

# Cat<sup>®</sup> PM310, PM312, PM313

**Cold Planers** 

Cat® PM310, PM312 and PM313 Cold Planers with integrated Cat Grade and Slope technology and the latest System K rotors are equipped to deliver performance, productivity and cutting precision. A comfortable operator environment puts intuitive controls at your fingertips, while long service intervals and easy maintenance access help simplify service. Although designed for a single operator, the PM300-Series includes features for supporting ground personnel. Many options are available to enhance machine versatility when optimum maneuverability or high production capabilities are required.

#### **Efficient Performance**

- The Cat® C9.3B engine meets U.S. EPA Tier 4 Final, EU Stage V, and Korea Stage V emission standards and delivers an increase in power density along with the latest electronic, fuel, and air systems compared to the previous Cat C9.3 engine
- Engine Idle Speed Management and multiple rotor speeds allow for optimal output and demand on the engine
- A variable-speed cooling fan operates at the lowest possible speed for quiet and efficient cooling
- Automatic Load Control monitors demand on the engine and adjusts milling speed to help prevent stalls while maintaining high production

## **Optimal Maneuverability and Control**

- The reliable track undercarriage leverages proven designs from Cat mini excavators and uses an automatic tensioning system for consistent performance and longer track life
- A robust propel system features dual displacement motors at each leg post, utilizing a cross-drive pattern for additional traction in straight cuts
- Automatic traction control helps maintain consistent speed in the most challenging applications
- The articulating right rear leg can be easily positioned outside to help provide extra stability and traction in demanding cuts or positioned in front of the rotor chamber for flush cutting
- An optional ballast weight kit is available to add weight over the rotor for increased cutting capability in more demanding applications
- Electronically switch rotor speeds during operation

#### **Effective Material Removal**

- High-capacity conveyors efficiently remove milled material with variable speed discharge control
- A wide opening and seamless belt effectively clear the rotor chamber
- Adjust the belt speed to match material type and production rate
- The belt reverses direction to easily remove material from the conveyor during clean-up, and easy-access covers allow for quick inspection and cleaning of the rollers
- Conveyor folds for transportation and maintenance

## **Durable and Dependable Cutting System**

- The rotor drive system is engineered to maximize torque transfer and features a heavy-duty dry clutch, dual stage belt drive and automatic belt-tensioning
- Durable, reinforced cutting chamber
- Hardened full-length side plate skis, inboard ski shoe, and anti-slab shoes are designed to reduce wear and maintenance



## High Production System K Rotors Optimize Cutting Capability

- Cat System K rotors can be used for numerous applications and feature efficient material flow with a uniform cutting pattern
- A fastener-free design secures toolholders in place without a retaining pin, bolt or setscrew, speeding up replacement and eliminating the need for torquing
- Toolholders, base blocks and kicker paddles are built from highstrength alloy steel that's abrasion resistant for extended life
- Optional Cat Diamond bits are designed to stay sharp and last significantly longer than a carbide bit (ideal for bituminous applications without obstacles such as interstates or motorways)

#### **Comfortable Work Environment**

- Operate in comfort with a standard suspension seat, adjustable right arm console and intuitive, ergonomic controls
- A sliding operator station extends up to 215 mm (8.5 in) to provide improved visibility to the cutting edge
- Work areas are illuminated for nighttime operation with backlit keypads and wide-dispersion LED or halogen lighting options
- An optional hydraulically-powered canopy with extendible wing and handrail-mounted windscreen help protect the operator from sun, wind, and rain
- Better direct exhaust up and away from ground personnel or when milling close to buildings with the optional and stowable exhaust diverter
- Maximize dust removal from the working areas with the optional dust abatement system

## **Easy Operation**

- Access integrated technology and automated systems through easy-to-use controls and a highly intuitive touchscreen interface
- Displays provide access to the gauge cluster, operating information, grade and slope, remote camera feeds, machine controls and diagnostics
- An optional grade control display can be positioned in the operator station or on the back of the machine to enable interaction with the grade system from the ground level
- A 14-button ground-level keypad gives ground operators convenient access to various machine functions (leg height, water spray, sideplates, moldboard and lights)
- A Standby/Resume button pauses major machine functions and lowers engine speed to conserve fuel during truck exchanges, and when ready to resume milling a push of the button automatically brings the machine back up to production at the same speed
- Once a rotor speed is selected and the cutting pattern is established, use of the Cruise Control button stores the propel speed and repeatedly returns to that same speed for every pass, and when used in combination with Standby/Resume allows for easy and precise pattern control
- Cut closer to obstacles on either side with the assistance of optional remote cameras and adjustable on-screen guidance lines

