





## ENGINE

80

Type .....	Yanmar 4TNE98 – Naturally Aspirated Direct-Injection Diesel
Rated power .....	55 SAE net hp (41 kW) @ 2,200 rpm
Cylinders.....	4
Displacement.....	202 cu. in. (3.3 L)
Maximum net torque .....	166 lb.-ft. (225 Nm) @ 1,300 rpm
Fuel consumption, typical.....	1.5 to 2.5 gal./hr. (5.7 to 9.5 L/h)
Cooling fan.....	suction-type
Electrical system .....	24 volt with 35-amp alternator
Batteries (two 12 volt) .....	reserve capacity: 180 min.

## HYDRAULIC SYSTEM

Main pumps.....	one variable-displacement axial-piston open center
Maximum rated flow .....	2 x 20.6 gpm (2 x 78 L/min.)
Pilot pump.....	one gear
Maximum rated flow .....	6.5 gpm (24.6 L/min.)
Pressure setting .....	540 psi (3727 kPa)
System operating pressure	
Implement circuits.....	3,770 psi (25 988 kPa)
Travel circuits.....	4,550 psi (31 380 kPa)
Swing circuits.....	3,627 psi (25 007 kPa)
Crossover relief valve	
Blade .....	3,129 psi (21 573 kPa)
Dozer blade pump (optional).....	one gear
Oil filtration.....	one 10-micron full-flow return filter with by-pass one pilot oil filter one suction filter

## CYLINDERS

Boom (1)	
Bore .....	4.5 in. (115 mm)
Rod diameter.....	2.6 in. (65 mm)
Stroke .....	34.8 in. (885 mm)
Arm (1)	
Bore .....	3.7 in. (95 mm)
Rod diameter.....	2.4 in. (60 mm)
Stroke .....	35.4 in. (900 mm)
Bucket (1)	
Bore .....	3.3 in. (85 mm)
Rod diameter.....	2.2 in. (55 mm)
Stroke .....	28.7 in. (730 mm)

## SWING MECHANISM

Swing speed .....	0–14 rpm
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## UNDERCARRIAGE

Carrier rollers (per side).....	1
Track rollers (per side) .....	5
Idlers (per side) .....	1
Shoes, triple semi-grouser (per side).....	38
Track guides.....	front
Track adjustment.....	hydraulic
Travel speed	
Low .....	0–2.2 mph (0–3.5 km/h)
High .....	0–2.8 mph (0– 4.5 km/h)
Drawbar pull.....	11,817 lb. (5310 kg)
Off-level operating limit for oil sump.....	59% (30 deg.)

## GROUND PRESSURE DATA

	<i>With 18-in. (450 mm) triple semi-grouser shoes (recommended for rocky terrain and stumps)</i>	<i>With 24-in. (600 mm) triple semi-grouser shoes (recommended for general/soft terrain)</i>
Average ground pressure		
Standard one-piece boom without dozer blade .....	4.33 psi (28.85 kPa)	3.33 psi (22.95 kPa)
Standard one-piece boom with dozer blade.....	4.71 psi (32.97 kPa)	3.61 psi (24.89 kPa)
Offset boom without dozer blade.....	4.67 psi (32.19 kPa)	3.59 psi (24.75 kPa)
Offset boom with dozer blade .....	5.03 psi (34.69 kPa)	3.86 psi (26.61 kPa)



**CAPACITIES**

**80**

Fuel tank .....	35.6 gal. (135 L)
Cooling system .....	9 qt. (8.5 L)
Engine lubrication, including filter.....	12 qt. (10.5 L)
Hydraulic system .....	31.7 gal. (120 L)
Planetary propel drive (each) .....	2.6 qt. (2.5 L)
Swing drive .....	1.9 qt. (1.8 L)

