

# M318D MH M322D MH

Wheel  
Material Handlers



	M318D MH	M322D MH
<b>Cat® C6.6 engine with ACERT™ Technology</b>		
Net power (ISO 9249)	124 kW/169 hp	123 kW/167 hp
Operating weight	21 100 to 23 400 kg	23 500 to 25 700 kg
Maximum reach (stick pin)	11 000 mm	12 480 mm
Maximum height (stick pin)	12 040 mm	13 300 mm

# M318D MH and M322D MH Wheel Material Handlers

*The D series Material Handlers incorporate innovations for improved performance and versatility.*

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## 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**

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## Hydraulics

- ✓ The state of the art load-sensing hydraulic system provides you with faster cycle times and increased productivity on any material handling job. **pg. 5**

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## 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**

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## 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**

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## SmartBoom™

- ✓ More productive. Faster cycle times for material handling. More fuel efficiency. **pg. 5**

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



- ✓ *New Feature*

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### Elevated Cab

- ✓ The new D-Series Material Handler elevated cab options have undergone many design changes to focus on operator safety and comfort while maintaining the best solution to maximize visibility to all sides of the machine. **pg. 8**

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### 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**

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### 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. 10**

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### Versatility

Caterpillar offers a wide variety of factory-installed attachments that enhance performance and job site management. **pg. 11**

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### Serviceability

For increased safety, all daily maintenance points are accessible from ground level. A centralized greasing system allows lubrication of critical points. **pg. 12**

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### Complete Customer Service

Your Cat® dealer offers a wide range of services that can be set up under a customer support agreement when you purchase your equipment. Your dealer will help you choose a plan that can cover everything from machine and attachment selection to replacement. **pg. 12**



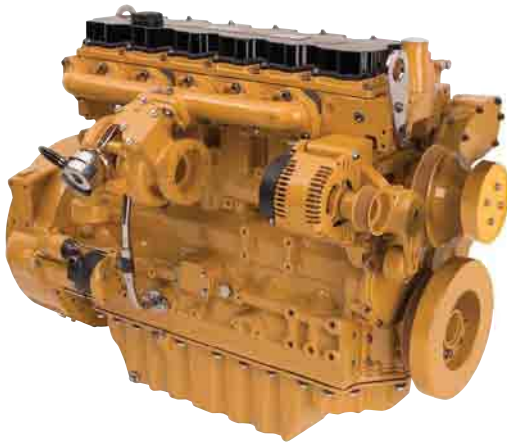


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## Engine

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

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**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 M318D MH and M322D MH deliver a maximum gross power of 130 kW (M318D) and 129 kW (M322D).

**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 Material Handlers 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 2 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.

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## Environmentally Responsible Design

*The D-Series Material Handlers help build a better world and preserve the fragile environment.*

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**Fuel Efficiency.** The Material Handlers 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

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

**Improved Implement Speed.** Due to new spools and increased horsepower, the D-Series Material Handlers are able to offer even faster stick and swing speeds, leading to more productivity.

**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 material handler by 7 percent. Heavy loads can be easily moved in the full working range of the machine, maintaining excellent stability and speed.

**Adjustable Hydraulic Sensitivity.** Adjustable Hydraulic Sensitivity allows the operator to adjust the aggressiveness of the machine according to the application. For precision work, one of three different levels of aggressiveness can be pre-selected.

**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.
- The Medium Pressure Function Valve provides proportional flow that is ideal for rotating tools.
- A new feature for the D-Series Material Handlers 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.

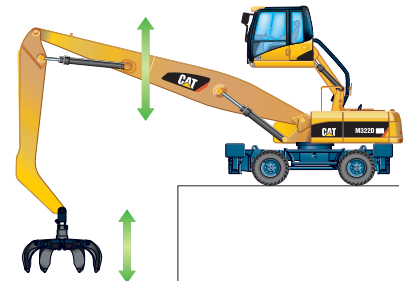


## Stick Regeneration Circuit.

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

**Hydraulic Snubbers.** Caterpillar integrates its cylinder snubber technology into all Wheel Material Handler boom, stick and hydraulic cab riser 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.** It allows the operator to fully concentrate on production. The unique Cat SmartBoom significantly enhances operator comfort and job efficiency. Loading is more productive and more 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 Material Handler Operator Station. The pressurized cab 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 the 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 features include a cigar lighter, ashtray, drink/bottle 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. Interior noise levels are substantially reduced due to the cab shell being attached to the frame with rubber mounts that limit vibration and sound transmitted from the frame.



**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 windshields meet operator preference and application conditions.

- The fixed front windshield comes with high-impact resistant, laminated glass.
- The 70/30 split front windshield opens with the upper portion able to be stored out of the way above the operator. The lower front windshield features a rounded design to maximize downward visibility and improves wiper coverage. This windshield option also features the one-touch action release system.
- The roof of the cab provides an additional viewing pane with a skylight for added upward visibility. Direct sunlight is diverted with the retractable sunshield.





**Monitor.** The new compact color monitor displays information in the local language that is easy to read and understand.

Functions include the following:

- Five programmable “quick access” buttons for one-touch selection of favorite functions.
- Filter and oil change warnings displayed when the number of hours reaches the maintenance interval.
- Tool select functionality, allowing the operator to select up to ten pre-defined hydraulic work tools.
- Travel motor retarder selection to choose between three levels of aggressiveness in braking once the travel pedal is released.
- Rear camera viewing capabilities from the optional camera 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.

## Elevated Cab

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



**Bottom Position.** The bottom position is used for shipping and travel, allowing for safer transporting.



**Top Position.** The top position raises the cab by 2400 mm. This provides optimal viewing for all material handling jobs.

**Hydraulic Cab Riser.** The Hydraulic Cab Riser (HCR) design provides the most suitable solution when high flexibility in cab height is needed. Main features of the hydraulic riser include the following:

- **Stability** – The lift arms on the HCR are a wide and deep box-sectioned design with improved top and bottom links for greater cab stability. Further stability is achieved with the help of the retractable hydraulic cylinders used to raise the cab.
- **Speed** – Two heavy-duty hydraulic cylinders provide quicker and more controlled up and down travel than seen in the C-Series.
- **Comfort** – The parallelogram design of the linkage allows the cab to remain level at all ranges of motion. HCR movement is also slowed as the cab reaches the end of the riser stroke, eliminating the effects of a sudden start/stop.
- **Safety** – In the event of a hydraulic malfunction, the cab can be lowered using either a lever inside the cab or one on the frame at ground level.



**Fixed Cab Riser.** The fixed cab riser offers a very stable and comfortable method to raise the cab by 1200 mm to offer better viewing around the machine. Well positioned steps lead up to the cab from the ground level. Fixed cab riser option is only available for the M322D MH.



## Undercarriage and Drive Line

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

**Undercarriage Options.** Effective hydraulic line routing, transmission protection and heavy-duty axles make Caterpillar's undercarriages perfect for material handler applications. The D-Series M318D MH and M322D MH come with the option of three different undercarriages in order to provide the greatest stability while performing your material handler jobs.