## **Boost Precision with Integrated Cat Technology**

- Achieve accurate, repeatable and automatic cutting precision with the integrated Cat Grade and Slope system
- Obtain full control of grade and slope from any machine display
- Easily adjust grade control values and sensors through the touchscreen displays
- Adjust the speed at which the rotor drops into the cut for optimal machine control
- Set and automate transitions into/out of cuts
- Clear obstacles in the cutting path with ease using the obstacle jump feature
- Enhance for full 3D milling operation (additional hardware required)

## **Simple Service, Low Maintenance Costs**

- Daily maintenance areas are easily accessible through large service doors
- Track components do not require routine maintenance and easy to replace track pads help lower service costs
- Standard ground-level controls and an optional hydraulicallyoperated rotor turning device simplify bit removal and replacement
- High and low pressure washdown options connect to the onboard water tank for convenient clean-up
- The accessory drive system allows use of select machine functions when the engine is off
- Electrical system wiring is color-coded and numbered for easy identification and wrapped in a protective, abrasion-resistant nylon braid for longer life
- Monitor fluid conditions with regular sampling to help extend change intervals up to 500 hours engine oil, 6000 hours hydraulic oil and 12000 hours coolant
- Built-in diagnostics monitor machine systems, alert the operator of performance issues and provide troubleshooting information
- VisionLink® takes the guesswork out of managing your entire fleet-regardless of size or equipment manufacturer\*-by providing maintenance needs, machine hours, location, fuel usage, idle time, diagnostic codes, and more through interactive dashboards on your mobile device or desktop, helping you make informed decisions that lower costs, simplify maintenance, and improve safety and security on your jobsite
- Remote Flash allows you to update onboard software without a technician being present, allowing you to initiate software updates when convenient, increasing your overall operating efficiency\*\*
- Remote Troubleshoot allows your Cat dealer to perform diagnostic testing on your connected machine remotely\*\*
- Cat Inspect is a mobile application that allows you to easily perform digital preventative maintenance checks, inspections, and daily walkarounds
- Convenient parts availability, dealer locations and service repair kits simplify ordering of high wear components

<sup>\*</sup> Data field availability can vary by equipment manufacturer and is provided through an application programming interface (API).

<sup>\*\*</sup> Must be within cell range coverage.

## **Standard and Optional Equipment**

Features, standard and optional equipment may vary by region. Please check with your local Cat dealer for specific offerings and availability in your area.

	Standard	Optional
OPERATOR ENVIRONMENT		
Sliding operator station	✓	
Suspension seat	✓	
Ergonomically-adjustable arm rest	✓	
Ground control keypad	✓	
High-resolution LCD touchscreen display	✓	
Additional high-resolution LCD touchscreen display		✓
12-Volt power receptacle	✓	
Powered canopy		✓
Windscreen		✓
Exhaust diverter		✓
CAT® TECHNOLOGY		
Remote Flash	✓	
Remote Troubleshoot	✓	
Cat Grade and Slope	✓	
VisionLink® telematics	✓	
Sonic grade control sensors		✓
High-resolution LCD touchscreen display (for ground level grade controls)		✓
CONVEYOR		
Dust extraction system		✓
Hydraulically folding conveyor		✓
Mechanically folding conveyor		✓
Additional spray bars (dust control)		✓
POWERTRAIN		
Engine Idle Speed Management	✓	
High capacity cooling system	✓	
Automatic Load Control	✓	
CE certificate		✓
HYDRAULIC SYSTEM		
Traction Control	✓	
Cat Bio HYDO™ Advanced biodegradable hydraulic oil		<b>√</b>
High ambient hydraulic oil		✓

