

SOLAR 250LC-V

DAEWOO NEW CRAWLER TYPE EXCAVATOR

- Operating Weight : 24,400 kg (53,800 lb)
- Bucket Capacity (PCSA) : 0.5~1.29m³ (1.06~1.69cu·yd)
- Rated Engine Power : 162HP / 2,000 rpm
121kw / 2,000 rpm



DAEWOO
DAEWOO HEAVY INDUSTRIES &
MACHINERY LTD.

Technical Data



Engine

Model	DAEWOO D1146T
Type	Water-cooled, 4-cycle, direct injection.
Aspiration	Turbocharged
No of cylinders	6
Rated flywheel horse power	
DIN 6271, net	121KW (165PS) at 2,000 rpm
SAE J1349, net	121KW (162HP) at 2,000 rpm
Piston displacement	8,071 cc (493 cu.in)
Maximum torque	64.5 kgf.m (633Nm, 467lb.ft.) @1,300 rpm
Bore and stroke	111 mm × 139 mm (4.4" × 5.5")
Starting system	24V electric motor
Batteries	2 × 12V × 150 AH



Hydraulic system

New EPOS-V (Electronic Power Optimizing System) allows the operator to maximize work efficiency over a full range of operating conditions and to minimize fuel consumption.

- Hydraulic system assures fully independent and combined operations.
- Automatic 2 speed travel system for high traction force and travel speed.
- Cross-sensing and fuel saving pump system.
- Auto idle system.
- 3-Working / 3-power mode selection system.
- Computer aided engine-pump control.

Main pumps	2 variable displacement axial piston pumps.
Max. oil flow	2 × 224l/min (2 × 59.0US gpm, 2 × 49.3Imp gpm)
Pilot pump	Gear pump
Max. oil flow	30 l/min (7.9 US gpm, 6.6 Imp gpm)
Swing motor	
Relief valve	279 bar (4,050 psi, 285 kgf/cm ²)

Main relief valves

Boom/Arm/Bucket	Normal : 324 bar (4,690 psi, 330 kgf/cm ²) Power Boost : 343bar (4,970 psi, 350 kgf/cm ²)
Travel circuit	324 bar (4,690 psi, 330 kgf/cm ²)

Hydraulic cylinders

High-strength piston rods and tubes are used. Cylinder cushion mechanism is provided for all cylinders to assure shock-free operation and extend life of cylinder.

Cylinders	Q'ty	Bore × Rod dia. × Stroke
Boom	2	130 × 90 × 1,320mm (5.1" × 3.5" × 52.0")
Arm	1	140 × 100 × 1,705 mm (5.5" × 3.9" × 67.1")
Bucket	1	130 × 90 × 1,050 mm (5.1" × 3.5" × 41.3")

Hydraulic filters

All hydraulic circuits have high-quality hydraulic filters for protection against oil contamination and longer life of hydraulic components. Suction filter is built in suction line, and 10 μ full-flow filter in return circuit and swing / travel motor drain lines.



Swing mechanism

High-torque, axial piston motor with planetary reduction gear bathed in oil. Swing circle is singlerow, shear type ball bearing with induction-hardened internal gear. Internal gear and pinion gear immersed in lubricant. Swing parking brake is spring-set, hydraulic-released disc type. A high parking brake torque secures the super-structure for transportation.

• Swing speed	10.9 rpm (min ⁻¹)
• Rear swing radius	3,035mm (9' 11")



Drive

Each track is driven by an independent, high-torque, axial piston motor through planetary reduction gear. Two levers or foot pedal control provide smooth travel or counter-rotation upon demand.

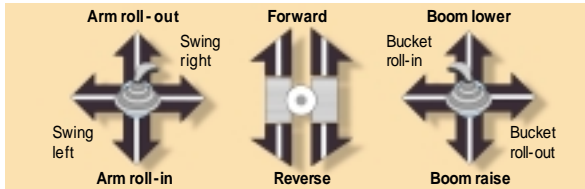
Travel speed (High/Low)	4.9/3.2 km/h (3.0/2.0 mph)
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Maximum traction force	21,100 kgf (46,520 lbf)
Gradeability	35° (70%) continuous

Technical Data

Controls. 2 implement levers

Pilot pressure control type. Right lever is boom and bucket control, left lever for swing and arm control.



2 Travel pedals with levers

Pilot pressure control type. Independent drive at each track allows counter-rotation of the tracks. Levers are detachable.

Super-structure revolving frame

A deep, full-reinforced box section. Heavy-gauge steel plates used for ruggedness.