- **Material Handling** – A new, standard design for the D-Series, the Material Handling undercarriage with four welded outriggers is ideal for the extra stability needed, especially when using a Hydraulic Cab Riser.
- **Material Handling with Dozer Blade** – An optional expansion to the Material Handling Undercarriage described above with an additional Dozer Blade mounted ahead of the front stabilizers to be used to push material commonly encountered in waste and mill yard applications.
- **Pin-On/Bolt-On** – An optional undercarriage, the pin-on/bolt-on option allows for different kinds of stabilizers to be attached to the front and rear of the machine.

**Heavy-Duty Axles.** 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.



**Drive Line Concept.** The M318D MH and M322D MH driveline design effectively utilize the 19% increase in engine torque and 10% increase in power to provide a comfortable ride with improved smoothness, hydraulic retarding, and gear shifting commonly used during travel between material handling jobs.

**Ground Clearance.** A compact undercarriage design provides the M318D MH and M322D MH with optimum ground clearance during travel.

## Booms and Sticks

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



**MH Booms and Sticks.** The MH booms have been redesigned to handle increased lifting capacities. The new stick range offers leading side plates to maximize the protection of hydraulic lines. The lines are fitted in between the two side plates offering protection from damage. Multiple boom and stick options allow you to pick the best match for your job.

**MH Booms.** A specially designed MH boom is available to meet the functionality requirements demanded in material handling applications. The boom arrangements include high pressure hydraulic lines for opening and closing functionality and medium pressure lines for implement rotation.



**M318D MH Sticks.** Two options of MH sticks are available for the M318D MH, all equipped with high and medium pressure auxiliary lines. The 4900 mm Drop Nose Stick offers the reaching and lifting capabilities required for typical MH applications, while the 4200 mm Straight Stick is the best solution for when additional work tool functionality is needed.

**M322D MH Sticks.** Three options of MH sticks are available for the M322D MH, all equipped with high and medium pressure auxiliary lines. The 4900 mm Drop Nose Stick offers the reaching and lifting capabilities required for typical MH applications, while the 5900 mm Long Drop Nose Stick is ideal when maximum reach is necessary. The 4800 mm Straight Stick is the best solution when additional work tool functionality is needed.

**Special Applications.** The M318D MH and M322D MH can be further outfitted with additional boom and stick options (see Optional Equipment), offering the ability to combine the material handler's hydraulic cab riser with traditional excavator functionality. This combination has been proven in transfer station, mining, and mill yard applications.



## Versatility

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



**Tool Control.** Ten hydraulic pump flow and pressure settings can be preset within the monitor, eliminating the need to adjust the hydraulics each time a tool is changed. Selecting the proper setting from the monitor menu instantly provides the operator with the correct amount of flow and pressure for the tool.

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

**Multi-Grapple.** The Multi-Grapple with unlimited left and right rotation is the ideal tool for stripping, sorting, handling and loading. For the best control in forward and backward grapple mobility, pair the Multi-Grapple with the MH Straight Stick and linkage.

**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.



**Control Settings.** Two selectable control settings are available to choose from in order to get the best power output from the engine and hydraulics and maintain optimum fuel efficiency.

- Economy Mode – for precise material handling and loading with the added benefit of reduced fuel consumption.
- Power Mode – for applications requiring fast volume loading and material casting.

**Automatic Travel Mode.** Automatically engaged when the travel pedal is depressed this mode provides maximum speed, drawbar pull and best in class fuel efficiency.

**Product Link.** Product Link can assist with Fleet Management to keep track of hours, location, security and product health.

**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.





## 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 Material Handlers 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 Material Handlers 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, remote greasing blocks for the swing bearing and front-end-attachments have been provided to reduce maintenance time. 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.** Two toolboxes in the undercarriage provide enough storage room. Additionally a waterproof storage box can be 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.

## Engine

	M318D	M322D
Cat C6.6 with ACERT Technology		
Ratings	1800 rpm	2000 rpm
Gross power	130 kW/177 hp	129 kW/175 hp
Net power		
ISO 9249	124 kW/169 hp	123 kW/167 hp
EEC 80/1269	124 kW/169 hp	123 kW/167 hp
Bore	105 mm	105 mm
Stroke	127 mm	127 mm
Displacement	6.6 liters	6.6 liters
Cylinders	6	6
Maximum torque at 1400 rpm	805 Nm	750 Nm

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

## Transmission

	M318D	M322D
1st gear, forward/reverse	8 km/h	7 km/h
2nd gear, forward/reverse	25 km/h	25 km/h
Creeper speed (first gear)	3 km/h	3 km/h
Creeper speed (second gear)	13 km/h	11 km/h
Drawbar pull	103 kN	112 kN
Maximum Gradeability	47%	52%

## Undercarriage

	M318D	M322D
Ground clearance	380 mm	380 mm
Maximum steering angle	35°	35°
Oscillation axle angle	± 6°	± 6°
Minimum turning radius		
Standard axle		
outside of tire	6800 mm	6800 mm
end of VA boom	7100 mm	7800 mm
end of one-piece boom	8500 mm	9300 mm

## Cab

FOGS meets ISO 10262.

## Hydraulic System

	M318D	M322D
Tank capacity	170 l	220 l
System	270 l	335 l
Maximum pressure		
Implement circuit		
normal	350 bar	350 bar
heavy lift	375 bar	375 bar
Travel circuit	350 bar	350 bar
Auxiliary circuit		
high pressure	350 bar	350 bar
medium pressure	200 bar	200 bar
Swing mechanism	310 bar	340 bar
Maximum flow		
Implement/travel circuit	290 l/min	350 l/min
Auxiliary circuit		
high pressure	250 l/min	250 l/min
medium pressure	50 l/min	50 l/min
Swing mechanism	112 l/min	112 l/min

## Swing Mechanism

	M318D	M322D
Swing speed	10 rpm	9 rpm
Swing torque	46 kNm	56 kNm

## Service Refill Capacities

	M318D	M322D
	Liter	Liter
Fuel tank capacity	310	385
Cooling	32	33
Engine crankcase	15	15
Rear axle housing (differential)	14	14
Front steering axle (differential)	11	11
Final drive	2.5	2.5
Powershift transmission	2.5	2.5

## Sound Levels

**Operator Sound.** The operator sound level measured according to the procedures specified in ISO 6394:1998 is 72 dB(A).

