

# SMARTGRADE™ DOZERS



JOHN DEERE

700K / 750K / 850K



**HEAD OF THE CLASS**

*BUILT TO MAKE YOU*  
**LOOK LIKE**  
**A GENIUS.**



RELIABLE

+



PRODUCTIVE





## ***SCHOOL THE COMPETITION.***

Your success depends on your ability to one-up your competition — and grade-control technology has become a must-have tool for maximizing productivity and minimizing daily operating costs.

Unlike traditional aftermarket grade-control systems, which are more prone to theft and damage, and take time to set up, John Deere SmartGrade™ Dozers are purpose built. Combining the power of Topcon 3D-MC<sup>2</sup> technology with the Deere track load-sensing system, these highly productive crawlers feature a fully integrated grade-control system that is as easy to set up as it is to run. And they're backed by our legendary Deere dealer network.

Why settle for average grades? Delivering a unique combination of power, durability, technology, and support, SmartGrade Dozers are way ahead of the curve.

# BRILLIANT IDEA

*PURPOSE BUILT AND FULLY INTEGRATED AT THE FACTORY.*

The SmartGrade grade-control system is fully integrated from the factory without the vulnerable masts and cables of aftermarket systems. It's easy to calibrate, too, so you'll spend less time setting up and more time grading.



**EASY  
CALIBRATION**

## **Precise grading performance**

The grade-control system is fully integrated into the machine's cabin, structures, and software, to deliver more precise grading performance.

## **Minimize damage and theft**

Cab-mounted antennas and measurement units on the blade and beneath the cab replace external masts and cables, so there's less chance of breakage or theft.

## **Easy setup**

No more manually taking measurements. Preloaded machine dimensions reduce initial calibration time from up to three hours to around 30 minutes. And there's no need for adjustments by a GPS specialist whenever you arrive at a new jobsite with different soil conditions.



STANDOUT FEATURE

# MATERIAL MASTERMIND

*DON'T SETTLE FOR  
**AVERAGE GRADES.***

Auto SmartGrade settings enable you to optimize performance based on soil type and load size, increasing operator efficiency for novices and pros alike. Handy dash-mounted monitor enables easy activation and total machine control.



**AUTO  
SMARTGRADE**



### **Lower owning and operating costs**

Anti-track-slip capability extends undercarriage life and fuel economy, helping to lower owning and operating costs.

### **Better blade response**

Electrohydraulic (EH) controls significantly improve blade response by up to 50 percent over previous models.

### **Low-effort control**

A single lever provides low-effort control of steering, forward/reverse travel, and ground speed. It's also detented so it doesn't require an operator's constant touch or attention, and employs a thumb-actuated travel-speed switch.

### **Maximum grading versatility**

Auto SmartGrade automatically raises the blade whenever you encounter heavier loads during rough grading to prevent stalling and track slip — so you can use the dozer in all phases of grading.



NO EXTERNAL  
MASTS OR CABLES



***BRAINS.***  
***AND BRAWN.***



## SMARTGRADE DOZERS ARE A WISE CHOICE.

With heavy-duty undercarriages and job-proven components, SmartGrade Dozers deliver the same brute strength and durability as their K-Series siblings. Behind the brawn are intelligent features like Eco mode and a highly efficient hydraulic-driven cooling fan.

### DuraTrax™ undercarriage

Heavy-duty sealed and lubricated undercarriage is quality built to keep your machine in the field. Maximum Life undercarriage (available as an option only on the 700K SmartGrade) delivers up to twice the bushing life, for extra durability in extremely abrasive conditions. Standard and Extended Life undercarriage options are available on 700K, 750K, and 850K SmartGrade Dozers. To further reduce maintenance and operating costs, contact your dealer about John Deere undercarriage wear-assurance programs.

### Eco mode

Eco mode maximizes fuel economy without sacrificing performance, automatically adjusting engine rpm and transmission settings based on load.

### Hydraulic-driven cooling-system fan

Available reversing hydraulic-powered fan automatically back-blows the cooler cores at preset intervals. When conditions demand more frequent cleaning, simply press a button to actuate the reversing cycle.

### Fluid-efficient, reliable FT4 diesel

Our EPA Final Tier 4 (FT4)/EU Stage IV diesels meet emission regulations without sacrificing power or torque. We built on our Interim Tier 4 (IT4)/Stage IIIB solution to deliver a strong combination of performance, efficiency, and reliability. This technology is simple, fluid efficient, fully integrated, and fully supported.



**ECO MODE REDUCES FUEL CONSUMPTION BY UP TO**

**20%**



# ONE-STOP SHOP

*FROM FACTORY ORDER TO DEALER SUPPORT,  
DEERE'S GOT YOU COVERED.*

## **Simple to service**

Inertial measurement unit (IMU) sensors are located outside the cylinders, making them easier to access should service be required.

## **Ready to work**

700K, 750K, and 850K SmartGrade Dozers are factory equipped with fully integrated Topcon 3D-MC<sup>2</sup> grade-control components so they're ready to dig in from day one.

## **Backed to the max**

The complete SmartGrade system is sold and fully supported by the renowned John Deere dealer network.



Keep downtime down with  
**ULTIMATE UPTIME**

Ultimate Uptime, featuring John Deere WorkSight™, is a customizable support solution available exclusively from your Deere dealer. This flexible offering maximizes equipment availability with standard John Deere WorkSight capabilities that can help prevent future downtime and speed repairs when needed. In addition to the base John Deere WorkSight features, our dealers work with you to build an uptime package that meets the specific needs of your machine, fleet, project, and business, including customized maintenance and repair agreements, onsite parts availability, extended warranties, fluid sampling, response-time guarantees, and more.

Get valuable insight with  
**JOHN DEERE WORKSIGHT**

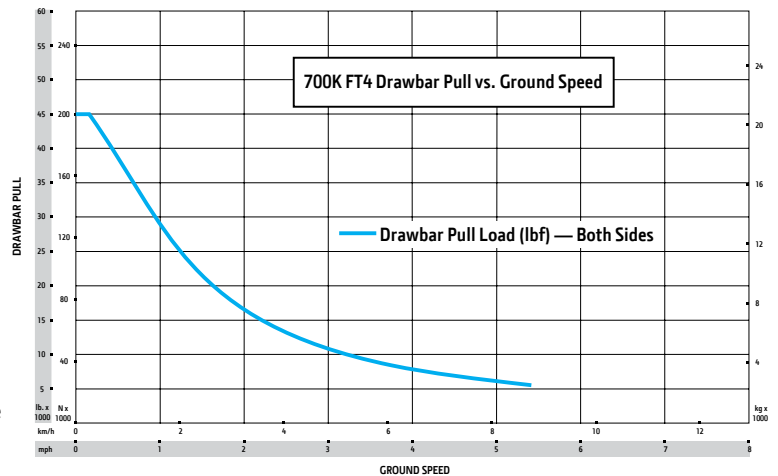
John Deere WorkSight is an exclusive suite of telematics solutions that increases uptime while lowering operating costs. At its heart, JDLink™ Ultimate machine monitoring provides real-time utilization data and alerts to help you maximize productivity and efficiency while minimizing downtime. Remote diagnostics enable your dealer to read codes, record performance data, and even update software without a trip to the jobsite.





