

416E Backhoe Loader

Counterweights

Minimum Counterweight Recommendations

Standard Stick

Loader Bucket	Power Train	kg	lb
GP	2WD	231	510
GP	4WD	116	255
MP	2WD/4WD	no counterweight	

Extendible Stick

Loader Bucket	Power Train	kg	lb
GP	2WD/4WD	488	1,075
GP	2WD	231	510
MP	4WD	116	255

Backhoe Buckets

With weld on adapters and pin-on teeth

Standard Duty

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft ³	kg	lb	
305	12	78	2.8	97	213	3
457	18	118	4.2	115	253	4
610	24	175	6.2	132	290	5
762	30	233	8.2	147	323	5
914	36	292	10.3	165	363	6

Heavy Duty

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft ³	kg	lb	
305	12	78	2.8	105	231	3
406	16	105	3.7	128	282	3
457	18	118	4.2	129	284	4
610	24	175	6.2	151	332	5
762	30	233	8.2	167	367	5
914	36	292	10.3	189	416	6

Soil Excavation

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft ³	kg	lb	
457	18	181	6.4	153	336	4
610	24	241	8.5	179	395	5
762	30	320	11.3	197	434	5
914	36	380	13.4	223	491	6

Heavy Duty Rock

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft ³	kg	lb	
305	12	70	2.5	120	265	3
457	18	127	4.5	150	331	4
610	24	198	7.0	175	386	5
762	30	255	9.5	195	430	5
914	36	311	11.5	210	463	6

Coral

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft ³	kg	lb	
305	12	60	2.1	134	295	4
457	18	100	3.5	155	341	6
610	24	140	4.9	182	402	8
762	30	190	6.7	210	463	10

416E Backhoe Loader

Machine Dimensions

	Single-Tilt Loader					
	General Purpose (0.76 m ³ /1.0 yd ³)		General Purpose (0.96 m ³ /1.25 yd ³)		Multi Purpose (1.0 m ³ /1.3 yd ³)	
	mm	ft/in	mm	ft/in	mm	ft/in
(1) Overall transport length	7233	23 ft 9 in	7321	24 ft 0 in	7285	23 ft 11 in
Overall length (loader on ground)	7180	23 ft 7 in	7293	23 ft 11 in	7209	23 ft 8 in
(2) Overall transport height (standard stick)	3577	11 ft 9 in	3577	11 ft 9 in	3577	11 ft 9 in
Overall transport height (extendible stick)	3631	11 ft 11 in	3631	11 ft 11 in	3631	11 ft 11 in
Overall width	2322	7 ft 7 in	2322	7 ft 7 in	2322	7 ft 7 in
(3) Height to top of cab/canopy	2819	9 ft 3 in	2819	9 ft 3 in	2819	9 ft 3 in
(4) Height to top of exhaust stack	2754	9 ft 0 in	2754	9 ft 0 in	2754	9 ft 0 in
Height to loader hinge pin (transport)	365	1 ft 2 in	365	1 ft 2 in	417	1 ft 4 in
Ground clearance (minimum)	320	1 ft 1 in	320	1 ft 1 in	320	1 ft 1 in
(5) Rear axle centerline to front grill	2704	8 ft 10 in	2704	8 ft 10 in	2704	8 ft 10 in
Front wheel tread gauge	1880	6 ft 2 in	1880	6 ft 2 in	1880	6 ft 2 in
Rear wheel tread gauge	1727	5 ft 8 in	1727	5 ft 8 in	1727	5 ft 8 in
(6) Wheelbase 2WD/4WD	2200	7 ft 3 in	2200	7 ft 3 in	2200	7 ft 3 in

