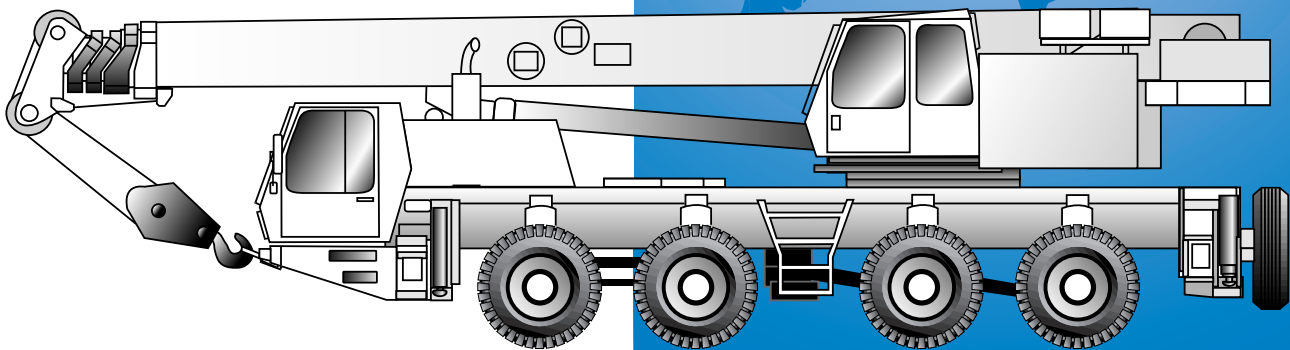




GROVE[®]
CRANE

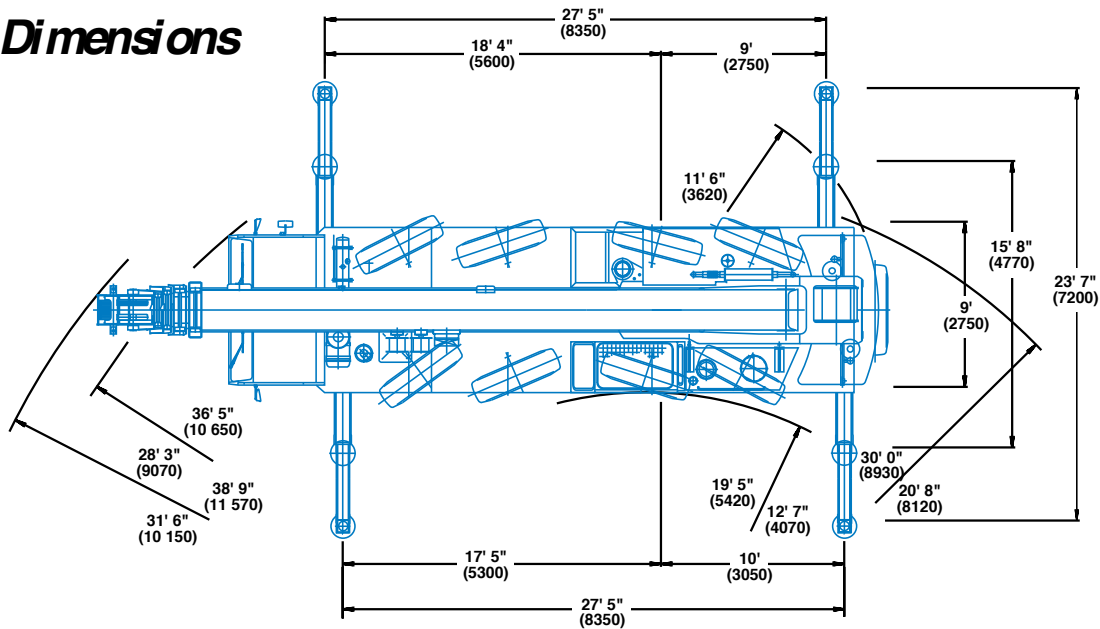
A GROVE WORLDWIDE COMPANY

GMK4100

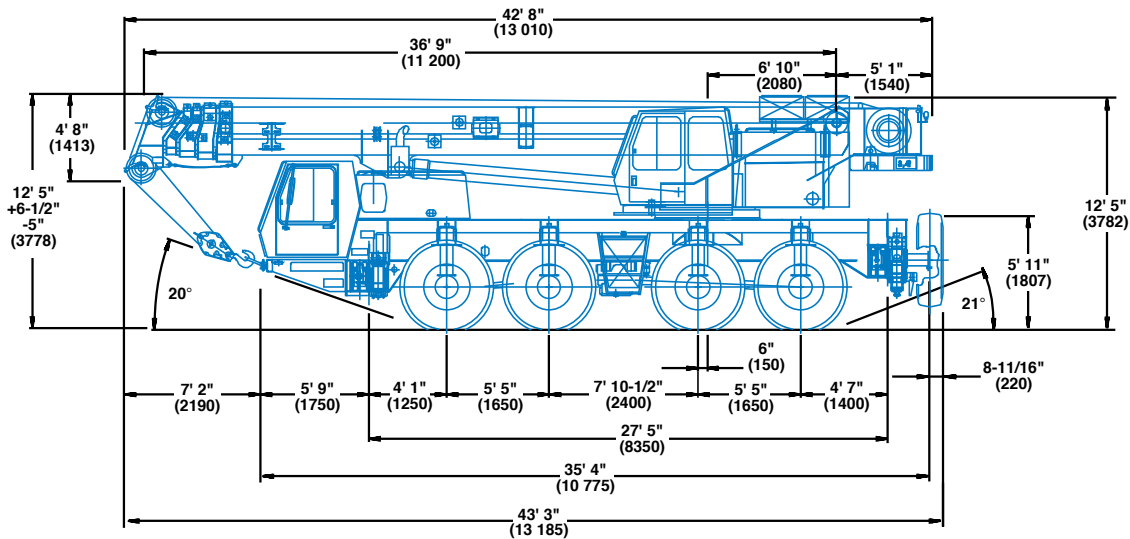


All Terrain Hydraulic Crane

Dimensions



Note: With addition of auxiliary hoist, tailswing increases to 14' 2" (4320 mm)



Note: () Reference dimensions in mm

MODEL GMK 4100 EQUIPPED WITH: 8 x 6 x 8, Tires 20.5R25, 9,260 lbs. (4200 kg) counterweight	FRONT 2 AXLE LINES 51,920 lbs.	REAR 2 AXLE LINES 50,915 lbs.	GVW 102,835 lbs.
ADDITIONS:			
Outrigger Floats	159 lbs.	172 lbs.	331 lbs.
Auxiliary Hoist	-2,147 lbs.	4,837 lbs.	2,690 lbs.
16.00R25 Tires in lieu of 20.5R25	-370 lbs.	-370 lbs.	-740 lbs.
14.00R25 Tires in lieu of 20.5R25	-900 lbs.	-900 lbs.	-1,800 lbs.
Spare Tire & Wheel - 14.00R25 & Bracket	-416 lbs.	1,000 lbs.	584 lbs.
Spare Tire & Wheel - 16.00R25 & Bracket	-516 lbs.	1,232 lbs.	716 lbs.
Spare Tire & Wheel - 20.5R25 & Bracket	-589 lbs.	1,398 lbs.	809 lbs.
26' - 43' Lattice Extension w/Brackets	3,382 lbs.	-1,067 lbs.	2,315 lbs.
8 x 8 Drive	212 lbs.	824 lbs.	1,036 lbs.
REMOVAL:			
9,260 lbs. Counterweight	5,315 lbs.	-14,575 lbs.	-9,260 lbs.
2 X Front Outriggers (Beams & Jacks)	-4,167 lbs.	1,411 lbs.	-2,756 lbs.
2 X Rear Outriggers (Beams & Jacks)	1,940 lbs.	-5,467 lbs.	-3,527 lbs.

Weights may vary due to manufacturing tolerances and scale accuracy.

