

# MH3024

## Wheel Material Handler



### Engine

Engine Model	Cat® C7.1 ACERT™	
Emissions	EU Stage IV	
Power (Maximum)		
ISO 9249 at 1,700 rpm	126 kW	169 hp
ISO 9249 at 1,700 rpm (metric)		171 hp (PS)
ISO 14396	129.4 kW	174 hp
ISO 14396 (metric)		176 hp (PS)

### Weights

Operating Weight with Worktool	22 330-27 000 kg
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### Working Ranges

Maximum Reach (stick pin)	12 480 mm
Maximum Height (stick pin)	13 300 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 MH3024 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 MH3024 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.***



# Next Generation Key Features

Commitment from the Ground Up



**Safety and Comfort Are Not Optional**

- Embedded smart devices help enforce safe behaviors, like the automatic swing lock, brake and axle lock, and safety lever
- The new cab contributes to your comfort with limited vibrations and drastically reduced sound levels
- Improved access with new and longer handrails, steps and service platform
- Improved visibility with enlarged glass areas, rear and side cameras and LED working lights



### **Make the Move to the Next Generation**

Refinements. From the whole design to the smallest detail. Convenient features, new advanced and transparent technologies, not only to reduce emissions but to further improve your daily experience when working with our products.

### **Made to be Efficient**

Recognizing that fuel efficiency is directly affected by hydraulic performance, the hydraulic system in the MH3024 is carefully designed to provide the work needed without wasting fuel. A high capacity hydraulic cooling system keeps operating temperatures well-balanced, resulting in longer component life, higher efficiency and lower repair cost.

### **Made to Keep Your Costs Down**

Not only does the machine give you all the performance you need, but it does so while providing a great deal of precision, and speed with an absolute minimum fuel consumption – and zero impact on your efficiency.

### **Maintenance: Keep it Simple**

Ground level and grouped service points, automatic central greasing, dedicated system compartments and many other features that make your maintenance quick and easy.

### **Made to Make Operation Easy and Pleasant**

Have a seat, you will be impressed by the quietness and comfort of the cab. Feel relaxed, we help you make sure you're safe.

### **Integrated Technologies**

Enjoy integrated technologies; they act transparently.

### **Be Flexible to Win**

When you add the multiple Cat attachments that help you do all kinds of jobs, you simply won't find a better machine.





# Sustainability

## Generations Ahead in Every Way

### Fuel Efficiency and Reduced Exhaust Emissions

The engine meets Stage IV emission standards and performs the same amount of work as the previous model, all while burning less fuel, which means more efficiency, less resource consumption, and fewer emissions.

### Quiet Operation

Outstandingly low sound levels, you won't believe your machine is running.

### Transparent Technologies and Longer Service Intervals

- The new Eco Modes, Auto Engine Speed Control and Engine Idle Shutdown help further reduce your overall fuel consumption.
- Product Link™ allows remote monitoring of the machine and helps improve overall efficiency.
- Your Cat dealer can help extend service intervals, meaning fewer fluids and disposals, all adding up to lower costs.

### Biodiesel and Biodegradable Hydraulic Oil

- The MH3024 has the flexibility of running on either ultra-low-sulfur diesel (ULSD) fuel with 10 ppm of sulfur or less or biodiesel (up to B20) fuel blended with ULSD.
- Cat BIO HYDO™ Advanced HEES™ reduces the impact on the environment.

### Cat Certified Used

This program is a key element in the range of solutions offered by Caterpillar and Cat dealers to help customers achieve growth at the lowest cost while eliminating waste. Used equipment is inspected, guaranteed and ready for work and customers will benefit from a Caterpillar warranty.

# Engine

Power, Reliability, and Fuel Economy



## *The Power and Performance You Need*

### **Constant Power Strategy**

Provides a quick response to changing loads, while delivering the same amount of power regardless of operating conditions.

### **A Transparent Emission Solution That Works.**

The Cat C7.1 ACERT engine meets today's Stage IV emission standards, and it does so without interrupting your job process. It is designed to be:

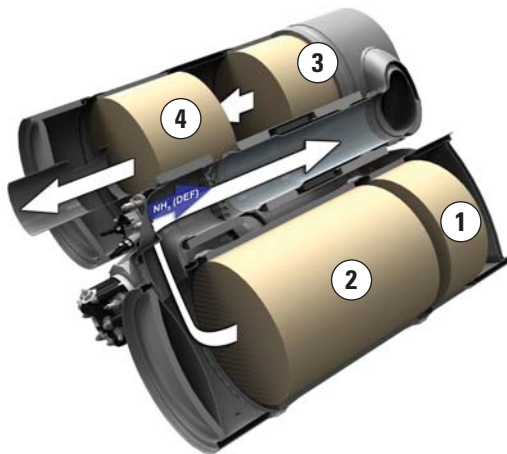
- **Transparent:** no operator intervention
- **Durable:** fit for life Diesel Particulate Filter (DPF)
- **Efficient:** no work interruption, even in case of extended idling time
- **Simple:** minimum maintenance. Longitudinal engine installation, which further simplifies maintenance.

### **Biodiesel Not a Problem**

The engine can run on up to B20 biodiesel fuel that meets ASTM 6751 standards – all to give you more potential fuel-saving flexibility.

### **Proven Technology**

To assure that our technology will meet your expectations for reliable trouble-free service, we subjected these engines and technologies to extensive operating hours of test and validation.



1) Diesel Oxidation Catalyst (DOC) 2) Diesel Particulate Filter (DPF)  
3) Selective Catalytic Reduction (SCR) 4) Ammonia Oxidation Catalyst (AMOX)

## **Built-in Fuel Savers That Add Up**

- Automatic Engine Speed Control: lowers engine speed when it is not needed.
- NEW Engine Idle Shutdown (when activated): turns the engine off when it's been idling for more than a pre-set amount of time.
- NEW Cooling System: variable speed and on-demand fan optimizing consumption.
- NEW enhanced Eco Mode: reduces engine speed while delivering the same power.
- Automatic shift to Travel Mode when you start riding: optimizes driveline performance while preserving fuel.

# Hydraulic System

Fast, Precise, Flexible





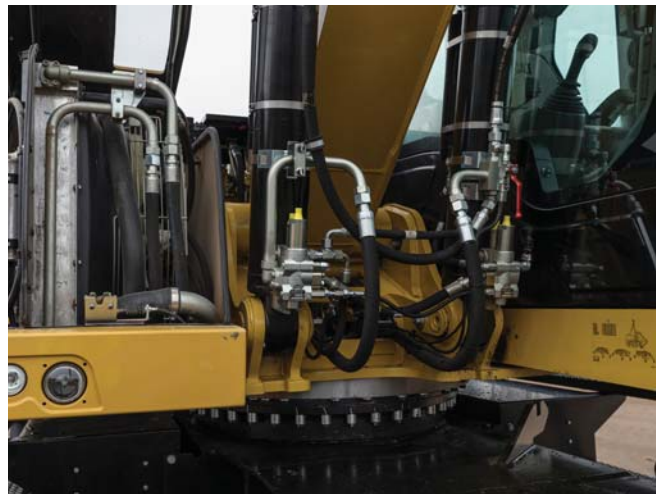
***When it comes to moving material quickly, you need efficient hydraulics – the type the MH Series can deliver.***

### **Efficient Design, Smart and Fast**

- **Simple Design** – The new hydraulic valve compartment and routings offer a simple and clean design to help ensure durability. Everything is reachable from ground level.
- **Smart Main Hydraulics** – The system allows reducing the load on the engine when not needed, which translates into lower fuel consumption.
- **Dedicated Swing Pump** – A closed hydraulic circuit is dedicated to the swing only. Having two separate pumps, one for the swing and the second for the other functions allows faster and smoother combined movements.

