



# 410L SPECIFICATIONS

<b>Engine</b>	<b>410L</b>		
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT083 turbocharged		
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		
Displacement	4.5 L (276 cu. in.)		
Net Peak Power (ISO 9249)	84 kW (113 hp) at 2,244 rpm		
Net Peak Torque (ISO 9249)	447 Nm (330 lb.-ft.) at 1,400 rpm		
Net Torque Rise	23%		
Lubrication	Pressure system with spin-on filter and cooler		
Air Cleaner	Dual-stage dry type with safety element and evacuator valve		
<b>Cooling</b>			
Fan Type	Electronically controlled, variable rate, suction type		
Engine Coolant Rating	-40 deg. C (-40 deg. F)		
Engine Oil Cooler	Oil to water		
<b>Powertrain</b>			
<b>Transmission</b>	5-speed, helical-cut gears, full PowerShift™ transmission with hydraulic reverser standard; electric clutch cutoff on loader lever; AutoShift transmission optional		
<b>Torque Converter</b>	Single stage, dual phase with 2.63:1 stall ratio, 280 mm (11 in.)		
Maximum Travel Speeds with Standard Engine, Measured with 21L-24 Rear Tires	<i>Forward</i>	<i>Reverse</i>	
Gear 1	5.7 km/h (3.5 mph)	7.2 km/h (4.5 mph)	
Gear 2	10.5 km/h (6.5 mph)	13.2 km/h (8.2 mph)	
Gear 3	21.4 km/h (13.3 mph)	21.1 km/h (13.1 mph)	
Gear 4	35.9 km/h (22.3 mph)	—	
Gear 5	40.0 km/h (24.9 mph)	—	
<b>Axles</b>			
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		
Axle Ratings	<i>Mechanical-Front-Wheel Drive</i>		
	<i>Non-Powered Front</i>	<i>(MFWD)</i>	<i>Rear</i>
SAE J43	6500 kg (14,330 lb.)	6000 kg (13,228 lb.)	7500 kg (16,535 lb.)
Dynamic	8500 kg (18,739 lb.)	8500 kg (18,739 lb.)	10 000 kg (22,046 lb.)
Static	22 500 kg (49,604 lb.)	23 500 kg (51,809 lb.)	26 000 kg (57,320 lb.)
Ultimate	35 000 kg (77,162 lb.)	37 000 kg (81,571 lb.)	39 500 kg (87,083 lb.)
<b>Differentials</b>			
MFWD Axle	Automatic, limited-slip traction control		
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock		
<b>Steering (ISO 5010)</b>	Hydrostatic power steering and emergency steering		
Axle	<i>Non-Powered Front</i>	<i>MFWD</i>	
Curb-Turning Radius			
With Brakes	3.59 m (11 ft. 9 in.)	3.67 m (12 ft. 0 in.)	
Without Brakes	4.21 m (13 ft. 10 in.)	4.35 m (14 ft. 3 in.)	
Bucket-Clearance Circle			
With Brakes	10.31 m (33 ft. 10 in.)	10.40 m (34 ft. 1 in.)	
Without Brakes	11.22 m (36 ft. 10 in.)	11.41 m (37 ft. 5 in.)	
Steering Wheel Turns (lock to lock, flow amplified)	3.1 to 4.3	2.6 to 3.6	
<b>MFWD Axle</b>	Heavy duty, outboard planetary final drives distribute shock loads over 3 gears		
<b>Rear Axle</b>	Heavy duty, outboard planetary final drives distribute shock loads over 4 gears		
<b>Brakes (ISO 3450)</b>			
Service	Power assisted, hydraulic wet disc, mounted inboard, self-adjusting and self-equalizing		
Parking	Spring applied, hydraulically released, wet, multi-disc, independent of service brakes with electric switch control		