	Standard	Optional
ROTOR SYSTEM		
Automatic plunge-cut	✓	
Automatic grade and slope transition feature	✓	
Obstacle jump	✓	
Three cutting speeds	✓	
Powered rotor turning device (with pendant control)		✓
System K Rotor — Coarse (18 mm)		✓
System K Rotor – Standard (15 mm)		✓
System K Rotor – Fine (8 mm)		✓
Cat Diamond bits		✓
Pneumatic bit removal tool		✓
Tool holder extractor		✓
510 kg (1124 lb) ballast kit		✓
SERVICE AND MAINTENANCE		
Scheduled Oil Sampling (S•O•S™) Ports	✓	
Platform-level engine oil dipsticks	✓	
Rotor chamber water spray system	✓	
1260 L (332.9 gal) onboard water tank	✓	
Side water fill valve	✓	
Water tank fill pump	✓	
Air compressor		✓
Accessory drive system		✓
High pressure washdown		✓
Low pressure washdown		✓
Additional water spray system (dust control)		✓
SAFETY AND SECURITY		
Platform handrails	✓	
Signaling/warning horn	✓	
Halogen work lighting		✓
Wide-dispersion LED work lighting		✓
Warning beacon (fixed)		✓
LED roading lights		✓
Truck signal lights		✓
Remote cameras (rear back up, front conveyor, left and/or right cutting edges, magnetic mount)		✓

## **Technical Specifications**

		Weights	
	PM310	PM312	PM313
Operating Weight	21 215 kg 46,770 lb	21 503 kg 47,407 lb	21 556 kg 47,522 lb
Transport Weight	20 806 kg 45,869 lb	21 095 kg 46,506 lb	21 147 kg 46,622 lb

Weights shown are approximate:

- Poperating weight includes base machine with 75 kg (165 lb) operator, all standard equipment, power canopy, dust abatement system, high pressure wash system,
   15 mm rotor, 510 kg (1124 lb) ballast kit, rotor turning device, pneumatic compressor, 50% water, 50% fuel and full operating fluids.
   Transport weight includes base machine, all standard equipment, power canopy, dust abatement system, high pressure wash system, 15 mm rotor, 510 kg (1124 lb) ballast kit, rotor
- turning device, pneumatic compressor, empty water, full fuel and other operating fluids.

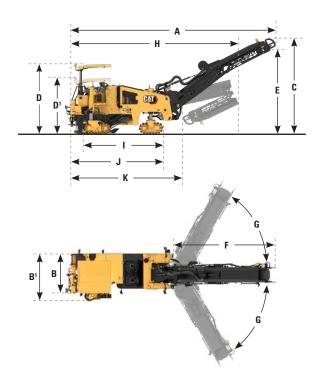
Powertrain			
Engine Model	Cat C9.3B		
Cylinders	6		
Emission Standards	U.S. EPA Tier 4 Final, EU Stage V, Korea Stage V		
Gross Power – SAE J1995:2014	256 kW	343 hp	
Engine Power – ISO 14396:2002	253 kW	339 hp	
Build Number	02C		
Maximum Milling Speed	33 m/min	108 ft/min	
Maximum Travel Speed	5.5 km/h	3.4 mph	

Cutting System			
Milling Width			
PM310	1000 mm	39.4 in	
PM312	1225 mm	48.2 in	
PM313	1300 mm	51.2 in	
Number of Bits (15 mm spacing)			
PM310	91		
PM312	106		
PM313	111		
Maximum Cutting Depth	330 mm	13 in	
Rotor Speeds	97 / 109 / 121 rpm		
Minimum Left Cutting Radius	4.14 m	13.58 ft	
Minimum Right Cutting Radius	1.92 m	6.30 ft	

Service Refill Capacities			
Fuel Tank	522 L	137.9 gal	
Diesel Exhaust Fluid (DEF) Tank	47 L	12.4 gal	
Cooling System	64 L	16.9 gal	
Engine Oil	30 L	7.9 gal	
Hydraulic Oil	55 L	14.5 gal	
Water Tank	1260 L	332.9 gal	

