

180G LC



Engine		180G LC	
		<i>Base engine for use in the U.S., U.S. Territories, and Canada</i>	<i>Optional engine for use outside the U.S. and U.S. Territories</i>
Manufacturer and Model	John Deere PowerTech™ PVX	John Deere PowerTech™ 4045H	
Non-Road Emissions Standard	EPA Interim Tier 4/EU Stage IIIB	EPA Tier 3/EU Stage IIIA	
Net Rated Power (ISO 9249)	90 kW (121 hp) at 2,200 rpm	90 kW (121 hp) at 1,900 rpm	
Cylinders	4	4	
Displacement	4.5 L (275 cu. in.)	4.5 L (275 cu. in.)	
Off-Level Capacity	70% (35 deg.)	70% (35 deg.)	
Aspiration	Turbocharged, air-to-air charge-air cooler	Turbocharged, air-to-air charge-air cooler	
Cooling			
Cool-on-demand hydraulic-driven, suction-type fan with remote-mounted drive			
Powertrain			
2-speed propel with automatic shift			
Maximum Travel Speed			
Low	3.4 km/h (2.1 mph)		
High	5.3 km/h (3.3 mph)		
Drawbar Pull	17 250 kg (38,030 lb.)		
Hydraulics			
Open center, load sensing			
Main Pumps	2 variable-displacement axial-piston pumps		
Maximum Rated Flow	191 L/m (50 gpm) x 2		
Pilot Pump	One gear		
Maximum Rated Flow	33.6 L/m (8.9 gpm)		
Pressure Setting	3930 kPa (570 psi)		
System Operating Pressure			
Circuits			
Implement	34 336 kPa (4,980 psi)		
Travel	34 336 kPa (4,980 psi)		
Swing	34 336 kPa (4,980 psi)		
Power Boost	38 000 kPa (5,511 psi)		
Controls	Pilot levers, short stroke, low-effort hydraulic pilot controls with shutoff lever		
Cylinders			
	<i>Bore</i>	<i>Rod Diameter</i>	<i>Stroke</i>
Boom (2)	120 mm (4.72 in.)	85 mm (3.35 in.)	1123 mm (44.21 in.)
Arm (1)	125 mm (4.92 in.)	90 mm (3.54 in.)	1371 mm (53.98 in.)
Bucket (1)	105 mm (4.13 in.)	75 mm (2.95 in.)	1060 mm (41.73 in.)
Electrical			
Number of Batteries (12 volt)	2		
Battery Capacity	1,400 CCA		
Alternator Rating	100 amp		
Work Lights	2 halogen (one mounted on boom, one on frame)		
Undercarriage			
Rollers (each side)			
Carrier	2		
Track	7		
Shoes, Triple Semi-Grousers (each side)	46		
Track			
Adjustment	Hydraulic		
Guides	Center		
Chain	Sealed and lubricated		
Ground Pressure			
Triple Semi-Grouser Shoes			
600 mm (24 in.)	41 kPa (5.95 psi)		
700 mm (28 in.)	36 kPa (5.22 psi)		
800 mm (32 in.)	32 kPa (4.64 psi)		



Swing Mechanism	180G LC
Speed	12.8 rpm
Torque	50 000 Nm (36,765 lb.-ft.)

Serviceability

Refill Capacities	
Fuel Tank	320 L (84.5 gal.)
Cooling System	23.5 L (24.8 qt.)
Engine Oil with Filter	14.5 L (15 qt.)
Hydraulic Tank	125 L (33 gal.)
Hydraulic System	210 L (55.5 gal.)
Gearbox	
Swing	6.2 L (6.6 qt.)
Propel (each)	6.8 L (7.2 qt.)
Pump Drive	0.9 L (1.0 qt.)

Operating Weights

With full fuel tank; 79-kg (175 lb.) operator; 1067-mm (42 in.), 0.83-m³ (1.09 cu. yd.), 785-kg (1,731 lb.) general-purpose bucket; 3.21-m (10 ft. 6 in.) arm; 3910-kg (8,620 lb.) counterweight; and 700-mm (28 in.) triple semi-grouser shoes