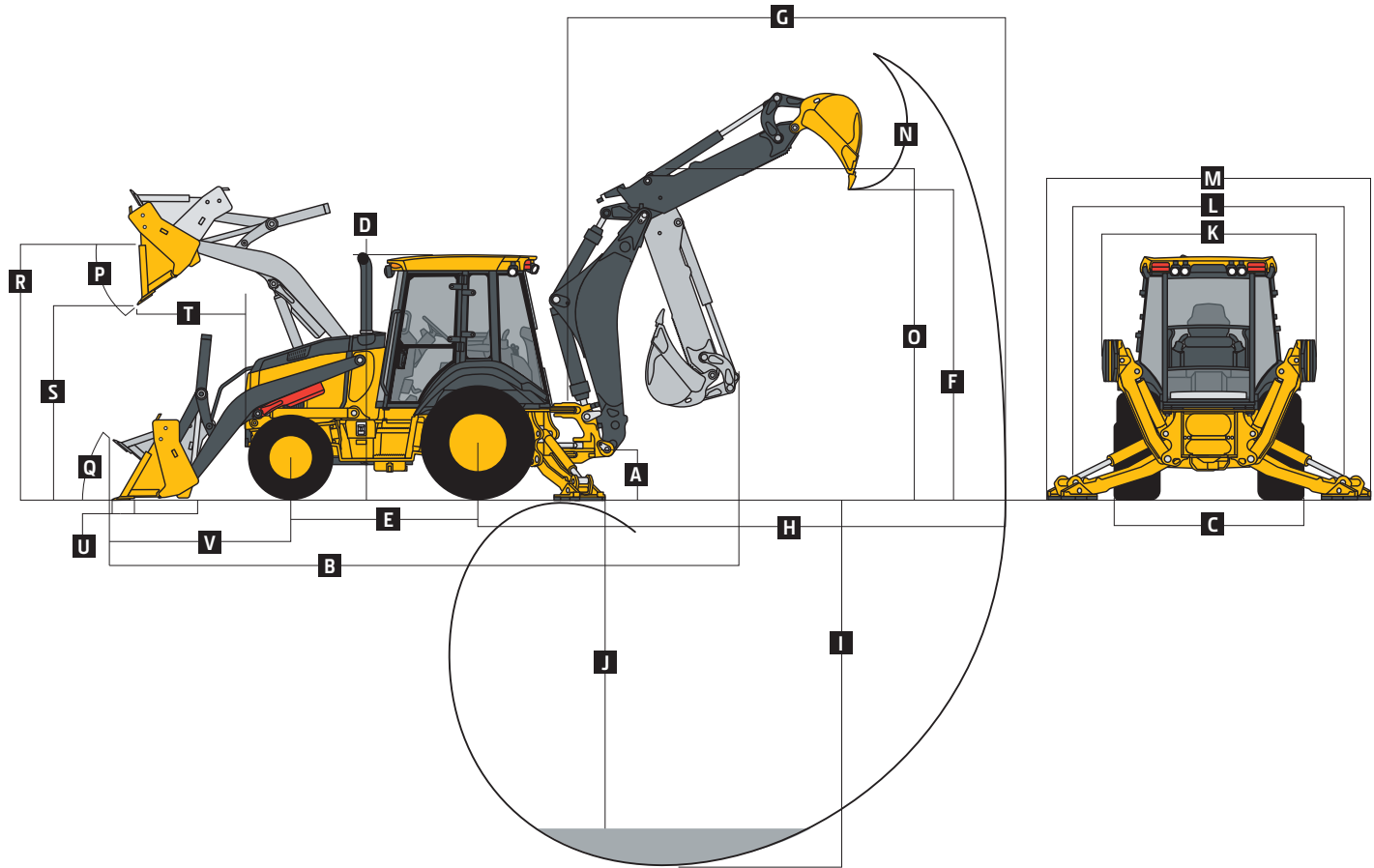
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<b>Hydraulics</b>		<b>410L</b>	
Main Pump	Pressure compensated load sensing (PCLS), axial-piston pump		
Pump Flow at 2,200 rpm, Backhoe and Loader	159 L/m (42 gpm)		
System Relief Pressure, Backhoe and Loader	24 993 kPa (3,625 psi)		
Backhoe (lift mode)	27 579 kPa (4,000 psi)		
<b>Controls</b>			
Backhoe	2-lever mechanical standard; pilot controls with pattern select and auxiliary functions optional; field kits available for additional mechanical control options		
Loader	Single-lever control with electric clutch cutoff, momentary MFWD, transmission quick-shift, and electro-hydraulic (EH) auxiliary loader control optional		
<b>Electrical</b>			
Voltage	12 volt		
Alternator Rating	150 amp with cab; 120 amp with canopy and quarter cab		
Lights	10 halogen: 4 front, 4 rear, and 2 side docking (32,500 candlepower each); turn signals and flashers: 2 front and 2 rear; stop and taillights; and 2 rear reflectors; LED light field kits available with both flood- and spotlights		
<b>Operator Station</b>			
Type (SAE J1040)	Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) and fully enclosed cab		
<b>Tires/Wheels</b>			
	<i>Front</i>	<i>Rear</i>	