Loader Bucket Dimensions and Performance

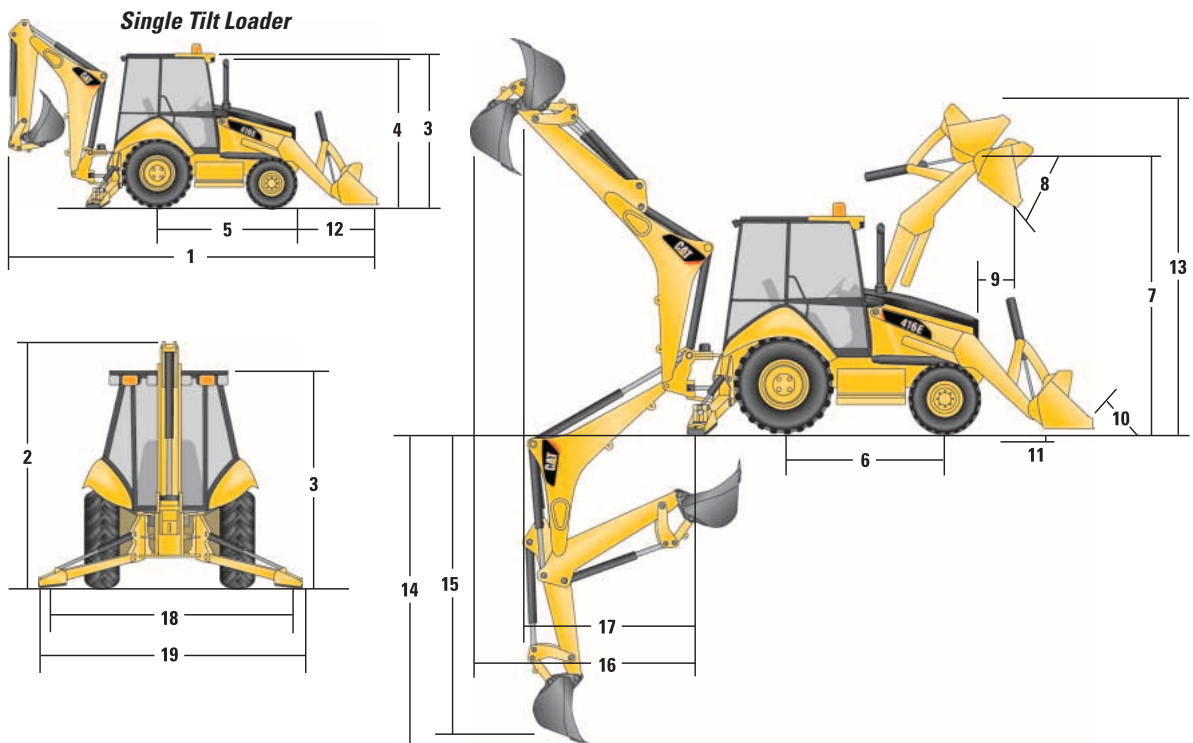
	Single-Tilt Loader					
	General Purpose (0.76 m ³ /1.0 yd ³)		General Purpose (0.96 m ³ /1.25 yd ³)		Multi Purpose (1.0 m ³ /1.3 yd ³)	
	mm	ft/in	mm	ft/in	mm	ft/in
Capacity (SAE rated)	0.76 m ³	1.0 yd ³	0.96 m ³	1.25 yd ³	1.0 m ³	1.3 yd ³
Width	2262 mm	7 ft 5 in	2262 mm	7 ft 5 in	2279 mm	7 ft 6 in
Lift capacity at maximum height	2547 kg	5,615 lb	2427 kg	5,351 lb	2225 kg	4,905 lb
Breakout force	40.9 kN	9,185 lb	38.1 kN	8,565 lb	37.2 kN	8,363 lb
(7) Maximum hinge pin height	3296 mm	10 ft 10 in	3296 mm	10 ft 10 in	3296 mm	10 ft 10 in
(8) Dump angle at full height		44°		44°		44°
Dump height at maximum angle	2651 mm	8 ft 8 in	2573 mm	8 ft 5 in	2624 mm	8 ft 7 in
(9) Dump reach at maximum angle	772 mm	2 ft 6 in	853 mm	2 ft 10 in	761 mm	2 ft 6 in
(10) Maximum bucket rollback at ground level		39°		39°		40°
(11) Digging depth	106 mm	4 in	106 mm	4 in	133 mm	5 in
Maximum grading angle		110°		107°		110°
Width of dozer cutting edge		N/A		N/A	2262 mm	7 ft 5 in
(12) Grill to bucket cutting edge, carry position	1428 mm	4 ft 8 in	1516 mm	5 ft 0 in	1480 mm	4 ft 10 in
(13) Maximum operating height	4063 mm	13 ft 4 in	4196 mm	13 ft 9 in	4244 mm	13 ft 11 in
Jaw opening maximum		N/A		N/A	790 mm	2 ft 7 in
Bucket jaw clamping force		N/A		N/A	50.6 kN	11,385 lb
Weight (does not include teeth or forks)	384 kg	847 lb	451 kg	994 lb	745 kg	1,642 lb

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Backhoe Dimensions and Performance