**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).



## Weights

	M318D	M322D		M318D	M322D
	kg	kg		kg	kg
MH boom			Sticks		
rear dozer only	20 300	22 550	MH straight	950	1100
rear dozer, front outriggers	21 500	23 750	MH drop nose short	840	910
front and rear outriggers	21 850	24 100	MH drop nose long	–	1080
with MH undercarriage	21 450	23 700	digging short	550	650
with MH undercarriage and push blade	22 125	24 375	digging medium	580	700
VA boom			digging long	600	780
rear dozer only	20 650	22 900	industrial	520	–
rear dozer, front outriggers	21 850	24 100	MH push blade (with MH undercarriage)	675	675
front and rear outriggers	22 200	24 450	Dozer blade	770	920
with MH undercarriage	21 800	24 050	Outriggers	1030	1260
with MH undercarriage and push blade	22 475	24 725	Counterweights		
One-piece boom			Standard	4000	4400
rear dozer only	20 050	22 300	Optional	–	5400
rear dozer, front outriggers	21 250	23 500			
front and rear outriggers	21 600	23 850			
with MH undercarriage	21 200	23 450			
with MH undercarriage and push blade	21 875	24 125			

## Tire Options

10.00-20 (dual solid rubber)  
11.00-20 (dual pneumatic)

## Work Tools Matching Guide

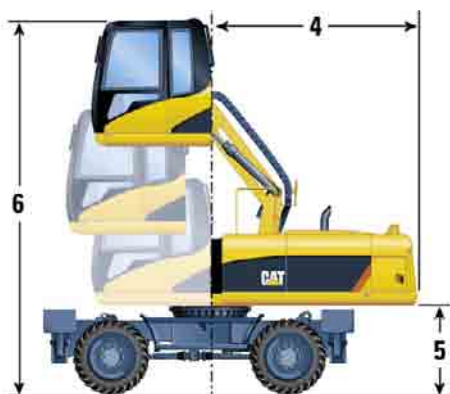
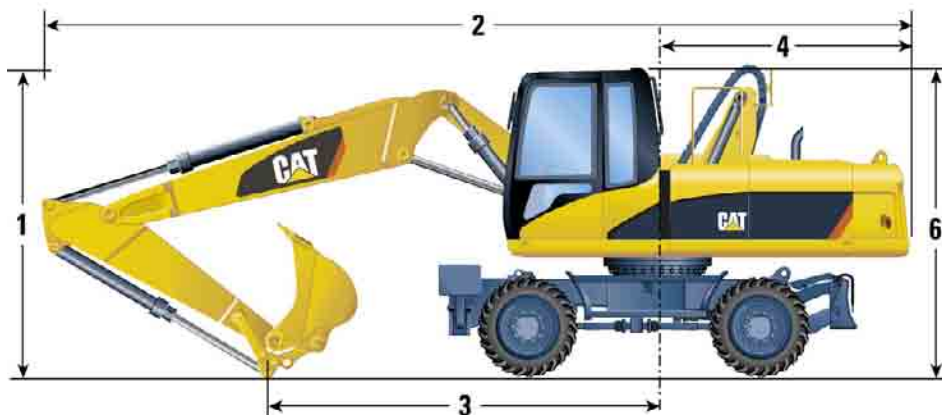
Without quick coupler	Boom		M318D MH – 6200 mm				M322D MH – 6800 mm					
	Undercarriage		MH		Standard		MH			Standard		
	Stick length (mm)		4900	4200	4900	4200	4900	5900	4800	4900	5900	4800
360° rotatable Shears*	S325, S340											
Multi-Grapples	G315B	D, R	×		×		×	×		×	×	
Orange Peel Grapples (5 tines)	GSH15B	400, 500, 600										
		800										
	GSH20B	600										
		800				×					×	
		1000			×	×				×	×	×
Orange Peel Grapples (4 tines)	GSH15B	400, 500, 600										
		800										
	GSH20B	600										
		800										
		1000	×		×							×
With quick coupler												
Quick Couplers	CW-30, 30S		×		×		×	×	×	×	×	×
	CW-40, 40S		×	×	×	×	×	×		×	×	
Multi-Grapples	G315B	D, R	×		×		×			×	×	

\* boom mounted

	360° Working Range		Maximum Material density 3000 kg/m <sup>3</sup>
	Quick coupler match		Maximum Material density 1800 kg/m <sup>3</sup>
×	Not Compatible		Maximum Material density 1200 kg/m <sup>3</sup>

## Dimensions with Standard Undercarriage

All dimensions are approximate – measured in mm

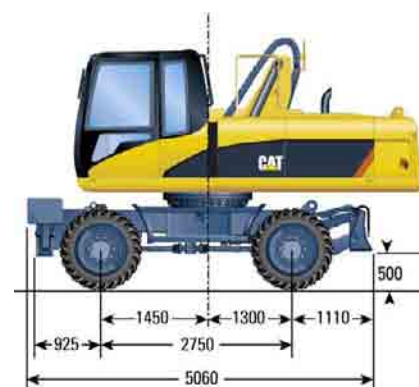


	M318D/M322D VA boom		M318D/M322D One-piece boom	
	mm	mm	mm	mm
<b>1</b> Shipping height				
2200 mm stick	3320	3350	3320	3350
2500 mm stick	3320	3350	3320	3350
2800 mm stick	3320	–	3320	–
2900 mm stick	–	3350	–	3350
<b>2</b> Shipping length				
2200 mm stick	8870	9550	8970	9750
2500 mm stick	8850	9550	8960	9720
2800 mm stick	8820	–	8950	–
2900 mm stick	–	9540	–	9720
<b>3</b> Support Point				
2200 mm stick	3960	4380	3830	4270
2500 mm stick	3640	3830	3500	3810
2800 mm stick	3510	–	3330	–
2900 mm stick	–	3530	–	3440
<b>4</b> Tail swing radius	2500	2820	2500	2820
<b>5</b> Counterweight clearance	1310	1310	1310	1310
<b>6</b> Cab height				
with 1200 mm Fixed Cab Raiser	–	4440	–	4440
with hydraulic cab raiser (lowered)	3240	3240	3240	3240
with hydraulic cab raiser (raised)	5640	5640	5640	5640
<b>7</b> Stabilizer width on ground	3960	3960	3960	3960