# 700K SPECIFICATIONS

<b>Engine</b>	<b>700K LGP</b>
<b>Blade Type</b>	<b>Power-Angle-Tilt (PAT)</b>
Manufacturer and Model	John Deere PowerTech™ PVS 6068
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV
Displacement	6.8L (414 cu. in.)
SAE Net Rated Power	97 kW (130 hp) at 1,800 rpm
Net Peak Torque	559 Nm (412 ft.-lb.) at 1,500 rpm
Aspiration	Turbocharged with charge-air cooler
Air Cleaner	Dual-stage dry tube with tangential unloader
<b>Cooling</b>	
Type	Variable-speed suction fan w/ optional reversing feature
Engine Coolant Rating	-37 deg. C. (-34 deg. F)
Engine Radiator	10 fins per in.
<b>Powertrain</b>	
<b>Transmission</b>	Automatic, dual-path, hydrostatic drive; load-sensing feature automatically adjusts speed and power to match changing load conditions; each individually controlled track is powered by a variable-displacement piston pump and motor combination; ground-speed selection buttons on single-lever steering and direction control; independently selectable reverse speed ratios of 100%, 115%, or 130% of forward ground speed; decelerator pedal controls ground speed to stop
System Relief Pressure	47 573 kPa (6,900 psi)
Travel Speeds	
Forward and Reverse	8.9 km/h (5.5 mph)
Maximum (optional)	9.7 km/h (6.0 mph)
<b>Steering</b>	Single-lever steering, direction control, and counter-rotation; full power turns and infinitely variable track speeds provide unlimited maneuverability and optimum control; hydrostatic steering eliminates steering clutches and brakes
<b>Final Drives</b>	Triple-reduction final drives mounted independently of track frames and dozer push frames for isolation from shock loads
Total Ratio	33.59 to 1
<b>Drawbar Pull</b>	
Maximum	200 kN (45,000 lb.)
At 1.9 km/h (1.2 mph)	119 kN (26,800 lb.)
At 3.2 km/h (2.0 mph)	77 kN (17,200 lb.)
<b>Brakes</b>	
Service	Hydrostatic (dynamic) braking stops the machine whenever the direction-control lever is moved to neutral or the decelerator is depressed to the detent
Parking	Exclusive spring-applied, hydraulically released park-brake feature engages wet, multiple-disc brakes automatically whenever the engine stops, the operator depresses the decelerator pedal to the brake position, the unit is in neutral for 3 seconds (with detected motion), or the park-lock lever is in the park position; machine cannot be driven with brake applied, minimizing wearout or need for adjustment
<b>Hydraulics</b>	
Type	Open-center hydraulic system with fixed-displacement gear pump
Pump Displacement	44 cc
System Relief Pressure	22 063 kPa (3,200 psi)
Maximum Flow at Unloaded High Idle	95 L/m (25 gpm)
Control	3-function direct-acting T-bar joystick with push-button angle function



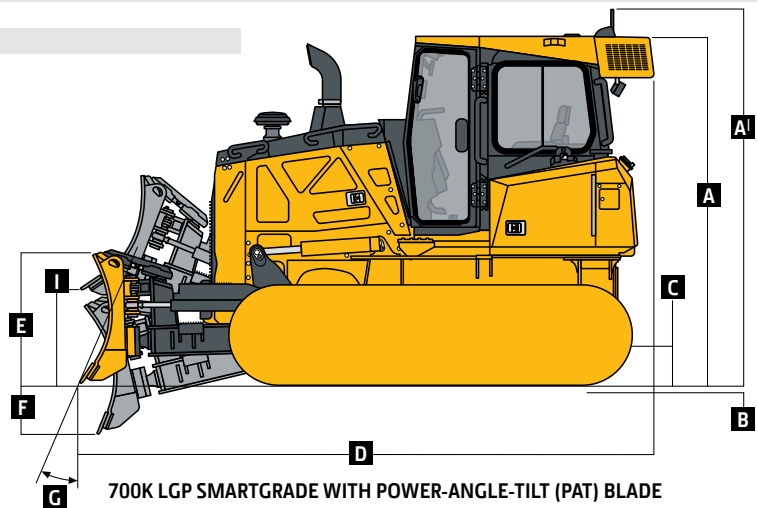
# 700K SPECIFICATIONS



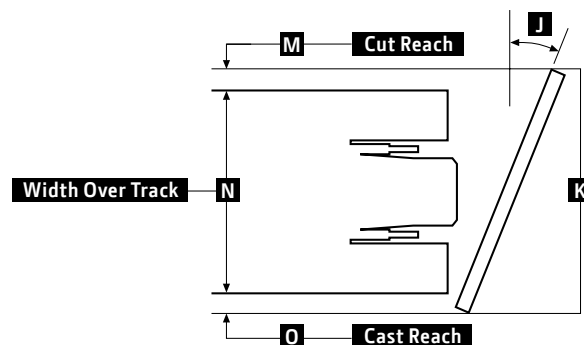
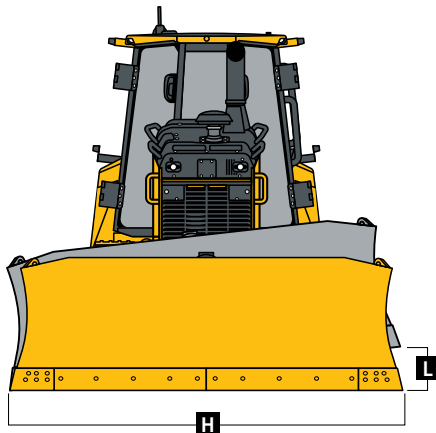
<b>Electrical</b>	<b>700K LGP</b>
<b>Blade Type</b>	<b>PAT</b>
Voltage	24 volts
Capacity	
Battery	950 CCA
Reserve	190 min.
Alternator Rating (cab)	130 amp
Lights	Grille mounted (2), rear mounted (2), and rear reflectors (2)
<b>Undercarriage</b>	
<b>Tracks</b>	John Deere DuraTrax™ features large deep-heat-treated components; pins and bushings are sealed for life; rollers and idlers are permanently sealed and lubricated; sprockets are segmented; full-length track-frame covers reduce material buildup and ease cleaning
Track Gauge	1981 mm (78 in.)
Grouser Width	760 mm (30 in.)
Chain	Sealed and lubricated
Shoes, Each Side	39
Track Rollers, Each Side	7
Track Length on Ground	2590 mm (102 in.)
Ground Contact Area	39 472 cm <sup>2</sup> (6,118 sq. in.)
Ground Pressure	35.2 kPa (5.11 psi)
Track Pitch	191 mm (7.5 in.)
Oscillation at Front Roller	± 94 mm (± 3.7 in.)
<b>Operator Station</b>	
ROPS (ISO 3471 – 2008) and FOPS (ISO 3449 – 2005)	
<b>Serviceability</b>	
<b>Refill Capacities</b>	
Fuel Tank with Lockable Cap	301 L (79.5 gal.)
Diesel Exhaust Fluid (DEF) Tank	11.8 L (3.1 gal.)
Cooling System with Recovery Tank	35.06 L (9.3 gal.)
Engine Oil with Filter	24.6 L (6.5 gal.)
Reservoir with Filter	
Transmission	68.9 L (18.2 gal.)
Hydraulic	53.8 L (14.2 gal.)
<b>Operating Weights</b>	
<i>Base Weight (with standard equipment, rollover protective structure [ROPS], full fuel tank, and 79-kg [175 lb.] operator)</i>	14 193 kg (31,290 lb.)
<b>Optional Components</b>	
Cab with Pressurizer and Heater/Air Conditioner	288 kg (635 lb.)
Cab with Air Conditioner	
Front and Door Screens	68 kg (151 lb.)
Rear Screen	41 kg (91 lb.)
Side Screens	68 kg (151 lb.)
Limb Risers (cab)	155 kg (341 lb.)
Front Counterweight	172 kg (380 lb.)
Retrieval Hitch	31 kg (68 lb.)
Drawbar, Extended Rigid	88 kg (195 lb.)
Winch	652 kg (1,437 lb.)
Fairlead, 4 Roller	85 kg (187 lb.)
Full-Length Rock Guards	130 kg (287 lb.)
Maximum Life Undercarriage	373 kg (822 lb.)

