



# Cat<sup>®</sup> MH3022

## Material Handler

***We know that when it comes to material handling equipment, your success depends on productivity and low operating costs. The Cat<sup>®</sup> MH3022 is a purpose-built material handler that features simple-to-use technologies, a redesigned cab for enhanced comfort, and more options to match your work. Combine these features with up to 10% lower operating costs, and you have a safe, quality, and reliable product that will provide you with the superior performance you need for your toughest indoor material handling applications.***

*Not all features are available in all regions. Consult your Cat dealer for specific configurations available in your region.*

### **High Performance with Lower Fuel Consumption**

- Use up to 10% less fuel versus the previous model with no impact on your productivity.
- The C4.4 engine can run on biodiesel up to B20 and meets EU Stage V and U.S. EPA Tier 4 Final emission standards with an aftertreatment system that requires no maintenance or downtime.
- The advanced electro-hydraulic system provides the optimum balance of power and efficiency while giving you the control you need.
- Valve priority puts hydraulic pressure and flow where you need it.
- Boost lifting capabilities and improve the controllability of heavy loads with heavy lift mode.
- Program and store your preferred power mode and joystick settings using your operator ID. The machine will automatically remember your selections.
- SmartBoom™ lets the boom freely travel up and down without using any pump flow so operators can focus on stick and bucket work.
- The Cat App helps you manage fleet location, hours, and maintenance schedules; it also alerts you for required maintenance and even allows you to request service from your local Cat dealer.
- Product Link™ comes standard so you can remotely monitor machine health, location, hours, and fuel consumption on demand.

### **Versatility Keeps You Productive and Profitable**

- Match your machine to your application. Multiple configurations allow you to customize your machine to your needs.
- Equip your MH3022 with an optional 15 kW generator for magnet operation. Generator controls are fully integrated into the cab monitor.
- Expand your work capabilities with attachments for a variety of applications.

### **Work in Comfort in the All-New Cab**

- Choose between Deluxe and Premium cab options.
- The Deluxe seat is heated and air adjustable, while the Premium seat is heated and ventilated and adjusts automatically.
- The cab has a wide seat that adjusts for operators of all sizes.
- Control the machine comfortably with easy-to-reach controls.
- Standard automatic climate control keeps you at the right temperature all shift long.
- Stow your gear with plenty of in-cab storage beneath and behind the seat, overhead, and in the consoles. A cup holder, document holder, bottle holder, and coat hook are also provided.
- Use the standard radio's USB ports and Bluetooth<sup>®</sup> technology to connect to personal devices.



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## Reliability and Durability You Can Count On

- Count on your machine to withstand wear throughout the years. Boom, sticks, and other high-stress areas are reinforced with thick multi-plate fabrications, castings, and forgings to ensure quality and reliability.
- Work up to 3000 m (9,840 ft) above sea level without derating.
- Don't let the temperature stop you from working. The material handler has a standard high-ambient temperature capability of 52°C (125°F) and cold start capability of -18°C (-0°F).
- Auto warm up speeds up hydraulic oil warming in cold temperatures and helps prolong the life of components.

## Safety

- Cab Avoidance helps you avoid contact between your attachment and the cab.
- Standard E-fence prevents your machine from moving outside operator-defined parameters.
- Keep your machine secure with Operator ID. Use your PIN code on the monitor to enable the push button starting feature.
- Access all daily maintenance points from ground level – no need for you to climb on top of the machine.
- Enjoy great all-around visibility with the help of smaller cab pillars, larger windows, and a flat engine hood design. Rearview and sideview cameras are standard along with optional 360-degree visibility system.
- Standard 1800-lumen LED lights on the chassis, boom, stick, and cab illuminate your surroundings for a safer work environment.
- Thicker high-impact and impact-resistant windshields fulfill EN356 P8B and P5A standards respectively.
- Cab air pre-filtration reduces dust entry and air contamination. Upgrade to the optional Advanced Cabin Filtration system for additional protection against harmful particles.
- Joystick steering eliminates steering column, improving front visibility and increasing cab entrance width. There is an option for a steering wheel for operators who prefer it.
- New service platform design provides easy, safe, and quick access to the upper service platform. The service platform steps use anti-skid punch plate to prevent slipping.
- The standard hydraulic lockout lever isolates all hydraulic and travel functions in the lowered position.
- Optional Falling Object Guard System (FOGS) provides protection from falling and flying debris.
- Ground-level shutoff switch stops all fuel to the engine when activated and shuts down the machine.
- Boom and stick lowering check valves prevent reverse flow, keeping your front linkage securely in place should the hydraulic system unexpectedly lose pressure.

