

# 700K SmartGrade™ Dozer

97 kW (130 net hp)



JOHN DEERE

## FEATURES

Grade-control system is fully integrated into the machine cabin, structures, and software — delivering precise grading performance while eliminating vulnerable external masts and cables.

Auto SmartGrade automatically raises the blade when heavier loads are encountered during rough grading to prevent stalling and track slip, enabling the machine to be used in all phases of grading.

Machine dimensions are preloaded into the grade-control monitor, reducing the time needed to calibrate to about 30 minutes.

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



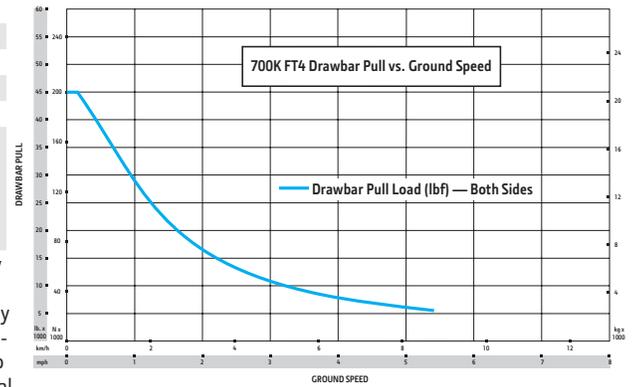
<b>Engine</b>	<b>700K LGP</b>
<b>Blade Type</b>	Power-Angle-Tilt (PAT)
Manufacturer and Model	John Deere PowerTech™ PVS 6068
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV
Displacement	6.8L (414 cu. in.)
SAE Net Rated Power	97 kW (130 hp) at 1,800 rpm
Net Peak Torque	559 Nm (412 ft.-lb.) at 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

**Powertrain (continued)****700K LGP****Drawbar Pull**

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.)

**Brakes**

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 wear-out or need for adjustment

**Hydraulics**

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

**Electrical**

Blade Type	PAT
Voltage	24 volts
Capacity	
Battery	950 CCA
Reserve	190 min.
Alternator Rating	
Cab	130 amp
Canopy	100 amp
Lights	Grille mounted (2), rear mounted (2), and rear reflectors (2)

**Undercarriage**

Blade Type	PAT
Tracks	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.)

**Operator Station**

ROPS (ISO 3471 – 2008) and FOPS (ISO 3449 – 2005)

**Serviceability****Refill Capacities**

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.)

**Operating Weights**

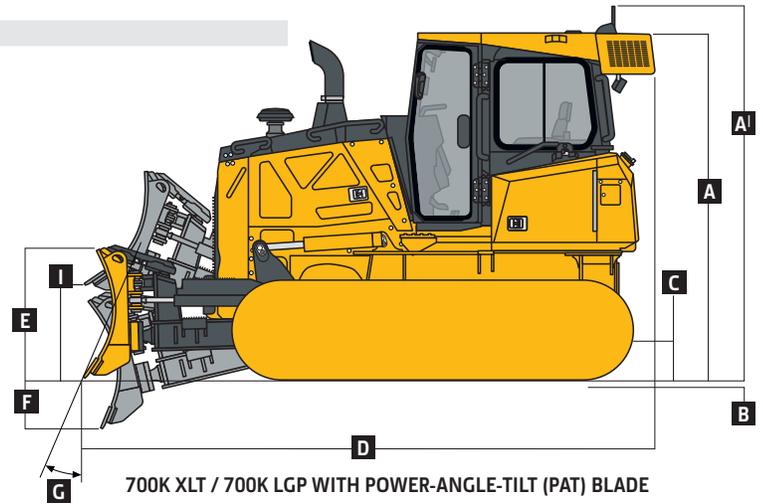
Blade Type	PAT
Base Weight (with standard equipment, rollover protective structure [ROPS], full fuel tank, and 79-kg [175 lb.] operator)	14 193 kg (31,290 lb.)