# 700K

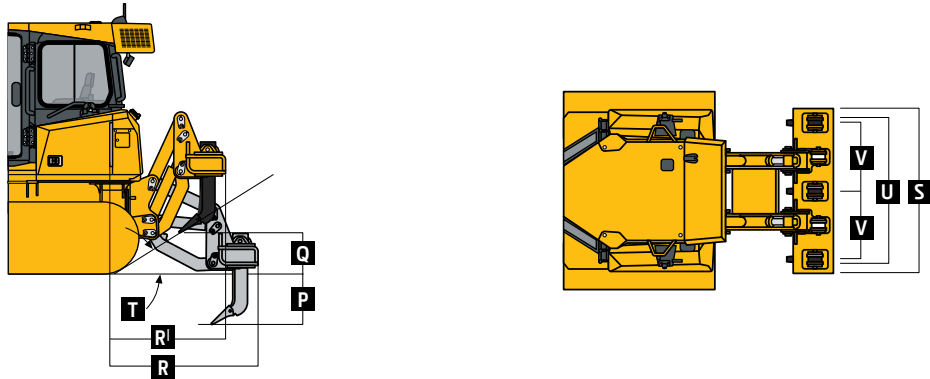
<b>Operating Weights (continued)</b>	<b>700K LGP</b>
<b>Blade Type</b>	<b>PAT</b>
<b>Optional Components (continued)</b>	
Track Shoes	
560 mm (22 in.)	- 493 kg (- 1,086 lb.)
610 mm (24 in.)	- 371 kg (- 818 lb.)
760 mm (30 in.)	In base
Swamp Shoes, 760 mm (30 in.)	- 14 kg (- 31 lb.)
<b>Machine Dimensions</b>	
<b>A</b> Overall Height to Roof	2936 mm (9 ft. 8 in.)
<b>A<sup>1</sup></b> Overall Height with Receivers/Antennae	3325 mm (10 ft. 11 in.)
<b>B</b> Tread Depth with Single-Bar Grouser	56 mm (2.2 in.)
<b>C</b> Ground Clearance in Dirt	393 mm (15.5 in.)
<b>D</b> Overall Length	4815 mm (189 in.) (15 ft. 9 in.)
Overall Length with Extended Drawbar	5033 mm (198 in.) (16 ft. 6 in.)
Overall Length with Winch and Fairlead Rollers	5395 mm (212 in.) (17 ft. 8 in.)
<b>E</b> Blade Lift Height	991 mm (3 ft. 3 in.)
<b>F</b> Blade Digging Depth	533 mm (21 in.)
<b>G</b> Blade Cutting-Edge Angle, Adjustable	52 to 60 deg.



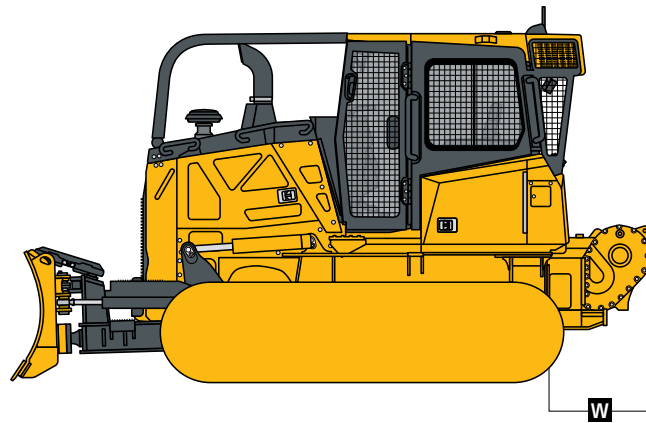
<b>Machine Dimensions (continued)</b>	<b>700K LGP</b>
<b>Blade Type</b>	<b>PAT</b>
<b>Straight</b>	
<b>H</b> Blade Width	3658 mm (144 in.) (12 ft. 0 in.)
<b>I</b> Blade Height	991 mm (39 in.) (3 ft. 3 in.)
SAE Capacity	3.2 m <sup>3</sup> (4.1 cu. yd.)
Weight	901 kg (1,986 lb.)
C-Frame Assembly Weight (without blade)	663 kg (1,461 lb.)
<b>J</b> Blade Angle	25 deg.
<b>K</b> Overall Width with Blade Angled	3324 mm (130.9 in.) (10 ft. 10.9 in.)
<b>L</b> Blade Tilt (uses tilt jack)	482 mm (19 in.)
<b>M</b> Cut Reach	113 mm (4.5 in.)
<b>N</b> Width Over Track	2743 mm (108 in.) (9 ft. 0 in.)
<b>O</b> Cast Reach	468 mm (18.4 in.)



Rear Ripper		700K LGP
<b>Blade Type</b>	PAT	
Multi-shank parallelogram ripper with 5 pockets and 3 shanks		
Weight	1444 kg (3,183 lb.)	
<b>P</b> Maximum Penetration	563 mm (22 in.)	
<b>Q</b> Maximum Clearance Under Tip	584 mm (23 in.)	
<b>R</b> Overall Length, Lowered Position	1494 mm (59 in.) (4 ft. 11 in.)	
<b>R<sup>l</sup></b> Overall Length, Raised Position	1210 mm (48 in.) (4 ft. 0 in.)	
<b>S</b> Overall Beam Width	1930 mm (6 ft. 4 in.)	
<b>T</b> Slope Angle (full raise)	26 deg.	
<b>U</b> Ripping Width	1673 mm (5 ft. 6 in.)	
<b>V</b> Distance Between Shanks	806 mm (32 in.)	



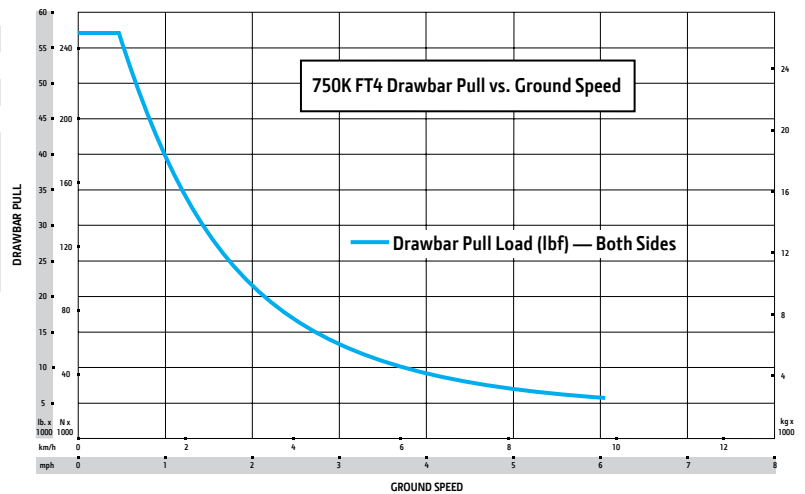
4000S Winch		700K LGP
<b>Blade Type</b>	PAT	
<b>W</b> Winch Length	798 mm (31 in.)	





