## PM820, PM822 and PM825

### Cold Planers

<table>
<thead>
<tr>
<th>Cat® C18 Engine</th>
<th>Gross Power (SAE J1995)</th>
<th>Cutting Dimensions</th>
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<tbody>
<tr>
<td></td>
<td>Canada, EU, USA</td>
<td>Width - PM820</td>
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<tr>
<td></td>
<td>All Other Regions</td>
<td>Width - PM822</td>
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<td></td>
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<td>Width - PM825</td>
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<td></td>
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<td>Maximum Cutting Depth</td>
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<tr>
<td><strong>Cat® C18 Engine</strong></td>
<td><strong>Gross Power (SAE J1995)</strong></td>
<td><strong>Cutting Dimensions</strong></td>
</tr>
<tr>
<td>Canada, EU, USA</td>
<td>597 kW</td>
<td>2010 mm</td>
</tr>
<tr>
<td>All Other Regions</td>
<td>570.5 kW</td>
<td>2235 mm</td>
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<tr>
<td><strong>Operating Weight</strong></td>
<td></td>
<td>2505 mm</td>
</tr>
<tr>
<td>PM820</td>
<td>36 130 kg</td>
<td>330 mm</td>
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<tr>
<td>PM822</td>
<td>36 700 kg</td>
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<tr>
<td>PM825</td>
<td>37 500 kg</td>
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</tr>
<tr>
<td></td>
<td>79,630 lb</td>
<td>79 in</td>
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<td></td>
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<tr>
<td></td>
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<td>13 in</td>
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### Operating Weight

- PM820: 36 130 kg (79,630 lb)
- PM822: 36 700 kg (80,887 lb)
- PM825: 37 500 kg (82,650 lb)
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THE HIGH POWER HALF-LANE MILLING MACHINES YOU HAVE BEEN WAITING FOR

Cat® PM820, PM822 and PM825 cold planers are the product of years of study, tinkering, rethinking. Every system and component has been examined, refined, optimized. The result is an advanced, world-class cold planer.

The PM800 models are similar in design to their sister PM600 half lane cold planers...but they bring a lot more power, useful for the most demanding applications. The PM800 models deliver the same benefits as well: lowered operating costs and increased productivity, paired with Cat reliability and the legendary dealer support you expect from Caterpillar.

The PM820, PM822 and PM825 are well equipped to deliver precision and efficient high production. Many options are available to enhance machine versatility and customize operations to suit the application, from milling highways to urban streets. Whether you are texturing the surface or milling an airport runway, there is a configuration that will meet your requirements and expectations.
POWERFUL AND Refined

Precision and control with versatility to spare.
1. Cat C18 Engine
2. Ground Control Console
3. Rear Water Fill Nozzle
4. Remote Camera (option)
5. Hydraulic Side Plates with Position Sensors
6. Crawler Tracks with Bolt-on Pads
7. Advanced Steering
8. Dual Operating Consoles
9. Power Canopy (optional windscreens available, not shown)
10. Dust Abatement System (option)
11. High Pressure Water Spray Hose (option)
12. Water Spray Control and Clean out Manifold
13. LCD Touchscreen Display
14. Cat Diamond Bits (option)
15. Cat Grade Control (option)
RUGGED POWERTRAIN
SIMPLE DESIGN DELIVERS AMPLE POWER TO GROUND.

C18 ENGINE
– Machines sold in Canada, EU and United States meet U.S. EPA Tier 4 Final / EU Stage V emission requirements
– Machines sold in all other regions are equivalent to China III NR / Tier 2 emission requirements
– Provides ample power
– Automatic idle control function and multiple rotor speeds optimizes output to the demand on the engine, keeping operation smooth and efficient
– High capacity cooling system keeps engine at ideal temperature for optimal fuel efficiency and lower emissions
– Proven core engine design ensures reliability and quiet operation
– Engine is iso-mounted to reduce noise and vibration

PROPEL SYSTEM
– Robust propel system features two propel pumps and two propel circuits, diagonally opposed; each circuit drives the propel motors for two crawler tracks
– Cross-flow traction control supplies dedicated hydraulic flow diagonally across machine to the tracks that grip
– Automatic Load Control senses load changes on the rotor system load and adjusts propel speed to prevent stalls and optimize production
STABLE PLATFORM
– Four leg posts with position sensors independently adjust and provide powered vertical movement to maintain desired height
– Ride-control feature ensures smooth travel
– Optional Cat Grade Control is integrated with the machine and works seamlessly to provide maximum cutting precision; system can be enhanced to full 3D milling capability