## Superior Serviceability

- Track your machine's filter life and maintenance intervals via the in-cab monitor.
- Change all fuel filters at a synchronized 1,000 hours.
- Expect the new air intake filter with cyclone precleaner to last up to 1,000 hours.
- The new hydraulic oil filter provides improved filtration performance, anti-drain valves to keep oil clean when the filter is replaced, and longer life with a 3,000-hour replacement interval – 50 percent longer than previous filter designs.
- High-efficiency, electrically driven cooling fans run only when needed; you can program intervals, so they automatically reverse to keep cores clean without interrupting your work.
- S-O-S<sup>SM</sup> ports simplify maintenance and allowing for quick, easy extraction of fluid samples for analysis.

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>BOOMS AND STICKS</b>			<b>ENGINE</b>		
6.4 m (21') Straight MH boom		✓	C4.4 engine	✓	
5.35 m (17'7") Straight MH boom		✓	One-touch low idle with automatic engine speed control	✓	
5.26 m (17'3") Variable Angle boom		✓	Automatic engine shutdown	✓	
5.65 m (18'6") One-piece boom		✓	52°C (125°F) high-ambient capability	✓	
4.5 m (14'9") Drop Nose MH stick		✓	-18°C (-0°F) cold start capability	✓	
4.3 m (14'1") Straight MH stick		✓	Electric fuel priming pump	✓	
4.0 m (13'1") Drop Nose MH stick		✓	Double element air filter with integrated precleaner	✓	
2.9 m (9'6") Reach stick		✓	On-demand electric cooling fans with auto-reverse function	✓	
2.5 m (8'2") Reach stick		✓	<b>HYDRAULIC SYSTEM</b>		
<b>CAB</b>			Electric main control valve	✓	
Advanced sound-suppressed TOPS cab (ISO 12117-2 compliant)	✓		Automatic hydraulic oil warm up	✓	
Deluxe cab: air suspension heated seat, 10" touchscreen monitor		✓	Automatic swing brake	✓	
Premium cab: air suspension heated seat, 10" touchscreen monitor		✓	Separate dedicated swing pump	✓	
Keyless push-to-start engine control	✓		Boom and stick lowering check valves	✓	
Tilt-up left-side console	✓		Medium pressure auxiliary circuit	✓	
Fixed one-piece laminated windshield and roof window (P5A glass)		✓	Element type main hydraulic filter	✓	
Fixed one-piece laminated windshield and roof window (P8B glass)		✓	SmartBoom	✓	
LED dome lights	✓		Heavy lift mode	✓	
<b>CAT TECHNOLOGY</b>			<b>SAFETY AND SECURITY</b>		
Cat Product Link	✓		Rear- and right-side-view cameras	✓	
E-fence and cab avoidance	✓		360° visibility		✓
Remote flash and services capability	✓		Travel alarm		✓
<b>ELECTRICAL SYSTEM</b>			Secondary engine shutoff switch	✓	
Roading and indicator lights at front and rear	✓		<b>UNDERCARRIAGE AND STRUCTURES</b>		
Maintenance-free batteries	✓		2550 mm (8'4") wide undercarriage	✓	
LED chassis light, left-hand/right-hand boom and stick lights, cab lights -1800 lumens	✓		3700 kg (8,150 lb) counterweight	✓	
Centralized electrical disconnect switch	✓		Push Blade		✓
Programmable time delay LED working lights	✓		10.00-20 dual solid rubber tires		✓
Electrical refueling pump		✓	10.00-20 16 PR dual tires		✓
<b>SERVICE AND MAINTENANCE</b>			All wheel drive	✓	
Automatic lubrication system for implement and swing system	✓		Automatic brake/axle lock	✓	
S•O•S sampling ports	✓		Creeper speed	✓	
			Heavy-duty axles, advanced disc brake system, and travel motor with adjustable braking force	✓	
			Lockable, oscillating front axle with remote greasing point	✓	

**Not all features are available in all regions. Please check with your local Cat dealer for specific offering availability in your area.**

For additional information and additional regional offerings, refer to the Technical Specifications brochure available at [www.cat.com](http://www.cat.com) or your Cat dealer.

