

230 P

Excavator



JOHN DEERE





PREPARED FOR POWERFUL PERFORMANCE

For demanding applications that require reliable power, you need a machine purpose built to meet the challenge. The new John Deere-designed 230 P-Tier Excavator is engineered for performance. Standard features driven by customer input include heavy-duty steel components, enhanced hydraulic cycle times, and an impressive 6.8L diesel to power through the toughest conditions. And the operator experience has been configured with comfort and convenience in mind, including modern amenities, intuitive controls, and streamlined service routines. Flexible grade-management solutions and optional Advanced Vision and Object Detection Systems help top off the highlights.

230 P-TIER EXCAVATOR

FEATURES

Safety on the jobsite

Optional Advanced Vision System with four cameras feeding into a 12.8-inch G5^{Plus} touchscreen display provides an expansive surround view around the machine on the jobsite. Optional Advanced Object Detection identifies objects near the machine and provides audible and visual alerts for increased operator awareness. Machine-damage avoidance helps protect the excavator from obstructions and machine movements as it works.

Ready to run

With its 6.8L John Deere PowerTech™ PVS engine, the 230 P-Tier brings more raw horsepower to any project than our 210 P-Tier. Redesigned electrohydraulic control system and larger front piping provide powerfully smooth multifunction control and fast cycle times to boost machine responsiveness.

Material mover

Move mountains of material smoothly, effortlessly, and efficiently with our factory-installed buckets. Engine horsepower and hydraulic capability deliver quick cycle times to master a variety of underground utility, site development, roadbuilding, and quarry applications.

Balanced and rugged

Reinforced undercarriage with nine bottom rollers is designed to balance weight across the track system, reducing stress and wear under heavy loads or on uneven terrain. Nearly every structural component has been scrutinized, down to the type of steel being used, to design an undercarriage built to withstand the toughest operating conditions. Hardened joints and reinforced booms and arms help the 230 P-Tier easily handle deep trenching, heavy lifting, and aggressive digging.

Rely on good grades

John Deere offers an upgradeable range of grade-management tech. Our 2D Grade Control system allows you to easily set and quickly switch between multiple surfaces and elevations as you work. Opt for fully integrated SmartGrade™ for 3D control including overdig protection and in-cab real-time distance to target. SmartGrade is also available for use with existing Leica and Topcon systems. All grade-management solutions are factory ready and backed by your Deere dealer, including service, warranty, and financing.



OPERATOR-FOCUSED CAB
FEATURES SPACE, STORAGE & ADJUSTABLE
COMFORT FOR LONG WORKDAYS

What matters to the operator

Completely redesigned and operator-focused cab is spacious, with plenty of legroom and storage. Joysticks with programmable buttons can be customized by the operator. Machine controls are conveniently located next to the right joystick in the CommandARM™. Joysticks, armrests, and standard seat are independently adjustable without tools. Single G5 or G5^{Plus} touchscreen display is easy to navigate, for quick access to frequently used functions like Bluetooth™ audio and phone connectivity. Automatic temperature control lets the operator dial-in a precise setting for ultimate comfort.

Support is always available

Remote Display Access (RDA) gives machine owners and support teams the ability to view or request control of the machine's G5 or G5^{Plus} display. Support teams can view the display in near-real time from off-site, for faster troubleshooting and operator guidance as well as optimal uptime. Accessed within the John Deere Operations Center™, RDA enables exceptional support to improve machine uptime, helping keep projects and productivity on track.

Connected machines

John Deere construction equipment comes with in-base connectivity — free from subscriptions or annual renewals. Analyze critical machine data, track utilization, review diagnostic alerts, and more from **the John Deere Operations Center**. The Operations Center also enables John Deere Connected Support™, which uses data from thousands of connected machines to proactively address issues before they arise. With your approval, your dealer or preferred service provider can also remotely monitor machine health, diagnose problems, and even update machine software without a trip to the jobsite.*

*Availability varies by region and product. Options not available in every country.



