

G-SERIES 4WD
MOTOR GRADERS



JOHN DEERE

620G/GP

JESCO
THE DOWN-TO-EARTH EQUIPMENT PEOPLE™



*CHOOSE HOW
YOU WORK*



620G / GP SPECIFICATIONS

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

Engine		620G/GP	
Manufacturer and Model		John Deere PowerTech™ PSS 6.8L	John Deere PowerTech™ Plus 6.8L
Non-Road Emission Standard		EPA Final Tier 4/EU Stage V	EPA Tier 3/EU Stage IIIA
Cylinders		6	6
Displacement		6.8L (414 cu. in.)	6.8L (414 cu. in.)
Net Engine Power			John Deere PowerTech™ 6.8L
Gear 1		112 kW (150 hp)	112 kW (150 hp)
Gear 2		123 kW (165 hp)	123 kW (165 hp)
Gear 3		134 kW (180 hp)	130 kW (175 hp)
Gear 4		142 kW (190 hp)	134 kW (180 hp)
Gear 5		149 kW (200 hp)	138 kW (185 hp)
Gear 6		153 kW (205 hp)	138 kW (185 hp)
Gear 7		157 kW (210 hp)	138 kW (185 hp)
Gear 8		160 kW (215 hp)	138 kW (185 hp)
Net Peak Torque		1005 Nm (750 lb.-ft.)	915 Nm (682 lb.-ft.)
Net Torque Rise		40%	37%
Aspiration		Series turbocharged, charge-air cooled	Turbocharged, charge-air cooled
Lubrication		Full-flow spin-on filter and integral cooler	Full-flow spin-on filter and integral cooler
Air Cleaner With Restriction Indicator		Dual element, dry	Dual element, dry
Cooling			
Engine Coolant, Extended Life, Rating		-37 deg. C (-34 deg. F)	
Powertrain			
Transmission		Direct-drive John Deere PowerShift Plus™, modulated shift-on-the-go, Event-Based Shifting (EBS), inching pedal; independent transmission reservoir with separate filtration and cooling system with 117-L/min. (31 gpm) gear pump	
Gears			
Forward		8	
Reverse		8	
Maximum Travel Speeds		<i>No tire slip at 2,180 rpm, 14.0-R24 tires</i>	
Gear 1		4.0 km/h (2.5 mph)	16.4 km/h (10.2 mph)
Gear 2		5.6 km/h (3.5 mph)	23.2 km/h (14.4 mph)
Gear 3		7.7 km/h (4.8 mph)	32.3 km/h (20.1 mph)
Gear 4		10.9 km/h (6.8 mph)	45.5 km/h (28.3 mph)
Front Axle		Heavy-duty welded fabrication	
Oscillation (total)		32 deg.	
Wheel Lean Angle (each direction)		20 deg.	
Differentials		Spiral bevel; hydraulically actuated, clutch type can be applied on-the-go; selectable manual or automatic differential lock	
Steering (all models include steering wheel)		All-hydraulic power-frame articulation for maneuverability and productivity; crab steering reduces side drift, positions tandems on firm ground, and increases side-slope stability; return-to-straight control included in Grade Pro (GP) option	
Turning Radius (front steer and articulation)		7.21 m (284 in.) (23 ft. 8 in.)	
Articulation (both right and left)		22 deg.	
Final Drives		Inboard-mounted planetary sealed in cooled, filtered oil	
Brakes		Foot-controlled, hydraulically operated, multiple wet-disc brakes sealed in pressurized, cooled, filtered oil; both independent systems effective on all 4 tandem wheels	
Primary and Secondary Brakes		Hydraulically actuated, inboard of tandem pivot, self-adjusting, sealed in cooled and filtered oil, multi-disc (ISO 3450)	
Parking Brake		Automatically spring applied, hydraulically released, oil cooled, self-adjusting (ISO 3450)	
Hydraulics			
Type		Closed-center, pressure-compensated load-sensing (PCLS), variable-displacement piston pump	
Maximum Pump Flow		212 L/min. (56 gpm)	
Maximum System Pressure		18 961 kPa (2,750 psi)	
Pump Displacement		90 cm³ (5.5 cu. in.)	