### **Control Like No Other**

- **Electronic Pump Control** – Controllability is one of the main attributes of the MH3024, and one of the key contributors to this is the Electronic Pump Control (EPC) that's designed to improve response time and precision. It puts flow exactly where you need it, when you need it, which means a much smoother operation and greater efficiency.
- **Adjustable Hydraulic Sensitivity** – Allows you to adjust the aggressiveness of the machine according to the application.
- **Stick Circuit** – Increases efficiency and helps enhance controllability for higher productivity.



### **Well Balanced Cooling Package**

The hydraulic oil cooler is mounted side-by-side with the engine radiator and the air-to-air aftercooler (ATAAC). Located separately from the engine and featuring a well-balanced sizing, the new cooling package offers unprecedented up-times even in difficult environments.

# Structure – Elevated Cab and Frame

Strength, Flexibility and 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.
- The standard undercarriage allows for different kinds of stabilizers and blades to be attached either to the front or to the 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.

## Driveline Concept

The driveline design effectively utilizes engine torque and power to provide a comfortable ride.

## Ground Clearance

The MH3024 offers good ground clearance, with the transmission mounted on and protected by the rear axle.



## Front Linkage

### Durability – Built with No Compromises

You know that a material handler works only as good as its front linkage is able to handle the job. The MH3024's booms and sticks are purpose built for the loads encountered in material handling applications.

#### 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

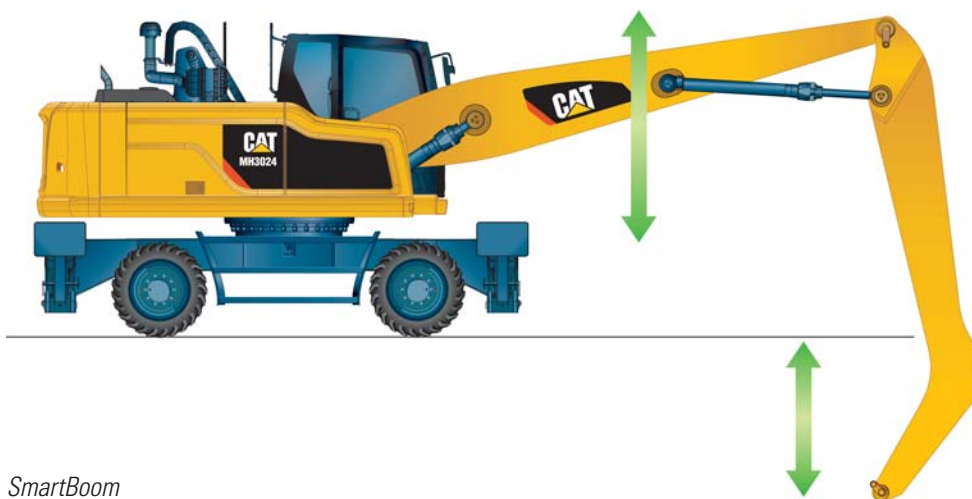
The MH3024 offers the ability to combine the hydraulic cab riser with a traditional excavator front linkage. This combination has been proven in transfer station, mining, and millyard applications.

Automatic lubrication of the whole uppercarriage extends component life, protecting your equipment.

## 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.



SmartBoom

# Smart Features

When Operation Becomes as Easy as Pleasant

## Joystick Steering (Optional)

Keep both hands on your joysticks even when you need to reposition the machine while simultaneously moving the implements.

## Swing and Auto Travel Lock

No need for the operator to bend to engage the swing lock pin.

- Just press a button,
- Align the upper to the lower frame,
- Enjoy the ride: a green indicator confirms the swing and the implements have been automatically locked.

## Integrated Pin Code

No need to buy optional security system to protect your equipment against theft.

- The pin code is integrated into the monitor (standard)
- Entering the right code allows the engine to start

The Machine Security System (MSS – optional) adds even more protection when needed.

## Cruise Control

Focus on the working environment, not on your foot. No need to press the pedal all the time.

- Choose the very speed you wish
- Press the quick access button on the monitor
- Enjoy the ride



## Load and Go Auto Axle Lock

Presses the Pedal  
for You, Reducing the  
Number of Actions  
You Need to Do

The machine automatically detects when the service brake and axle need to be locked (like when working), or unlocked (roading), hence removing the need for the operator to systematically press the pedal. Brake and axle are released automatically by pressing the travel pedal again.



# 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, including FULL adjustment. All seats are heated and air suspended. Automatic weight adjustment and air cooled seats are available.

## Safety – Not Optional

FOPS cabs, seat belt alarm, safety lever, sideview camera ... among others.

## 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.
- New technologies that work transparently like the swing and auto travel lock or the automatic brake and axle lock, reduce the number of tasks you need to do.

## Plug, Charge and Play Your Devices

- The 12V 10A 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, not only tilting fore/aft but also in height
- Hydraulic sensitivity of the machine to make it more or less aggressive
- Joystick controls, buttons and thumb wheels
- Automatic air conditioning

### **Incredibly Low Sound Levels, Less Fatigue**

Operator sound level has been reduced thanks to a new cab design and increased cab pressure, which also prevents from dust entry. Add in the rubber mounts to fix the cab on the frame and you have a cab that's as quiet as any of today's premium cars.

### **Outstanding Visibility: See the difference!**

- Standard LED working lights and halogen roading lights
- Standard LED dome light
- All glass areas have been drastically increased
- Choice of 70/30 front windshield or one piece windshield
- New wide angle mirrors including a lower mirror for a better visibility to the ground
- Parallel intermittent (four speeds) wipers covering the whole windshield



### **Standard Rear and Side Wide Angle Cameras**

Cameras let you see what's going on around. The image from the side camera is displayed on an additional wide color screen, offering the full view from the front to the rear of the machine. The rear camera is integrated into the counterweight for enhanced protection.

### **Large Color Monitor**

Easy to read and in local language, the high resolution LCD monitor 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.

# Serviceability

## When Uptime Counts

### Convenient Access Built In

You can reach routine maintenance items like fuel and engine oil filters and fluid taps at ground level while fuel and DEF tank are accessible from the safety of the slip-resistant new service foldable step. Compartments feature wide composite service doors, designed to be more resistant to shocks, which all include gas struts to facilitate the opening. Components are now gathered in specific dedicated compartments, like the special electrical compartment.

### A Smart Design for Any Temperature

The side-by-side and axial fan design allows greater cooling performance. The system is completely separated from the engine compartment to reduce noise and heat, and all radiators are gathered in the same compartment while featuring easy-to-clean cores with a tilting device that requires no tool to unlock.

### A Fresh Idea

Ventilation inside the cab allows outside air to enter through a fresh air filter. The filter is located on the side of the cab to make it easy to reach, and it is protected by a lockable door that can be opened with the ignition key.

### Lube and Fuel Options

An automatic lubricator system is an available time-saving standard feature for greasing the whole uppercarriage. Greasing points for the undercarriage are kept to a minimum and grouped. An electric refueling pump is also available. The hose is stored in a dedicated tray, for more cleanliness. Add in the new electric lift pump removing the need to prime the system manually, the standard fuel and water separator and you get a machine that does the fastidious works for you.