**RDA HELPS SUPPORT
MACHINE UPTIME**



230 P-TIER EXCAVATOR



Less is more

The new 230 P-Tier can move up to 75 more cubic yards per hour than the previous John Deere mid-size model while using up to 10-percent less fuel.

Work your connections

Brand-new John Deere hydraulic variable pin-grabber coupler was integrally designed with the excavator to maximize tool forces and compatibility with a wide range of buckets and attachments. Integrated coupler controls enable quick changes of buckets and other work tools to expand machine capability. Secure locking system provides confidence that attachments are properly engaged before operation.

Shed more light on it

Standard LED worklights on the boom and toolbox are bright and durable. Upgrade to optional premium LED worklights at the front and rear of the cab for extra illumination when the shift extends beyond daylight hours.

Simplify the service routine

Large fuel tank and hydraulic service interval extended to 6,000 hours with our new Hy-Gard™ FLEX hydraulic oil along with regular oil sampling help boost uptime. Ground-level engine and hydraulic oil checks plus easy-to-access daily grease points help streamline service. Upgrade to the optional remote grease bank to make machine maintenance even easier.



230 P-TIER EXCAVATOR SPECIFICATIONS

Engine		230 P-TIER	
Manufacturer and Model	John Deere PowerTech™ PVS 6.8L		
Type	Engine Control Unit (ECU) controlled, 4 valves per cylinder, High-Pressure Common-Rail (HPCR) fuel system, variable-geometry turbocharger, external cooled Exhaust Gas Recirculation (EGR), charge air cooled, in-cylinder fuel-dosing Diesel Oxidation Catalyst (DOC) + Diesel Particulate Filter (DPF) + Selective Catalytic Reduction (SCR) exhaust aftertreatment		
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		
Rated Power			
Gross (SAE J1995 and ISO3046)	128 kW (172 hp) at 1,800 rpm		
Net (ISO9249)	127 kW (170 hp) at 1,800 rpm		
Number of Cylinders	6		
Piston Displacement	6.8L		
Off-Level Capability	70% (35 deg.)		
Cooling System			
Fan Drive			
Standard	Engine-driven, variable-speed fan		
Optional	Hydraulic on-demand reversing fan		
Hydraulic System			
Hydraulic system engineered for precise control, high productivity, and fuel efficiency; advanced Deere electrohydraulic (EH) valves, pumps, and proprietary software deliver optimized performance across operating conditions			
Main Pumps	Tandem variable-displacement, EH-controlled, axial-piston pumps		
Maximum Flow	2 x 224 L/m (59 gpm)		
Pilot Pump			
Maximum Flow	18 L/m (4.8 gpm)		
Low-Flow Auxiliary Pump			
Maximum Flow	31 L/m (8.2 gpm)		
System Operating Pressure			
Circuits			
Implement	34.3 MPa (4,975 psi)		
Travel	34.3 MPa (4,975 psi)		
Swing	30.0 MPa (4,351 psi)		
Pilot	3.9 MPa (566 psi)		
Pressure Boost	37.3 MPa (5,410 psi)		
Auxiliary Circuit	High Flow	Merge Flow	Low Flow
Operating Flow	30–224 L/m (7.9–59.2 gpm)	30–448 L/m (7.9–118.3 gpm)	31 L/m (8.2 gpm)
Operating Pressure	2-way electronically selectable 60–35 MPa (8,702–5,706 psi); 1-way integrated low-pressure return		Manually adjustable 21–25 MPa (3,046–3,626 psi)
Controls	EH controls with hydraulic-enable lever		
Hydraulic Fan System (optional)			
Maximum Flow	36.8 L/m (9.7 gpm)		
System Operating Pressure	21.0 MPa (3,046 psi)		
Travel System			
Travel Motor	2-speed axial piston		
Maximum Drawbar Pull	211 kN (47,435 lbf)		
Travel Speeds			
High	5.8 km/h (3.6 mph)		
Low	3.4 km/h (2.1 mph)		