**OPERATING WEIGHTS**

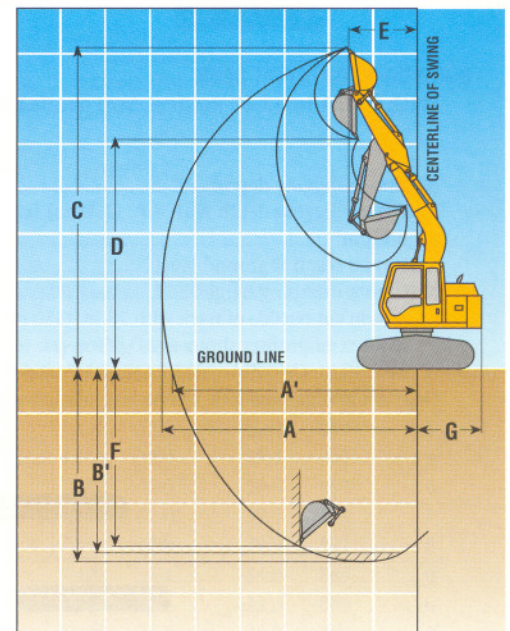
With full fuel tank; 175-lb. (79 kg) operator; blade; offset boom; counterweight for offset boom; 24-in. (600 mm) triple semi-grouser shoes; 5-ft. 4-in. (1.62 m) arm; and 0.36-cu. yd. (0.28 m<sup>3</sup>), 30-in. (760 mm), 522-lb. (237 kg) bucket .....16,600 lb. (7572 kg)

**COMPONENT WEIGHTS**

Undercarriage equipped with triple semi-grouser shoes	
18-in. (450 mm)	
Without blade .....	4,171 lb. (1892 kg)
With blade .....	5,351 lb. (2427 kg)
24-in. (600 mm) (add) .....	
Without blade .....	4,532 lb. (2056 kg)
With blade .....	5,712 lb. (2591 kg)
Upperstructure for standard one-piece boom with full fuel tank (less 1,543-lb. [700 kg] counterweight and front attachments).....	
.....	4,813 lb. (2183 kg)
Upperstructure for offset boom with full fuel tank (less 1,763-lb. [800 kg] counterweight and front attachments).....	
.....	4,813 lb. (2183 kg)
Standard one-piece boom (with boom and arm cylinders) .....	
.....	1,076 lb. (488 kg)
Offset boom (with boom and arm cylinders) .....	
.....	2,196 lb. (996 kg)
Boom cylinder only .....	
.....	196 lb. (89 kg)
Arm with bucket cylinder and linkage	
5 ft. 4 in. (1.62 m).....	540 lb. (245 kg)
6 ft. 11 in. (2.12 m).....	617 lb. (280 kg)
Leveling blade.....	
.....	972 lb. (800 kg)
Counterweight only	
For standard one-piece boom .....	1,543 lb. (700 kg)
For offset boom.....	1,764 lb. (800 kg)
0.36-cu. yd. (0.28 m <sup>3</sup> ), 30-in. (760 mm) bucket.....	
.....	522 lb. (237 kg)

