M316D

Wheel Excavator

Cat® C6.6 engine with ACERT™ Technology	
Net power (ISO 9249) at 1800 rpm	118 kW/160 hp
Operating weight	17 600 to 19 800 kg
Bucket capacities	0.38 to 1.26 m^3
Maximum reach at ground level	9380 mm
Maximum digging depth	6070 mm
Maximum travel speed	37 km/h

M316D Wheel Excavator

The D Series incorporates innovations for improved performance and versatility.

Engine

✔ Caterpillar's exclusive ACERT™ Technology surpasses the most stringent emissions requirements in the construction industry. The EU Stage IIIA compliant C6.6 offers increased performance and reliability while reducing fuel consumption and sound levels. **pg. 4**

Hydraulics

✔ The state of the art load-sensing hydraulic system combined with a separate dedicated swing pump provides fast cycle times, increased lift capacity and high bucket and stick forces. This combination maximizes your productivity in any job. **pg. 5**

Operator Comfort

✔ The totally redesigned operator station maximizes comfort while increasing safety. The available auto-weight adjusted air-suspension seat with heated and cooled ventilated cushions improves operator comfort. Safety is enhanced by the new color monitor and optional rear-mounted camera. **pg. 6**

Environmentally Responsible Design

✔ Helping to protect our environment, the engine has low operator and spectator sound levels, longer filter change intervals and is more fuel-efficient. **pg. 4**

SmartBoom™

✔ More productive. Faster cycle times for truck loading and rock scraping. Maintains optimum hammering frequency for effective, steady productivity. **pg. 5**

Increased lifting capacity, improved cycle times and ease of operation lead to increased productivity and lower operating costs.

✔ *New Feature*

Undercarriage

Various undercarriage configurations are available to provide the best solution for your work environment; these configurations can include a dozer blade and/or outriggers depending on your needs. **pg. 8**

Booms and Sticks

Caterpillar® excavator booms and sticks are built for performance and long service life. The box section design provides the strength needed for even the toughest applications. Multiple boom and stick options allow you to pick the best match for your job. **pg. 8**

Work Tools

The combination of Caterpillar machines and work tools provide a total solution for any application. A variety of couplers, buckets, hammers, grapples, shears, multi-processors to name a few are offered to optimize your machine's versatility. **pg. 9**

Versatility

Caterpillar offers a wide variety of factory-installed attachments that enhance performance and job site management. **pg. 12**

Serviceability

For increased safety, all daily maintenance points are accessible from ground level. A centralized greasing system allows lubrication of critical points. **pg. 10**

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. Your dealer will help you choose a plan that can cover everything from machine and attachment selection to replacement. **pg. 10**

Engine

Built for power, reliability, low maintenance, excellent fuel economy and low emissions.

Powerful Performance. The Cat C6.6 engine with ACERT Technology introduces a series of evolutionary, incremental improvements that provide breakthrough engine performance. The building blocks of ACERT Technology are fuel delivery, air management and electronic control. ACERT Technology optimizes engine performance while meeting EU Stage IIIA engine emission regulations. The Cat C6.6 engine in the M316D delivers a maximum gross power of 124 kW at a rated speed of 1800 rpm. This is 20% more horsepower as compared to the 3056E in the M316C.

Low Fuel Consumption. The C6.6 is electronically controlled and uses the new Cat Common Rail Fuel System and fuel pump. This combination provides outstanding fuel consumption during both production and travel. When the system recognizes roading application the engine will operate at the most efficient system operating point to save fuel without compromising road performance.

Low Noise, Low Vibration. The Cat C6.6 design improves operator comfort by reducing sound and vibration.

Cooling System. An electronically controlled, hydraulic motor drives a variable speed on-demand fan for engine coolant and hydraulic oil. The optimum fan speed is determined based on coolant and hydraulic oil temperature resulting in reduced fuel consumption and lower sound levels. The electronic engine control continuously compensates for the varying fan load, providing consistent net power, regardless of operating conditions.

One-Touch Low Idle Control. The two stage, one-touch Automatic Engine Speed Control reduces engine speed if no operation is performed, maximizing fuel efficiency and reducing sound levels.

Waste Handling Package. The Waste Handling Package has been specifically developed for Cat Wheel Excavators working in waste transfer stations or other extremely dusty applications. This option features the following:

- An automatic, hydraulic reversible fan that reverses airflow after a set interval, manually adjustable between 5 and 60 minutes with a switch located inside the cab.
- A special dense wire mesh cooling system hood further reduces radiator clogging.
- Two cyclone filters provide clean filtered air to the engine compartment, air cleaner, aftercooler and air conditioner condenser.

Environmentally Responsible Design

The M316D helps build a better world and preserve the fragile environment.

Fuel Efficiency. The D-Series Wheel Excavators are designed for outstanding performance with high fuel efficiency. This means more work done in a day, less fuel consumed and minimal impact on our environment.

Low Exhaust Emissions. The EU Stage IIIA compliant Cat C6.6 offers increased performance and reliability while reducing fuel consumption and sound levels.

Quiet Operation. Operator and spectator noise levels are extremely low as a result of the new variable speed fan and remote cooling system.

Biodegradable Hydraulic Oil. The optional biodegradable hydraulic oil (HEES™) is formulated to provide excellent high-pressure and high temperature characteristics, and is fully compatible with all hydraulic components. HEES is fully decomposed by soil or water microorganisms, providing a more environmentally sound alternative to mineral-based oils.

Fewer Leaks and Spills. Lubricant fillers and drains are designed to minimize spills. Cat O-Ring Face Seals, Cat 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. Working closely with your Caterpillar Dealer can help extend service intervals for engine oil, hydraulic oil, axle oil and coolant. Meaning fewer required fluids and fewer disposal, all adding up to lower operating costs.

Hydraulics

Load-sensing hydraulic system provides fast cycle times, increased lift capacity and high bucket and stick forces to maximize your productivity in any job.

Dedicated Swing Pump. A dedicated variable displacement piston pump and fixed displacement piston motor power the swing mechanism. This closed hydraulic circuit maximizes swing performance without reducing power to the other hydraulic functions, resulting in smoother combined movements.

Heavy Lift Mode. This mode maximizes lifting performance by boosting the lifting capability of the excavator by 7%. Heavy loads can be easily moved in the full working range of the machine, maintaining excellent stability.

Adjustable Hydraulic Sensitivity. This function allows the operator to adjust the aggressiveness of the machine according to the application. For precision work, one of four different levels of aggressiveness can be preselected.

Proportional Auxiliary Hydraulics. Versatility of the hydraulic system can be expanded to utilize a wide variety of hydraulic work tools using multiple valve options.

- The Multi-Combined Valve is the core of the Tool Control System, allowing the operator to select up to ten pre-programmed work tools from the monitor. These preset hydraulic parameters support either one-way or two-way flow. The joystick sliding switches allow modulated control of the work tool.

- A dedicated Hammer circuit is the best option for tools that require one-way flow only, and do not require the flexibility provided by the Multi-Combined Valve.
- The Medium Pressure Function Valve provides proportional flow that is ideal for tilting buckets or rotating tools.
- A new feature for the D-Series Wheel Excavators is the optional second High Pressure valve. In combination with the Multi-Combined Valve, it provides the possibility to operate the machine with work tools or in applications requiring a third auxiliary hydraulic function, such as a tilting/rotating quick coupler.

Stick Regeneration Circuit. The stick regeneration circuit increases efficiency and helps increase controllability for higher productivity and lower operating costs.

Quick Coupler. The machine can be optionally equipped with a dedicated hydraulic circuit to operate hydraulic quick couplers.

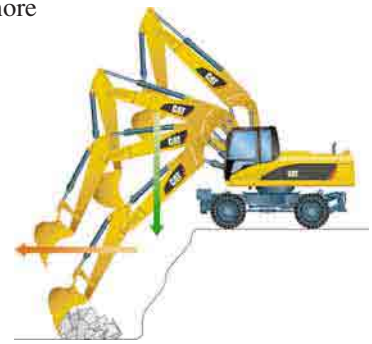
Hydraulic Snubbers. Caterpillar integrates its cylinder snubber technology into all Wheel Excavator boom, stick and bucket cylinders. These snubbers help cushion shocks, reduce sound and increase cylinder life.

Caterpillar XT-6 ES Hoses. Premium quality rubber, precision 4-ply wire reinforcement and exclusive reusable couplings are all unique features that deliver top performance and long life.

SmartBoom. Reduces stress and vibrations transmitted to the machine and provides a more comfortable environment.

Rock Scraping. Scraping rock and finishing work is easy and fast. SmartBoom simplifies the task and allows the operator to concentrate on stick and bucket, while boom freely goes up and down without using pump flow.

Hammer Work. The front parts automatically follow the hammer while penetrating the rock. Blank shots or excessive force on the hammer are avoided resulting in longer life for the hammer and the machine. Similar advantages with vibratory plate compactors.



Truck Loading. Loading trucks from a bench is more productive and fuel efficient as the return cycle is reduced while the boom down function does not require pump flow.

Operator Comfort

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

Interior Operator Station. Improved visibility and ergonomics are some of the many new features of the D-Series Wheel Excavators. The pressurized operator station provides maximum space and is designed for simplicity and functionality. Frequently used switches are centralized and are situated on the right-hand switch console. The left-hand seat console controls dozer blade and/or outriggers, and is tiltable for easy access to the cab. The fully automatic climate control adjusts temperature and air flow for exceptional operator comfort. Other comfort features include a cigar lighter, ashtray, cup/can holder, magazine rack and integrated mobile phone holder.

Cab Construction. The exterior design uses thick steel tubing along the bottom perimeter of the cab, improving the resistance to fatigue and vibration. This design allows the falling object guards to be bolted directly to the cab. The cab shell is attached to the frame with rubber mounts that limit vibration and sound transmitted from the frame, substantially reducing interior noise levels.