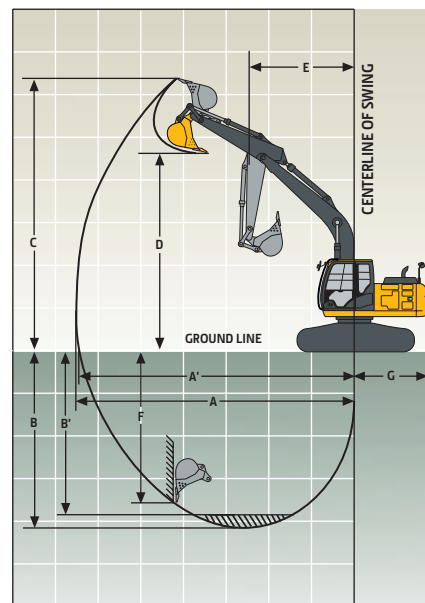
Operating Weight	20 120 kg (44,317 lb.)
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Component Weights

Undercarriage with Triple Semi-Grouser Shoes	
600 mm (24 in.)	6752 kg (14,873 lb.)
700 mm (28 in.)	7143 kg (15,733 lb.)
800 mm (32 in.)	7437 kg (16,381 lb.)
One-Piece Boom (with arm cylinder)	1566 kg (3,449 lb.)
Arm with Bucket Cylinder and Linkage	
2.71 m (8 ft. 10 in.)	881 kg (1,941 lb.)
3.21 m (10 ft. 6 in.)	946 kg (2,084 lb.)
Boom-Lift Cylinders (2), Total Weight	326 kg (718 lb.)
1067-mm (42 in.), 0.83-m ³ (1.09 cu. yd.) Bucket	785 kg (1,731 lb.)
Counterweight, Standard	3910 kg (8,620 lb.)

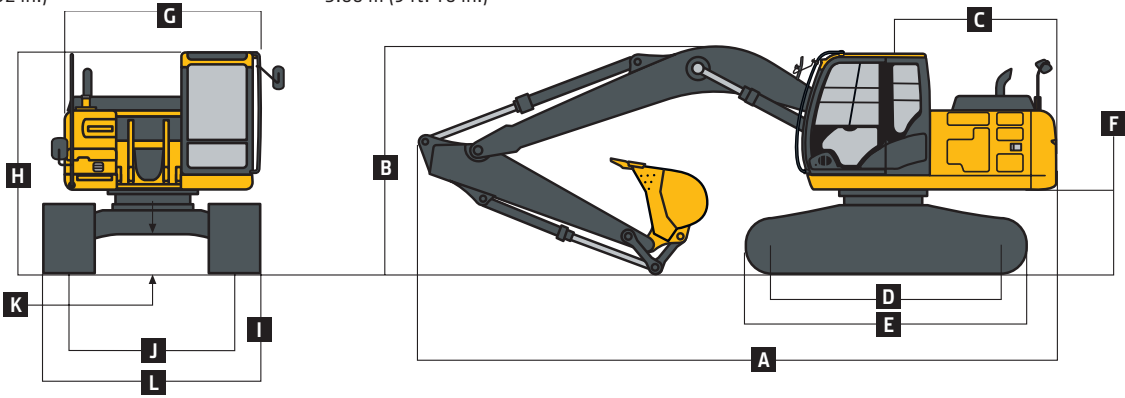
Operating Dimensions

Arm Length	<i>2.71 m (8 ft. 10 in.)</i>	<i>3.21 m (10 ft. 6 in.)</i>
Arm Digging Force		
SAE	91 kN (20,496 lb.)	81 kN (18,240 lb.)
ISO	95 kN (21,282 lb.)	84 kN (18,825 lb.)
Bucket Digging Force		
SAE	113 kN (25,311 lb.)	113 kN (25,311 lb.)
ISO	126 kN (28,244 lb.)	126 kN (28,244 lb.)
Lifting Capacity Over Front at Ground Level 6.1-m (20 ft. 0 in.) Reach (with power boost)	5287 kg (11,656 lb.)	5302 kg (11,690 lb.)
A Maximum Reach	9.43 m (30 ft. 11 in.)	9.94 m (32 ft. 7 in.)
A' Maximum Reach at Ground Level	9.27 m (30 ft. 5 in.)	9.79 m (32 ft. 1 in.)
B Maximum Digging Depth	6.57 m (21 ft. 7 in.)	7.07 m (23 ft. 2 in.)
B' Maximum Digging Depth at 2.44-m (8 ft. 0 in.) Flat Bottom	6.32 m (20 ft. 9 in.)	6.87 m (22 ft. 6 in.)
C Maximum Cutting Height	9.40 m (30 ft. 10 in.)	9.79 m (32 ft. 1 in.)
D Maximum Dumping Height	6.57 m (21 ft. 7 in.)	6.93 m (22 ft. 9 in.)
E Minimum Swing Radius	3.13 m (10 ft. 3 in.)	3.13 m (10 ft. 3 in.)
F Maximum Vertical Wall	5.55 m (18 ft. 3 in.)	6.28 m (20 ft. 7 in.)
G Tail-Swing Radius	2.55 m (8 ft. 4 in.)	2.55 m (8 ft. 4 in.)