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## Technical Specifications

### Engine

Engine Model	Cat C4.4	
Engine Power – ISO 14396:2002	110 kW	148 hp
Net Power – ISO 9249:2007	108 kW	145 hp
Bore	105 mm	4 in
Stroke	127 mm	5 in
Displacement	4.4 L	269 in <sup>3</sup>

- The net power advertised is the power available at the flywheel when the engine is equipped with alternator, air cleaner, aftertreatment, and fan at minimum speed.
- The MH3022 meets U.S. EPA Tier 4 Final and EU Stage V emission standards.

### Transmission

Maximum Travel Speed (with steering wheel)	20 km/h	12.4 mph
Maximum Travel Speed (with joysticks)	15 km/h	9.3 mph
Drawbar Pull	127 kN	28,550 lbf
Maximum Gradeability	65%	

### Hydraulic System

Main System – Maximum Flow – Implements	306 L/min	81 gal/min
Maximum Pressure – Implements	37 000 kPa	5,366 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	36 500 kPa	5,294 psi

### Machine Weights

Minimum Operating Weight	21 200 kg	46,750 lb
Maximum Operating Weight	24 500 kg	54,000 lb

- Operating weight includes full fuel tank, operator, 1400 kg (3,086 lb) work tool. Weight varies depending on configuration.

### Service Refill Capacities

Fuel Tank Capacity	350 L	92.5 gal
Diesel Exhaust Fluid Tank	30 L	7.9 gal
Cooling System	36 L	9.5 gal
Engine Oil	13 L	3.4 gal
Hydraulic Tank	155 L	40.9 gal
Hydraulic System (including tank)	345 L	91.1 gal
Rear Axle (differential)	14 L	3.7 gal
Steering Axle (differential)	10.5 L	2.8 gal
Final Drive (each)	2.5 L	0.7 gal
Powershift Transmission	2.5 L	0.7 gal

### Swing Mechanism

Swing Speed	8.2 rpm	
Maximum Swing Torque	54 kN•m	39,533 lb-ft

### Dimensions

Boom	MH Boom 6.4 m (21'0")	
Stick	Straight 4.3 m (14'1")	
Shipping Height with FOGS	3350 mm	11'0"
Shipping Length	9600 mm	31'6"
Shipping Length (with push blade)	9860 mm	32'4"
Machine Length	4950 mm	16'3"
Machine Length (with push blade)	5390 mm	17'8"
Tail Swing Radius	2600 mm	8'6"
Counterweight Clearance	1300 mm	4'3"
Cab Height – Lowered	3350 mm	11'0"
Cab Height – Lowered with FOGS	3350 mm	11'0"
Cab Height – Raised	5750 mm	18'10"
Cab Height – Raised with FOGS	5750 mm	18'10"
Wheel Base	2600 mm	8'6"
Shipping Width	2540 mm	8'4"
Ground Clearance	330 mm	1'1"
Undercarriage Length	4900 mm	16'1"
Undercarriage Length (with push blade)	5365 mm	17'7"
Upper Frame Width (including handrails)	2540 mm	8'4"

### Working Ranges

Boom	MH Boom 6.4 m (21'0")	
Stick	Straight 4.3 m (14'1")	
Maximum Height	11 710 mm	38'5"
Minimum Dump Height	4290 mm	14'1"
Maximum Reach	10 280 mm	33'9"
Maximum Reach at Ground Line	9800 mm	32'2"
Maximum Depth	1500 mm	4'11"
Boom Pin Height	8200 mm	26'11"

### Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.05 kg of refrigerant, which has a CO<sub>2</sub> equivalent of 1.502 metric tonnes.

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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