

Excavator









Get into the swing

Reduced-tail-swing configuration enhances machine flexibility, enabling the 85 P-Tier to maneuver nimbly and work efficiently on tight and congested jobsites. Plus this go-to taskmaster transports easily, making it ideal for "dig-and-go" projects.

In control and comfortable

Ergonomically correct short-throw pilot joysticks enable smooth, precise fingertip control. Handy new swing-boom functionality in the joystick eliminates a hard-to-reach floor pedal and clears space to move your legs.

At home in the cab

All-new operator station that's more spacious than previous models features a completely new adjustable and heated airsuspension seat with armrests, comfortable air-conditioning system, and ample entryway and legroom. Wide expanse of front and side glass, narrow front cab posts, large tinted overhead window, and numerous mirrors enable outstanding visibility. Isolated cab mounts help reduce noise and vibration.

Stay connected

New 8-inch multi-language LCD monitor equipped with Bluetooth® connectivity to phone calls and music provides intuitive access to a wealth of information and functions. Just turn and tap the rotary dial to select work mode, access operating info, check service intervals, source diagnostic codes, adjust cab temperature, and tune the radio. Handy USB port and cellphone holder make it easy to stay in touch.

Bring your work into focus

Standard LED lighting illuminates dusty and before-daylight or after-dark jobsites. Integrated into the all-new, high-resolution main monitor for optimal image quality, the standard right rear left camera system with additional LED surround lighting work together to supplement 270-degree visibility of the area around the machine, even in low-light conditions.

Modes of operation

Engine performance and hydraulic flow are optimally balanced for predictable operation. Two productivity modes allow you to choose the digging style that fits the job: **Power** delivers a balance of speed and fuel economy for normal operation, while **Economy** reduces engine speed and helps save fuel.

Bank on these blades

Standard blade is ideal for cleanup and backfilling. It provides extra lift capacity and stability when running hydraulic hammers and other heavy-duty attachments. Optional new angle blade with float redefines earthmoving and grading.

Rugged resistance

Large idlers, rollers, and strutted links enable the undercarriage to withstand and command. Thick-plate single-sheet mainframe, box-section track frames, double-seal swing bearing, and new boom-cylinder guard deliver rock-solid durability. All structures and components are built to resist stress.

It's all right here

Large hinged doors provide easy wide-open access to service items including cooler and condenser cleanout. Remote oil-filter and filter-bank access, remote swing-bearing grease bank, generous fuel tank, and 500- and 5,000-hour engine and hydraulic oil-service intervals minimize downtime for routine maintenance.

Where the rubber meets the road

Optional rubber track pads or heavy-duty rubber belts let the 85 P-Tier set up and work on paved surfaces and even cross curbs without doing damage.









85 P-TIER EXCAVATOR SPECIFICATIONS



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Manufacturer and Model Varnuar 4 TM V98G CT-WHEND Varnuar 4 TM V98G	Engine	85 P-TIER				
Net Power ISO 9249	Manufacturer and Model	Yanmar 4TNV98CT-WHBW				
Spisalacement 3.3 L (202 cu. In.)	Non-Road Emission Standard	EPA Final Tier 4/EU Stage I	V			
Displacement Aspiration Turbocharque Off-Level Cagacity O% (35 deg.)	Net Power (ISO 9249)	50.4 kW (67.6 hp) at 2,000	rpm			
Aspination	Cylinders	4	·			
Aspiration Turbocharger 70% [35 deg.]	Displacement	3.3 L (202 cu. in.)				
Off-level Capacity 70% [35 deg.] Cacing Variable-speed fart, viscous dutch Powertrain Caped propel with automatic shift Maximum Travel Speed Low 3.1 km/h (1.9 mph) High 5.0 km/h (3.0 mph) Drawbar Poll 6.00 kg/l (3.74 bb.) Hydraulic Open center. Joad sensing Main Pumps 3 variable-displacement axial-piston pumps Maximum Pump Plow 1 year Maximum Brum Plow 2 x 72 + 56 L/m (2 x 19 + 15 gpm) Maximum Brum Plow 1 year Maximum Brum Plow 2 x 72 + 56 L/m (2 x 19 x 19 s 5 gpm) System Operating Pressure Implement Circuits Trave Circuits Maximum Brum Plow		Turbocharger				
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Maximum Reach