Machine Dimensions 180G LC

A Overall Length with Arm	2.71 m (8 ft. 10 in.)	9.04 m (29 ft. 8 in.)
	3.21 m (10 ft. 6 in.)	9.04 m (29 ft. 8 in.)
B Overall Height with Arm	2.71 m (8 ft. 10 in.)	3.08 m (10 ft. 1 in.)
	3.21 m (10 ft. 6 in.)	3.39 m (11 ft. 1 in.)
C Rear-End Length/Swing Radius	2.55 m (8 ft. 4 in.)	
D Distance Between Idler/Sprocket Centerline	3.37 m (11 ft. 1 in.)	
E Undercarriage Length	4.17 m (13 ft. 8 in.)	
F Counterweight Clearance	1030 mm (3 ft. 5 in.)	
G Upperstructure Width	2.50 m (8 ft. 2 in.)	
H Cab Height	2.95 m (9 ft. 8 in.)	
I Track Width with Triple Semi-Grouser Shoes	600 mm (24 in.) / 700 mm (28 in.) / 800 mm (32 in.)	
J Gauge Width	2.20 m (7 ft. 3 in.)	
K Ground Clearance	450 mm (18 in.)	
L Overall Width with Triple Semi-Grouser Shoes	600 mm (24 in.)	2.80 m (9 ft. 2 in.)
	700 mm (28 in.)	2.90 m (9 ft. 6 in.)
	800 mm (32 in.)	3.00 m (9 ft. 10 in.)



Lift Capacities

Boldface type indicates hydraulically limited capacity; lightface type indicates stability-limited capacities, in kg (lb.). Ratings at bucket lift hook; machine equipped with 600-kg (1,323 lb.) bucket, standard counterweight, and standard gauge; and situated on firm, level, uniform supporting surface. Total load includes weight of cables, hook, etc. Figures do not exceed 87 percent of hydraulic capacities or 75 percent of weight needed to tip machine. All lift capacities are based on ISO 10567 (with power boost).

Load Point Height	1.5 m (5 ft.)		3.0 m (10 ft.)		4.5 m (15 ft.)		6.0 m (20 ft.)		7.5 m (25 ft.)	
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
<i>With 2.71-m (8 ft. 10 in.) arm and 700-mm (28 in.) triple semi-grouser shoes</i>										
6.0 m (20 ft.)							4000 (8,850)	3800 (8,150)		
4.5 m (15 ft.)					4850 (10,450)	4850 (10,450)	4400 (9,550)	3700 (7,950)		
3.0 m (10 ft.)					6550 (14,050)	5600 (12,050)	5150 (11,150)	3550 (7,600)	3900 (8,350)	2400 (5,150)
1.5 m (5 ft.)					8200 (17,700)	5200 (11,200)	5450 (11,700)	3350 (7,200)	3800 (8,150)	2300 (4,950)
Ground Line			4350 (10,150)	4350 (10,150)	8500 (18,200)	4950 (10,650)	5300 (11,400)	3200 (6,900)	3700 (8,000)	2250 (4,850)
-1.5 m (-5 ft.)	4700 (10,500)	4700 (10,500)	8300 (18,950)	8300 (18,950)	8400 (18,000)	4900 (10,500)	5250 (11,250)	3150 (6,750)		
-3.0 m (-10 ft.)	8800 (19,850)	8800 (19,850)	12 750 (27,650)	9750 (20,950)	8450 (18,150)	4950 (10,650)	5250 (11,350)	3200 (6,850)		
-4.5 m (-15 ft.)			10 150 (21,700)	10 100 (21,700)	6900 (14,600)	5150 (11,100)				
<i>With 3.21-m (10 ft. 6 in.) arm and 600-mm (24 in.) triple semi-grouser shoes</i>										
6.0 m (20 ft.)							3450 (7,650)	3450 (7,650)		
4.5 m (15 ft.)							3900 (8,550)	3700 (7,950)	3350 (6,850)	2450 (5,200)
3.0 m (10 ft.)			8950 (19,000)	8950 (19,000)	5850 (12,600)	5600 (12,100)	4700 (10,250)	3500 (7,550)	3800 (8,200)	2350 (5,050)
1.5 m (5 ft.)					7650 (16,500)	5150 (11,150)	5350 (11,550)	3300 (7,100)	3700 (7,950)	2250 (4,850)
Ground Line			4700 (10,900)	4700 (10,900)	8350 (17,900)	4850 (10,500)	5200 (11,150)	3150 (6,750)	3600 (7,800)	2150 (4,650)
-1.5 m (-5 ft.)	4000 (8,950)	4000 (8,950)	7450 (17,000)	7450 (17,000)	8200 (17,600)	4750 (10,200)	5100 (10,950)	3050 (6,550)	3600 (7,700)	2150 (4,600)
-3.0 m (-10 ft.)	7250 (16,350)	7250 (16,350)	11 750 (26,900)	9450 (20,200)	8200 (17,600)	4750 (10,250)	5100 (10,950)	3050 (6,550)		
-4.5 m (-15 ft.)	11 700 (26,500)	11 700 (26,500)	11 300 (24,300)	9700 (20,850)	7700 (16,500)	4900 (10,600)				