Operating Dimensions			
Α	Overall Length	11.11 m	36.45 ft
В	Machine Width (leg in)	2.18 m	7.15 ft
B¹	Machine Width (leg out)	2.54 m	8.33 ft
C	Machine Height (rotor at scratch)	5.15 m	16.90 ft
D	Height to Optional Canopy	3.75 m	12.30 ft
Ε	Maximum Truck Clearance	4.70 m	15.42 ft
F	Conveyor Length	7.08 m	23.23 ft
G	Conveyor Swing	±60° from center	

	Shipping Dimensions			
Н	Transport Length (conveyor folded)	9.32 m	30.58 ft	
B <sup>1</sup>	Transport Width (leg out)	2.54 m	8.33 ft	
D¹	Transport Height (rotor at scratch and canopy lowered)	3.00 m	9.84 ft	
1	Length (track to track)	4.26 m	13.98 ft	
J	Length of Machine (rear to front track)	5.04 m	16.54 ft	
K	Length of Base Machine	5.90 m	19.36 ft	



#### **Environmental Declaration**

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, please visit www.caterpillar.com/en/company/sustainability.html.

#### **ENGINE**

- The Cat 9.3B meets U.S. EPA Tier 4 Final, EU Stage V, and Korea Stage V emission standards.
- Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lowercarbon intensity fuels\* up to:
  - √ 20% biodiesel FAME (fatty acid methyl ester)
  - 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels

Refer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.

\*Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.

#### **PAINT**

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
- Barium < 0.01%
- Cadmium < 0.01%
- Chromium < 0.01%</li>
- Lead < 0.01%

#### **SOUND PERFORMANCE**

With cooling fan speed at 70% of maximum value:

Operator Sound Pressure Level (ISO 6396:2008) - 92 dB(A)

Exterior Sound Power Level (ISO 6395:2008) - 109 dB(A)

- The dynamic operator sound pressure level measurements are performed according to the dynamic test procedures that are specified in ISO 6396:2008.
- The dynamic spectator sound power level measurements are performed according to the dynamic test procedures that are specified in ISO 6395:2008.
- Hearing protection may be needed when operating with an open operator station for extended periods or in a noisy environment.

### **OILS AND FLUIDS**

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO™ Advanced is an EU Ecolabel approved biodegradable hydraulic oil.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

#### **FEATURES AND TECHNOLOGY**

- The following features and technology may contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
- Advanced hydraulic systems balance power and efficiency
- Adjustable rotor speeds allow for milling at lower engine speeds
- Engine Idle Speed Management allows the machine to idle at the lowest possible RPM
- The variable-speed cooling fan operates at the lowest speed for optimal cooling
- System K rotor efficiently removes material and reduces drag
- Cat Diamond bits are designed to stay sharp, last significantly longer than a carbide bit and maintains cutting efficiency
- The Standby/Resume feature pauses machine functions and lowers engine speed during truck exchanges
- Extended maintenance intervals reduce fluid and filter consumption
- Remote Flash and Remote Troubleshoot

#### RECYCLING

 The materials included in machines are categorized as below with approximate weight percentage. Because of variations of product configurations, the following values in the table may vary.

Weight Percentage (Track Undercarriage)
79.95%
7.44%
4.00%
0.55%
1.14%
3.64%
0.94%
0.01%
1.06%
0.72%
0.55%
100%

A machine with higher recyclability rate will ensure more efficient usage of valuable
natural resources and enhance End-of-Life value of the product. According to ISO 16714
(Earthmoving machinery – Recyclability and recoverability – Terminology and calculation
method), recyclability rate is defined as percentage by mass (mass fraction in percent) of
the new machine potentially able to be recycled, reused or both.

All parts in the bill of material are first evaluated by component type based on a list of components defined by the ISO 16714 and Japan CEMA (Construction Equipment Manufacturers Association) standards. Remaining parts are further evaluated for recyclability based on material type.

Because of variations of product configurations, the following value in the table may vary.

Recyclability - 95%

QEHQ3139-04 (12-2024) Build Number: 02C (N Am, Colombia, Europe, South Korea, Türkiye)

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

© 2024 Caterpillar All rights reserved

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, "Caterpillar Corporate Yellow," the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission. VisionLink is a trademark of Caterpillar Inc., registered in the United States and in other countries.

