

M322D

Wheel Excavator

The Cat® D Series incorporates innovations for improved performance and versatility.

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

Engine

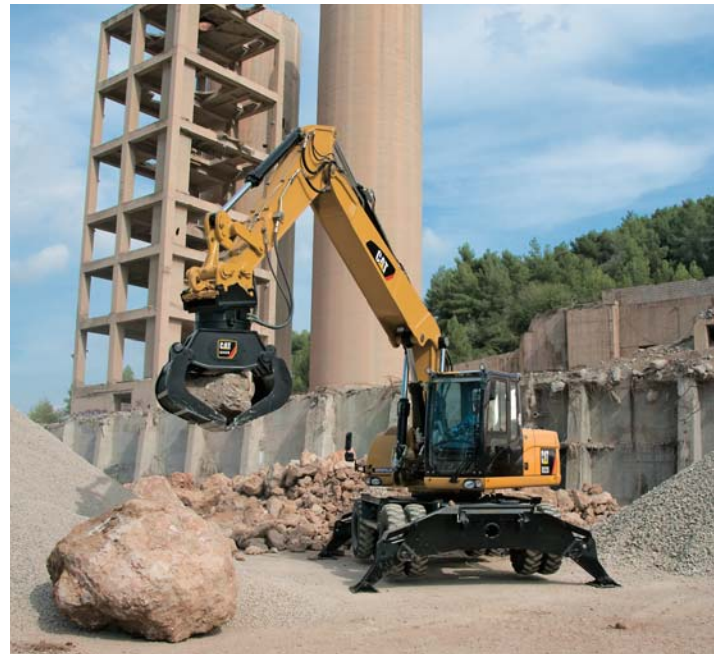
The EU Stage IIIA compliant C6.6 offers increased performance and reliability while reducing fuel consumption and sound levels.

Environmentally Responsible Design

Helping to protect our environment, the engine has low operator and spectator sound levels, longer filter change intervals and is more fuel-efficient.

Hydraulics

The state of the art load-sensing hydraulic system combined with a separate dedicated swing pump provides fast cycle times, increased lift capacity and high bucket and stick forces. This combination maximizes your productivity in any job.



Serviceability

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

Operator Comfort

The totally redesigned operator station maximizes comfort while increasing safety. The available auto-weight adjusted air-suspension seat with heated and cooled ventilated cushions improves operator comfort. Safety is enhanced by the new color monitor and standard rear-mounted camera.

Undercarriage

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

M322D Wheel Excavator Specifications

Engine

Engine Model	Cat® C6.6 with ACERT™ Technology
Ratings	2,000 rpm
Gross Power	129 kW (175 hp)
Net Power	
ISO 9249	123 kW (167 hp)
80/1269/EEC	123 kW (167 hp)
Bore	105 mm
Stroke	127 mm
Displacement	6.6 L
Cylinders	6
Maximum Torque at 1,400 rpm	750 N·m

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

Hydraulic System

Tank Capacity	220 L
System	350 L
Maximum Pressure	
Implement Circuit	
Normal	350 bar
Heavy Lift	375 bar
Travel Circuit	350 bar
Auxiliary Circuit	
High Pressure	350 bar
Medium Pressure	185 bar
Swing Mechanism	340 bar
Maximum Flow	
Implement/Travel Circuit	350 L/min
Auxiliary Circuit	
High Pressure	250 L/min
Medium Pressure	50 L/min
Swing Mechanism	112 L/min

Weights

VA Boom*	
Rear Dozer Only	19 650 kg
Rear Dozer, Front Outriggers	20 850 kg
Front and Rear Outriggers	21 100 kg
One-Piece Boom*	
Rear Dozer Only	19 000 kg
Rear Dozer, Front Outriggers	20 200 kg
Front and Rear Outriggers	20 450 kg
Sticks	
Short (2200 mm)	650 kg
Medium (2500 mm)	700 kg
Long (2900 mm)	780 kg
Dozer Blade	920 kg
Outriggers	1260 kg

Counterweight

Standard	3900 kg
Optional	4400/5400 kg

- Machine weight with medium stick, 4400 kg counterweight, with operator and full fuel tank, without work tool. Weight varies depending on configuration.

