

# AP600D

## Asphalt Paver



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**Cat® C6.6 Engine with ACERT™ Technology**

Gross Power (SAE J1995) at 2200 rpm    129.5 kW/176 hp

Net Power (ISO 9249) at 2200 rpm    121.9 kW/165.8 hp

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**Operating Weight with**

AS4251C Screed    18 200 kg

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**Hopper Capacity**

6.5 m<sup>3</sup> (14.1 tonne)

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**Standard Paving Range**

AS4251C Screed    2550-5000 mm

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**Maximum Paving Width**

AS4251C Screed (Electric Heat)    7000 mm

AS4251C Screed (LPG Heat)    7000 mm

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# High Performance and Operator Comfort Make the AP600D the Perfect Choice

*The AP600D sets the standard in performance, operator comfort, ease of use, ride quality and reliability.*

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## C6.6 Engine with ACERT™ Technology

ACERT Technology works at the point of combustion to optimize engine performance. ACERT Technology incorporates an electronic controller to precisely deliver multiple injections of fuel. These multiple injections are combined with a refined air management system in order to generate fewer emissions and optimize fuel combustion while meeting European EU Stage IIIA engine emission requirements. **pg. 4**

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## Dual Operator's Station

The AP600D utilizes dual swing-out operator's station with sliding control console. The stations can be rotated into five different positions and the sliding control console provides operator comfort. The operator's stations can be positioned beyond the machine frame for greater visibility to the steering guide when matching a joint or paving near curbs, where precise paving control is required. **pg. 5**

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## Advisor Monitoring System

The LCD Advisor located on the sliding control console provides an interactive interface to assist the operator. The system includes project planning calculators, start-up checklists, engine operating parameters and many other features to assist the operator. **pg. 5**

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## High Capacity Cooling System and Ventilation System

The high-capacity top-mounted cooling system performs efficiently in high ambient temperatures. The variable speed fan draws air across the engine compartment and exhausts it toward the hopper in order to provide a cooler working environment for the crew. Augers fumes extraction efficiently keeps asphalt fumes away from screed crew and operator. **pg. 4**

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## Screed

The AP600D is available with the AS4251C double width hydraulic power extendible asphalt screed, available with variable frequency tamper and vibrators and with LPG or electric heating system. The AS4251C lays material to the desired width and depth while providing a smooth finish with initial compaction. **pg. 8**

## Caterpillar® Asphalt Pavers continue to lead the industry and meet your demanding job requirements.

*Many easy-to-use features and technologies have been developed in order to guide your crew in producing high quality mats time and time again. Contact your Caterpillar Dealer today for more information.*



## Versatility Defines the AP600D

*The AP600D excels in a wide range of applications from routine commercial jobs to demanding highway operations.*

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### Undercarriage

The wheel undercarriage utilizes four, front solid rubber steering tyres that are mounted on pairs of oscillating bogies for maximum ground contact and smooth operation. The front wheel assist and all-wheel assist options increase mobility in tough operating conditions. **pg. 6**

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### Maneuverability

Caterpillar asphalt pavers provide maneuverability that is unmatched in the industry. The AP600D utilizes three steering modes including PAVE, TRAVEL and MANEUVER. The MANEUVER mode is unique to Caterpillar. This mode provides a 1.4 m turning radius that allows quick maneuverability when moving to a new starting position. **pg. 6**

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### Independent Material Handling System

The material handling system provides precise mix delivery through the most proven system in the industry. The independent operation of the augers and conveyors reduces component wear and minimizes the potential for mix segregation.

Reversible augers and conveyors assist the crew by reducing handwork and clean-up. The reversible auger feature pulls asphalt back into the main screed area when retracting the extenders while the reversible conveyor feature pulls asphalt back into the tunnels, resulting in limited spillage. **pg. 7**

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### Generator and Auxiliary Power Panel

The optional high capacity generator quietly powers the standard electric screed heat system for fast heat-up and uniform screed plate temperatures. The optional auxiliary power panel provides power for lighting and job site work tools. **pg. 8**



## Cat® C6.6 Engine with ACERT Technology

*ACERT Technology manages combustion using a combination of air management, precise fuel delivery and careful timing in order to lower emissions and meet European EU Stage IIIA engine emissions requirements.*



**Cat C6.6 Engine with ACERT Technology.** The C6.6 engine provides a full-rated gross power (SAE J1995) of 129.5 kW (176 hp) at 2200 rpm. Meets European EU Stage IIIA engine emission requirements.