Viewing Area. To maximize visibility, all glass is affixed directly to the cab, eliminating the use of window frames. Choice of fixed or easy-to-open split front windshield meet operator preference and application conditions.

- The 50/50 split front windshield allows both upper and lower portions to be stored in an overhead position and features the one-touch action release system.
- The 70/30 split front windshield stores the upper portion above the operator. The lower front windshield features a rounded design to maximize downward visibility and improves wiper coverage. Also features the one-touch action release system.
- The fixed front windshield comes with high impact resistant laminated glass.
- A unique large skylight without cross bar provides superb upward visibility. The retractable sunscreen blocks direct sunlight.

Monitor. The new compact color monitor displays information in local language that is easy to read and understanding. Functions include:

- 5 programmable “Quick Access” buttons for one-touch selection of favorite functions.
- Filter and oil change warnings are displayed when the number of hours reaches the maintenance interval.
- Tool select function allows the operator to select up to 10 pre-defined hydraulic work tools.
- Adjustable braking characteristics enable the operator to select three levels of travel motor retarder aggressiveness when releasing the travel pedal.
- Provides a rear camera view that is activated through the monitor menu. The optional camera is mounted on the counterweight.

New Deluxe Seat. The new optional deluxe seat, equipped with an active seat climate system, improves operator comfort. Cooled air flows through the seat cushions to reduce body perspiration. On cold days, a two-step seat heater keeps the operator warm and comfortable. The fully adjustable seat with adjustable lumbar support automatically adjusts to the driver’s weight providing a more relaxed and comfortable environment.

Heated Mirrors. Another new feature is electrically heated mirrors, increasing safety and visibility in cold conditions.

Wipers. The parallel wiper system maximizes visibility in poor weather conditions. The wiper virtually covers the entire front windshield, cleaning the operator’s immediate line of sight.

Lunch Box. A large, cooled storage compartment is located behind the operator’s seat. The compartment provides sufficient room to store items such as a lunch box. An optional cover secures the contents during machine operation.

Foot Pedals. Two-way pedals for travel and auxiliary circuits provide increased floor space, reducing the need to change positions. The foot pedal for auxiliary high-pressure circuit can be locked in the off position and used as a footrest for greater operator comfort.

Undercarriage

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

Increased Travel Speed. The maximum travel speed for the D-Series excavators has been increased from 34 to 37 km/h, reducing travel time between sites and increasing productivity.

Heavy-Duty Axles and Stabilizers. The D-Series undercarriage with pin on/bolt on design provides excellent flexibility, rigidity and long life. Effective hydraulic line routing, transmission protection and heavy-duty axles make the undercarriage perfect for wheel excavator applications. The front axle offers wide oscillating and steering angles. The transmission is mounted directly on the rear axle for protection and optimum ground clearance.

Advanced Disc Brake System. The disc brake system acts directly on the hub instead of the drive shaft to avoid planetary gear backlash. This solution eliminates the rocking effect associated with working free on wheels. The axle design lowers maintenance and lifetime costs. Oil change intervals are at 2000 working hours, further reducing owning and operating costs.

Fenders. The optional fenders provide excellent coverage of the front and rear tires, protecting the machine from mud and dirt. Water cannot splash up on the windscreen or cooler. The fenders further protect the machine from stones and debris being thrown up by the tires, providing additional safety for the machine, other vehicles and personnel working close to the excavator.

Adjustable Travel Alarm. An adjustable travel alarm is available to warn people when the machine is moving. Three settings can be selected through the monitor:

- Auto mode – alarm will stop sounding immediately when the machine is no longer traveling, or has been sounding for an uninterrupted 10-second interval.
- Standard mode – alarm operates constantly during moving, with only manual cancellation.
- Off mode – travel alarm is disabled.

Booms and Sticks

Designed for maximum flexibility to keep production high on all jobs.

Design. Booms and sticks are welded, box section structures with thick, multiplate fabrications in high stress areas, for rugged performance and long service life.

Flexibility. The choice of three booms and four sticks provides the right balance of reach and digging forces for all applications.

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

One-Piece Boom. The one-piece boom 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.

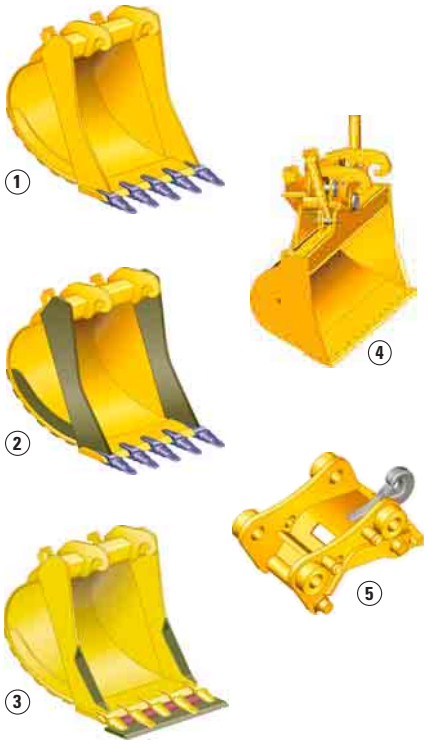
Offset Boom. The large offset dimensions (left/right 2460/2760 mm) allow you to dig along walls, over obstacles, to grade while driving, and to dig under laid tubes without damaging them. The combination with a tiltable ditch cleaning bucket lets you operate a highly versatile system.

Sticks. Four different stick lengths are offered to match different application requirements:

- Short stick (2100 mm) for maximum breakout force and lifting capability.
- Medium stick (2400 mm) for greater crowd force and lift capacity.
- Long stick (2600 mm) for greater depth and reach requirements.
- Industrial stick (3100 mm) for use with free-swinging grapples in material handling and industrial applications.

Work Tools

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



Work Tools. Caterpillar work tools are designed to function as an integral part of your excavator and to provide the best possible performance in your particular application. All work tools are performance-matched to Cat machines.

Quick Couplers. Quick Couplers enable the operator to simply release one work tool and connect to another, making your hydraulic excavator highly versatile. Productivity also increases, as a carrier no longer needs to be idle between jobs. Caterpillar offers hydraulic and spindle quick coupler versions.

Buckets. Caterpillar offers a wide range of specialized buckets, each designed and tested to function as an integral part of your excavator. Buckets feature the new Caterpillar K Series™ Ground Engaging Tools.

1 Excavation (X)

2 Extreme Excavation (EX)

3 Excavation Leveling

4 Ditch Cleaning

5 Quick Coupler

Hammers. Cat hammer series deliver very high blow rates, increasing the productivity of your tool carriers in demolition and construction applications. Wide oil flow acceptance ranges make the Caterpillar hammers suitable for a wide range of carriers and provide a system solution from one safe source.

Orange Peel Grapples. The Orange Peel Grapple is constructed of high-strength, wear-resistant steel, with a low and compact design that makes it ideal for dump clearance. There are several choices of tine and shell versions.

Multi-Grapples. The Multi-Grapple with unlimited left and right rotation is the ideal tool for stripping, sorting, handling and loading. The powerful closing force of the grab shells combined with fast opening/closing time ensures rapid cycle time which translates to more tons per hour.

Multi-Processors. Thanks to its single basic housing design, the Multi-Processor series of hydraulic demolition equipment makes it possible to use a range of jaw sets that can handle any demolition job. The Multi-Processor is the most versatile demolition tool on the market.

Vibratory Plate Compactors. Cat compactors are performance-matched to Cat machines, and integrate perfectly with the Cat hammer line – brackets and hydraulic kits are fully interchangeable between hammers and compactors.

Shears. Cat shears provide superior and effective scrap processing, and are highly productive in demolition environments. Shears are compatible with a matching Cat excavator, and bolt-on brackets are available for either stick or boom-mounted options.

Serviceability and Complete Customer Support

Simplified and easy maintenance save you time and money.
Cat dealer services help you operating longer with lower costs.

Ground Level Maintenance. Caterpillar designed its D-Series Wheel Excavators with the operator and service technician in mind. Gull-wing doors, with pneumatically-assisted lift cylinders, effortlessly lift up to allow critical maintenance to be performed quickly and efficiently while maintaining operator safety.

Extended Service Intervals. The D Series Wheel Excavator service and maintenance intervals have been extended to reduce machine service time, increase machine availability and reduce operating costs. Using S•O•S Scheduled Oil Sampling analysis, hydraulic oil change intervals can be extended up to 4000 hours. Engine coolant change intervals are 12 000 hours with Cat Extended Life Coolant.

Engine Oil. Caterpillar engine oil is formulated to optimize engine life and performance. The specially formulated oil is more cost effective and increases engine oil change interval to 500 hours, providing industry leading performance and savings.

Self-Monitoring System with Auto-Diagnostics. The electronic engine and machine controllers provide detailed diagnostic capability for the service technicians. The ability to store active and intermittent indicators simplifies problem diagnosis and reduces total repair time, resulting in improved machine availability and lower operating cost.

Air Filters. Caterpillar air filters eliminate the use of service tools, reducing maintenance time.The air filter features a double-element construction with wall flow filtration in the main element and built-in mini-cyclone precleaners for superior cleaning efficiency. The air filters are constantly monitored for optimum performance. If airflow becomes restricted, a warning is displayed by the way of the in-cab monitor.

Capsule Filter. The hydraulic return filter, a capsule filter, prevents contaminants from entering the system when the hydraulic oil is changed.

Fuel Filters. Cat high efficiency fuel filters with a Stay-Clean Valve™ features a special media that removes more than 98% of particles, increasing fuel injector life. Both the primary and secondary fuel filters are located in the engine compartment and can be easily changed from ground level.

Water Separator. The D Series is equipped with a primary fuel filter with water separator located in the engine compartment. For ease of service, the water separator can be easily accessed from ground level.

Fuel Tank Drain. The durable, corrosion-free tank has a remote drain located at the bottom of the upper frame to remove water and sediment. The tank drain with hose connection allows simple, spill-free fluid draining.

