

M322D2 MH

Wheel Material Handler



Engine

Engine Model	Cat® C7.1 ACERT™	
Power – ISO 14396	128.8 kW	173 hp

Weights

Operating Weight with Work Tool	22 100-24 695 kg
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Working Ranges

Maximum Reach (stick pin)	11 005 mm
Maximum Height (stick pin)	12 030 mm

Drive

Maximum Travel Speed	25 km/h
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Introduction

We know that when it comes to material handling equipment, your success depends on high productivity and dependable performance.

The M322D2 MH offers a great compromise between the agility, versatility and performance of a wheeled excavator and the stability, efficiency and power needed to cope with harsh environments and applications of industrial, scrap, waste recycling and bulk handling operations, which call for safe, quality and reliable products, while generating a low operating cost to the owner.

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The new M322D2 MH is here to help you take on the wide variety of challenges you face every day, more easily and with more pleasure.

Commitment from the Ground Up.

Engine

Power, Reliability and Fuel Economy



The Power and Performance You Need

The Cat engine meets China Nonroad III, UN/ECE R96 Stage IIIA emission standards, and U.S. EPA Tier 3/EU Stage IIIA equivalent emission standards, delivers a maximum net power (Acc. ISO 14396) of 128.8 kW at a rated speed of 2,000 rpm.

Fuel Efficiency

Common Rail Fuel System and Fuel Pump

This combination provides outstandingly low fuel consumption during both working and traveling applications.

Demand Fan Cooling System

The electronically controlled hydraulic motor drives a variable speed on-demand fan, resulting in optimized fuel consumption.

One-Touch Low Idle Control

The Automatic Engine Speed Control reduces engine speed if no operation is performed, reducing fuel consumption and sound levels.

Eco and Work Modes

- The Eco Mode can significantly reduce your fuel consumption
- The Travel Mode optimizes driveline performance while preserving fuel
- The Power Mode is the best compromise between productivity and fuel efficiency

Hydraulic System

Fast, Precise, Flexible



Efficient Design, Smart and Fast

- **Dedicated Swing Pump** – A closed hydraulic circuit is dedicated to the swing only. Having two separate pumps, one for the swing and the other for the other functions allows faster and smoother combined movements.
- **Stick Circuit** – Increases efficiency and helps enhance controllability for higher productivity.
- **Boom, Stick and Cab Riser Hydraulic Snubbers** – help cushion shocks, reduce sound and increase cylinders life.

Control Like No Other

- **Heavy Lift Mode** – maximizes lifting performance by boosting the lifting capability by 7%.
- **Adjustable Hydraulic Sensitivity** – Allows you to adjust the aggressiveness of the machine according to the application.
- **Tool Control System** – enables you to select up to 10 preprogrammed hydraulic work tools from the monitor. Proportional two-way flow is ideal for rotating tools with joystick sliding switches for modulated tool control.



Structure – Elevated Cab and Frame

Strength, Flexibility, Mobility



High Visibility – 2400 mm Elevated Cab

The hydraulic cab riser is designed to be:

- Stable – Wide lift arms, deep box-sectioned design, strong top and bottom links and retractable hydraulic cylinders used to raise the cab for greater stability.
- Fast – Two heavy-duty hydraulic cylinders provide quick and controlled up and down travel.
- Comfortable – The parallelogram design of the linkage allows the cab to remain level at all ranges of motion.
- Cab movement is also slowed as it reaches the end of the riser stroke, with no sudden start/stop effect.
- Safe – The cab can be lowered using either a lever inside the cab or one on the frame at ground level in the event of a hydraulic malfunction.



Undercarriage Options

Effective hydraulic line routing, transmission protection and heavy-duty axles make the Cat undercarriages perfect for material handler applications.

Three different undercarriages are available to provide the stability you need for your applications:

- Material Handling – The Material Handling undercarriage with four welded outriggers is ideal when extra stability is needed.
- Material Handling with Dozer Blade – An optional expansion to the Material Handling Undercarriage includes an additional dozer blade mounted ahead of the front stabilizers to be used to push material commonly encountered in waste and millyard applications.
- Standard – The Standard undercarriage is equipped with dozer blade at front and stabilizers at rear.

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 minimizes the rocking effect associated with working free on wheels.



Premium Comfort

Keeps Operators Productive All Shift Long



Legacy from the Renowned Cat Wheel Material Handlers

Designed for the operator, our cabs are unique.

Ergonomic Layout

- Frequently used switches are centralized, kept to the minimum and ideally located close to the joysticks.
- Storage compartments are useful ... when well designed. The lunch box provides sufficient room to store a hard hat. Several other areas include drink, phone, or key holders.

Comfortable Seat Options

Our seats provide all the comfort needed for a long day of work. The comfort seat is equipped with a passive seat climate control and air suspension which can be adjusted to the operator's weight.

Automatic Climate Control

Easy adjustment of the cab temperature with filtered ventilation.

Details That Make the Difference

Have a look at the cab; you will see it is through details that we improve pleasure of operating.

Smart Controls to Reduce Fatigue

- Features like SmartBoom™ or joystick steering will be precious to increase your productivity.
- Two-way pedals for travel and auxiliary circuits provide increased floor space, reducing the need to change positions.

Plug, Charge and Play Your Devices

- The 12V 7A power supply socket is conveniently located for charging your laptop, or a tablet.
- A CD/MP3 radio with speakers and USB port is available.



Simplicity and Functionality

For Ease of Operation



A Cab Just for You – Fully Adjustable

- Seat armrests, in height and angle
- Steering column adjustment, fore/aft tiltable
- Hydraulic sensitivity of the machine to make it more or less aggressive
- Automatic air conditioning

Low Sound Levels, Less Fatigue

The rubber-mounted cab includes thick steel tubing. Associated with the comfortable air-suspended seat helps reduce vibrations and sound levels.

Visibility: See the difference!

- Halogen front roading lights and working lights
- LED rear roading lights
- All glass is affixed directly to the cab, eliminating the use of window frames.
- The 70/30 split front windshield stores the upper portion above the operator and is easy to release.
- A large skylight provides upward visibility and includes a retractable sunscreen. The parallel wiper system covers the entire front windshield.



Standard Rearview Camera

Together with the best in class visibility to all sides, the rear view displayed on the monitor helps ensure a safe operation.

Large Color Monitor

Easy to read and in local language, you can rely on the high resolution LCD monitor, which will keep you aware of any important information. "Quick Access" buttons allow a quick selection of favorite functions. The tool select function lets you preset up to ten different hydraulic attachments for quick tool changes.

Front Linkage

Durability – Designed with No Compromises



You know that a material handler works only as good as its front linkage is able to handle the job. The M322D2 MH's booms and sticks are purpose built for the loads encountered in material handling applications. Sticks are purposely designed with leading side plates to maximize the protection of hydraulic lines.