WORRY-FREE TRACKS
– Four crawler tracks based on proven Cat track design and components
– Tracks automatically adjust to provide ideal tension
– Track pads are easily replaceable with bolt-on design

EXCELLENT MANEUVERABILITY
– Four steering modes: front steer, rear steer, crab steer, coordinated steer
– Advanced steering function adjusts track alignment to provide precise steering geometry and reduce pad wear
– Minimum left cutting radius: 2 m (6.56 ft)
– Minimum right cutting radius:
  PM820- 2 m (6.56 ft)
  PM822- 1.8 m (5.91 ft)
  PM825- 1.5 m (4.92 ft)

The four post design offers excellent maneuverability and dependable operation to maximize versatility and production.
COMFORT AND CONTROL
OPERATE WITH CONFIDENCE.

OPERATING ENVIRONMENT

– Height-adjustable dual operating console is intuitive and comfortable
– Optional power canopy can deploy or stow during machine operation; optional windscreen panels available
– Touchscreen LCD display provides gauge cluster, operating information, remote camera feed, machine control and diagnostics; optional second and third display available to provide additional gauge or machine operation/control information
– Optional suspension seats reposition for optimal visibility and comfort
– Lockable storage provides secure area to stow personal items
– 12-volt power receptacle

ERGONOMIC CONTROLS

– Controls comfortably positioned for easy use
– Large, backlit keypads are visible in all light conditions
– Durable design tested to 1 million cycles
– Lockable covers provide protection from vandalism

EQUIPPED FOR 24/7 OPERATION

– Working areas and perimeter well lit with standard halogen lights
– Displays and controls easy to see
– Additional LED light options
– Available balloon lighting options
Dual controls and large LCD screens keep the operator informed and in control.
CUTTING SYSTEM
EFFICIENT AND DEPENDABLE, AS IT SHOULD BE.

ROBUST ROTOR CHAMBER
– Chamber optimizes material flow to promote thorough clean-out
– Thicker steel in areas exposed to high abrasion enhances durability
– Side plates are hydraulically adjustable with position-sensing cylinders, can be used as an averaging ski
– Hydraulically adjustable moldboard applies optimal down-pressure to keep material contained for clean out and minimize required sweeping

ANTI-SLAB DEVICE
– Helps to optimize sizing and gradation
– Protects collecting conveyor
– Prevents blockage in the discharge opening

THE VERSATILITY YOU NEED
– Two available cutting widths;
– Cutting depth to 330 mm (13 in)
– Enhanced clearance for flush cutting
– Three rotor speeds, electronically selectable during operation
– High production and fine milling drums available
– Optional Cat Grade Control keeps machine on target
ADVANCED AUTOMATED FEATURES

- Automatic Load Control senses load changes on the rotor and adjusts propel speed to prevent stalls and optimize production
- Automatic plunge-cut feature ensures precise, repeatable starting cuts and reduces wear on machine (requires Cat Grade Control option)
- Ramp-in, Ramp-out cutting capability (requires Cat Grade Control option)
- Jump hold feature assists to clear obstacles

ROTOR DRIVE SYSTEM

- Driven by two 6-rib high-tensile belts
- Automatic belt tensioning to reduce slippage
- Heavy-duty dry clutch

HIGH PRODUCTION ROTORS

- 2.0 m (79 in), 2.2 m (88 in) or 2.5 (98.6 in) cutting widths
- Cutting bits held in exclusive conical quick-release tool holders and arranged in a triple-wrap flight pattern
- Large, replaceable carbide-faced loading paddles effectively move milled material onto collecting conveyor
- Standard 15 mm (5/8 in) tool tip spacing is optimal for high production and reduced wear
- Triple tree tool arrangement on rotor ends reduces wear on rotor when maneuvering in the cut
- Premium carbide bits available
- Optional Cat Diamond Bits provide cutting life up to 80 times longer than conventional carbide bits, decreasing overall fuel consumption and reducing machine wear
CAT GRADE CONTROL
EASY TO USE; HIGH PRECISION.

