

M313D

Wheel Excavator



Engine

Engine Model	Cat® C4.4 with ACERT™ Technology
Net power (ISO 9249) at 2,000 rpm	95 kW (129 hp)

Weights

Operating Weight	14 000 to 16 200 kg
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Bucket Specifications

Bucket Capacities	0.18 to 0.92 m ³
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Working Ranges

Maximum Reach at Ground Level	8770 mm
Maximum Digging Depth	5750 mm

Drive

Maximum Travel Speed	37 km/h
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Features

Engine

The EU Stage IIIA compliant C4.4 offers increased performance and reliability while reducing fuel consumption and sound levels.

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.

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.

Serviceability

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

Operator Comfort

The 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 standard rear-mounted camera.

Undercarriage

Various undercarriage configuration with blade and outriggers are available to provide the best solution for you.

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The D Series incorporates innovations for improved performance and versatility.

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

Engine

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

Powerful Performance

The Cat® C4.4 engine with ACERT™ Technology includes 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 standards. The Cat C4.4 engine in the M313D delivers a maximum gross power of 102 kW at a rated speed of 2,000 rpm.

Low Fuel Consumption

The C4.4 is electronically controlled and uses the 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 C4.4 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.



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 drive. 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%.

Adjustable Hydraulic Sensitivity

This function allows the operator to adjust the aggressiveness of the machine according to the application.

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 preprogrammed 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.
- The Medium Pressure Function Valve provides proportional flow that is ideal for tilting buckets or rotating tools.
- The D Series feature an 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 work tool.

Stick Regeneration Circuit

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

Quick Coupler

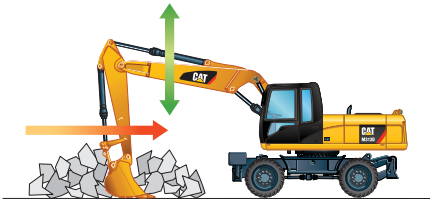
The machine can be optionally equipped with a dedicated hydraulic circuit to operate hydraulic quick couplers.

Hydraulic Snubbers

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

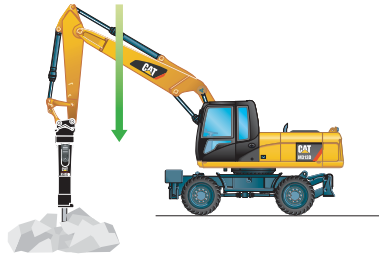
SmartBoom™

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



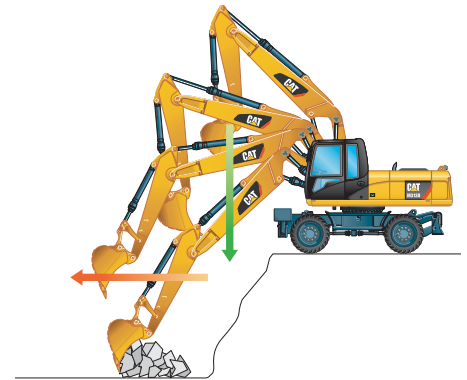
Rock Scraping

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.

Environmentally Responsible Design

The M313D 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 Cat® C4.4 engine meets the EU Stage IIIA emission standards while offering increased performance, reliability and reduced 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 (Cat BIO HYDO Advanced HEES™) is formulated to provide excellent

high-pressure and high temperature characteristics, and is fully compatible with all hydraulic components. Cat BIO HYDO Advanced 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 Cat 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.

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 features of the D Series Wheel Excavators. The 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 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 large skylight provides superb upward visibility. The retractable sunscreen blocks direct sunlight.

Heated Mirrors

The optional electrically heated mirrors provide increased 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.



Monitor

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

- 2 times 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 predefined 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.



Deluxe Seat

The 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.



Lunch Box

A large storage compartment is located behind the operator’s seat. The compartment provides sufficient room to store items such as a lunch box. A 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.

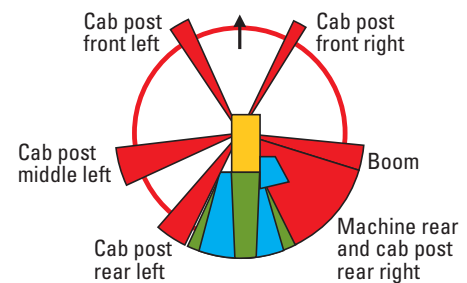
Cat Standard Rearview Camera

The rearview camera displays on the operator monitor. Together with the best in class visibility to the front, up, left and right, the rearview camera ensures the safe operation of the machine and fulfills the requirements of ISO 5006/EN474.

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.

Field of Vision



Legend:

Red: limitations due to cab post and/or boom

Blue: additional visibility due to mirrors

Green: additional visibility due to rearview camera



Undercarriage

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

Increased Travel Speed

The maximum travel speed for the M313D is 37 km/h, reducing travel time between sites and increasing productivity.

Heavy-Duty Axles and Stabilizers

The D Series undercarriage provides 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 minimizes the rocking effect associated with working free on wheels. The axle design lowers maintenance and lifetime costs. Oil change intervals are at 2,000 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 2480/2760 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

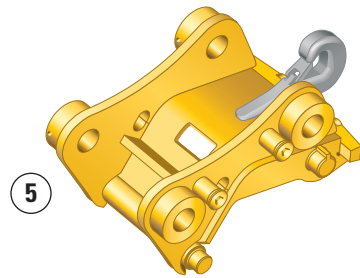
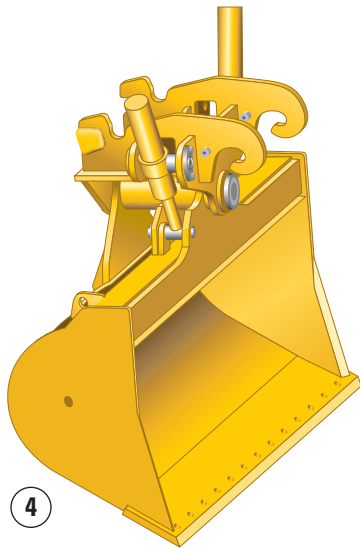
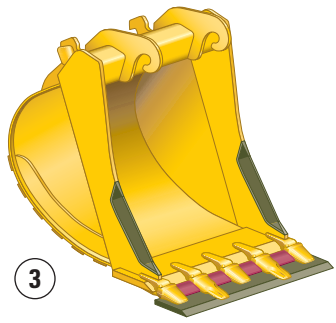
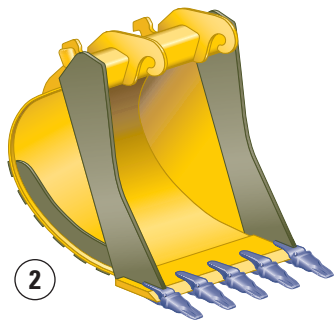
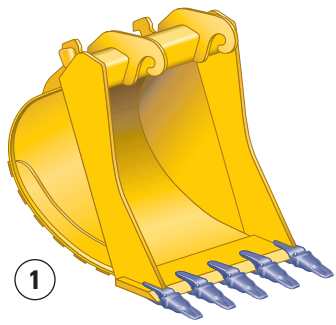
Four different stick lengths are offered to match different application requirements:

- Short stick (2000 mm) for maximum breakout force and lifting capability.
- Medium stick (2300 mm) for greater crowd force and lift capacity.
- Long stick (2600 mm) for greater depth and reach requirements.
- Industrial stick (2900 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.