MH Boom

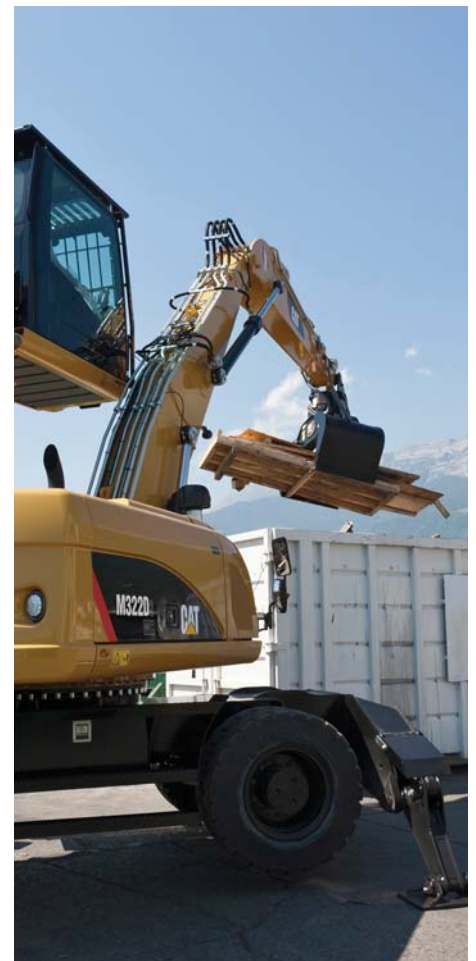
MH booms include high pressure hydraulic lines for opening and closing functionality and medium pressure lines for implement rotation.

MH Sticks

MH sticks are equipped with high and medium pressure auxiliary lines. The 4900 mm and 5900 mm Drop Nose Sticks offer the reaching and lifting capabilities required for typical MH applications, while the 4800 mm Straight Stick is the best solution when additional work tool functionality is needed.

Special Applications

The M322D2 MH offers the ability to combine the hydraulic cab riser with a traditional excavator front linkage. This combination has been proven in transfer station, mining, and millyard applications.



Smart Features

When Operation Becomes as Easy as Pleasant

Joystick Steering

Keep both hands on your joysticks even when you need to reposition the machine while simultaneously moving the implements. You can do more precise work faster with increased safety around the machine.

Working Modes

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.

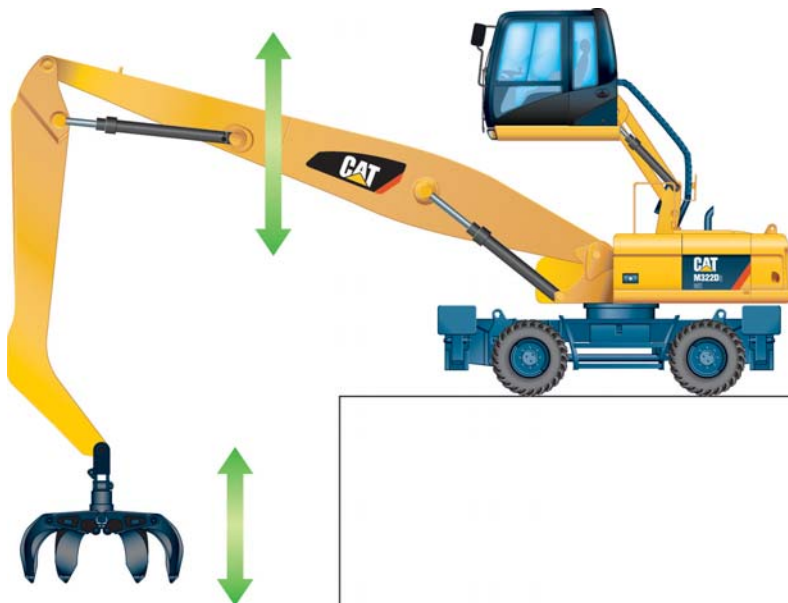
Automatic Travel Mode

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

SmartBoom

Allow your operator to fully concentrate on production.

The unique Cat SmartBoom significantly enhances operator comfort and job efficiency by reducing stress and vibrations transmitted to the machine. Loading is more productive and more fuel efficient as the return cycle is reduced while the boom down function does not require pump flow.

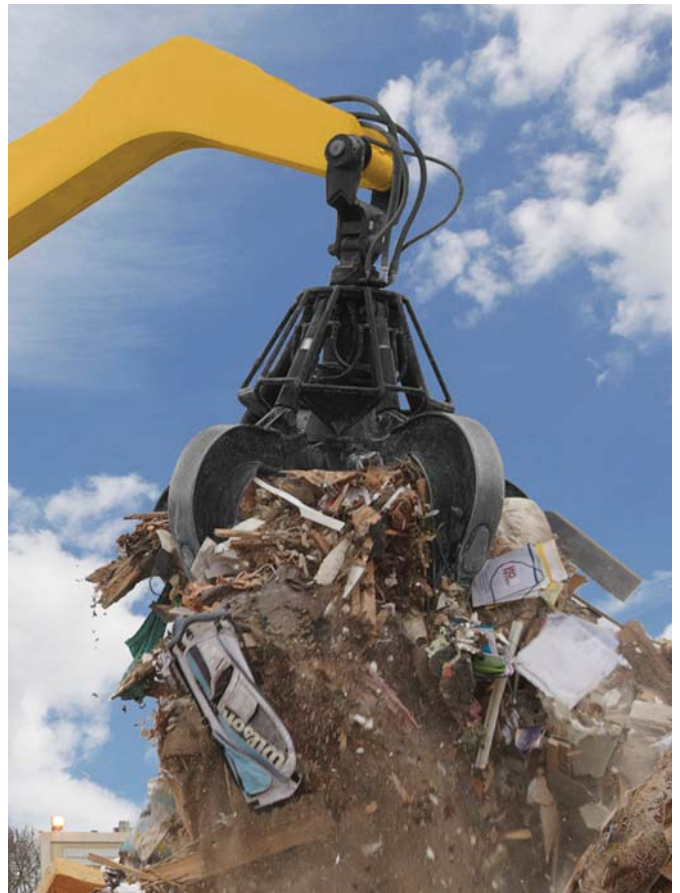


Safety

Your Safety is NOT Optional

Smart devices are embedded to offer as much safety as possible for your operators, and help enforce safe behavior:

- Large handrails and steps assist you during cab ingress and egress.
- Anti-skid plates on all walkways and steps reduce slipping hazards, by decreasing the accumulation of mud, improving machine cleanliness and operator and technician safety.
- LED rear lights enhance visibility.
- Seat belt.
- Emergency shut off switch and battery disconnect switch.
- Lowering check valves.
- Standard rearview camera gives you a clear field of view behind the machine through the monitor.
- MSS Machine Security System prevents unauthorized machine use.



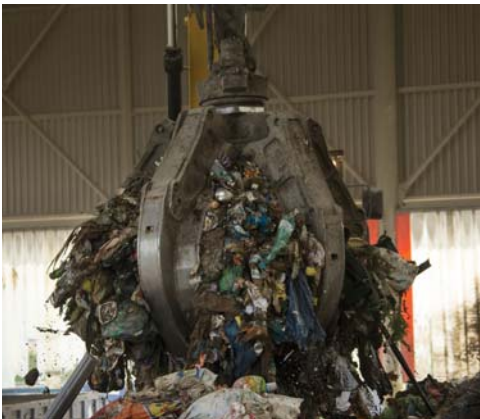
Work Tool Attachments

Move More, Make More



Power Match

Match your Cat hydraulic work tools to your Cat machine, and get the most out of the standard, built-in software. 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. Work tool changes have never been easier!



Attachment Solutions for Scrap Recycling, Bulk Handling

When productivity, reliability and stability are important, Cat attachments are the perfect solution for the M322D2 MH. Choose one for your Cat machine for maximum performance.

Productive and Perfectly Matched

Loading and unloading is foundational to your productivity. Grapples are sized right for the M322D2 MH. They are designed for maximum penetration into the pile. The full power of your machine is utilized to provide fast open/close times and powerful closing force. Full, 360° rotation systems allow precise placement. Together, an M322D2 MH and Cat grapple allow you to move volumes with minimal time and effort.