INTEGRATED DESIGN
– System communicates directly with position-sensing hydraulic cylinders, slope sensors and processors to ensure optimal precision

CONTROL BOXES
– LCD color touchscreen display with soft keys is durable and visible in all light conditions
– Intuitive interface is easy to understand and use
– Supports multiple languages
– Control boxes and sensors can be repositioned without reconfiguring settings
– Full control over grade and slope can be attained from any control box
REFERENCE VERSATILITY

1. Sonic Mounting Point
2. Control Box Mounting Point
3. Position-sensing Independently Controlled Side Plates
4. Optional Position-sensing Hydraulically Controlled Inboard Ski

SYSTEM VERSATILITY

– System can utilize various references including sonics, contact sensors, position sensing hydraulic cylinders, wire rope sensors
– Can be enhanced for full 3D operation
– Sensors can be positioned in multiple inboard or external locations around the machine

SONIC SENSORS

– Sensor units feature five ceramic transducers
– System discards the highest and lowest readings and averages remaining three for a true average
– Each unit equipped with temperature sensor that compensates for fluctuations due to temperature change
– Durable construction outlasts foil transducer design

Each sensor has five transducers; the high and low readings are discarded and the remaining three are averaged for a true average reading.
HIGH CAPACITY MATERIAL REMOVAL
EFFICIENT AND EFFECTIVE.

The high-capacity conveyors provide efficient removal of milled material and dust with outstanding discharge control.

COLLECTING CONVEYOR
— A wide opening and seamless 850 mm (33.5 in) wide belt efficiently clears rotor chamber
— Reversible for easy clean out
— Optional grease tensioner provides easy adjustment of belt alignment and tension

WATER SPRAY SYSTEM
— Water spray system provides lubrication and cools bits while helping to control dust
— Spray system fed by 3400 L (898 gal) onboard tank; tank can be filled from top deck ports, rear fill valve, side fill valve or optional refill pump
— Optional additional water spray system provides maximum lubrication, cooling and dust suppression
— Onboard winterization system utilizes compressed air to purge water lines
LOADING CONVEYOR
– Aluminum covers and vinyl side panels reduce spillage and help control dust
– Seamless 850 mm (33.5 in) wide belt provides heavy duty, high speed discharge
– Variable belt speed optimizes speed to material type and production rate
– Reversible for easy clean out
– “Boost” feature provides a temporary surge in belt speed to help precisely place material
– Loading conveyor folds to reduce length for transport
– Loading conveyor swings 60 degrees from center position to the left or right

OPTIONAL DUST ABATEMENT SYSTEM
– Vacuum system ports to collecting conveyor housing and transition between collecting and loading conveyor to remove airborne particles
– Augments dust suppression provided by water spray system
– Discharges collected dust into the loading conveyor to facilitate removal from working area around machine
– Maximizes dust removal capability when used with water spray system and optional additional water spray system
OPTIONAL EQUIPMENT
OPTIMIZE VERSATILITY, PRODUCTIVITY, COMFORT.

CAT GRADE AND SLOPE CONTROL
System is integrated with the machine for maximum precision

POWER SUN CANOPY
Deploys or stows hydraulically

WINDSCREENS FOR POWER SUN CANOPY

CAT DIAMOND BITS
Lasts up to 80 times longer than conventional carbide bits

ADDITIONAL LCD TOUCHSCREEN DISPLAY
For use to monitor machine functions

PRODUCT LINK, ADDITIONAL CONFIGURATIONS
Keep track of your machine health, location or fleet use

ADDITIONAL WATER SPRAY SYSTEM
Second system augments lubrication, bit cooling and dust suppression capabilities of the standard system

INBOARD AVERAGING SKI
Hydraulically controlled ski provides inboard reference for grade control system

ROTOR TURNING DEVICE
Assists with turning rotor during rotor service

DUST ABATEMENT SYSTEM
Vacuum system ports to the transition area between the rotor chamber and the collecting conveyor as well as the transition between the collecting conveyor and the loading conveyor; dust is removed and expelled within the loading conveyor, where is it discharged with the milled material

REMOTE CAMERA, LOADING CONVEYOR
Mounts to the discharge end of the loading conveyor; provides enhanced view of discharge loading

REMOTE CAMERA, REAR
Mounts to the rear of machine; provides enhanced view of area behind the machine

REMOTE CAMERA, MAGNETIC MOUNT
Mounts magnetically to various locations; up to two magnetic cameras can be used

SUSPENSION SEAT
Adjustable seats installed on operator’s platform

BIT BUCKET TRAYS
Trays mount to rear crawlers and provide convenient storage for bit buckets