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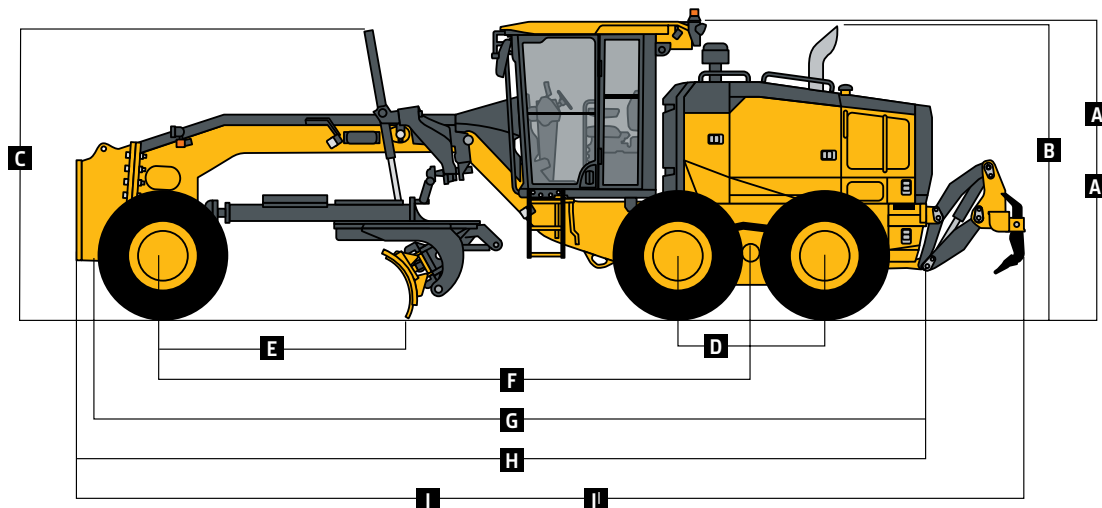
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Blade Function		620G/GP	
All-hydraulic, industry-standard lever placement of blade-function controls; includes float position; 7 discrete saddle positions			
Blade Range			
Lift Above Ground	490 mm (19.3 in.)		
Blade Side Shift (right or left)	683 mm (26.9 in.)		
Pitch at Ground Line			
Forward	42 deg.		
Back	5 deg.		
Shoulder Reach Outside Wheels (frame straight, right or left)	2083 mm (82.0 in.) (6 ft. 10 in.)		
Bank Cut Angle (right or left)	90 deg.		
Blade Pull			
At Maximum Operating Weight	14 091 kg (31,066 lb.)		
Electrical			
Solid-state load center and sealed-switch module	EPA Final Tier 4/EU Stage V	EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II	
Voltage	24 volt	24 volt	
Number of Batteries	2	2	
Battery Capacity	1,400 CCA	950 CCA	
Reserve Capacity	440 min.	190 min.	
Amp-Hour Rating	224 amp-hour	110 amp-hour	
Alternator Rating			
Base	130 amp	100 amp	
Optional	200 amp	130 amp	
Lights	Driving lights; 2 high- and 2 low-beam halogen headlights; front and rear LED turn signals and marker lights; LED brake and hazard warning lights		
Mainframe			
Type	Welded box construction		
Width (minimum)	307 mm (12.1 in.)		
Height (minimum)	307 mm (12.1 in.)		
Thickness			
Side	16 mm (0.63 in.)		
Top and Bottom Plate	23 mm (0.89 in.)		
Modulus			
Minimum Vertical Section	1445 cm³ (88 cu. in.)		
Average Vertical Section at Saddle	2245 cm³ (137 cu. in.)		
Draft Frame (drawbar)			
Welded box construction machined for flatness and double ball-and-socket pivot connection			
Circle			
Welded construction, heat-treated, and machined for flatness			
	Standard Circle	Premium Circle	
Circle Diameter	1524 mm (60 in.)	1524 mm (60 in.)	
Rotation	360 deg.	360 deg.	
Surface	Quick-change bronze or nylon wear inserts	Sealed and lubricated roller element slewing bearing	
Pinion/Ring-Gear Connection	Adjustable backlash and open for serviceability	No adjustment; fully sealed and lubricated	
Drive	Hydraulic motor and worm gear with positive lock	Hydraulic motor and worm gear with positive lock	
Slip Clutch	Option	Standard	
Circle Side Shift (right and left)	787 mm (31 in.)	787 mm (31 in.)	
Moldboard			
High-strength, pre-stressed for higher strength; wear-resistant, high-carbon steel and reversible end bits; blade side-shift wear system includes quick-change replaceable wear inserts and quick-adjust jackscrew system			
Base Length	3.66 m (144 in.) (12 ft. 0 in.)		
Height (measured along arc, including cutting edge)	610 mm (24 in.)		
Thickness	22 mm (0.88 in.)		

Cutting Edge		620G/GP	
Dura-Max™ through-hardened steel edge			
Thickness	16 mm (0.62 in.)		
Width	152 mm (6 in.)		
Scarifiers			
	Front	Mid-mount	
Type	V-type toolbar with 2-pitch positions and hydraulic float	Radial linkage, with NeverGrease™ pin joints; V-type manual 3-pitch positions and hydraulic float	
Width of Cut	1.20 m (48 in.) (4 ft. 0 in.)	1.19 m (46.7 in.) (3 ft. 11 in.)	
Number of Shanks/Teeth	5 (maximum capacity 9)	11	
Lift Above Ground	589 mm (23.2 in.)	335 mm (13.2 in.)	
Maximum Depth	335 mm (13.2 in.)	325 mm (12.8 in.)	
Shank			
Spacing	146 mm (5.75 in.)	117 mm (4.6 in.)	
Size	25 x 76 mm (1 x 3 in.)	25 x 76 mm (1 x 3 in.)	
Front Lift Group (Balderson-style)			
Parallel linkage, mechanical pins, and hydraulic float			
Lift			
Above Ground (top of tube)	1864 mm (73.4 in.)		
Range	988 mm (38.9 in.)		
Rear Ripper/Scarifier			
Parallel linkage, with NeverGrease pin joints, hydraulic float, and integrated hitch			
	Ripper	Scarifier	
Width of Cut	2.21 m (87.2 in.) (7 ft. 3 in.)	2.18 m (86 in.) (7 ft. 2 in.)	
Number of Shanks/Teeth	3 (maximum capacity 5)	None standard (maximum capacity 9)	
Lift Above Ground	602 mm (23.7 in.)	810 mm (31.9 in.)	
Maximum Depth	426 mm (16.8 in.)	323 mm (12.7 in.)	
Force			
Penetration	9,302 kg (20,508 lb.)	—	
Pry-Out	11,253 kg (24,808 lb.)	—	
Shank Size	61.5 x 133 mm (2.42 x 5.25 in.)	25 x 76 mm (1 x 3 in.)	
Operator Station			
Low-profile cab with ROPS (ISO 3471-2008) and FOPS (ISO 3449-2005)			
Tires/Wheels			
	13x24 on 254-mm (10 in.) Rim	14R24 on 254-mm (10 in.) Rim	17.5R25 on 356-mm (14 in.) Rim
Wheel Tread on Ground	2.08 m (82 in.)	2.08 m (82.0 in.)	2.16 m (85.0 in.)
Overall Width	2.49 m (98 in.)	2.49 m (98.0 in.)	2.64 m (104.0 in.)
Ground Clearance (front axle)	557 mm (21.9 in.)	587 mm (23.1 in.)	587 mm (23.1 in.)
Serviceability			
Refill Capacities	EPA Final Tier 4/EU Stage V	EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II	
Fuel Tank	416.5 L (110 gal.)	303 L (80 gal.)	
Diesel Exhaust Fluid (DEF) Tank	22.5 L (6 gal.)	—	
Cooling System	51.0 L (13.5 gal.)	44.0 L (11.6 gal.)	
Engine Oil With Filter	31.5 L (8.3 gal.)	26.0 L (6.9 gal.)	
Transmission Fluid	28.4 L (7.5 gal.)	28.4 L (7.5 gal.)	
Differential Housing	38.0 L (10 gal.)	38.0 L (10 gal.)	
Tandem Housings (each)	74.0 L (19.5 gal.)	74.0 L (19.5 gal.)	
Circle Gearbox	5.7 L (1.5 gal.)	5.7 L (1.5 gal.)	
Hydraulic Reservoir	60.5 L (16 gal.)	53.0 L (14 gal.)	
Operating Weights			
With Full Fuel Tank, 3.66-m x 610-mm x 22-mm (12 ft. x 24 in. x 0.88 in.) Moldboard			
With 152-mm x 16-mm (6 in. x 5⁄8 in.) Cutting Edges, 14-24 Bias L2 Tires, and 79-kg (175 lb.) Operator			
Operator	EPA Final Tier 4/EU Stage V	EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II	
Front	4193 kg (9,243 lb.)	4222 kg (9,308 lb.)*	
Rear	11 577 kg (25,523 lb.)	10 681 kg (23,548 lb.)*	
Total	15 770 kg (34,767 lb.)	14 904 kg (32,857 lb.)*	
Typical Operating Weight With Front Push Block, Rear Ripper/Scarifier, and Other Equipment			
Front	4940 kg (10,890 lb.)	5096 kg (11,235 lb.)	
Rear	13 386 kg (29,510 lb.)	12 439 kg (27,423 lb.)	
Total	18 325 kg (40,400 lb.)	17 535 kg (38,658 lb.)	
Maximum Operating Weight	22 680 kg (50,000 lb.)	22 680 kg (50,000 lb.)	
*With 13-24 Bias L2 tires			