Work Tools

Cat 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 Cat K Series™ Ground Engaging Tools.

- 1 **Excavation (X)**
- 2 **Extreme Excavation (EX)**
- 3 **Excavation Leveling**
- 4 **Ditch Cleaning**
- 5 **Quick Coupler**

Purpose designed and built to Caterpillar's high durability standards.

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 Cat hammers suitable for a wide range of carriers and provide a system solution from one safe source.

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.

Vibratory Plate Compactors

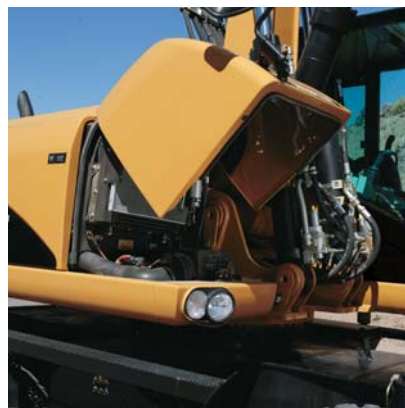
Cat compactors are performance-matched to Cat machines, and integrate perfectly with the Cat hammer line – brackets and hydraulic kits are fully interchangeable between hammers and compactors.

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



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·SSM oil sampling analysis, hydraulic oil change intervals can be extended up to 6,000 hours.

Engine Oil

Cat 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.

Air Filters

Cat 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 ValveTM 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.

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

Front Compartment

The front compartment hood can be opened vertically, providing outstanding ground level access to the batteries, air-to-air aftercooler, 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.

S-O-SSM

Caterpillar has specially developed S-O-SSM 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 Cat 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.

Handrails and Steps

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



Versatility

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



Tool Control

The integrated Tool Control system allows the operator to select up to 10 preset combinations. This eliminates the need to reset 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.

Working and Travel Modes

There are 2 selectable working modes and one automatic travel setting. The operator can choose the best power setting for both engine and hydraulic power versus fuel efficiency.

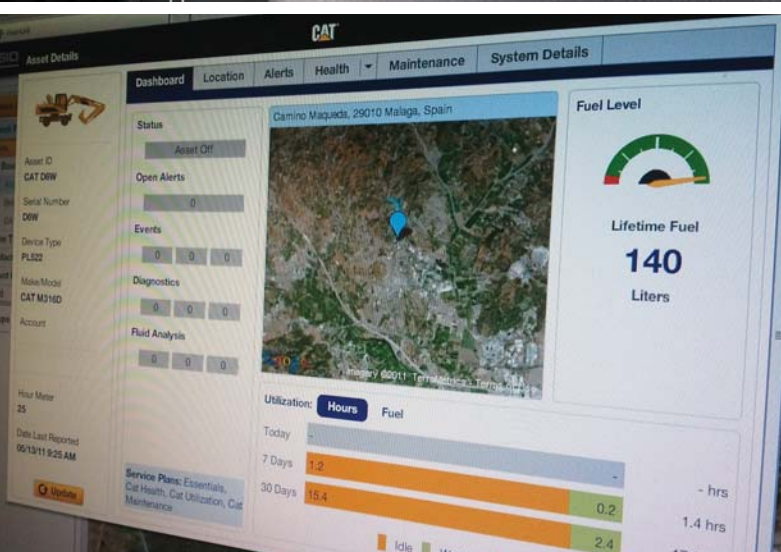
- Economy Mode – used for lifting, pipe setting, grading, slope finishing and precise work while reducing fuel consumption.
- Power Mode – used for normal truck loading and digging applications, trenching or hammer use.
- Travel Mode – automatically set when the travel pedal is actuated. It provides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



Product Link

Product Link allows remote monitoring of the machine, using a powerful telemetric system to transmit needed information to the customer and the dealer via a secure, web-based application, VisionLink™.

Critical information, such as event and diagnostic codes, is readily accessible, as are machine statistics, such as hour-meter reading, fuel consumption and idle time. Mapping functions include location and geo-fencing, which assist in servicing operations and in preventing unauthorized machine use. With Product Link, the customer and the dealer have an invaluable tool for more efficiently managing machines and fleets.



Ride Control

On 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.

M313D Wheel Excavator Specifications

Engine

Engine Model	Cat® C4.4 with ACERT™ Technology
Ratings	2,000 rpm
Gross Power	102 kW (139 hp)
Net Power	
ISO 9249	95 kW (129 hp)
80/1269/EEC	95 kW (129 hp)
Bore	105 mm
Stroke	127 mm
Displacement	4.4 L
Cylinders	4
Maximum Torque at 1,400 rpm	550 N·m

- 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	95 L
System	180 L
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	350 bar
Maximum Flow	
Implement/Travel Circuit	190 L/min
Auxiliary Circuit	
High Pressure	190 L/min
Medium Pressure	50 L/min
Swing Mechanism	80 L/min

Weights

VA Boom*	
Rear Dozer Only	13 800 kg
Rear Dozer, Front Outriggers	14 750 kg
Front and Rear Outriggers	15 050 kg
One-Piece Boom*	
Rear Dozer Only	13 500 kg
Rear Dozer, Front Outriggers	14 450 kg
Front and Rear Outriggers	14 750 kg
Offset Boom*	
Rear Dozer Only	14 350 kg
Rear Dozer, Front Outriggers	15 300 kg
Front and Rear Outriggers	15 600 kg
Sticks	
Short (2000 mm)	370 kg
Medium (2300 mm)	390 kg
Long (2600 mm)	440 kg
Industrial (2900 mm)	380 kg
Dozer Blade	750 kg
Outriggers	960 kg
Counterweight	
Standard	2900 kg
Optional	3300 kg

• Machine weight with medium stick, 3300 kg counterweight, with operator and full fuel tank, without work tool. Weight varies depending on configuration.

Transmission

Forward/Reverse	
1st Gear	9 km/h
2nd Gear	37 km/h
Creeper Speed	
1st Gear	3 km/h
2nd Gear	13 km/h
Drawbar Pull	76 kN
Maximum Gradeability	58%

Swing Mechanism

Swing Speed	10.5 rpm
Swing Torque	35 kN·m

Tires

Standard	
• 10.00-20 (dual pneumatic)	
Optional	
• 11.00-20 (dual pneumatic)	
• 18 R 19.5 XF (single pneumatic)	
• 10.00-20 (dual solid rubber)	

Undercarriage

Ground Clearance	370 mm
Maximum Steering Angle	35°
Oscillation Axle Angle	± 9°
Minimum Turning Radius	
Outside of Tire	6200 mm
End of VA Boom	6700 mm
End of One-Piece Boom	8100 mm

Service Refill Capacities

Fuel Tank	235 L
Cooling	31 L
Engine Crankcase	8 L
Rear Axle Housing (differential)	11.2 L
Front Steering Axle (differential)	9 L
Final Drive	2.4 L
Powershift Transmission	2.5 L

Sound Levels

Exterior Sound	
• The labeled spectator sound power level measured according to the test procedures and conditions specified in 2000/14/EC is 102 dB(A).	