Operator's cab

A roomy, independent, shock and noise-free operator's cab, 4 side safety glass windows give all-round visibility. Front window slides up and stores in the roof and side window can be left open for ventilation. Fully adjustable reclining seat : fwd./rev. and up/down. Cab cooler(option). ISO standard cab.

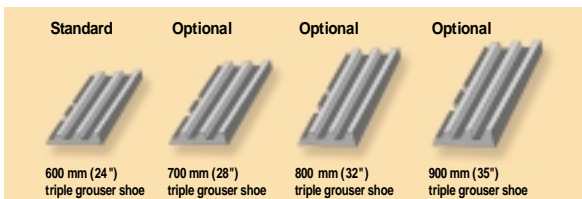
Noise Levels (dynamic value)

Lpw External noise..... **105 dB(A)** (89/514/EC)

LpA Operator ear noise..... **76 dB(A)** (ISO 6396)
77 dB(A) (89/514/EC)

Undercarriage types of shoes

Tractor type undercarriage. Heavy-duty track frame, all welded stress-relieved structure. Top grade materials are used for toughness. Side frames are welded, securely and rigidly, to the track frame. Lifetime-lubricated track rollers, idlers and sprockets with floating seals. Track shoes of induction-hardened rolled alloy with triple grousers. Specially heat-treated connecting pins. Hydraulic track adjusters with shock-absorbing recoil springs.



Number of rollers and shoes (each side) ground contact area

Upper rollers 2

(Standard shoe)

Lower rollers 10

Track shoes 51

Overall track length 4,635mm (15' 2")

Brake

Two oil disc brake on final drive input shafts. Parking brake is spring-set, hydraulic-released disc type.

Weight

Equipped with 5.9m(19'4") boom, 3.0m(9' 10") arm, and 1.1m³(1.44yd³; PCSA heaped) bucket and 600mm(24") shoes.

Shoe type	Shoe width	Operating weight	Ground pressure
Triple grouser	600mm (24")	24,400 kg (53,800 lb)	0.49kgf/cm ² (48 kpa, 7.0psi)
	700mm (28")	24,700 kg (54,500 lb)	0.43kgf/cm ² (42 kpa, 6.1psi)
	800mm (32")	25,000 kg (55,100 lb)	0.38kgf/cm ² (37 kpa, 5.4psi)
	900mm (35")	25,300 kg (55,800 lb)	0.34kgf/cm ² (34 kpa, 4.8psi)

Service refill capacities

	Liters	US gal	Imp gal
Fuel tank	360	95.1	79.2
Cooling system	35	9.2	7.7

Lubrication	Liters	US gal	Imp gal
Engine oil	21.0	5.5	4.6
Swing drive	11.0	2.9	2.4
Final drive (each)	7.0	1.8	1.5
Hydraulic tank	155	40.9	34.1

Safety

- Safety glass windows.
- Spring-set/hydraulic-released disc type parking brake.
- Electric horn.
- Window protector. optional.
- Engine coolant temperature gauge.
- Alarm buzzer (Engine oil pressure and engine coolant temperature).
- Lever lock.

Technical Data

- Monitor for during operation
(Engine oil pressure, battery charge, engine oil filter clogging, air cleaner clogging and hydraulic oil filter clogging)



Standard equipment

All weather steel cab with all-round visibility. Safety glass windows. Wide screen wiper. Sliding, fold-in front window. Sliding side window. Lockable door. Deluxe fully adjustable reclining seat. Lever lock. Cab heater. Air conditioner.

Backhoe attachments

Boom and arm are of all welded. Low stress, full box section design. Bucket of all welded, high-strength steel structure.



Optional equipment

Buckets. Track shoes. Additional working lamp(on top of cabin). Lock valves on boom and arm for safety.

Instrument panel

Engine coolant temperature gauge. Electric hourmeter. Fuelmeter. Tachometer. Voltmeter. Hydraulic oil pressure gauge. Monitor for during operation(Engine oil pressure, battery charge, air cleaner clogging and hydraulic oil filter clogging). Alarm buzzer (Engine oil pressure and engine coolant temperature).