# 750K SPECIFICATIONS

<b>Engine</b>	<b>750K LGP</b>
<b>Blade Type</b>	<b>Power/Angle/Tilt (PAT)</b>
Manufacturer and Model	John Deere PowerTech™ PVS 6068
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV
Displacement	6.8 L (414 cu. in.)
SAE Net Rated Power	123 kW (165 hp) at 1,800 rpm
Net Peak Torque	768 Nm (567 lb.-ft.) at 1,400 rpm
Aspiration	Turbocharged with charge air cooler
Air Cleaner	Vacuum-aspirated dual-element dry canister
<b>Cooling</b>	
Type	Variable-speed suction fan with optional reversing feature
Engine Coolant Rating	-37 deg. C. (-34 deg. F)
Engine Radiator	10 fins per in.
<b>Powertrain</b>	
<b>Transmission</b>	Automatic, dual-path, hydrostatic drive; load-sensing feature automatically adjusts speed and power to match changing load conditions; each individually controlled track is powered by a variable-displacement piston pump and motor combination; ground-speed selection buttons on single-lever steering and direction control; independently selectable reverse speed ratios of 100%, 115%, or 130% of forward ground speed; decelerator pedal controls ground speed to stop
System Relief Pressure	45 850 kPa (6,650 psi)
Travel Speeds	
Forward and Reverse	9.7 km/h (6.0 mph)
Maximum (optional)	11.0 km/h (6.8 mph)
<b>Steering</b>	Single-lever steering, speed, direction control, and counter-rotation; full power turns and infinitely variable track speeds provide unlimited maneuverability and optimum control; hydrostatic steering eliminates steering clutches and brakes
<b>Final Drives</b>	Double-reduction, planetary final drives mounted independently of track frames and dozer push frames for isolation from shock loads
Total Ratio	46.41 to 1
<b>Drawbar Pull</b>	
Maximum	254 kN (57,000 lb.)
At 1.9 km/h (1.2 mph)	156 kN (35,000 lb.)
At 3.2 km/h (2.0 mph)	98 kN (22,000 lb.)
<b>Brakes</b>	
Service	Hydrostatic (dynamic) braking stops the machine whenever the direction-control lever is moved to neutral or the decelerator is depressed to the detent
Parking	Exclusive spring-applied, hydraulically released park brake safety feature engages wet, multiple-disc brakes automatically whenever the engine stops, the operator depresses the decelerator pedal to the brake position, the unit is in neutral for 3 seconds (with detected motion), or the park-lock lever is in the park position; machine cannot be driven with brake applied, minimizing wearout or need for adjustment





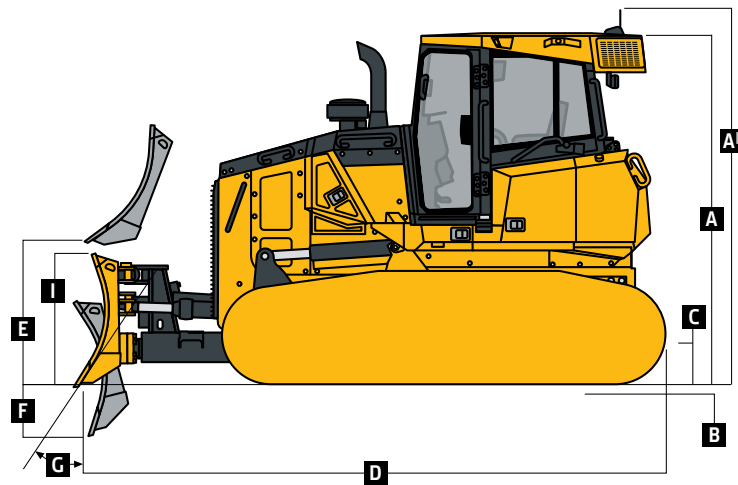
# 750K SPECIFICATIONS



<b>Hydraulics</b>	<b>750K LGP</b>
<b>Blade Type</b>	<b>PAT</b>
Type	Load sense hydraulic system with variable-displacement piston pump
Pump Displacement	63 cc
System Relief Pressure	24 993 kPa (3,625 psi)
Differential Pressure	1896 kPa (275 psi)
Maximum Flow at Unloaded High Idle	138 L/m (36 gpm)
Control	3-function hydraulic-pilot T-bar joystick with push-button angle function
<b>Electrical</b>	
Voltage	24 volts
Capacity	
Battery	950 CCA
Reserve	190 min.
Alternator Rating (cab)	130 amp
Lights	Grille mounted (2), rear mounted (2), engine compartment (1), and rear reflectors (2)
<b>Undercarriage</b>	
<b>Tracks</b>	John Deere Dura-Trax™ features large deep-heat-treated, sealed, and lubricated track links and through-hardened, sealed, and lubricated rollers for maximum wear resistance; sprockets are segmented; extreme-duty shoes are available (on some models) for severe applications
Track Gauge	2134 mm (84 in.)
Grouser Width	865 mm (34 in.)
Chain	Sealed and lubricated
Shoes, Each Side	45
Track Rollers, Each Side	8
Track Length on Ground	3073 mm (121 in.)
Ground Contact Area	53 077 cm <sup>2</sup> (8,227 sq. in.)
Ground Pressure	31.5 kPa (4.57 psi)
Track Pitch	191 mm (7.5 in.)
Oscillation at Front Roller	± 127 mm (± 5.0 in.)
<b>Operator Station</b>	
ROPS (ISO 3471 – 2008) and FOPS (ISO 3449 – 2005)	
<b>Serviceability</b>	
<b>Refill Capacities</b>	
Fuel Tank with Lockable Cap	368 L (97.5 gal.)
Cooling System with Recovery Tank	40.75 L (10.8 gal.)
Engine Oil with Filter	24.6 L (6.5 gal.)
Reservoir with Filter	
Transmission	115 L (30 gal.)
Hydraulic	112 L (29.7 gal.)
Diesel Exhaust Fluid (DEF) Reservoir	13.6 L (3.6 gal.)
<b>Operating Weights</b>	
<i>Base Weight (with standard equipment, rollover protective structure [ROPS], full fuel tank, and 79-kg [175 lb.] operator)</i>	17 121 kg (37,745 lb.)
<b>Optional Components</b>	
Cab with Pressurizer and Heater/Air Conditioner	337 kg (743 lb.)
Cab with Air Conditioner	
Front and Door Screens	79 kg (175 lb.)
Rear Screen	34 kg (75 lb.)
Side Screens	54 kg (120 lb.)

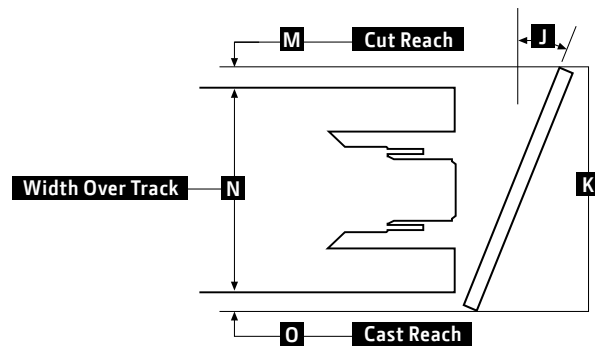
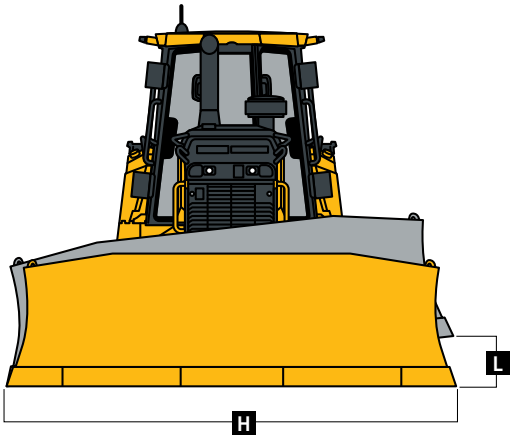
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Operating Weights <i>(continued)</i>	750K LGP
<b>Blade Type</b>	<b>PAT</b>
<b>Optional Components <i>(continued)</i></b>	
Condenser Guard (cab with air conditioner)	55 kg (121 lb.)
Limb Risers (cab)	261 kg (575 lb.)
Heavy-Duty Grille	28 kg (62 lb.)
Lift-Cylinder Hose Guards	42 kg (93 lb.)
Tank Guards	323 kg (712 lb.)
Rear Counterweight	326 kg (720 lb.)
Retrieval Hitch	37 kg (81 lb.)
Drawbar, Extended Rigid	130 kg (286 lb.)
Blade Brush Guard	87 kg (192 lb.)
Center Chain Guides	61 kg (135 lb.)
Full-Length Rock Guards	154 kg (340 lb.)
Track Shoes	
710-mm (28 in.) Moderate Duty	- 418 kg (- 922 lb.)
865-mm (34 in.) Moderate Duty	In base
<b>Machine Dimensions</b>	
<b>A</b> Overall Height to Roof	3128 mm (10 ft. 3 in.)
<b>A<sup>1</sup></b> Overall Height with Receivers/Antennae	3517 mm (11 ft. 6 in.)
<b>B</b> Tread Depth with Single-Bar Grouser	
Moderate Duty	56 mm (2.2 in.)
Extreme Duty	69 mm (2.7 in.)
<b>C</b> Ground Clearance in Dirt	356 mm (14 in.)
<b>D</b> Overall Length	5246 mm (17 ft. 3 in.)
Overall Length with Extended Drawbar	5535 mm (18 ft. 2 in.)
<b>E</b> Blade Lift Height	1025 mm (40.3 in.)
<b>F</b> Blade Digging Depth	650 mm (25.6 in.)
<b>G</b> Blade Cutting-Edge Angle, Adjustable	55.2 to 60.1 deg.