Transmission

Forward/Reverse	
1st Gear	7 km/h
2nd Gear	25 km/h
Creeper Speed	
1st Gear	3 km/h
2nd Gear	12 km/h
Drawbar Pull	112 kN
Maximum Gradeability	60%

M322D Wheel Excavator Specifications

Swing Mechanism

Swing Speed	9 rpm
Swing Torque	56 kN·m

Tires

Standard

- 11.00-20 (dual pneumatic)

Optional

- 10.00-20 (dual solid rubber)

Undercarriage

Ground Clearance	380 mm
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Maximum Steering Angle	35°
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Oscillation Axle Angle	± 9°
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Minimum Turning Radius

Standard Axle

Outside of Tire	6800 mm
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End of VA Boom	7800 mm
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End of One-Piece Boom	9300 mm
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Service Refill Capacities

Fuel Tank	385 L
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Cooling	37 L
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Engine Crankcase	15 L
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Rear Axle Housing (differential)	14 L
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Front Steering Axle (differential)	11 L
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Final Drive	2.5 L
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Powershift Transmission	2.5 L
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Sound Levels

Exterior Sound

- The labeled spectator sound power level measured according to the test procedures and conditions specified in 2000/14/EC is 103 dB(A).

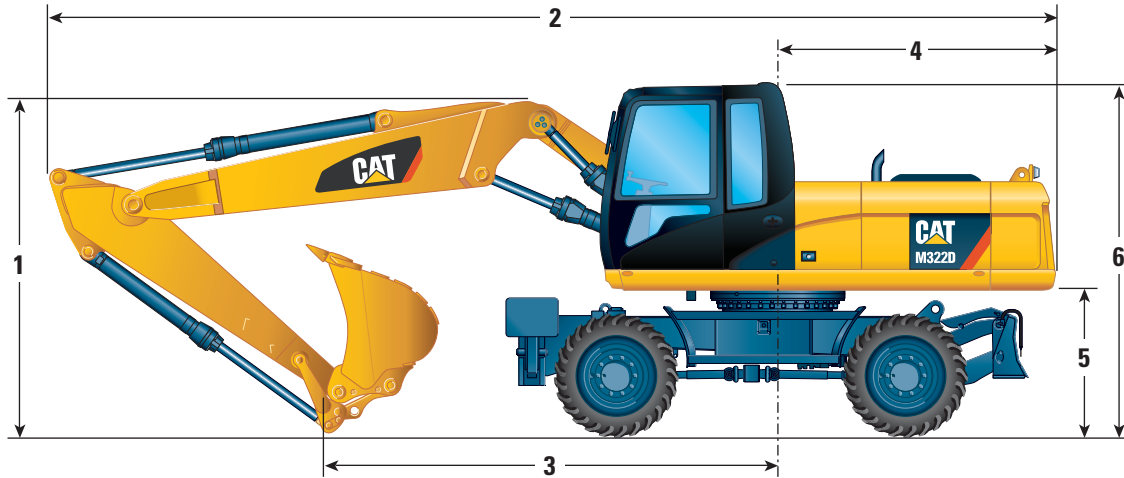
Cab/ROPS/FOGS

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

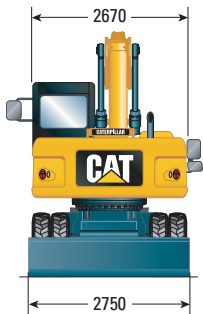
M322D Wheel Excavator Specifications

Dimensions

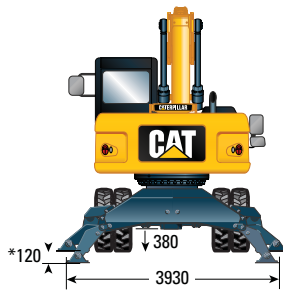
All dimensions are approximate.