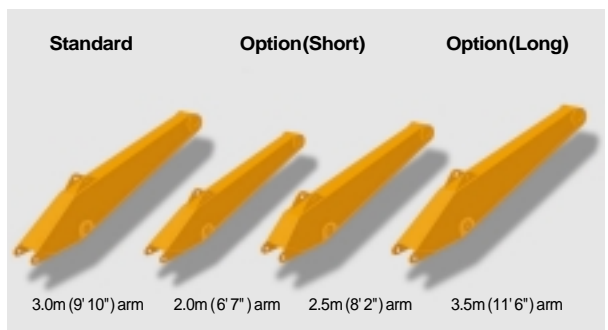
Miscellaneous

Car stereo. Electric horn. Cigarette lighter. Ashtray. Magazine box. Lockable machine cover. Radiator reserve tank. Air cleaner evacuator. Track guards. Dual type air filters. Fuel filler pump(optional).

Digging forces (Maximum radial tooth forces)

	2.0m(6'7")Arm	2.5m(8'2")Arm	3.0m(9'10")Arm	3.5m(11'6")Arm
Bucket digging force*	16,400 kgf	15,200 kgf	15,200 kgf	15,200 kgf
	161KN	149KN	149KN	149KN
	36,200 lbf	33,500 lbf	33,500 lbf	33,500 lbf
Arm digging force*	16,400 kgf	13,700 kgf	11,800 kgf	10,600 kgf
	161KN	134KN	116KN	104KN
	36,200 lbf	30,200 lbf	26,000 lbf	23,400 lbf

*At power boost



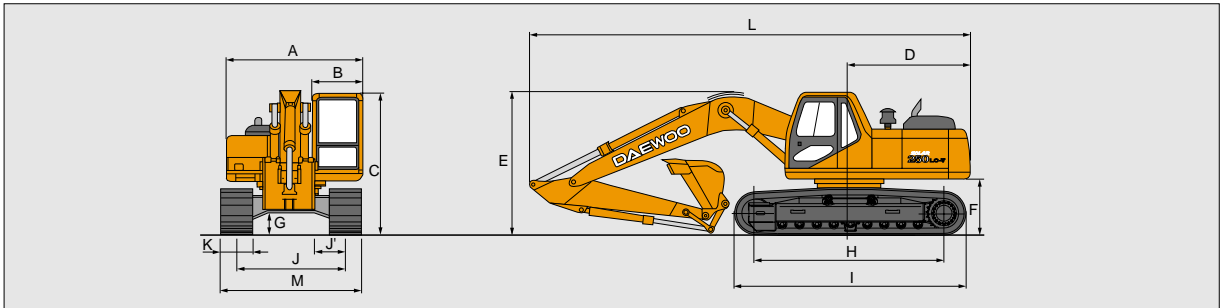
Buckets

Capacity		Width		Weight	Recommendation			
PCSA, heaped	CECE, heaped	Without side cutters	With side cutters		2.0m(6'7") Arm	2.5m(8'2") Arm	3.0m(9'10") Arm	3.5m(11'6") Arm
0.5m ³ (0.65yd ³)	0.45m ³	688mm (27")	778mm (31")	530kg (1,170lb)	A	A	A	A
0.81m ³ (1.06yd ³)	0.7m ³	1,058mm (42")	1,168mm (51")	690kg (1,520lb)	A	A	A	A
0.93m ³ (1.22yd ³)	0.8m ³	1,180mm (46")	1,290mm (51")	730kg (1,610lb)	A	A	A	A
1.1m ³ (1.44yd ³)	0.95m ³	1,260mm (50")	1,370mm (54")	815kg (1,800lb)	A	A	A	C
1.26m ³ (1.65yd ³)	1.1m ³	1,420mm (56")	1,530mm (60")	895kg (1,973lb)	A	A	B	C

- A. Suitable for materials with density of 3,370 lb/cu-yd (2,000 kg/m³) or less
 B. Suitable for materials with density of 2,700 lb/cu-yd (1,600 kg/m³) or less
 C. Suitable for materials with density of 1,850 lb/cu-yd (1,100 kg/m³) or less

Specifications & Working Ranges

Dimensions (5.9m(19'4") Boom, 3.0m(9'10") Arm, 600mm(24") Shoe)



General specifications

Operating weight	24,400kg (53,800lb)
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Bucket