### Undercarriage with 2 sets of outriggers

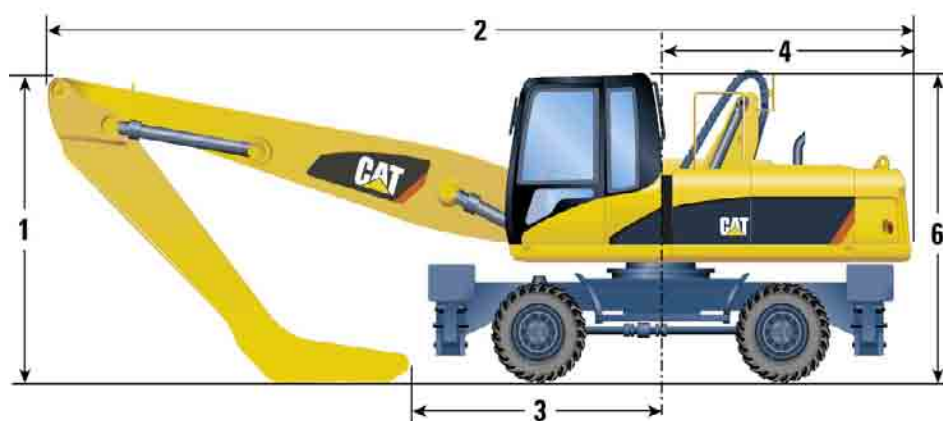


### Undercarriage with 1 set of outriggers and dozer

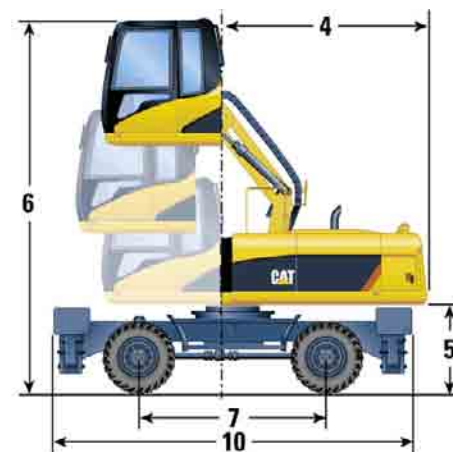


## Dimensions with MH Undercarriage

All dimensions are approximate – measured in mm

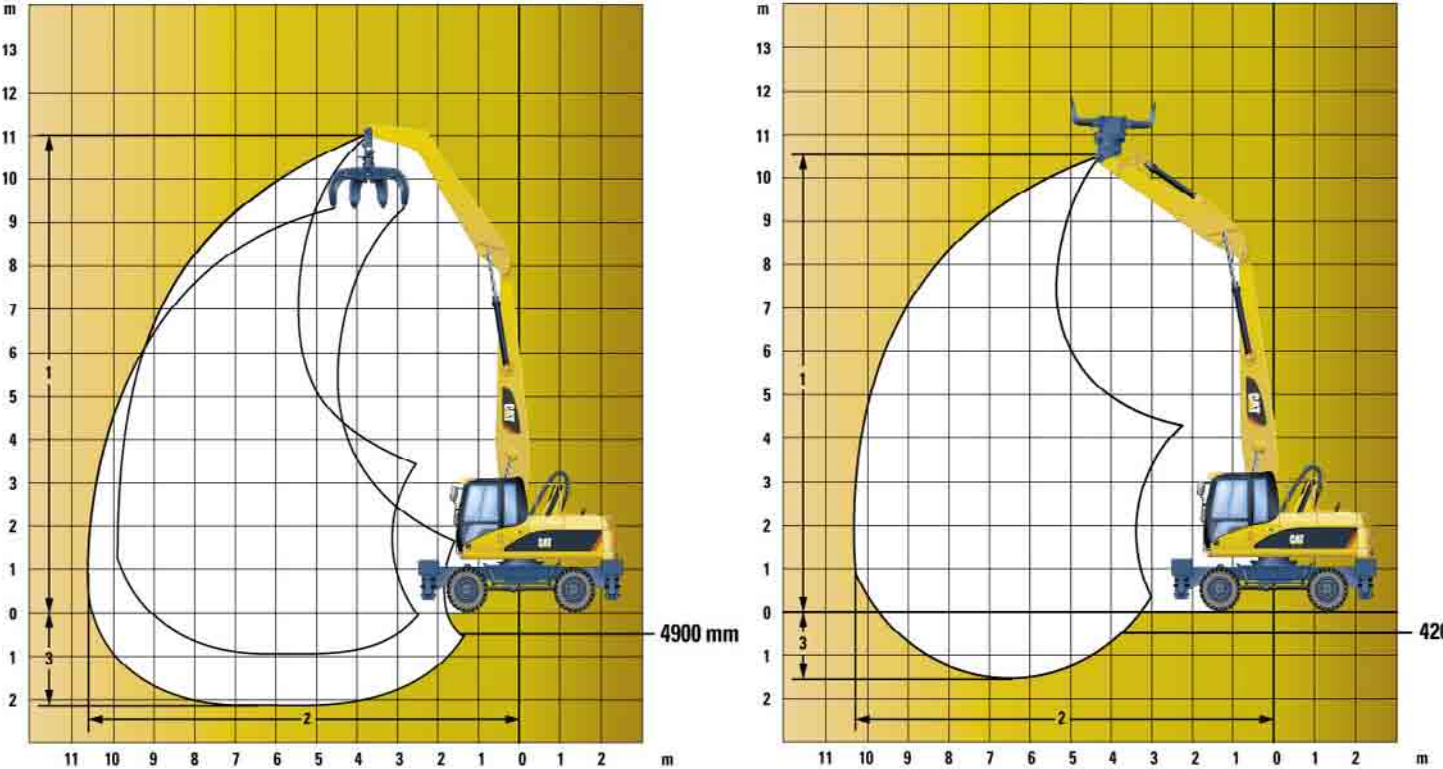


	M318D	M322D
	mm	mm
<b>1 Shipping height</b>		
4200 mm straight stick	3400	–
4800 mm straight stick	–	3410
4900 mm drop nose stick	3400	3410
5900 mm drop nose stick (removed)	–	3350
5900 mm drop nose stick (installed)	–	3350
<b>2 Shipping length</b>		
4200 mm straight stick	9060	–
4800 mm straight stick	–	9870
4900 mm drop nose stick	9060	9870
5900 mm drop nose stick (removed)	–	9930
5900 mm drop nose stick (installed)	–	15 130
<b>3 Support Point</b>		
4200 mm straight stick	3160	–
4800 mm straight stick	–	3250
4900 mm drop nose stick	2720	–
5900 mm drop nose stick (installed)	–	15 010
<b>4 Tail swing radius</b>	2500	2820
<b>5 Counterweight clearance</b>	1310	1310
<b>6 Cab Height</b>		
with 1200 mm Fixed Cab Raiser	–	4440
with Hydraulic Cab Riser (lowered)	3240	3240
with Hydraulic Cab Riser (raised)	5640	5640
<b>7 Wheel base</b>	2750	2750
<b>8 Undercarriage width</b>	2990	2990
<b>9 Stabilizer width on ground</b>	4360	4360
<b>10 Undercarriage length</b>	5250	5250