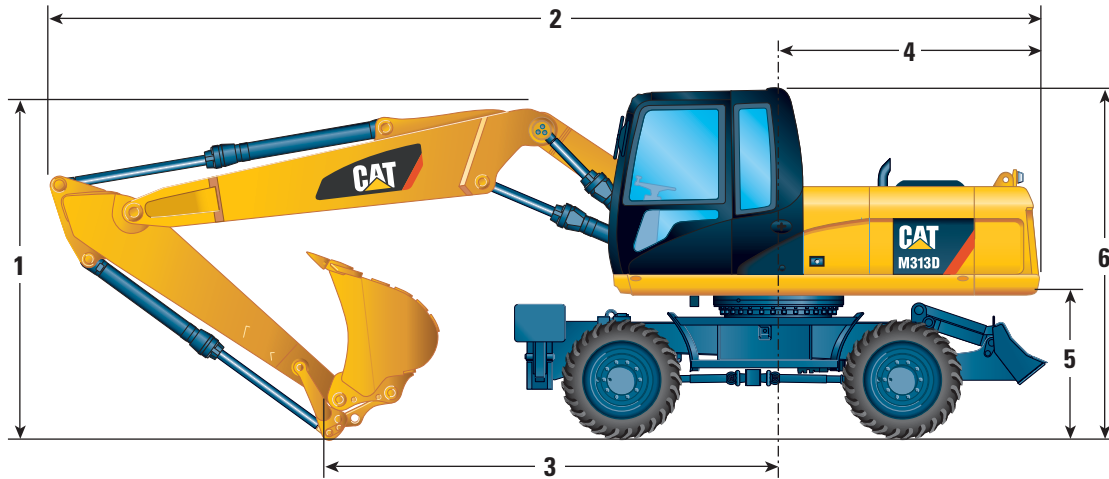
Cab/ROPS/FOGS

- Cat cab with integrated Roll Over Protective Structure (ROPS) meets ISO 12117-2:2008 criteria.
- Cab with Falling Object Guard Structure (FOGS) meets ISO 10262.

M313D Wheel Excavator Specifications

Dimensions

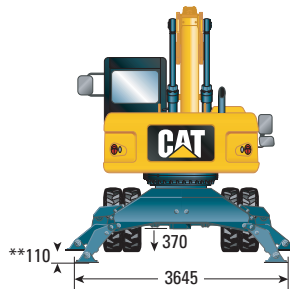
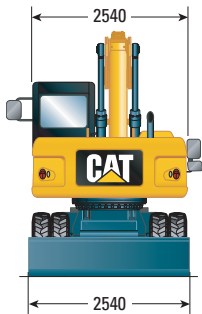
All dimensions are approximate.



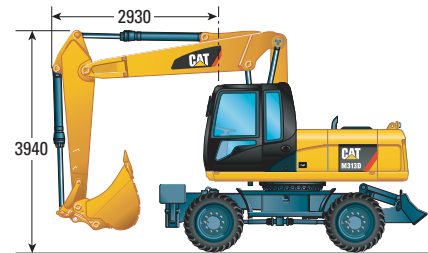
		VA Boom				One-Piece Boom				Offset Boom	
		2000	2300	2600	*2900	2000	2300	2600	*2900	2000	2300
Stick Length	mm	2000	2300	2600	*2900	2000	2300	2600	*2900	2000	2300
1 Shipping Height	mm	3120	3120	3120	3120	3120	3120	3120	3120	3120	3120
2 Shipping Length	mm	8310	8300	8290	8130	8090	8080	8090	7950	8300	8300
3 Support Point	mm	3820	3470	3320	3580	3480	3120	2950	3170	3820	3460
4 Tail Swing Radius	mm		2060				2060			2060	
5 Counterweight Clearance	mm		1230				1230			1230	
6 Cab Height	mm		3120				3120			3120	

* Industrial stick

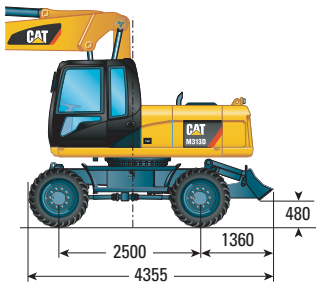
** Maximum tire clearance with outrigger fully down



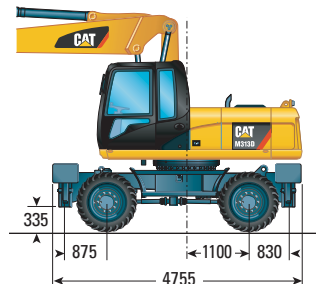
Roading position with 2300 mm stick



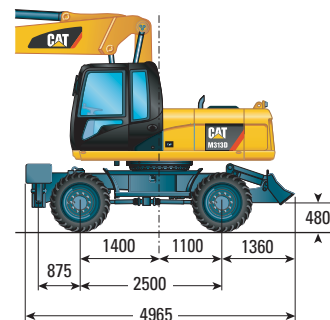
Undercarriage with dozer only



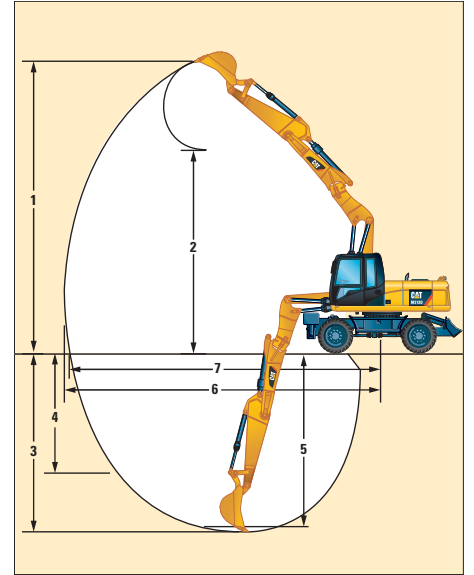
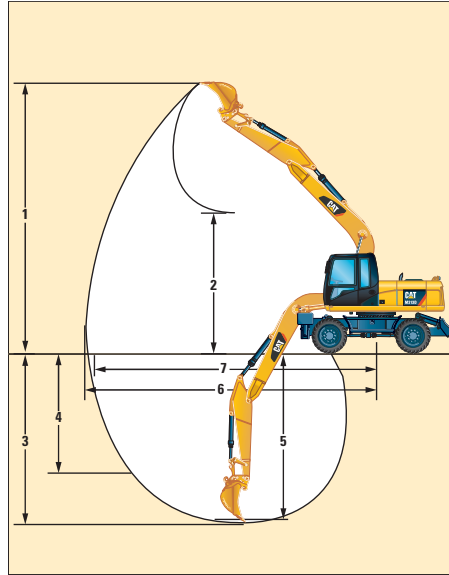
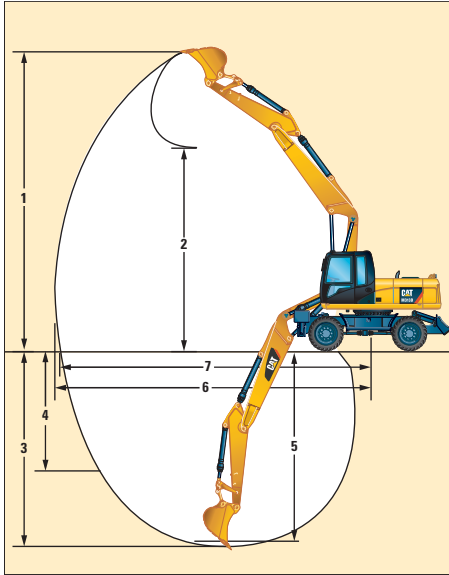
Undercarriage with 2 sets of outriggers