Turbocharged and Air-To-Air Aftercooling (ATAAC). The turbocharged air-to-air aftercooling system provides high horsepower with increased response time while keeping exhaust temperatures low for long hours of continuous operation. Air-to-air aftercooling keeps air intake temperatures down, maximizing fuel efficiency and minimizing emissions.

**Sound Reduction features.** The C6.6 engine sound reduction features include composite valve covers with a fully isolated base, a steel oil pan and a cast iron front cover. A common rail fuel system also provides control of sound and vibration levels.

**Service, Maintenance and Repair.** Easier service, maintenance and repair is accomplished by monitoring key functions and logging critical indicators. Advanced electronic diagnostic capabilities are possible using Cat Electronic Technician.

## High Capacity Cooling System and Optional Ventilation System

*The deck-mounted cooling system provides a cool environment by exhausting hot air toward the hopper, away from operators and ground personnel. The ventilation system promotes a significant reduction of asphalt fumes for operator and crew comfort.*



**High Ambient Temperature Cooling System.** The standard, high-capacity cooling system provides efficient operation in high ambient temperatures. The system design provides quiet operation that benefits the operator and the surrounding environment.

**Efficient Airflow design.** The airflow design draws ambient air across the engine compartment and through the coolers. This design allows the exhaust air to exit toward the hopper in order to provide a cooler engine compartment and cooler operating environment.

**Variable Speed Fan.** The variable speed fan is electronically controlled and hydraulically driven to provide on-demand cooling. This on-demand operation reduces engine power demand, lowers sound levels, and increases fuel efficiency.

**Ventilation System.** A suction system efficiently removes asphalt fumes from the auger chamber area assuring the best operating conditions and comfort for the crew. Asphalt fumes extraction with hydraulically driven fan is combined with engine exhaust into a single outlet stack.

## Operator Comforts for a Productive Environment

*The dual operator's station offers the best-in-class comfort, visibility and ease of use.*



**Dual Operator's Station.** The ergonomic dual operator's station incorporates a sliding control console, ground speed indicators, adjustable suspension seats, armrests and retractable seat belts.

**Operator Visibility.** The dual swing-out operator's station can be positioned in one of five different locations to provide optimum visibility. The stations can extend beyond the machine frame for good visibility when paving applications require precise control.

**Sliding Control Console.** The sliding control console is fully equipped with comprehensive controls allowing the operator to conveniently monitor all machine functions. A lockable vandal cover protects console controls.

**Canopy option.** The optional folding canopy provides full width with two side extending wings for optimum comfort and protection. The canopy can be lowered manually for easy transportation.

## Advisor Monitoring System Simplifies Operation

*The sliding control console includes the Advisor Display that provides many unique features to assist the operator.*



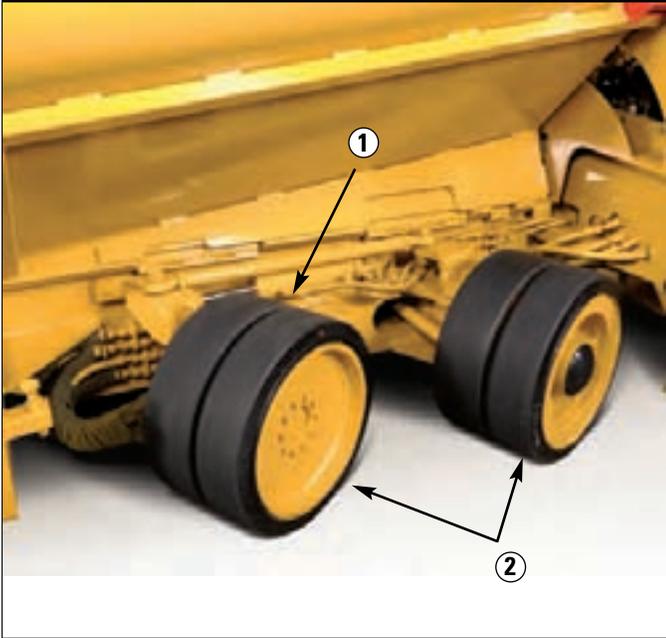
**Advisor Monitoring System (AMS).** The LCD Advisor provides access to a start-up checklist, operator preferences, engine and machine operating parameters and "Paving Calculator".