Heaped capacity range	PCSA 0.5 ~ 1.29m ³ (0.65 ~ 1.69 cu-yd)
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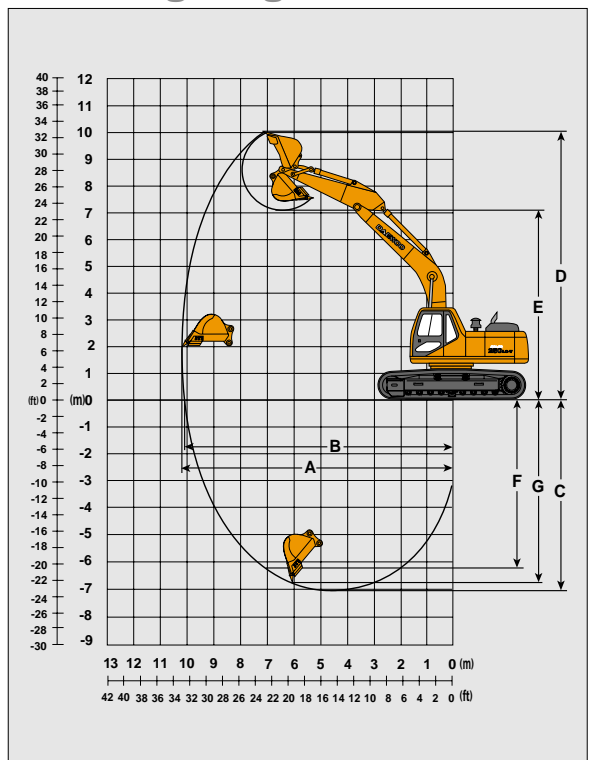
Dimensions

A Overall width of upper structure	2,710mm (8'11")
B Overall width of cab	960mm (38")
C Overall height of cab	3,000mm (9'10")
D Tail swing radius	3,035mm (9'11")
E Overall height	3,400mm (11'2")
F Clearance under counterweight	1,110mm (3'8")
G Ground clearance	450mm (1'6")
H Tumbler distance	3,830mm (12'7")
I Track length	4,635mm (15'2")
J Track gauge (Standard Track)	2,600mm (8'6")
J' Track gauge (Narrow Track)	2,390mm (7'10")
K Track shoe width	600mm (24")
L Overall length	10,110mm (33'2")
M Overall track width with 600mm (24") shoe (STD)	3,200mm (10'6")
M' Overall track width with 600mm (24") shoe (NARROW)	2,990mm (9'10")

Maneuverability

Ground pressure	0.49bar (7.0psi)
Travel speed (High/Low)	4.9/3.2 km/h (3.0/2.0 mph)
Gradeability	35° (70%)
Ground clearance	450mm (18")

Working ranges

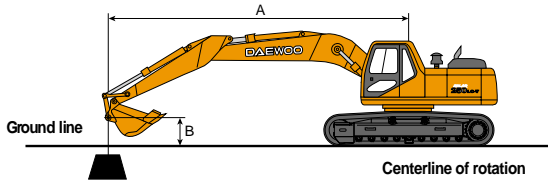


Working ranges

Boom length	5.9 m (19'4")			
Arm length	3.0 m (9'10")	2.0 m (6'7")	2.5 m (8'2")	3.5 m (11'6")
A. Max. digging reach	10,240 mm (33'7")	9,360 mm (30'8")	9,740 mm (31'11")	10,710 mm (35'2")
B. Max. digging reach at ground level	10,060 mm (33'0")	9,160 mm (30'1")	9,560 mm (31'4")	10,540 mm (34'7")
C. Max. digging depth	6,790 mm (22'3")	5,790 mm (19'0")	6,290 mm (20'8")	7,290 mm (23'11")
D. Max. digging height	9,500 mm (31'2")	9,240 mm (30'4")	9,180 mm (30'1")	9,720 mm (31'11")
E. Max. dumping height	6,640 mm (21'9")	6,330 mm (20'9")	6,360 mm (20'10")	6,860 mm (22'6")
F. Max. vertical wall digging depth	6,080 mm (19'11")	5,390 mm (17'8")	5,360 mm (17'7")	6,560 mm (21'6")
G. Max. digging depth (8' level)	6,620 mm (21'9")	5,560 mm (18'3")	6,090 mm (20'0")	7,140 mm (23'5")

Lifting Capacities

Standard



Boom : 5.9 m (19'4")
 Arm : 3.0 m (9'10")
 Bucket : CECE 0.95m³ heaped
 Shoe : 600 mm (24")
 Unit : 1,000 kg/1,000 lb