***Keep it simple.***





# 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.

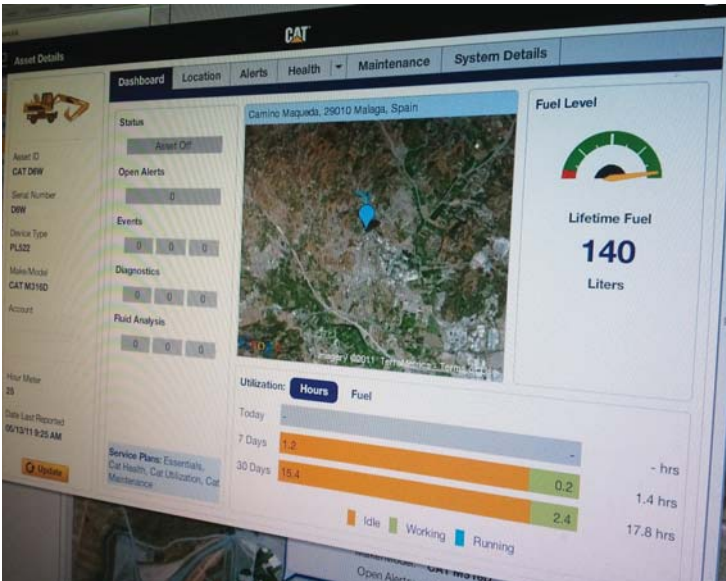
Featured Cat Connect technologies include the following:

## 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



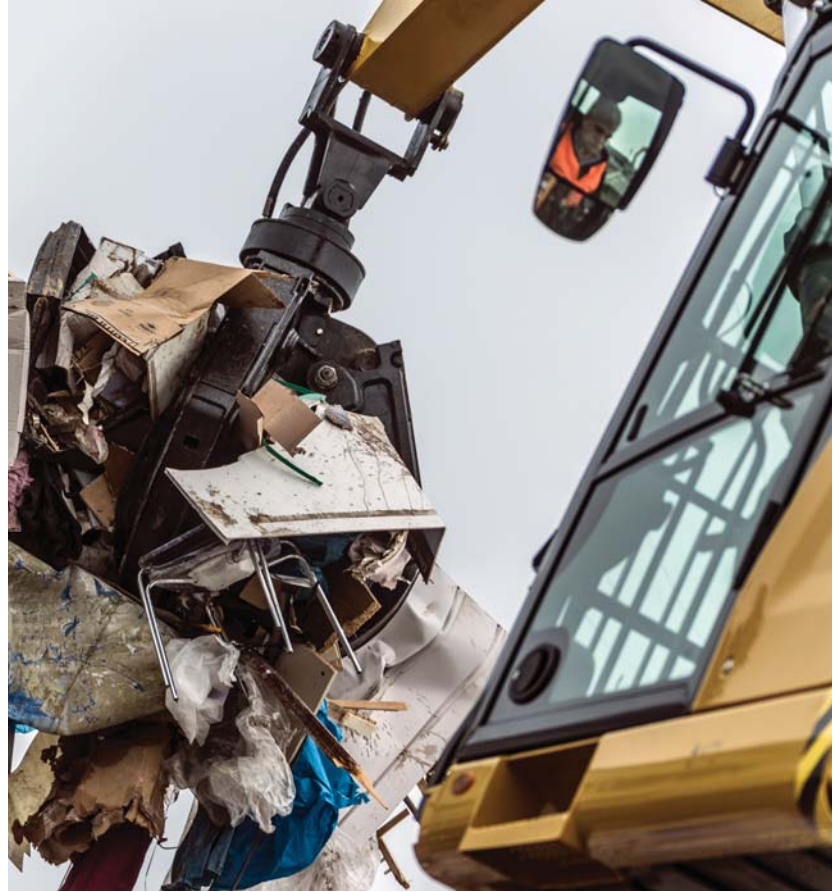
PRODUCTIVITY



SAFETY



SUSTAINABILITY



## 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. Attachment changes have never been easier!

\*For straight/linkage sticks.



## Attachment Solutions for Scrap Recycling, Bulk Handling

When productivity, reliability and stability are important, Cat attachments are the perfect solution for the MH3024. 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 MH3024. 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 MH3024 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 600 to 1000 L. 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.



### Digging Grapples

Cat Digging grapples are designed to suit MH machines for digging applications where good penetration is required.

### Waste Handling Grapples

The dedicated waste handling grapple has been specifically designed to offer high volume for maximum loads and proven fuel consumption.