Front Compartment. The front compartment hood can be opened vertically, providing outstanding ground level access to the batteries, air-to-air after cooler, air conditioner condenser and the air cleaner filter.

Swing-out Air Conditioner Condenser. The Air Conditioning condenser swings out horizontally to allow complete cleaning on both sides as well as excellent access to the air-to-air aftercooler.

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

Engine Inspection. The engine can be accessed from both ground level and the upper structure. The longitudinal layout ensures that all daily inspection items can be accessed from ground level.

Anti-Skid Plates. They cover the top of the steps and upper structure to help prevent slipping during maintenance. The Anti-Skid plates reduce the accumulation of mud on the upper structure, improving the cleanliness and safety.

Easy to Clean Coolers. Flat fins on all coolers reduce clogging, making it easier to remove debris. The main cooling fan and air conditioner condenser are both hinged for easier cleaning.

Remote Greasing Blocks. For those hard to reach locations, greasing blocks have been provided to reduce maintenance time. One block is located in the engine compartment with two grease points for the swing bearing and front-end attachment. For the undercarriage, two remote blocks provide easy access for greasing the oscillating axle and, as an option, the dozer blade.

New LED Rear Lights. Optional Light Emitting Diode (LED) rear lights replace the standard lights, for increased visibility on the job site, higher durability and longer life.

New Auto-Lube System. The new automatic lubrication system provides the optimal amount of grease to all the main lubrication points, including the bucket linkage. The lubrication interval can be adjusted through the monitor, and status messages for the auto-lube system are displayed.

Handrails and Steps. Large handrails and steps assist the operator in climbing on and off the machine.

Storage Box. There are two tool boxes integrated in the steps of the undercarriage. Additionally, there is a waterproof storage box integrated into the upper structure steps.

Product Support. You will find nearly all parts requirements at your local Caterpillar dealer parts counter. Cat dealers utilize a world-wide network to find in-stock parts to minimize your downtime. To save money use genuine Cat Reman parts. You will receive the same warranty and reliability as new products at a substantial cost savings.

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 videotapes, literature and other ideas to help you increase productivity, and Caterpillar offers certified operator training classes to help maximize the return on your machine investment.

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.

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

Versatility

A wide variety of optional factory-installed attachments are available to enhance performance and improve job site management.

Control Settings. There are 2 selectable control settings and one automatic travel setting. The new automatic travel mode is activated with a button in the right hand console. In this setting, the transmission will automatically shift up or down, depending on the speed conditions. The operator can choose the best power setting for both engine and hydraulic power versus fuel efficiency.

- Economy Mode – used for lifting, pipe setting, grading, slope finishing and precise work while reducing fuel consumption.
- Power Mode – used for normal truck loading and digging applications, trenching or hammer use.
- Travel Mode – automatically set when the travel pedal is actuated. It provides maximum speed and drawbar pull.

Tool Control. The integrated Tool Control system allows the operator to select up to 10 pre-set combinations. This eliminates the need to re-set the hydraulic parameters each time a tool is changed. Individual flow and pressure can be programmed easily as well as one-way/two-way hydraulic functions. Each of the ten-programmed tools can even be given a specific name. The unique Cat proportional sliding switches and optional auxiliary pedal provide modulation to the tool to make precision work easy.

Joystick Steering. The unique joystick steering option enables an operator to reposition the machine while traveling in first gear by the use of the slider switch on the right joystick. This enables the operator to keep both hands on the joysticks while simultaneously moving the implements and traveling. The operator can do more precise work faster with increased safety around the machine.

Product Link. Product Link can assist with Fleet Management to keep track of hours, location, security and product health. The machine is pre-wired to accept Product Link systems to be installed in the field. Product Link is also available as a factory installed attachment.

Machine Security. An optional Machine Security System is available from the factory. This system controls who can operate the machine when, and utilizes specific keys to prevent unauthorized machine use.

Ride Control. New for the D Series, the ride control system improves operator comfort and allows the machine to travel faster over rough terrain with improved ride quality for the operator. The ride control system features accumulators acting as shock absorbers to dampen the front part motion. Ride control can be activated through a button located on the soft switch panel in the cab.

Engine

Cat C6.6 with ACERT Technology	
Ratings	1800 rpm
Gross power	124 kW/169 hp
Net power	
ISO 9249	118 kW/160 hp
80/1269/EEC	118 kW/160 hp
Bore	105 mm
Stroke	127 mm
Displacement	6.6 liters
Cylinders	6
Maximum torque at 1400 rpm	785 Nm

- All engine horsepower (hp) are metric including front page.
- EU Stage IIIA compliant.
- Full engine net power up to 3000 m altitude.

Hydraulic System

Tank capacity	135 liters
System	220 liters
Maximum pressure	
Implement circuit	
normal	350 bar
heavy lift	375 bar
Travel circuit	350 bar
Auxiliary circuit	
high pressure	350 bar
medium pressure	185 bar
Swing mechanism	310 bar
Maximum flow	
Implement/travel circuit	250 l/min
Auxiliary circuit	
high pressure	250 l/min
medium pressure	50 l/min
Swing mechanism	80 l/min

Cab

FOGS meets ISO 10262.

Sound Levels

Operator Sound

The operator sound level measured according to the procedures specified in ISO 6394:1998 is 72 dB(A), for cab offered by Caterpillar, when properly installed and maintained and tested with the doors and windows closed.

Exterior Sound

The labeled spectator sound power level measured according to the test procedures and conditions specified in 2000/14/EC is 103 dB(A).

Transmission

	km/h
Forward/reverse	
1st gear	8
2nd gear	37
Creeper speed	
1st gear	3
2nd gear	13
Drawbar pull	97 kN
Maximum Gradeability	63%

Swing Mechanism

Swing speed	10.5 rpm
Swing torque	40 kNm

Tires

Standard
- 10.00-20 (dual pneumatic)

Optional
- 11.00-20 (dual pneumatic)
- 18 R 19.5 XF (single pneumatic)
- 600/40-22.5 (single pneumatic)
- 10.00-20 (dual solid rubber)

Undercarriage

	mm
Ground clearance	370
Maximum steering angle	35°
Oscillation axle angle	± 9°
Minimum turning radius	
Standard axle	
outside of tire	6400
end of VA boom	7000
end of one-piece boom	8300
Wide axle	
outside of tire	6500
end of VA boom	7100
end of one-piece boom	8500

Service Refill Capacities

	Liter
Fuel tank	310
Cooling	32
Engine crankcase	15
Rear axle housing (differential)	14
Front steering axle (differential)	10.5
Final drive	2.5
Powershift transmission	2.5

Weights

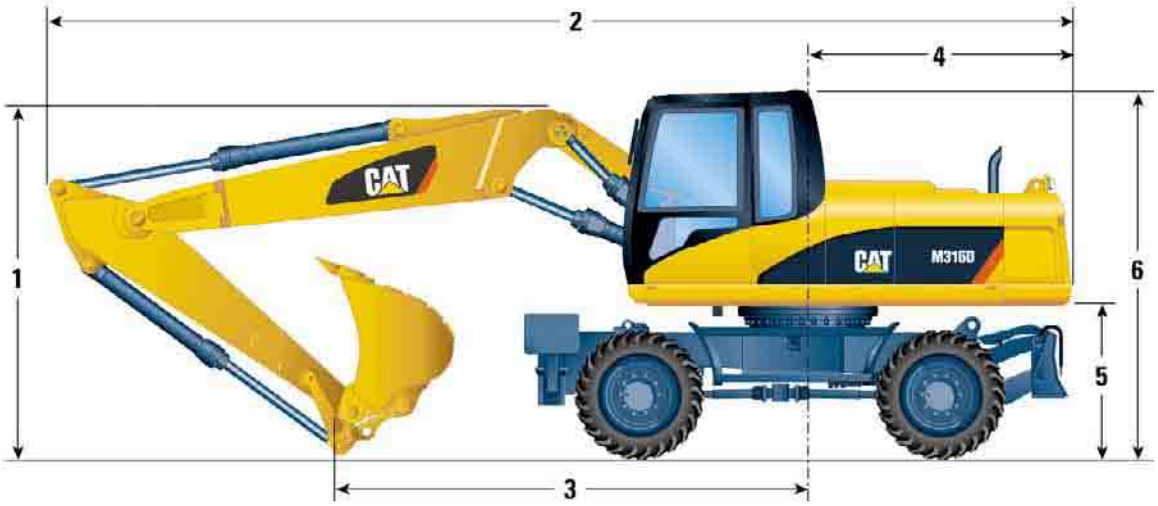
VA boom*	kg
rear dozer only	17 200
rear dozer, front outriggers	18 250
front and rear outriggers	18 500
One-piece boom*	
rear dozer only	16 700
rear dozer, front outriggers	17 750
front and rear outriggers	18 000
Offset boom*	
rear dozer only	17 650
rear dozer, front outriggers	18 700
front and rear outriggers	18 950

Sticks	kg
short (2100 mm)	470
medium (2400 mm)	514
long (2600 mm)	530
industrial (3100 mm)	450
Dozer blade	740
Outriggers	1030
Counterweight	
standard	3700
optional	4100

* Machine weight with medium stick, 4100 kg counterweight, full fuel tank and operator, without work tool.

Dimensions

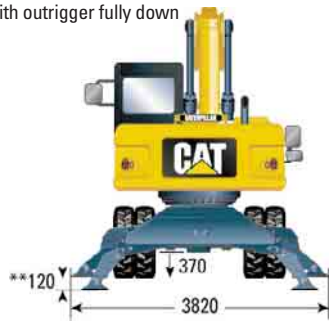
All dimensions are approximate.