Undercarriage with 1 set of outriggers and dozer



Working Ranges



		VA Boom				One-Piece Boom				Offset Boom	
		2000	2300	2600	*2900	2000	2300	2600	*2900	2000	2300
Stick Length	mm										
1 Digging Height	mm	9670	9820	10 060	8500	8600	8620	8790	7140	9670	9820
2 Dump Height	mm	6900	7060	7290	4020	5910	5970	6140	3160	6900	7060
3 Digging Depth	mm	5160	5450	5750	4670	4990	5290	5590	4500	5160	5450
4 Vertical Wall Digging Depth	mm	3500	3600	3890	–	3410	3370	3670	–	3500	3600
5 Depth 2.5 m Straight Clean-Up	mm	4920	5230	5550	–	4750	5070	5390	–	4920	5230
6 Reach	mm	8670	8920	9210	7910	8420	8660	8950	7610	8670	8920
7 Reach at Ground Level	mm	8490	8740	9030	7710	8230	8480	8770	7400	8490	8740
Bucket Forces (ISO 6015)	kN	93	93	93	–	93	93	93	–	93	93
Stick Forces (ISO 6015)	kN	73	67	62	–	73	67	62	–	73	67

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

Values 1-7 are calculated with bucket and quick coupler with a tip radius of 1400 mm.

Breakout force values are calculated with heavy lift on (no quick coupler) and a tip radius of 1236 mm.


M313D Wheel Excavator Specifications

Bucket Specifications


Contact your Cat dealer for special bucket requirements.


Pin-On Buckets					Variable Adjustable Boom 5020 mm												One-Piece Boom 4815 mm												
Stick Length					2000 mm				2300 mm				2600 mm				2000 mm				2300 mm				2600 mm				
	Width	Weight*	Capacity (ISO)	Adapters	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	450	312	0.18	3																									
	600	345	0.28	3																									
	750	362	0.38	4																									
	900	403	0.49	4																									
	1000	427	0.56	4																									
	1100	463	0.64	5																									
	1200	486	0.72	5																									
Extreme Excavation	1200	496	0.72	5																									
Excavation (leveling)	600	382	0.38	3																									
	750	407	0.50	3																									
	800	422	0.54	3																									
	900	443	0.64	4																									
	1000	484	0.73	4																									
	1100	519	0.82	4																									
	1200	546	0.92	5																									
Extreme Excavation (leveling)	1200	557	0.84	5																									
Ditch Cleaning	1800	465	0.73																										
	2000	495	0.83																										
Tilttable Ditch Cleaning	1800	690	0.61																										
	2000	720	0.68																										

*Bucket weight includes Ground Engaging Tools

 Maximum material density 1800 kg/m³

 Maximum material density 1500 kg/m³

 Maximum material density 1200 kg/m³

 Not recommended

Bucket Specifications

Contact your Cat dealer for special bucket requirements.

CW Quick Coupler Buckets					Variable Adjustable Boom 5020 mm												One-Piece Boom 4815 mm												
Stick Length					2000 mm				2300 mm				2600 mm				2000 mm			2300 mm			2600 mm						
	Width	Weight*	Capacity (ISO)	Adapters	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	339	0.28	3																									
	750	352	0.38	3																									
	900	390	0.49	4																									
	1000	413	0.56	4																									
	1100	450	0.64	4																									
	1200	473	0.72	5																									
Extreme Excavation	1200	483	0.72	5																									
Excavation (leveling)	600	390	0.38	3																									
	750	435	0.50	4																									
	800	409	0.54	3																									
	900	443	0.64	4																									
	1000	470	0.73	4																									
	1100	505	0.82	4																									
	1200	533	0.92	5																									
Extreme Excavation (leveling)	600	396	0.38	3																									
	800	416	0.54	3																									
	1200	544	0.92	5																									
Ditch Cleaning	1800	430	0.73																										
	2000	460	0.83																										
Tiltable Ditch Cleaning	1800	650	0.61																										
	2000	680	0.68																										

*Bucket weight includes Ground Engaging Tools

Maximum material density 1800 kg/m³

Maximum material density 1500 kg/m³

Maximum material density 1200 kg/m³

Not recommended

M313D Wheel Excavator Specifications

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 5020 mm												One-Piece Boom 4815 mm												Offset Boom 5020 mm					
		(1)				(2)				(3)				(1)				(2)				(3)				(1)		(2)		(3)	
		2000	2300	2600	2900	2000	2300	2600	2900	2000	2300	2600	2900	2000	2300	2600	2900	2000	2300	2600	2900	2000	2300	2600	2900	2000	2300	2000	2300	2000	2300
Hammers	H100, H100 S, H115 S	360° Working Range																													
Hydraulic Shears (* boom mounted)	S320B*	360° Working Range																													
	S325B*	360° Working Range																													
Multi-Grapples	G310B	D	Over the front only	360° Working Range																											
		R	Over the front only	360° Working Range																											
	G315B	D	360° Working Range																												
		R	360° Working Range																												
Compactor	CVP75	360° Working Range																													
With Quick Coupler (CW-20, CW-20S)		(1) Dozer lowered																													
		(2) 2 sets of stabilizers lowered																													
		(3) Dozer and stabilizer lowered																													
Hammers	H100, H100 S, H115 S	360° Working Range																													
Multi-Grapples	G310B	D	Over the front only	360° Working Range																											
		R	Over the front only	360° Working Range																											
Compactor	CVP75	360° Working Range																													














360° Working Range
 Over the front only

Lift Capacities – Variable Adjustable Boom (5020 mm)















All values are in kg, without bucket and without QC, with counterweight (3300 kg), heavy lift on.