Metric

B (m)	A (m)		2		3		4		5		6		7		8		Max. Reach		
	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	
7											6.54	6.54	4.77	4.77			6.58	6.58	7.26
6											6.65	6.65	4.83	4.83			6.51	6.51	7.97
5											6.76	6.76	4.92	4.92	6.03	3.66	4.56	3.24	8.52
4					4.38	4.38	7.26	7.26	6.97	6.97	6.56	4.59	6.30	3.65	4.65	3.05	8.89		
3			13.32	13.32	4.75	4.75	7.87	7.87	6.80	5.78	6.12	4.53	6.66	3.63	4.76	2.95	9.14		
2			7.87	7.87	11.52	10.58	9.19	7.55	7.64	5.68	6.68	4.47	5.50	3.59	4.97	2.92	9.27		
1			6.08	6.08	12.97	10.36	8.95	7.32	6.41	5.58	7.16	4.40	5.47	3.56	4.22	2.95	9.29		
0(Ground)	4.52	4.52	6.26	6.26	13.92	10.25	10.97	7.19	6.05	5.51	6.72	4.36	5.44	3.54	4.56	3.05	9.18		
-1	4.30	4.30	7.17	7.17	14.35	10.06	11.38	7.14	8.53	5.46	6.69	4.34	5.44	3.53	4.97	3.24	8.97		
-2	6.58	6.58	6.63	6.63	14.40	10.00	11.54	7.10	8.48	5.43	6.70	4.34	5.49	3.58	4.65	3.56	8.63		
-3	4.28	4.28	12.89	12.89	14.13	10.08	11.21	7.14	8.53	5.46	6.74	4.38	5.55	3.64	4.19	4.08	8.13		
-4	12.60	12.60	16.60	16.60	13.05	10.16	10.76	7.19	8.75	5.51	6.88	4.45			6.17	5.09	7.47		
-5	16.88	16.88	14.40	14.40	11.63	10.44	9.42	7.36	7.52	5.64					7.67	6.72	6.50		

Feet

B (ft)	A (ft)		5		10		15		20		25		Max. Reach						
	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡					
25											12.01	12.01			7.85	7.85	24'10"		
20											12.43	12.43	10.94	9.81	7.77	7.32	27'10"		
15								17.77	17.77	13.37	13.37	12.10	9.60	8.09	6.66	29'7"			
10								25.11	25.11	21.30	20.88	16.13	13.37	13.49	9.36	8.66	6.45	30'5"	
5								10.91	10.91	25.01	19.10	18.60	12.82	13.90	9.14	8.42	6.53	30'4"	
0	7.59	7.59	16.08	16.08	27.39	18.63	19.43	12.50	13.61	8.90	10.76	7.01	29'5"						
-5	14.61	14.61	24.46	24.46	27.76	18.65	19.19	12.32	13.56	8.85	12.36	8.06	27'6"						
-10	23.43	23.43	36.63	36.28	25.62	18.52	19.32	12.41	13.76	9.01	13.66	10.62	24'5"						
-15					29.20	21.27	19.87	14.61	12.89			16.80	16.80	19'3"					

Option

Boom : 5.9m(19'4") Bucket : CECE 1.1m³ heaped Unit : 1,000kg/1,000 lb
 Arm : 2.5m(8'2") Shoe : 600mm(24")

Metric

B (m)	A (m)		2		3		4		5		6		7		8		Max. Reach		
	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	
7											6.62	6.62					4.80	4.43	6.59
6											6.75	6.75			6.29	4.53			7.39
5											7.18	7.18	6.81	6.81	6.59	4.55			7.96
4					4.42	4.42	7.31	7.31	6.48	5.82	6.98	4.51	6.67	3.59	4.96	3.31	8.38		
3					10.92	10.92	6.53	7.56	7.32	5.72	6.49	4.45	5.46	3.56	4.87	3.18	8.65		
2					12.28	10.29	9.90	7.40	6.11	5.61	6.98	4.41	5.44	3.54	4.83	3.15	8.79		
1					13.02	10.33	10.85	7.23	6.81	5.53	6.72	4.37	5.42	3.52	4.88	3.18	8.79		
0(Ground)			6.69	6.69	12.34	10.14	11.00	7.11	8.52	5.46	6.68	4.33	5.42	3.52	5.05	3.29	8.72		
-1	6.17	6.17	6.89	6.89	14.42	10.00	11.69	7.09	8.47	5.42	6.67	4.32	5.46	3.55	5.44	3.54	8.51		
-2	7.29	7.29	10.79	10.79	14.12	10.02	11.35	7.12	8.47	5.42	6.69	4.34			6.05	3.94	8.10		
-3	10.57	10.57	14.68	14.68	13.44	10.10	10.77	7.15	8.57	5.46	6.76	4.40			6.53	4.80	7.58		
-4	15.36	15.36	15.37	15.37	12.30	10.24	10.14	7.26	8.21	5.56					6.23	5.99	6.89		
-5			12.67	12.67	10.33	10.33	9.32	7.44							6.16	6.16	5.86		