Working range



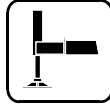
37 - 141 ft.
(11.2 - 43.0 m)



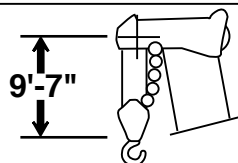
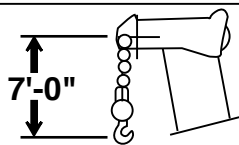
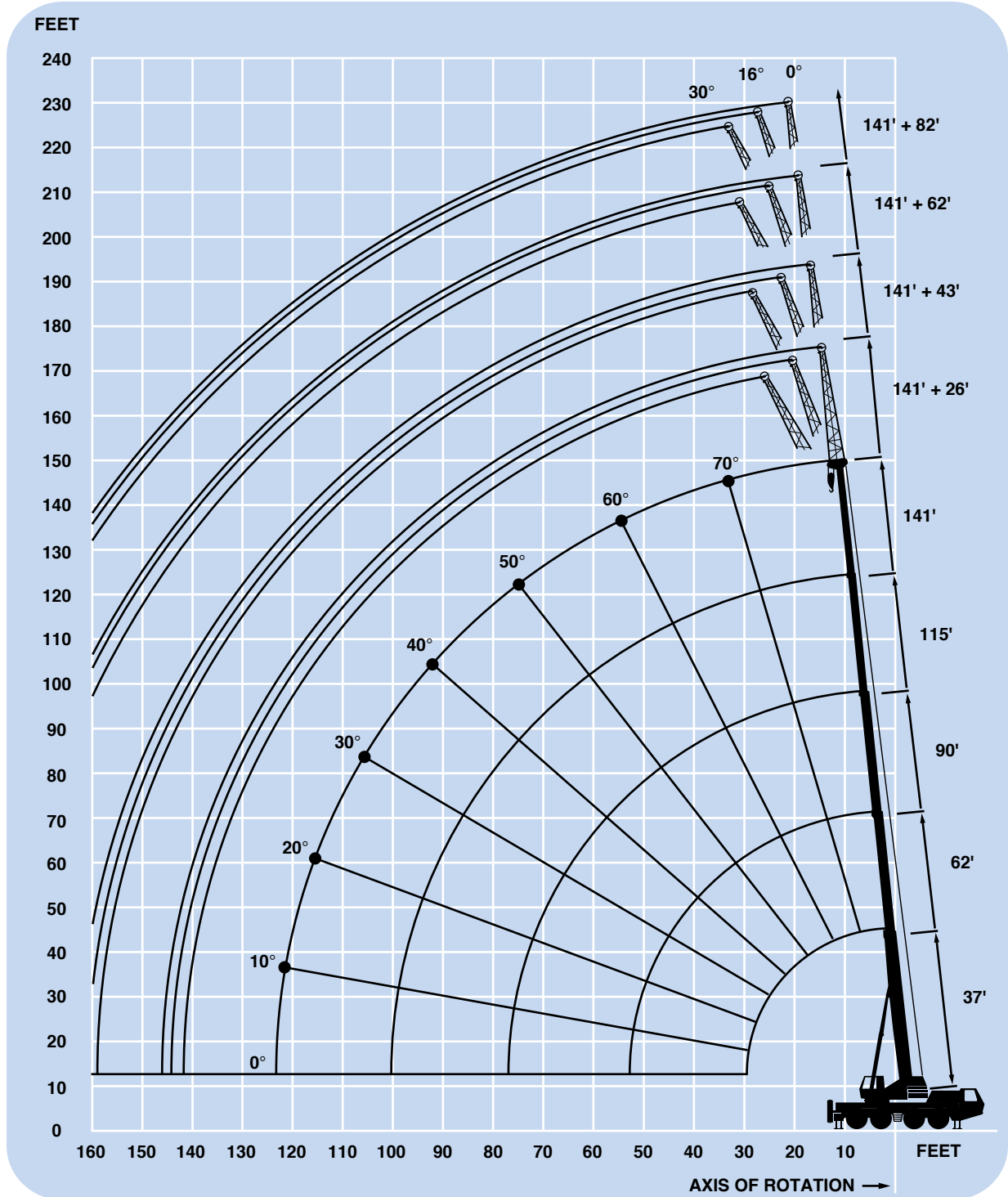
26 - 43 - 62 - 82 ft.
(8.0 - 13.0 - 19.0 - 25.0 m)



34,850 lbs.
(15 800 kg)



360°



DIMENSIONS ARE FOR LARGEST GROVE FURNISHED HOOK BLOCK AND HEADACHE BALL, WITH ANTI-TWO BLOCK ACTIVATED.