		VA Boom				One-piece Boom				Offset Boom	
Stick length	mm	**2100**	**2400**	**2600**	***3100**	**2100**	**2400**	**2600**	***3100**	**2100**	**2400**
1 Shipping height	mm	3170	3170	3170	3330	3170	3170	3170	3330	3170	3170
2 Shipping length	mm	8550	8550	8540	8510	8390	8400	8400	8405	8550	8540
3 Support point	mm	3910	3650	3550	3630	3560	3270	3150	3230	4020	3780
4 Tail swing radius	mm	2280				2280				2280	
5 Counterweight clearance	mm	1280				1280				1280	
6 Cab height	mm	3170				3170				3170	
with 1200 mm fixed cab riser	mm	4370				4370				4370	
Overall machine width	mm	2550				2550				2550	
Wide gauge axle	mm	2750				2750				2750	

* Industrial stick

** Maximum tire clearance with outrigger fully down

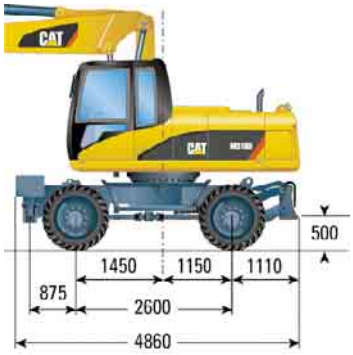


Roading position with 2400 mm stick

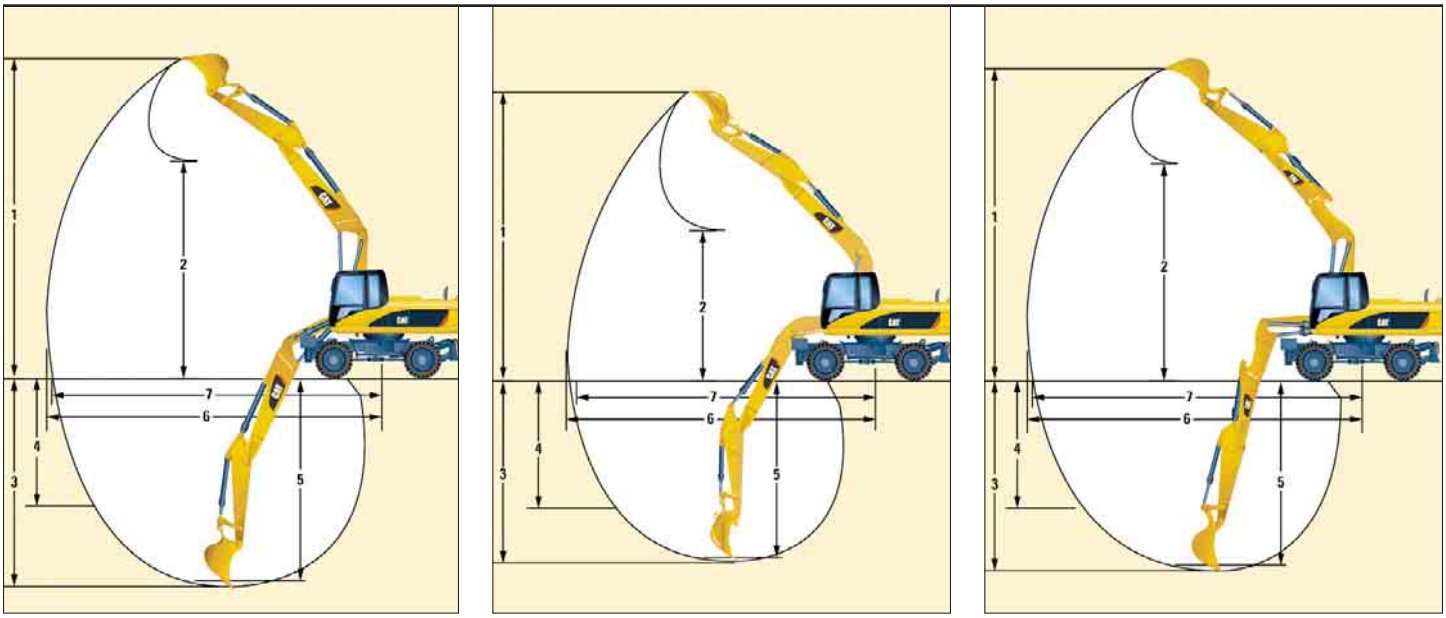
Undercarriage with dozer only

Undercarriage with 2 sets of outriggers

Undercarriage with 1 set of outriggers and dozer



Working Ranges



		VA Boom				One-piece Boom				Offset Boom	
Stick length	mm	**2100**	**2400**	**2600**	***3100**	**2100**	**2400**	**2600**	***3100**	**2100**	**2400**
1 Digging height	mm	10060	10250	10400	8970	9000	9090	9210	7720	9960	10150
2 Dump height	mm	6970	7160	7320	3980	6020	6130	6250	3200	7150	7340
3 Digging depth	mm	5570	5870	6070	5030	5370	5670	5870	4820	5450	5750
4 Vertical wall digging depth	mm	3700	3900	4070	–	3490	3630	3800	–	4100	4320
5 Depth 2.5 m straight clean-up	mm	5350	5670	5880	–	5150	5470	5680	–	5200	5520
6 Reach	mm	9100	9360	9560	8370	8900	9160	9350	8130	8970	9240
7 Reach at ground level	mm	8910	9190	9380	8170	8710	8970	9170	7920	8780	9060
Bucket forces (ISO 6015)	kN	101	101	101	–	101	101	101	–	101	101
Stick forces (ISO 6015)	kN	81	74	71	–	81	74	71	–	81	74

Values 1-7 are calculated with bucket and quick coupler with a tip radius of 1552 mm.
Breakout force values are calculated with heavy lift on (no quick coupler) and a tip radius of 1405 mm.

* Industrial stick has no bucket linkage.
All dimensions refer to sticknose.

Bucket Specifications

Contact your Caterpillar dealer for special bucket requirements.

Pin-on Buckets	Width	Weight*	Capacity (ISO)	Adapters	Variable Adjustable Boom 5200 mm												One-piece Boom 5050 mm											
Stick length					2100 mm				2400 mm				2600 mm				2100 mm				2400 mm				2600 mm			
					Free on wheels	Dozer lowered	1 set of stabilizer lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizer lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizer lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizer lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizer lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizer lowered	Fully stabilized
	mm	kg	m^3																									
Excavation	600	459	0.38	3																								
	750	495	0.52	3																								
	900	557	0.65	4																								
	1000	591	0.75	4																								
	1100	622	0.84	4																								
	1200	668	0.94	5																								
	1300	699	1.03	5																								
	1400	731	1.13	5																								
Extreme Excavation	1200	702	0.94	5																								
	1300	735	1.03	5																								
Excavation (leveling)	600	485	0.41	3																								
	750	529	0.56	3																								
	800	547	0.61	4																								
	900	596	0.70	4																								
	1000	636	0.82	4																								
	1100	672	0.92	4																								
	1200	725	1.04	5																								
	1300	762	1.14	5																								
	1400	798	1.26	5																								
Extreme Excavation (leveling)	1200	757	1.04	5																								
Ditch Cleaning	1800	545	0.90																									
	2000	590	1.00																									
Tiltable Ditch Cleaning	1800	875	0.75																									
	2000	910	0.84																									
CW Quick Coupler Buckets																												
Excavation	600	468	0.38	3																								
	750	504	0.52	3																								
	900	534	0.65	4																								
	1000	568	0.75	4																								
	1100	600	0.84	4																								
	1200	645	0.94	5																								
	1300	676	1.03	5																								
	1400	708	1.13	5																								
Extreme Excavation	1200	679	0.94	5																								
	1300	712	1.03	5																								
Excavation (leveling)	600	498	0.41	3																								
	750	547	0.56	3																								
	800	526	0.61	4																								
	900	575	0.70	4																								
	1000	614	0.82	4																								
	1100	651	0.92	4																								
	1200	704	1.04	5																								
	1300	741	1.14	5																								
	1400	777	1.26	5																								
Extreme Excavation (leveling)	600	523	0.41	3																								
	800	555	0.61	4																								
	1000	644	0.82	4																								
	1200	736	1.04	5																								
Ditch Cleaning	1800	510	0.90																									
	2000	555	1.00																									
Tiltable Ditch Cleaning	1800	835	0.75																									
	2000	870	0.84																									

* Bucket weight includes Ground Engaging Tools

Maximum material density 1800 kg/m^3

Maximum material density 1500 kg/m^3

Maximum material density 1200 kg/m^3

Not recommended

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.

Without Quick Coupler			Variable Adjustable Boom 5200 mm												One-piece Boom 5050 mm												Offset Boom 5200 mm					
			(1)				(2)				(3)				(1)				(2)				(3)				(1)		(2)		(3)	
Stick length (mm)			2100	2400	2600	3100	2100	2400	2600	3100	2100	2400	2600	3100	2100	2400	2600	3100	2100	2400	2600	3100	2100	2400	2600	3100	2100	2400	2100	2400	2100	2400
Hammers	H100, H100 S																															
	H115 S, H120C S																															
Multiprocessors	MP15	CC, CR																														
	MP15	PP																														
	MP15	PS																														
	MP15	S																														
Mechanical Pulverizer	P115																															
Hydraulic Shears (* boom mounted)	S115																															
	S320																															
	S320*																															
	S325*																															
Multi-Grapples	G310B	D, R																														
	G315B	D																														
		R																														
Mechanical Grapple	G112																															
Compactor	CVP75																															
Orange Peel Grapples	GSH15B 5 tines	400																														
		500																														
		600																														
		800																														
	GSH15B 4 tines	400																														
		500																														
		600																														
		800																														

With Quick Coupler (CW-20, CW-20S)

Hammers	H100, H100 S																															
	H115 S, H120C S																															
Multiprocessors	MP15	CC, CR, PS																														
	MP15	S																														
Multi-Grapples	G310B	D, R																														
	G315B	D, R																														
Mechanical Grapple	G112																															
Compactor	CVP75																															

(1) Dozer lowered
(2) 2 sets of stabilizer lowered
(3) Dozer and stabilizer lowered

360° Working Range
Over the front only
Maximum material density 3000 kg/m³
Maximum material density 1800 kg/m³
Maximum material density 1200 kg/m³

Lift Capacities – Variable Adjustable Boom (5200 mm)

All values are in kg, without bucket, with counterweight (4100 kg) and CW quick coupler (204 kg), heavy lift on.