Maximum Digging Depth

Maximum Dumping Height

C Maximum Cutting Height

E Minimum Swing RadiusF Tail-Swing Radius

Ground Pressure	85 P-TIER
450-mm (18 in.) Rubber Crawler Pads	39 kPa (5.7 psi)
Triple Semi-Grouser Shoes	55 M C (5.17 p.517
450 mm (18 in.)	39 kPa (5.7 psi)
600 mm (24 in.)	30 kPa (4.4 psi)
Serviceability	50 Nr u (+++ ps))
Refill Capacities	
Fuel Tank	125 L (33 gal.)
Cooling System	13.1 L (3.5 gal.)
Engine Oil With Filter	12.3 L (3.2 gal.)
Hydraulic Tank	52 L (14 gal.)
Hydraulic System	100 L (26 gal.)
Propel Gearbox (each)	1.2 L (1.3 qt.)
Operating Weights	
	Tank, 3.67-m (12 ft. 0 in.) Boom, and 2.12-m (6 ft. 11 in.) Arm
With 450-mm (18 in.) Track (steel track shoes	8820 kg (19,445 lb.)
with vulcanized rubber pads bonded to top	
of shoes)	
With Angle Blade	9168 kg (20,212 lb.)
With 600-mm (24 in.) Steel Track	8994 kg (19,828 lb.)
With 450-mm (18 in.) Rubber Crawler Pads	8858 kg (19,529 lb.)
With Angle Blade	9206 kg (20,296 lb.)
With 450-mm (18 in.) Continuous Rubber Belt	8726 kg (19,238 lb.)
Optional Components	
Undercarriage (with the following)	
450-mm (18 in.) Rubber Crawler Pads	2912 kg (6,420 lb.)
450-mm (18 in.) Continuous Rubber Belt	2884 kg (6,358 lb.)
Triple Semi-Grouser Shoes	
450 mm (18 in.)	2874 kg (6,336 lb.)
600 mm (24 in.)	3048 kg (6,720 lb.)
1-Piece Boom (with arm cylinder)	443 kg (977 lb.)
2.12-m (6 ft. 11 in.) Arm With Bucket Cylinder	282 kg (622 lb.)
and Linkage	
Boom Lift Cylinder	109 kg (196 lb.)
0.49-m³ (0.64 cu. yd.), 1219-mm (48 in.)	330 kg (728 lb.)
Ditching Bucket	
Counterweight, Standard	1408 kg (3,104 lb.)
Operating Dimensions	212 (6 (1) 1)
Arm Length	2.12 m (6 ft. 11 in.)
Arm Digging Force (ISO)	35.3 kN (7,936 lb.)
Bucket Digging Force (ISO)	59.0 kN (13,264 lb.)

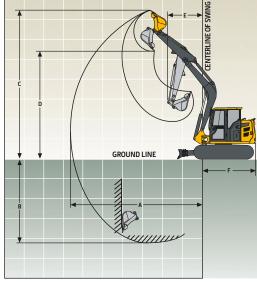
7.56 m (24 ft. 10 in.)

4.53 m (14 ft. 10 in.)

7.19 m (23 ft. 7 in.)

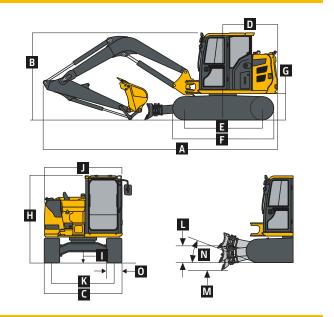
5.12 m (16 ft. 10 in.) 2.68 m (8 ft. 10 in.)

1.59 m (5 ft. 3 in.)



85 P-TIER

IV	lachine Dimensions	85 P-TIER
Α	rm Length	2.12 m (6 ft. 11 in.)
Α	Overall Length	6.79 m (22 ft. 3 in.)
В	Overall Height in Transport Position	2.52 m (8 ft. 3 in.)
C	Undercarriage Width	
	With 450-mm (18 in.) Track	2.20 m (7 ft. 3 in.)
	With 600-mm (24 in.) Steel Track	2.47 m (8 ft. 1 in.)
D	Rear-End Length/Swing Radius	1.59 m (5 ft. 3 in.)
Ε	Distance Between Idler/Sprocket Centerline	2.30 m (7 ft. 6 in.)
F	Undercarriage Length	2.90 m (9 ft. 6 in.)
G	Counterweight Clearance	0.72 m (28 in.)
Н	Cab Height	2.52 m (8 ft. 3 in.)
1	Ground Clearance	360 mm (14 in.)
J	Upperstructure Width	2.26 m (7 ft. 5 in.)
K	Gauge Width	1.75 m (5 ft. 9 in.)
L	Blade Lift Height	450 mm (18 in.)
В	lade Height	472 mm (19 in.)
В	lade Width	
	With 450-mm (18 in.) Track	2200 mm (7 ft. 3 in.)
	With 600-mm (24 in.) Steel Track	2200 mm (7 ft. 3 in.)
M	Blade Cut Below Grade	410 mm (16 in.)
Ν	Blade Lift Angle	26 deg.
0	Track Width	
	With 450-mm (18 in.) Track	0.45 m (18 in.)
	With 600-mm (24 in.) Steel Track	0.60 m (24 in.)