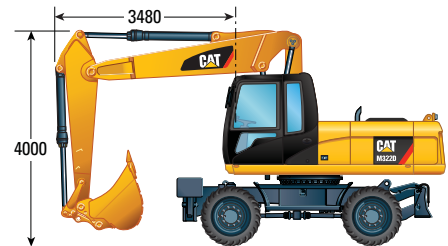
		VA Boom			One-Piece Boom		
Stick Length	mm	2200	2500	2900	2200	2500	2900
1 Shipping Height	mm	3260	3230	3250	3300	3250	3290
2 Shipping Length	mm	9430	9440	9430	9650	9640	9650
3 Support Point	mm	4160	3660	3420	4240	3720	3440
4 Tail Swing Radius	mm		2820			2820	
5 Counterweight Clearance	mm		1310			1310	
6 Cab Height	mm		3200			3200	
With 1200 mm Fixed Cab Riser	mm		4400			4400	



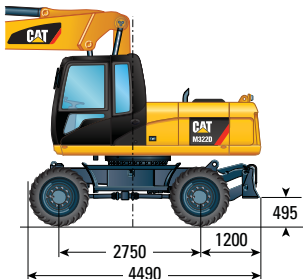
* Maximum tire clearance with outrigger fully down



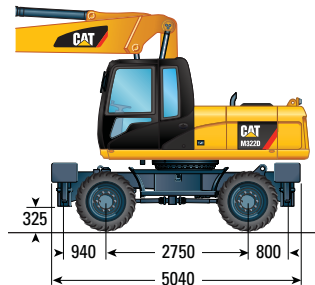
Roading position with 2500 mm stick



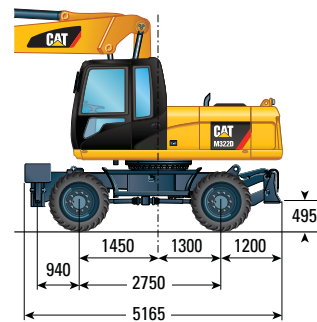
Undercarriage with dozer only



Undercarriage with 2 sets of outriggers

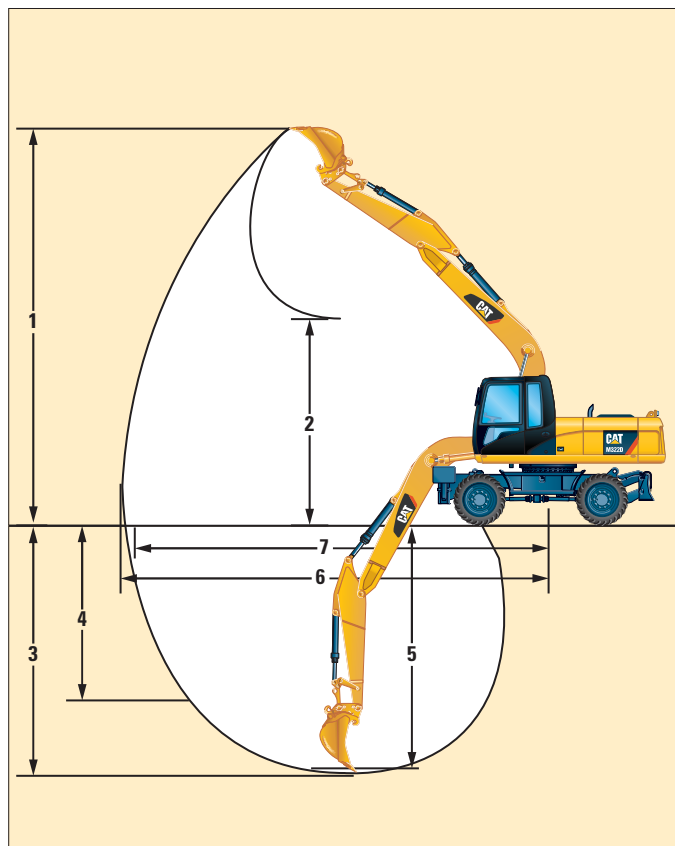
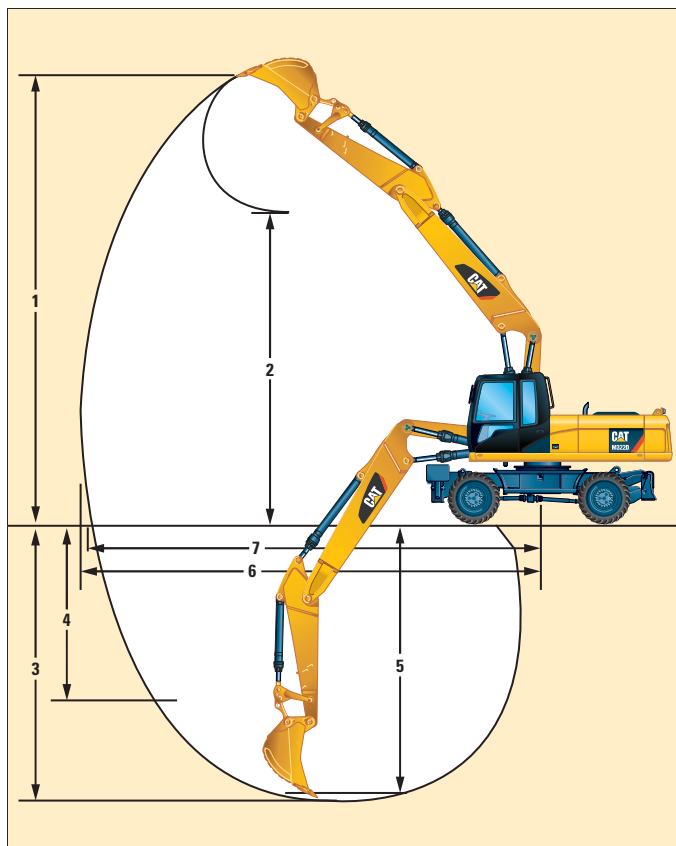