**OPERATING INFORMATION**

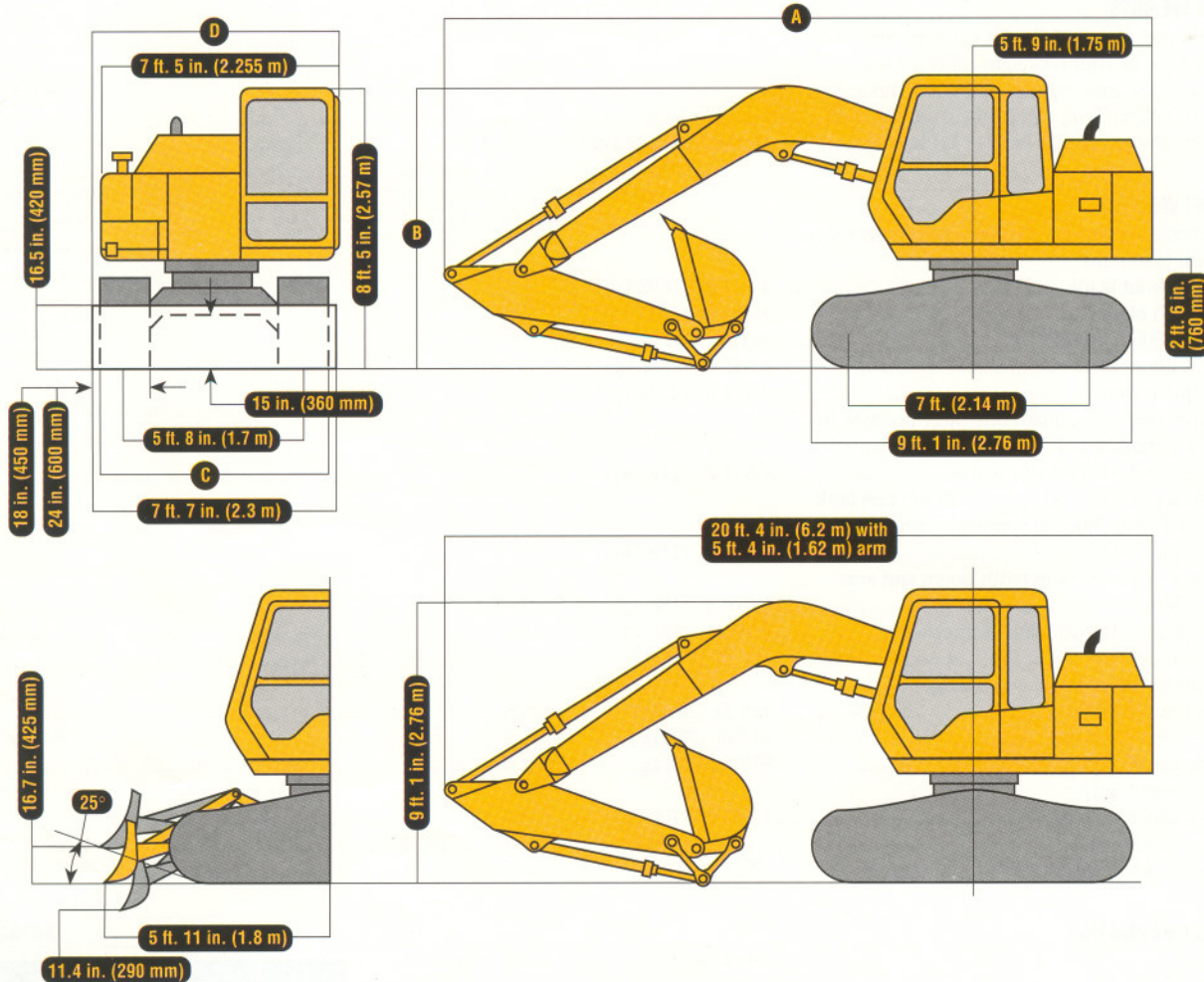
	<i>Arm Length 5 ft. 4 in. (1.62 m)</i>	<i>Arm Length 6 ft. 11 in. (2.12 m)</i>
Arm force with 0.36-cu. yd. (0.28 m <sup>3</sup> ), 30-in. (760 mm), 522-lb. (237 kg) heavy-duty bucket.....	8,500 lb. (37.8 kN)	7,190 lb. (32.0 kN)
Bucket tangential force with 0.36-cu. yd. (0.28 m <sup>3</sup> ), 30-in. (760 mm), 522-lb. (237 kg) heavy-duty bucket .....	11,220 lb. (49.9 kN)	11,220 lb. (49.9 kN)
Lifting capacity over front @ ground level 15-ft. (4.57 m) reach.....	2,948 lb. (1337 kg)	2,935 lb. (1331 kg)
<b>A</b> Maximum reach .....	20 ft. 6 in. (6251 m)	22 ft. 1 in. (6741 m)
<b>A'</b> Maximum reach @ ground level .....	20 ft. (6097 m)	21 ft. 8 in. (6597 m)
<b>B</b> Maximum digging depth .....	13 ft. 5 in. (4091 m)	15 ft. 1 in. (4601 m)
<b>B'</b> Maximum digging depth @ 8-ft. (2.44 m) flat bottom.....	12 ft. 3 in. (3741 m)	14 ft. 2 in. (4309 m)
<b>C</b> Maximum cutting height.....	23 ft. 3 in. (7091 m)	24 ft. 7 in. (7491 m)
<b>D</b> Maximum dumping height .....	16 ft. 10 in. (5129 m)	18 ft. 2 in. (5529 m)
<b>E</b> Minimum front swing radius.....	5 ft. 7 in. (1700 m)	6 ft. 9 in. (2060 m)
<b>F</b> Maximum vertical wall .....	11 ft. 4 in. (3461 m)	13 ft. 2 in. (4001 m)
<b>G</b> Tail swing radius .....	5 ft. 9 in. (1750 m)	5 ft. 9 in. (1750 m)