Lift Capacities (continued)

180G LC

Boldface type indicates hydraulically limited capacity; lightface type indicates stability-limited capacities, in kg (lb.). Ratings at bucket lift hook; machine equipped with 600-kg (1,323 lb.) bucket, standard counterweight, and standard gauge; and situated on firm, level, uniform supporting surface. Total load includes weight of cables, hook, etc. Figures do not exceed 87 percent of hydraulic capacities or 75 percent of weight needed to tip machine. All lift capacities are based on ISO 10567 (with power boost).

Load Point Height 1.5 m (5 ft.) 3.0 m (10 ft.) 4.5 m (15 ft.) 6.0 m (20 ft.) 7.5 m (25 ft.)

Horizontal Distance from Centerline

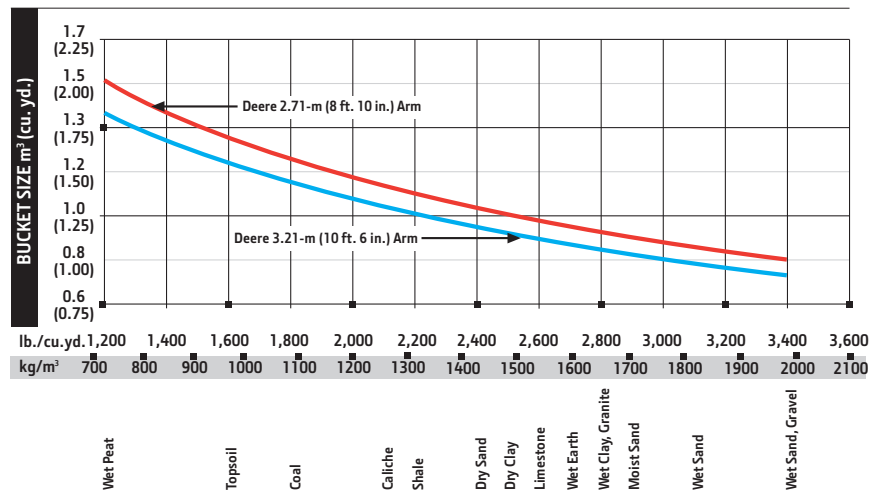
of Rotation	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
<i>With 3.21-m (10 ft. 6 in.) arm and 700-mm (28 in.) triple semi-grouser shoes</i>										
6.0 m (20 ft.)							3450	3450		
							(7,650)	(7,650)		
4.5 m (15 ft.)							3900	3750	3350	2500
							(8,550)	(8,100)	(6,850)	(5,350)
3.0 m (10 ft.)			8950	8950	5850	5700	4700	3550	3900	2400
			(19,000)	(19,000)	(12,600)	(12,300)	(10,250)	(7,700)	(8,350)	(5,150)
1.5 m (5 ft.)					7650	5250	5500	3350	3800	2300
					(16,500)	(11,350)	(11,800)	(7,250)	(8,150)	(4,950)
Ground Line			4700	4700	8500	4950	5300	3200	3700	2250
			(10,900)	(10,900)	(18,250)	(10,700)	(11,400)	(6,850)	(7,950)	(4,800)
-1.5 m (-5 ft.)	4000	4000	7450	7450	8350	4850	5200	3100	3650	2200
	(8,950)	(8,950)	(17,000)	(17,000)	(17,950)	(10,450)	(11,150)	(6,700)	(7,850)	(4,700)
-3.0 m (-10 ft.)	7250	7250	11 750	9600	8400	4850	5200	3100		
	(16,350)	(16,350)	(26,900)	(20,600)	(18,000)	(10,450)	(11,200)	(6,700)		
-4.5 m (-15 ft.)	11 700	11 700	11 300	9900	7700	5000				
	(26,500)	(26,500)	(24,300)	(21,250)	(16,500)	(10,800)				
<i>With 3.21-m (10 ft. 6 in.) arm and 800-mm (32 in.) triple semi-grouser shoes</i>										
6.0 m (20 ft.)							3450	3450		
							(7,650)	(7,650)		
4.5 m (15 ft.)							3900	3800	3350	2550
							(8,550)	(8,200)	(6,850)	(5,400)
3.0 m (10 ft.)			8950	8950	5850	5800	4700	3600	3950	2450
			(19,000)	(19,000)	(12,600)	(12,500)	(10,250)	(7,800)	(8,500)	(5,250)
1.5 m (5 ft.)					7650	5350	5550	3400	3850	2350
					(16,500)	(11,500)	(11,950)	(7,350)	(8,250)	(5,050)
Ground Line			4700	4700	8650	5050	5400	3250	3750	2250
			(10,900)	(10,900)	(18,500)	(10,850)	(11,550)	(7,000)	(8,100)	(4,850)
-1.5 m (-5 ft.)	4000	4000	7450	7450	8500	4950	5300	3150	3700	2250
	(8,950)	(8,950)	(17,000)	(17,000)	(18,200)	(10,600)	(11,350)	(6,800)	(8,000)	(4,800)
-3.0 m (-10 ft.)	7250	7250	11 750	9750	8500	4950	5300	3150		
	(16,350)	(16,350)	(26,900)	(20,900)	(18,250)	(10,650)	(11,350)	(6,800)		
-4.5 m (-15 ft.)	11 700	11 700	11 300	10 050	7700	5100				
	(26,500)	(26,500)	(24,300)	(21,500)	(16,500)	(10,950)				

