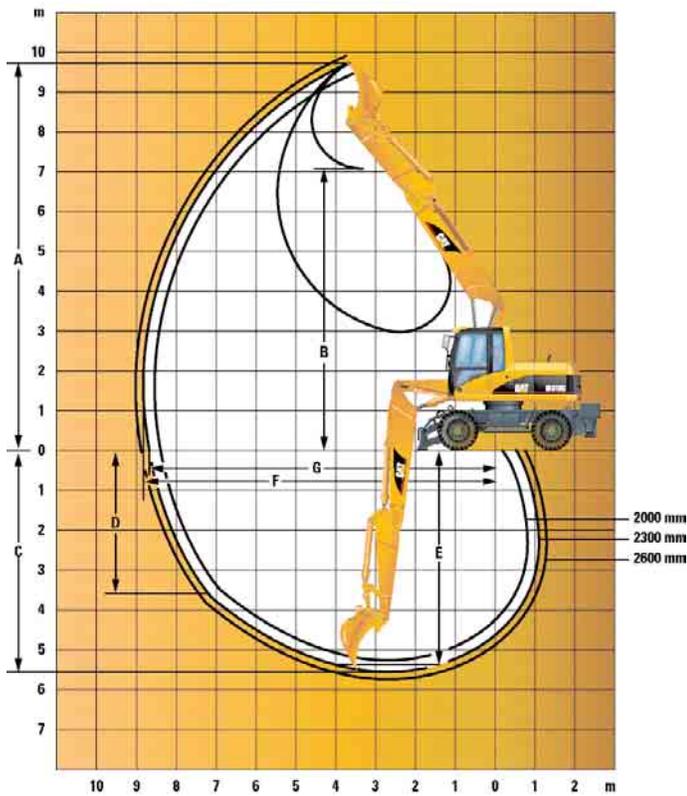
		Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m	
																			
6.0 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down							*2800		2000								
										*2800	2400								
										*2800	*2800								
											*2800								
											*2800								
											*2800								
4.5 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down							3300		2000								
											2300								
											2800								
											*3500								
											*3500								
											*3500								
											*3500								
3.0 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down	*7200		5700	*4800		3000	3200		1900	2200		1300	*1400		1200	8.11	
				*7200	6700		3500			2200			1500			1400			
				*7200	*7200	*4800	4300		*3800	2700	*2400		1900	*1400		*1400	1400		
					*7200	*4800	*4800		*3800	*3800	*2400		*2400	*1400		*1400	1400		
				*7200	*7200	*4800	*4800		*3800	*2400	*2400		*2400	*1400		*1400	1400		
					*7200	*4800	*4800		*3800	*2400	*2400		*2400	*1400		*1400	1400		
1.5 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down			4700		2800	3000		1800	2100		1300	*1500		1100	8.22		
							3300			2100		1500			1300				
							4100			2600		1800			1500				
							5700			4000		2800			1500				
							5200			3300		2300			1500				
										*3000		2800			1500				
										*3000		2300			1500				
										*3000		2300			1500				
Ground		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down	*4200		*4200	4500	2600	2900		1700	2100		1200	*1700		1100	8.01		
				*4200	*4200		3100			2000		1400			1300				
				*4200	*4200		3900		*4400	2500		1800			1700				
					*4200	*6100	*6100		4400	3900		2400			1700				
				*4200	*4200	*6100	*6100		*4400	3200		2300		*1700	*1700				
				*4200	*4200	*6100	5000		*4400	*2400		2300		*1700	*1700				
-1.5 m		Rear dozer up Rear dozer down Rear stab down 2 sets stab down Dozer and stab down	*6800		4700	4500	2600	2900		1700				*1900		1200	7.46		
				*6800	5700		3000			2000					1500				
				*6800	*6800		3800		*4200	2500					1800				
					*6800	*5800	*5800		*4200	3900				*1900	*1900				
				*6800	*6800	*5800	4900		*4200	3200				*1900	*1900				
					*6800	*5800								*1900	*1900				
				*6800	*6800	*5800								*1900	*1900				
					*6800	*4800								*2500		1600			
				*6800	5800		3100		*3000	2000					1900				
					*6800	*4800	3800		*3000	2500					2300				
					*6800	*4800	*4800		*3000	3000					2500				
				*6800	*6800	*4800	*4800		*3000	*3000					2500				
					*6800	*4800	*4800		*3000	*3000					2500				
				*6800	*6800	*4800	*4800		*3000	*3000					2500				



\* 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.