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230 P-TIER EXCAVATOR SPECIFICATIONS

230

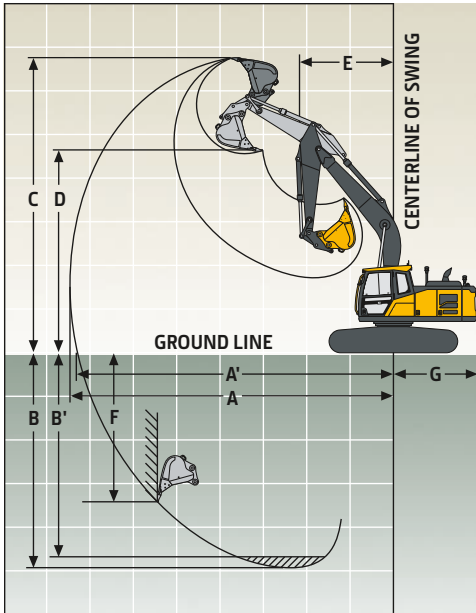
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Cylinders		230 P-TIER	
	Bore	Rod Diameter	Stroke
Boom (2)	125 mm (4.9 in.)	85 mm (3.3 in.)	1314 mm (51.7 in.)
Arm (1)	140 mm (5.5 in.)	100 mm (3.9 in.)	1510 mm (59.4 in.)
Bucket (1)	120 mm (4.7 in.)	80 mm (3.1 in.)	1060 mm (41.7 in.)
Swing System			
Swing			
Motor	Axial-piston motor with spring-applied, hydraulic-release brake		
Speed	11.7 rpm		
Torque	75.1 kNm (55,391 ft.-lb.)		
Undercarriage			
Number of Shoes (each side)	49		
Shoe Width			
Standard	800-mm (32 in.) triple grouser (bolt-on pad ready)		
Optional	700-mm (28 in.) triple grouser		
Number of Rollers (each side)			
Carrier	2		
Track	9		
Number of Standard Track Guides (each side)	2		
Weights and Ground Pressure			
With full fuel tank, 79-kg (175 lb.) operator, 5.7-m (18 ft. 8 in.) boom, and 2.9-m (9 ft. 6 in.) arm			
Triple Grouser Shoe Width	Operating Weight	Ground Pressure	Counterweight
700 mm (28 in.)			
Without Bucket	23 950 kg (52,800 lb.)	42.7 kPa (6.2 psi)	5400 kg (11,900 lb.)
With 1.0-m ³ (1.3 cu. yd.) Bucket	24 900 kg (54,900 lb.)	44.4 kPa (6.4 psi)	5400 kg (11,900 lb.)
800 mm (32 in.)			
Without Bucket	24 250 kg (53,460 lb.)	37.9 kPa (5.5 psi)	5400 kg (11,900 lb.)
With 1.0-m ³ (1.3 cu. yd.) Bucket	25 200 kg (55,560 lb.)	39.3 kPa (5.7 psi)	5400 kg (11,900 lb.)
ROPS Certification Weight	28 000 kg (61,730 lb.)		
Gross Machine Mass			
Of Heaviest Configuration	26 729 kg (58,930 lb.)		
Of Lightest Configuration	23 802 kg (52,470 lb.)		
Component Weight – Boom, Arm, Track, and Counterweight			
Undercarriage With 800-mm (32 in.)	7930 kg (17,480 lb.)		
Track			
Boom, 5.7-m (18 ft. 8 in.) With Arm	1950 kg (4,300 lb.)		
Cylinder			
Arm, 2.9-m (9 ft. 6 in.) With Bucket	1070 kg (2,360 lb.)		
Cylinder and Linkage			
Boom Cylinder Total Weight	395 kg (870 lb.)		
Counterweight	5400 kg (11,900 lb.)		