Undercarriage with 1 set of outriggers and dozer



M322D Wheel Excavator Specifications

Working Ranges



		VA Boom			One-Piece Boom		
		2200	2500	2900	2200	2500	2900
Stick Length	mm						
1 Digging Height	mm	10 560	10 620	10 930	9670	9540	9760
2 Dump Height	mm	6930	7170	7500	6300	6230	6450
3 Digging Depth	mm	5990	6280	6680	5770	6070	6470
4 Vertical Wall Digging Depth	mm	4420	4450	4830	4480	4780	5160
5 Depth 2.5 m Straight Clean-Up	mm	5780	6090	6510	5570	5880	6300
6 Reach	mm	9770	10 000	10 390	9890	10 100	10 490
7 Reach at Ground Level	mm	9590	9830	10 230	9720	9930	10 320
Bucket Forces (ISO 6015)	kN	140	140	140	140	140	140
Stick Forces (ISO 6015)	kN	123	114	104	123	114	104

Values 1-7 are calculated with bucket and quick coupler with a tip radius of 1712 mm.

Breakout force values are calculated with heavy lift on (no quick coupler) and a tip radius of 1511 mm.

M322D Wheel Excavator Specifications

Lift Capacities – Variable Adjustable Boom (5440 mm)

All values are in kg, without bucket and without QC, with counterweight (4400 kg), heavy lift on.