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

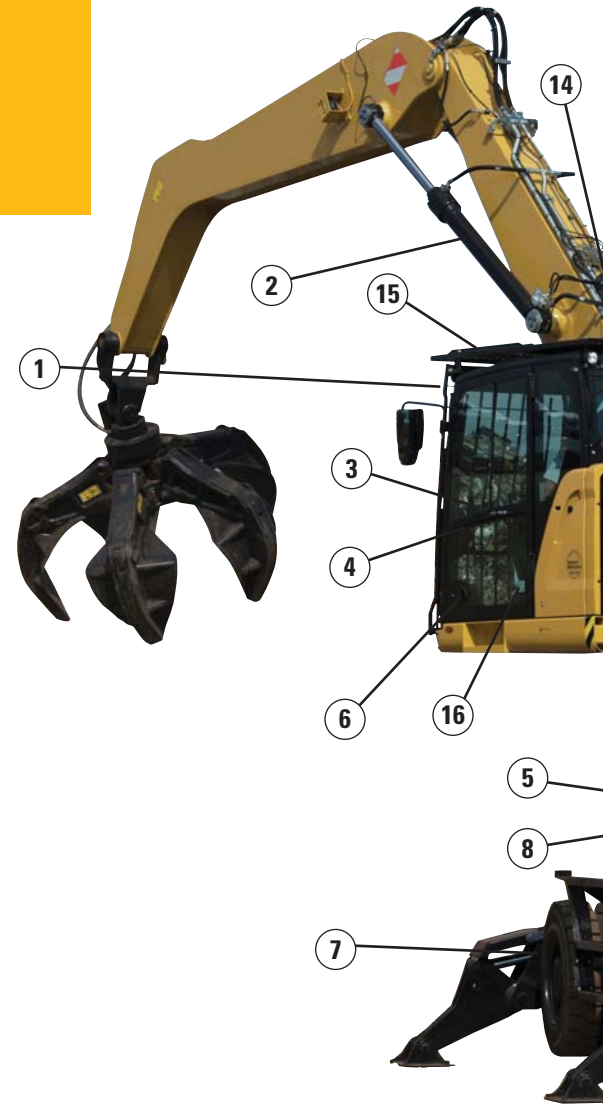
# Safety

Your Safety Is NOT Optional

## Embedded Features

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

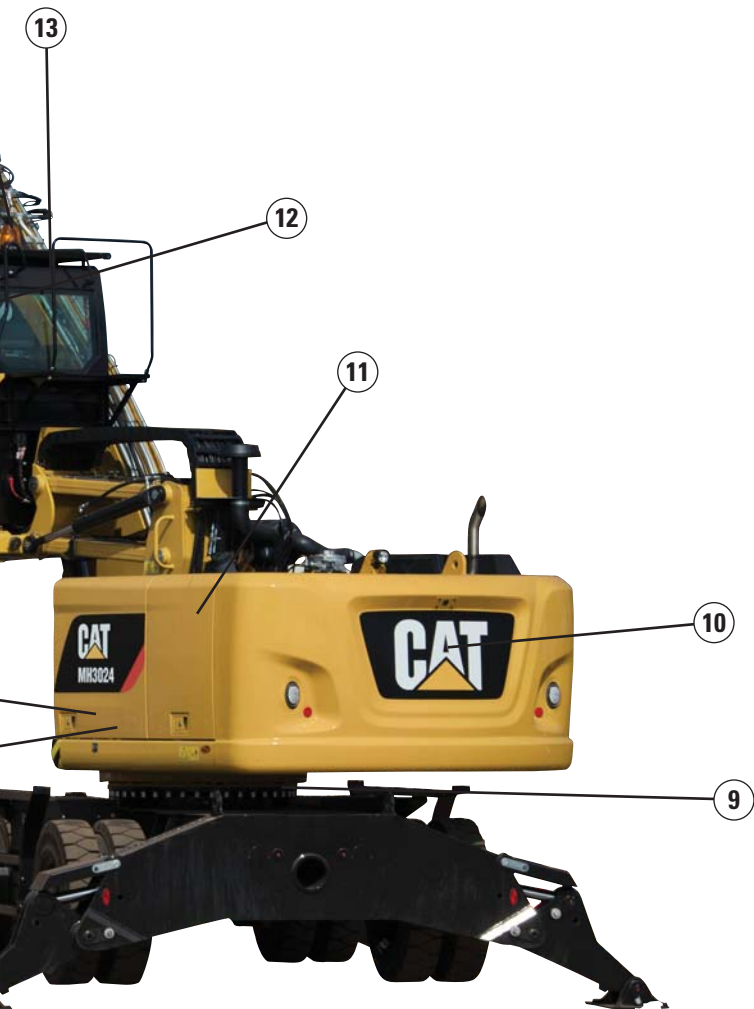
- Safety seat belt and warning indicators (monitor)
- Automatic swing lock
- Automatic brake and axle lock
- Safety lever, preventing exit when the implements are not locked out
- Emergency shut off switch and battery switch disconnect
- Adjustable travel alarm
- Lowering check valves



## Cab Ingress

We bring a solution to allow you to safely climb into the cab:

- Three longer access steps, aligned with the cab entry
- New additional step integrated into the skirt, directly below the cab door
- Anti-skid plates on all walkways and steps reducing slipping hazards
- Convenient door handrail
- Additional extended handrail, from the top to the bottom of the cab
- Tiltable console, not to obstruct entry into the cab
- Safety lever built into the tiltable console to make sure the way in and out is free of obstacles



- 1) Laminated windshield and skylight window
- 2) Lowering check valves
- 3) Safety seat belt indicator
- 4) Safety lever
- 5) Emergency shut-off switch
- 6) Automatic brake and axle lock
- 7) Punched, anti-slippery walking surfaces
- 8) Battery switch disconnect
- 9) Swing and implement electronic lock
- 10) Adjustable travel alarm
- 11) All doors equipped with gas spring cylinders
- 12) Emergency hammer and exit
- 13) Sound proofing
- 14) Beacon available
- 15) FOPS cab and top/front guards compatibility
- 16) Safety lever to lower the cab, either from the ground or directly from the cab

### Smart Lighting

- LED lights for all working lights for enhanced visibility
- Halogen lights for all roading lights
- LED dome light for better illumination inside the cab



### Safe and Quiet Cab

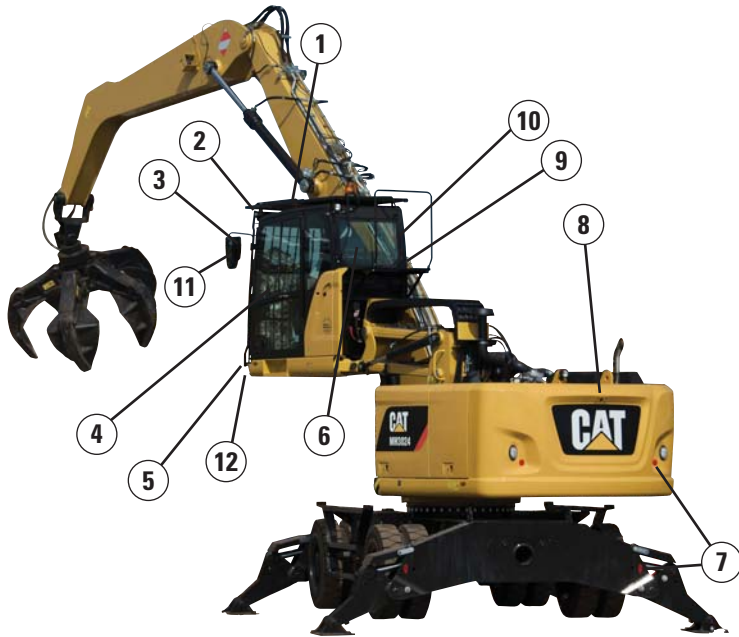
The all-new cab provides you with a safe environment. It also contributes to your comfort with limited vibrations and drastically reduced sound levels.

### Great Views

- Enlarged glass gives you excellent visibility to the front, top, rear, and sides, even to the right
- Standard rearview camera gives you a clear field of view behind the machine through the monitor. Camera is integrated into the counterweight.
- Standard sideview camera, to check nothing is hidden to you from the front right hand side to the rear of the machine
- Lenses of all the cameras are wide angle and heated
- All mirrors are wide angle and allow view not only around the machine but also to the ground

# Unmatched Visibility

Make Sure Nothing Is Hidden to You



**Visibility all around is critical**, especially for machines working and driving in industrial job sites.

- 1) Increased skylight and windshield glass area
- 2) Improved lighting with standard LED lights for all working lights
- 3) Optional heated mirrors
- 4) Great left hand side visibility with the new all glass door
- 5) Halogen roading lights
- 6) Wide rear window
- 7) Reflecting red lights on rear and blade/outriggers
- 8) Standard wide rearview camera
- 9) Standard side camera and dedicated wide monitor
- 10) Large right hand side window
- 11) Mirrors, wide angle, with additional lower mirror for ground visibility
- 12) High visibility – 2400 mm elevated cab

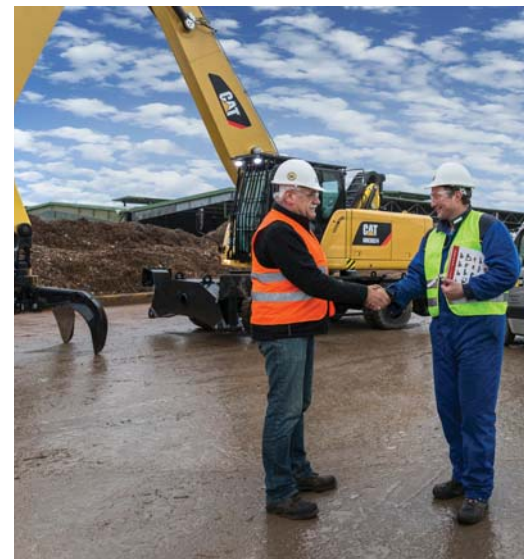
## Complete Customer Care

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.