 Load at maximum reach (sticknose/bucket pin)
  Load over front
  Load over rear
  Load over side
  Load point height

Short Stick 2000 mm

Undercarriage configuration	3.0 m			4.5 m			6.0 m						m
													
6.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				*5000 3900 *5000 *5000	3900 *5000 *5000 *5000	3550 4100 *5000 *5000				*3550 2550 *3550 *3550	2550 *3550 *3550 *3550	2300 2650 *3550 *3550	5.82
4.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				*5450 3750 *5450 *5450	3750 *5450 *5450 *5450	3400 3950 *5450 *5450	3500 *4500 *4500 *4500	2400 2550 3850 4500	2200 2550 3850 4500	2900 2000 *3250 *3250	2000 *3250 *3250 *3250	1800 2100 3200 *3200	6.71
3.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				5250 *6250 *6250 *6250	3500 *6250 *6250 *6250	3200 3700 5850 *6250	3400 *4750 *4750 *4750	2300 2450 3750 4400	2100 2450 3750 4400	2600 *3200 *3200 *3200	1750 *3200 *3200 *3200	1600 1850 2850 *3200	7.16
1.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				5000 *6750 *6750 *6750	3300 *6750 *6750 *6750	2950 3450 5600 6650	3300 *4900 *4900 *4900	2200 2350 3650 4250	2000 2350 3650 4250	2500 *3300 *3300 *3300	1700 *3300 *3300 *3300	1550 1800 2750 3200	7.28
0.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				4900 *6500 *6500 *6500	3200 *6500 *6500 *6500	2850 3350 5450 6500	3250 *4750 *4750 *4750	2150 2250 3600 4200	1950 2250 3600 4200	2600 *3600 *3600 *3600	1750 *3600 *3600 *3600	1600 1850 2850 3350	7.06
-1.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down	*6700 *6700 *6700 *6700	5950 *6700 *6700 *6700	5200 *6700 *6700 *6700	4900 *5550 *5550 *5550	3150 *5550 *5550 *5550	2850 3350 5450 6500	3250 *4000 *4000 *4000	2150 2250 3600 4200	1950 2250 3600 4200	2950 *4000 *4000 *4000	1950 *3300 *3300 *3300	1800 2050 3250 *3300	6.48

Medium Stick 2300 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 Dozer and stabilizer down 2 sets of stabilizers down				*4600 3950 *4600 *4600	3950 *4600 *4600 *4600	3600 4150 *4600 *4600	*3500 *3500 *3500 *3500	2450 2550 *3500 *3500	2250 2550 *3500 *3500				*2900 2350 *2900 *2900	2350 *2900 *2900 *2900	2150 2450 *2900 *2900	6.13
4.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				*5200 3800 *5200 *5200	3800 *5200 *5200 *5200	3450 4000 *5200 *5200	3550 *4350 *4350 *4350	2450 2550 *4350 *4350	2200 2550 3900 *4350				*2750 1900 *2750 *2750	1900 *2750 *2750 *2750	1700 2000 *2750 *2750	6.98
3.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				5300 *6050 *6050 *6050	3550 *6050 *6050 *6050	3200 3750 5900 *6050	3400 *4650 *4650 *4650	2350 2450 *4650 *4650	2100 2450 3800 4400				2450 *2700 *2700 *2700	1650 *2700 *2700 *2700	1500 1750 *2700 *2700	7.42
1.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				5000 *6700 *6700 *6700	3300 *6700 *6700 *6700	3000 3500 5600 6650	3300 *4900 *4900 *4900	2200 2350 *4900 *4900	2000 2350 3650 4300	2400 *3050 *3050 *3050	1600 *3050 *3050 *3050	1450 1700 2650 *3050	2400 *2850 *2850 *2850	1600 *2850 *2850 *2850	1450 1700 2650 *2850	7.52
0.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				4900 *6600 *6600 *6600	3150 *6600 *6600 *6600	2850 3350 5450 6500	3200 *4800 *4800 *4800	2150 2250 *4800 *4800	1950 2250 3600 4200				*3150 2450 *3150 *3150	1650 *3150 *3150 *3150	1500 1750 2700 *3150	7.32
-1.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down	*6800 *6800 *6800 *6800	5850 *6800 *6800 *6800	5150 *6800 *6800 *6800	4850 *5800 *5800 *5800	3150 *5800 *5800 *5800	2850 3350 5450 *5800	3200 *4200 *4200 *4200	2100 2250 *4200 *4200	1950 2250 3550 4150				2750 *3300 *3300 *3300	1850 *3300 *3300 *3300	1650 1950 3050 *3300	6.76
-3.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				*4150 3200 *4150 *4150	3200 *4150 *4150 *4150	2900 3400 *4150 *4150										

*Limited by hydraulic rather than tipping load.

Lift capacity ratings are based on ISO 10567:2007, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. The load point is the center line of the bucket pivot mounting pin on the stick. The oscillating axle must be locked. Lifting capacities are based on the machine standing on a firm uniform supporting surface and the Variable Boom Cylinder adjusted to the maximum length. For lifting capacity including bucket and/or quick coupler, the respective weight has to be subtracted from above values. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

M313D Wheel Excavator Specifications

Lift Capacities – Variable Adjustable Boom (5020 mm)

All values are in kg, without bucket and without QC, with counterweight (3300 kg), heavy lift on.

Long Stick 2600 mm	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m			Load point height			m
		Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	
6.0 m	Rear dozer up				*4000	*4000	3650	3600	2500	2250				*2500	2150	1950	6.49
	Rear dozer down					*4000	*4000		*3650	2600					*2500	2250	
	Dozer and stabilizer down					*4000	*4000		*3650	*3650					*2500	*2500	
	2 sets of stabilizers down				*4000	*4000	*4000	*3650	*3650	*3650				*2500	*2500	*2500	
4.5 m	Rear dozer up				*4500	3850	3500	3550	2450	2250				*2350	1750	1600	7.29
	Rear dozer down					*4500	4000		*4200	2550					*2350	1850	
	Dozer and stabilizer down					*4500	*4500		*4200	3900					*2350	*2350	
	2 sets of stabilizers down				*4500	*4500	*4500	*4200	*4200	*4200				*2350	*2350	*2350	
3.0 m	Rear dozer up				5300	3550	3250	3400	2350	2100	2450	1650	1500	2300	1550	1400	7.71
	Rear dozer down					*5850	3750		*4500	2450		*3350	1750		*2350	1650	
	Dozer and stabilizer down					*5850	*5850		*4500	3800		*3350	2700		*2350	*2350	
	2 sets of stabilizers down				*5850	*5850	*5850	*4500	*4500	4400	*3350	*3350	3100	*2350	*2350	*2350	
1.5 m	Rear dozer up				5050	3300	3000	3300	2200	2000	2400	1600	1450	2250	1500	1350	7.81
	Rear dozer down					*6550	3500		*4800	2350		3750	1700		*2450	1600	
	Dozer and stabilizer down					*6550	5600		*4800	3650		3750	2650		*2450	*2450	
	2 sets of stabilizers down				*6550	*6550	*6550	*4800	*4800	4250	*3800	*3800	3050	*2450	*2450	*2450	
0.0 m	Rear dozer up				4850	3150	2850	3200	2100	1900	2350	1550	1400	2300	1500	1400	7.61
	Rear dozer down					*6650	3350		*4800	2250		*3550	1650		*2700	1600	
	Dozer and stabilizer down					*6650	5450		*4800	3550		*3550	2600		*2700	2550	
	2 sets of stabilizers down				*6650	*6650	6500	*4800	*4800	4150	*3550	*3550	3050	*2700	*2700	*2700	
-1.5 m	Rear dozer up	*6400	5800	5050	4800	3100	2800	3150	2100	1900				2550	1700	1550	7.08
	Rear dozer down		*6400	6100		*6000	3300		*4350	2200					*3150	1800	
	Dozer and stabilizer down		*6400	*6400		*6000	5400		*4350	3500					*3150	2800	
	2 sets of stabilizers down	*6400	*6400	*6400	*6000	*6000	*6000	*4350	*4350	4150				*3150	*3150	*3150	
-3.0 m	Rear dozer up				*4550	3150	2850	*2900	2150	1950							
	Rear dozer down					*4550	3350		*2900	2250							
	Dozer and stabilizer down					*4550	*4550		*2900	*2900							
	2 sets of stabilizers down				*4550	*4550	*4550	*2900	*2900	*2900							