Short Stick 2100 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
6.0 m	Rear dozer up				*5500		4600	4600		2800							
	Rear dozer down					*5500	5200		*5100	3200							
	Rear stab down					*5500	*5500		*5100	3900							
	2 sets stab down				*5500		*5500	*5100		*5100							
	Dozer and stab down				*5500		*5500	*5100		4700							
4.5 m	Rear dozer up	*6800		*6800	*6600		4500	4600		2900				*2600		1800	7.68
	Rear dozer down		*6800	*6800		*6600	5100		*5400	3300					*2600	2100	
	Rear stab down		*6800	*6800		*6600	6100		*5400	4000					*2600	*2600	
	2 sets stab down	*6800		*6800	*6600		*6600	*5400		*5400				*2600		*2600	
	Dozer and stab down	*6800		*6800	*6600		*6600	*5400		4800				*2600		*2600	
3.0 m	Rear dozer up	*8700		8000	7000		4400	4600		2900	3100		1800	*2600		1600	8.11
	Rear dozer down		*8700	*8700		*7800	5000		*5800	3300		*4500	2100		*2600	1900	
	Rear stab down		*8700	*8700		*7800	6000		*5800	3900		4200	2600		*2600	2300	
	2 sets stab down	*8700		*8700	*7800		*7800	*5800		5400	*4500		3800	*2600		*2600	
	Dozer and stab down	*8700		*8700	*7800		7200	*5800		4700	*4500		3200	*2600		*2600	
1.5 m	Rear dozer up	*10500		7700	6900		4300	4600		2800	3100		1800	*2700		1600	8.21
	Rear dozer down		*10500	9000		*8600	5000		*6200	3200		4800	2100		*2700	1800	
	Rear stab down		*10500	*10500		*8600	5900		6000	3900		4200	2600		*2700	2200	
	2 sets stab down	*10500		*10500	*8600		8300	*6200		5400	*4900		3700	*2700		*2700	
	Dozer and stab down	*10500		*10500	*8600		7100	*6200		4700	*4900		3200	*2700		*2700	
0 m	Rear dozer up	*12700		7300	7000		4200	4400		2700	3000		1700	2800		1600	8.99
	Rear dozer down		*12700	8700		*8700	4800		*6300	3100		*4200	2000		*2900	1900	
	Rear stab down		*12700	11100		*8700	5900		6100	3700		4100	2500		*2900	2300	
	2 sets stab down	*12700		*12700	*8700		8300	*6300		5400	*4200		3700	*2900		*2900	
	Dozer and stab down	*12700		*12700	*8700		7200	*6300		4600	*4200		3100	*2900		2900	
-1.5 m	Rear dozer up	13800		7300	6900		4000	4300		2500				3100		1800	7.42
	Rear dozer down		*14100	8600		*8800	4700		*6300	2900					*3200	2100	
	Rear stab down		*14100	11100		*8800	5700		6000	3600					*3200	2600	
	2 sets stab down	*14100		*14100	*8800		8600	*6300		5200				*3200		*3200	
	Dozer and stab down	*14100		14000	*8800		7100	*6300		4400				*3200		*3200	
-3.0 m	Rear dozer up	14000		7400	6700		3800										
	Rear dozer down		*14300	8700		*8100	4500										
	Rear stab down		*14300	11200		*8100	5500										
	2 sets stab down	*14300		*14300	*8100		*8100										
	Dozer and stab down	*14300		*14300	*8100		6900										

Medium Stick 2400 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
6.0 m	Rear dozer up				*4800		4600	4600		2900							
	Rear dozer down					*4800	*4800		*4700	3300							
	Rear stab down					*4800	*4800		*4700	4000							
	2 sets stab down				*4800		*4800	*4700		*4700							
	Dozer and stab down				*4800		*4800	*4700		*4700							
4.5 m	Rear dozer up	*5100		*5100	*5600		4500	4600		2900	*3000		1900	*2300		1700	7.97
	Rear dozer down		*5100	*5100		*5600	5100		*5300	3300		*3000	2100		*2300	2000	
	Rear stab down		*5100	*5100		*5600	*5600		*5300	4000		*3000	2600		*2300	*2300	
	2 sets stab down	*5100		*5100	*5600		*5600	*5300		*5300	*3000		*3000	*2300		*2300	
	Dozer and stab down	*5100		*5100	*5600		*5600	*5300		4700	*3000		*3000	*2300		*2300	
3.0 m	Rear dozer up	*9400		8000	7000		4400	4600		2900	3100		1900	*2300		1500	8.38
	Rear dozer down		*9400	9100		*7500	5000		*5600	3300		*4500	2100		*2300	1800	
	Rear stab down		*9400	*9400		*7500	6000		*5600	3900		4300	2600		*2300	2200	
	2 sets stab down	*9400		*9400	*7500		*7500	*5600		5400	*4500		3800	*2300		*2300	
	Dozer and stab down	*9400		*9400	*7500		7100	*5600		4700	*4500		3200	*2300		*2300	
1.5 m	Rear dozer up	*10700		7800	6900		4300	4600		2900	3100		1800	*2400		1500	8.47
	Rear dozer down		*10700	8900		*8500	5000		*6200	3300		*4800	2100		*2400	1700	
	Rear stab down		*10700	*10700		*8500	5900		6000	3900		4200	2600		*2400	2100	
	2 sets stab down	*10700		*10700	*8500		8300	*6200		5400	*4800		3800	*2400		*2400	
	Dozer and stab down	*10700		*10700	*8500		7100	*6200		4700	*4800		3200	*2400		*2400	
0 m	Rear dozer up	*12500		7600	6900		4200	4400		2700	3000		1800	*2500		1500	8.26
	Rear dozer down		*12500	8900		*8600	4800		*6200	3100		*4700	2000		*2500	1800	
	Rear stab down		*12500	11200		*8600	5900		6000	3800		4100	2500		*2500	2200	
	2 sets stab down	*12500		*12500	*8600		8300	*6200		5400	*4700		3700	*2500		*2500	
	Dozer and stab down	*12500		*12500	*8600		7100	*6200		4600	*4700		3100	*2500		*2500	
-1.5 m	Rear dozer up	13600		7300	6900		4000	4300		2500				2900		1700	7.72
	Rear dozer down		*14000	8600		*8800	4600		*6300	2900					*2900	1900	
	Rear stab down		*14000	11100		*8800	5700		6000	3600					*2900	2400	
	2 sets stab down	*14000		*14000	*8800		8400	*6300		5300				*2900		*2900	
	Dozer and stab down	*14000		13900	*8800		7100	*6300		4400				*2900		*2900	
-3.0 m	Rear dozer up	13900		7300	6700		3900	4200		2400							
	Rear dozer down		*14400	8600		*8700	4500		*4600	2800							
	Rear stab down		*14400	11100		*8700	5500		*4600	3500							
	2 sets stab down	*14400		*14400	*8700		8400	*4600		*4600							
	Dozer and stab down	*14400		14300	*8700		6900	*4600		4300							

Long Stick
2600 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
6.0 m	Rear dozer up				*4300		*4300	*4400		2900							
	Rear dozer down					*4300	*4300		*4400	3300							
	Rear stab down					*4300	*4300		*4400	4000							
	2 sets stab down				*4300		*4300	*4400		*4400							
	Dozer and stab down				*4300		*4300	*4400		*4400							
4.5 m	Rear dozer up				*5000		4500	4600		2900	3200		1900	*2100		1700	8.18
	Rear dozer down					*5000	*5000		*5000	3300		*3600	2200		*2100	1900	
	Rear stab down					*5000	*5000		*5000	4000		*3600	2700		*2100	*2100	
	2 sets stab down				*5000		*5000	*5000		*5000	*3600		*3600	*2100		*2100	
	Dozer and stab down				*5000		*5000	*5000		4800	*3600		3300	*2100		*2100	
3.0 m	Rear dozer up	*9300		8000	7000		4400	4600		2900	3200		1900	*2100		1500	8.58
	Rear dozer down		*9300	9200		*7400	5000		*5600	3300		*4600	2200		*2100	1700	
	Rear stab down		*9300	*9300		*7400	6000		*5600	3900		4300	2700		*2100	*2100	
	2 sets stab down	*9300		*9300	*7400		*7400	*5600		5400	*4600		3800	*2100		*2100	
	Dozer and stab down	*9300		*9300	*7400		7200	*5600		4700	*4600		3300	*2100		*2100	
1.5 m	Rear dozer up	*10600		7800	6900		4300	4600		2900	3100		1800	*2200		1400	8.67
	Rear dozer down		*10600	8900		*8400	4900		*6100	3300		*4800	2100		*2200	1700	
	Rear stab down		*10600	*10600		*8400	5900		6000	3900		4200	2600		*2200	2000	
	2 sets stab down	*10600		*10600	*8400		8300	*6100		5400	*4800		3800	*2200		*2200	
	Dozer and stab down	*10600		*10600	*8400		7100	*6100		4700	*4800		3200	*2200		*2200	
0 m	Rear dozer up	*12200		7600	6900		4200	4500		2700	3000		1800	*2300		1400	8.46
	Rear dozer down		*12200	9000		*8600	4800		*6200	3100		*4800	2100		*2300	1700	
	Rear stab down		*12200	11100		*8600	5900		6000	3800		4200	2500		*2300	2100	
	2 sets stab down	*12200		*12200	*8600		8200	*6200		5500	*4800		3700	*2300		*2300	
	Dozer and stab down	*12200		*12200	*8600		7100	*6200		4600	*4800		3100	*2300		*2300	
-1.5 m	Rear dozer up	13500		7300	6900		4000	4300		2500	3000		1700	*2600		1600	7.94
	Rear dozer down		*14000	8600		*8700	4700		*6300	2900		*3300	2000		*2600	1900	
	Rear stab down		*14000	11100		*8700	5700		6000	3600		*3300	2500		*2600	2300	
	2 sets stab down	*14000		*14000	*8700		8400	*6300		5300	*3300		*3300	*2600		*2600	
	Dozer and stab down	*14000		13800	*8700		7100	*6300		4400	*3300		3100	*2600		*2600	
-3.0 m	Rear dozer up	13900		7200	6700		3900	4200		2400							
	Rear dozer down		*14400	8600		*8900	4500		*5200	2800							
	Rear stab down		*14400	11000		*8900	5600		*5200	3500							
	2 sets stab down	*14400		*14400	*8900		8400	*5200		*5200							
	Dozer and stab down	*14400		14200	*8900		6900	*5200		4300							
-4.5 m	Rear dozer up	*10100		7200													
	Rear dozer down		*10100	8500													
	Rear stab down		*10100	*10100													
	2 sets stab down	*10100		*10100													
	Dozer and stab down	*10100		*10100													