Superstructure specifications

Boom

37 ft. to 141 ft. (11.2 m to 43 m) five-section full power boom.

Maximum tip height: 150 ft. (46 m).

Lattice Extension

Two-stage, 26 ft. to 43 ft. (8 m to 13 m) lattice extension offsettable at 0°, 16° and 30°. Stows alongside base boom section.

Maximum tip height: 194 ft. (59 m).

*Optional Lattice Extension

Boom extension, lattice design 26, 43, 62, 82 ft. (8, 13, 19, 25 m) - includes 26 ft. to 43 ft. (8 m to 13 m) swing-away (offsets 0°, 16° and 30°) plus 20 ft. (6 m) lattice extensions.

Maximum tip height: 230 ft. (70 m).

Boom Elevation

Single cylinder with integral holding valve provides elevation from -3° to 84°.

Load Moment

& Anti-Two Block System

Load moment and anti-two block system with audio-visual warning and control lever lock-out. These systems provide electronic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition.

Cab

Full vision aluminum cab, safety glass windows, adjustable operator's seat with hydraulic suspension, engine-independent heating, instrumentation and operating controls for superstructure.

Swing

Axial piston motor with planetary gear. Holding and service brake. Swing speed variable from 0 - 1.9 RPM.

Counterweight

34,850 lbs. (15 800 kg) total. Hydraulically installed and removed.

Engine

Mercedes-Benz OM366A, diesel, 6 cylinders, water cooled, turbocharged, 104 kW at 1800 RPM. Maximum torque: 566 Nm at 1500-1600 RPM.

Hydraulic System

Three separate pump circuits: two axial piston pumps with integrated infinitely variable speed and load control and two fixed displacement pumps for swing.

349 gallon (1320 L) reservoir capacity.

All crane movements infinitely variable by hydraulic pilot circuit control levers with automatic reset to zero.

Electrical System

24 V lighting system and signals.

Generator: 28 V/55 A.

Two batteries: 12 V/170 Ah each.

HOIST SPECIFICATIONS

Main Hoist

Axial piston fixed displacement motor with integrated planetary gear and multiple disk brake. Rope drum with special grooving.

Single line pull:	13,700 lbs. (61 kN)
Single line speed:	400 FPM (120 m/min)
Rope diameter:	19 mm
Rope length:	788 ft. (240 m)

Auxiliary Hoist

Axial piston variable displacement motor with integrated planetary gear and multiple disk brake. Rope drum with special grooving.

Single line pull:	13,700 lbs. (61 kN)
Single line speed:	400 FPM (120 m/min)
Rope diameter:	19 mm
Rope length:	590 ft. (180 m)

Carrier specifications

Chassis

Four-axle, all-welded, torsion-resistant, box-type construction of high strength steel.

Outriggers

Four hydraulically telescoping beam outriggers with vertical cylinders and outrigger pads. Independent horizontal and vertical movement control on each side of chassis. Crane level indicators at each control station.

Engine

Daimler Benz OM 442 A diesel, 8 cylinders, water-cooled with turbocharger, 335 hp (250 kW) @ 2100 RPM.

Maximum torque: 1500 Nm at 1200 RPM.

Fuel Tank Capacity

127 gallons (500 L).

Transmission

Automatic powershift transmission with 5 forward and 1 reverse gears. Two speed transfer case with longitudinal differential lock.

Drive

8 x 6 x 8

Axles

1st axle line - drive/steer.

2nd axle line - drive/steer.

3rd axle line - steer (off road only).

4th axle line - drive/steer.

Drive axles with planetary hub reduction and center mounted gearing.

Suspension

Exclusive "MEGATRAK™" independent hydropneumatic suspension and hydraulic axle lock-out. Dual level control. Suspension range: +6.7 in. (170 mm) to -5.0 in. (-130 mm). Possible combination for transverse slope.

Tires

8 - 20.5R25 radials.

Steering

Dual-circuit. Automatic switch-in of standby steering pump in case of main pump failure.

Brakes

Service brake: pneumatic dual circuit acting on all wheels. Air dryer.