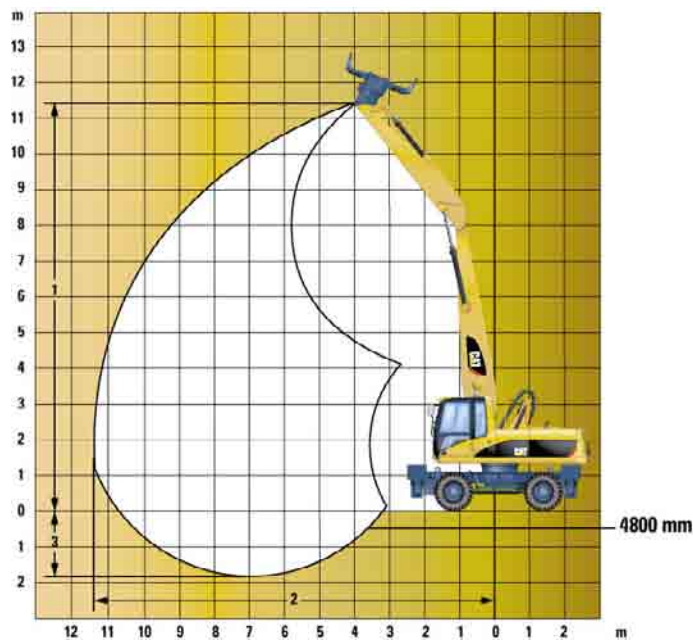
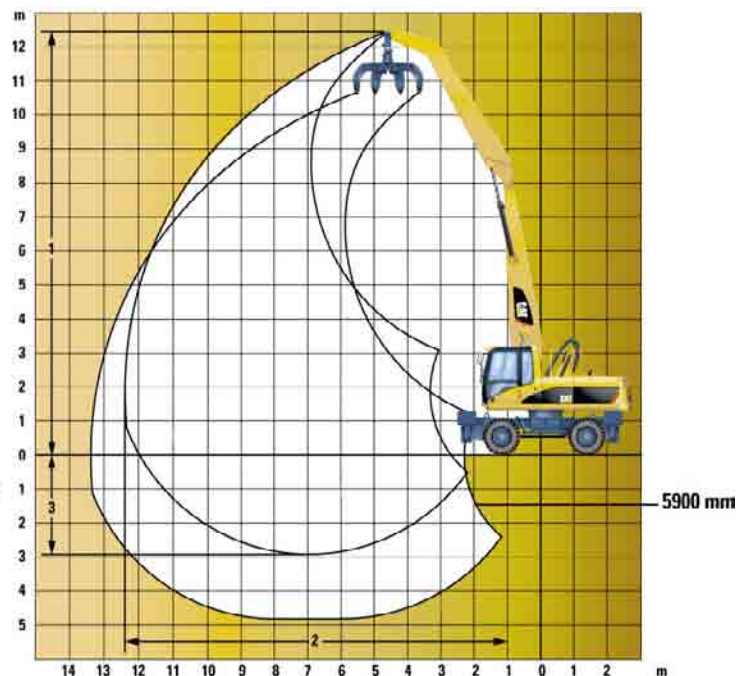
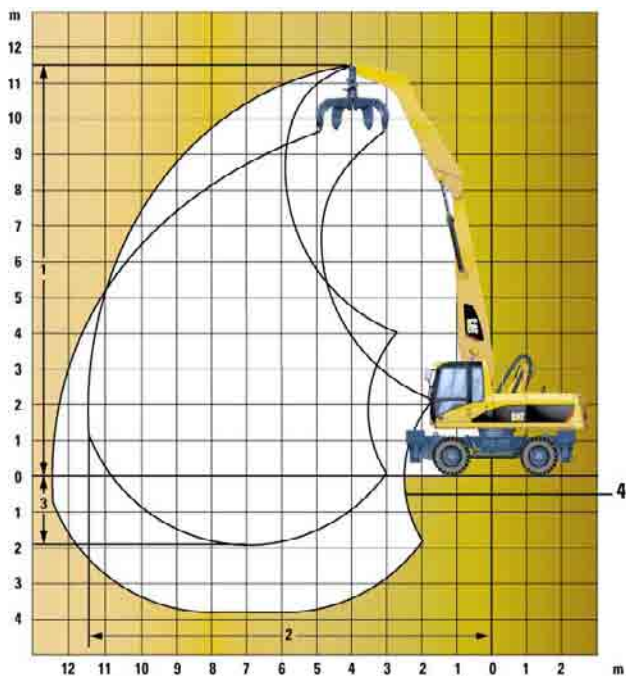
# Working Ranges – M318D MH



## Undercarriage Material Handling

		MH drop nose 4900 mm	MH straight stick 4200 mm
Boom Length	mm	6200	6200
Maximum Height	mm	12 040	11 490
Minimum Dump Height	mm	3690	4330
1 Maximum Reach	mm	11 000	10 350
2 Maximum Reach at Ground Level	mm	10 620	10 180
3 Maximum Depth	mm	2190	1480

## Working Ranges – M322D MH



### Undercarriage Material Handling

		MH drop nose 4900 mm	MH drop nose 5900 mm	MH straight stick 4800 mm
Boom Length	mm	6800	6800	6800
Maximum Height	mm	12 500	13 300	12 430
Minimum Dump Height	mm	4030	3090	4120
<b>1</b> Maximum Reach	mm	11 530	12 480	11 430
<b>2</b> Maximum Reach at Ground Level	mm	10 850	12 050	11 280
<b>3</b> Maximum Depth	mm	1920	2920	1820

# Lift Capacities – M318D MH

All weights are in kg.

## Undercarriage




















Standard

## Boom

6200 mm

## Stick

4200 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m			9.0 m						m
																				
10.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*8400 *8400	*8400 6000 6800 8250 *8400														
9.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down							*8350 5700		7500 3900										
7.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down							*8600 5750		7500 3900 4000	*7350		5200 2700				*5200 3100		4050 2050	8.64
6.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*10900 9000	*10900 6000 6800 8200 *10900		*8800 5650		7400 3800 3950	7350		5150 2650 2900	5400		3800 1900 2650	4950 2650		3500 1750	9.46
4.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down	*14800 *14800		*14800 10800	*11850 8550	11650 5600 6400 7800 9800		*9200 5400		7150 3600 3850	7250		5000 2550 2850	5350		3750 1850 2400	4550 2400		3200 1550	10.10
3.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*12850 7950	10950 5050 5850 7200 9150		*9550 5150		6850 3350 3700	7050		4805 2400 2800	5300		3700 1800 2250	4300 2250		3000 1450	10.28
1.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*12900 7350	10300 4550 5300 6600 8550		*9500 4850		6550 3100 3550	6900		4700 2250 2700	5200		3600 1750 2200	4250 2200		2950 1400	10.34
0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*9650 7050	*9650 4250 5000 6300 8200		*8800 4650		6350 2900 3400	6750		4600 2150 2500	5150		3550 1700 1950				

## Undercarriage














Material Handling

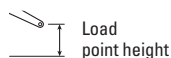
## Boom

6200 mm

## Stick

4200 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m				m
														
10.5 m	All stabilizers up All stabilizers down					*8400 *8400								
9.0 m	All stabilizers up All stabilizers down							5650 *8350	4250 *8350					
7.5 m	All stabilizers up All stabilizers down							5650 *8600	4300 *8600	3950 *7350	2950 6250			8.64
6.0 m	All stabilizers up All stabilizers down					8850 *10 900	6550 *10 900	5550 *8800	4200 *8800	3900 *7400	2950 6200	2900 5700	2150 4600	9.46
4.5 m	All stabilizers up All stabilizers down					14 800 *14 800	11 750 *14 800	8400 *11 850	6150 *11 850	5350 *9200	4000 8750	3800 *7500	2800 6100	10.00
3.0 m	All stabilizers up All stabilizers down							7800 *12 850	5600 *12 850	5100 *9550	3700 8400	2700 7400	2800 5900	10.28
1.5 m	All stabilizers up All stabilizers down							7250 *12 900	5100 *12 900	4800 *9500	3450 8100	3500 7250	2550 5500	10.43
0 m	All stabilizers up All stabilizers down							6900 *9650	4800 *9650	4600 *8800	3300 7850	3400 *6800	2450 5650	



Load point height



Load over front



Load over rear



Load over side



Load at maximum reach


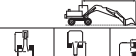



















\* Limited by hydraulic rather than tipping load. Lift capacity ratings are based on ISO 10567, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Oscillating axle must be locked.