Load point height

Load over front

Load over rear

Load over side

Load at maximum reach

Load point height

Industrial Stick
3100 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
6.0 m	Rear dozer up							*4600		3300							
	Rear dozer down								*4600	3700							
	Rear stab down								*4600	4400							
	2 sets stab down							*4600		*4600							
	Dozer and stab down							*4600		*4600							
4.5 m	Rear dozer up				*5100		4900	5000		3300	3600		2300	*3200		2100	7.89
	Rear dozer down					*5100	*5100		*5200	3700		*4200	2600		*3200	2400	
	Rear stab down					*5100	*5100		*5200	4400		*4200	3100		*3200	2800	
	2 sets stab down				*5100		*5100	*5200		*5200	*4200		*4200	*3200		*3200	
	Dozer and stab down				*5100		*5100	*5200		5100	*4200		3700	*3200		*3200	
3.0 m	Rear dozer up	*8800		8400	7400		4700	4900		3300	3600		2300	3000		1900	8.27
	Rear dozer down		*8800	8800		*7500	5400		*5900	3700		*4900	2600		*3200	2200	
	Rear stab down		*8800	*8800		*7500	6400		*5900	4300		4700	3100		*3200	2600	
	2 sets stab down	*8800		*8800	*7500		*7500	*5900		5800	*4900		4200	*3200		*3200	
	Dozer and stab down	*8800		*8800	*7500		*7500	*5900		5100	*4900		3700	*3200		3100	
1.5 m	Rear dozer up	*11600		8200	7300		4700	4900		3200	3500		2200	2900		1900	8.36
	Rear dozer down		*11600	9400		*8700	5300		*6400	3700		*5200	2500		*3400	2100	
	Rear stab down		*11600	*11600		*8700	6300		*6400	4300		4600	3000		*3400	2500	
	2 sets stab down	*11600		*11600	*8700		*8700	*6400		5800	*5200		4200	*3400		*3400	
	Dozer and stab down	*11600		*11600	*8700		7400	*6400		5000	*5200		3600	*3400		3000	
0 m	Rear dozer up	*12800		8100	7300		4600	4900		3100	3400		2200	3000		1900	8.17
	Rear dozer down		*12800	9400		*9100	5300		*6700	3500		5200	2400		*3700	2100	
	Rear stab down		*12800	11500		*9100	6300		6400	4200		4600	2900		*3700	2600	
	2 sets stab down	*12800		*12800	*9100		8700	*6700		5800	*5300		4100	*3700		3600	
	Dozer and stab down	*12800		*12800	*9100		7500	*6700		5000	*5300		3500	*3700		3100	
-1.5 m	Rear dozer up	14000		7800	7300		4400	4700		2900	3300		2100	3200		2000	766
	Rear dozer down		*14400	9100		*9200	5100		*6700	3300		*4800	2400		*4300	2300	
	Rear stab down		*14400	11600		*9200	6100		6400	4000		4500	2800		*4300	2800	
	2 sets stab down	*14400		*14400	*9200		8800	*6700		5700	*4800		4000	*4300		3900	
	Dozer and stab down	*14400		14200	*9200		7500	*6700		4800	*4800		3400	*4300		3300	
-3.0 m	Rear dozer up	14200		7600	7100		4300	4600		2800							
	Rear dozer down		*14700	9000		*9400	4900		*6200	3200							
	Rear stab down		*14700	11400		*9400	5900		*6200	3900							
	2 sets stab down	*14700		*14700	*9400		8800	*6200		5500							
	Dozer and stab down	*14700		14600	*9400		7300	*6200		4700							
-4.5 m	Rear dozer up	*12000		7500	*6000		4100										
	Rear dozer down		*12000	8800		*6000	4700										
	Rear stab down		*12000	11300		*6000	5800										
	2 sets stab down	*12000		*12000	*6000		*6000										
	Dozer and stab down	*12000		*12000	*6000		*6000										

* Limited by hydraulic rather than tipping load. Lift capacity ratings are based on ISO 10567, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Oscillating axle must be locked.

Lift Capacities – One-piece Boom (5050 mm)

All values are in kg, without bucket, with counterweight (4100 kg) and CW quick coupler (204 kg), heavy lift on.

Short Stick 2100 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
6.0 m	Rear dozer up							*4400		2800							
	Rear dozer down								*4400	3200							
	Rear stab down								*4400	3900							
	2 sets stab down							*4400		*4400							
	Dozer and stab down							*4400		*4400							
4.5 m	Rear dozer up				*6300		4400	4500		2800				*2600		2000	7.46
	Rear dozer down					*6300	5000		*5400	3200					*2600	2300	
	Rear stab down					*6300	6100		*5400	3800				*2600	*2600	*2600	
	2 sets stab down				*6300		*6300	*5400		*5400						*2600	
	Dozer and stab down				*6300		*6300	*5400		4700				*2600		*2600	
3.0 m	Rear dozer up				6900		4100	4400		2700				*2600		1800	7.91
	Rear dozer down					*7600	4700		*5800	3100					*2600	2000	
	Rear stab down					*7600	5700		*5800	3700				*2600	*2600	2400	
	2 sets stab down				*7600		*7600	*5800		5400						*2600	
	Dozer and stab down				*7600		7100	*5800		4500				*2600		*2600	
1.5 m	Rear dozer up				6600		3800	4300		2500	3100		1800	*2700		1700	8.01
	Rear dozer down					*8600	4400		*6300	2900		*3900	2100		*2700	1900	
	Rear stab down					*8600	5400		6000	3600		*3900	2600	*2700	*2700	2400	
	2 sets stab down				*8600		8200	*6300		5200	*3900		3700			*2700	
	Dozer and stab down				*8600		6800	*6300		4400	*3900		3200	*2700		*2700	
0 m	Rear dozer up				6400		3700	4200		2500				*2900		1700	7.78
	Rear dozer down					*8800	4200		*6400	2800					*2900	2000	
	Rear stab down					*8800	5300		5800	3500				*2900	*2900	2400	
	2 sets stab down				*8800		8000	*6400		5100						*2900	
	Dozer and stab down				*8800		6600	*6400		4300				*2900		*2900	
-1.5 m	Rear dozer up	*8000		6600	6300		3600	4100		2400				3200		1900	7.20
	Rear dozer down		*8000	7900		*8000	4200		*5800	2800					*3400	2200	
	Rear stab down		*8000	*8000		*8000	5200		*5800	3500				*3400	*3400	2700	
	2 sets stab down	*8000		*8000	*8000		*8000	*5800		5100						*3400	
	Dozer and stab down	*8000		*8000	*8000		6600	*5800		4300				*3400		3300	
-3.0 m	Rear dozer up	*8300		6800	*6200		3700										
	Rear dozer down		*8300	8100		*6200	4300										
	Rear stab down		*8300	*8300		*6200	5300										
	2 sets stab down	*8300		*8300	*6200		*6200										
	Dozer and stab down	*8300		*8300	*6200		*6200										

Medium Stick 2400 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
6.0 m	Rear dozer up							*4400		2800							
	Rear dozer down								*4400	3200							
	Rear stab down								*4400	3900							
	2 sets stab down							*4400		*4400							
	Dozer and stab down							*4400		*4400							
4.5 m	Rear dozer up							4500		2800				*2300		1900	7.74
	Rear dozer down								*5100	3200					*2300	2100	
	Rear stab down								*5100	3900				*2300	*2300	*2300	
	2 sets stab down							*5100		*5100						*2300	
	Dozer and stab down							*5100		4700				*2300		*2300	
3.0 m	Rear dozer up				6900		4100	4400		2700	3100		1900	*2300		1700	8.17
	Rear dozer down					*7300	4700		*5700	3100		*4000	2100		*2300	1900	
	Rear stab down					*7300	5800		*5700	3700		*4000	2600	*2300	*2300	*2300	
	2 sets stab down				*7300		*7300	*5700		5400	*4000		3800			*2300	
	Dozer and stab down				*7300		7100	*5700		4600	*4000		3200	*2300		*2300	
1.5 m	Rear dozer up				6600		3800	4300		2500	3000		1800	*2400		1600	8.27
	Rear dozer down					*8400	4400		*6200	2900		*4800	2100		*2400	1800	
	Rear stab down					*8400	5500		6000	3600		4200	2600	*2400	*2400	2200	
	2 sets stab down				*8400		8200	*6200		5200	*4800		3700			*2400	
	Dozer and stab down				*8400		6800	*6200		4400	*4800		3200	*2400		*2400	
0 m	Rear dozer up	*4000		*4000	6400		3600	4100		2400	3000		1800	*2600		1600	8.05
	Rear dozer down		*4000	*4000		*8800	4200		*6300	2800		*4100	2100		*2600	1900	
	Rear stab down		*4000	*4000		*8800	5300		5800	3500		*4100	2500	*2600	*2600	2300	
	2 sets stab down	*4000		*4000	*8800		8000	*6300		5100	*4100		3700			*2600	
	Dozer and stab down	*4000		*4000	*8800		6600	*6300		4300	*4100		3100	*2600		*2600	
-1.5 m	Rear dozer up	*7800		6600	6300		3600	4100		2400				*3000		1800	7.49
	Rear dozer down		*7800	*7800		*8200	4200		*6000	2800					*3000	2100	
	Rear stab down		*7800	*7800		*8200	5200		5800	3400				*3000	*3000	2500	
	2 sets stab down	*7800		*7800	*8200		7900	*6000		5100						*3000	
	Dozer and stab down	*7800		*7800	*8200		6500	*6000		4300				*3000		*3000	
-3.0 m	Rear dozer up	*9200		6700	6400		3600	4200		2500							
	Rear dozer down		*9200	8000		*6700	4200		*4400	2800							
	Rear stab down		*9200	*9200		*6700	5300		*4400	3500							
	2 sets stab down	*9200		*9200	*6700		*6700	*4400		*4400							
	Dozer and stab down	*9200		*9200	*6700		6600	*4400		4300							