Lift Capacities

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

	HORIZONTAL DISTANCE FROM CENTERLINE OF ROTATION									
	1.5 m (5 ft.) 3.0 m (10 ft.) 4.5 m (15 f						5 ft.) 6.0 m (20 ft.)			
LOAD POINT HEIGHT	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side		
With 3.67-m (12 ft. 0 in.) boom, 2.12-m (6 ft. 11 in.) arm, and 450-mm (18 in.) steel track, with blade on ground, without bucket										
4.5 m (15 ft.)					1900	1703				
					(4,188)	(3,754)				
3.0 m (10 ft.)					2200	1642	1974	1037		
15 (55.)				2607	(4,849)	(3,621)	(4,352)	(2,287)		
1.5 m (5 ft.)			4493	2687	2806	1525	2125	1000		
Ground Line			(9,906) 3309	(5,924)	(6,187)	(3,362)	(4,684) 2210	(2,205)		
Ground Line				2505 (F. 533)	3207	1430		964		
–1.5 m (–5 ft.)	3119	3119	(7,296) 5111	(5,522) 2505	(7,071) 3047	(3,152) 1402	(4,872)	(2,125)		
-1.5 111 (-5 11.)	(6,875)	(6,875)	(11,267)	(5,515)	(6,717)	(3,090)				
–3.0 m (–10 ft.)	(0,073)	(0,075)	3253	2587	(0,717)	(5,090)				
-5.0 III (-10 It.)			(7.171)	(5,704)						
With 3.67-m (12 ft. 0 in.) boo	om. 2.12-m (6 ft	11 in.) arm. and 4			awler pad (steel tr	ack shoes with vii	lcanized rubber na	ds bonded to		
top of shoes), with blade on					and pad steer the		pu			
4.5 m (15 ft.)	<i>J</i> ,				1901	1710				
					(4,190)	(3,769)				
3.0 m (10 ft.)					2208	1647	1977	1042		
					(4,868)	(3,630)	(4,358)	(2,297)		
1.5 m (5 ft.)			4224	2688	2825	1528	2130	1004		
			(9,313)	(5,926)	(6,228)	(3,369)	(4,696)	(2,213)		
Ground Line			3359	2515	3212	1435	2208	968		
			(7,405)	(5,545)	(7,081)	(3,164)	(4,868)	(2,134)		
–1.5 m (–5 ft.)	3187	3187	5074	2515	3030	1409				
2.2 (22.5)	(7,027)	(7,027)	(11,186)	(5,545)	(6,680)	(3,107)				
–3.0 m (–10 ft.)			3159	2605						
W: 1. 2. 67 /12. ft . 0 : . 1 /	212 /6.61	77:1	(6,965)	(5,742)	1					
With 3.67-m (12 ft. 0 in.) boo 4.5 m (15 ft.)	oπ, ∠.1∠-m (6 ft.	ii in.) arm, and 6	uu-mm (24 in.) ste	ei track, with bla	de on ground, witi 1900	nout bucket 1736				
4.3 111 (13 11.)					(4,188)	(3,827)				
3.0 m (10 ft.)					2200	1676	1974	1061		
J.O III (10 1 t.)					(4,849)	(3,694)	(4,352)	(2,339)		
1.5 m (5 ft.)			4493	2744	2806	1558	2125	1024		
			(9,906)	(6,049)	(6,187)	(3,435)	(4,684)	(2,257)		
Ground Line			3309	2561	3207	1463	2210	987		
			(7,296)	(5,647)	(7,071)	(3,225)	(4,872)	(2,176)		
–1.5 m (–5 ft.)	3119	3119	5111	2559	3047	1435	. ,	. ,		
		2112								
	(6,875)	(6,875)	(11,267)	(5,641)	(6,717)	(3,163)				
–3.0 m (–10 ft.)				(5,641) 2644 (5,830)		(3,163)				

