



Cat[®] 120

Motor Grader

The Next Generation Cat[®] 120 Motor Grader has a new cab with steering wheel and lever controls along with comfort options to help improve performance. Factory options, such as Stable Blade, help to ensure finish surface quality while maximizing productivity and reducing rework.

High Performance with Lower Fuel Consumption

- Get to work with balanced weight and power in the Cat C7.1 engine.
- Increase your fuel economy up to 5% with Eco mode.
- The powershift transmission works hard with machine balance to ensure drawbar power to the ground.
- Power train components are specifically made to be rebuilt.
- Stable Blade option senses blade bounce before you to reduce manual throttle use and site rework. When machine bounce is detected, the system automatically reduces ground speed eliminating bouncing to ensure a better grade finish.
- Product Link™ provides location, machine hours, fuel usage, productivity, idle time, diagnostic codes, and other machine data on demand through the VisionLink[®] online interface, which helps you improve jobsite efficiency with lower operating costs.
- Update machine software with Remote Services without taking the machine out of service.
- Proven aftertreatment systems apply proven technologies to strategically meet your high expectations for productivity, reliability, and service life (India CEV Stage V emission standards only).

New Cab Keeps You Comfortable All Day Long

- Choose your comfort level in the cab with standard, comfort plus, and premium plus options.
- With one 254 mm (10 in) color monitor display screen, view your machine information from fuel levels to machine alerts. The anti-glare screen makes it easy to read no matter how bright it gets.
- Connect your phone with Bluetooth[®] or auxiliary cord option to listen to music and podcasts throughout your work day.
- Decrease clutter with more storage areas in the cab.
- The high-capacity heating, ventilation, and air conditioning (HVAC) system dehumidifies and pressurizes the cab, circulates fresh air, seals out dust, and keeps windows clear from fogging.
 - With the auto-controlled climate option, you can set your ideal temperature.
- Easily add a radio to the cab using the built-in mounting location.
- Keep your phone charged with the optional USB charging port along with a spot designed to hold your phone.



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Safety

- View your surroundings with the rear camera option to ensure the safety of you and those around you. The dedicated display can be always on to ensure a safe work environment.
 - The heated lens keeps the rearview camera clear.
- In the event of an engine stall, count on the secondary steering system option to help stop the machine safely.
- Ensure three points of contact when entering and exiting the machine with strategically placed walk ways and grab rails.
- Ground-level engine shut-off switch stops all fuel to the engine when activated and shuts down the machine.
- See the rear of your machine with connecting windows.
- Work past sundown using the LED light option for increased night time visibility.
- Refueling from the ground keeps you from climbing onto the machine for a safer work environment (with optional ground-level fuel fill).

Maintenance

- Filters, such as fuel, engine air, and oil filters, are grouped together for easy access and preventative maintenance.
- Be more environmentally friendly with next generation filters.
- Maintain roads with the standard drawbar circle moldboard with hardened circle teeth for increased durability.
- Hydraulic brakes are oil cooled to prevent fade under extreme operation and ensure safer trouble-free stopping power.
- Lower costly repairs to your circle and pinion with the Circle Saver.

Versatility

- Improve the balance of your machine with the counterweight or push block for increased performance and efficiency.
- Ripper and scarifier options are available to assist with grading hardened ground.
- The front lift group option is ready for attachments like the straight or front blade.
- For more road coverage, add a moldboard extension to add 605 mm (24 in).

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
CAB			POWER TRAIN		
Vinyl Seat	✓		Cat C7.1	✓	
Cloth or Leather Seat		✓	Eco Mode	✓	
Steering Wheel/Lever Controls	✓		Engine Idle Shutdown System	✓	
ROPS/FOPS	✓		Hydraulic Demand Fan	✓	
Heating/Cooling Cab System	✓		Reversing Fan		✓
Rear Wiper		✓	DRAWBAR CIRCLE MOLDBOARD		
Base Cab	✓		Standard	✓	
Comfort Plus		✓	Circle Drive Slip Clutch	✓	
Premium Plus		✓	Circle Saver		✓
Seat Belt Indicator		✓	Top Adjust Drawbar Circle Moldboard		✓
203 mm (8 in) Touchscreen Monitor		✓	SAFETY		
254 mm (10 in) Information Display	✓		Parking Brake	✓	
Heated/Cooled Seat		✓	Signaling/Warning Horn	✓	
Bluetooth/Auxiliary Radio		✓	Rearview Mirror	✓	
Halogen Lighting	✓		Rearview Camera		✓
LED Lighting		✓	Hydraulic Brakes	✓	
Rear Window Screen		✓	Secondary Steering System		✓
CAT TECHNOLOGY			Side View Mirrors	✓	
Stable Blade		✓	Walkways and Grab Rails	✓	
Product Link	✓		Ground-Level Daily Maintenance	✓	
Remote Services		✓	VERSATILITY		
			Counterweight		✓
			Push Block		✓
			Ripper		✓
			Scarifier		✓
			Front Blade		✓