Short Stick 2200 mm	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load point height	3.0 m			4.5 m			6.0 m			7.5 m			m				
						Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration					
6.0 m	Rear dozer up (std UC)								*8000	7250	6050	5600	4500	3750				*4100	3550	2950	6.80	
	Rear dozer down (std UC)								*8000	6850		*7100	4250						*4100	3350		7.56
	Dozer and stabilizer down (std UC)								*8000	*8000	*8000	*7100	*7100	*7100				*4100	*4100	*4100		
	2 sets of stabilizers down (std UC)								*8000	*8000	*8000	*7100	*7100	*7100				*4100	*4100	*4100		
4.5 m	Rear dozer up (std UC)								8650	6850	5650	5450	4350	3600	3750	2950	2450	3700	2900	2400	8.04	
	Rear dozer down (std UC)								*9250	6450		*7300	4150		*5050	2850			*4100	*3750		7.30
	Dozer and stabilizer down (std UC)								*9250	*9250	*9250	*7300	*7300	*7300	*5050	*5050	5050	*3750	*3750	*3750		
	2 sets of stabilizers down (std UC)								*9250	*9250	*9250	*7300	*7300	*7300	*5050	*5050	5050	*3750	*3750	*3750		
3.0 m	Rear dozer up (std UC)								8000	6250	5100	5200	4100	3400	3700	2900	2400	3350	2600	2150	7.30	
	Rear dozer down (std UC)								*10 950	5900		*7800	3900		*7800	6150	2750		*3650	2500		7.83
	Dozer and stabilizer down (std UC)								*10 950	9100		*7800	5850		*6200	4150			*3650	*3650		
	2 sets of stabilizers down (std UC)								*10 950	*10 950	*10 950	*7800	*7800	7050	*6200	*6200	5000	*3650	*3650	*3650		
1.5 m	Rear dozer up (std UC)								7500	5750	4650	4950	3850	3200	3600	2800	2300	3250	2500	2100	7.30	
	Rear dozer down (std UC)								*11 950	5450		*8500	3650		6050	2650			*3700	2400		7.30
	Dozer and stabilizer down (std UC)								*11 950	8600		*8500	5600		*6500	4050			*3700	3650		
	2 sets of stabilizers down (std UC)								*11 950	*11 950	10 700	*8500	*8500	6800	*6500	6150	4900	*3700	*3700	*3700		
0.0 m	Rear dozer up (std UC)								7300	5600	4500	4800	3700	3050	3550	2750	2250	3350	2600	2150	7.30	
	Rear dozer down (std UC)								*11 650	5250		8500	3550		5950	2600			*3900	2450		7.30
	Dozer and stabilizer down (std UC)								*11 650	8400		*8600	5450		*6500	4000			*3900	3800		
	2 sets of stabilizers down (std UC)								*11 650	*11 650	10 500	*8600	8550	6650	*6500	6100	4800	*3900	*3900	*3900		
-1.5 m	Rear dozer up (std UC)								7300	5600	4500	4800	3700	3000				3700	2900	2350	7.30	
	Rear dozer down (std UC)								*10 400	5250		*7800	3500						*4400	2750		7.30
	Dozer and stabilizer down (std UC)								*10 400	8400		*7800	5450						*4400	4200		
	2 sets of stabilizers down (std UC)								*10 400	*10 400	*10 400	*7800	*7800	6600					*4400	*4400		

Medium Stick 2500 mm	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load point height	3.0 m			4.5 m			6.0 m			7.5 m			m				
						Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration	Undercarriage configuration						
6.0 m	Rear dozer up (std UC)											5650	4500	3800				*3350	3350	2800	7.08	
	Rear dozer down (std UC)												*6800	4300					*3350	3200		7.81
	Dozer and stabilizer down (std UC)												*6800	6300					*3350	*3350		
	2 sets of stabilizers down (std UC)												*6800	*6800	*6800				*3350	*3350		
4.5 m	Rear dozer up (std UC)								8750	6950	5750	5500	4350	3650	3800	3000	2500	*3150	2750	2300	8.19	
	Rear dozer down (std UC)								*8800	6550		*7150	4150		*5800	2850			*3150	2650		7.81
	Dozer and stabilizer down (std UC)								*8800	*8800		*7150	6150		*5800	4250			*3150	*3150		
	2 sets of stabilizers down (std UC)								*8800	*8800	*8800	*7150	*7150	*7150	*5800	*5800	5100	*3150	*3150	*3150		
3.0 m	Rear dozer up (std UC)								8100	6350	5150	5250	4100	3400	3700	2900	2400	*3150	2500	2050	7.55	
	Rear dozer down (std UC)								*10 600	5950		*7600	3900		*6050	2750			*3150	2400		7.81
	Dozer and stabilizer down (std UC)								*10 600	9200		*7600	5900		*6050	4150			*3150	*3150		
	2 sets of stabilizers down (std UC)								*10 600	*10 600	*10 600	*7600	*7600	7100	*6050	*6050	5000	*3150	*3150	*3150		
1.5 m	Rear dozer up (std UC)								7550	5800	4700	5000	3850	3200	3600	2800	2300	3100	2400	1950	7.55	
	Rear dozer down (std UC)								*11 800	5450		*8300	3700		6050	2650			*3250	2300		7.81
	Dozer and stabilizer down (std UC)								*11 800	8650		*8300	5650		*6350	4050			*3250	*3250		
	2 sets of stabilizers down (std UC)								*11 800	*11 800	10 750	*8300	*8300	6850	*6350	6150	4850	*3250	*3250	*3250		
0.0 m	Rear dozer up (std UC)								7300	5600	4450	4800	3700	3050	3500	2700	2250	3200	2450	2000	7.55	
	Rear dozer down (std UC)								*11 800	5250		8500	3500		5950	2600			*3500	2350		7.81
	Dozer and stabilizer down (std UC)								*11 800	8400		*8600	5450		*6600	3950			*3500	*3500		
	2 sets of stabilizers down (std UC)								*11 800	*11 800	10 500	*8600	8550	6650	*6600	6050	4800	*3500	*3500	*3500		
-1.5 m	Rear dozer up (std UC)	*10 000	*10 000	8350	7300	5550	4450	4750	3650	3000	3500	2700	2250	3500	2700	2250	3500	2700	2200	7.55		
	Rear dozer down (std UC)		*10 000	*10 000	*10 750	5200		*8000	3450		*5200	2600			*4050	2550			*4050		2550	7.55
	Dozer and stabilizer down (std UC)		*10 000	*10 000	*10 750	8350		*8000	5400		*5200	4000			*4050	3950			*4050		3950	
	2 sets of stabilizers down (std UC)	*10 000	*10 000	*10 000	*10 750	*10 750	10 450	*8000	*8000	6600	*5200	*5200	4800		*4050	*4050			*4050		*4050	
-3.0 m	Rear dozer up (std UC)				7400	5650	4550	4850	3750	3050											7.55	
	Rear dozer down (std UC)				*8650	5300		*6300	3550													7.55
	Dozer and stabilizer down (std UC)				*8650	8450		*6300	5500													
	2 sets of stabilizers down (std UC)				*8650	*8650	*8650	*6300	*6300	*6300												