Option Weights	620G/GP
Moldboards With Through-Hardened Dura-Max Cutting Edge	
3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x 7/8 in.) with 152-mm x 16-mm (6 in. x 5/8 in.) cutting edge and 16-mm (5/8 in.) hardware	0 kg (0 lb.)
3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x 7/8 in.) with 203-mm x 19-mm (8 in. x 3/4 in.) cutting edge and 16-mm (5/8 in.) hardware	45 kg (99 lb.)
4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x 7/8 in.) with 152-mm x 16-mm (6 in. x 5/8 in.) cutting edge and 16-mm (5/8 in.) hardware	105 kg (231 lb.)
4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x 7/8 in.) with 203-mm x 19-mm (8 in. x 3/4 in.) cutting edge and 16-mm (5/8 in.) hardware	157.4 kg (347 lb.)
Extensions, 610 mm (2 ft.) (right or left)	
For Use With 610-mm (24 in.) Moldboards	116 kg (255 lb.)
Overlay End Bits, Reversible (one pair)	
For 152-mm (6 in.) Cutting Edge	19.5 kg (43 lb.)
For 203-mm (8 in.) Cutting Edge	23 kg (51 lb.)
Circle-Drive Slip Clutch	9 kg (20 lb.)
Circle	
Standard	0 kg (0 lb.)
Premium	289 kg (638 lb.)
Moldboard Impact-Absorption System	43 kg (95 lb.)
Ripper, 3 Shank, No Scarifier	1052 kg (2,319 lb.)
Ripper/Scarifier, Rear Mounted With Hitch and Ripper Shanks (3)	1139 kg (2,510 lb.)
Scarifier Shanks With Teeth (9 for rear ripper/scarifier)	68 kg (150 lb.)
Rear Counterweight With Integral Rear Hitch	727 kg (1,603 lb.)
Rear Hitch	54.4 kg (120 lb.)
Push Block, Front	907 kg (2,000 lb.)
Scarifier	
Front Mount With Teeth (5)	831 kg (1,833 lb.)
Mid-Mount With Teeth (11)	1481 kg (3,265 lb.)
Front Lift Group (Balderson-style)	763 kg (1,682 lb.)
Machine Dimensions	
A Height to Top of Cab	3.18 m (10 ft. 5 in.)
A' Height to Top of Full-Height Cab	3.40 m (11 ft. 2 in.)
B Height to Top of Exhaust	3.10 m (10 ft. 2 in.)
C Height to Top of Blade-Lift Cylinders	3.05 m (10 ft. 0 in.)
D Tandem Axle Spacing	1.54 m (5 ft. 1 in.)
E Blade Base	2.57 m (8 ft. 5 in.)

Option Weights (continued)	620G/GP
Tires	
13.00-24, 12 PR G2	-79 kg (-174 lb.)
14.00-24, 12 PR G2	0 kg (0 lb.)
17.5-25, 12 PR G2/L2	114 kg (252 lb.)
14.00-R24, Radial, G2/L2 General Purpose	220 kg (486 lb.)
14.00-R24, Radial, G2/L2 Snow	261 kg (576 lb.)
17.5-R25, Radial, L2 General Purpose	272 kg (600 lb.)
17.5-R25, Radial, G2/L2 Snow	316 kg (696 lb.)
17.5-R25, Radial, G3/L3 General Purpose	362 kg (798 lb.)
1-Piece Rims	
229 mm x 610 mm (9 in. x 24 in.)	0 kg (0 lb.)
330 mm x 635 mm (13 in. x 25 in.)	65 kg (144 lb.)
Multi-Piece Rims	
254 mm x 610 mm (10 in. x 24 in.)	180 kg (396 lb.)
356 mm x 635 mm (14 in. x 25 in.)	267 kg (588 lb.)
Fenders	
Front	99 kg (218 lb.)
Rear	141 kg (310 lb.)
Low Cab With Opening Front and Side Windows	14.5 kg (32 lb.)
Premium Air-Suspension, Heated Seat With Adjustable Arm- and Headrests	13 kg (28 lb.)
Coolant Heater	4 kg (9 lb.)
Quick Service	11 kg (24 lb.)
Sound-Absorption Package (machines equipped with Tier 3/Stage IIIA and Tier 2/Stage II engines only)	14 kg (31 lb.)
Secondary Steering	26 kg (58 lb.)
Beacon Bracket	8 kg (18 lb.)
Fire Extinguisher	14.5 kg (32 lb.)
Lighting Packages	
10 Halogen Lights	4.5 kg (10 lb.)
18 Halogen Lights	8 kg (18 lb.)
18 LED Lights	7 kg (16 lb.)
High-Front Light Bar for Snowplowing	20 kg (44 lb.)
Auxiliary Hydraulic Control Valve Section and Controls	7 kg (15 lb.)
Hydraulics for Front-Mounted Equipment	9 kg (19 lb.)
Machine Dimensions (continued)	
F Wheelbase	6.16 m (20 ft. 3 in.)
G Overall Length	8.89 m (29 ft. 2 in.)
H Overall Length With Scarifier	9.69 m (31 ft. 9 in.)
I Overall Length With Push Block and Ripper	9.99 m (32 ft. 9 in.)
I' Overall Length With Scarifier and Ripper	10.59 m (34 ft. 9 in.)
<i>For Overall Width see Tires/Wheels on page 16.</i>	