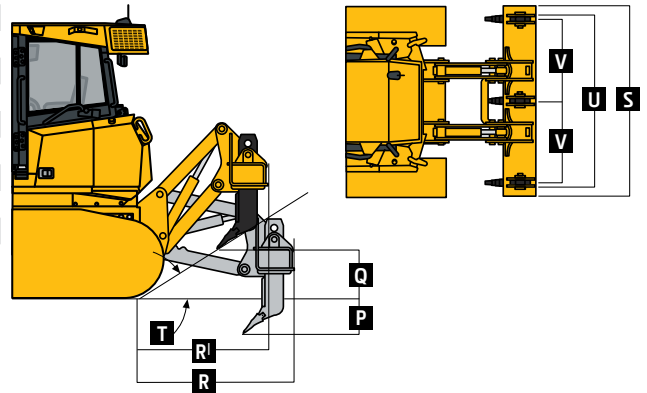


750K LGP SMARTGRADE WITH POWER-ANGLE-TILT (PAT) BLADE

Machine Dimensions (continued)		750K LGP
<b>Blade Type</b>		<b>PAT</b>
<b>Straight</b>		
<b>H</b>	Blade Width	3962 mm (156 in.) (13 ft. 0 in.)
<b>I</b>	Blade Height	1170 mm (46.1 in.) (3 ft. 10.1 in.)
	SAE Capacity	3.8 m <sup>3</sup> (5.0 cu. yd.)
	Weight	1081 kg (2,383 lb.)
	C-Frame Assembly Weight (without blade)	1318 kg (2,905 lb.)
<b>J</b>	Blade Angle	23.5 deg.
<b>K</b>	Overall Width with Blade Angled	3631 mm (142.9 in.) (11 ft. 10.9 in.)
<b>L</b>	Blade Tilt (uses tilt jack)	524 mm (20.6 in.)
<b>M</b>	Cut Reach	84 mm (3.3 in.)
<b>N</b>	Width Over Track	2997 mm (118 in.) (9 ft. 10 in.)
<b>O</b>	Cast Reach	297 mm (11.7 in.)



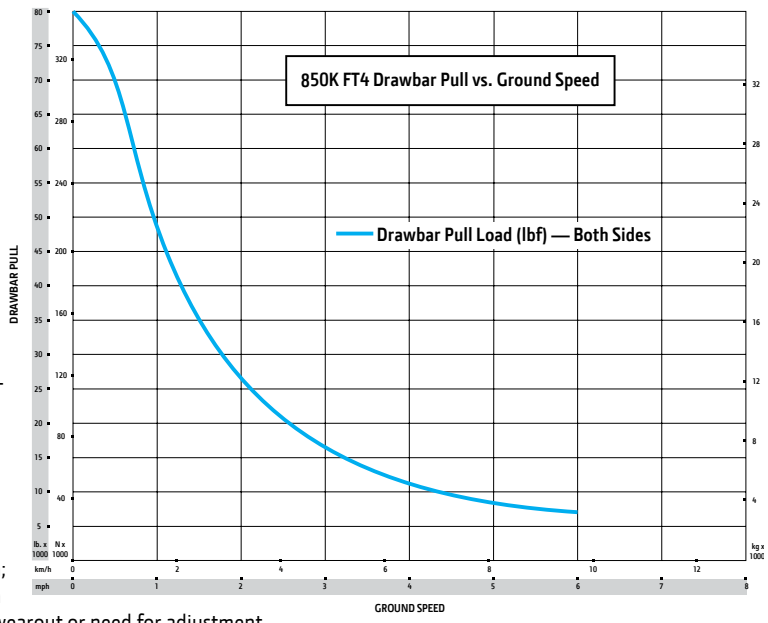
Rear Ripper		750K LGP
Multi-shank (3) parallelogram ripper with hydraulic pitch adjustment and ESCO® ripper tips		
	Weight	1690 kg (3,725 lb.)
<b>P</b>	Maximum Penetration	686 mm (27 in.)
<b>Q</b>	Maximum Clearance Under Tip	686 mm (27 in.)
<b>R</b>	Overall Length, Lowered Position	1689 mm (5 ft. 7 in.)
<b>R<sup>l</sup></b>	Overall Length, Raised Position	1448 mm (4 ft. 9 in.)
<b>S</b>	Overall Beam Width	2134 mm (7 ft. 0 in.)
<b>T</b>	Slope Angle (full raise)	22 deg.
<b>U</b>	Ripping Width	1880 mm (6 ft. 2 in.)
<b>V</b>	Distance Between Shanks	902 mm (3 ft. 0 in.)





# 850K SPECIFICATIONS

<b>Engine</b>	<b>850K WLT / 850K LGP</b>
<b>Blade Type</b>	<b>Power-Angle-Tilt (PAT)</b>
Manufacturer and Model	John Deere PowerTech™ PSS 6068
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV
Displacement	6.8L (414 cu. in.)
SAE Net Rated Power	152 kW (205 hp) at 1,800 rpm
Net Peak Torque	915 Nm (675 ft.-lb.) at 1,500 rpm
Aspiration	Turbocharged with charge-air cooler
Air Cleaner	Vacuum-aspirated dual-element dry canister
<b>Cooling</b>	
Type	Variable-speed suction fan with automatic reversing
Engine Coolant Rating	-37 deg. C. (-34 deg. F)
Engine Radiator	10 fins per in.
<b>Powertrain</b>	
<b>Transmission</b>	Automatic, dual-path, hydrostatic drive; load-sensing feature automatically adjusts speed and power to match changing load conditions; each individually controlled track is powered by a variable-displacement piston pump and motor combination; ground-speed selection buttons on single-lever steering and direction control; independently selectable reverse speed ratios of 100%, 115%, or 130% of forward ground speed; decelerator pedal controls ground speed to stop
System Relief Pressure	45 850 kPa (6,650 psi)
Travel Speeds	
Forward and Reverse	9.7 km/h (6.0 mph)
Maximum (optional)	11.0 km/h (6.8 mph)
<b>Steering</b>	Single-lever steering, speed, direction control, and counter-rotation; full power turns and infinitely variable track speeds provide unlimited maneuverability and optimum control; hydrostatic steering eliminates steering clutches and brakes
<b>Final Drives</b>	Double-reduction, planetary final drives mounted independently of track frames and dozer push frames for isolation from shock loads
Total Ratio	44.75 to 1
<b>Drawbar Pull</b>	
Maximum	356 kN (80,000 lb.)
At 1.9 km/h (1.2 mph)	178 kN (40,000 lb.)
At 3.2 km/h (2.0 mph)	131 kN (29,500 lb.)
<b>Brakes</b>	
Service	Hydrostatic (dynamic) braking stops machine whenever the direction/steering-control lever is moved to neutral or the decelerator is depressed to the end of travel
Parking	Exclusive spring-applied, hydraulically released park brake safety feature engages wet, multiple-disc brakes automatically whenever the engine stops, the operator depresses the decelerator pedal to the brake position, the unit is in neutral for 3 seconds (with detected motion), or the park-lock lever is in the park position; machine cannot be driven with brake applied, minimizing wearout or need for adjustment