*Limited by hydraulic rather than tipping load.

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

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

M322D Wheel Excavator Specifications

Lift Capacities – Variable Adjustable Boom (5440 mm)

All values are in kg, without bucket and without QC, with counterweight (4400 kg), heavy lift on.

Long Stick 2900 mm	Load at maximum reach (sticknose/bucket pin)	Load over front	Load over rear	Load over side	Load point height	Load point height												m
						3.0 m			4.5 m			6.0 m			7.5 m			
						Stick	QC	Stick	QC	Stick	QC	Stick	QC	Stick	QC	Stick	QC	
6.0 m	Rear dozer up (std UC)								5700	4600	3850	*3150	3050	2550	*2800	*2800	2500	7.54
	Rear dozer down (std UC)									*6350	4350		*3150	2900		*2800	*2800	
	Dozer and stabilizer down (std UC)									*6350	*6350		*3150	*3150		*2800	*2800	
	2 sets of stabilizers down (std UC)									*6350	*6350	*6350	*3150	*3150	*3150	*2800	*2800	
4.5 m	Rear dozer up (std UC)																	8.23
	Rear dozer down (std UC)																	
	Dozer and stabilizer down (std UC)																	
	2 sets of stabilizers down (std UC)																	
3.0 m	Rear dozer up (std UC)																	8.59
	Rear dozer down (std UC)																	
	Dozer and stabilizer down (std UC)																	
	2 sets of stabilizers down (std UC)																	
1.5 m	Rear dozer up (std UC)																	8.67
	Rear dozer down (std UC)																	
	Dozer and stabilizer down (std UC)																	
	2 sets of stabilizers down (std UC)																	
0.0 m	Rear dozer up (std UC)																	8.47
	Rear dozer down (std UC)																	
	Dozer and stabilizer down (std UC)																	
	2 sets of stabilizers down (std UC)																	
-1.5 m	Rear dozer up (std UC)																	7.98
	Rear dozer down (std UC)																	
	Dozer and stabilizer down (std UC)																	
	2 sets of stabilizers down (std UC)																	
-3.0 m	Rear dozer up (std UC)																	
	Rear dozer down (std UC)																	
	Dozer and stabilizer down (std UC)																	
	2 sets of stabilizers down (std UC)																	

*Limited by hydraulic rather than tipping load.