# MH3024 Wheel Material Handler Specifications

## Engine

Engine Model	Cat C7.1 ACERT <sup>(1)</sup>	
Ratings	1,700 rpm	
Engine Gross Power (maximum)		
ISO 14396	129.4 kW	174 hp
ISO 14396 (metric)	176 hp (PS)	
Net Power (Rated) <sup>(2)</sup>		
ISO 9249/SAE J1349	126 kW	169 hp
ISO 9249/SAE J1349 (metric)	171 hp (PS)	
80/1269/EEC	126 kW	169 hp
Net Power (maximum)		
ISO 9249/SAE J1349	126 kW	169 hp
ISO 9249/SAE J1349 (metric)	171 hp (PS)	
80/1269/EEC	126 kW	
Bore	105 mm	
Stroke	135 mm	
Displacement	7.01 L	
Maximum Torque at 1,400 rpm	830 N·m	
Number of Cylinders	6	

<sup>(1)</sup> Meets Stage IV emission standards.

<sup>(2)</sup> Rated speed 1,700 rpm. Constant power from 1,500-1,700 rpm.

- 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 derating required up to 3000 m altitude. Automatic derating occurs after 3000 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	12.0 km/h
Drawbar Pull	127.0 kN
Maximum Gradeability (25 000 kg)	60.0%

## Swing Mechanism

Swing Speed	9.0 rpm
Swing Torque	53.0 kN·m

## Undercarriage\*

Maximum Steering Angle	35.0°
Oscillation Axle Angle	±5.0°
Minimum Turning Radius	
Outside of Tire	6800 mm
End of VA Boom	7800 mm
End of One-Piece Boom	9300 mm

\*Dimensions valid for standard undercarriage.

## Service Refill Capacities

Fuel Tank (total capacity)	420 L
Diesel Exhaust Fluid Tank	34.5 L
Cooling System	46.9 L
Engine Crankcase	18.5 L
Rear Axle Housing (differential)	14 L
Front Steering Axle (differential)	10.5 L
Final Drive	2.5 L
Powershift Transmission	2.5 L

# MH3024 Wheel Material Handler Specifications

## Weights

Operating Weights*	22 330-27 000 kg
MH Boom	
MH Undercarriage, Straight Stick	26 150 kg
MH Undercarriage, Drop Nose Stick	25 770 kg
Standard Undercarriage, Straight Stick	25 220 kg
Sticks**	
Straight (4800 mm)	1265 kg
Drop Nose (4900 mm)	860 kg
Drop Nose (5900 mm)	1080 kg
MH Push Blade	675 kg
Dozer Blade	850 kg
Solid Tires (delta vs. standard tires)	950 kg
Counterweight	
Standard	4100 kg
Optional	5200 kg

\*Operating weight includes solid tires, 5200 kg counterweight, full fuel tank, operator, four outriggers undercarriage, attachment (1400 kg). Weight varies depending on configuration.

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

## Hydraulic System

Tank Capacity	200 L
System	352 L

## Hydraulic System: Maximum Pressure

Implement Circuit	
Normal	350 bar
Heavy Lift	370 bar
Travel Circuit	350 bar
Auxiliary Circuit	
High Pressure	350 bar
Medium Pressure	210 bar
Swing Mechanism	310 bar

## Hydraulic System: Maximum Flow

Implement/Travel Circuit	359 L/min
Auxiliary Circuit	
High Pressure	250 L/min
Medium Pressure	49 L/min
Swing Mechanism	127 L/min

## Tires

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

## Push Blade

Blade Type	Radial
Blade Height	920 mm
Width	2990 mm



# MH3024 Wheel Material Handler Specifications

## Emissions and Safety

Engine Emissions	Stage IV
Diesel Exhaust Fluid	Must meet ISO 22241
Fluids (optional)	
Cat Bio HYDO Advanced	Readily biodegradable EU Flower eco-label certified
Bio Diesel 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 <sup>2</sup>
Maximum Whole Body	
ISO/TR 25398:2006	<0.5 m/s <sup>2</sup>
Seat Transmissibility Factor	
ISO 7096:2000-spectral class EM5	<0.7

## Standards

Operator Protective Structure	
Top/Front Guards	FOPS (Falling Object Protective Structure) meets FOPS criteria ISO 10262:1998 and SAE J1356:2008
Cab/Sound Levels	Meets appropriate standards as listed below

## Sound Performance

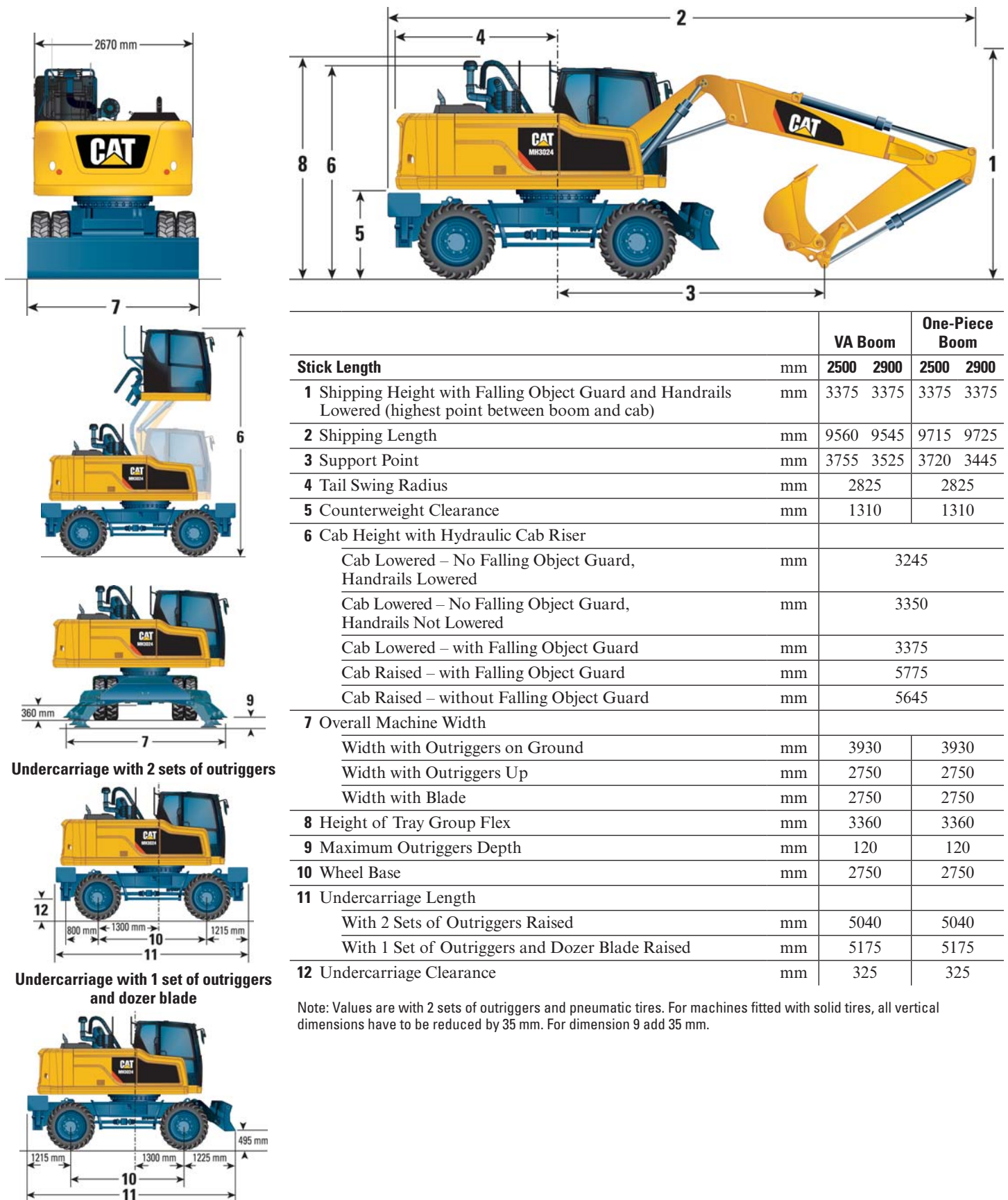
Operator Sound	
2000/14/EC	71 dB(A)
Spectator Sound	
2000/14/EC	100 dB(A)

- Operator Sound – The operator sound level is measured according to the procedures specified in 2000/14/EC, 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 2000/14/EC.
- 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).