	Standard Stick		Extendible Stick Retracted		Extendible Stick Extended	
(14) Digging depth, SAE (max.)	4360 mm	14 ft 4 in	4402 mm	14 ft 5 in	5456 mm	17 ft 11 in
(15) Digging depth, 610 mm (2 ft) flat bottom	4321 mm	14 ft 2 in	4363 mm	14 ft 4 in	5420 mm	17 ft 10 in
Reach from rear axle centerline at ground line	6721 mm	22 ft 1 in	6760 mm	22 ft 2 in	7769 mm	25 ft 6 in
(16) Reach from swing pivot at ground line	5618 mm	18 ft 5 in	5657 mm	18 ft 7 in	6666 mm	21 ft 10 in
Maximum operating height	5523 mm	18 ft 1 in	5555 mm	18 ft 3 in	6302 mm	20 ft 8 in
Loading height	3636 mm	11 ft 11 in	3577 mm	11 ft 9 in	4145 mm	13 ft 7 in
(17) Loading reach	1768 mm	5 ft 10 in	1868 mm	6 ft 2 in	2771 mm	9 ft 1 in
Swing arc	180°		180°		180°	
Bucket rotation	205°		205°		205°	
(18) Stabilizer spread, operating position (center)	3310 mm	10 ft 10 in	3310 mm	10 ft 10 in	3310 mm	10 ft 10 in
(19) Stabilizer spread, operating position (outside)	3770 mm	12 ft 4 in	3770 mm	12 ft 4 in	3770 mm	12 ft 4 in
Stabilizer spread, transport position	2322 mm	7 ft 7 in	2322 mm	7 ft 7 in	2322 mm	7 ft 7 in
Bucket dig force	51.8 kN	11,655 lb	51.1 kN	11,491 lb	51.1 kN	11,491 lb
Stick dig force	31.8 kN	7,151 lb	31.8 kN	7,151 lb	23.4 kN	5,250 lb

Dimensions and performance specifications shown are for machines equipped with 12.5/80-18 SGL front tires, 19.5L-24 IT525 rear tires, ROPS canopy, standard stick with 610 mm (24 inch) standard-duty bucket, and 0.76 m³ (1.0 yd³) loader bucket and standard equipment unless otherwise specified.