Lift Capacities (continued) 85 P-TIER

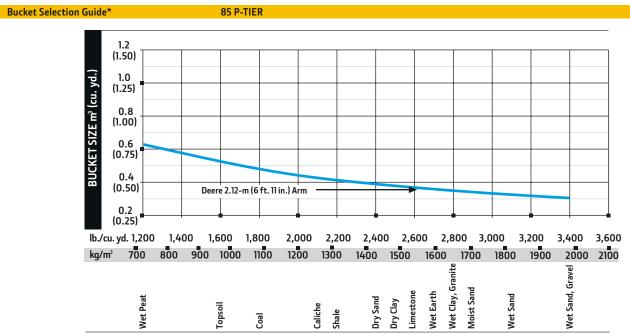
Boldface type indicates hydraulically limited capacities; lightface type indicates stability-limited capacities, in kg (lb.). Ratings are at bucket lift hook, using standard counterweight, situated on firm, level, uniform supporting surface. Total load includes weight of cables, hook, etc. Figures do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

75% of weight needed to	tip machine. All lif	t capacities are b			M CENTERLINE C	F ROTATION			
	1.5 m	(5 ft.)	3.0 m			(15 ft.)	6.0 m (20 ft.)		
LOAD POINT HEIGHT	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	
With 3.67-m (12 ft. 0 in.) b	oom, 2.12-m (6 ft.	11 in.) arm, and 45	0-mm (18 in.) steel	track, with blade	on ground and add	litional counterwe	ight, without buck	et	
4.5 m (15 ft.)					1900	1900			
					(4,188)	(4,188)			
3.0 m (10 ft.)					2200	1863	1974	1193	
					(4,849)	(4,108)	(4,352)	(2,631)	
1.5 m (5 ft.)			4493	3067	2806	1746	2125	1156	
			(9,906)	(6,761)	(6,187)	(3,849)	(4,684)	(2,549)	
Ground Line			3309	2884	3207	1651	2210	1119	
			(7,296)	(6,359)	(7,071)	(3,639)	(4,872)	(2,468)	
–1.5 m (–5 ft.)	3119	3119	5111	2882	3047	1623			
	(6,875)	(6,875)	(11,267)	(6,353)	(6,717)	(3,578)			
-3.0 m (-10 ft.)			3253	2967					
			(7,171)	(6,542)					
With 3.67-m (12 ft. 0 in.) top of shoes), with blade							icanizea rubber pa	ias ponaea to	
4.5 m (15 ft.)					1901	1901			
					(4,190)	(4,190)			
3.0 m (10 ft.)					2216	1867	1977	1198	
					(4,886)	(4,117)	(4,358)	(2,640)	
1.5 m (5 ft.)			4224	3068	2825	1749	2130	1160	
			(9,313)	(6,763)	(6,228)	(3,856)	(4,696)	(2,557)	
Ground Line			3359	2895	3212	1656	2208	1124	
			(7,405)	(6,382)	(7,081)	(3,651)	(4,868)	(2,478)	
–1.5 m (–5 ft.)	3187	3187	5074	2895	3030	1630			
	(7,027)	(7,027)	(11,186)	(6,382)	(6,680)	(3,594)			
−3.0 m (−10 ft.)			3159	2984					
			(6,965)	(6,579)					
With 3.67-m (12 ft. 0 in.) b	oom, 2.12-m (6 ft.	11 in.) arm, and 60	0-mm (24 in.) stee	l track, with blade	on ground and add	ditional counterwe	eight, without buck	ret	
4.5 m (15 ft.)					1900	1900			
					(4,188)	(4,188)			
3.0 m (10 ft.)					2200	1897	1974	1217	
					(4,849)	(4,181)	(4,352)	(2,682)	
1.5 m (5 ft.)			4493	3123	2806	1779	2125	1179	
			(9,906)	(6,886)	(6,187)	(3,922)	(4,684)	(2,600)	
Ground Line			3309	2941	3207	1684	2210	1143	
			(7,296)	(6,484)	(7,071)	(3,712)	(4,872)	(2,520)	
–1.5 m (–5 ft.)	3119	3119	5111	2938	3047	1656			
	(6,875)	(6,875)	(11,267)	(6,478)	(6,717)	(3,650)			
–3.0 m (–10 ft.)			3253	3024					
			(7,171)	(6,667)					

Buckets

A full line of buckets is offered to meet a wide variety of applications. Replaceable cutting edges are available through John Deere Parts. Optional side cutters add 150 mm (6 in.) to bucket widths.

Type Bucket	Bucket	Width	Bucket	Capacity	Bucket	Weight		ket Dig e (ISO)	3	Force (ISO) 5 ft. 11 in.)	Bucket T	ip Radius	Number of Teeth
	mm	in.	m^3	cu. yd.	kg	lb.	kN	lb.	kN	lb.	mm	in.	
Heavy Duty	610	24	0.31	0.40	287	633	58	13,039	35	7,868	1087	42.80	5
	762	30	0.41	0.53	333	735	58	13,039	35	7,868	1087	42.80	6
	914	36	0.50	0.66	380	837	58	13,039	35	7,868	1087	42.80	7
Ditching	1219	48	0.49	0.64	330	727	69	15,512	37	8,318	907	35.69	0



^{*}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.