# MH3024 Wheel Material Handler Specifications

## Dimensions – With Standard Undercarriage

All dimensions are approximate.



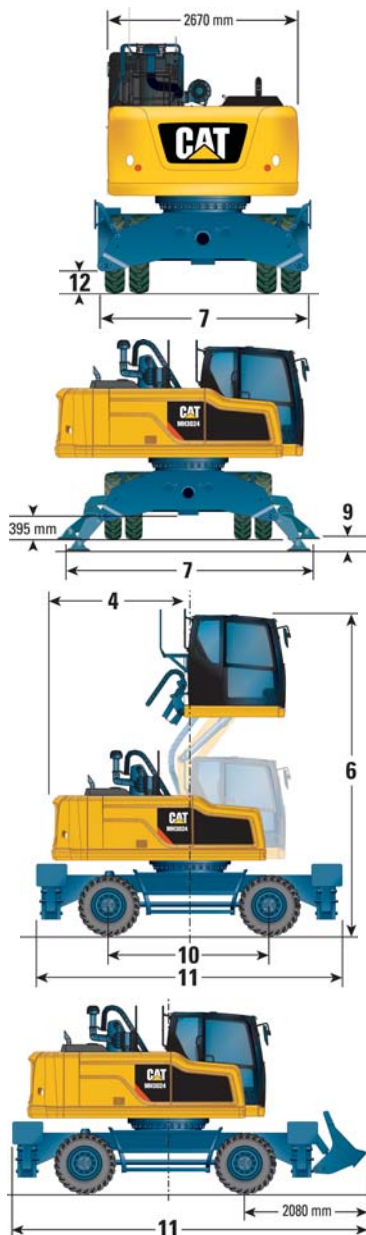
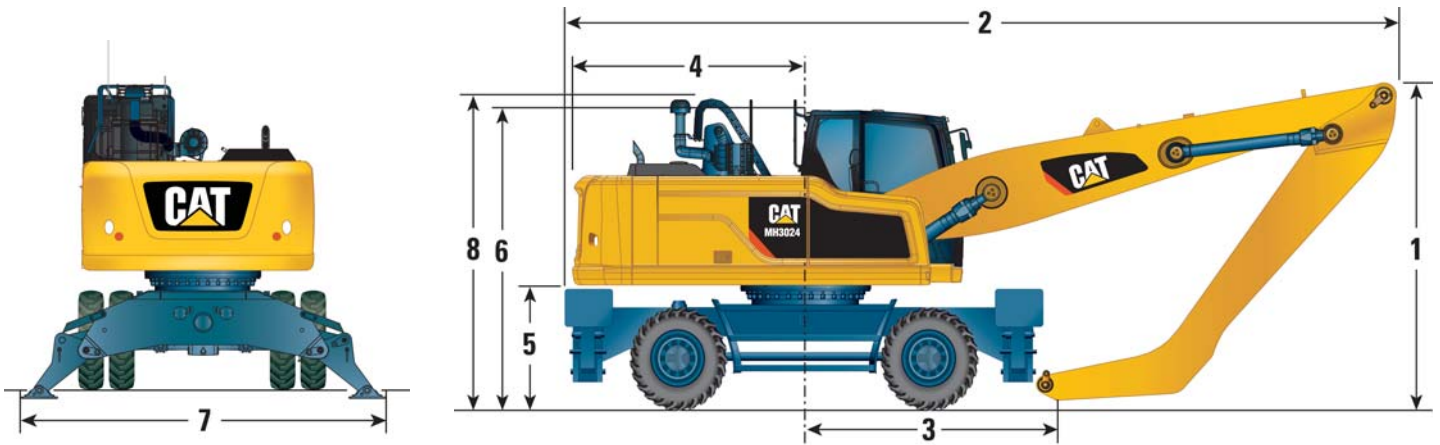
		VA Boom		One-Piece Boom	
Stick Length	mm	2500	2900	2500	2900
1 Shipping Height with Falling Object Guard and Handrails Lowered (highest point between boom and cab)	mm	3375	3375	3375	3375
2 Shipping Length	mm	9560	9545	9715	9725
3 Support Point	mm	3755	3525	3720	3445
4 Tail Swing Radius	mm	2825		2825	
5 Counterweight Clearance	mm	1310		1310	
6 Cab Height with Hydraulic Cab Riser					
Cab Lowered – No Falling Object Guard, Handrails Lowered	mm	3245			
Cab Lowered – No Falling Object Guard, Handrails Not Lowered	mm	3350			
Cab Lowered – with Falling Object Guard	mm	3375			
Cab Raised – with Falling Object Guard	mm	5775			
Cab Raised – without Falling Object Guard	mm	5645			
7 Overall Machine Width					
Width with Outriggers on Ground	mm	3930		3930	
Width with Outriggers Up	mm	2750		2750	
Width with Blade	mm	2750		2750	
8 Height of Tray Group Flex	mm	3360		3360	
9 Maximum Outriggers Depth	mm	120		120	
10 Wheel Base	mm	2750		2750	
11 Undercarriage Length					
With 2 Sets of Outriggers Raised	mm	5040		5040	
With 1 Set of Outriggers and Dozer Blade Raised	mm	5175		5175	
12 Undercarriage Clearance	mm	325		325	

Note: Values are with 2 sets of outriggers and pneumatic tires. For machines fitted with solid tires, all vertical dimensions have to be reduced by 35 mm. For dimension 9 add 35 mm.

# MH3024 Wheel Material Handler Specifications

## Dimensions – With MH Undercarriage

All dimensions are approximate.