Buckets

A full line of buckets is offered to meet a wide variety of applications. Digging forces are with power boost. Buckets are equipped with John Deere Fanggs™ or ESCO teeth standard. Replaceable cutting edges and a variety of teeth are available through John Deere Parts. Optional side cutters add 150 mm (6 in.) to bucket widths. Capacities are SAE heaped ratings.

Type Bucket	Bucket Width		Bucket Capacity		Bucket Weight		Bucket Dig Force (SAE)		Arm Dig Force 2.71 m (8 ft. 10 in.)		Arm Dig Force 3.21 m (10 ft. 6 in.)		Bucket Tip Radius		Number of Teeth
	mm	in.	m ³	cu. yd.	kg	lb.	kN	lb.	kN	lb.	kN	lb.	mm	in.	
Heavy Duty	760	30	0.54	0.71	622	1,369	135.9	30,554	130.2	29,271	107.1	24,071	1463	57.61	4
	915	36	0.69	0.90	708	1,559	135.9	30,554	130.2	29,271	107.1	24,071	1463	57.61	5
	1065	42	0.83	1.09	786	1,731	135.9	30,554	130.2	29,271	107.1	24,071	1463	57.61	5
	1220	48	0.99	1.29	872	1,921	135.9	30,554	130.2	29,271	107.1	24,071	1463	57.61	6
Heavy Duty High Capacity	915	36	0.74	0.97	809	1,782	135.0	30,349	129.9	29,197	106.8	24,016	1473	58.0	5
	1065	42	0.91	1.19	886	1,951	135.0	30,349	129.9	29,197	106.8	24,016	1473	58.0	5

Bucket Selection Guide*



* Contact your John Deere dealer for optimum bucket and attachment selections. These recommendations are for general conditions and average use. Does not include optional equipment such as thumbs or couplers. Larger buckets may be possible when using light materials, for flat and level operations, less compacted materials, and volume loading applications such as mass-excavation applications in ideal conditions. Smaller buckets are recommended for adverse conditions such as off-level applications, rocks, and uneven surfaces. Bucket capacity indicated is SAE heaped.