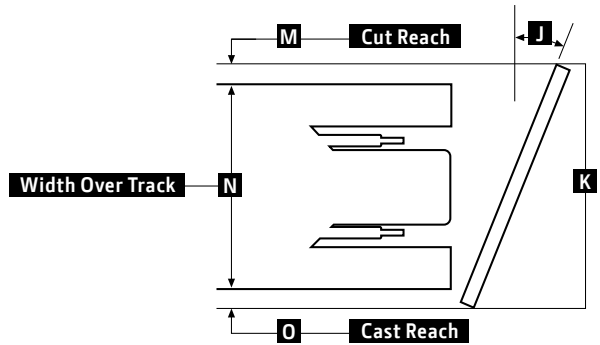
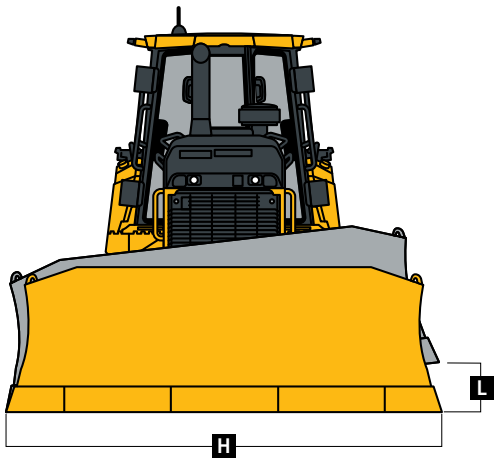


# 850K SPECIFICATIONS



<b>Hydraulics</b>	<b>850K WLT / 850K LGP</b>	
<b>Blade Type</b>	<b>PAT</b>	
Type	Load-sense hydraulic system with variable-displacement piston pump	
Pump Displacement	74 cc	
System Relief Pressure	24 993 kPa (3,625 psi)	
Differential Pressure	1896 kPa (275 psi)	
Maximum Flow at Unloaded High Idle	163 L/m (43 gpm)	
Control	3-function hydraulic-pilot T-bar joystick with push-button angle function	
<b>Electrical</b>		
Voltage	24 volts	
Capacity		
Battery	950 CCA	
Reserve	190 min.	
Alternator Rating (cab)	130 amp	
Lights	Grille mounted (2), rear mounted (2), engine compartment (1), and rear reflectors (2)	
<b>Undercarriage</b>	<b>850K WLT</b>	<b>850K LGP</b>
<b>Tracks</b>	Track frame with front and rear track guides and sprocket guard; John Deere DuraTrax™ features deep-heat-treated, sealed, and lubricated track links and through-hardened, sealed, and lubricated rollers for maximum wear resistance; sprockets are segmented; extreme-duty shoes are available (on some models) for severe applications	
Track Gauge	2235 mm (88 in.)	2388 mm (94 in.)
Grouser Width	760 mm (30 in.)	910 mm (36 in.)
Chain	Sealed and lubricated	Sealed and lubricated
Shoes, Each Side	45	45
Track Rollers, Each Side	8	8
Track Length on Ground	3284 mm (129 in.)	3284 mm (129 in.)
Ground Contact Area	50 048 cm <sup>2</sup> (7757 sq. in.)	60 058 cm <sup>2</sup> (9309 sq. in.)
Ground Pressure	40.0 kPa (5.79 psi)	34.2 kPa (4.96 psi)
Track Pitch	203 mm (8 in.)	203 mm (8 in.)
Oscillation at Front Roller	± 166.5 mm (± 6.5 in.)	± 168 mm (± 6.6 in.)
<b>Operator Station</b>	<b>850K WLT / 850K LGP</b>	
ROPS (ISO 3471 – 2008) and FOPS (ISO 3449 – 2005)		
<b>Serviceability</b>		
<b>Refill Capacities</b>		
Fuel Tank with Lockable Cap	368 L (97.5 gal.)	
Cooling System with Recovery Tank	42.2 L (11.1 gal.)	
Engine Oil with Filter	24.6 L (6.5 gal.)	
Reservoir with Filter		
Transmission	115 L (30 gal.)	
Hydraulic	112 L (29.7 gal.)	
Diesel Exhaust Fluid (DEF) Reservoir	13.6 L (3.6 gal.)	
<b>Operating Weights</b>	<b>850K WLT</b>	<b>850K LGP</b>
<i>Base Weight (with standard equipment, rollover protective structure [ROPS], full fuel tank, and 79-kg [175 lb.] operator)</i>	20 481 kg (45,152 lb.)	21 036 kg (46,376 lb.)
<b>Optional Components</b>		
Cab with Pressurizer and Heater/Air Conditioner	337 kg (743 lb.)	337 kg (743 lb.)
Cab with Air Conditioner		
Front and Door Screens	79 kg (175 lb.)	79 kg (175 lb.)
Rear Screen	34 kg (75 lb.)	34 kg (75 lb.)
Side Screens	54 kg (120 lb.)	54 kg (120 lb.)

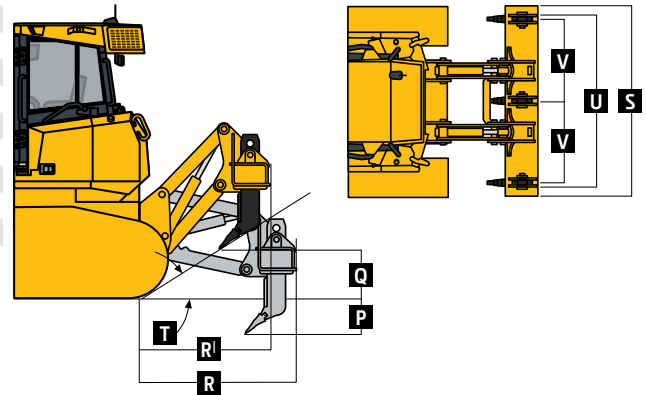
Machine Dimensions (continued)	850K WLT	850K LGP
<b>Blade Type</b>	<b>PAT</b>	<b>PAT</b>
<b>H</b> Blade Width	4013 mm (158 in.) (13 ft. 2 in.)	4267 mm (168 in.) (14 ft. 0 in.)
<b>I</b> Blade Height	1229 mm (48 in.) (4 ft. 0 in.)	1229 mm (48 in.) (4 ft. 0 in.)
SAE Capacity	4.3 m <sup>3</sup> (5.6 cu. yd.)	4.5 m <sup>3</sup> (5.9 cu. yd.)
Weight	1330 kg (2,932 lb.)	1397 kg (3,080 lb.)
C-Frame Assembly Weight (without blade)	1647 kg (3,631 lb.)	1647 kg (3,631 lb.)
<b>J</b> Blade Angle	23.8 deg.	23.8 deg.
<b>K</b> Overall Width with Blade Angled	3658 mm (144 in.) (12 ft. 0 in.)	3901 mm (154 in.) (12 ft. 10 in.)
<b>L</b> Blade Tilt (uses tilt jack)	533 mm (21 in.)	572 mm (23 in.)
<b>M</b> Cut Reach	145 mm (5.7 in.)	109 mm (4.3 in.)
<b>N</b> Width Over Track	2997 mm (118 in.) (9 ft. 10 in.)	3302 mm (130 in.) (10 ft. 10 in.)
<b>O</b> Cast Reach	272 mm (10.7 in.)	234 mm (9.2 in.)