## Undercarriage Standard

## Boom 6200 mm
















## Stick 4900 mm

	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m			9.0 m			10.5 m						
																							m
10.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down							*6500 5800		*6500 4000													
								*6500 4500		*6500 5350													
								*6500		*6500													
9.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down							*7850 5950		7700 4100	*6300 4150		5350 2850										
								*7850 4600		*7850 5450		*6300 5950		3200 3800									
								*7850		6650	*6300		4650										
7.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down							*8200 5950		7700 4100	*7150 4150		5350 2850	*5500 3050		3950 2050				*4450 2800		3650 1900	9.42
								*8200 4600		*8200 5450		6750 5950		3200 3800	4950 4400	2350 2800				*4450 4050	2150 2550		
								*8200		6650	*7150		4650	*5500		3450				*4450	3200		
6.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down							*8450 5800		7600 4000	*7250 4100		5300 2800	5550 3050		3950 2050				*4300 2450		3250 1650	10.18
								*8450 4500		*8450 5350		6700 5900		3150 3750	4950 4350	2300 2800				4000 3550	1850 2250		
								*8450		6550	*7250		4600	5500		3450				*4300	2800		
4.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*11200 8900		*11200 5900	*8950 5600		7350 3800	7400 3950		5150 2700	5500 3000		3900 2000	4300 2350			3005 1500	4200 2250	2950 1450	10.68
					*11200 6700		*11200 8100	*8950 5150		4300 5150		6550 5750		3050 3650	4850 4300	2250 2700				3800 3350	1750 2100	1700 2050	
					*11200		10100	*8950		6350	7350		4500	5450		3400	4250			2650	4150	2600	
3.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down	*18650 16900		*18650 10000	*12450 8300		11350 5400	*9450 5350		7050 3550	7200 3800		5000 2550	5400 2900		3800 1900	4250 2300			3000 1500	4000 2150	2850 1400	10.94
			*18650 11800	*18650 15050	*12450		6150 7500		9250 8050	4000 4850		6350 5600		2900 3500	4750 4200	2200 2650				3750 3300	1700 2100	1600 1950	
		*18650		*18650	*12450		9500	*9450		6050	7150		4350	5350		3300	4200			2600	3950	2450	
1.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*13100 7650		10650 4850	*9650 5050		6750 3250	7050 3650		4850 2400	5300 2800		3700 1850	4200 2250			2950 1450	3950 2100	2800 1350	11.00
					*13100 12700		5600 6900		8900 7700	3750 4550		6200 5400		2750 3300	4650 4100	2100 2550				3700 3300	1650 2050	1550 1900	
					*13100		8850	*9650		5750	6950		4150	5250		3200	4150			2550	3900	2400	
0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down	*3500 *3500		*3500 *3500	*12200 7250		10150 4450	*9300 4800		6500 3050	6850 3550		4700 2250	5200 2750		3650 1750	*4100 2200			2950 1400			
			*3500 *3500	*3500 *3500	*12200 12150		5200 6500		8600 7400	3500 4300		6050 5250		2600 3200	4600 4050	2050 2500				3650 3250	1650 2000		
		*3500		*3500	*12200		8400	*9300		5500	6800		4050	5150		3150	*4100			2550			
-1.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*9600 7050		*9600 4250	*8100 4650		6350 2900	*6300 3450		4600 2200	*4750 2700		3600 1700							
					*9600 *9600		5000 6300		*8100 7250	3400 4200		5950 5150		2500 3100	4550 4000	2000 2450							
					*9600		8200	*8100		5350	*6300		3950	*4750		3100							

## Undercarriage Material Handling

## Boom 6200 mm

## Stick 4900 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				m
																
10.5 m	All stabilizers up All stabilizers down					5750 *6500	4350 *6500									
9.0 m	All stabilizers up All stabilizers down					5850 *7850	4450 *7850	4100 *6300	3100 *6300							
7.5 m	All stabilizers up All stabilizers down					5850 *8200	4450 *8200	4100 *7150	3150 6400	3050 *5500	2300 4750			2800 *4450	210 4400	9.42
6.0 m	All stabilizers up All stabilizers down					5750 *8450	4350 *8450	4050 *7250	3100 6350	3050 5850	2300 4750			2450 *4300	1850 3900	10.18
4.5 m	All stabilizers up All stabilizers down			8750 *11 200	6450 *11 200	5550 *8950	4150 *8950	3950 *7450	2950 6250	3000 5800	2250 4700	2350 4550	1700 3700	2250 *4350	1650 3600	10.68
3.0 m	All stabilizers up All stabilizers down	16 200 *18 650	10 950 *18 650	8150 *12 450	5900 *12 450	5250 *9450	3900 8600	3800 7550	2850 6050	2900 5700	2150 4600	2300 4500	1700 3650	2150 4200	1550 3450	10.94
1.5 m	All stabilizers up All stabilizers down			7550 *13 100	5350 *13 100	5000 *9650	3650 8300	3650 7350	2700 5900	2800 5600	2050 4450	2250 4550	1650 3600	2100 4150	1550 3350	11.00
0 m	All stabilizers up All stabilizers down	*3500 *3500	*3500 *3500	7100 *12 200	4950 *12 200	4750 *9300	3400 8000	3500 7200	2550 5750	2750 5500	2000 4450	2200 *4100	1600 3550			
-1.5 m	All stabilizers up All stabilizers down			6900 *9600	4800 *9600	4600 *8100	3300 7850	3400 *6300	2450 5650	2700 *4750	1950 4350					

# Lift Capacities – M322D MH

All weights are in kg.

## Undercarriage





















Standard


## Boom


6800 mm


## Stick


4800 mm


	Undercarriage configuration	4.5 m			6.0 m			7.5 m			9.0 m			10.5 m						
																				m
10.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*9150 6950 *9150 *9150 *9150	8950 4900 5450 6400 7750														
9.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*9300 7050 *9300 *9300 *9300	9050 5000 5550 6500 7850	*8050 4900 7900 7000 *8050		6250 3400 3800 4500 5450											
7.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*9350 7000 *9350 *9350 *9350	9000 4950 5500 6450 7800	*8000 4850 7850 7000 *8000		6200 3400 3800 4500 5450	6400 3600 5750 5100 6350		4600 2450 2800 3300 4000					5450 3000 4850 4300 5400	3900 2050 2300 2750 3400	9.91	
6.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*9700 6800 *9700 *9700 *9700	8800 4750 5350 6300 7650	*8150 4750 7750 6850 *8150		6100 3350 3700 4400 5350	6350 3550 5700 5050 6300		4550 2450 2750 3250 4000	4900 2700 4400 3900 4900		350 1800 2050 2450 3050	4800 2650 4300 3800 4750	3450 1750 2000 2400 3000	10.64		
4.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down	*13150 10350 *13150 *13150 *13150		*13150 7000 7900 9450 11700	*10250 6500 *10250 9700 *10250	8500 4500 5050 6000 7300	*8400 4600 7550 6700 *8400		5950 3150 3550 4200 5150	6250 3450 5600 5000 6200		4450 2350 2650 3150 3900	4900 2700 4350 3850 4850		3500 1800 2050 2450 3050	4450 2450 3950 3500 4400	3150 1600 1800 2200 2750	11.12		
3.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down	*14450 9500 *14450 *14450 *14450		12900 6250 7150 8650 10800	*10750 6150 10650 9250 *10750	8050 4150 4700 5600 6900	8200 4400 7300 6450 8150		5700 2950 3350 4000 4950	6150 3350 5500 4850 6100	4350 2250 2550 3050 3750	4850 2650 4300 3800 4800	3450 2650 4300 3800 2950		1750 2000 2400 2400 4200	4250 2300 3800 3350 4200	3000 1500 1700 2100 2600	11.38		
1.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down	*14850 8700 *14850 *14850 *14850		12000 5550 6400 7850 10000	*10900 5750 10150 8800 *10900	7650 3800 4300 5200 6500	7950 4200 7100 6200 7900		5500 2800 3150 3800 4750	6000 3200 5350 4700 5950	4200 2150 2450 2900 3650	4750 2550 4700 3750 4700		3350 1650 1900 2300 2900	4200 2250 3700 3300 4150	2950 1450 1700 2050 2550	11.43			
0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down	*9900 8200 *9900 *9900 *9900		*9900 5100 5950 7400 9500	*10350 5450 9800 8500 *10350	7350 3500 4050 4950 6250	7750 4000 6900 6000 7700		5300 2600 3000 3650 4550	5900 3100 5250 4600 5850	4100 2050 2350 2850 3550	4700 2500 4150 3700 4650		3300 1600 1850 2250 2850						
-1.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*8850 5300 *8850 8300 *8850	7150 3400 3900 4800 6050	*7000 3900 6750 5900 *7000		5200 2500 2900 3550 4450											