HIGH PRESSURE WASHDOWN SYSTEM
High pressure hose and spray wand connect to onboard water tank to deliver high pressure water spray for convenient clean up

WATER TANK TRANSFER PUMP
Water pump provides additional options to fill onboard water tank

FUEL TRANSFER PUMP
Fuel pump provides additional options to fill fuel tank

WARNING BEACON, FIXED
Amber warning beacon mounts to one of two fixed locations on loading conveyor or rear of machine

WARNING BEACON, MAGNETIC MOUNT
Amber warning beacon can be magnetically mounted in multiple locations on the machine

COMMISSIONING SUPPORT
Cat technician provides machine introduction and training to key personnel

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1. Power Sun Canopy
2. Inboard Averaging Ski
3. Dust Abatement System
4. Remote Camera, Loading Conveyor
5. Remote Camera, Magnetic Mount
6. Bit Bucket Trays
7. High Pressure Washdown System
8. Water Tank Transfer Pump
EASY SERVICE
DESIGNED RIGHT IN.

Outstanding access to critical components and systems makes service and maintenance easier and faster. That keeps your machine where you need it: on the job.

LARGE ACCESS DOORS AND PANELS
- Designed to facilitate efficient service, reducing labor costs and service time
- Quick and easy maintenance
- Accessible pumps and components
- Power hood opens to allow walk-in access
- Visual indicators simplify routine service checks
HYDRAULIC SYSTEM
– Manual overrides simplify troubleshooting by eliminating functioning systems
– Hydraulic hoses are cleanly routed and clamped for long-term reliability
– Exposed hoses are wrapped in nylon sleeves for protection against abrasion
– Pressure test ports and oil sampling ports simplify hydraulic system diagnosis

ELECTRICAL SYSTEM
– 24-volt system with 100 amp alternator
– Color-coded and numbered electrical wiring simplifies troubleshooting
– Harnesses are wrapped in abrasion-resistant nylon braid

ELECTRONIC CONTROL MODULES (ECM)
– Monitors machine systems to ensure proper function and precision
– Provides warning indications via LCD touchscreen display when machine performance is substandard
– Provides diagnostic information

TELEMATICS: PRODUCT LINK™
– Maximize up-time
– Automatic machine location
– Hour updates
– Diagnostic codes
– Schedule service at convenient times
– Optional configurations available

LONG SERVICE INTERVALS
– 500 hour engine oil service interval
– 3,000 hour hydraulic oil service interval without oil sampling; 6,000 hours with oil sampling

ACCESSORY DRIVE SYSTEM
– Provides full operational control of auxiliary machine functions to enable assisted machine movement during maintenance or service
– Facilitates assisted relocation of machine from live construction area to service area during emergency situations
CUTTING BITS
OPTIMIZE PERFORMANCE, MAXIMIZE PRODUCTION.

PREMIUM CUTTING BITS
Your Cat Dealer can supply you with a wide assortment of cutting bits to match performance to your application. Offering superior holder protection and easy penetration, the right cutting bit can ensure peak machine performance, providing maximum production, greater fuel efficiency and less wear on your machine.

A wide range of styles, shapes and shank sizes to accommodate most rotors, engine powers, materials and applications.

- Tips designed to best match your application
- Material flow along the fluted body supports rotation, increasing tool life
- Puller groove design allows various extraction methods
- Head designed to lead cut material away, resulting in less fine material building up between retainer and shank
- Increased collar diameter covers most of the washer and holder face, maximizing holder protection
- Body design allows easy penetration, decreasing stress and wear on washer, retainer and holder system
CAT DIAMOND BITS
STAY SHARP UP TO **80X** LONGER THAN CONVENTIONAL CARBIDE.

PROVEN BENEFITS

More efficiency, more productivity, lower fuel consumption and less wear on the machine. It all adds up to more profitability and growth for your company.