Industrial Stick 2900 mm

Industrial Stick 2900 mm	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m			Load point height			m
		Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	
6.0 m	Rear dozer up				*4150	*4150	3850	3800	2700	2500				*3150	2300	2150	6.60
	Rear dozer down					*4150	*4150		*4000	2800					*3150	2400	
	Dozer and stabilizer down					*4150	*4150		*4000	*4000					*3150	*3150	
	2 sets of stabilizers down				*4150	*4150	*4150	*4000	*4000	*4000				*3150	*3150	*3150	
4.5 m	Rear dozer up				*4600	4050	3700	3750	2650	2450				2700	1900	1750	7.39
	Rear dozer down					*4600	4250		*4250	2750					*3100	2000	
	Dozer and stabilizer down					*4600	*4600		*4250	4100					*3100	3000	
	2 sets of stabilizers down				*4600	*4600	*4600	*4250	*4250	*4250				*3100	*3100	*3100	
3.0 m	Rear dozer up				5550	3800	3500	3650	2550	2350	2600	1850	1700	2450	1700	1600	7.80
	Rear dozer down					*5850	4000		*4650	2650		*3800	1950		*3200	1800	
	Dozer and stabilizer down					*5850	*5850		*4650	4000		*3800	2900		*3200	2700	
	2 sets of stabilizers down				*5850	*5850	*5850	*4650	*4650	4600	*3800	*3800	3300	*3200	*3200	3100	
1.5 m	Rear dozer up				5300	3550	3250	3500	2400	2200	2550	1800	1650	2400	1650	1500	7.90
	Rear dozer down					*6700	3750		*5000	2550		3900	1850		*3400	1750	
	Dozer and stabilizer down					*6700	5850		*5000	3850		3950	2800		*3400	2600	
	2 sets of stabilizers down				*6700	*6700	*6700	*5000	*5000	4500	*4000	*4000	3250	*3400	*3400	3000	
0.0 m	Rear dozer up				5100	3400	3050	3400	2300	2150	2550	1750	1600	2450	1700	1550	7.71
	Rear dozer down					*6950	3550		*5100	2450		3850	1850		3700	1750	
	Dozer and stabilizer down					*6950	5700		*5100	3750		*3900	2800		*3700	2700	
	2 sets of stabilizers down				*6950	*6950	6750	*5100	*5100	4400	*3900	*3900	3200	*3700	*3700	3100	
-1.5 m	Rear dozer up	*7400	6050	5300	5050	3350	3000	3350	2300	2100				2650	1800	1650	7.18
	Rear dozer down		*7400	6350		*6450	3500		*4750	2400					*3600	1900	
	Dozer and stabilizer down		*7400	*7400		*6450	5600		*4750	3700					*3600	2950	
	2 sets of stabilizers down	*7400	*7400	*7400	*6450	*6450	*6450	*4750	*4750	4350				*3600	*3600	3400	
-3.0 m	Rear dozer up	*6950	6150	5400	5050	3350	3050	3400	2300	2100				3200	2200	2000	6.25
	Rear dozer down		*6950	6450		*5150	3550		*3600	2450					*3300	2300	
	Dozer and stabilizer down		*6950	*6950		*5150	*5150		*3600	*3600					*3300	*3300	
	2 sets of stabilizers down	*6950	*6950	*6950	*5150	*5150	*5150	*3600	*3600	*3600				*3300	*3300	*3300	

*Limited by hydraulic rather than tipping load.

Lift capacity ratings are based on ISO 10567:2007, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. The load point is the center line of the bucket pivot mounting pin on the stick. The oscillating axle must be locked. Lifting capacities are based on the machine standing on a firm uniform supporting surface and the Variable Boom Cylinder adjusted to the maximum length. For lifting capacity including bucket and/or quick coupler, the respective weight has to be subtracted from above values. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.














Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Lift Capacities – One-Piece Boom (4815 mm)














All values are in kg, without bucket and without QC, with counterweight (3300 kg), heavy lift on.

 Load at maximum reach (sticknose/bucket pin)
  Load over front
  Load over rear
  Load over side
  Load point height

Short Stick 2000 mm

Undercarriage configuration	3.0 m			4.5 m			6.0 m						m	
														
4.5 m				*5100	3800	3450	3500	2400	2250	*3000	2150	2000	6.44	
Rear dozer down					*5100	3950		*4450	2550		*3000	2250		
Dozer and stabilizer down					*5100	*5100		*4450	3850		*3000	*3000		
2 sets of stabilizers down				*5100	*5100	*5100	*4450	*4450	*4450	*3000	*3000	*3000		
3.0 m				5300	3600	3250	3450	2350	2150	2750	1900	1750	6.91	
Rear dozer down					*6000	3750		*4700	2450		*2950	2000		
Dozer and stabilizer down					*6000	5900		*4700	3800		*2950	*2950		
2 sets of stabilizers down				*6000	*6000	*6000	*4700	*4700	4400	*2950	*2950	*2950		
1.5 m				5050	3350	3050	3350	2250	2050	2650	1800	1650	7.03	
Rear dozer down					*6750	3550		*4950	2400		*3100	1900		
Dozer and stabilizer down					*6750	5650		*4950	3700		*3100	2900		
2 sets of stabilizers down				*6750	*6750	6700	*4950	*4950	4300	*3100	*3100	*3100		
0.0 m				4950	3250	2950	3250	2200	2000	2750	1850	1700	6.80	
Rear dozer down					*6800	3450		*4950	2300		*3450	1950		
Dozer and stabilizer down					*6800	5500		*4950	3600		*3450	3050		
2 sets of stabilizers down				*6800	*6800	6550	*4950	*4950	4200	*3450	*3450	*3450		
-1.5 m		*8300	6000	5300	4900	3250	2950	3250	2200	2000	3150	2100	1950	6.20
Rear dozer down			*8300	6350		*6100	3400		*4250	2300		*3900	2250	
Dozer and stabilizer down			*8300	*8300		*6100	5500		*4250	3600		*3900	3450	
2 sets of stabilizers down		*8300	*8300	*8300	*6100	*6100	*6100	*4250	*4250	4200	*3900	*3900	*3900	
-3.0 m		*5800	*5800	5400	*4250	3300	3000				*3300	2850	2600	5.07
Rear dozer down			*5800	*5800		*4250	3500					*3300	3000	
Dozer and stabilizer down			*5800	*5800		*4250	*4250					*3300	*3300	
2 sets of stabilizers down		*5800	*5800	*5800	*4250	*4250	*4250				*3300	*3300	*3300	