 Load point height

 Load over front

 Load over rear

 Load over side



















 Load at maximum reach

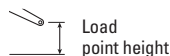
\* Limited by hydraulic rather than tipping load. Lift capacity ratings are based on ISO 10567, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Oscillating axle must be locked.

# Undercarriage Standard

# Boom 6800 mm

# Stick 4900 mm

	Undercarriage configuration	4.5 m			6.0 m			7.5 m			9.0 m			10.5 m						m
																				
10.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*9200 7050		9050 5000	*6350 4850		6200 3400										
						*9200	6500 7850	*6350		3800 4450 5400										
9.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*9300 7150		9150 5050	*8100 5000		6350 3550										
						*9300	5650 6600 7950	7950 7100		3950 4600 5550										
7.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*9400 7100		9100 5050	*8100 4950		6300 3550	6500 3700		4700 2600			5450 3050		3900 2100	10.02	
						*9400	5600 6550 7900	7950 7100		3900 4600 5550		5850 5200	2900 3400 4150				4850 4350	2350 2800 3450		
6.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*9750 6950		8900 4900	*8250 4900		6250 3450	6500 3650		4650 2550	5050 2850		3650 1950	4850 2700	3500 1850	10.74	
						*9750	5450 6400 7750	7850 7000		3850 4500 5450		5800 5200	2850 3350 4100		4500 4000	2200 2600 3200	4350 3850	2100 2500 3050		
4.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down	*13200 10500		*13200 8050	*10300 6650		8600 4600	*8500 4750		6050 3300	6400 3550		4600 2450	5000 2800		3600 1900	4500 2500	3250 1700	11.22	
			*13200	9600		*10300	5150 6100	7700 6800		3700 4350		5700 5100	2750 3300		4450 4000	2150 2550	4000 3600	1900 2300		
		*13200	11850		*10300		7450	*8500		5300	6350		4000	4950		3150	4450	2850		
3.0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down	*14550 9700		13100 6450	*10900 6300		8200 4300	8350 4550		5850 3100	6250 3450		4450 2350	4950 2750		3550 1850	4300 2400	3100 1600	11.47	
			*14550	7300		10800	4850	7450		3500		5600	2650		4400	2100	3850	1800		
			*14550	8850		9400	5750	6600		4150		4950	3150		3950	2500	3400	2150		
		*14550	11000		*10900		7050	8250		5100	6200		3900	4900		3100	4300	2700		
1.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down	*15100 8950		12250 5750	*11100 5900		7800 3950	8100 4350		5650 2900	6150 3350		4350 2250	4850 2700		3500 1800	4250 2350	3050 1550	11.52	
			*15100	6600		10350	4500	7200		3300		5450	2550		4350	2050	3800	1750		
			14750	8100		9000	5400	6350		3950		4850	3050		3850	2450	3350	2150		
		*15100	10250		*11100		6700	8050		4900	6100		3800	4850		3050	4200	2650		
0 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down	*10250 8450 *10250 *10250 *10250	*10250 5350 6200 7650 9750	*1060 5650 10000 8650 *10600	7500 3700 4200 5100 6400	7900 4150 7050 6150 7850	5450 2750 3150 3800 4700	6000 3250 5350 4750 5950	4250 2150 2450 2950 3700	4800 2650 4300 3800 4800	3450 1750 2000 2400 3000									
-1.5 m	2 sets stab down Rear dozer up Rear dozer down Rear stab down Dozer and stab down				*9200 5500		7350 3550	*7250 4050		5350 2650										
						*9200	4100 4950 6250	6900 6050		3050 3700 4600										



Load  
point height



Load  
over front



Load  
over rear



Load  
over side



Load at  
maximum reach

\* 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 – M322D MH

All weights are in kg.

**Undercarriage**  
Standard

**Boom**  
6800 mm

**Stick**  
5900 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m		  		m
		 	 	 	 	 	 	 	 	 	 	 	 	 	 	 		
12.0 m	2 sets stab down																	
	Rear dozer up					*7450												
	Rear dozer down					5050												
	Rear stab down					*7450												
10.5 m	Dozer and stab down					*7450												
	2 sets stab down																	
	Rear dozer up																	
	Rear dozer down																	
9.0 m	Dozer and stab down																	
	2 sets stab down																	
	Rear dozer up																	
	Rear dozer down																	
7.5 m	Dozer and stab down																	
	2 sets stab down																	
	Rear dozer up																	
	Rear dozer down																	
6.0 m	Dozer and stab down																	
	2 sets stab down																	
	Rear dozer up																	
	Rear dozer down																	
4.5 m	Dozer and stab down																	
	2 sets stab down																	
	Rear dozer up																	
	Rear dozer down																	
3.0 m	Dozer and stab down																	
	2 sets stab down																	
	Rear dozer up																	
	Rear dozer down																	
1.5 m	Dozer and stab down																	
	2 sets stab down																	
	Rear dozer up																	
	Rear dozer down																	
0 m	Dozer and stab down																	
	2 sets stab down																	
	Rear dozer up																	
	Rear dozer down																	
-1.5 m	Dozer and stab down																	
	2 sets stab down																	
	Rear dozer up																	
	Rear dozer down																	