Built for Severe Material

Cat grapples are built to take on the material you move. Hydraulic components are protected from damage, yet easily accessed for routine maintenance. Areas that dig and penetrate are made of high quality, wear resistant material to keep them in working condition. Components that pivot and move are engineered to the latest standards for a long life. Cat grapples last for a positive impact to your bottom line.

Orange Peel Grapples

The perfect solution for scrap yards, recycling plants and transfer stations. These grapples are available with 4 or 5 tines, in capacities from 750 to 1000 liter. Several shell choices allow further customization of your grapple to the specific material you work with.

Clamshell Grapples

The perfect solution for loading and transferring large volumes of loose material like grain, coal, sand and gravel. These grapples are configured with several shells for different capacity options to meet your specific requirements.

Contact your local Cat dealer to learn more about the specific grapple choices available in your region.

Integrated Technologies

It Pays to Know

Cat Connect makes smart use of technology and services to improve your job site efficiency. Using the data from technology-equipped machines, you'll get more information and insight into your equipment and operations than ever before.

Cat Connect technologies offer improvements in these key areas:



EQUIPMENT
MANAGEMENT

Equipment Management – increase uptime and reduce operating costs.



PRODUCTIVITY

Productivity – monitor production and manage job site efficiency.



SAFETY

Safety – enhance job site awareness to keep your people and equipment safe.

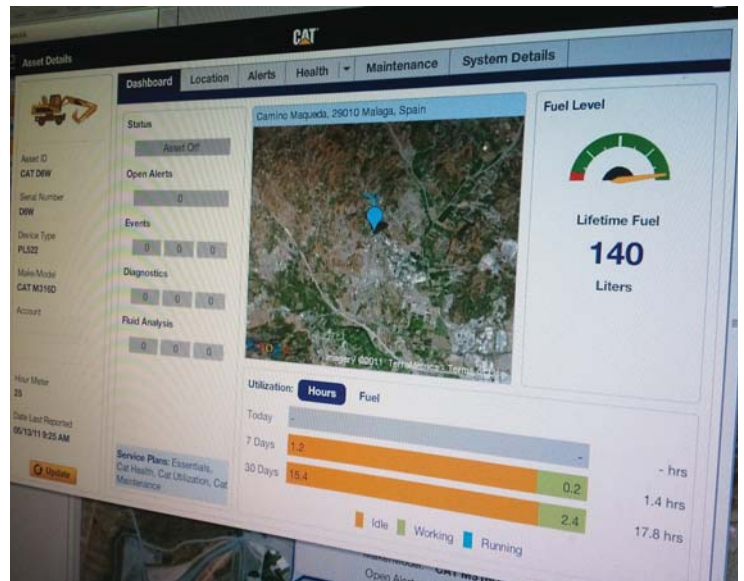
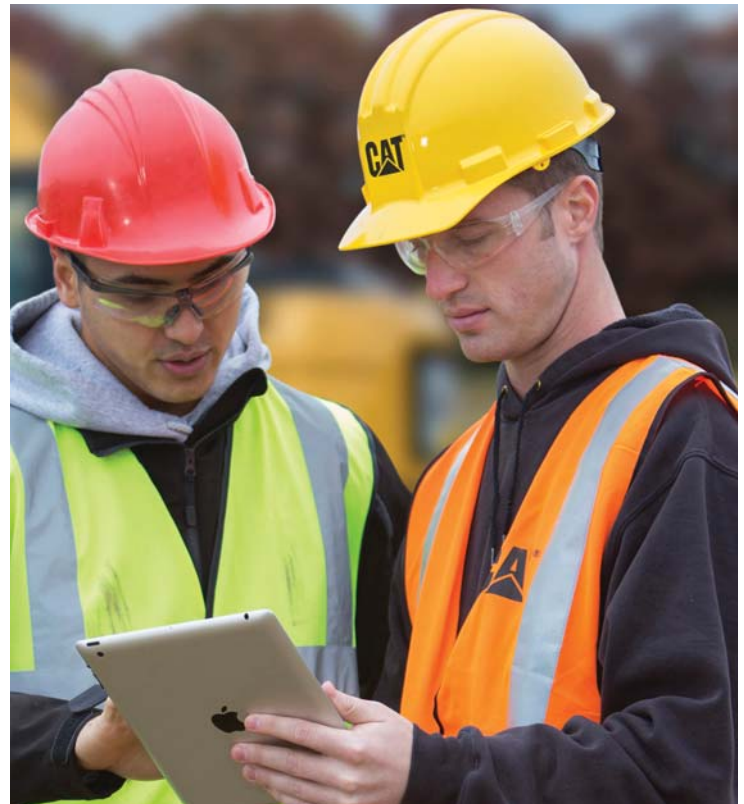
Featured Cat Connect technologies include the following:

Link

Link technologies provide wireless capability to machines to enable two-way transfer of information collected by on-board sensors, control modules, and other Cat Connect technologies.

Manage Your Machine Remotely

Cat Product Link™ is a system that is deeply integrated into the machine monitoring system to take the guesswork out of managing your equipment. The system tracks location, hours, fuel usage, productivity, idle time, and diagnostic codes and shares it with you through VisionLink® to help you maximize efficiency, improve productivity, and lower operating costs.



CAT® CONNECT



EQUIPMENT
MANAGEMENT



PRODUCTIVITY



SAFETY



SUSTAINABILITY

Sustainability

Generations Ahead in Every Way



Fuel Efficiency and Reduced Exhaust Emissions

The Cat C7.1 engine meets China Nonroad III, UN/ECE R96 Stage IIIA emission standards, and U.S. EPA Tier 3/ EU Stage IIIA equivalent emission standards, and performs the same amount of work as the previous model.

Fewer Leaks and Spills

Lubricant fillers and drains, Cat O-ring face seals, Cat XT™ hose and hydraulic cylinders are all designed to prevent fluid leaks that can reduce the machine performance.

Biodegradable Hydraulic Oil

The optional Cat Bio HYDO™ Advanced HEES™ is fully decomposed by soil or water microorganisms as opposed to mineral-based oils.

Complete Customer Care

Your Cat Dealer Will Support You Like No Other

Support You Can Count On

From helping you to choose the right machine to knowledgeable on-going support, Cat dealers provide the best-in-sales and services.

- **Best long-term investment** with financing options and services
- **Productive operation** with training programs
- **Preventive maintenance** and guaranteed maintenance contracts
- **Uptime**, with best-in-class parts availability
- **Repair, rebuild, or replace?** Your dealer can help evaluate the best option.



Serviceability

Uptime Counts



Easy Ground Level Maintenance

Our excavators are designed with the operator and technician in mind. Door opening is assisted with gas springs.

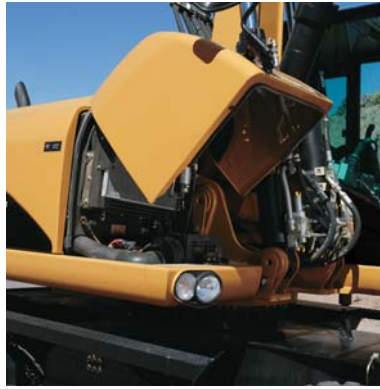
Front Compartment – Ground level access to the batteries, air-to-air aftercooler, air conditioner condenser and the air cleaner filter.

Swing-out Air Conditioner Condenser allows cleaning on both sides and access to the air-to-air aftercooler.

Engine Compartment – The longitudinal layout ensures accessibility from ground level.