The AMS display also allows the operator to:

- Calibrate the machine components
- Set the automatic engine speed control
- Monitor engine rpm's and operating temperatures
- Determine the required paving speed and tonnage requirements for a particular job
- Determine performance parameters such as distance traveled, operating hours, paving distance, paving hours, and engine fuel consumption

## Wheel Undercarriage System

*The wheel undercarriage system provides excellent mobility and maneuverability along with a smooth ride for optimum performance.*



**Excellent Mobility.** The sharp turning radius and high propel speeds allow the paver to move quickly around the job site.

**Three Propel Modes.** Pave, travel and maneuver modes provide good control and versatility. The new maneuver mode provides a 1.4 m turning radius for excellent maneuverability in tight quarters.

**Speed Control.** A speed control dial located on the operating control console allows the operator to set a maximum propel speed. When the propel lever is moved to the full forward position, the paver returns to the preset speed.

**Steering Assist.** A position sensor located in the left steering cylinder provides good maneuverability by adjusting the drive speed of the propel motors according to the steering angle of the front wheels. This feature allows the machine to turn while maintaining a consistent travel speed, leading to better mat quality and less wear on the drive system.

**Large Drive Tyres.** The 16.00 x 25 radial tyres provide good tractive effort and a smooth ride.

**Large Steering Tyres.** The 559 mm x 330 mm, solid rubber steering tyres provide maximum ground contact, leading to good turning capability.

**Front Suspension.** Four, front solid rubber steering wheels are mounted on pairs of oscillating bogies, providing a smooth ride.

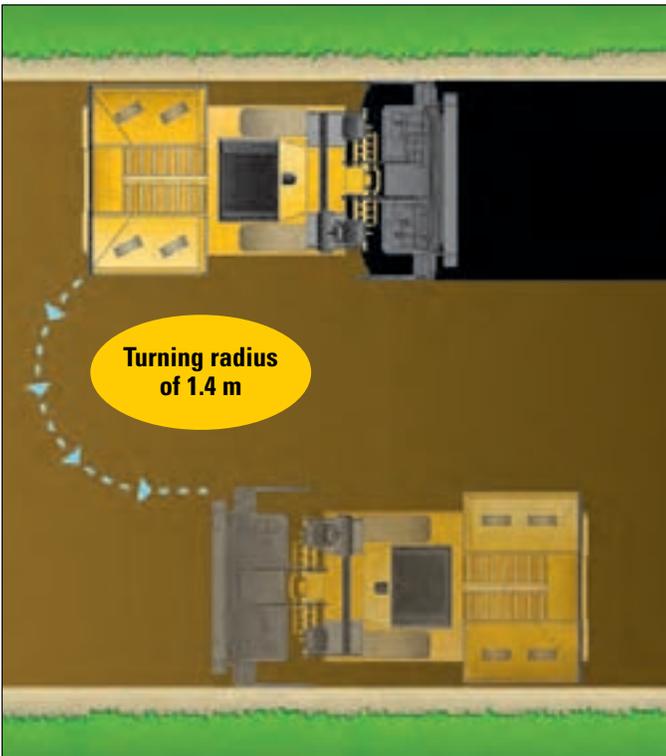
**Long Wheel Base.** The long wheel base provides good tractive effort and stability on soft base materials.

**Front Wheel Assist (Optional).** The front wheel assist feature provides power to the front bogie wheels for additional tractive effort.