## Undercarriage Material Handling

**Boom**  
6800 mm

**Stick**  
4800 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				m
10.5 m	All stabilizers up All stabilizers down					6850 *9150	5250 *9150									
9.0 m	All stabilizers up All stabilizers down					6950 *9300	5350 *9300	4800 *8050	3700 7400							
7.5 m	All stabilizers up All stabilizers down					6900 *9350	5300 *9350	4800 *8000	3700 7400	3550 6700	2700 5450			3000 *5500	2250 4650	9.91
6.0 m	All stabilizers up All stabilizers down					6700 *9700	5150 *9700	4700 *8150	3600 7300	3500 6650	2650 5400	2700 5150	2000 4200	2650 5050	1950 4100	10.64
4.5 m	All stabilizers up All stabilizers down			10 100 *13 150	7550 *13 150	6400 *10 250	4850 10 200	4550 *8400	3450 7100	3400 6550	2600 5350	2650 5100	2000 4150	2400 4650	180 3800	11.12
3.0 m	All stabilizers up All stabilizers down			9300 *14 450	6800 *14 450	6050 *10 750	4500 9750	4350 8550	3250 6850	3300 6400	2450 5200	2600 5050	1950 4100	2300 4450	1700 3650	11.38
1.5 m	All stabilizers up All stabilizers down			8500 *14 850	6100 *14 850	5650 *10 900	4150 9350	4150 8300	3050 6650	3200 6250	2350 5050	2550 5000	1850 4050	2250 *4350	1650 3600	11.43
0 m	All stabilizers up All stabilizers down			8000 *9900	5650 *9900	5350 *10 350	3900 9000	3950 *8050	2900 6450	3100 6150	2250 4950	2500 *4800	1800 4000			
-1.5 m	All stabilizers up All stabilizers down					5200 *8850	3750 8850	3850 *7000	2800 6350							

## Undercarriage Material Handling

**Boom**  
6800 mm



















**Stick**  
4900 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				m
10.5 m	All stabilizers up All stabilizers down					6950 *9200	5350 *9200	4800 *6350*	3700 6350							
9.0 m	All stabilizers up All stabilizers down					7000 *9300	5450 *9300	4900 *8100	3800 7500							
7.5 m	All stabilizers up All stabilizers down					7000 *9400	5400 *9400	4900 *8100	3800 7500	3650 6800	2800 5550			3050 *5450	2300 4650	10.02
6.0 m	All stabilizers up All stabilizers down					6800 *9750	5250 *9750	4850 *8250	3700 7400	3650 6750	2800 5550	2800 5250	2150 4300	2700 5050	2050 4150	10.74
4.5 m	All stabilizers up All stabilizers down			10 250 *13 200	7650 *13 200	6550 *10 300	5000 10 300	4650 *8500	3600 7200	3550 6650	2700 5450	2800 5200	2100 4300	2500 4700	1850 3850	11.22
3.0 m	All stabilizers up All stabilizers down			9450 *14 550	7000 *14 550	6200 *10 900	4650 9900	4500 8650	3400 7000	3450 6500	2600 5300	2750 5150	2050 4250	2400 4500	1750 3700	11.47
1.5 m	All stabilizers up All stabilizers down			8750 *15 100	6300 *15 100	5800 *11 100	4300 9500	4300 8450	3200 6800	3300 6400	2500 5200	2650 5100	2000 4150	2350 4450	1750 3650	11.52
0 m	All stabilizers up All stabilizers down			8250 *10 250	5900 *10 250	5550 *10 600	4050 9200	4100 8250	3050 6600	3250 6300	2400 5100	2600 *5050	1950 4100			
-1.5 m	All stabilizers up All stabilizers down					5400 *9200	3950 9000	4000 *7250	2950 6500							

## Undercarriage Material Handling

**Boom**  
6800 mm

**Stick**  
5900 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m				
																		m
12.0 m	All stabilizers up All stabilizers down					7000 *7450	5400 *7450											
10.5 m	All stabilizers up All stabilizers down							5000 *7250	3900 *7250									
9.0 m	All stabilizers up All stabilizers down							5100 *7500	3950 *7500	3750 *6750	2900 5700							
7.5 m	All stabilizers up All stabilizers down							5050 *7550	3950 *7550	3750 *6700	2900 5700	2850 5350	2200 4400			2600 *4400	1950 4000	11.11
6.0 m	All stabilizers up All stabilizers down							4950 *7750	3850 7550	3700 *6800	2850 5600	2850 5300	2150 4400			2300 *4350	1750 3600	11.76
4.5 m	All stabilizers up All stabilizers down					6800 *9550	5200 *9550	4800 *8050	3700 7350	3600 6700	2750 5500	2800 5250	2100 4300	2200 4250	1650 3500	2150 4150	1600 3400	12.20
3.0 m	All stabilizers up All stabilizers down			9950 *13450	7400 *13450	6400 *10300	4850 10150	4550 *8400	3450 7100	3450 6550	2600 5350	2700 5150	2050 4250	2200 4200	1600 3450	2050 4000	1500 3250	12.43
1.5 m	All stabilizers up All stabilizers down			9050 *14750	6600 *14750	5950 *10850	4450 9650	4300 8500	3250 6850	3300 6400	2500 5200	2650 5100	1950 4150	2150 4150	1550 3400	2000 3900	1450 3200	12.48
0 m	All stabilizers up All stabilizers down	*4050 *4050	*4050 *4050	8350 *14750	5950 *14750	5600 *10850	4100 9250	4100 8250	3050 6600	3200 6250	2350 5050	2550 5000	1900 4050	2100 *4100	1550 3350			
-1.5 m	All stabilizers up All stabilizers down			8000 *10450	5600 *10450	5350 *10050	3850 8950	3950 *7850	2900 6450	3100 6150	2250 4950	2500 *4800	1850 4000					

## 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

High ambient cooling 52° C

### 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

MH undercarriage with four welded outriggers

Bolt-on design for front attachments

Heavy-duty axles, advanced travel motor, adjustable braking force

Oscillating front axle with remote greasing

Tires, 10.00-20 16 PR, solid rubber

Tool box in undercarriage

Two-piece drive shaft

Two-speed transmission

### Other Equipment

Automatic swing brake

Counterweight

M318D 4000 kg

M322D 4400 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)  
Generator with valve and priority function  
Lowering control devices for boom and stick  
SmartBoom

### Booms and Sticks

Material Handling boom  
M318D (6200 mm)  
M322D (6800 mm)  
Straight MH stick  
M318D (4200 mm)  
M322D (4800 mm)  
Drop nose MH stick  
M318D (4900 mm)  
M322D (4900/5900 mm)  
One-piece boom  
M318D (5350 mm)  
M322D (5650 mm)  
VA boom  
M318D (5260 mm)  
M322D (5440 mm)  
Sticks  
M318D (2200/2500/2800 mm)  
M322D (2200/2500/2900 mm)

### 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 (M322D)  
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 (horizontal and vertical), two-step seat heater, automatic weight adjustments, ventilated seat cushions, pneumatically adjustable lumbar support  
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

MH undercarriage with four welded outriggers and front mounted blade  
Standard bolt-on/pin-on undercarriage  
Front bolt-on outriggers  
Rear pin-on dozer blade  
Rear pin-on outriggers  
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  
5400 kg (M322D)  
Custom paint  
Mirrors heated, frame and cab  
Ride Control  
Tires (see pg.14)  
Tool box in upperframe, lockable  
Waste Handling Package

# M318D MH and M322D MH Wheel Material Handlers

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

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

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