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Engine	670G/GP		
Manufacturer and Model	John Deere PowerTech™ PSS 9.0L	John Deere PowerTech™ Plus 9.0L	John Deere PowerTech™ 9.0L
Non-Road Emission Standard	EPA Final Tier 4/EU Stage V	EPA Tier 3/EU Stage IIIA	EPA Tier 2/EU Stage II
Cylinders	6	6	6
Displacement	9.0L (548 cu. in.)	9.0L (548 cu. in.)	9.0L (548 cu. in.)
Net Engine Power			
Gear 1	134 kW (180 hp)	134 kW (180 hp)	134 kW (180 hp)
Gear 2	142 kW (190 hp)	142 kW (190 hp)	142 kW (190 hp)
Gear 3	153 kW (205 hp)	149 kW (200 hp)	149 kW (200 hp)
Gear 4	157 kW (210 hp)	153 kW (205 hp)	153 kW (205 hp)
Gear 5	164 kW (220 hp)	157 kW (210 hp)	157 kW (210 hp)
Gear 6	168 kW (225 hp)	164 kW (220 hp)	164 kW (220 hp)
Gear 7	172 kW (230 hp)	168 kW (225 hp)	168 kW (225 hp)
Gear 8	175 kW (235 hp)	172 kW (230 hp)	172 kW (230 hp)
Net Peak Torque	1225 Nm (913 lb.-ft.)	1196 Nm (892 lb.-ft.)	1196 Nm (892 lb.-ft.)
Net Torque Rise	56%	56%	56%
Aspiration	Series turbocharged, charge-air cooled	Turbocharged, charge-air cooled	Turbocharged, charge-air cooled
Lubrication	Full-flow spin-on filter and integral cooler	Full-flow spin-on filter and integral cooler	Full-flow spin-on filter and integral cooler
Air Cleaner With Restriction Indicator	Dual element, dry	Dual element, dry	Dual element, dry
Cooling			
Engine Coolant, Extended Life, Rating	–37 deg. C (–34 deg. F)		
Powertrain			
Transmission	Direct-drive John Deere PowerShift Plus™, modulated shift-on-the-go, Event-Based Shifting (EBS), inching pedal; independent transmission reservoir with separate filtration and cooling system with 117-L/min. (31 gpm) gear pump		
Gears			
Forward	8		
Reverse	8		
Maximum Travel Speeds	No tire slip at 2,180 rpm, 14.0-R24 tires		No tire slip at 2,180 rpm, 14.0-R24 tires
Gear 1	4.0 km/h (2.5 mph)	Gear 5	16.4 km/h (10.2 mph)
Gear 2	5.6 km/h (3.5 mph)	Gear 6	23.2 km/h (14.4 mph)
Gear 3	7.7 km/h (4.8 mph)	Gear 7	32.3 km/h (20.1 mph)
Gear 4	10.9 km/h (6.8 mph)	Gear 8	45.5 km/h (28.3 mph)
Front Axle	Heavy-duty welded fabrication		
Oscillation (total)	32 deg.		
Wheel Lean Angle (each direction)	20 deg.		
Differentials	Spiral bevel; hydraulically actuated, clutch type can be applied on-the-go; selectable manual or automatic differential lock		
Steering (all models include steering wheel)	All-hydraulic power-frame articulation for maneuverability and productivity; crab steering reduces side drift, positions tandems on firm ground, and increases side-slope stability; return-to-straight control included in Grade Pro (GP) option		
Turning Radius (front steer and articulation)	7.21 m (284 in.) (23 ft. 8 in.)		
Articulation (both right and left)	22 deg.		
Final Drives	Inboard-mounted planetary sealed in cooled, filtered oil		
Brakes	Foot-controlled, hydraulically operated, multiple wet-disc brakes sealed in pressurized, cooled, filtered oil; both independent systems effective on all 4 tandem wheels		
Primary and Secondary Brakes	Hydraulically actuated, inboard of tandem pivot, self-adjusting, sealed in cooled and filtered oil, multi-disc (ISO 3450)		
Parking Brake	Automatically spring applied, hydraulically released, oil cooled, self-adjusting (ISO 3450)		
Hydraulics			
Type	Closed-center, pressure-compensated load-sensing (PCLS), variable-displacement piston pump		
Maximum Pump Flow	212 L/min. (56 gpm)		
Maximum System Pressure	18 961 kPa (2,750 psi)		
Pump Displacement	90 cm³ (5.5 cu. in.)		