**All-Wheel Assist (Optional).** The all-wheel assist feature provides power to the front and rear bogie wheels, maximizing tractive effort.

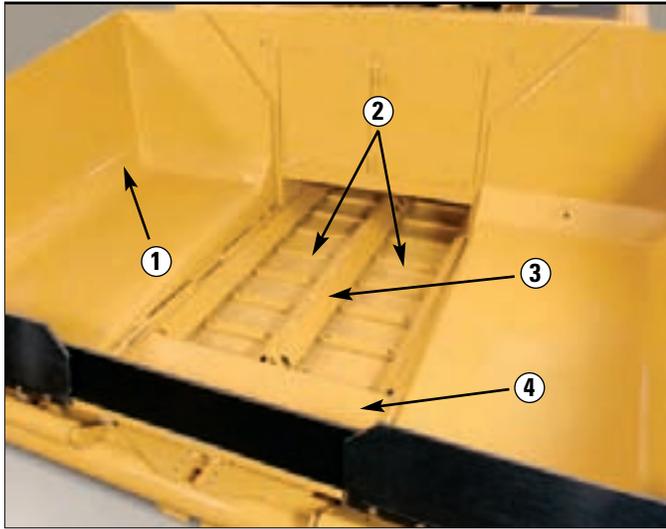
**1** Steering Assist Sensor

**2** Front Wheel Assist and All-Wheel Assist (Options)



# Independent Material Handling System Promotes Hands-Free Operation

The material handling system promotes hands-free operation by providing features such as independent control of each auger and each conveyor.



**Precise Mix Delivery.** The material delivery system provides precise mix delivery with minimal operator monitoring. The left and right conveyors in addition to the left and right augers are controlled independently.

**Outboard-Mounted Conveyor Drives.** The conveyors have outboard-mounted motors, reducers and drive chains that maximize the tunnel area and reduce segregation.

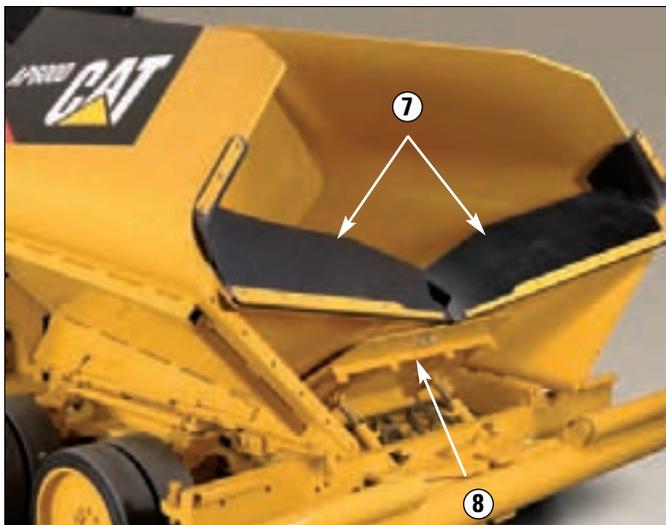
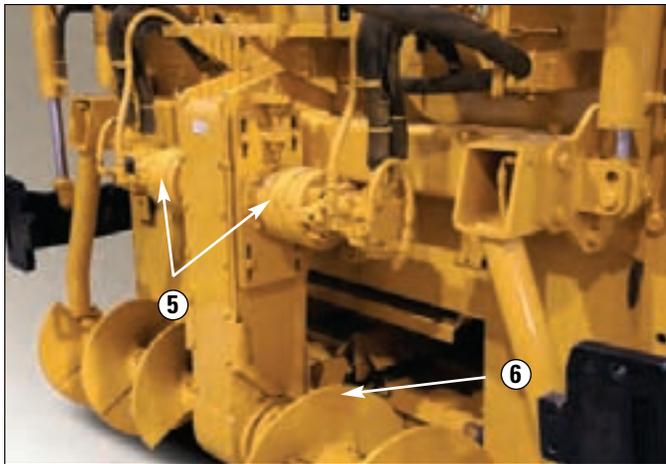
**Independent Auger Drive.** The auger drive assembly is independent of the tractor, which allows the distance between the two conveyors to be significantly reduced. Keeping the conveyors close together allows the material to flow together more easily as it discharges into the auger cavity. The tunnel and auger design eliminates voids under the chain case in order to minimize segregation.