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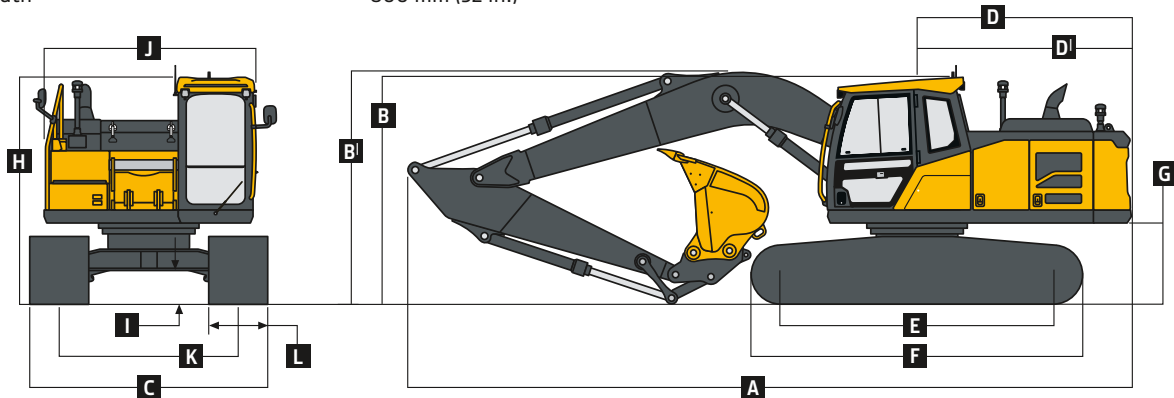
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Electrical System		230 P-TIER
Batteries		24V (2 x 12 volt)
Battery Capacity		950 CCA
Alternator Rating		145 amp
Lights		
Standard LED		1 light on boom and 1 light in toolbox
Optional Premium LED Work-Light Package		4 lights on cab, 2 lights on boom, and 1 light in toolbox
Serviceability		
Fluid Refill Capacities		
Fuel Tank		390.0 L (103.0 gal.)
Engine Coolant (standard fill)		33.0 L (8.7 gal.)
Engine Oil (standard fill)		22.0 L (5.8 gal.)
Diesel Exhaust Fluid (DEF) Tank		18.0 L (4.8 gal.)
Swing Mechanism (standard fill)		5.4 L (5.7 qt.)
Travel Final Drive (each side, standard fill)		5.0 L (5.3 qt.)
Hydraulic System (standard fill)		280.0 L (74.0 gal.)
Hydraulic Tank (standard fill)		127.0 L (33.5 gal.)
Working Ranges (ISO 7135) [see line art at right]		
With 5.68-m (18 ft. 8 in.) Boom		2.9-m (9 ft. 6 in.) Arm
A	Maximum Reach	9860 mm (32 ft. 4 in.)
A'	Maximum Reach at Ground Level	9680 mm (31 ft. 9 in.)
B	Maximum Digging Depth	6650 mm (21 ft. 10 in.)
B'	Maximum Depth Cut for 2.44-m (8 ft. 0 in.) Level Bottom	6460 mm (21 ft. 2 in.)
C	Maximum Cutting Height	9470 mm (31 ft. 1 in.)
D	Maximum Loading Height	6890 mm (22 ft. 7 in.)
E	Minimum Slew Radius	3620 mm (11 ft. 10 in.)
F	Maximum Vertical Wall Digging Depth	4880 mm (16 ft. 0 in.)
G	Tail Swing Radius	2880 mm (9 ft. 5 in.)