Non-Powered Front Axle	12.5/80-18 F3 (12)	21L-24 R-4 (12)	
With MFWD	12.5/80-18 R4 (10)	21L-24 R-4 (12)	
	12.5/80-18 I3 (12)	21L-24 R-4 (12)	
	340/80R18 XMCL	500/70R24 XMCL	
	340/80R18 580	500/70R24 580	
<b>Serviceability</b>			
<b>Refill Capacities</b>			
Cooling System	35 L (37 qt.)		
Rear Axle	18 L (19 qt.)		
Engine Oil (including vertical spin-on filter)	13 L (13.7 qt.)		
Torque Converter and Transmission	15.1 L (16 qt.)		
Fuel Tank (with ground-level fueling)	140.1 L (37 gal.)		
Diesel Exhaust Fluid (DEF) Tank	16.3 L (4.3 gal.)		
Hydraulic System	126.8 L (33.5 gal.)		
Hydraulic Reservoir	45 L (11.9 gal.)		
MFWD Housing			
Axle	6.5 L (6.9 qt.)		
Planetary (each)	0.9 L (1 qt.)		
Hydra™ XR Hydraulic Oil	Optional		
<b>Operating Weights</b>			
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and 340-kg (750 lb.) Counterweight	8068 kg (17,786 lb.)		
Typical with Cab, Extendable Dipperstick, and 567-kg (1,250 lb.) Counterweight	8828 kg (19,463 lb.)		
<b>Optional Components (weight difference between base equipment and option)</b>			
Cab	263 kg (580 lb.)		
MFWD with Tires	110 kg (242 lb.)		
Extendable Dipperstick	271 kg (597 lb.)		
Front Loader Coupler	257 kg (566 lb.)		
Backhoe Bucket Coupler	64 kg (141 lb.)		