Extended Service Intervals to Reduce Costs

- **S-O-SSM Oil Sampling Analysis** – Enhances performance and durability. This system can predict potential failures and can extend hydraulic oil change intervals up to 6,000 hours.
- **Engine Oil (low ash oil)** – Cat engine oil is more cost effective and provides industry-leading performance. Engine oil change interval can be extended up to 500 hours.
- **Capsule Filter** – The hydraulic return filter prevents from contamination when the hydraulic oil is changed.
- **Fuel Filters and Water Separator** – The new filtration system is suited for challenging work conditions, even when using poor fuel quality. The new primary filter offers increased filtration capabilities and works in conjunction with a water separator. Fuel filters are designed to last up to 500 hours (250 hours with very poor fuel quality). The primary fuel filter includes a fuel priming pump, a water level switch and a visual restriction indicator.
- **Remote Greasing** – Centralized or grouped points for hard to reach and critical locations.



Waste Handling Package

Specifically developed for machines working in dusty environments, this package has been tested to make sure customers can rely on it. This package includes:

- An automatic, hydraulic reversible fan that reverses airflow after a set interval, manually adjustable between 2 and 60 minutes directly from the monitor.
- A special dense wire mesh cooling system hood that further helps to reduce radiator clogging.
- A maintenance-free turbine precleaner with side dust ejection provides precleaned air to the engine air filter.
- A new air filter.
- A special dense wire mesh covering air inlets.
- A new sealing all around the front hood.

The front hood enclosures are perforated when the machine is equipped with the Waste Handling Package.



M322D2 MH Wheel Material Handler Specifications

Engine

Engine Model	Cat C7.1 ACERT ⁽¹⁾	
Ratings	2,000 rpm	
Power – ISO 14396	128.8 kW	173 hp
Power – ISO 9249 @ 2,000 rpm	122 kW	164 hp
Power – 80/1269/EEC	122 kW	164 hp
Bore	105 mm	
Stroke	135 mm	
Displacement	7.01 L	
Maximum Torque at 1,400 rpm	868 N·m	
Number of Cylinders	6	

⁽¹⁾ Meets China Nonroad III, UN/ECE R96 Stage IIIA emission standards, and U.S. EPA Tier 3/EU Stage IIIA equivalent emission standards.

- Net power advertised is the power available at the flywheel when engine is equipped with air cleaner, CEM exhaust gas aftertreatment, alternator, and cooling fan running at intermediate speed.
- No deratings required up to 4500 m altitude. Automatic derating occurs after 4500 m.

Hydraulic System

Tank Capacity	170 L	
System	345 L	
Maximum Pressure		
Implement Circuit		
Normal	35 000 kPa	
Heavy Lift	37 500 kPa	
Travel Circuit	35 000 kPa	
Auxiliary Circuit		
High Pressure	35 000 kPa	
Medium Pressure	20 500 kPa	
Swing Mechanism	34 000 kPa	
Maximum Flow		
Implement/Travel Circuit	290 L/min	
Auxiliary Circuit		
High Pressure	250 L/min	
Medium Pressure	40 L/min	
Swing Mechanism	112 L/min	

Weights

Operating Weights*	23 050-24 265 kg
MH Boom (6400 mm)**	
MH Undercarriage, Straight Stick	23 450 kg
MH Undercarriage, Drop Nose Stick	23 050 kg
Standard Undercarriage, Straight Stick	23 795 kg
One-Piece Boom**	
Front Dozer, Rear Outriggers, 2.5 m Stick	22 665 kg
Sticks***	
Digging Medium (2500 mm)	830 kg
Digging Long (2800 mm)	870 kg
Straight (4200 mm)	1230 kg
Drop Nose (4900 mm)	870 kg
MH Push Blade	675 kg
Dozer Blade	850 kg
Solid Tires (delta vs. standard tires)	950 kg
Counterweight	4000 kg

*Operating weight includes solid tires, 4000 kg counterweight, operator and full fuel tank, four outriggers undercarriage and work tool (1400 kg). Weight varies depending on configuration.

**Machine weight with 4000 kg counterweight, with operator and full fuel tank, with solid tires, without quick coupler, with work tool (1400 kg).

***Includes cylinder, bucket linkage, pins and standard hydraulic lines.

Swing Mechanism

Swing Speed	10.0 rpm
Swing Torque	48.0 kN·m

Transmission

Forward/Reverse	
1st Gear	8.0 km/h
2nd Gear	25.0 km/h
Creeper Speed	
1st Gear	3.0 km/h
2nd Gear	13.0 km/h
Drawbar Pull	125 kN
Maximum Gradeability	65%

M322D2 MH Wheel Material Handler Specifications

Tire Options

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

Undercarriage*

Ground Clearance	360 mm
Maximum Steering Angle	35°
Oscillation Axle Angle	±5°
Minimum Turning Radius	
Outside of Tire	6800 mm
End of One-Piece Boom	9300 mm

*Dimensions valid for MH Undercarriage with dual pneumatic tires.

Push Blade

Blade Type	Radial
Blade Height	920 mm
Width	2990 mm

Sustainability

Engine Emission Standards	Meets China Nonroad III, UN/ECE R96 Stage IIIA emission standards, and U.S. EPA Tier 3/ EU Stage IIIA equivalent emission standards
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Fluids (Optional)

Cat Bio HYDO Advanced	Readily biodegradable EU Flower eco-label certified
Biodiesel up to B20	Meets EN 14214 or ASTM D6751 with EN590 or ASTM D975 standard mineral diesel fuels

Vibration Levels

Maximum Hand/Arm	
ISO 5349:2001	<2.5 m/s ²
Maximum Whole Body	
ISO/TR 25398:2006	<0.5 m/s ²

Seat Transmissibility Factor

ISO 7096:2000-spectral class EM5	<0.7
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Standards

OPS	Meets OPS criteria 2006/42/EC
FOPS	FOPS (Falling Object Protective Structure) meets FOPS criteria ISO 10262:1998 and SAE J1356:2008
Cab/Sound Levels	Meets appropriate standards as listed below

Service Refill Capacities

Fuel Tank (total capacity)	310 L
Cooling System	36 L
Engine Crankcase	15 L
Rear Axle Housing (differential)	14 L
Front Steering Axle (differential)	11 L
Final Drive	2.5 L
Powershift Transmission	2.5 L