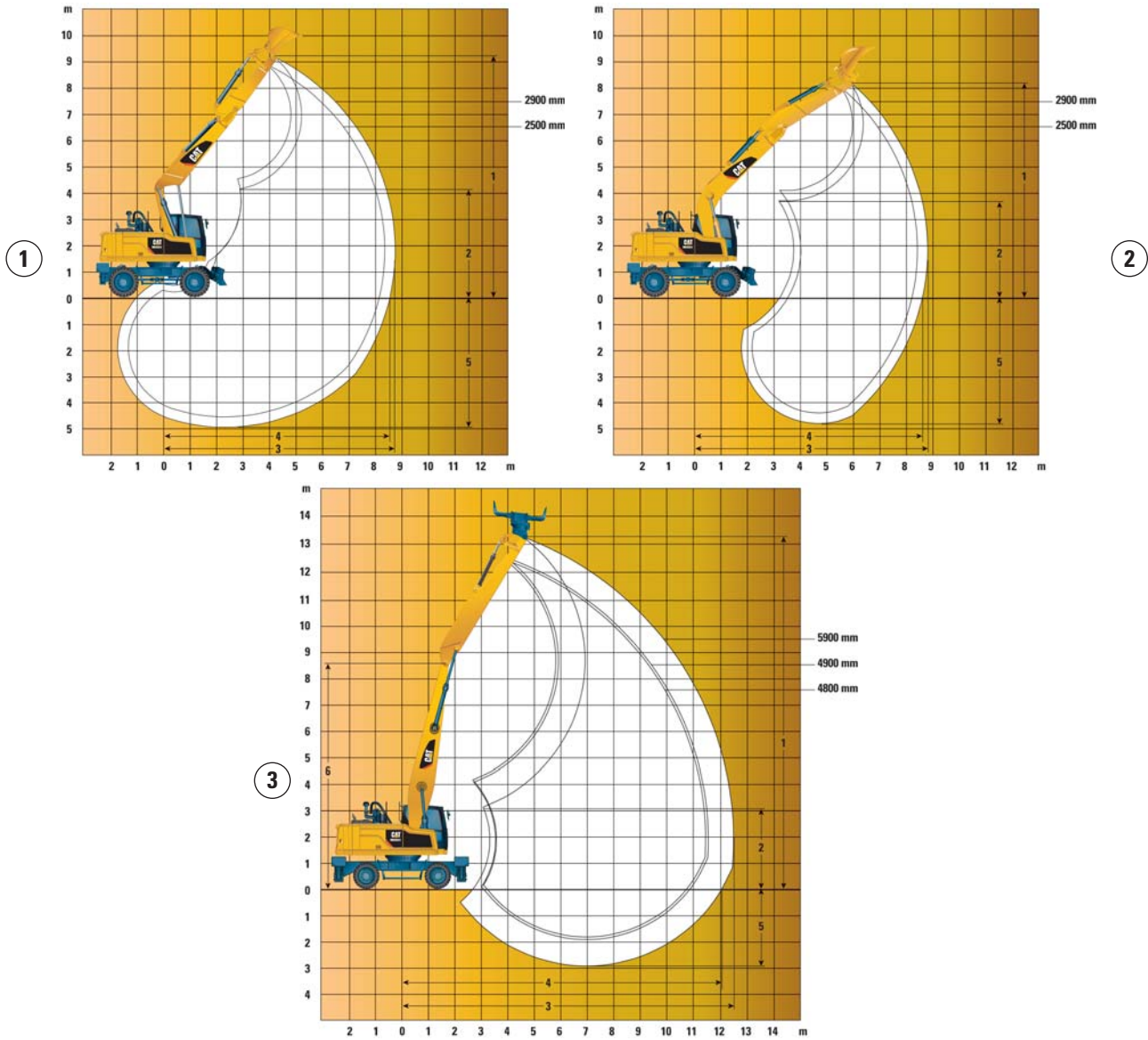
		MH Undercarriage		
		MH Boom 6800 mm		
Stick Length	mm	4800	4900	5900
Stick Type		Straight	Drop Nose	Drop Nose
1 Shipping Height with Falling Object Guard and Handrails Lowered (highest point between boom and cab)	mm	3375	3635	3375*
2 Shipping Length	mm	10 090	10 040	10 040*
3 Support Point	mm	3085	3225	3060*
4 Tail Swing Radius	mm		2825	
5 Counterweight Clearance	mm		1310	
6 Cab Height with Hydraulic Cab Riser				
Cab Lowered – No Falling Object Guard, Handrails Lowered	mm		3245	
Cab Lowered – No Falling Object Guard, Handrails Not Lowered	mm		3350	
Cab Lowered – with Falling Object Guard	mm		3375	
Cab Raised – with Falling Object Guard	mm		5775	
Cab Raised – No Falling Object Guard	mm		5645	
7 Overall Machine Width				
Width With Outriggers on Ground	mm		4360	
Width with Outriggers Up	mm		2990	
Width with the Special Front Push Blade	mm		2990	
8 Height of Tray Group Flex	mm		3360	
9 Maximum Outriggers Depth	mm		125	
10 Wheel Base	mm		2750	
11 Undercarriage Length	mm		5250	
With MH Undercarriage Front Push Blade	mm		6080	
12 Undercarriage Clearance	mm		280	

\*5900 mm stick needs to be detached for shipping.

Note: Values are with pneumatic tires. For machine fitted with solid tires, all vertical dimensions have to be reduced by 35 mm. For dimension 9 add 35 mm.

# MH3024 Wheel Material Handler Specifications

## Working Ranges



		MH3024						
		①		②		③		
		Standard Undercarriage*				MH Undercarriage**		
Boom Type		VA Boom		One-Piece Boom		MH Boom		
Stick Length	mm	2500	2900	2500	2900	4800	4900	5900
1 Maximum Height	mm	8910	9220	7945	8165	12 425	12 505	13 300
2 Minimum Dump Height	mm	4530	4135	4070	3675	4120	4025	3090
3 Maximum Reach	mm	8285	8675	8395	8770	11 435	11 530	12 485
4 Maximum Reach at Ground Level	mm	8070	8470	8185	8580	10 720	10 850	12 050
5 Maximum Depth	mm	4565	4965	4360	4760	1820	1920	2925
6 Boom Pin Height	mm	NA	NA	NA	NA	8620	8620	8620

All dimensions refer to sticknose pin.

\*Standard undercarriage figures calculated with pneumatic tires.

\*\*MH undercarriage figures calculated with solid tires.

# MH3024 Wheel Material Handler Specifications

## MH3024 Work Tool Offering Guide\*

Boom Type		One-Piece Boom				MH Boom					
Counterweight		4100 kg		5200 kg		4100 kg	5200 kg	4100 kg	5200 kg	4100 kg	5200 kg
Undercarriage/Outriggers		(1)		(1)		(2)	(2)	(2)	(2)	(2)	(2)
Stick Length		2500 mm	2900 mm	2500 mm	2900 mm	4800 mm	4800 mm	4900 mm	4900 mm	5900 mm	5900 mm
Stick Type		Straight	Straight	Straight	Straight	Straight	Straight	Drop Nose	Drop Nose	Drop Nose	Drop Nose
Hydraulic Hammer	H115Es	Green	Green	Green	Green	Green	Green				
	H120Es	Green	Green	Green	Green	Green	Green				
	H130Es	Green	Red	Green	Red	Green	Green				
Multi Processor	MP318 CC Jaw	Green	White	Green	White						
	MP318 D	Green	Red	Green	Red						
	MP318 P	Red	White	Red	White						
	MP318 S	Green	Red	Green	Red						
	MP318 U	Green	White	Green	White						
Crusher	P315	Green	White	Green	White						
Pulverizer	P215	Green	Red	Green	Red						
Demolition and Sorting Grapple	G315B-D/R	Green	White	Green	White	Green	Green				
	G315B-D/R fixed CAN	Green	White	Green	White						
	G315B WH	Green	White	Green	White	Green	Green				
Scrap and Demolition Shear	S320B	Red	White	Red	White						
	S325B	Green	White	Green	White						
	S340B	Green	White	Green	White						
Compactor	CVP75	Green	Green	Green	Green						
Dedicated Quick Coupler	CW-30, CW-30S	These couplers are available for the MH3024 (linkage stick).									
	CW-40S										
Orange Peel Grapple (4 or 5 Tines)	GSH15B 400L, 500L, 600L							Orange	Orange	Orange	Orange
	GSH15B 800L							Orange	Orange	Blue	Orange
	GSH20B 600L							Blue	Orange	Blue	Orange
	GSH20B 800L							Blue	Orange	Blue	Orange
	GSH20B 1000L							Blue	Orange	Blue	Orange
Orange Peel Grapple (5 Tines)	GSM25 400L, 500L, 600L, 800L							Orange	Orange	Orange	Orange
	GSM35 500							Orange	Orange	Blue	Orange
	GSM35 600L							Orange	Orange	Blue	Orange
	GSM35 800L							Blue	Orange	Blue	Orange
	GSM35 1000L							Blue	Orange	Blue	Orange
	GSM35 1500L							Blue	Orange	Blue	Orange
Digging Grapple/Clamshell	CTV15 1000L							Orange	Orange	Blue	Orange
	CTV15 1200L							Orange	Orange	Blue	Orange
	CTV15 1500L							Orange	Orange	Blue	Orange
	CTV15 1700L							Orange	Orange	Blue	Orange