**Adjustable Auger Range.** The auger assembly is hydraulically adjustable with a range up to 215 mm. The ability to adjust the auger assembly simplifies loading and unloading from a transport vehicle. Also, when working with larger stone mixes, the augers can be adjusted to allow the mix to flow unrestricted under the auger assembly.

**Power Folding Front Apron (Optional).** The front hopper apron folds rearward providing good material flow. It reduces clean out effort and time, a feature the crew will really appreciate. A switch located on the operating control console provides power to the hydraulic folding apron.

Note: The front hopper apron is standard *without* the power control and folding wings. Manual operation is required.

**Adjustable Push Rollers.** The four position adjustable push rollers provide a contact point between the paver and the truck to center the load and assist steering while unloading.



- 1 Curved Hopper Design
- 2 Independently Controlled Conveyors
- 3 Narrow Chain Guard
- 4 Folding Front Apron
- 5 Independent Auger Drives
- 6 406 mm Auger Diameter
- 7 Foldable Wings
- 8 Power Folding Front Apron

## Optional Generator System Provides Quiet Power

*The high capacity generator provides power for the electric screed heat, auxiliary lights and job site tools.*



**Industrial, Single-Phase A.C. Generator.** The tractor-mounted generator provides 25 kW of power at 60 Hz for the electric screed heat and the auxiliary power panel. Circuit breaker protection, internal electronic voltage regulation and a dual bearing design provide reliability.

**Choices Available (Belt or Hydraulic Driven).** The belt-driven generator provides full power with a *variable frequency* when the engine speed increases above 1275 rpm.

The hydraulic-driven generator provides full power with a *fixed frequency* of 60 Hz when the engine speed increases above 1275 rpm.

**Optional Auxiliary Power Panel.** The power panel provides 4 kW of power for auxiliary lighting and job site work tools. The panel includes choice of two 240 V or two 120 V receptacles, protected for ground fault circuit interrupt (GFCI). Activating the “Tool Mode” switch provides power at 50 Hz for frequency sensitive tools.

## Screed That Delivers Quality

*AS4251C double width hydraulic power extendible asphalt screed provides even material flow and unparalleled stability that result in smooth, high quality mats.*



*The AS4251C screed paves from 2550 mm to 5000 mm. With mechanical extensions added to both sides, maximum paving width is 7000 mm (electric heat and LPG heat screeds).*

**AS4251C Screed.** The screed is available with variable frequency tamper and vibrators and with LPG or electric heating system. The screed control panels include material feeding controls for easy ground crew usage.

**Tamper and Vibrator.** Automatically operated when the AP600D advances following a preset ramp. Tamper starting and stopping ramps are adjustable in order to maintain an optimum mat finish. The AS4251C screed is equipped with electronic ignition, automatic and independent adjustment of the smoothing plate temperature for central and each mobil plate.

**LPG Heating System.** The system provides high efficiency burners and optimum thermostatic temperature control.

**Electric Heating System.** The system provides a tractor-mounted generator, replaceable heating elements and operator friendly controls providing a cleaner environment. Feature & benefits include simple operation, fast heat-up time, multi-zone heating elements and thermostatic control of all screed plates. Heavy-duty, user-friendly screed heating control unit with self-diagnostic control is positioned at the rear of the machine for easy ground crew usage.

## Serviceability Features That You've Come to Expect

*Simplified service means more time spent paving and less time spent on maintenance.*



**Advisor Monitoring System (AMS).** The Advisor display lists diagnostic fault codes for machine functions making troubleshooting quick and easy.

**Manual Overrides.** The hydraulic pump solenoids incorporate manual overrides to assist troubleshooting procedures.

**Large Access Doors and Panels.** Preventative maintenance points can be accessed through the large swing open access doors and panels.