Sound Levels

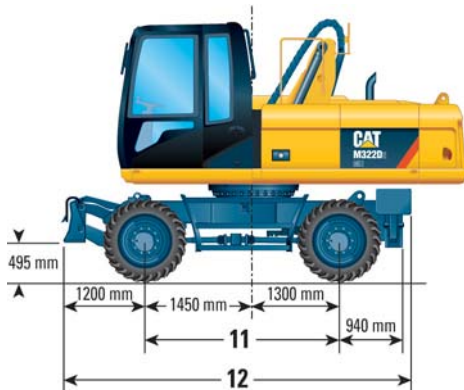
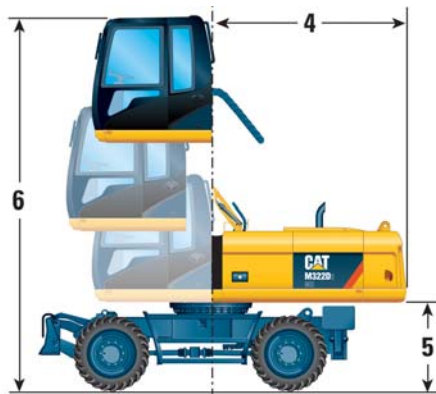
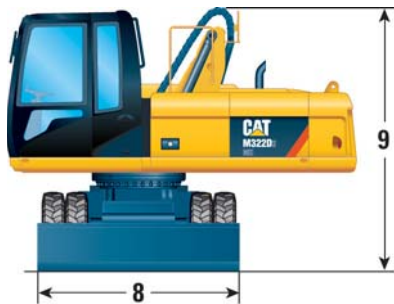
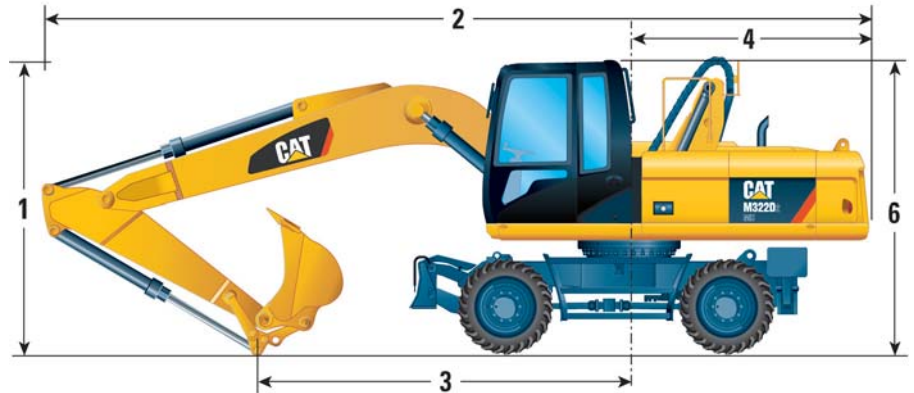
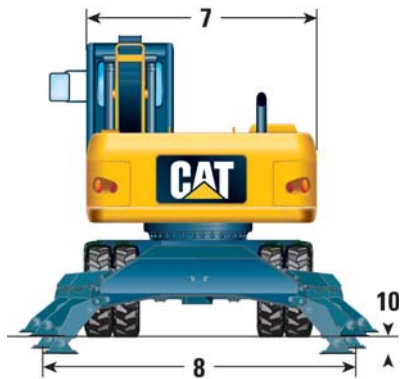
Operator Sound	
2000/14/EC, GB 16710-2010	71 dB(A)
Exterior Sound	
2000/14/EC, GB 16710-2010	103 dB(A)

- Operator Sound – The operator sound level is measured according to the procedures specified in ISO 6396:2008, for a cab offered by Caterpillar, when properly installed and maintained and tested with the door and windows closed.
- Exterior Sound – The labeled spectator sound power level is measured according to the test procedures and conditions specified in ISO 6395:2008.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained for doors/windows open) for extended periods or in noisy environment(s).

M322D2 MH Wheel Material Handler Specifications

Dimensions with Standard Undercarriage

All dimensions are approximate.



Undercarriage with 1 set of outriggers and dozer

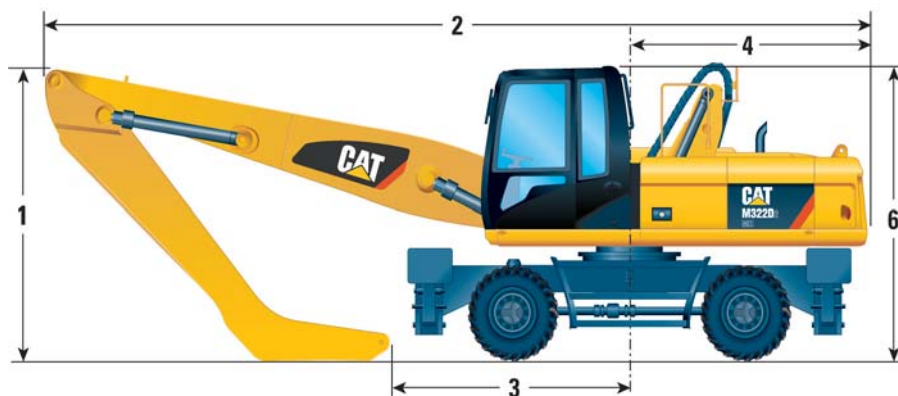
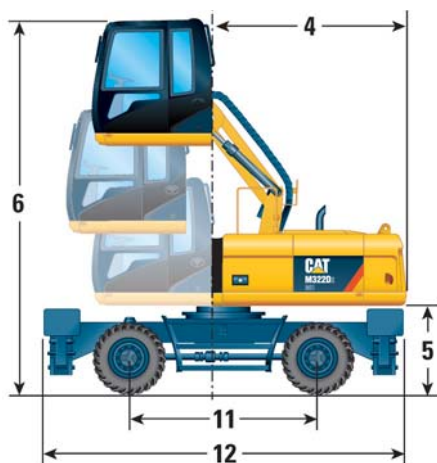
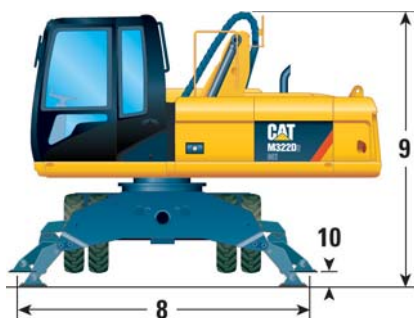
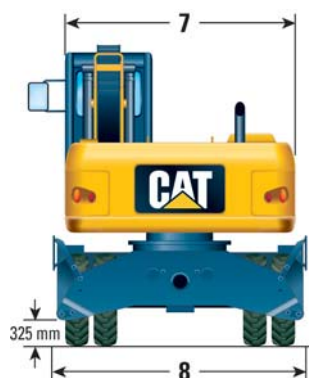
Boom Type Stick Length	One-Piece Boom	
	2500 mm	2800 mm
1 Shipping Height (boom and stick installed)		
at Boom	mm	3350
at Cab Riser Tray Group Flex	mm	3350
2 Shipping Length	mm	8960
3 Support Point	mm	3490
4 Tail Swing Radius	mm	2565
5 Counterweight Clearance	mm	1310
6 Cab Height		
Cab Lowered, no FOG	mm	3230
Cab Lowered, with FOG	mm	3360
Cab Raised, no FOG	mm	5630
Cab Raised, with FOG	mm	5760
7 Upperframe Width	mm	2540
8 Undercarriage Width		
with Outriggers on Ground	mm	3930
with Outriggers Up	mm	2750
with Blade	mm	2750
9 Height of Tray Group Flex	mm	3350
10 Maximum Outriggers Depth	mm	120
11 Wheel Base	mm	2750
12 Undercarriage Length		
with 1 Set of Outriggers and Dozer Blade Raised	mm	5165

Note: Values are with pneumatic tires. For machine fitted with solid tires, dimensions 1, 5, 6 and 9 are to be reduced by 35 mm, dimension 10 is to be increased by 35 mm.

M322D2 MH Wheel Material Handler Specifications

Dimensions with MH Undercarriage

All dimensions are approximate.