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Blade Function		670G/GP
All-hydraulic, industry-standard lever placement of blade-function controls; includes float position; 7 discrete saddle positions		
Blade Range		
Lift Above Ground	490 mm (19.3 in.)	
Blade Side Shift (right or left)	683 mm (26.9 in.)	
Pitch at Ground Line		
Forward	42 deg.	
Back	5 deg.	
Shoulder Reach Outside Wheels (frame straight, right or left)	2083 mm (82.0 in.) (6 ft. 10 in.)	
Bank Cut Angle (right or left)	90 deg.	
Blade Pull		
At Maximum Operating Weight	15 501 kg (34,173 lb.)	
Electrical		
Solid-state load center and sealed-switch module	EPA Final Tier 4/EU Stage V	EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II
Voltage	24 volt	24 volt
Number of Batteries	2	2
Battery Capacity	1,400 CCA	1,400 CCA
Reserve Capacity	440 min.	440 min.
Amp-Hour Rating	224 amp-hour	224 amp-hour
Alternator Rating		
Base	130 amp	100 amp
Optional	200 amp	130 amp
Lights	Driving lights; 2 high- and 2 low-beam halogen headlights; front and rear LED turn signals and marker lights; LED brake and hazard warning lights	
Mainframe		
Type	Welded box construction	
Width (minimum)	307 mm (12.1 in.)	
Height (minimum)	307 mm (12.1 in.)	
Thickness		
Side	16 mm (0.63 in.)	
Top and Bottom Plate	23 mm (0.89 in.)	
Modulus		
Minimum Vertical Section	1445 cm³ (88 cu. in.)	
Average Vertical Section at Saddle	2245 cm³ (137 cu. in.)	
Draft Frame (drawbar)		
Welded box construction machined for flatness with double ball-and-socket pivot connection		
Circle		
Welded construction, heat-treated, machined for flatness		
	Standard Circle	Premium Circle
Circle Diameter	1524 mm (60 in.)	1524 mm (60 in.)
Rotation	360 deg.	360 deg.
Surface	Quick-change bronze or nylon wear inserts	Sealed and lubricated roller element slewing bearing
Pinion/Ring-Gear Connection	Adjustable backlash and open for serviceability	No adjustment; fully sealed and lubricated
Drive	Hydraulic motor and worm gear with positive lock	Hydraulic motor and worm gear with positive lock
Slip Clutch	Option	Standard
Circle Side Shift (right and left)	787 mm (31 in.)	787 mm (31 in.)
Moldboard		
High-strength, pre-stressed for higher strength; wear-resistant, high-carbon steel and reversible end bits; blade side-shift wear system includes quick-change replaceable wear inserts and quick-adjust jackscrew system		
Base Length	3.66 m (144 in.) (12 ft. 0 in.)	
Height (measured along arc, including cutting edge)	610 mm (24 in.)	
Thickness	22 mm (0.88 in.)	

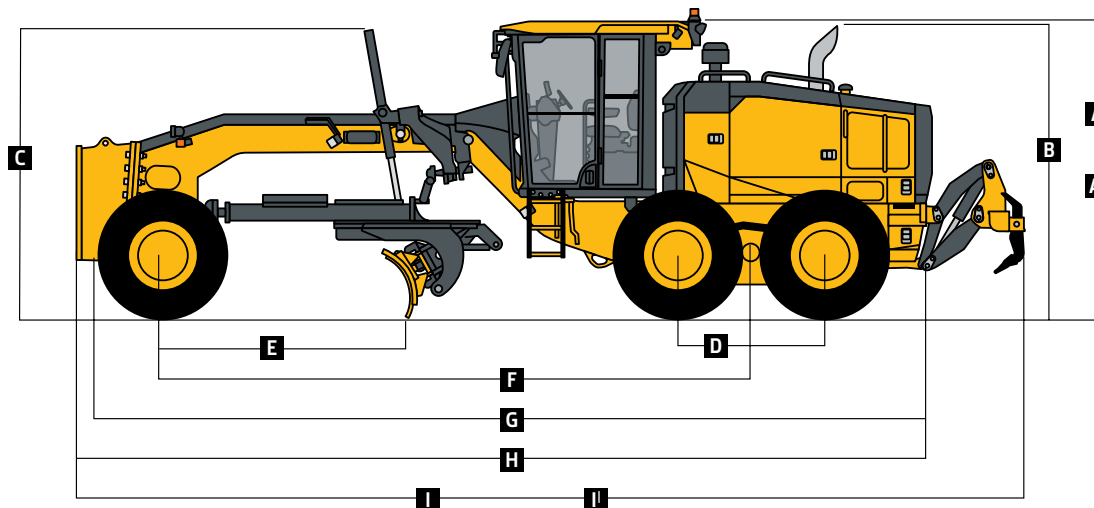
Cutting Edge		670G/GP	
Dura-Max™ through-hardened steel edge			
Thickness	16 mm (0.62 in.)		
Width	152 mm (6 in.)		
Scarifiers			
	Front	Mid-mount	
Type	V-type toolbar with 2-pitch positions and hydraulic float	Radial linkage, with NeverGrease™ pin joints; V-type manual 3-pitch positions and hydraulic float	
Width of Cut	1.20 m (48 in.) (4 ft. 0 in.)	1.19 m (46.7 in.) (3 ft. 11 in.)	
Number of Shanks/Teeth	5 (maximum capacity 9)	11	
Lift Above Ground	589 mm (23.2 in.)	335 mm (13.2 in.)	
Maximum Depth	335 mm (13.2 in.)	325 mm (12.8 in.)	
Shank			
Spacing	146 mm (5.75 in.)	117 mm (4.6 in.)	
Size	25 x 76 mm (1 x 3 in.)	25 x 76 mm (1 x 3 in.)	
Front Lift Group (Balderson-style)			
Parallel linkage, mechanical pins, and hydraulic float			
Lift			
Above Ground (top of tube)	1864 mm (73.4 in.)		
Range	988 mm (38.9 in.)		
Rear Ripper/Scarifier			
Parallel linkage, with NeverGrease pin joints, hydraulic float, and integrated hitch			
	Ripper	Scarifier	
Width of Cut	2.21 m (87.2 in.) (7 ft. 3 in.)	2.18 m (86 in.) (7 ft. 2 in.)	
Number of Shanks/Teeth	3 (maximum capacity 5)	None standard (maximum capacity 9)	
Lift Above Ground	602 mm (23.7 in.)	810 mm (31.9 in.)	
Maximum Depth	426 mm (16.8 in.)	323 mm (12.7 in.)	
Force			
Penetration	9526 kg (21,000 lb.)	—	
Pry-Out	12 580 kg (27,734 lb.)	—	
Shank Size	61.5 x 133 mm (2.42 x 5.25 in.)	25 x 76 mm (1 x 3 in.)	
Operator Station			
Low-profile cab with ROPS (ISO 3471-2008) and FOPS (ISO 3449-2005)			
Tires/Wheels			
	14R24 on 254-mm (10 in.) Rim	17.5R25 on 356-mm (14 in.) Rim	
Wheel Tread on Ground	2.08 m (82.0 in.)	2.16 m (85.0 in.)	
Overall Width	2.49 m (98.0 in.)	2.64 m (104.0 in.)	
Ground Clearance (front axle)	587 mm (23.1 in.)	587 mm (23.1 in.)	
Serviceability			
Refill Capacities	EPA Final Tier 4/EU Stage V	EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II	
Fuel Tank	416.5 L (110 gal.)	416.5 L (110 gal.)	
Diesel Exhaust Fluid (DEF) Tank	22.5 L (6 gal.)	—	
Cooling System	55.0 L (14.5 gal.)	48.5 L (12.8 gal.)	
Engine Oil With Filter	28.4 L (7.5 gal.)	28.0 L (7.4 gal.)	
Transmission Fluid	28.4 L (7.5 gal.)	28.4 L (7.5 gal.)	
Differential Housing	38.0 L (10 gal.)	38.0 L (10 gal.)	
Tandem Housings (each)	74.0 L (19.5 gal.)	74.0 L (19.5 gal.)	
Circle Gearbox	5.7 L (1.5 gal.)	5.7 L (1.5 gal.)	
Hydraulic Reservoir	60.5 L (16 gal.)	53.0 L (14 gal.)	
Operating Weights			
With Full Fuel Tank, 3.66-m x 610-mm x 22-mm (12 ft. x 24 in. x 0.88 in.) Moldboard			
With 152-mm x 16-mm (6 in. x 5/8 in.) Cutting Edges, 14-24 Bias L2 Tires, and 79-kg (175 lb.) Operator			
	EPA Final Tier 4/EU Stage V	EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II	
Front	4193 kg (9,245 lb.)	4203 kg (9,265 lb.)	
Rear	11 807 kg (26,030 lb.)	11 327 kg (24,972 lb.)	
Total	16 000 kg (35,275 lb.)	15 530 kg (34,237 lb.)	
Typical Operating Weight With Front Push Block, Rear Ripper/Scarifier, and Other Equipment			
Front	5522 kg (12,175 lb.)	5488 kg (12,100 lb.)	
Rear	13 708 kg (30,220 lb.)	13 063 kg (28,800 lb.)	
Total	19 230 kg (42,395 lb.)	18 552 kg (40,900 lb.)	
Maximum Operating Weight	24 948 kg (55,000 lb.)	24 948 kg (55,000 lb.)	