## DIMENSIONS

- A** With 5 ft. 4 in. (1.62 m) arm .....19 ft. 11 in. (6.08 m)  
With 6 ft. 11 in. (2.12 m) arm .....20 ft. 1 in. (6.12 m)
- B** With 5 ft. 4 in. (1.62 m) arm .....8 ft. 4 in. (2.55 m)  
With 6 ft. 11 in. (2.12 m) arm .....9 ft. 5 in. (2.88 m)
- C** With 18-in. (450 mm) triple semi-grouser shoes.....7 ft. 3 in. (2.20 m)  
With 24-in. (600 mm) triple semi-grouser shoes.....7 ft. 8 in. (2.35 m)
- D** With 18-in. (450 mm) triple semi-grouser shoes  
No blade .....7 ft. 8 in. (2.34 m)  
With blade .....7 ft. 11 in. (2.42 m)  
With 24-in. (600 mm) triple semi-grouser shoes  
No blade .....7 ft. 11 in. (2.42 m)  
With blade .....7 ft. 11 in. (2.42 m)

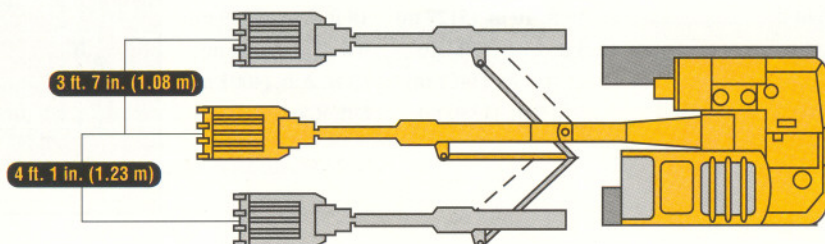


## DIMENSIONS FOR OFFSET BOOM

**With 5 ft. 4 in. (1.62 m) arm (not available with long arm)**

	With No Boom Offset	With Offset To Left 4 ft. 1 in. (1.23 m)	With Offset To Right 3 ft. 7 in. (1.08 m)
Maximum digging depth*	13 ft. 7 in. (4.09 m)	11 ft. 11 in. (3.6 m)	11 ft. 11 in. (3.6 m)
Maximum digging depth with 8-ft. (2.44 m) flat bottom*	12 ft. 2 in. (3.7 m)	10 ft. 10 in. (3.31 m)	10 ft. 10 in. (3.31 m)
Maximum reach @ ground level	20 ft. (6.1 m)	18 ft. 7 in. (5.7 m)	18 ft. 7 in. (5.7 m)
Maximum dumping height	16 ft. 10 in. (5.1 m)	15 ft. 8 in. (4.8 m)	15 ft. 8 in. (4.8 m)
Maximum cut outside of track with 18-in. (450 mm) triple semi-grouser shoes and 0.36-cu. yd. (0.28 m <sup>3</sup> ), 30-in. (760 mm), 522-lb. (237 kg) bucket	9 in. (230 mm)		15.7 in. (400 mm)

\*Maximum digging depth will be less in applications where offset boom interferes with edge of trench.