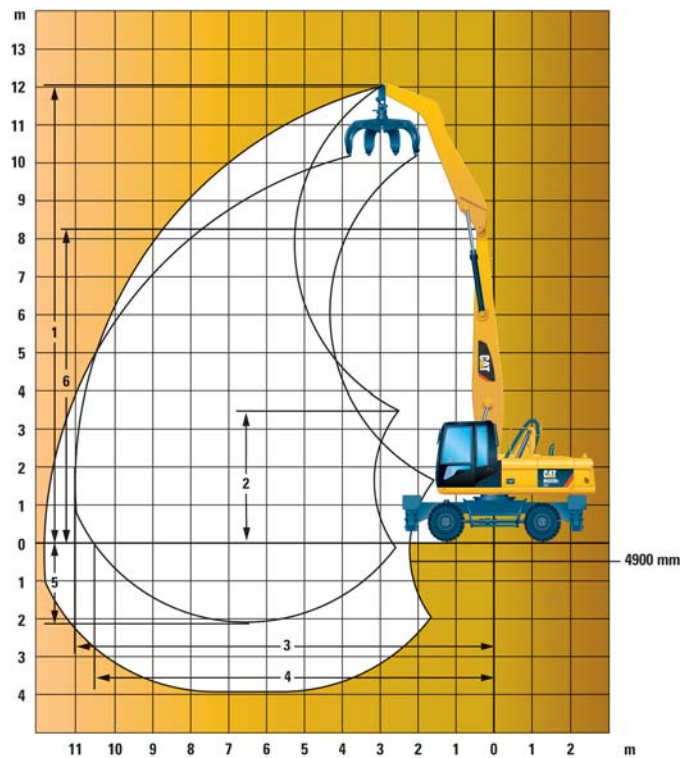
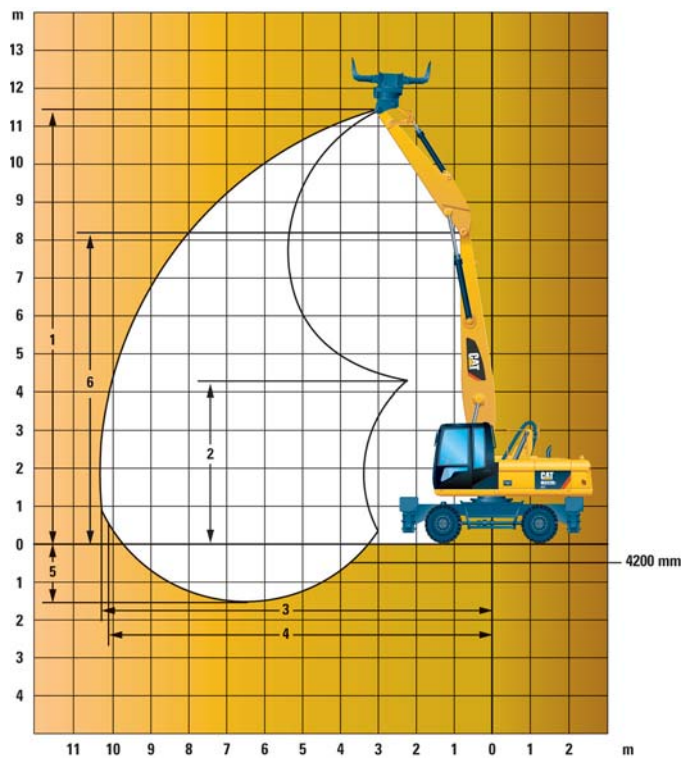
Boom Type	MH Boom	
	Straight	Drop Nose
Stick Type	4200 mm	4900 mm
Stick Length		
1 Shipping Height (boom and stick installed)		
at Boom	mm	3350
at Cab Riser Tray Group Flex	mm	3350
2 Shipping Length	mm	9380
3 Support Point	mm	3130
4 Tail Swing Radius	mm	2565
5 Counterweight Clearance	mm	1310
6 Cab Height		
Cab Lowered, no FOG	mm	3230
Cab Lowered, with FOG	mm	3360
Cab Raised, no FOG	mm	5630
Cab Raised, with FOG	mm	5760
7 Upperframe Width	mm	2540
8 Undercarriage Width		
with Outriggers on Ground	mm	4360
with Outriggers Up	mm	2990
with Blade	mm	2990
9 Height of Tray Group Flex	mm	3350
10 Maximum Outriggers Depth	mm	90
11 Wheel Base	mm	2750
12 Undercarriage Length	mm	5250

Note: Values are with pneumatic tires. For machine fitted with solid tires, dimensions 1, 5, 6 and 9 are to be reduced by 35 mm, dimension 10 is to be increased by 35 mm.

M322D2 MH Wheel Material Handler Specifications

Working Ranges

All dimensions are approximate.



Boom Type	One-Piece Boom		MH Boom	
	5350 mm		6400 mm	
Boom Length				
Stick Type			Straight	Drop Nose
Stick Length	2500 mm	2800 mm	4200 mm	4900 mm
1 Maximum Height	8910 mm	9060 mm	11 485 mm	12 030 mm
2 Minimum Dump Height	6270 mm	6420 mm	4295 mm	3645 mm
3 Maximum Reach	9340 mm	9620 mm	10 350 mm	11 005 mm
4 Maximum Reach at Ground Level	9160 mm	9450 mm	10 180 mm	10 625 mm
5 Maximum Depth	5850 mm	6150 mm	1520 mm	2225 mm
6 Boom Pin Height	—	—	8200 mm	8200 mm

All dimensions refer to stick nose pin, with solid tires.

These dimensions are independent from the undercarriage type.



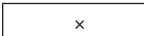


M322D2 MH Wheel Material Handler Specifications

Work Tools Matching Guide

	Boom		MH Boom 6400 mm			
	Undercarriage		MH		Standard	
	Stick Length (mm)		4900	4200	4900	4200
Without Quick Coupler						
360° Rotatable Shears*	S325B, S340B					
Multi-Grapples	G315B	D, R	x		x	
Orange Peel Grapples (5 tines)	GSH15B	400				
		500, 600				
		800				x
	GSH20B	600			x	x
800				x	x	
Orange Peel Grapples (4 tines)	GSH15B	400, 500, 600				
		800				
	GSH20B	600				x
		800			x	x
With Quick Coupler						
Quick Couplers	CW-30, 30S		x		x	
	CW-40, 40S		x	x	x	x
Multi-Grapples	G315B	D, R	x		x	

*Boom mounted.

**S325B only. S340B not compatible.

	360° Working Range
	Quick Coupler Match
	Not Compatible
	Maximum Material Density 1800 kg/m ³
	Maximum Material Density 1200 kg/m ³

M322D2 MH Wheel Material Handler Specifications

Lift Capacities























All values are in kg, without work tool, with counterweight (4000 kg), heavy lift on.

 Load point height
  Load over front
  Load over rear
  Load over side
  Load at maximum reach (stick nose pin)