Medium Stick 2300 mm

Undercarriage configuration	3.0 m			4.5 m			6.0 m						m	
														
6.0 m											*2700	2600	2350	5.81
Rear dozer down												*2700	*2700	
Dozer and stabilizer down												*2700	*2700	
2 sets of stabilizers down											*2700	*2700	*2700	
4.5 m					*4850	3850	3500	3550	2450	2250	*2500	2050	1850	6.70
Rear dozer down						*4850	4000		*4250	2550		*2500	2150	
Dozer and stabilizer down						*4850	*4850		*4250	3900		*2500	*2500	
2 sets of stabilizers down					*4850	*4850	*4850	*4250	*4250	*4250	*2500	*2500	*2500	
3.0 m					5350	3600	3300	3450	2350	2150	*2500	1800	1650	7.16
Rear dozer down						*5800	3800		*4550	2500		*2500	1900	
Dozer and stabilizer down						*5800	*5800		*4550	3800		*2500	*2500	
2 sets of stabilizers down					*5800	*5800	*5800	*4550	*4550	4400	*2500	*2500	*2500	
1.5 m					5100	3400	3050	3350	2250	2050	2500	1700	1550	7.27
Rear dozer down						*6650	3550		*4900	2400		*2650	1800	
Dozer and stabilizer down						*6650	5650		*4900	3700		*2650	*2650	
2 sets of stabilizers down					*6650	*6650	*6650	*4900	*4900	4300	*2650	*2650	*2650	
0.0 m		*4500	*4500	*4500	4950	3250	2950	3250	2200	2000	2600	1750	1600	7.05
Rear dozer down			*4500	*4500		*6850	3450		*4950	2300		*3000	1850	
Dozer and stabilizer down			*4500	*4500		*6850	5500		*4950	3600		*3000	2850	
2 sets of stabilizers down		*4500	*4500	*4500	*6850	*6850	6550	*4950	*4950	4200	*3000	*3000	*3000	
-1.5 m		*8650	5950	5250	4900	3200	2900	3250	2150	2000	2950	1950	1800	6.47
Rear dozer down			*8650	6300		*6300	3400		*4450	2300		*3650	2100	
Dozer and stabilizer down			*8650	*8650		*6300	5450		*4450	3600		*3650	3250	
2 sets of stabilizers down		*8650	*8650	*8650	*6300	*6300	*6300	*4450	*4450	4200	*3650	*3650	*3650	
-3.0 m		*6550	6100	5350	*4750	3300	2950				*3450	2550	2350	5.40
Rear dozer down			*6550	6400		*4750	3450					*3450	2700	
Dozer and stabilizer down			*6550	*6550		*4750	*4750					*3450	*3450	
2 sets of stabilizers down		*6550	*6550	*6550	*4750	*4750	*4750				*3450	*3450	*3450	

*Limited by hydraulic rather than tipping load.

Lift capacity ratings are based on ISO 10567:2007, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. The load point is the center line of the bucket pivot mounting pin on the stick. The oscillating axle must be locked. Lifting capacities are based on the machine standing on a firm uniform supporting surface. For lifting capacity including bucket and/or quick coupler, the respective weight has to be subtracted from above values. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

M313D Wheel Excavator Specifications

Lift Capacities – One-Piece Boom (4815 mm)

All values are in kg, without bucket and without QC, with counterweight (3300 kg), heavy lift on.

Long Stick 2600 mm	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m			Load point height							
		Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	m			
Long Stick 2600 mm	7.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down																	*2750	*2750	*2750	4.69
	6.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down								*2900	2450	2250							*2300	*2300	2150	6.17
	4.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down								3550	2450	2250							*2150	1900	1750	7.01
	3.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				5350	3650	3300	3450	2350	2150								*2200	1700	1550	7.45
	1.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				5100	3400	3050	3350	2250	2050	2400	1600	1500					*2300	1600	1450	7.55
	0.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down	*4800	*4800	*4800	4900	3250	2900	3250	2150	2000								2450	1650	1500	7.35
	-1.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down	*8050	5900	5200	4850	3200	2850	3200	2150	1950								2700	1800	1650	6.79
	-3.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down	*7200	6000	5250	4900	3200	2900											3400	2300	2100	5.79

Industrial Stick 2900 mm	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m			Load point height							
		Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	m			
Industrial Stick 2900 mm	6.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down								*3500	2700	2500							*3050	2550	2350	6.23
	4.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down								3750	2650	2450							2900	2050	1900	7.06
	3.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				*5500	3850	3550	3650	2550	2350								2650	1850	1700	7.50
	1.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down				5350	3650	3300	3550	2450	2250	2600	1800	1650					2550	1800	1650	7.60
	0.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down	*6350	6200	5450	5150	3450	3150	3450	2350	2200								2600	1800	1650	7.40
	-1.5 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down	*9100	6150	5450	5100	3400	3100	3400	2350	2150								2850	1950	1800	6.85
	-3.0 m Rear dozer up Rear dozer down Dozer and stabilizer down 2 sets of stabilizers down	*8100	6200	5500	5100	3400	3100											3550	2400	2200	5.86



*Limited by hydraulic rather than tipping load.

Lift capacity ratings are based on ISO 10567:2007, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. The load point is the center line of the bucket pivot mounting pin on the stick. The oscillating axle must be locked. Lifting capacities are based on the machine standing on a firm uniform supporting surface and the Variable Boom Cylinder adjusted to the maximum length. For lifting capacity including bucket and/or quick coupler, the respective weight has to be subtracted from above values. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.













Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Lift Capacities – Offset Boom (5020 mm)
















All values are in kg, without bucket and without QC, with counterweight (3300 kg), heavy lift on.

 Load at maximum reach (sticknose/bucket pin)
  Load over front
  Load over rear
  Load over side
  Load point height

Short Stick 2000 mm

Load point height	Undercarriage configuration	3.0 m			4.5 m			6.0 m			Load point height			m
														
6.0 m	Rear dozer up				*4850	3850	3500				*3400	2400	2200	5.81
	Rear dozer down					*4850	4050					*3400	2550	
	Dozer and stabilizer down					*4850	*4850					*3400	*3400	
	2 sets of stabilizers down				*4850	*4850	*4850				*3400	*3400	*3400	
4.5 m	Rear dozer up				*5250	3650	3300	3400	2300	2050	2800	1850	1650	6.70
	Rear dozer down					*5250	3850		*4300	2400		*3100	1950	
	Dozer and stabilizer down					*5250	*5250		*4300	3750		*3100	3100	
	2 sets of stabilizers down				*5250	*5250	*5250	*4300	*4300	*4300	*3100	*3100	*3100	
3.0 m	Rear dozer up				5100	3300	3000	3250	2150	1950	2450	1600	1450	7.16
	Rear dozer down					*6000	3500		*4550	2300		*3050	1700	
	Dozer and stabilizer down					*6000	5700		*4550	3650		*3050	2750	
	2 sets of stabilizers down				*6000	*6000	*6000	*4550	*4550	4250	*3050	*3050	*3050	
1.5 m	Rear dozer up				4750	3000	2700	3100	2000	1800	2350	1500	1350	7.27
	Rear dozer down					*6400	3200		*4650	2150		*3200	1600	
	Dozer and stabilizer down					*6400	5350		*4650	3500		*3200	2600	
	2 sets of stabilizers down				*6400	*6400	6400	*4650	*4650	4100	*3200	*3200	3100	
0.0 m	Rear dozer up				4600	2850	2550	3050	1950	1750	2450	1550	1400	7.05
	Rear dozer down					*6150	3050		*4500	2050		*3450	1650	
	Dozer and stabilizer down					*6150	5150		*4500	3400		*3450	2700	
	2 sets of stabilizers down				*6150	*6150	*6150	*4500	*4500	4000	*3450	*3450	3200	
-1.5 m	Rear dozer up	*6400	5450	4700	4600	2850	2550	3050	1950	1750	2750	1750	1600	6.47
	Rear dozer down		*6400	5750		*5200	3050		*3700	2050		*3050	1900	
	Dozer and stabilizer down		*6400	*6400		*5200	5150		*3700	3400		*3050	*3050	
	2 sets of stabilizers down	*6400	*6400	*6400	*5200	*5200	*5200	*3700	*3700	*3700	*3050	*3050	*3050	