Auxiliary brake: hydraulic retarder integrated with automatic transmission.

Parking brake: pneumatically operated spring-loaded brake acting on 2nd and 4th axle line.

Cab

Aluminum, two-man design, safety glass, driver's seat with hydraulic suspension, engine hot water heater. Complete instrumentation and driving controls. Cab can be tilted forward by 60° for easy access to engine, transmission, hydraulic pumps, heater and batteries.

Electrical System

24 V lighting system and signals.

Generator: 28 V/55 A.

Two batteries: 12 V/170 Ah each.

Maximum Speed

47 mph (75 kph)

Gradeability (Theoretical)

60%

Miscellaneous Standard Equipment

Hydraulic oil cooler; spare tire and wheel - 20.5R25 with carry bracket; spare parts/service manuals; hoist drum rotation indicators; flashing amber warning light on carrier cab; working light; tool kit, wheel chocks, fire extinguisher; rooster sheave; radio/cassette in carrier cab.

*Optional Equipment

* 8 x 8 x 8 drive

* Hook blocks and headache balls

* Motor-independent heating with engine preheater.

**Denotes optional equipment.*



37 - 141 ft.
(11.2 - 43 m)



34,850 lbs.
(15 800 kg)



100%



360°



(Feet)

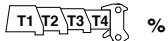


Pounds

	37*	37	63	63	75	89	89	101	115	115	128	141
9	200,000**											
10	193,000	158,000										
15	155,000	122,000	115,000	78,000	78,000							
20	113,800	97,000	94,000	78,000	78,000	69,000	53,000	56,000	41,200	31,600	31,600	
25	88,600	79,000	77,000	76,000	66,000	59,000	45,000	51,000	41,200	31,600	31,600	26,600
30			60,000	65,000	57,000	51,000	38,800	44,000	39,600	31,600	31,600	26,600
35			46,000	50,000	46,000	44,000	34,000	39,000	35,000	28,800	31,600	26,600
40			36,000	40,400	36,200	37,600	29,800	34,400	31,200	25,600	29,400	26,600
45			28,800	33,200	29,200	30,600	26,800	30,400	27,800	22,800	26,600	26,600
50			23,200	27,600	23,600	25,000	24,000	25,000	25,000	20,200	24,000	23,800
55					19,200	20,600	21,600	20,600	21,600	18,200	21,600	21,200
60					15,800	17,200	19,600	17,200	18,000	16,400	19,400	18,800
65					13,000	14,400	17,200	14,400	15,200	15,000	16,400	17,200
70						12,000	14,800	12,000	12,800	13,800	14,000	15,000
75						10,000	12,800	10,000	10,800	12,800	12,000	12,800
80								8,200	9,000	12,000	10,200	11,200
85								6,600	7,400	11,200	8,600	9,600
90									6,000	10,200	7,200	8,200
95									4,800	9,000	6,000	7,000
100											5,000	5,800
105											4,000	5,000
110											3,200	4,000
115											2,400	3,200
120												2,600

*Over the Rear

**200,000 LBS. only with special equipment



	T1	T2	T3	T4	%
T1	0	0	100	0	100
T2	0	0	0	50	50
T3	0	0	0	50	0
T4	0	0	0	0	0

All main boom charts available with 50% outriggers.



37 - 141 ft.
(11.2 - 43 m)



22,000 lbs.
(10 000 kg)



100%



360°



Pounds

(Feet)	37*	37	63	63	75	89	89	101	115	115	128	141
10	193,000	158,000										
15	150,200	121,000	115,000	78,000	78,000							
20	108,000	95,000	93,000	78,000	78,000	69,000	53,000	56,000	41,200	31,600	31,600	
25	75,800	76,000	72,000	76,000	66,000	59,000	45,000	51,000	41,200	31,600	31,600	26,600
30			50,000	55,000	51,000	51,000	38,800	44,000	39,600	31,600	31,600	26,600
35			37,800	42,400	38,200	39,600	34,000	39,000	35,000	28,800	31,600	26,600
40			29,000	33,600	29,400	31,000	29,800	31,000	31,200	25,600	29,400	26,600
45			22,800	27,400	23,000	24,600	26,800	24,600	25,600	22,800	26,600	26,600
50			17,800	22,400	18,200	19,600	22,800	19,800	20,600	20,200	22,000	23,000
55					14,200	15,800	19,000	15,800	16,600	18,200	18,000	19,200
60					11,200	12,600	15,800	12,600	13,400	16,400	14,800	15,800
65					8,600	10,000	13,000	10,000	11,000	15,000	12,200	13,200
70						8,000	11,000	8,000	8,800	13,200	10,200	11,000
75						6,200	9,000	6,200	7,000	11,400	8,200	9,200
80								4,600	5,400	9,800	6,800	7,600
85								3,400	4,200	8,400	5,400	6,400
90									3,000	7,200	4,200	5,200
95										6,200	3,200	4,200
100											2,400	3,200
105												2,400
*Over the Rear												