# 410L

Overall Dimensions	410L
A Ground Clearance, Minimum	334 mm (13 in.)
B Overall Length, Transport	7.43 m (24 ft. 5 in.)
C Width Over Tires	2.18 m (7 ft. 2 in.)
D Height to Top of ROPS/Cab	2.87 m (9 ft. 5 in.)
E Length from Axle to Axle	
Non-Powered Front Axle	2.16 m (7 ft. 1 in.)
MFWD Axle	2.19 m (7 ft. 2 in.)



## Backhoe Dimensions and Performance

Backhoe specifications are with 610-mm x 0.21-m<sup>3</sup> (24 in. x 7.5 cu. ft.) bucket; dipper lift specs are with a boom angle of 60 deg.

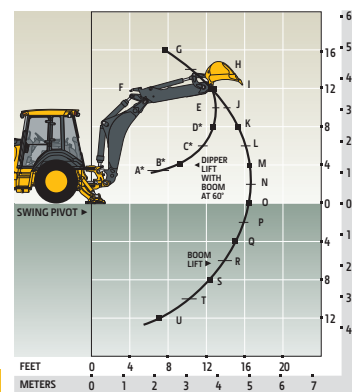
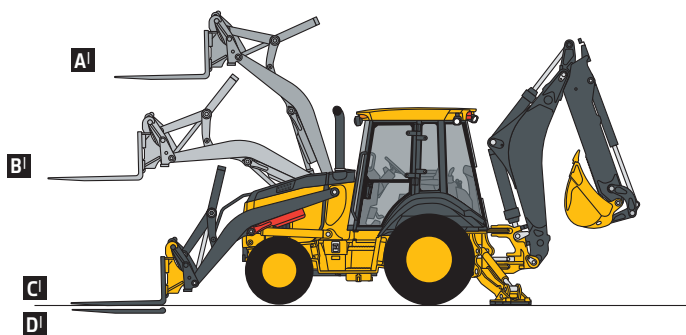
Bucket Range	305–762 mm (12–30 in.)		
Digging Force			
Bucket Cylinder	69.9 kN (15,723 lb.)		
Lift Mode	77.2 kN (17,350 lb.)		
Crowd Cylinder	44.1 kN (9,907 lb.)		
Lift Mode	48.6 kN (10,932 lb.)		
Swing Arc	180 deg.		
Operator Control	2 levers		
	<i>With Standard Backhoe</i>	<i>With Optional Extendable Dipperstick</i>	
		<i>Retracted</i>	<i>Extended</i>
F Loading Height, Truck Loading Position	3.98 m (13 ft. 1 in.)	4.02 m (13 ft. 2 in.)	4.73 m (15 ft. 6 in.)
G Reach from Center of Swing Pivot	6.02 m (19 ft. 9 in.)	6.02 m (19 ft. 9 in.)	7.14 m (23 ft. 5 in.)
H Reach from Center of Rear Axle	7.14 m (23 ft. 5 in.)	7.14 m (23 ft. 5 in.)	8.26 m (27 ft. 1 in.)
I Digging Depth (SAE maximum)	4.83 m (15 ft. 10 in.)	4.83 m (15 ft. 10 in.)	5.99 m (19 ft. 8 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	4.78 m (15 ft. 8 in.)	4.78 m (15 ft. 8 in.)	5.96 m (19 ft. 7 in.)
2440-mm (8 ft.) Flat Bottom	4.47 m (14 ft. 8 in.)	4.47 m (14 ft. 8 in.)	5.73 m (18 ft. 9 in.)
K Stabilizer Width, Transport	2.30 m (7 ft. 7 in.)	2.30 m (7 ft. 7 in.)	2.30 m (7 ft. 7 in.)
L Stabilizer Spread, Operating	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)
M Stabilizer Overall Width, Operating	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)
N Bucket Rotation	190 deg.	190 deg.	190 deg.
O Transport Height	3.93 m (12 ft. 11 in.)	3.93 m (12 ft. 11 in.)	3.93 m (12 ft. 11 in.)

## Loader Dimensions and Performance 410L

<b>P</b> Bucket Dump Angle, Maximum	45 deg.		
<b>Q</b> Rollback Angle at Ground Level	40 deg.		
	<i>Heavy-duty</i>	<i>Heavy-duty</i>	<i>Multipurpose</i>
Bucket Capacity	1.00 m <sup>3</sup> (1.31 cu. yd.)	1.15 m <sup>3</sup> (1.50 cu. yd.)	1.00 m <sup>3</sup> (1.31 cu. yd.)
Width	2346 mm (92 in.)	2394 mm (94 in.)	2346 mm (92 in.)
Weight	521 kg (1,148 lb.)	548 kg (1,208 lb.)	863 kg (1,902 lb.)
Breakout Force	47.3 kN (10,634 lb.)	46.0 kN (10,351 lb.)	43.6 kN (9,813 lb.)
Lift Capacity, Full Height	3243 kg (7,149 lb.)	3134 kg (6,909 lb.)	2761 kg (6,087 lb.)
<b>R</b> Height to Bucket Hinge Pin, Maximum	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)
<b>S</b> Dump Clearance, Bucket at 45 deg.	2.68 m (8 ft. 10 in.)	2.64 m (8 ft. 8 in.)	2.65 m (8 ft. 8 in.)
<b>T</b> Reach at Full Height, Bucket at 45 deg.	750 mm (29.5 in.)	792 mm (31.2 in.)	792 mm (31.2 in.)
<b>U</b> Digging Depth Below Ground, Bucket Level	157 mm (6.2 in.)	157 mm (6.2 in.)	153 mm (6.0 in.)
<b>V</b> Length from Front Axle Centerline to Bucket Cutting Edge	2.04 m (6 ft. 8 in.)	2.10 m (6 ft. 11 in.)	2.09 m (6 ft. 10 in.)