(1) With the Outriggers front and rear undercarriage

(2) With the MH undercarriage

\* Offerings not available in all areas. Matches are dependent on Wheeled Excavator configurations. Consult your Cat dealer to determine what is offered in your area and for proper work tool match.

Note: Demolition and Sorting Grapple: D-Demolition shells, R-Recycling shells

Fixed CAN: CW quick coupler adapter plates

- Attachment is a match
- Pin-on or dedicated coupler
- Pin-on only
- Boom mounted
- Not recommended
- Maximum Material Density 1800 kg/m<sup>3</sup>
- Maximum Material Density 1200 kg/m<sup>3</sup>
- Maximum Material Density 600 kg/m<sup>3</sup>











## Standard Equipment

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

### ELECTRICAL

- Alternator, 115A
- Heavy Duty maintenance free batteries
- Lights
  - Boom and stick LED working light
  - One LED light on the counterweight
  - Cab LED interior dome light
  - Rooding lights two front
  - Rooding lights two rear
  - Working LED lights, cab mounted (front and rear)
- Main shut-off switch
- Signal/warning horn

### ENGINE

- Air filter
- Altitude capability: 3000 m
- Automatic engine speed control, including One Touch Low Idle
- Engine Idle Shutdown
- Automatic starting aid
- Cat C7.1 ACERT meeting Stage IV emission standards
- Fuel filter
- Fuel/water separator with level indicator
- High ambient cooling
- Power mode selector (economy, power)

### HYDRAULICS

- Adjustable hydraulic sensitivity
- Cat XT-6 ES hoses
- Control circuits (standard and optional, depending on boom/stick/linkage choice):
  - Medium pressure
    - Two-way, medium pressure circuit, for rotating or tilting of work tools
- Heavy lift mode
- Load-sensing hydraulic system
- Oil cooler
- Quick disconnect couplings
- Separate swing pump

### OPERATOR STATION

- Additional color monitor for sideview camera
- Adjustable armrests
- Air conditioner, heater and defroster with automatic climate control
- Beverage cup/can holder
- Bolt-on top/front guards capability
- Bottle holder
- Bottom mounted, intermittent, parallel wiping system, covering upper and lower windshield glass
- Camera integrated into the counterweight displays through cab monitor
- CD/MP3 radio (12V) at rear location including speakers and 12V converter
- Coat hook
- Cruise control system
- Floor mat, washable, with storage compartment
- Fully adjustable suspension seat
- Hydraulic cab riser
- Instrument panel and gauges, full graphic and color display
  - Information and warning messages in local language
  - Gauges for fuel and DEF levels, engine coolant and hydraulic oil temperature
  - Filters/fluids change interval, working hours
  - Indicators for headlights, turning signal, low fuel and DEF, engine dial setting
  - Clock with 10-day backup battery
- Interior lighting with door switch
- Joysticks, pilot operated
- Laminated front windshield
- Left side console, tiltable, with lock out for all controls
- Lighter (24V)
- Literature holder in right console
- Mobile phone holder
- Parking brake
- Pin code type engine start prevention, integrated into the monitor
- Positive filtered ventilation, variable speed
- Power supply, 12V-10A
- Rear window, emergency exit

- Retractable seat belt, integrated into the seat
- Seat belt indicator and alarm
- Skylight
- Sliding door windows
- Steering column, adjustable angle and height
- Step, integrated into the skirt
- Storage area suitable for a lunch box
- Sunshade for windshield and skylight

### UNDERCARRIAGE

- Automatic brake and axle lock
- Automatic swing and implement lock
- Creeper speed
- Four wheel drive
- Full hydraulic steering with emergency capability
- Heavy-duty axles, advanced travel motor, adjustable braking force and disc brake system
- Oscillating front axle, lockable, with remote greasing
- Steps, wide, left and right
- Tool boxes, left and right, in undercarriage
- Two-speed hydrostatic transmission

### OTHER EQUIPMENT

- Auto-lube system (implements and swing gear)
- Automatic swing brake
- Capability to add auxiliary hydraulic circuit
- Cooling package, fine mesh screen and engine air precleaner
- Cat Electronic Technician capability (ET)
- Counterweight, 4100 kg
- Door locks and cap locks with Cat one-key security system
- Lowering check valves, BLCV including overload warning device and SLCV
- Mirrors, frame and cab
- Product Link
- Rear wide angle camera
- Side wide angle camera
- S·O·S<sup>SM</sup> Quick Sampling valves for engine oil, hydraulic oil and coolant

## 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
- SmartBoom

### BOOMS AND STICKS

- VA boom (5440 mm):
  - Straight stick (2500, 2900 mm)
- One-Piece boom (5650 mm):
  - Straight stick (2500, 2900 mm)
- Material Handling boom (6800 mm):
  - Drop nose MH stick (4900 or 5900 mm)
  - Straight MH stick (4800 mm)

### ELECTRICAL

- Back-up alarm with three selectable modes
- Rotating beacon

### OPERATOR STATION

- Top/front guards
- Joystick steering
- Pedal HPF/Hammer for auxiliary operation
- Seat, adjustable high-back
  - Vertical air suspension, horizontal suspension, automatic weight adjustment, lumbar support, passive climate system, seat cushion length/angle adjustment and heated seat (Comfort)
  - Vertical air suspension, horizontal suspension, automatic height and weight adjustment, active climate system, premium microfiber seat fabric, pneumatic lumbar support, seat cushion length and angle adjustment and adjustable dampening (Deluxe)
- Visor for rain protection
- Windshield
  - One-piece fixed
  - 70/30 split, openable

### TIRES

- Dual pneumatic 11.00-20
- Dual solid rubber, 10.00-20
- Spacer rings for tires

### UNDERCARRIAGE

- MH undercarriage with four welded outriggers
- MH undercarriage with four welded outriggers and front mounted blade
- Standard undercarriage, with outriggers (front and/or rear), dozer blade (front or rear)

### OTHER EQUIPMENT

- Bucket linkages
- Cat Machine Security System
- Counterweight, 5200 kg
- Hydraulic quick coupler
- Maximum speed 20 km/h or 25 km/h\*
- Mirrors heated, frame and cab
- Refueling pump with dedicated tray for the hose

\*25 km/h not compatible with solid tires

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)

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