Additional equipment

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

85 P Engine

- Auto-idle system
- Batteries (2 12 volt)
- Coolant recovery tank
- Single-element air filter
- Electronic engine control
- Enclosed fan guard (conforms to SAE J1308)
- Engine coolant to –37 deg. C (–34 deg. F)
- Fuel filter with water separator
- Full-flow oil filter
- Radiator and oil cooler with dustprotective net
- Glow-plug start aid
- 500-hour engine oil-change interval
- 70% (35 deg.) off-level capacity
- Isolation mounted

Hydraulic System

- Reduced-drift valve for boom down, arm in
- Auxiliary hydraulic valve section
- Spring-applied, hydraulically released automatic swing brake
- 5,000-hour hydraulic oil-change interval
- Auxiliary hydraulics with selector valve
- Control pattern-change valve
- ▲ Hydraulic filter restriction indicator kit

Undercarriage

- Planetary drive with axial piston motors
- Propel motor shields
- Spring-applied, hydraulically released automatic propel brake
- 2-speed propel with automatic shift
- Upper carrier roller (1)
- Sealed and lubricated track chain
- Undercarriage with blade
- ▲ Triple semi-grouser shoes, 600 mm (24 in.)
- ▲ Rubber crawler pads, 450 mm (18 in.)
- A Rubber belt, continuous, 450 mm (18 in.)
- 2-way backfill blade
- ▲ 4-way angle blade with float

85 P Upperstructure

- Counterweight, 1408 kg (3,104 lb.)
- Right- and left-hand mirrors
- Vandal locks with ignition key: Cab door / Engine hood / Fuel cap / Service doors
- Remote-mounted fuel filters

Front Attachments*

- Centralized lubrication system
- Dirt seals on all bucket pins
- Oil-impregnated bushings
- Reinforced resin thrust plates
- Tungsten carbide thermal coating on arm-to-bucket joint
- Arm, 2.12 m (6 ft. 11 in.)
- ▲ Attachment quick-couplers
- Buckets: Ditching / Heavy duty / Heavy-duty high capacity / Side cutters and teeth
- Thumb bracket
- Attachment modes and adjustment in main monitor

Operator's Station

- Meets ISO 12117-2 for ROPS
- Adjustable independent control positions (seat-to-pedals)
- AM/FM radio
- Auto climate control/air conditioner with heater and pressurizer
- Built-in operator's manual storage compartment and manual
- Cell-phone power outlet, 12 volt,60 watt, 5 amp
- Coat hook
- Deluxe cloth, heated, air-suspension seat with adjustable armrests
- Floor mat
- Front windshield wiper with intermittent speeds
- Gauges (illuminated): Engine coolant / Fuel
- Horn, electric
- Hour meter, electric
- Cell-phone holder, USB port, and Bluetooth® calling and audio
- Hydraulic shutoff lever, all controls

B5 P Operator's Station (continued)

- Hydraulic warm-up control
- Interior light
- Large cup holder
- Machine Information Center (MIC)
- Mode selectors (illuminated): Power modes (2) / Travel modes (2 with automatic shift) / Work mode (1)
- Multifunction, color LCD monitor with: Diagnostic capability / Multiple-language capabilities / Maintenance tracking / Clock / System monitoring with alarm features: Auto-idle indicator, engine air cleaner restriction indicator light, engine check, engine coolant temperature indicator light with audible alarm, engine oil pressure indicator light with audible alarm, low-alternator-charge indicator light, low-fuel indicator light, fault-code alert indicator, fuel-rate display, wiper-mode indicator, work-lights-on indicator, and work-mode indicator
- Motion alarm with cancel switch (conforms to SAE J994)
- Auxiliary hydraulic control switches in right console lever
- SAE 2-lever control pattern
- Seat belt, 51 mm (2 in.), retractable
 - Tinted glass
- Transparent tinted overhead window
- Hot/cold beverage compartment
- ▲ Seat belt, 76 mm (3 in.), non-retractable
- Protection screens for cab front, rear, and side

Electrical

- 50-amp alternator
- Blade-type multi-fused circuits
- Positive-terminal battery covers
- Right rear left 270-deg. camera system with LED surround lighting

Lights

 Work lights: LED / 1 mounted on boom / 1 mounted on frame