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

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

M322D Wheel Excavator Standard Equipment

Standard Equipment

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

ELECTRICAL

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

ENGINE

- Automatic engine speed control
- Automatic starting aid
- Cat C6.6 with ACERT Technology EU Stage IIIA compliant
- Fuel/water separator with level indicator

HYDRAULICS

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

OPERATOR STATION

- ROPS cab structure compliant with 2006/42/EC and tested according to ISO 12117-2:2008
- Adjustable armrests
- Air conditioner, heater and defroster with automatic climate control
- Ash tray with cigarette lighter (24 volt)
- Beverage cup/can holder
- Bolt-on FOGS capability
- Bottle holder
- Bottom mounted parallel wiping system that covers the upper and lower windshield glass
- Camera mounted on counterweight displays through cab monitor
- Coat hook
- Floor mat, washable, with storage compartment
- Fully adjustable suspension seat
- Instrument panel and gauges
 - Information and warning messages in local language
 - Gauges for fuel level, engine coolant and hydraulic oil temperature
 - Filters/fluids change interval
 - Indicators for headlights, turning signal, low fuel, engine dial setting
- Clock with 10-day backup battery

OPERATOR STATION (cont'd)

- Laminated front windshield
- Left side console, tiltable, with lock out for all controls
- Literature compartment behind seat
- Literature holder in right console
- Mobile phone holder
- Parking brake
- Positive filtered ventilation
- Power supply, 12V-7A
- Rear window, emergency exit
- Retractable seat belt
- Skylight
- Sliding door windows
- Steering column, tiltable
- Storage area suitable for a lunch box
- Sunshade for windshield and skylight

UNDERCARRIAGE

- Heavy-duty axles, advanced travel motor, adjustable braking force
- Oscillating front axle with remote greasing
- Tires, 11.00-20 16 PR, dual
- Tool box in undercarriage
 - Second tool box for undercarriage
- Two-piece drive shaft

OTHER EQUIPMENT

- Automatic swing brake
- Counterweight, 3900 kg
- Mirrors, frame and cab
- Product Link ready
- Tool box in upperframe, lockable

Optional Equipment

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

AUXILIARY CONTROLS AND LINES

- Auxiliary boom and stick lines
- Anti-drift valves for bucket, stick, VA boom and tool control/multi-function circuits
- Basic control circuits:
 - Single action
 - One-way, high pressure circuit, for hammering application
 - Medium pressure
 - Two-way, medium pressure circuit, for rotating or tilting of work tools
 - Tool control/multi function
 - One/two-way high pressure for hammer application or opening and closing of a work tool
 - Programmable flow and pressure for up to 10 work tools – selection via monitor
 - Second high pressure
 - Additional two-way, high pressure circuit, for tools requiring a second high or medium pressure function
 - Quick coupler control
- Cat BIO HYDO Advanced HEES™ biodegradable hydraulic oil
- Generator with valve and priority function
- Lowering control devices for boom and stick
- SmartBoom™

FRONT LINKAGE

- Booms
 - One-piece boom, 5650 mm
 - VA boom (two piece), 5440 mm
- Bucket linkage with diverter valve
- Sticks
 - 2200, 2500, 2900 mm

ELECTRICAL

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

OPERATOR STATION

- Adjustable hydraulic sensitivity
- CD/MP3 Radio (12V) at rear location including speakers and 12V converter
- Falling objects guard
- Joystick steering
- Seat, adjustable high-back
 - mechanical suspension
 - air suspension (vertical)
 - deluxe with headrest, air suspension
- Headrest
- Travel speed lock
- Vandalism guards
- Visor for rain protection
- Windshield
 - One-piece high impact resistant
 - 70/30 split, openable

UNDERCARRIAGE

- Dozer blade, rear mounted
- Outriggers, front and/or rear mounted
- Spacer rings for tires

OTHER EQUIPMENT

- Auto-lube system (implements and swing gear)
- Cat Machine Security System
- Cat Product Link
- Counterweight, 4400 or 5400 kg
- Mirrors heated, frame and cab
- Ride Control
- Tires (see pg. 3)
- Waste Handling Package

M322D Wheel Excavator

Materials and specifications are subject to change without notice.

Featured machines in photos may include additional equipment.

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com.

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