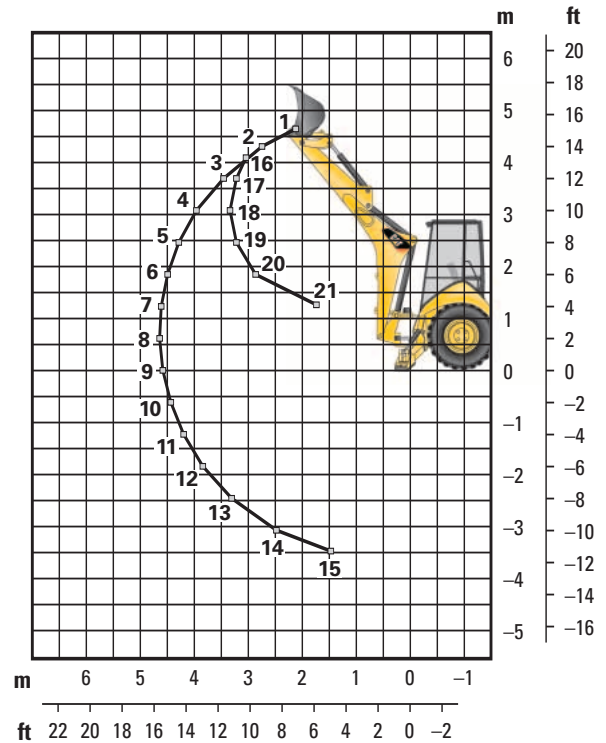


416E Backhoe Loader

Backhoe Lift Capacity

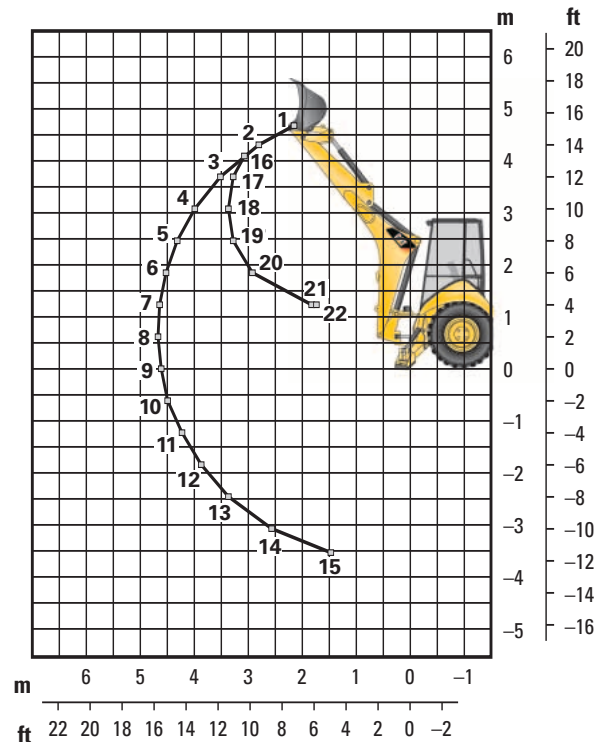
Cat 416E Standard Stick

Boom Lifting			
	kg	lb	
1	1262	2,776	
2	1378	3,031	
3	1394	3,066	
4	1356	2,984	
5	1306	2,873	
6	1253	2,757	
7	1202	2,643	
8	1153	2,536	
9	1107	2,436	
10	1065	2,344	
11	1028	2,261	
12	995	2,190	
13	972	2,138	
14	973	2,141	
15	1081	2,377	
Stick Lifting			
	kg	lb	
16	1297	2,853	
17	1827	4,020	
18	2195	4,828	
19	2275	5,005	
20	2645	5,818	
21	5285	11,627	



Cat 416E Extendible Stick – Retracted

Boom Lifting			
	kg	lb	
1	1084	2,385	
2	1186	2,608	
3	1190	2,618	
4	1149	2,527	
5	1096	2,412	
6	1042	2,291	
7	988	2,174	
8	938	2,063	
9	890	1,958	
10	846	1,860	
11	805	1,771	
12	768	1,690	
13	738	1,623	
14	722	1,589	
15	788	1,734	
Stick Lifting			
	kg	lb	
16	1155	2,541	
17	1672	3,679	
18	1992	4,382	
19	2063	4,539	
20	2395	5,269	
21	4688	10,313	
22	5059	11,129	



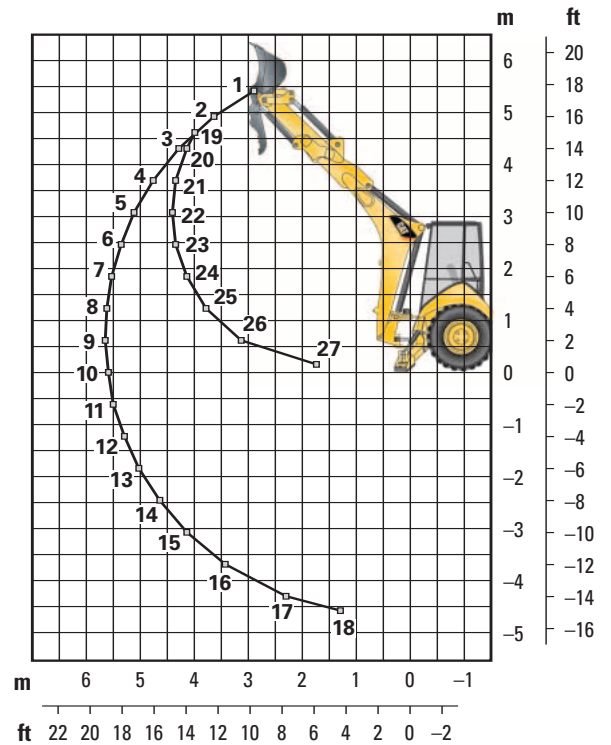
Lift capacities are over-end values. Machine equipped with 4WD, OROPS, 0.76 m³ (1.0 yd³) general purpose bucket, and 116 kg (255 lb) counterweight. Extendible stick includes 488 kg (1,075 lb) counterweight.

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Backhoe Lift Capacity

Cat 416E Extendible Stick – Extended

Boom Lifting			
		kg	lb
	1	597	1,313
	2	729	1,605
	3	780	1,715
	4	725	1,596
	5	681	1,498
	6	659	1,449
	7	653	1,437
	8	663	1,458
	9	687	1,512
	10	672	1,478
	11	651	1,432
	12	632	1,390
	13	616	1,354
	14	604	1,328
	15	600	1,319
	16	613	1,348
	17	704	1,550
	18	1071	2,355
Stick Lifting			
		kg	lb
	19	543	1,195
	20	724	1,593
	21	973	2,141
	22	1146	2,522
	23	1290	2,839
	24	1442	3,172
	25	1653	3,637
	26	2160	4,751
	27	5031	11,069



Lift capacities are over-end values. Machine equipped with 4WD, OROPS, 0.76 m³ (1.0 yd³) general purpose bucket, and 116 kg (255 lb) counterweight. Extendible stick includes 488 kg (1,075 lb) counterweight.