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670G/GP

Option Weights	670G/GP
Moldboards With Through-Hardened Dura-Max Cutting Edge	
3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x 7/8 in.) with 152-mm x 16-mm (6 in. x 5/8 in.) cutting edge and 16-mm (5/8 in.) hardware	0 kg (0 lb.)
3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x 7/8 in.) with 203-mm x 19-mm (8 in. x 3/4 in.) cutting edge and 16-mm (5/8 in.) hardware	45 kg (99 lb.)
3.96 m x 686 mm x 25 mm (13 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x 3/4 in.) cutting edge and 16-mm (5/8 in.) hardware	180 kg (396 lb.)
4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x 7/8 in.) with 152-mm x 16-mm (6 in. x 5/8 in.) cutting edge and 16-mm (5/8 in.) hardware	105 kg (231 lb.)
4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x 7/8 in.) with 203-mm x 19-mm (8 in. x 3/4 in.) cutting edge and 16-mm (5/8 in.) hardware	157.4 kg (347 lb.)
4.27 m x 686 mm x 25 mm (14 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x 3/4 in.) cutting edge and 16-mm (5/8 in.) hardware	251 kg (554 lb.)
4.27 m x 686 mm x 25 mm (14 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x 3/4 in.) cutting edge and 19-mm (3/4 in.) hardware	261 kg (575 lb.)
Extensions, 610 mm (2 ft.) (right or left)	
For Use With 610-mm (24 in.) Moldboards	116 kg (255 lb.)
For Use With 686-mm (27 in.) Moldboards	120 kg (265 lb.)
Overlay End Bits, Reversible (one pair)	
For 152-mm (6 in.) Cutting Edge	19.5 kg (43 lb.)
For 203-mm (8 in.) Cutting Edge	23 kg (51 lb.)
Heavy-Duty Dual-Input Circle-Drive Gearbox	14 kg (31 lb.)
Circle-Drive Slip Clutch	9 kg (20 lb.)
Circle	
Standard	0 kg (0 lb.)
Premium	289 kg (638 lb.)
Moldboard Impact-Absorption System	43 kg (95 lb.)
Ripper/Scarifier, Rear Mounted With Hitch and Ripper Shanks (3)	1139 kg (2,510 lb.)
Scarifier Shanks With Teeth (9 for rear ripper/scarifier)	68 kg (150 lb.)
Ripper Shanks and Teeth (2)	63 kg (139 lb.)
Rear Counterweight With Integral Rear Hitch	727 kg (1,603 lb.)
Machine Dimensions	
A Height to Top of Cab	3.18 m (10 ft. 5 in.)
A' Height to Top of Full-Height Cab	3.40 m (11 ft. 2 in.)
B Height to Top of Exhaust	3.10 m (10 ft. 2 in.)
C Height to Top of Blade-Lift Cylinders	3.05 m (10 ft. 0 in.)
D Tandem Axle Spacing	1.54 m (5 ft. 1 in.)
E Blade Base	2.57 m (8 ft. 5 in.)