**Rear Ripper** 850K WLT / 850K LGP

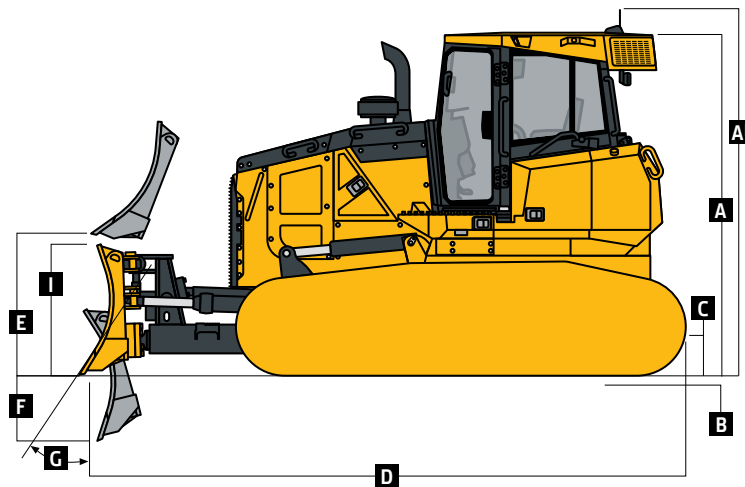
Multi-shank (3) parallelogram ripper with hydraulic pitch adjustment and ESCO® ripper tips

Weight	2032 kg (4,480 lb.)
<b>P</b> Maximum Penetration	724 mm (28.5 in.)
<b>Q</b> Maximum Clearance Under Tip	610 mm (24 in.)
<b>R</b> Overall Length, Lowered Position	1626 mm (5 ft. 4 in.)
<b>R'</b> Overall Length, Raised Position	1525 mm (5 ft. 0 in.)
<b>S</b> Overall Beam Width	2400 mm (7 ft. 10 in.)
<b>T</b> Slope Angle (full raise)	24 deg.
<b>U</b> Ripping Width	2146 mm (7 ft. 1 in.)
<b>V</b> Distance Between Shanks	1041 mm (3 ft. 5 in.)



# 850K

Operating Weights <i>(continued)</i>	850K WLT	850K LGP
<b>Blade Type</b>	<b>PAT</b>	<b>PAT</b>
<b>Optional Components <i>(continued)</i></b>		
Condenser Guard (cab with air conditioner)	55 kg (121 lb.)	55 kg (121 lb.)
Limb Risers (cab)	272 kg (600 lb.)	272 kg (600 lb.)
Heavy-Duty Grille	35 kg (78 lb.)	35 kg (78 lb.)
Lift-Cylinder Hose Guards	42 kg (93 lb.)	42 kg (93 lb.)
Tank Guards	323 kg (712 lb.)	323 kg (712 lb.)
<b>Counterweight</b>		
Front	397 kg (875 lb.)	397 kg (875 lb.)
Rear	449 kg (990 lb.)	449 kg (990 lb.)
Retrieval Hitch	52 kg (114 lb.)	52 kg (114 lb.)
Drawbar, Extended Rigid	130 kg (286 lb.)	130 kg (286 lb.)
Blade Brush Guard	87 kg (192 lb.)	87 kg (192 lb.)
Blade Trash Rack	198 kg (436 lb.)	210 kg (462 lb.)
Center Chain Guides	85 kg (188 lb.)	85 kg (188 lb.)
Full-Length Rock Guards	242 kg (534 lb.)	242 kg (534 lb.)
Final-Drive Trash Guards	70 kg (155 lb.)	70 kg (155 lb.)
<b>Striker Bars</b>		
Front	73 kg (160 lb.)	73 kg (160 lb.)
Rear	78 kg (171 lb.)	78 kg (171 lb.)
<b>Pre-Cleaner</b>		
Powered Cab Air	21 kg (47 lb.)	21 kg (47 lb.)
Rotary Ejector Engine Air	6 kg (13 lb.)	6 kg (13 lb.)
<b>Track Shoes</b>		
610-mm (24 in.) Moderate Duty	—	– 850 kg (– 1,873 lb.)
610-mm (24 in.) Extreme Duty	—	– 504 kg (– 1,111 lb.)
760-mm (30 in.) Moderate Duty	In base	– 435 kg (– 959 lb.)
760-mm (30 in.) Extreme Duty	444 kg (979 lb.)	9 kg (19 lb.)
910-mm (36 in.) Moderate Duty	—	In base
910-mm (36 in.) Extreme Duty	—	524 kg (1,155 lb.)
<b>Machine Dimensions</b>		
<b>850K WLT / 850K LGP</b>		
<b>A</b> Overall Height to Roof	3211 mm (10 ft. 6.5 in.)	
<b>A<sup>1</sup></b> Overall Height with Receivers/Antennae	3600 mm (11 ft. 10 in.)	
<b>B</b> Tread Depth with Single-Bar Grouser		
Moderate Duty	66 mm (2.6 in.)	
Extreme Duty	71 mm (2.8 in.)	
<b>C</b> Ground Clearance in Dirt	409 mm (16.1 in.)	
<b>D</b> Overall Length	5740 mm (18 ft. 10 in.)	
Overall Length with Extended Drawbar	5937 mm (19 ft. 6 in.)	
<b>E</b> Blade Lift Height	1072 mm (3 ft. 6 in.)	
<b>F</b> Blade Digging Depth	704 mm (28 in.)	
<b>G</b> Blade Cutting-Edge Angle, Adjustable	55.1 to 60.2 deg.	



850K WLT / 850K LGP SMARTGRADE WITH POWER-ANGLE-TILT (PAT) BLADE

# Additional equipment

Key: ● Standard ▲ Optional or special

See your John Deere dealer for further information.

700K	750K	850K	Engine
●	●	●	Meets EPA Final Tier 4/ EU Stage IV emissions
●	●		John Deere PowerTech™ PVS 6.8L engine
		●	John Deere PowerTech™ PSS 6.8L engine
●	●	●	Wet-sleeve cylinder liners
●	●	●	Eco mode
●	●	●	Exhaust stack, black
▲	▲	▲	Exhaust stack, chrome
●	●	●	Electronic control with automatic engine protection
●	●	●	Turbocharged with charge-air cooler
●	●	●	Dual-element dry-canister air cleaner
●	●	●	Exhaust filter, under hood, with vertical stack
●			Engine glow-plug-starting system
●	●	●	Programmable auto engine shutdown
●	●	●	Automatic turbo cool-down timer
●	●	●	Fuel filters with automatic electronic priming
▲	▲	▲	Severe-duty fuel filter
▲	▲	▲	Engine block heater, 110 volts
●	●	●	130-amp sealed alternator
Cooling			
●	●	●	Tilt-out cooling fan, hydraulically driven, variable-speed suction type
●	●	●	Engine cooling rated -37 deg. C (-34 deg. F)
▲	●	●	Automatic, programmable reversing fan
●	●	●	Engine coolant radiator, 10 fins per in.
●	●	●	Hydrostatic (HST) cooler, 10 fins per in.