Long Stick
2600 mm

Load point height	Load over front	Load over rear	Load over side	Load at maximum reach	Load point height

Load point height	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
6.0 m	Rear dozer up							*4200		2900							
	Rear dozer down								*4200	3300							
	Rear stab down								*4200	3900							
	2 sets stab down							*4200		*4200							
	Dozer and stab down							*4200		*4200							
4.5 m	Rear dozer up							4600		2800	*2500		1900	*2100		1800	7.95
	Rear dozer down								*5000	3200		*2500	2200		*2100	2000	
	Rear stab down								*5000	3900		*2500	*2500		*2100	*2100	
	2 sets stab down							*5000		*5000	*2500		*2500	*2100		*2100	
	Dozer and stab down							*5000		4700	*2500		*2500	*2100		*2100	
3.0 m	Rear dozer up				7000		4200	4400		2700	3100		1900	*2100		1600	8.36
	Rear dozer down					*7100	4800		*5500	3100		*4200	2200		*2100	1800	
	Rear stab down					*7100	5800		*5500	3700		*4200	2600		*2100	*2100	
	2 sets stab down				*7100		*7100	*5500		5400	*4200		3800	*2100		*2100	
	Dozer and stab down				*7100		*7100	*5500		4600	*4200		3200	*2100		*2100	
1.5 m	Rear dozer up				6600		3800	4300		2600	3100		1800	*2200		1500	8.46
	Rear dozer down					*8300	4400		*6100	2900		4800	2100		*2200	1800	
	Rear stab down					*8300	5500		6000	3600		4200	2600		*2200	2200	
	2 sets stab down				*8300		*8300	*6100		5200	*4900		3700	*2200		*2200	
	Dozer and stab down				*8300		6800	*6100		4400	*4900		3200	*2200		*2200	
0 m	Rear dozer up	*4200		*4200	6400		3700	4200		2400	3000		1800	*2400		1600	8.25
	Rear dozer down		*4200	*4200		*8800	4200		*6300	2800		4700	2000		*2400	1800	
	Rear stab down		*4200	*4200		*8800	5300		5800	3500		4100	2500		*2400	2200	
	2 sets stab down	*4200		*4200	*8800		8000	*6300		5100	*4800		3700	*2400		*2400	
	Dozer and stab down	*4200		*4200	*8800		6600	*6300		4300	*4800		3100	*2400		*2400	
-1.5 m	Rear dozer up	*7500		6500	6300		3600	4100		2400				*2800		1700	7.7
	Rear dozer down		*7500	*7500		*8400	4200		*6000	2800					*2800	2000	
	Rear stab down		*7500	*7500		*8400	5200		5800	3400					*2800	2400	
	2 sets stab down	*7500		*7500	*8400		7900	*6000		5100				*2800		*2800	
	Dozer and stab down	*7500		*7500	*8400		6500	*6000		4200				*2800		*2800	
-3.0 m	Rear dozer up	*9700		6700	6400		3600	4100		2400							
	Rear dozer down		*9700	7900		*6900	4200		*4800	2800							
	Rear stab down		*9700	*9700		*6900	5200		*4800	3500							
	2 sets stab down	*9700		*9700	*6900		*6900	*4800		*4800							
	Dozer and stab down	*9700		*9700	*6900		6600	*4800		4300							

Industrial Stick
3100 mm

Load point height	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
6.0 m	Rear dozer up							*4500		3300							
	Rear dozer down								*4500	3700							
	Rear stab down								*4500	4300							
	2 sets stab down							*4500		*4500							
	Dozer and stab down							*4500		*4500							
4.5 m	Rear dozer up							5000		3200	*3600		2300	*3200		2200	7.64
	Rear dozer down								*5200	3600		*3600	2600		*3200	2500	
	Rear stab down								*5200	4300		*3600	3100		*3200	3000	
	2 sets stab down							*5200		*5200	*3600		*3600	*3200		*3200	
	Dozer and stab down							*5200		5100	*3600		*3600	*3200		*3200	
3.0 m	Rear dozer up				*7200		4600	4800		3100	3500		2300	*3200		2100	8.03
	Rear dozer down					*7200	5200		*5800	3500		*4800	2500		*3200	2300	
	Rear stab down					*7200	6300		*5800	4100		4600	3000		*3200	2700	
	2 sets stab down				*7200		*7200	*5800		*5800	*4800		4200	*3200		*3200	
	Dozer and stab down				*7200		*7200	*5800		5000	*4800		3600	*3200		*3200	
1.5 m	Rear dozer up				7100		4300	4700		3000	3400		2200	3100		2000	8.12
	Rear dozer down					*8600	4900		*6400	3300		5200	2500		*3400	2200	
	Rear stab down					*8600	6000		*6400	4000		4600	3000		*3400	2600	
	2 sets stab down				*8600		*8600	*6400		5600	*5300		4100	*3400		*3400	
	Dozer and stab down				*8600		7300	*6400		4800	*5300		3500	*3400		3200	
0 m	Rear dozer up	*5800		*5800	6800		4100	4600		2900	3400		2200	3100		2000	7.92
	Rear dozer down		*5800	*5800		*9300	4700		*6800	3200		5100	2400		*3800	2300	
	Rear stab down		*5800	*5800		*9300	5700		6200	3900		4500	2900		*3800	2700	
	2 sets stab down	*5800		*5800	*9300		8500	*6800		5500	*5300		4100	*3800		*3800	
	Dozer and stab down	*5800		*5800	*9300		7100	*6800		4700	*5300		3500	*3800		3200	
-1.5 m	Rear dozer up	*8600		7100	6700		4000	4500		2800				3400		2200	7.40
	Rear dozer down		*8600	8300		*9000	4600		*6600	3200					*4600	2400	
	Rear stab down		*8600	*8600		*9000	5600		6200	3800					*4600	2900	
	2 sets stab down	*8600		*8600	*9000		8400	*6600		5500				*4600		4100	
	Dozer and stab down	*8600		*8600	*9000		7000	*6600		4600				*4600		3500	
-3.0 m	Rear dozer up	*11000		7100	6800		4000	4500		2800							
	Rear dozer down		*11000	8400		*7800	4600		*5600	3200							
	Rear stab down		*11000	10700		*7800	5600		*5600	3800							
	2 sets stab down	*11000		*11000	*7800		*7800	*5600		5500							
	Dozer and stab down	*11000		*11000	*7800		7000	*5600		4600							
-4.5 m	Rear dozer up	*7100		*7100	*5000		4100										
	Rear dozer down		*7100	*7100		*5000	4700										
	Rear stab down		*7100	*7100		*5000	*5000										
	2 sets stab down	*7100		*7100	*5000		*5000										
	Dozer and stab down	*7100		*7100	*5000		*5000										

* Limited by hydraulic rather than tipping load. Lift capacity ratings are based on ISO 10567, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Oscillating axle must be locked.

Lift Capacities – Offset Boom (5200 mm)

All values are in kg, without bucket, with counterweight (4100 kg) and CW quick coupler (204 kg), heavy lift on.