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, refer to the Technical Specifications brochure available at www.cat.com or your Cat dealer.

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Technical Specifications

Power Train

Engine Model	Cat 7.1	
Emissions	China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 3/EU Stage IIIA, and meets India CEV Stage V emission standards	
Engine Power (ISO 9249/SAE J1349) – Tier 3/Stage IIIA Equivalent	97-116 kW	130-156 hp
Engine Power (ISO 9249/SAE J1349 EEC 80/1269) – India CEV Stage V	104-123 kW	140-164 hp
Engine RPM	2,000 rpm	
Displacement	7.01 L	427.8 in ³
Bore	105 mm	4.1 in
Stroke	135 mm	5.3 in
Torque Rise (ISO 9249)	42%	
Maximum Torque (ISO 9249)	822 N·m	606 lbf·ft
Number of Cylinders	6	
Derating Altitude – Tier 3/Stage IIIA Equivalent	4500 m	14,764 ft
Derating Altitude – India CEV Stage V	3000 m	9,842 ft
Ambient Capacity	50°C	122°F

- Net power is tested per ISO 9249, SAE J1349, and EEC 80/1269 standards in effect at the time of manufacture.
- Net power advertised is the power available at rated speed of 2,000 rpm, measured at the flywheel when engine is equipped with fan, air cleaner, muffler, and alternator.
- VHP Plus is standard for the 120 and 120 all-wheel drive (AWD).
- Rated speed at 2,000 rpm.
- Biodiesel blends up to B30 (30% blend by volume) are acceptable when blended with 500 ppm (mg/kg) sulfur or less ULSD. B30 should meet ASTM D7467 specification (biodiesel blend should meet Cat biodiesel spec, ASTM D6751 or EN 14214). Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specification are required. Consult your OMM for further machine-specific fuel recommendations.

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.6 kg of refrigerant which has a CO₂ equivalent of 2.288 metric tonnes.

Service Refill Capacities

Fuel Tank	246 L	65 gal
Circle Drive	7 L	1.8 gal
Engine Crankcase	18 L	4.8 gal
Cooling System	52.5 L	14 gal
Hydraulic System	75 L	19.8 gal
Transmission and Differential	60 L	15.9 gal

Machine Weight

Weight* - Tier 3/Stage IIIA Equivalent	15 803 kg	34,839 lb
Weight* - India CEV Stage V	16 271 kg	35,871 lb

*Typically equipped includes ROPS cabin, 3.7 m (12 ft) blade, 14.00R24 tires, push plate, ripper, bottom guard, operator, and full fluids.

Dimensions

Length of Machine*	9838 mm	387 in
Maximum Height	3440 mm	135.4 in
Width	2592 mm	102 in

*Typically equipped with push block and ripper.

Moldboard

Blade Width	3.7 m	12 ft
Blade Height	610 mm	24 in
Arc Radius	413 mm	16.3 in
Throat Clearance	105 mm	4.1 in
End Bit Width	152 mm	6 in
Cutting Edge Width	152 mm	6 in

Blade Range

Circle Center Shift – Right	656 mm	26 in
Circle Center Shift – Left	656 mm	26 in
Moldboard Side Shift – Right	663 mm	26.1 in
Moldboard Side Shift – Left	512 mm	20.1 in
Blade Tip Range – Forward	40°	
Blade Tip Range – Backward	5°	
Maximum Shoulder Reach – Right	1928 mm	76 in
Maximum Shoulder Reach – Left	1764 mm	69.4 in
Maximum Lift Above Ground	410 mm	16.1 in
Maximum Depth of Cut	775 mm	30.5 in

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