700K	750K	850K	Cooling (continued)
●	●	●	Hydraulic cooler, 10 fins per in.
●	●	●	Enclosed safety fan guard (conforms to SAE J1308 and ISO 3457)
●	●	●	Tilt-out front grille
●			Stacked coolers with 2-side access for cleaning and service
	●	●	V-cool cooler design
●	●	●	Cooling package isolated from engine compartment
●	●	●	Heavy-duty, trash-resistant radiator and high-ambient cooling package
Powertrain			
●	●	●	Dual-path HST transmission
●	●	●	Selectable reverse-speed ratios
●	●	●	Operator-selectable decelerator function (hydrostats and engine or hydrostats only)
●	●	●	Single-lever steering with counter-rotate function
●	●	●	Full power turns with infinitely variable track speed
●	●	●	HST (dynamic) service brakes
●	●	●	Wet, multi-disc parking brake
●	●	●	Remote diagnostic test ports
●	●	●	Automatic cold-weather transmission warm-up system
●	●	●	Automatic transmission derating for exceeded system temperatures
●	●	●	Sealed dedicated transmission reservoir and filtration system separate from hydraulic system
●	●	●	2,000-hour vertical spin-on transmission filter

700K	750K	850K	Hydraulic System
●	●	●	Load-sense electrohydraulic (EH) system with variable-displacement piston pump
●	●	●	3-function hydraulics
●			2,000-hour vertical spin-on hydraulic filter
	▲	▲	3-function hydraulics with rear plumbing
▲	▲	▲	4-function hydraulics with rear plumbing
▲	▲	▲	SmartGrade EH hydraulics
●	●	●	Hydrau™ All-Season Hydraulic Oil, -25 deg. C to 50 deg. C (-13 deg. F to 122 deg. F)
▲	▲	▲	Hydrau™ XR Hydraulic Oil, -40 deg. C to 40 deg. C (-40 deg. F to 104 deg. F)
●	●	●	Hydraulic pump, standard
	▲	▲	Hydraulic pump, high flow, for hydraulic winch
▲	▲	▲	Through-drive hydraulic pump
●	●	●	Sealed dedicated hydraulic reservoir and filtration system separate from transmission system
Undercarriage			
●	●	●	Full-length, smooth-surface track frame covers
	●	●	Guides, front and rear, with wear strips
●	●	●	Segmented sprockets
●	●	●	Double-flange rollers
●			Maximum Life Undercarriage System
●	●	●	Oscillating undercarriage
▲	●	●	Heavy-duty sealed and lubricated undercarriage
▲	▲	▲	Extended life undercarriage SC-2™ bushings
▲	▲	▲	Full-length rock guards

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO9249. No derating is required up to 3050-m (10,000 ft.) altitude. Also available: winches, fair-leads, log arches, skidding grapples, trash packages, landfill protection packages, cable plows, side booms, field-installed cab for canopy, canopy heater, and fire-suppression systems. Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards. Except where otherwise noted, these specifications are based on units with ROPS, full fuel tanks, and 79-kg (175 lb.) operators. Operator station ROPS and FOPS certified.



# Additional equipment *(continued)*

Key: ● Standard ▲ Optional or special

See your John Deere dealer for further information.

700K	750K	850K	Operator's Station
●	●	●	Enclosed cab with air/heat
●	●	●	Retractable seat belt, 76 mm (3 in.) (conforms to SAE J386)
●	▲	▲	Air-suspension cloth seat
▲			Deluxe heated and leather-bolstered air-ride seat
	▲	▲	Air-suspension heated deluxe seat
●	●	●	Under-seat heater
●	●	●	AM/FM/Weather-Band (WB) radio, clock, and MP3 player front plug-in
▲	▲	▲	Premium XM Satellite Radio™ ready with Bluetooth®
	▲	▲	HVAC-powered precleaner
●	●	●	Multifunction, multi-language monitor
	▲	▲	178-mm (7 in.) color, multi-language Primary Display Unit (PDU) (with EH hydraulics only)
●	●	●	Backup alarm
●	●	●	Power ports (2), 12 volts, 10 amps
	▲	▲	Additional 3rd power port, 12 volts
●	●	●	Keyless start
●	●	●	Convex interior rearview mirror
▲	▲	▲	External-mounted rear-attachment mirror
●	●	●	Lockable, dash-mounted storage compartment
●	●	●	Cup holders (2)
●	●	●	Tinted glass
●	●	●	Dome light

700K	750K	850K	Operator's Station <i>(continued)</i>
●	●	●	Heater (roof mounted)
●	●	●	Wipers (intermittent plus 2 speeds) and washers – front window, left and right doors
▲	▲	▲	Rear wiper and washer
Overall Vehicle			
	●	●	Tilt operator station service access
●	●	●	Environmental service drains
▲	▲	▲	Fluid-sample valves
●	●	●	JDLink™ Ultimate wireless machine communication system (available in specific countries; see your local dealer for details)
▲	▲	▲	Quick-service ports (HST, hydraulic, and engine oil, and coolant)
	▲	▲	Fast-fuel system
●	●	●	Lights, grille mounted (2), rear mounted (2)
▲	▲	▲	Additional lights (2)
▲	●	●	Engine-compartment light
	▲	▲	Beacon light
▲	▲	▲	Topcon integrated grade-control system
▲	▲	▲	Forestry protection package
●	●	●	Lockable master electrical disconnect switch
Attachments			
	▲	▲	Large debris prescreen
	▲	▲	Full-length rock guards
	▲	▲	Recessed sprockets
	▲	▲	Final-drive trash guards (trash applications)
▲	▲	▲	Ripper, multi-shank

700K	750K	850K	Attachments <i>(continued)</i>
	▲	▲	Rear counterweight (1 or 2)
●	▲	▲	Heavy-duty grille
▲			Retrieval hitch with pin
	▲	▲	Retrieval hitch with 1 or 2 counterweights
	▲	▲	Extended rigid drawbar
▲			Extended rigid drawbar with pin for pull-type implements
	▲	▲	Extended rigid drawbar with 2 counterweights
	▲	▲	Rear storage compartment
	▲	▲	Corrosion prevention
LGP 700K Shoes			
▲			560-mm (22 in.) moderate service
▲			610-mm (24 in.) moderate service
●			760-mm (30 in.) moderate service
LGP 750K Shoes			
▲			560-mm (22 in.) moderate service
▲			560-mm (22 in.) extreme service
▲			610-mm (24 in.) moderate service
▲			610-mm (24 in.) extreme service
▲			710-mm (28 in.) moderate service
●			865-mm (34 in.) moderate service with clipped corners
WLT LGP 850K Shoes			
▲	▲		560-mm (22 in.) extreme service
▲	▲		610-mm (24 in.) moderate service
▲	▲		610-mm (24 in.) extreme service
●	▲		760-mm (30 in.) moderate service with clipped corners
▲	▲		760-mm (30 in.) extreme service with clipped corners
	●		910-mm (36 in.) moderate service with clipped corners
	▲		910-mm (36 in.) extreme service with clipped corners

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO9249. No derating is required up to 3050-m (10,000 ft.) altitude. Also available: winches, fair-leads, log arches, skidding grapples, trash packages, landfill protection packages, cable plows, side booms, field-installed cab for canopy, canopy heater, and fire-suppression systems. Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards. Except where otherwise noted, these specifications are based on units with ROPS, full fuel tanks, and 79-kg (175 lb.) operators. Operator station ROPS and FOPS certified.



**WORKING SMARTER.  
TOGETHER.**

**YOUR WORK IS AHEAD OF THE CURVE.**

And no matter the load, no matter the grade, John Deere is committed to helping you keep it that way. With state-of-the-art technology and customer-inspired design, K-Series SmartGrade™ Dozers are proof positive that our best ideas are made better by owners and operators like you.



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