Option Weights (continued)	670G/GP
Rear Hitch	54.4 kg (120 lb.)
Push Block, Front	1338 kg (2,950 lb.)
Scarifier	
Front Mount With Teeth (5)	831 kg (1,833 lb.)
Mid-Mount With Teeth (11)	1481 kg (3,265 lb.)
Front Lift Group (Balderson-style)	763 kg (1,682 lb.)
Tires	
14.00-24, 12 PR G2	0 kg (0 lb.)
17.5-25, 12 PR G2/L2	114 kg (252 lb.)
14.00-R24, Radial, G2/L2 General Purpose	220 kg (486 lb.)
14.00-R24, Radial, G2/L2 Snow	261 kg (576 lb.)
17.5-R25, Radial, L2 General Purpose	272 kg (600 lb.)
17.5-R25, Radial, G2/L2 Snow	316 kg (696 lb.)
17.5-R25, Radial, G3/L3 General Purpose	362 kg (798 lb.)
1-Piece Rims	
229 mm x 610 mm (9 in. x 24 in.)	0 kg (0 lb.)
330 mm x 635 mm (13 in. x 25 in.)	65 kg (144 lb.)
Multi-Piece Rims	
254 mm x 610 mm (10 in. x 24 in.)	180 kg (396 lb.)
356 mm x 635 mm (14 in. x 25 in.)	267 kg (588 lb.)
Fenders	
Front	99 kg (218 lb.)
Rear	141 kg (310 lb.)
Low Cab With Opening Front and Side Windows	14.5 kg (32 lb.)
Premium Air-Suspension, Heated Seat With Adjustable Arm- and Headrests	13 kg (28 lb.)
Coolant Heater	4 kg (9 lb.)
Quick Service	11 kg (24 lb.)
Sound-Absorption Package (machines equipped with Tier 3/Stage IIIA and Tier 2/Stage II engines only)	14 kg (31 lb.)
Secondary Steering	26 kg (58 lb.)
Beacon Bracket	8 kg (18 lb.)
Fire Extinguisher	14.5 kg (32 lb.)
Lighting Packages	
10 Halogen Lights	4.5 kg (10 lb.)
18 Halogen Lights	8 kg (18 lb.)
18 LED Lights	7 kg (16 lb.)
High-Front Light Bar for Snowplowing	20 kg (44 lb.)
Auxiliary Hydraulic Control Valve Section and Controls	7 kg (15 lb.)
Hydraulics for Front-Mounted Equipment	9 kg (19 lb.)
Machine Dimensions (continued)	
F Wheelbase	6.16 m (20 ft. 3 in.)
G Overall Length	8.89 m (29 ft. 2 in.)
H Overall Length With Scarifier	9.69 m (31 ft. 9 in.)
I Overall Length With Push Block and Ripper	9.99 m (32 ft. 9 in.)
II Overall Length With Scarifier and Ripper	10.59 m (34 ft. 9 in.)
For Overall Width see Tires/Wheels on page 20.	



Additional equipment

Key: ● Standard ▲ Optional or special See your John Deere dealer for further information.

620	670	770	870	Operator's Station
●	●	●	●	Low-profile ROPS/FOPS cab with HVAC (ROPS ISO 3471 / FOPS SAE 3449 Level II)
▲	▲	▲	▲	Low-profile ROPS/FOPS cab utilizing laminated glass with fixed lower front and side opening windows
▲	▲	▲	▲	Opening front and side windows (standard with Grade Pro)
●	●	●	●	Keyless start with multiple security modes
●	●	●	●	Fabric air-suspension seat with armrests and headrest
▲	▲	▲	▲	Premium heated, leather/fabric, high-wide-back, air-suspension seat with armrests (standard with Grade Pro)
●	●	●	●	Sealed-switch module with function indicators
●	●	●	●	Electric rear-window defroster
●	●	●	●	Upper front windshield washers with intermittent wipers
▲	●	●	●	Upper rear windshield washers with intermittent wipers
▲	▲	▲	▲	Lower front intermittent wiper and washer
▲	▲	▲	▲	Powered cab precleaner
▲	▲	▲	▲	Decelerator pedal
▲	▲	▲	▲	Flip-down, right- and/or left-hand cab beacon with bracket
●	●	●	●	Cab prewired for beacon, radio, and auxiliary circuit
●	●	●	●	Front window sun visor
▲	▲	▲	▲	Retractable rear sunshade
●	●	●	●	Rearview mirrors, exterior (2) (SAE J985)
▲	▲	▲	▲	Heated exterior mirrors (2) (SAE J985)
▲	▲	▲	▲	Fire extinguisher
●	●	●	●	High-resolution rear camera with dedicated in-cab monitor (in some markets)
▲	▲	▲	▲	High-resolution front/rear-camera combination with dedicated in-cab monitor
●	●	●	●	Retractable seat belt, 76 mm (3 in.) (SAE 386)
▲	▲	▲	▲	AM/FM radio with auxiliary and Weather Band (WB)
▲	▲	▲	▲	AM/FM radio with Bluetooth®, auxiliary, and WB ready
●	●	●	●	Push-button-activated cruise control

620	670	770	870	Electrical
●	●	●	●	100-amp alternator (Tier 3/Stage IIIA and Tier 2/Stage II)
●	●	●	●	130-amp alternator (FT4/Stage V [optional for Tier 3/Stage IIIA and Tier 2/Stage II])
▲	▲	▲	▲	200-amp alternator (FT4/Stage V)
●	●	●	●	Batteries (2), 1,400 CCA with 440-min. reserve capacity
▲	●	●	●	Left-hand engine compartment service-check light
▲	▲	▲	▲	Right-hand engine compartment service-check light
●	●	●	●	Transporting lights (4 halogen)
▲	▲	▲	▲	Grading lights (10 halogen lights)
▲	▲	▲	▲	Deluxe grading lights (18 halogen lights)
▲	▲	▲	▲	Premium grading lights (18 LED lights)
	▲	▲	▲	Tall front snowplow light bar
●	●	●	●	Multifunction/multi-language diagnostic LCD color monitor
●	●	●	●	Reverse warning alarm (SAE J994)
●	●	●	●	LED brake and turn lights
Moldboard				
Patented pre-stressed, high strength, wear resistant:				
●	●	●		3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x 7/8 in.)
	▲	▲	▲	3.96 m x 686 mm x 25 mm (13 ft. x 27 in. x 1 in.)
▲	▲	▲		4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x 7/8 in.)
	▲	▲	●	4.27 m x 686 mm x 25 mm (14 ft. x 27 in. x 1 in.)
		▲		4.88 m x 686 mm x 25 mm (16 ft. x 27 in. x 1 in.)
●	●	●	●	Quick-change and jackscrew-adjustable moldboard side-shift extreme-duty wear inserts
▲	▲	▲		610-mm (24 in.) left- or right-hand extensions for 610-mm (24 in.) moldboard
		▲	▲	610-mm (24 in.) left- or right-hand extensions for 686-mm (27 in.) moldboard
▲	▲	▲	▲	Reversible overlay endbits
Overall Vehicle				
●	●	●	●	JDLink™ wireless communication system (available in specific countries; see your dealer for details)
●	●	●	●	Ground-level fuel and diesel exhaust fluid (DEF) filling
▲	●	●	●	Fluid-sampling ports for engine oil and coolant, hydraulic oil, and axle and transmission fluids