**Optional Components**

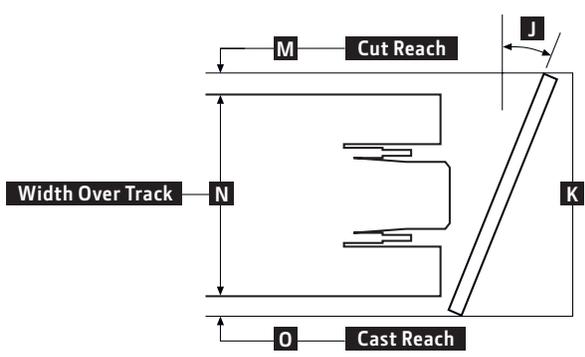
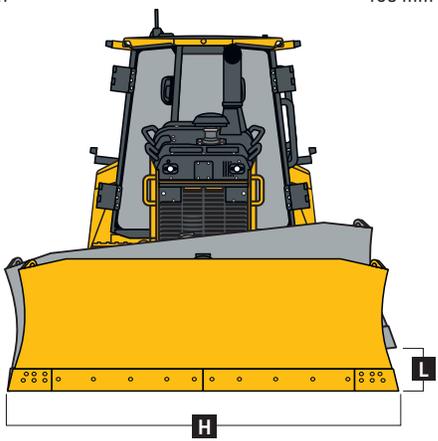
Cab with Pressurizer and Heater/Air Conditioner	288 kg (635 lb.)
ROPS Canopy	
Heater	39 kg (85 lb.)
Front and Door Screens	54 kg (120 lb.)
Rear Screen	20 kg (45 lb.)
Side Screens	54 kg (120 lb.)
Cab with Air Conditioner	
Front and Door Screens	68 kg (151 lb.)
Rear Screen	41 kg (91 lb.)
Side Screens	68 kg (151 lb.)

Operating Weights (continued)	700K LGP
<b>Blade Type</b>	PAT
<b>Optional Components (continued)</b>	
Limb Risers (ROPS canopy and 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.)
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.)

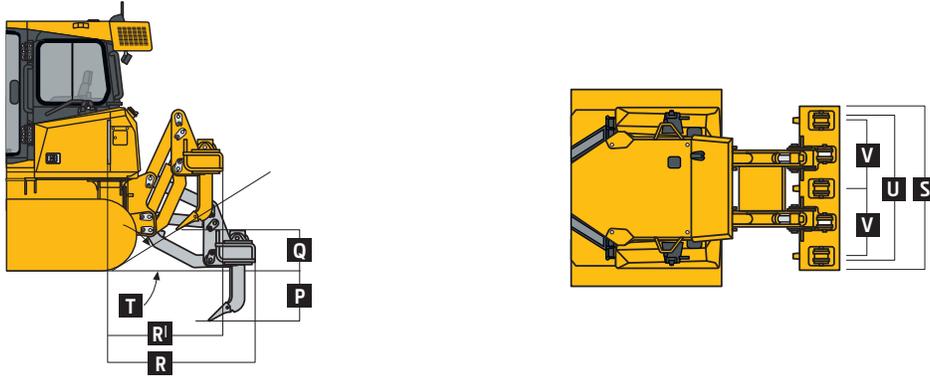
Machine Dimensions	
<b>A</b> Overall Height to Roof	2936 mm (9 ft. 8 in.)
<b>A<sup>I</sup></b> Overall Height with Receivers/Antennae	3152 mm (10 ft. 11 in.)
<b>B</b> Tread Depth with Single-Bar Grouser	56 mm (2.2 in.)
<b>C</b> Ground Clearance in Dirt	393 mm (15.5 in.)
<b>D</b> Overall Length	4815 mm (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.



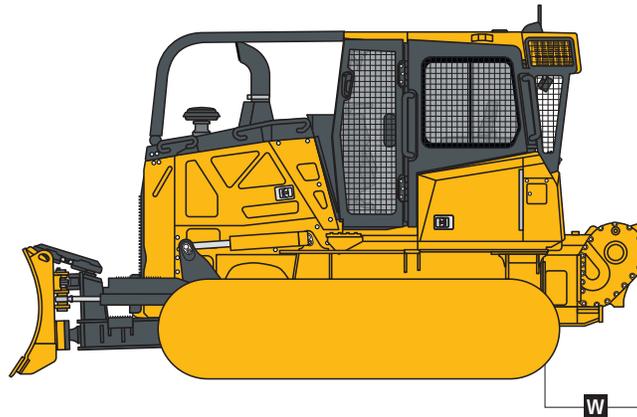
Machine Dimensions (continued)	
<b>Blade Type</b>	PAT
<b>Straight</b>	
<b>H</b> Blade Width	3658 mm (144 in.) (12 ft. 0 in.)
<b>I</b> Blade Height	991 mm (39 in.) (3 ft. 3 in.)
SAE Capacity	3.2 m <sup>3</sup> (4.1 cu. yd.)
Weight	901 kg (1,986 lb.)
C-Frame Assembly Weight (without blade)	663 kg (1,461 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.)



<b>Rear Ripper</b>	<b>700K LGP</b>
<b>Blade Type</b>	<i>PAT</i>
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.)



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



## Boost your grades — and your bottom line.

1. Auto SmartGrade activation is a quick and easy way to tune in your machine to deliver the best performance for the type of job it's doing.
2. Inertial Measurement Unit (IMU) sensors are located outside the cylinders so they're easy to access should service be required.



Grade-control system includes Topcon 3D-MC<sup>2</sup> components.