Medium Stick 2300 mm

Load point height	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m			Load point height			m
																	
6.0 m	Rear dozer up				*4600	3950	3550	*3350	2350	2150				*2800	2250	2050	6.12
	Rear dozer down					*4600	4100		*3350	2450					*2800	2350	
	Dozer and stabilizer down					*4600	*4600		*3350	*3350					*2800	*2800	
	2 sets of stabilizers down				*4600	*4600	*4600	*3350	*3350	*3350				*2800	*2800	*2800	
4.5 m	Rear dozer up				*5050	3750	3400	3450	2300	2100				*2650	1750	1600	6.97
	Rear dozer down					*5050	3900		*4200	2450					*2650	1850	
	Dozer and stabilizer down					*5050	*5050		*4200	3800					*2650	*2650	
	2 sets of stabilizers down				*5050	*5050	*5050	*4200	*4200	*4200				*2650	*2650	*2650	
3.0 m	Rear dozer up				5150	3400	3050	3300	2200	1950				2350	1500	1350	7.41
	Rear dozer down					*5800	3550		*4450	2300					*2600	1600	
	Dozer and stabilizer down					*5800	5750		*4450	3650					*2600	2600	
	2 sets of stabilizers down				*5800	*5800	*5800	*4450	*4450	4300				*2600	*2600	*2600	
1.5 m	Rear dozer up				4800	3050	2700	3150	2050	1850	2250	1450	1300	2250	1450	1300	7.52
	Rear dozer down					*6350	3200		*4650	2150		*2900	1550		*2750	1550	
	Dozer and stabilizer down					*6350	5350		*4650	3500		*2900	2500		*2750	2500	
	2 sets of stabilizers down				*6350	*6350	*6350	*4650	*4650	4100	*2900	*2900	*2900	*2750	*2750	*2750	
0.0 m	Rear dozer up				4600	2850	2550	3050	1950	1750				2300	1450	1300	7.31
	Rear dozer down					*6250	3050		*4550	2050					*3050	1550	
	Dozer and stabilizer down					*6250	5150		*4550	3400					*3050	2550	
	2 sets of stabilizers down				*6250	*6250	6200	*4550	*4550	4000				*3050	*3050	3000	
-1.5 m	Rear dozer up	*7000	5350	4650	4550	2850	2500	3000	1900	1700				2550	1650	1500	6.75
	Rear dozer down		*7000	5650		*5450	3000		*3950	2050					*3100	1750	
	Dozer and stabilizer down		*7000	*7000		*5450	5150		*3950	3350					*3100	2850	
	2 sets of stabilizers down	*7000	*7000	*7000	*5450	*5450	*5450	*3950	*3950	*3950				*3100	*3100	*3100	
-3.0 m	Rear dozer up				*3800	2950	2600										
	Rear dozer down					*3800	3100										
	Dozer and stabilizer down					*3800	*3800										
	2 sets of stabilizers down				*3800	*3800	*3800										

*Limited by hydraulic rather than tipping load.

Lift capacity ratings are based on ISO 10567:2007, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. The load point is the center line of the bucket pivot mounting pin on the stick. The oscillating axle must be locked. Lifting capacities are based on the machine standing on a firm uniform supporting surface and the Variable Boom Cylinder adjusted to the maximum length. For lifting capacity including bucket and/or quick coupler, the respective weight has to be subtracted from above values. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

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M313D Wheel Excavator Standard Equipment

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

Electrical

- Alternator, 75 A
- Lights
 - Boom working light
 - Cab interior light
 - Roading lights two front
 - Roading lights two rear
 - Rotating beacon on cab
 - Working lights, cab mounted (front and rear)
- Main shut-off switch
- Maintenance free batteries
- Signal/warning horn

Engine

- Automatic engine speed control
- Automatic starting aid
- Cat C4.4 with ACERT Technology
 - EU Stage IIIA compliant
- Fuel/water separator with level indicator

Hydraulics

- Heavy lift mode
- Load-sensing Plus hydraulic system
- Manual work modes (economy, power)
- Separate swing pump
- Stick regeneration circuit

Operator Station

- ROPS cab structure compliant with 2006/42/EC and tested according to ISO 12117-2:2008
- Adjustable armrests
- Air conditioner, heater and defroster with automatic climate control
- Ash tray with cigarette lighter (24 volt)
- Beverage cup/can holder
- Bolt-on FOGS capability
- Bottle holder
- Bottom mounted parallel wiping system that covers the upper and lower windshield glass
- Camera mounted on counterweight displays through cab monitor
- Coat hook
- Floor mat, washable, with storage compartment
- Fully adjustable suspension seat
- 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
 - 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
- Positive filtered ventilation
- 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

- Heavy-duty axles, advanced travel motor, adjustable braking force
- Oscillating front axle with remote greasing
- Tires, 10.00-20 16 PR, dual
- Tool box in undercarriage
- Two-piece drive shaft

Other Equipment

- Automatic swing brake
- Counterweight, 2900 kg
- Mirrors, frame and cab
- Product Link ready

M313D Wheel Excavator Optional Equipment

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

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:
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
Cat BIO HYDO Advanced HEEST™ biodegradable hydraulic oil
Lowering control devices for boom and stick
SmartBoom™

Front Linkage

Booms
One-piece boom, 4815 mm
VA boom (two piece), 5020 mm
Offset boom, 5020 mm
Bucket linkage with diverter valve
Sticks
2000, 2300, 2600 mm
2900 mm industrial with drop nose

Electrical

Back-up alarm with three selectable modes
Heavy-duty maintenance free batteries
Refueling pump

Operator Station

Adjustable hydraulic sensitivity
Falling objects guard
Joystick steering
CD/MP3 Radio (12V) at rear location including speakers and 12V converter
Seat, adjustable high-back
– mechanical suspension
– air suspension (vertical)
– deluxe with headrest, air suspension
Travel speed lock
Vandalism guards
Visor for rain protection
Windshield
One-piece high impact resistant
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

Other Equipment

Auto-lube system (implements and swing gear)
Cat Machine Security System
Cat Product Link
Counterweight, 3300 kg
Mirrors heated, frame and cab
Ride Control
Tires (see pg.15)
Tool box in upperframe, lockable

M313D Wheel Excavator

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