T1 T2 T3 T4 %

T1	0	0	100	0	100	100	0	100	100	0	100	100
T2	0	0	0	50	50	50	100	100	100	100	100	100
T3	0	0	0	50	0	50	100	50	100	100	100	100
T4	0	0	0	0	0	0	0	0	0	100	50	100

All main boom charts available with 50% outriggers.



37 - 141 ft.
(11.2 - 43 m)



9,300 lbs.
(4200 kg)



100%



360°



(Feet)



Pounds

	37	63	63	75	89	89	101	115	115	128	141
10	157,000										
15	120,000	115,000	78,000	78,000							
20	92,000	88,000	78,000	78,000	69,000	53,000	56,000	41,200	31,600	31,600	
25	60,000	55,000	61,000	56,000	58,000	45,000	51,000	41,200	31,600	31,600	26,600
30		38,000	43,200	38,400	40,000	38,800	40,200	39,600	31,600	31,600	26,600
35		27,600	32,600	28,000	29,600	33,000	29,600	30,800	28,800	31,600	26,600
40		20,400	25,200	20,800	22,400	25,800	22,400	23,400	25,600	24,800	26,600
45		15,000	20,000	15,200	17,000	20,400	17,000	18,000	22,800	19,400	20,600
50		11,000	15,600	11,200	12,800	16,200	12,800	13,800	18,600	15,200	16,200
55				8,200	9,600	12,800	9,600	10,600	15,400	12,000	13,000
60				5,600	7,000	10,200	7,000	8,000	12,600	9,400	10,400
65				3,600	5,000	8,000	5,000	6,000	10,400	7,200	8,200
70					3,400	6,400	3,400	4,200	8,600	5,600	6,400
75						4,800			7,200	4,000	5,000
80									5,800		3,800
85									4,600		
90									3,800		
95											
100											
105											

T1 T2 T3 T4 %

T1	0	100	0	100	100	0	100	100	0	100	100
T2	0	0	50	50	50	100	100	100	100	100	100
T3	0	0	50	0	50	100	50	100	100	100	100
T4	0	0	0	0	0	0	0	0	100	50	100

All main boom charts available with 50% outriggers.



37 - 141 ft.
(11.2 - 43 m)



0 lbs.
(0 kg)



100%



360°



(Feet)



Pounds

	37	63	63	75	89	89	101	115	115	128	141
10	157,000										
15	119,000	84,000	78,000	74,000							
20	73,000	53,000	60,000	48,000	46,000	51,000	42,400	40,400	31,600	31,600	
25	50,000	36,400	43,200	33,600	33,000	37,600	30,400	29,200	31,600	29,000	26,600
30		25,400	32,000	23,600	23,600	28,000	21,800	21,400	27,800	21,800	21,800
35		18,400	24,400	17,000	17,400	21,600	16,000	16,000	22,000	16,600	16,800
40		13,200	19,000	12,200	12,800	16,800	11,800	12,000	17,600	12,800	13,200
45		9,400	14,800	8,600	9,400	13,200	8,600	8,800	14,400	9,800	10,200
50		6,400	11,200	5,800	6,600	10,400	6,000	6,200	11,800	7,400	7,800
55				3,600	4,400	8,000	3,800	4,200	9,600	5,400	6,000
60						6,200			7,800	3,600	4,400
65						4,600			6,200		
70						3,400			5,000		
75									3,800		

T1 T2 T3 T4 %

T1	0	100	0	100	100	0	100	100	0	100	100
T2	0	0	50	50	50	100	100	100	100	100	100
T3	0	0	50	0	50	100	50	100	100	100	100
T4	0	0	0	0	0	0	0	0	100	50	100

All main boom charts available with 50% outriggers.