**Remote Lubrication Points.** Lubrication points are grouped in order to make routine service quick and easy.

**Color-Coded and Numbered Electrical Wiring.** Troubleshooting is efficient and simplified with the color-coded and numbered wiring.

## Optional Equipment

*Caterpillar offers many options that allow the paver and screed to be configured to your specific application. Contact your dealer for more details.*

### Tractor Options

- All-Wheel Assist
- Auger and Mainframe Extensions
- Auxiliary Power Panel
- CE Certificate
- Decelerator Pedal
- Ecological Washdown System
- Folding Operator's Station Canopy
- Front-Wheel Assist
- Generator (Belt or Hydraulic Driven)
- Italian/German Road Homologation
- Lights (High Intensity Discharge and Halogen)
- Power Folding Hopper Apron
- Paddle Feeder Sensor (Proportional)
- Sonic Feeder Sensor (Proportional)
- Steering Guide
- Uptime Kit
- Ventilation System
- Warning Beacon

### Controls and Grade References

- Automatic Grade and Slope Control
- Non-Contacting Sonic Grade Sensor
- Contacting Grade Sensor
- Outboard Leveler, 9.15 m and 12.2 m
- Inboard Leveler
- Sonic Averaging Beam
- Rigid Ski, 9.15 m and 12.2 m

### Screed Options

- Extensions for: 5.5 m – 6.5 m – 7 m
- Foldable End Gates
- Power Crown Adjuster
- Tamper, Vibrator and Counterbalance Display Control

## Engine

Six cylinder Caterpillar C6.6 with ACERT Technology, turbocharged air-to-air after-cooled diesel engine. Meets European EU Stage IIIA engine emission regulations.

Gross Power	2200 rpm
SAE J1995	129.5 kW/176 hp
Net Power	2200 rpm
ISO 9249	121.9 kW/165.8 hp
EEC 80/1269	121.9 kW/165.8 hp
Bore	105 mm
Stroke	127 mm
Displacement	6.6 liters

- All engine horsepower ratings are metric including front cover.
- Net power ratings are tested at the reference conditions for the specified standard.
- Net power advertised is the power available at the flywheel when the engine is equipped with alternator, air cleaner, muffler and fan.
- Derating is not required up to an altitude of 3000 m.

## Transmission

The drive system utilizes two dual path hydrostatic pumps and two fixed displacement motors. The pumps are infinitely variable with electronic displacement controls (EDC) for steering and speed. Single speed motors drive two speed planetary gear boxes to provide two propel ranges. The drive system is equipped with two switches located at the operator's station control console. The two switches are used as manual overrides and are directly linked to EDC's.

### Features

- The optional front wheel assist provides power to the front bogie wheels for additional tractive effort.
- The optional all-wheel assist provides power to the front and rear bogie wheels, maximizing tractive effort.

### Two Speed Ranges (forward and reverse)

Paving	0-25 mpm
Travel	0-18 km/h

## Steering

Hydraulic power-assist steering system provides smooth, low effort steering by means of a steering wheel on the control console panel. Electric over hydraulic dual path differential steering assures precise machine control. Steering commands are independent of propel speed.

### Features

- Three propel modes including pave, travel and maneuver are selectable at the operator's control console.
- When in the pave or travel mode, the steering range is electrically reduced to provide smooth steering movements.
- When in the maneuver mode, steering is at full range, allowing the operator to pivot-turn by preventing the inside drive wheel from turning.

### Turning Radius

Minimum	1400 mm
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## Suspension

Four front steering bogie wheels, two per side, are mounted in tandem on bogie axles, equalizing ground pressure.

Drive Tyres  
(radial) two, 16.00 x 25

Steering Wheels  
(solid rubber) four, 559 mm x 330 mm

Wheel base 2360 mm

## Brakes

### Primary Brake Features

- A closed-loop hydrostatic system provides dynamic braking during normal operation.