## Lift Capacity with Quick-Coupler Forks

<b>Hydraulic Capacity</b>	<i>1219-mm (48 in.) Tines</i>	<i>1524-mm (60 in.) Tines</i>
<b>A</b> Maximum Height	2031 kg (4,478 lb.)	1880 kg (4,145 lb.)
<b>B</b> Maximum Reach	3177 kg (7,005 lb.)	3002 kg (6,618 lb.)
<b>C</b> At Ground Line	4208 kg (9,278 lb.)	3613 kg (7,966 lb.)
<b>D</b> Below Ground Line	211 mm (8.3 in.)	211 mm (8.3 in.)



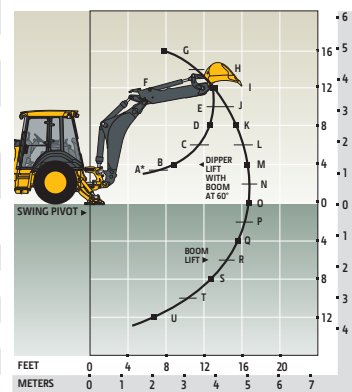
With Standard Dipperstick

## Lift Capacity with Bucket

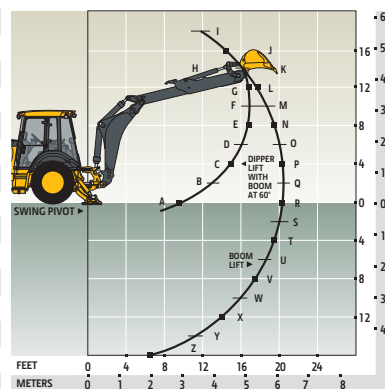
Calculated with 610-mm x 0.21-m<sup>3</sup> (24 in. x 7.5 cu. ft.) bucket; bucket impacts overall lift capacity