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Tool Forces		230 P-TIER
With 5.68-m (18 ft. 8 in.) Boom		2.9-m (9 ft. 6 in.) Arm
Bucket Tool Force (ISO)		163 kN (36,644 lbf)
Arm Tool Force (ISO)		118 kN (26,528 lbf)
Overall Dimensions <i>[see line art below]</i>		
With 5.68-m (18 ft. 8 in.) Boom		2.9-m (9 ft. 6 in.) Arm
A Overall Length	9600 mm (31 ft. 6 in.)	
B Overall Height	2980 mm (9 ft. 9 in.)	
B^I Overall Height With Boom Plumbing	3070 mm (10 ft. 0 in.)	
C Overall Width (over tracks)	3180 mm (10 ft. 5 in.)	
D Tail Length	2850 mm (9 ft. 4 in.)	
D^I Tail Swing Radius	2880 mm (9 ft. 5 in.)	
E Tumbler Distance	3650 mm (12 ft. 0 in.)	
F Overall Length of Crawler	4440 mm (14 ft. 7 in.)	
G Counterweight Clearance	1050 mm (3 ft. 5 in.)	
H Overall Height (to top of cab)	3029 mm (9 ft. 11 in.)	
I Ground Clearance	470 mm (19 in.)	
J Overall Width of Upperstructure	2780 mm (9 ft. 1 in.)	
K Track Gauge	2380 mm (7 ft. 10 in.)	
L Shoe Width	800 mm (32 in.)	



230 P-TIER

Lift Capacities Without Bucket

230 P-TIER

Boldface type indicates hydraulically limited capacity; lightface type indicates stability-limited capacities, in kg (lb.). Ratings at arm tip; standard counterweight; standard gauge; and situated on firm, 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.

LOAD POINT HEIGHT	HORIZONTAL DISTANCE FROM CENTERLINE OF ROTATION											
	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.)		Maximum	
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
<i>With 5.68-m (18 ft. 8 in.) boom, 2.9-m (9 ft. 6 in.) arm, 700-mm (28 in.) triple-grouser track shoes, and 5400-kg (11,900 lb.) counterweight</i>												
7.5 m (25 ft.)							5270 (9,870)	5270 (9,870)			4360 (9,700)	4360 (9,700)
6.0 m (20 ft.)							5980 (13,120)	5980 (13,120)			4060 (8,980)	4060 (8,980)
4.5 m (15 ft.)							6580 (14,330)	6100 (13,160)	6120 (12,840)	4380 (9,420)	4000 (8,820)	3950 (8,750)
3.0 m (10 ft.)					9640 (20,790)	8860 (19,310)	7520 (16,320)	5910 (12,760)	6180 (13,310)	4310 (9,280)	4100 (9,030)	3670 (8,100)
1.5 m (5 ft.)					11 500 (24,840)	8480 (18,300)	8460 (18,300)	5720 (12,360)	6140 (13,230)	4220 (9,110)	4370 (9,620)	3590 (7,910)
Ground Line			6790 (15,600)	6790 (15,600)	12 410 (26,890)	8350 (18,000)	8470 (18,250)	5620 (12,130)	6140 (13,240)	4170 (9,010)	4860 (10,720)	3700 (8,150)
-1.5 m (-5 ft.)	7370 (16,480)	7370 (16,480)	11 790 (26,800)	11 790 (26,800)	12 350 (26,780)	8430 (18,170)	8580 (18,480)	5620 (12,140)	6220 (13,430)	4200 (9,080)	5750 (12,730)	4050 (8,950)
-3.0 m (-10 ft.)	12 570 (28,230)	12 570 (28,230)	15 880 (34,440)	15 880 (34,440)	11 350 (24,550)	8680 (18,700)	8440 (18,160)	5750 (12,430)			6980 (15,400)	4840 (10,760)
-4.5 m (-15 ft.)			12 250 (26,200)	12 250 (26,200)	8890 (18,870)	8890 (18,870)					6890 (15,140)	6890 (15,140)
-6.0 m (-20 ft.)											6500 (14,320)	6500 (14,320)
<i>With 5.68-m (18 ft. 8 in.) boom, 2.9-m (9 ft. 6 in.) arm, 800-mm (32 in.) triple-grouser track shoes, and 5400-kg (11,900 lb.) counterweight</i>												
7.5 m (25 ft.)							5270 (9,870)	5270 (9,870)			4360 (9,700)	4360 (9,700)
6.0 m (20 ft.)							5980 (13,120)	5980 (13,120)			4060 (8,980)	4060 (8,980)
4.5 m (15 ft.)							6580 (14,330)	6160 (13,280)	6120 (12,840)	4420 (9,510)	4000 (8,820)	3990 (8,820)
3.0 m (10 ft.)					9640 (20,790)	8940 (19,310)	7520 (16,320)	5970 (12,880)	6250 (13,460)	4350 (9,370)	4100 (9,030)	3710 (8,180)
1.5 m (5 ft.)					11 500 (24,840)	8560 (18,480)	8460 (18,350)	5780 (12,480)	6210 (13,380)	4270 (9,200)	4370 (9,620)	3630 (8,000)
Ground Line			6790 (15,600)	6790 (15,600)	12 410 (26,890)	8430 (18,180)	8570 (18,460)	5680 (12,250)	6210 (13,390)	4220 (9,100)	4860 (10,720)	3740 (8,240)
-1.5 m (-5 ft.)	7370 (16,480)	7370 (16,480)	11 790 (26,800)	11 790 (26,800)	12 350 (26,780)	8520 (18,350)	8680 (18,690)	5680 (12,260)	6290 (13,590)	4240 (9,170)	5750 (12,730)	4090 (9,040)
-3.0 m (-10 ft.)	12 570 (28,230)	12 570 (28,230)	15 880 (34,440)	15 880 (34,440)	11 350 (24,550)	8760 (18,890)	8440 (18,160)	5810 (12,560)			6980 (15,400)	4890 (10,870)
-4.5 m (-15 ft.)			12 250 (26,200)	12 250 (26,200)	8890 (18,870)	8890 (18,870)					6890 (15,140)	6890 (15,140)
-6.0 m (-20 ft.)											6500 (14,320)	6500 (14,320)