– Last up to 80x longer than carbide tips, keeping crews more productive, month after month
– Assure faster project completions
– Provide you with a significant bidding advantage
– Virtually eliminate labor costs for pick changes; eliminate unplanned, unproductive interruptions
– Deliver proven fuel savings per ton of production
– Enable faster milling speeds and increased productivity
– Eliminate costly bit inventory, and the handling that goes with it
– Require no rotation, crucial because half of carbide failures result when tools fail to turn
– Create less vibration, increasing the life of planetaries, drive shafts, stub shafts, bearings and other parts and components
– Increase track-pad life because the machine does not work as hard
– Deliver a dramatically improved return on your mill investment through increased engagement
– Extend life of moldboards through a consistent pattern; protect welded-on base blocks—and ultimately the drum

*Average life and exact tonnage is impacted by local aggregate and operating technique. Diamond Asphalt Bits last up to 45x the life of standard carbide bits and Diamond Extended Life Bits last up to 80x the life of standard carbide bits.*
### Operating Dimensions

| A | Overall length, conveyor up | 14.52 m | 47.62 ft |
| B | Maximum machine width - PM820, PM822 | 2.83 m | 9.27 ft |
|   | Maximum machine width - PM825 | 3.14 m | 10.30 ft |
| C | Cutting width - PM820 | 2010 mm | 79.1 in |
|   | Cutting width - PM822 | 2235 mm | 88 in |
|   | Cutting width - PM825 | 2505 mm | 98.6 in |
| D | Maximum height, raised conveyor | 5.23 m | 17.17 ft |
| E | Height to optional canopy | 4.05 m | 13.29 ft |
| F | Height, no canopy (canopy down) | 3.00 m | 9.84 ft |
| G | Maximum truck clearance | 4.86 m | 15.95 ft |
| H | Conveyor swing | ± 60˚ from center |

### Shipping Dimensions

| I | Transport length | 12.43 m | 40.79 ft |
| J | Transport width - PM820 | 2.50 m | 8.2 ft |
|   | Transport width - PM822 | 2.70 m | 8.83 ft |
|   | Transport width - PM825 | 3.01 m | 9.88 ft |
| K | Length, track to track | 6.09 m | 21.95 ft |
| L | Length of base machine | 8.33 m | 27.33 ft |
| M | Conveyor length | 8.38 m | 27.48 ft |
| F | Transport height | 3.00 m | 9.84 ft |

### Weight

#### PM820
- Operating weight: 36 130 kg | 79,630 lb
- Transport weight: 32 230 kg | 71,035 lb

#### PM822
- Operating weight: 36 700 kg | 80,887 lb
- Transport weight: 32 800 kg | 72,290 lb

#### PM825
- Operating weight: 37 500 kg | 82,650 lb
- Transport weight: 33 600 kg | 74,054 lb

### Service Refill Capacities

- **Fuel Tank**: 1 108 L | 288.1 gal
- **Cooling System**: 104 L | 27.5 gal
- **Engine Oil**: 65 L | 16.9 gal
- **Hydraulic Oil**: 113 L | 29.4 gal
- **Water Tank**: 3 400 L | 898 gal

Weights shown are approximate and include:
- Operating weights include coolants, lubricants, full fuel tank, full water tank and 75 kg (165 lb) operator.
- Transport weights include coolants, lubricants, 50% full fuel tank and empty water tank.

### Powertrain

- **Cat C18 Engine - 6-cylinder**
  - CANADA, EU, U.S.A.
    - Gross power - SAE J1995: 597 kW | 800.6 hp
    - Gross power - ISO 14396: 590.7 kW | 792.1 hp
  - Emissions: U.S. EPA Tier 4 Final / EU Stage V
  - ALL OTHER REGIONS
    - Gross Power - SAE J1995: 570.5 kW | 765 hp
    - Gross Power - ISO 14396: 567.5 kW | 761 hp
  - Emissions: China III NR / Tier 2 equivalent
  - Operating speed: 100 m/min | 328 ft/min
  - Maximum travel speed: 5.9 km/h | 3.7 mph

### Cutting System

- **PM820 Milling Width**: 2010 mm | 79.1 in
  - Number of Bits: 170
- **PM822 Milling Width**: 2235 mm | 88 in
  - Number of Bits: 185
- **PM825 Milling Width**: 2505 mm | 98.6 in
  - Number of Bits: 203
- **Maximum Cutting Depth**: 330 mm | 13 in
- **Rotor Speeds**: 100 / 109 / 118 rpm

### Optional Equipment

- Power Canopy
- Windscreens for Power Canopy
- Inboard Averaging Ski
- CE Certificate
- Additional Water Spray System
- Water Tank Transfer Pump
- Fuel Transfer Pump
- Dust Abatement System
- Cat Grade Control
- Remote Camera (Front, Rear, or Magnet Mount)
- Product Link (optional configuration)
- Air-ride Operator’s Seats
- Drum Rotating Device
- Cat Diamond Bits
- Bit Bucket Trays
- Machine Commissioning Support
PM820, PM822 and PM825
Cold Planers