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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. 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 standard equipment; 14.0 x 610-mm (24 in.) 12 PR G2, Bias tires and 3.66-m x 610-mm x 22-mm (12 ft. x 24 in. x 7/8 in.) high-strength, wear-resistant moldboards with 16-mm x 152-mm (0.63 in. x 6 in.) Dura-Max® through-hardened-steel cutting edges for the 620G, 670G, and 770G; and 17.5 R 635-mm (25 in.) L2, Radial tires and 4.27-m x 686-mm x 25-mm (14 ft. x 27 in. x 1 in.) high-strength, wear-resistant moldboards with 16-mm x 152-mm (0.63 in. x 6 in.) Dura-Max through-hardened-steel cutting edges for the 870G. Weights include lubricants, coolants, full fuel tanks, and 79-kg (175 lb.) operators.

Additional equipment *(continued)*

Key: ● Standard ▲ Optional or special See your John Deere dealer for further information.

620	670	770	870	Overall Vehicle <i>(continued)</i>
●	●	●	●	Vandal-protection locking for: Cab doors / Top tank radiator-access door / Engine coolant surge tank / Hydraulic reservoir cap / Battery-disconnect switch / Ground-level electrical master disconnect switch / Fuel-tank door and cap / Toolbox
●	●	●	●	Environmental drains with hoses for engine, transmission, hydraulic, differential fluids, and engine coolant
▲	●	●	●	Hydraulically driven cool-on-demand reversing fan
●	●	●	●	Banked easy-access vertical spin-on filters for hydraulic, transmission, and axle fluids
●	●	●	●	Engine rotary ejector precleaner
●	●	●	●	Automatic differential lock
●	●	●	●	Engine-stall prevention and auto shutdown
▲	▲	▲	▲	Adjustable rotary engine precleaner (FT4/Stage V)
	▲	●	●	Heavy-duty air cleaner (FT4/Stage V)
●	●	●		Single-input circle drive
▲	▲	▲		Single-input circle drive with slip clutch
	▲	▲	●	Heavy-duty dual-input circle drive without slip clutch
	▲	▲	▲	Heavy-duty dual-input circle drive with slip clutch
▲	▲	▲	▲	Premium circle
▲	▲	▲	▲	Auto-Shift transmission
▲	▲	▲	▲	Auto-Shift PLUS transmission
▲	▲	▲	▲	Blade-impact-absorption system
▲	▲	▲	▲	Front and/or rear wheel fenders
▲	▲	▲	▲	Quick-service bank for transmission, hydraulic, engine oil, and engine coolant fluid changes
▲	▲	▲	▲	Secondary steering
	▲	▲	▲	Sound-absorption package (Tier 3/Stage IIIA and Tier 2/Stage II)
▲	▲	▲	▲	Wheel chocks
Automation (standard on SmartGrade™ models, optional on GP models)				
▲	▲	▲	▲	Automation Suite
▲	▲	▲	▲	Auto-Articulation
▲	▲	▲	▲	Auto-Gain for Cross Slope
▲	▲	▲	▲	Auto-Pass
▲	▲	▲	▲	Blade Flip
▲	▲	▲	▲	Machine Presets
▲	▲	▲	▲	Machine-Damage Avoidance

620	670	770	870	Front Attachments
▲	▲	▲	▲	Front push block
▲	▲	▲	▲	V-type front scarifier with float position, 5 shanks
▲	▲	▲	▲	Mid-mount scarifier with float position, 11 shanks
▲	▲	▲	▲	Front Balderson-style lift group with float position
▲	▲	▲	▲	Front-mounted dozer blades
Rear Attachments				
●	●	●	●	Full bottom guard with access panel and side guards for rear vehicle protection
▲	▲	▲	▲	Rear-mounted ripper/scarifier combination with rear hitch and pin, 3 ripper shanks
▲	▲	▲	▲	Rear counterweight with rear hitch and pin
▲	▲	▲	▲	Rear hitch and pin
▲	▲	▲	▲	Extra scarifier shanks (9) with teeth for rear ripper scarifier
	▲	▲	▲	Extra ripper shanks (2) with teeth for rear ripper/scarifier
Grade Pro (GP) Option				
●	●	●	●	Low-profile GP cab with opening lower front and side windows
▲	▲	▲	▲	Low-profile GP cab utilizing laminated glass with fixed lower front and side opening windows
●	●	●	●	Premium heated, leather/fabric, high-wide-back, air-suspension seat with armrests
▲	▲	▲	▲	Dual-joystick controls
▲	▲	▲	▲	Fingertip armrest-mounted controls including steering lever
●	●	●	●	Steering wheel
●	●	●	●	Cross slope
●	●	●	●	Return to straight
Grade Control				
▲	▲	▲	▲	SmartGrade available on GP models
▲	▲	▲	▲	Mast mounts
▲	▲	▲	▲	Topcon ready available on G and GP models
▲	▲	▲	▲	Trimble ready available on G and GP models

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