Boom : 5.9m(19'4") Bucket : CECE 0.8m³ heaped Unit : 1,000kg/1,000 lb
 Arm : 3.5m(11'6") Shoe : 600mm(24")

Metric

B (m)	A (m)		2		3		4		5		6		7		8		Max. Reach		
	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	
7													4.71	4.71			4.02	3.02	7.82
6													4.76	4.76			4.98	4.98	8.49
5											6.63	6.63	4.82	4.82	4.66	3.73	4.02	2.98	9.01
4											7.13	7.13	6.78	6.15	4.64	4.95	3.71	4.10	9.38
3					12.90	12.90	4.45	4.45	7.26	7.26	6.26	6.26	6.70	4.56	6.33	3.66	4.20	2.74	9.61
2					13.56	13.56	10.69	10.69	6.49	7.51	7.15	5.68	6.33	4.50	6.76	3.61	4.36	2.70	9.74
1					7.03	7.03	12.38	10.31	9.71	7.33	6.05	5.58	6.91	4.40	5.48	3.57	4.56	2.72	9.75
0(Ground)	4.20	4.20	6.48	6.48	13.46	10.07	10.43	7.19	6.73	5.49	6.71	4.35	5.43	3.53	4.81	2.79	9.65		
-1	4.75	4.75	7.92	7.92	14.20	9.94	11.26	7.06	8.47	5.42	6.67	4.32	5.42	3.52	4.18	2.94	9.47		
-2	6.40	6.40	6.68	6.68	14.31	9.88	11.28	7.02	8.43	5.38	6.65	4.30	5.43	3.52	4.76	3.18	9.16		
-3	6.47	6.47	11.95	11.95	14.30	9.95	11.63	7.04	8.44	5.38	6.67	4.31			6.47	3.59	7.90		
-4	11.15	11.15	15.42	15.42	13.53	10.00	10.72	7.09	8.51	5.42	6.71	4.36			6.96	4.24	8.08		
-5	14.64	14.64	15.66	15.66	12.15	10.15	9.91	6.69	6.19	5.53	6.51	4.47			6.88	5.61	7.29		
-6			12.91	12.91	10.15	10.15	9.31	7.41	6.27						7.37	7.37	6.11		

Note
 1. Ratings are based on SAE J1097.
 2. Load point is the hook on the back of the bucket.
 3. Rated loads are based on hydraulic capacity.
 4. Rated loads do not exceed 87% of hydraulic capacity or 75% of tipping capacity.

Feet

B (ft)	A (ft)		5		10		15		20		25		Max. Reach						
	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡					
25											12.39	12.39			10.46	9.59	22'7"		
20											12.58	12.58	11.87	9.59	10.53	8.00	26'0"		
15								17.80	17.80	14.57	13.60	12.88	9.40	10.96	7.21	28'0"			
10								22.74	20.13	17.08	13.14	13.96	9.21	10.63	6.94	28'10"			
5								26.53	19.20	19.34	12.66	13.63	8.94	10.83	7.05	28'11"			
0					14.81	14.81	27.80	18.58	19.38	12.44	13.60	8.87	11.72	7.63	28'0"				
-5	16.25	16.25	25.45	25.45	26.97	18.26	19.35	12.40					13.76	8.96	25'10"				
-10	27.63	27.63	34.31	34.31	24.41	18.63	18.25	12.44					13.89	12.42	22'5"				

Feet

B (ft)	A (ft)		5		10		15		20		25		Max. Reach						
	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡	⊠	⊡					
25													4.58	4.58	6.64	6.64	26'7"		
20													11.96	11.96	10.05	9.95	6.65	6.65	29'5"
15													17.57	17.57	12.62	12.62	11.25	9.70	6.86
10													28.73	29.73	19.45	19.45	15.03	13.44	12.76
5													15.17	15.17	24.56	20.03	17.81	12.90	13.84
0	7.19	7.19	16.18	16.18	26.56	18.40	19.48	12.51	23.63	8.90	9.04	6.40	31'1"						
-5	13.29	13.29	23.22	23.22	27.39	18.10	19.24	12.31	13.49	8.77	10.89	7.28	29'4"						
-10	20.78	20.78	32.54	32.54	28.69	18.77	19.17	12.27	13.56	8.83									