**LIFT CAPACITIES**

**Boldface italic** type indicates hydraulic-limited capacities; lightface type indicates stability-limited capacities, in lb. (kg). Ratings at bucket lift hook, machine equipped with 18-in. (450 mm) shoes; 0.36-cu. yd. (0.28 m<sup>3</sup>), 30-in. (760 mm), 522-lb. (237 kg) bucket; 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.

Load Point Height	5 ft. (1.52 m)		10 ft. (3.05 m)		15 ft. (4.57 m)		20 ft. (6.10 m)	
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
<i>With standard one-piece boom, 5 ft. 4 in. (1.62 m) arm, and no blade</i>								
15 ft. (4.57 m)			<b>2,672 (1212)</b>	<b>2,672 (1212)</b>				
10 ft. (3.05 m)			<b>3,790 (1719)</b>	<b>3,790 (1719)</b>	3,071 (1393)	2,480 (1125)		
5 ft. (1.52 m)			5,579 (2531)	4,391 (1992)	2,909 (1320)	2,324 (1054)		
Ground Line			5,257 (2385)	4,091 (1856)	2,766 (1255)	2,187 (992)		
-5 ft. (-1.52 m)	<b>8,522 (3866)</b>	<b>8,522 (3866)</b>	5,230 (2372)	4,066 (1844)	2,728 (1237)	2,150 (975)		
-10 ft. (-3.05 m)			<b>5,190 (2354)</b>	4,223 (1916)				
<i>With standard one-piece boom, 6 ft. 11 in. (2.12 m) arm, and no blade</i>								
15 ft. (4.57 m)					<b>2,625 (1191)</b>	<b>2,625 (1191)</b>		
10 ft. (3.05 m)			<b>2,952 (1339)</b>	<b>2,952 (1339)</b>	<b>2,872 (1303)</b>	2,615 (1186)		
5 ft. (1.52 m)			<b>5,376 (2439)</b>	4,660 (2114)	3,060 (1388)	2,437 (1105)	1,863 (845)	1,459 (662)
Ground Line			5,476 (2484)	4,233 (1920)	2,882 (1307)	2,266 (1028)		
-5 ft. (-1.52 m)	<b>6,954 (3154)</b>	<b>6,954 (3154)</b>	5,363 (2433)	4,128 (1872)	2,802 (1271)	2,189 (993)		
-10 ft. (-3.05 m)	<b>10,487 (4757)</b>	<b>10,487 (4757)</b>	5,459 (2476)	4,217 (1913)				
<i>With offset boom, 5 ft. 4 in. (1.62 m) arm, and no blade</i>								
15 ft. (4.57 m)			<b>2,699 (1224)</b>	<b>2,699 (1224)</b>				
10 ft. (3.05 m)			<b>3,492 (1584)</b>	<b>3,492 (1584)</b>	<b>2,944 (1335)</b>	2,412 (1094)		
5 ft. (1.52 m)					2,784 (1263)	2,116 (960)		
Ground Line					2,495 (1132)	1,838 (834)		
-5 ft. (-1.52 m)			4,661 (2114)	3,385 (1535)	2,401 (1089)	1,747 (792)		
-10 ft. (-3.05 m)			<b>4,558 (2067)</b>	3,654 (1657)				
<i>With standard one-piece boom, 5 ft. 4 in. (1.62 m) arm, and blade off ground</i>								
15 ft. (4.57 m)			<b>2,663 (1208)</b>	<b>2,663 (1208)</b>				
10 ft. (3.05 m)			<b>3,780 (1715)</b>	<b>3,780 (1715)</b>	3,059 (1388)	2,748 (1246)		
5 ft. (1.52 m)			5,562 (2523)	4,858 (2204)	2,896 (1314)	2,591 (1175)		
Ground Line			5,240 (2377)	4,558 (2067)	2,753 (1249)	2,454 (1113)		
-5 ft. (-1.52 m)	<b>8,513 (3861)</b>	<b>8,513 (3861)</b>	5,214 (2365)	4,533 (2056)	2,715 (1232)	2,418 (1097)		
-10 ft. (-3.05 m)			<b>5,180 (2350)</b>	4,691 (2128)				
<i>With standard one-piece boom, 6 ft. 11 in. (2.12 m) arm, and blade off ground</i>								
15 ft. (4.57 m)					<b>2,625 (1191)</b>	<b>2,625 (1191)</b>		
10 ft. (3.05 m)			<b>2,952 (1339)</b>	<b>2,952 (1339)</b>	<b>2,872 (1303)</b>	2,819 (1279)		
5 ft. (1.52 m)			<b>5,376 (2439)</b>	5,010 (2273)	2,959 (1342)	2,641 (1198)	1,794 (814)	1,603 (727)
Ground Line			5,289 (2399)	4,583 (2079)	2,781 (1261)	2,470 (1120)		
-5 ft. (-1.52 m)	<b>6,954 (3154)</b>	<b>6,954 (3154)</b>	5,177 (2348)	4,478 (2031)	2,701 (1225)	2,393 (1085)		
-10 ft. (-3.05 m)	<b>10,487 (4757)</b>	<b>10,487 (4757)</b>	5,272 (2391)	4,567 (2072)				
<i>With offset boom, 5 ft. 4 in. (1.62 m) arm, and blade off ground</i>								
15 ft. (4.57 m)			<b>2,699 (1224)</b>	<b>2,699 (1224)</b>				
10 ft. (3.05 m)			<b>3,492 (1584)</b>	<b>3,492 (1584)</b>	<b>2,944 (1335)</b>	2,680 (1216)		
5 ft. (1.52 m)					2,729 (1238)	2,385 (1082)		
Ground Line					2,440 (1107)	2,107 (956)		
-5 ft. (-1.52 m)			4,564 (2070)	3,848 (1745)	2,346 (1064)	2,016 (914)		
-10 ft. (-3.05 m)			<b>4,558 (2067)</b>	4,116 (1867)				