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Buckets/Bucket Selection Guide

230 P-TIER

	Cutting-Edge Width		Volume		Weight*		Bucket Tip Radius		Number of Teeth	5400-kg (11,900 lb.) Counterweight / 5.68-m (18 ft. 8 in.) Boom / 2.9-m (9 ft. 6 in.) Arm / Track Shoes	
	mm	in.	m ³	cu. yd.	kg	lb.	mm	in.		700-mm (28 in.) Width	800-mm (32 in.) Width
With Pin-On Bucket											
Heavy Duty (HD)	610	24	0.42	0.55	680	1,500	1420	56	3		
	760	30	0.57	0.74	750	1,650	1420	56	4		
	910	36	0.72	0.94	840	1,850	1420	56	5		
	1070	42	0.87	1.14	905	1,995	1420	56	5		
	1220	48	1.02	1.34	990	2,180	1420	56	5		
With John Deere Variable Pin-Grabber Coupler											
Heavy Duty (HD)	610	24	0.42	0.55	680	1,500	1420	56	3		
	760	30	0.57	0.74	750	1,650	1420	56	4		
	910	36	0.72	0.94	840	1,850	1420	56	5		
	1070	42	0.87	1.14	905	1,995	1420	56	5		
	1220	48	1.02	1.34	990	2,180	1420	56	6		

* Includes standard teeth and pins.

MAXIMUM MATERIAL DENSITY

Key / Legend:

 2100 kg/m ³ (3,500 lb./cu. yd.)	 1700 kg/m ³ (2,900 lb./cu. yd.)	 1200 kg/m ³ (2,000 lb./cu. yd.)	 Not Recommended
 1800 kg/m ³ (3,000 lb./cu. yd.)	 1500 kg/m ³ (2,500 lb./cu. yd.)	 900 kg/m ³ (1,500 lb./cu. yd.)	

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 SAFETY
ME230PCU (26-04)



JOHN DEERE