## VA Boom Working Ranges

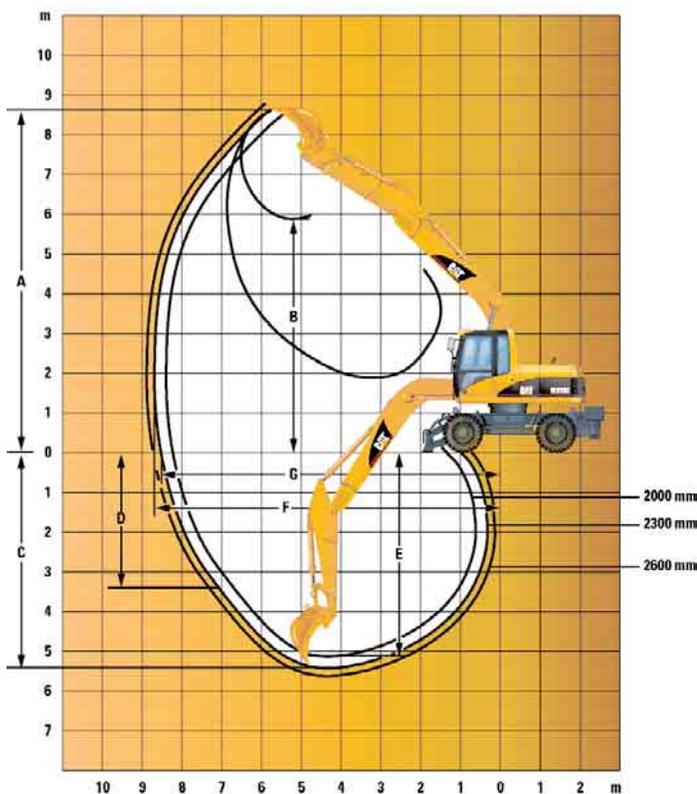
5020 mm Variable adjustable boom, quick coupler and bucket.



Stick Length	mm	2000	2300	2600
<b>A</b> Maximum Digging Height	mm	9670	9820	10 060
<b>B</b> Maximum Dump Height	mm	6900	7060	7290
<b>C</b> Maximum Digging Depth	mm	5160	5450	5750
<b>D</b> Maximum Vertical Wall Digging Depth	mm	3500	3600	3890
<b>E</b> Maximum Depth 2500 mm Straight Clean-up	mm	4921	5232	5549
<b>F</b> Maximum Reach	mm	8670	8920	9210
<b>G</b> Maximum Reach at Ground Level	mm	8490	8740	9030
Bucket Forces (ISO 6015)	kN	87	87	87
Stick Forces (ISO 6015)	kN	68	62	57

## One-piece Boom Working Ranges

4815 mm One-piece boom, quick coupler and bucket.



Stick Length	mm	2000	2300	2600
<b>A</b> Maximum Digging Height	mm	8600	8620	8790
<b>B</b> Maximum Dump Height	mm	5910	5970	6140
<b>C</b> Maximum Digging Depth	mm	4990	5290	5590
<b>D</b> Maximum Vertical Wall Digging Depth	mm	3410	3370	3670
<b>E</b> Maximum Depth 2500 mm Straight Clean-up	mm	4751	5072	5389
<b>F</b> Maximum Reach	mm	8420	8660	8950
<b>G</b> Maximum Reach at Ground Level	mm	8230	8480	8770
Bucket Forces (ISO 6015)	kN	87	87	87
Stick Forces (ISO 6015)	kN	68	62	57

## 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  
Bottom mounted parallel wiper and washer  
Coat hook  
Drink holder  
Filtered ventilation  
Floor mat, washable  
Fully adjustable suspension seat  
Heater and defroster  
Joysticks, adjustable  
LH console, tiltable  
Light, interior  
Literature holder  
Low fuel indicator light  
Openable two-piece front windscreen  
Parking brake  
Pre-wired radio mounting  
Polycarbonate skylight  
Power supply 12V – 7A  
Retractable seat belt  
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

### Engine

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

### Undercarriage

Oscillating front axle  
Pin-on design preparation for dozer blade and outriggers  
10.00-20 14PR tires  
Tool box  
Two-piece drive shaft

### Hydraulics

Cat X-6 ES hoses  
Load-sensing plus hydraulic system  
Manual work modes (economy, power, travel)  
Oil cooler  
Separate swing pump  
Stick regeneration circuit

### Electrical

Alternator, 75A  
Boom working light  
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  
Vandalism guard  
WEX comfort seat with seat heating and air suspension  
Fixed one-piece front windscreen  
Travel speed lock  
Visor, rain protection, polycarbonate  
Headrest  
Lid for storage compartment  
Fixed cab riser (1200 mm)

### Electrical

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

### Booms and Sticks

Hydraulically adjustable boom (5020 mm)  
One-piece-boom (4815 mm)  
2000 mm stick  
2300 mm stick  
2600 mm stick

### Undercarriage

Dozer blade, front or rear mounted  
Optional tires  
Outriggers, front or rear mounted  
Second tool box

### Hydraulics

Control group for quick coupler  
Generator with priority function  
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

# M313C Wheel Excavator

HEHH2872 (02/2003) hr

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

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