Undercarriage Standard

Boom 6400 mm

Stick 4900 mm

Load point height	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							*6500	*6500	*6500											*5250	*5250	*5250	6.70	
	Rear dozer up							5800	4700	3950											4800	3850	3250		
	Rear dozer down								*6500	4450												*5250	3700		
	Dozer and stab down								*6500	6450												*5250	*5250		
9.0 m	2 sets stab down							*7850	*7850	7800	*6300	*6300	5400									*4700	*4700	4500	8.32
	Rear dozer up							5900	4800	4100	4100	3300	2800								3450	2750	2300		
	Rear dozer down								*7850	4600		*6300	3150									*4700	2600		
	Dozer and stab down								*7850	6600		*6300	4550									*4700	3850		
7.5 m	2 sets stab down							*8200	*8200	7800	*7100	6700	5400	*5500	4950	4000						*4400	*4400	3700	9.42
	Rear dozer up							5900	4800	4100	4150	3300	2850	3050	2400	2050					2800	2200	1850		
	Rear dozer down								*8200	4600		6600	3200		4800	2300						*4400	2100		
	Dozer and stab down								*8200	6600		*7100	4600		5400	3400						*4400	3150		
6.0 m	2 sets stab down							*8450	*8450	7700	*7200	6600	5350	5650	4950	4000						*4300	4050	3250	10.18
	Rear dozer up							5800	4700	3950	4050	3250	2750	3050	2400	2050					2450	1900	1600		
	Rear dozer down								*8450	4450		6500	3150		4800	2300						3900	1850		
	Dozer and stab down								*8450	6450		*7200	4550		5400	3400						*4300	2750		
4.5 m	2 sets stab down				*11 200	*11 200	*11 200	*8900	*8900	7450	*7400	6500	5250	5550	4850	3950	4350	3800	3100			4250	3700	3000	10.68
	Rear dozer up				8850	7100	5900	5600	4500	3800	3950	3150	2650	2950	2350	1950	2300	1800	1500			2250	1750	1450	
	Rear dozer down					*11 200	6700		*8900	4250		6400	3000		4750	2250		3700	1700			3600	1650		
	Dozer and stab down					*11 200	10 000		*8900	6250		7150	4400		5350	3350		4200	2600			4050	2500		
3.0 m	2 sets stab down	*18 650	*18 650	*18 650	*12 400	*12 400	11 500	*9400	9050	7150	7300	6300	5050	5450	4800	3850	4300	3800	3050			4050	3550	2850	10.94
	Rear dozer up	16 850	12 800	9950	8250	6500	5350	5300	4200	3500	3800	3000	2500	2900	2250	1900	2250	1750	1450			2150	1650	1350	
	Rear dozer down		*18 650	11 750		*12 400	6150		9000	4000		6200	2850		4650	2150		3650	1700			3400	1550		
	Dozer and stab down		*18 650	*18 650		*12 400	9350		*9400	5950		6950	4250		5250	3250		4150	2550			3900	2400		
1.5 m	2 sets stab down				*13 100	*13 100	10 800	*9650	8700	6800	7100	6150	4900	5350	4700	3750	4250	3750	3000			3950	3500	2800	11.00
	Rear dozer up				7600	5900	4800	5000	3900	3250	3650	2850	2350	2800	2150	1800	2250	1700	1400			2100	1600	1300	
	Rear dozer down					*13 100	5550		8650	3700		6000	2700		4550	2100		3600	1650			3350	1550		
	Dozer and stab down					*13 100	8700		*9650	5650		6800	4100		5150	3150		4100	2500			3800	2350		
0.0 m	2 sets stab down	*3500	*3500	*3500	*12 200	*12 200	10 300	*9250	8400	6550	6950	6000	4750	5250	4600	3650	*4100	3700	2950						
	Rear dozer up	*3500	*3500	*3500	7200	5450	4400	4750	3650	3000	3500	2700	2250	2700	2100	1750	2200	1700	1400						
	Rear dozer down		*3500	*3500		*12 200	5150		8350	3500		5850	2600		4450	2000		3550	1600						
	Dozer and stab down		*3500	*3500		*12 200	8250		*9250	5400		6600	3950		5050	3050		4050	2500						
-1.5 m	2 sets stab down				*9600	*9600	*9600	*8100	*8100	6400	*6300	5900	4650	*4750	4550	3600									
	Rear dozer up				7000	5300	4200	4600	3550	2900	3400	2600	2150	2650	2050	1700									
	Rear dozer down					*9600	4950		*8100	3350		5750	2500		4400	1950									
	Dozer and stab down					*9600	8050		*8100	5250		*6300	3850		*4750	3000									

*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.


M322D2 MH Wheel Material Handler Specifications

Lift Capacities


All values are in kg, without work tool, with counterweight (4000 kg), heavy lift on.

 Load point height

 Load over front

 Load over rear

 Load over side

 Load at maximum reach (stick nose pin)

Undercarriage

















Special Application

Boom

6400 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					5750	4350							4800	3650	6.70
	All stabilizers down					*6500	*6500							*5250	*5250	
9.0 m	All stabilizers up					5900	4500	4100	3100					3450	2600	8.32
	All stabilizers down					*7850	*7850	*6300	*6300					*4700	*4700	
7.5 m	All stabilizers up					5900	4500	4150	3150	3050	2300			2800	2100	9.42
	All stabilizers down					*8200	*8200	*7100	6450	*5500	4800			*4400	*4400	
6.0 m	All stabilizers up					5800	4400	4100	3100	3050	2300			2450	1800	10.18
	All stabilizers down					*8450	*8450	*7200	6400	5850	4750			*4300	3900	
4.5 m	All stabilizers up			8750	6500	5550	4200	3950	2950	3000	2200	2350	1700	2250	1650	10.68
	All stabilizers down			*11 200	*11 200	*8900	*8900	*7400	6250	5800	4700	4550	3700	*4300	3600	
3.0 m	All stabilizers up	16 300	11 000	8150	5950	5300	3900	3800	2850	2900	2150	2300	1700	2150	1550	10.94
	All stabilizers down	*18 650	*18 650	*12 400	*12 400	*9400	8650	*7600	6100	5700	4600	4500	3650	4250	3450	
1.5 m	All stabilizers up			7550	5350	5000	3650	3650	2650	2800	2050	2250	1650	2100	1500	11.00
	All stabilizers down			*13 100	*13 100	*9650	8300	7400	5900	5600	4500	4450	3600	*4150	3400	
0.0 m	All stabilizers up	*3500	*3500	7100	4950	4750	3400	3500	2550	2750	2000	2200	1600			
	All stabilizers down	*3500	*3500	*12 200	*12 200	*9250	8050	*7200	5750	5500	4450	*4100	3600			
-1.5 m	All stabilizers up			6900	4800	4600	3300	3400	2450	2700	1950					
	All stabilizers down			*9600	*9600	*8100	7900	*6300	5650	*4750	4400					

*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.

M322D2 MH Wheel Material Handler Specifications

Lift Capacities























All values are in kg, without work tool, with counterweight (4000 kg), heavy lift on.

 Load point height
  Load over front
  Load over rear
  Load over side
  Load at maximum reach (stick nose pin)

Undercarriage Standard

Boom 6400 mm

Stick 4200 mm

Load point height	Undercarriage configuration	3.0 m			4.5 m			6.0 m			7.5 m			9.0 m			10.5 m						m
																							