**BUCKETS**

A full line of buckets is offered to meet a wide variety of applications. Tooth selection includes either the John Deere Fanggs® tooth or Tiger, Twin Tiger, Flare, Star, or Long Rock tooth. Replaceable cutting edges are available through John Deere parts.

Type Bucket	Bucket Width		Bucket Capacity*		Weight		Bucket Dig Force		Arm Dig Force 5 ft. 4 in. (1.62 m)		Arm Dig Force 6 ft. 11 in. (2.12 m)		Bucket Tip Radius		No. Teeth
	in.	mm	cu. yd.	m <sup>3</sup>	lb.	kg	lb.	kN	lb.	kN	lb.	kN	in.	mm	
Heavy-Duty	18	460	0.18	0.14	376	171	11,185	49.8	8,500	37.8	7,190	32.0	39.0	991	4
Plate Lip	24	610	0.27	0.21	450	204	11,185	49.8	8,500	37.8	7,190	32.0	39.0	991	5
	30	760	0.36	0.28	462	210	11,185	49.8	8,500	37.8	7,190	32.0	39.0	991	6
	36	915	0.45	0.34	484	220	11,185	49.8	8,500	37.8	7,190	32.0	39.0	991	7
	42	1065	0.65	0.50	509	231	11,185	49.8	8,500	37.8	7,190	32.0	39.0	991	8
	Ditching	42	1065	0.53	0.41	472	214	12,465	55.4	8,845	39.3	7,435	33.1	35.0	889
	48	1220	0.60	0.46	492	223	12,465	55.4	8,845	39.3	7,435	33.1	35.0	889	0
	60	1525	0.75	0.57	564	256	12,465	55.4	8,845	39.3	7,435	33.1	35.0	889	0

\*All capacities are SAE heaped ratings.