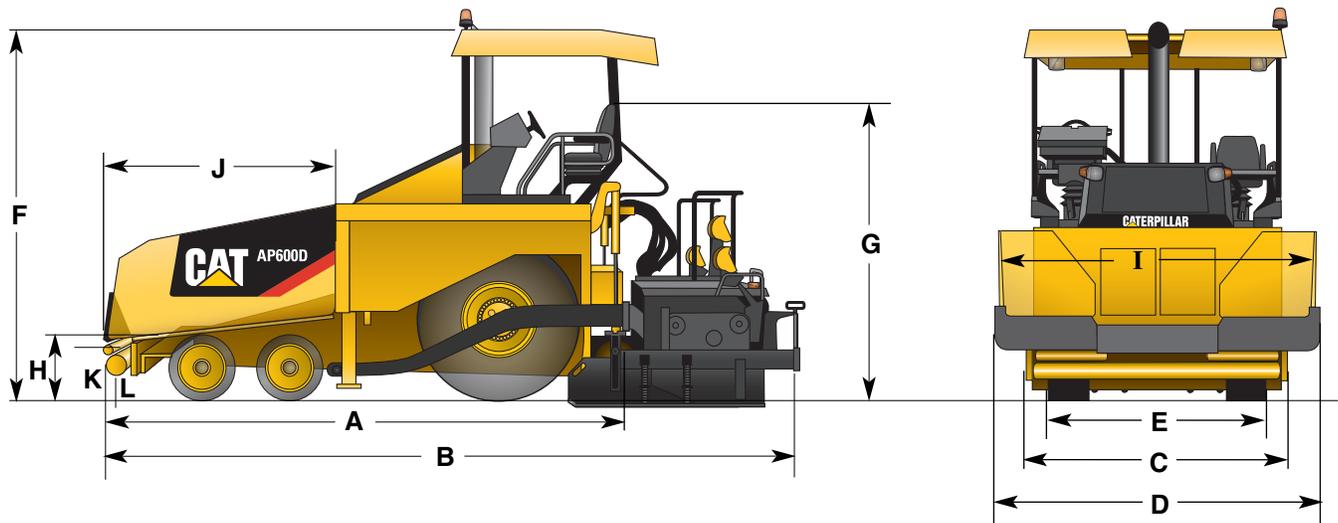
### Parking Brake Features

- Safety and parking brakes system includes a spring applied, hydraulically released brake which is actuated by a switch on the operator's station control console.

## Electrical System

The 24-volt DC electrical system is designed for improved durability, reliability and ease of service. Two 12-volt batteries with 1400 cranking amps each and a 80-amp alternator are used in the system. Wires are loomed with vinyl-coated nylon braid to improve the overall integrity of the electrical system and to protect against abrasion.

## Dimensions



	mm
<b>A</b> Tractor length with push roller	4950
<b>B</b> Length with push roller and screed	6160
<b>C</b> Transport width with screed end gates (hopper raised)	2720
Transport width without screed end gates (hopper raised)	2500
<b>D</b> Tractor operating width (hopper lowered)	3306
<b>E</b> Track gauge width	2200
<b>F</b> Operating height with canopy	3840
<b>G</b> Transport height with canopy, fumes stack and seat lowered	3019

	mm
<b>H</b> Truck dump height (at hoppers)	520
<b>I</b> Truck entry width (at hoppers)	3200
<b>J</b> Hopper length	1960
<b>K</b> Push roller height	533
<b>L</b> Clearance	260
Hopper capacity (with conveyor tunnels) – m <sup>3</sup>	6.5
Discharge height at center	566
Augers diameter	406

## Service Refill Capacities

	Liters
Fuel tank	291
Cooling system (total)	30
Engine oil w/filter	14
Hydraulic oil tank	218
Washdown spray system	38

## Weights

	kg
<b>Operating Weights*</b>	
AP600D with AS4251C	18 200
<b>Shipping Weights**</b>	
Tractor only	14 000
Tractor with screed	17 900

Weights shown are approximate and include:

\* 75 kg operator, with canopy, fuel tank 50%, leveling system, standard width screed (2.55-5 m).

\*\* base machine, canopy lowered, fuel tank 10%, manual apron, standard screed end gates.

# AP600D Asphalt Paver

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)

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

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