9.0 m	2 sets stab down							*8100	*8100	7350										*5300	*5300	5050	7.42
	Rear dozer up							5500	4350	3650										3750	2950	2450	
	Rear dozer down								*8100	4150										*5300	2800	2800	
	Dozer and stab down								*8100	6150										*5300	4200	4200	
7.5 m	2 sets stab down							*8300	*8300	7400	*7050	6300	5000							*4950	4900	3900	8.64
	Rear dozer up							5500	4400	3650	3750	2950	2450							2850	2200	1800	
	Rear dozer down								*8300	4150											4750	2100	
	Dozer and stab down								*8300	6150											*4950	3250	
6.0 m	2 sets stab down				*10 650	*10 650	*10 650	*8550	*8550	7250	*7100	6250	4950	5250	4550	3650				*4800	4150	3300	9.46
	Rear dozer up				8750	7000	5750	5400	4250	3550	3700	2900	2400	2650	2050	1650				2400	1850	1500	
	Rear dozer down					*10 650	6600		*8550	4050					4450	1950					4050	1750	
	Dozer and stab down					*10 650	9900		*8550	6050					5050	3000					4600	2750	
4.5 m	2 sets stab down	*14 500	*14 500	*14 500	*11 600	*11 600	*11 600	*8900	*8900	7000	7100	6100	4850	5200	4500	3600				4350	3800	3000	10.00
	Rear dozer up	*14 500	13 450	10 500	8300	6550	5350	5150	4050	3350	3600	2800	2300	2600	2000	1600				2150	1600	1300	
	Rear dozer down		*14 500	12 350		*11 600	6150		8900	3850					4400	1900					3650	1550	
	Dozer and stab down		*14 500	*14 500		*11 600	9450		*8900	5800					5000	2950					4150	2450	
3.0 m	2 sets stab down				*12 500	*12 500	10 850	*9250	8600	6700	6900	5950	4700	5100	4450	3500				4100	3550	2800	10.28
	Rear dozer up				7650	5900	4800	4850	3750	3100	3450	2650	2150	2550	1900	1550				2000	1500	1200	
	Rear dozer down					*12 500	5550		8550	3550					4300	1800					3450	1400	
	Dozer and stab down					*12 500	8750		*9250	5500					4900	2900					3950	2300	
1.5 m	2 sets stab down				*12 600	*12 600	10 200	*9200	8250	6400	6750	5750	4550	5050	4350	3400				*4000	3500	2750	10.34
	Rear dozer up				7050	5350	4250	4600	3500	2800	3250	2500	2000	2450	1850	1500				1950	1450	1150	
	Rear dozer down					*12 600	5000		8200	3300					4200	1750					3400	1350	
	Dozer and stab down					*12 600	8150		*9200	5200					4800	2800					3850	2250	
0.0 m	2 sets stab down				*9450	*9450	*9450	*8450	8000	6150	*6500	5650	4400	*4850	4300	3350							
	Rear dozer up				6700	5000	3950	4350	3300	2650	3150	2350	1900	2400	1800	1400							
	Rear dozer down					*9450	4700		7950	3100					4150	1700					4150	1700	
	Dozer and stab down					*9450	7750		*8450	5000					4750	2750							

*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.


M322D2 MH Wheel Material Handler Specifications

Lift Capacities


All values are in kg, without work tool, with counterweight (4000 kg), heavy lift on.

 Load point height

 Load over front

 Load over rear

 Load over side

 Load at maximum reach (stick nose pin)

Undercarriage















Special Application

Boom

6400 mm

Stick

4200 mm

	Undercarriage configuration	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m			m	
																
9.0 m	All stabilizers up					5450	4050							3750	2750	7.42
	All stabilizers down					*8100	*8100							*5300	*5300	
7.5 m	All stabilizers up					5500	4100	3750	2750					2900	2100	8.64
	All stabilizers down					*8300	*8300	*7050	6050					*4950	4700	
6.0 m	All stabilizers up			8650	6350	5350	3950	3700	2700	2700	1900			2450	1700	9.46
	All stabilizers down			*10 650	*10 650	*8550	*8550	*7100	6000	5500	4400			*4800	4050	
4.5 m	All stabilizers up	*14 500	11 550	8200	5950	5150	3750	3600	2600	2650	1850			2200	1500	10.00
	All stabilizers down	*14 500	*14 500	*11 600	*11 600	*8900	8550	*7250	5900	5450	4350			4550	3650	
3.0 m	All stabilizers up			7600	5350	4850	3500	3450	2450	2550	1800			2050	1400	10.28
	All stabilizers down			*12 500	*12 500	*9250	8200	7200	5700	5350	4250			4300	3450	
1.5 m	All stabilizers up			7000	4850	4550	3250	3300	2300	2500	1750			2000	1350	10.34
	All stabilizers down			*12 600	*12 600	*9200	7900	7050	5550	5250	4200			*4000	3400	
0.0 m	All stabilizers up			6650	4500	4350	3050	3150	2200	2400	1650					
	All stabilizers down			*9450	*9450	*8450	7650	*6500	5400	*4850	4100					

*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.

M322D2 MH Standard Equipment

Standard Equipment

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

ELECTRICAL

- Alternator, 85 A
- Lights
 - Boom working light
 - Cab interior light
 - Roading lights two front
 - Roading lights two LED modules rear
 - Working lights, cab mounted (two front and one rear)
- Signal/warning horn
- Main shut-off switch
- Heavy-duty maintenance free batteries

ENGINE

- Automatic engine speed control
- Automatic starting aid
- Cat C7.1 engine with ACERT Technology
- Meets China Nonroad III, UN/ECE R96 Stage IIIA emission standards, and U.S. EPA Tier 3/EU Stage IIIA equivalent emission standards
- Fuel/water separator with level indicator
- Power mode selector (economy and power)
- High ambient cooling 52° C

HYDRAULICS

- Heavy lift mode
- Load-sensing hydraulic system
- Auxiliary controls and lines
- Boom and stick lowering control devices
- Separate swing pump
- Control circuits (standard and optional, depending on boom/stick/linkage choice)
 - Two-way, medium pressure circuit, for rotating or tilting of work tools

OPERATOR STATION

- Adjustable armrests
- Adjustable hydraulic sensitivity
- Air conditioner, heater and defroster with automatic climate control
- Ash tray with cigarette lighter (24 volt)
- Beverage cup/can holder
- Bolt-on top/front guards capability
- Bottle holder
- Bottom mounted parallel wiping system, covering 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 including headrest
- Hydraulic cab riser, 2400 mm rising
- Instrument panel and gauges, full graphic and color display
 - 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 holder in right hand 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, adjustable angle
- Storage area suitable for a lunch box
- Sunshade for windshield and skylight

UNDERCARRIAGE

- Heavy-duty axles, advanced travel motor, adjustable braking force
- Creeper speed
- Oscillating front axle with remote greasing
- Toolboxes in undercarriage, left and right
- Four wheel drive
- Two-speed hydrostatic transmission
- Tires, 11.00-20 16 PR, dual pneumatic, with spacer rings

OTHER EQUIPMENT

- Automatic swing brake
- Counterweight, 4000 kg
- Mirrors, frame and cab
- S·O·S quick sampling valves for engine oil, hydraulic oil and coolant
- Product Link

Optional Equipment

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

AUXILIARY CONTROLS AND LINES

- Auxiliary boom and stick lines
- Control circuits (standard and optional, depending on boom/stick/linkage choice)
 - 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
 - Quick coupler control
- Cat Bio HYDO Advanced HEES biodegradable hydraulic oil
- Generator with valve and priority function
- SmartBoom

BOOMS AND STICKS

- Material Handling boom (6400 mm)
 - Straight MH stick (4200 mm)
 - Drop nose MH stick (4900 mm)
- One-piece boom (5350 mm)
 - Sticks (2500/2800 mm)

ELECTRICAL

- Back-up alarm with three selectable modes
- Rotating beacon on cab
- Refueling pump

OPERATOR STATION

- Falling objects guards
- Joystick steering
- Travel speed lock
- Visor for rain protection
- Windshield
 - One-piece high impact resistant
 - 70/30 split, openable
- Seat, adjustable high-back
 - Mechanical suspension
 - Vertical air suspension
- CD/MP3 radio (12V) at rear location including speakers and 12V converter

UNDERCARRIAGE

- MH undercarriage with four welded outriggers
- MH undercarriage with four welded outriggers and front mounted blade
- Standard undercarriage with dozer blade (front) and outriggers (rear)
- Tires, 10.00-20, solid rubber, with spacer rings

OTHER EQUIPMENT

- Cat Machine Security System
- Waste Handling Package (ambient capability 43° C)

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