Short Stick 2100 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
6.0 m	Rear dozer up				*5500		4600	4500		2700							
	Rear dozer down					*5500	5200		*5100	3100							
	Rear stab down					*5500	*5500		*5100	3800							
	2 sets stab down				*5500		*5500	*5100		*5100							
	Dozer and stab down				*5500		*5500	*5100		4700							
4.5 m	Rear dozer up	*6900		6900	*6500		4500	4600		2800				*2300		1700	7.70
	Rear dozer down		*6900	*6900		*6500	5100		*5300	3200					*2300	2000	
	Rear stab down		*6900	*6900		*6500	6100		*5300	3900					*2300	*2300	
	2 sets stab down	*6900		*6900	*6500		*6500	*5300		*5300				*2300		*2300	
	Dozer and stab down	*6900		*6900	*6500		*6500	*5300		4700				*2300		*2300	
3.0 m	Rear dozer up	*7900		*7900	6900		4300	4500		2800	3000		1700	*2300		1500	8.12
	Rear dozer down		*7900	*7900		*7600	5000		*5700	3200		*4400	2000		*2300	1800	
	Rear stab down		*7900	*7900		*7600	5900		*5700	3900		4200	2500		*2300	2200	
	2 sets stab down	*7900		*7900	*7600		*7600	*5700		5300	*4400		3700	*2300		*2300	
	Dozer and stab down	*7900		*7900	*7600		*7600	*5700		4600	*4400		3100	*2300		*2300	
1.5 m	Rear dozer up	*10300		7600	6800		4300	4500		2700	2900		1700	*2300		1400	8.22
	Rear dozer down		*10300	8900		*8300	4900		*6000	3100		*4700	1900		*2300	1700	
	Rear stab down		*10300	*10300		*8300	5800		5900	3800		4100	2400		*2300	2100	
	2 sets stab down	*10300		*10300	*8300		8100	*6000		5300	*4700		3600	*2300		*2300	
	Dozer and stab down	*10300		*10300	*8300		7000	*6000		4600	*4700		3000	*2300		*2300	
0 m	Rear dozer up	*12600		7100	6900		4100	4300		2500	2900		1600	*2500		1500	8.00
	Rear dozer down		*12600	8400		*8400	4700		*6100	2900		*4000	1900		*2500	1700	
	Rear stab down		*12600	10900		*8400	5800		6000	3600		*4000	2400		*2500	2200	
	2 sets stab down	*12600		*12600	*8400		8100	*6100		5300	*4000		3500	*2500		*2500	
	Dozer and stab down	*12600		*12600	*8400		7100	*6100		4500	*4000		3000	*2500		*2500	
-1.5 m	Rear dozer up	13500		7000	6800		3900	4100		2400				*2800		1600	7.44
	Rear dozer down		*13700	8400		*8600	4500		*6000	2700					*2800	1900	
	Rear stab down		*13700	10900		*8600	5600		5900	3400					*2800	2400	
	2 sets stab down	*13700		*13700	*8600		8400	*6000		5100				*2800		*2800	
	Dozer and stab down	*13700		*13700	*8600		7000	*6000		4300				*2800		*2800	
-3.0 m	Rear dozer up	13800		7100	6500		3600										
	Rear dozer down		*14000	8500		*7900	4300										
	Rear stab down		*14000	10900		*7900	5300										
	2 sets stab down	*14000		*14000	*7900		*7900										
	Dozer and stab down	*14000		*14000	*7900		6700										

Medium Stick 2400 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m						m
6.0 m	Rear dozer up				*4800		4600	4600		2800							
	Rear dozer down					*4800	*4800		*4700	3200							
	Rear stab down					*4800	*4800		*4700	3900							
	2 sets stab down				*4800		*4800	*4700		*4700							
	Dozer and stab down				*4800		*4800	*4700		*4700							
4.5 m	Rear dozer up	*5300		*5300	*5700		4500	4600		2900	*2800		1700	*2000		1600	7.99
	Rear dozer down		*5300	*5300		*5700	5100		*5100	3300		*2800	2000		*2000	1900	
	Rear stab down		*5300	*5300		*5700	*5700		*5100	3900		*2800	2500		*2000	*2000	
	2 sets stab down	*5300		*5300	*5700		*5700	*5100		*5100	*2800		*2800	*2000		*2000	
	Dozer and stab down	*5300		*5300	*5700		*5700	*5100		4700	*2800		*2800	*2000		*2000	
3.0 m	Rear dozer up	*8600		7900	6900		4300	4500		2900	3000		1700	*2000		1400	8.40
	Rear dozer down		*8600	*8600		*7300	5000		*5500	3300		*4500	2000		*2000	1700	
	Rear stab down		*8600	*8600		*7300	5900		*5500	3900		*4500	2500		*2000	*2000	
	2 sets stab down	*8600		*8600	*7300		*7300	*5500		5400	*4500		3700	*2000		*2000	
	Dozer and stab down	*8600		*8600	*7300		7100	*5500		4600	*4500		3100	*2000		*2000	
1.5 m	Rear dozer up	*10400		7600	6800		4300	4500		2800	3000		1700	*2100		1300	8.49
	Rear dozer down		*10400	8800		*8200	4900		*5900	3200		*4700	2000		*2100	1600	
	Rear stab down		*10400	*10400		*8200	5800		*5900	3900		4100	2500		*2100	2000	
	2 sets stab down	*10400		*10400	*8200		8000	*5900		5300	*4700		3700	*2100		*2100	
	Dozer and stab down	*10400		*10400	*8200		6900	*5900		4600	*4700		3100	*2100		*2100	
0 m	Rear dozer up	*12200		7400	6800		4100	4400		2600	2900		1600	*2200		1400	8.28
	Rear dozer down		*12200	8800		*8300	4700		*6000	3000		*4500	1900		*2200	1600	
	Rear stab down		*12200	10900		*8300	5800		5900	3700		4000	2400		*2200	2000	
	2 sets stab down	*12200		*12200	*8300		8100	*6000		5300	*4500		3600	*2200		*2200	
	Dozer and stab down	*12200		*12200	*8300		7000	*6000		4500	*4500		3000	*2200		*2200	
-1.5 m	Rear dozer up	13300		7000	6800		3900	4200		2400				*2500		1500	7.74
	Rear dozer down		*13600	8400		*8500	4500		*6100	2800					*2500	1800	
	Rear stab down		*13600	10900		*8500	5600		5900	3500					*2500	2300	
	2 sets stab down	*13600		*13600	*8500		8300	*6100		5100				*2500		*2500	
	Dozer and stab down	*13600		13500	*8500		7000	*6100		4300				*2500		*2500	
-3.0 m	Rear dozer up	13700		7000	6500		3700	4000		2300							
	Rear dozer down		*14100	8400		*8400	4300		*4300	2700							
	Rear stab down		*14100	10800		*8400	5400		*4300	3300							
	2 sets stab down	*14100		*14100	*8400		8200	*4300		*4300							
	Dozer and stab down	*14100		*14100	*8400		6700	*4300		4200							

Standard Equipment

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

Electrical
Alternator, 75 A
Lights
  Boom working light
  Cab interior light
  Roading lights (two front, two rear)
Main shut-off switch
Maintenance free batteries
Signal/warning horn

Engine
Automatic engine speed control
Automatic starting aid
Cat C6.6 with ACERT Technology
  EU Stage IIIA compliant
Fuel/water separator with level indicator

Hydraulics
Cat XT-6 ES hoses
Heavy lift mode
Load-sensing Plus hydraulic system
Manual work modes (economy, power)
Separate swing pump
Stick regeneration circuit

Operator Station
Adjustable armrests
Ash tray with cigarette lighter (24 volt)
Beverage cup/can holder
Bolt-on FOGS capability
Bottle holder
Coat hook
Floor mat, washable, with storage compartment
Fully adjustable suspension seat
Heater and defroster
Instrument panel and gauges
  Information and warning messages in local language
  Gauges for fuel level, engine coolant and hydraulic oil temperature
  Filters/fluids change interval, working hour
  Indicators for headlights, turning signal, low fuel, engine dial setting
  Clock with 10-day backup battery
Laminated front windshield
Left side console, tiltable, with lock out for all controls
Literature compartment behind seat
Literature holder in right console
Mobile phone holder
Parking brake
Parallel mounted top and bottom wiper and washer
Positive filtered ventilation, pressurized cab
Power supply, 12V-7A
Rear window, emergency exit
Retractable seat belt
Skylight
Sliding door windows
Steering column, tiltable
Storage area suitable for a lunch box
Sunshade for windshield and skylight

Undercarriage
Bolt-on design for front attachments
Heavy-duty axles, advanced travel motor, adjustable braking force
Oscillating front axle with remote greasing
Pin-on design for rear attachements
Tires, 10.00-20 16 PR, dual
Tool box in undercarriage
Two-piece drive shaft
Two-speed transmission, manual and automatic gear shifting

Other Equipment
Automatic swing brake
Counterweight, 3700 kg
Mirrors, frame and cab
Product Link ready

Optional Equipment

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

Auxiliary Controls and Lines
Auxiliary boom and stick lines
Anti-drift valves for bucket, stick, VA boom and tool control/multi-function circuits
Basic control circuits:
  Single action
    One-way, high pressure circuit, for hammering application
  Medium pressure
    Two-way, medium pressure circuit, for rotating or tilting of work tools
  Tool control/multi function
    One/two-way high pressure for hammer application or opening and closing of a work tool
    Programmable flow and pressure for up to 10 work tools - selection via monitor
  Second high pressure
    Additional two-way, high pressure circuit, for tools requiring a second high or medium pressure function
  Quick coupler control
Biodegradable hydraulic oil (synthetic ester based)
Lowering control devices for boom and stick
SmartBoom

Front Linkage
Booms
  One-piece boom, 5050 mm
  VA boom (two piece), 5200 mm
  Offset boom, 5200 mm
Bucket linkage
Bucket linkage with diverter valve
Sticks
  2100, 2400, 2600 mm
  3100 mm industrial with drop nose

Electrical
Back-up alarm with three selectable modes
Heavy-duty maintenance free batteries
Roading lights, rear (LED modules)
Refueling pump
Rotating beacon on cab
Working lights, cab mounted (front and rear)

Operator Station
Adjustable hydraulic sensitivity
Air conditioner, heater and defroster with automatic climate control
Camera mounted on counterweight, displays through cab monitor
Falling objects guard
Fixed cab riser, 1200 mm
Joystick steering
Lid for storage compartment
Radio ready mounting (12 V or 24 V) at rear location including speakers and 12 V converter
Seat, adjustable high-back
  – mechanical suspension
  – air suspension (vertical)
  – deluxe with headrest, air suspension
  Headrest
Travel speed lock
Vandalism guards
Visor for rain protection
Windshield
  One-piece high impact resistant
  50/50 split, openable; 70/30 split, openable

Undercarriage
Dozer blade, front or rear mounted
Outriggers, front and/or rear mounted
Second tool box for undercarriage
Spacer rings for tires
Wide axles

Other Equipment
Auto-lube system (implements and swing gear)
Cat Machine Security System
Cat Product Link
Counterweight, 4100 kg
Custom paint
Mirrors heated, frame and cab
Ride Control
Tires (see pg.13)
Tool box in upperframe, lockable
Waste Handling Package

M316D Wheel Excavator

HEHH3568 (02/2007) hr

CATERPILLAR®