With Standard Dipperstick		With 1.21-m (4 ft. 0 in.) Standard Dipperstick, Retracted		With 1.21-m (4 ft. 0 in.) Extendable Dipperstick, Extended	
Standard Lift	Lift Mode	Standard Lift	Lift Mode	Standard Lift	Lift Mode
<b>A</b> 6359 kg (14,020 lb.)*	6359 kg (14,020 lb.)*	6513 kg (14,359 lb.)*	6513 kg (14,359 lb.)*	4181 kg (9,217 lb.)	4554 kg (10,041 lb.)
<b>B</b> 4893 kg (10,788 lb.)*	4893 kg (10,788 lb.)*	4985 kg (10,990 lb.)	4985 kg (10,990 lb.)	2548 kg (5,618 lb.)	2855 kg (6,294 lb.)
<b>C</b> 3627 kg (7,996 lb.)*	3627 kg (7,996 lb.)*	3587 kg (7,908 lb.)	3587 kg (7,908 lb.)	2193 kg (4,836 lb.)	2461 kg (5,426 lb.)
<b>D</b> 3268 kg (7,204 lb.)*	3268 kg (7,204 lb.)*	3200 kg (7,055 lb.)	3200 kg (7,055 lb.)	2010 kg (4,432 lb.)	2258 kg (4,978 lb.)
<b>E</b> 3087 kg (6,805 lb.)	3168 kg (6,984 lb.)*	2979 kg (6,568 lb.)	3093 kg (6,820 lb.)	1879 kg (4,142 lb.)	2112 kg (4,657 lb.)
<b>F</b> 2717 kg (5,990 lb.)	3029 kg (6,678 lb.)	2608 kg (5,750 lb.)	2920 kg (6,438 lb.)	1755 kg (3,870 lb.)	1975 kg (4,355 lb.)
<b>G</b> 1341 kg (2,957 lb.)	1511 kg (3,330 lb.)	1202 kg (2,649 lb.)	1371 kg (3,023 lb.)	1608 kg (3,545 lb.)	1812 kg (3,995 lb.)
<b>H</b> 1718 kg (3,788 lb.)	1938 kg (4,272 lb.)	1560 kg (3,438 lb.)	1779 kg (3,923 lb.)	1397 kg (3,080 lb.)	1579 kg (3,480 lb.)
<b>I</b> 1813 kg (3,996 lb.)	2047 kg (4,513 lb.)	1646 kg (3,629 lb.)	1880 kg (4,146 lb.)	828 kg (1,825 lb.)	956 kg (2,109 lb.)
<b>J</b> 1834 kg (4,043 lb.)	2073 kg (4,571 lb.)	1662 kg (3,665 lb.)	1902 kg (4,193 lb.)	1041 kg (2,295 lb.)	1198 kg (2,642 lb.)
<b>K</b> 1826 kg (4,026 lb.)	2067 kg (4,557 lb.)	1651 kg (3,639 lb.)	1892 kg (4,171 lb.)	1139 kg (2,511 lb.)	1311 kg (2,889 lb.)
<b>L</b> 1805 kg (3,980 lb.)	2046 kg (4,511 lb.)	1627 kg (3,587 lb.)	1868 kg (4,118 lb.)	1189 kg (2,621 lb.)	1368 kg (3,017 lb.)
<b>M</b> 1779 kg (3,923 lb.)	2019 kg (4,452 lb.)	1598 kg (3,523 lb.)	1838 kg (4,052 lb.)	1214 kg (2,676 lb.)	1398 kg (3,083 lb.)
<b>N</b> 1752 kg (3,863 lb.)	1991 kg (4,389 lb.)	1568 kg (3,457 lb.)	1807 kg (3,983 lb.)	1225 kg (2,700 lb.)	1412 kg (3,114 lb.)
<b>O</b> 1726 kg (3,805 lb.)	1964 kg (4,329 lb.)	1539 kg (3,394 lb.)	1777 kg (3,917 lb.)	1227 kg (2,706 lb.)	1417 kg (3,124 lb.)
<b>P</b> 1704 kg (3,756 lb.)	1941 kg (4,278 lb.)	1514 kg (3,338 lb.)	1751 kg (3,860 lb.)	1225 kg (2,701 lb.)	1416 kg (3,123 lb.)
<b>Q</b> 1687 kg (3,720 lb.)	1924 kg (4,242 lb.)	1494 kg (3,294 lb.)	1731 kg (3,817 lb.)	1221 kg (2,691 lb.)	1413 kg (3,115 lb.)
<b>R</b> 1681 kg (3,706 lb.)	1920 kg (4,232 lb.)	1484 kg (3,271 lb.)	1723 kg (3,798 lb.)	1216 kg (2,680 lb.)	1409 kg (3,106 lb.)
<b>S</b> 1693 kg (3,733 lb.)	1937 kg (4,270 lb.)	1491 kg (3,287 lb.)	1734 kg (3,824 lb.)	1211 kg (2,670 lb.)	1406 kg (3,099 lb.)
<b>T</b> 1751 kg (3,859 lb.)	2005 kg (4,421 lb.)	1539 kg (3,393 lb.)	1794 kg (3,955 lb.)	1209 kg (2,666 lb.)	1405 kg (3,098 lb.)
<b>U</b> 2020 kg (4,454 lb.)	2319 kg (5,112 lb.)	1783 kg (3,930 lb.)	2081 kg (4,588 lb.)	1211 kg (2,671 lb.)	1410 kg (3,108 lb.)
<b>V</b> —	—	—	—	1221 kg (2,692 lb.)	1423 kg (3,136 lb.)
<b>W</b> —	—	—	—	1243 kg (2,740 lb.)	1450 kg (3,196 lb.)
<b>X</b> —	—	—	—	1290 kg (2,844 lb.)	1506 kg (3,321 lb.)
<b>Y</b> —	—	—	—	1404 kg (3,094 lb.)	1640 kg (3,615 lb.)
<b>Z</b> —	—	—	—	1933 kg (4,261 lb.)	2253 kg (4,967 lb.)

\*Indicated capacity is stability limited. Lift capacities are over end with stabilizers down and tires tangent to ground.



With Extendable Dipperstick, Retracted



With Extendable Dipperstick, Extended