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE. The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.



141 ft.
(43 m)



26 - 43 - 62 - 82 ft.
(8 - 13 - 19 - 25 m)



34,850 lbs.
(15 800 kg)



100%



360°



Pounds

	26 FEET			43 FEET			63 FEET			82 FEET		
(Feet)	0°	16°	30°	0°	16°	30°	0°	16°	30°	0°	16°	30°
25	13,600											
30	13,600	13,600	13,400	9,000								
35	13,600	13,600	13,400	9,000			6,600					
40	13,600	13,600	13,400	9,000	8,800		6,600			4,600		
45	13,600	13,600	13,400	9,000	8,800	8,600	6,600			4,600		
50	13,600	13,600	13,400	9,000	8,800	8,400	6,600	6,800		4,600	4,600	
55	13,600	13,200	12,800	9,000	8,800	8,200	6,600	6,800		4,600	4,600	
60	13,600	13,000	12,200	9,000	8,400	8,200	6,600	6,800	6,800	4,600	4,600	4,600
65	13,600	12,600	11,800	8,600	8,200	8,000	6,600	6,800	6,800	4,600	4,600	4,600
70	13,600	12,400	11,600	8,400	7,800	7,800	6,600	6,800	6,800	4,600	4,600	4,600
75	12,800	12,000	11,200	8,200	7,600	7,800	6,600	6,800	6,800	4,600	4,600	4,600
80	11,800	11,800	11,000	7,800	7,400	7,600	6,600	6,800	6,800	4,600	4,600	4,600
85	10,200	11,000	10,800	7,600	7,400	7,400	6,600	6,800	6,800	4,600	4,600	4,600
90	9,000	9,400	9,800	7,400	7,200	7,400	6,600	6,800	6,800	4,600	4,600	4,600
95	7,600	8,200	8,600	7,000	7,200	7,200	6,600	6,800	6,600	4,600	4,600	4,600
100	6,600	7,000	7,400	6,800	7,000	7,200	6,600	6,400	6,400	4,600	4,600	4,600
105	5,600	6,000	6,400	6,600	7,000	7,200	6,200	6,200	6,200	4,600	4,600	4,600
110	4,800	5,200	5,400	5,600	6,400	7,000	5,400	6,000	6,000	4,600	4,600	4,600
115	4,000	4,200	4,400	4,800	5,600	6,000	4,600	5,400	5,800	4,600	4,600	4,600
120	3,200	3,600	3,800	4,200	4,800	5,200	4,000	4,600	5,200	3,800	4,400	4,400
125	2,600	2,800	3,000	3,400	4,000	4,400	3,400	4,000	4,400	3,200	4,000	4,200
130	2,000	2,200	2,400	2,800	3,400	3,800	2,800	3,400	3,800	2,800	3,400	3,800
135	1,400	1,600	1,600	2,200	2,800	3,000	2,200	2,800	3,200	2,200	2,800	3,200
140				1,800	2,200	2,400	1,800	2,200	2,600	1,600	2,200	2,600
145				1,200	1,600	1,800		1,800	2,000		1,800	2,000
150					1,200	1,400			1,400			1,600
155												
<div> <div>T1 T2 T3 T4</div> <div>%</div> </div>												
T1	100	100	100	100	100	100	100	100	100	100	100	100
T2	100	100	100	100	100	100	100	100	100	100	100	100
T3	100	100	100	100	100	100	100	100	100	100	100	100
T4	100	100	100	100	100	100	100	100	100	100	100	100

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE. The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.



141 ft.
(43 m)



26 - 43 - 62 - 82 ft.
(8 - 13 - 19 - 25 m)



22,000 lbs.
(10 000 kg)



100%



360°



Pounds

	26 FEET			43 FEET			63 FEET			82 FEET		
(Feet)	0°	16°	30°	0°	16°	30°	0°	16°	30°	0°	16°	30°
25	13,600											
30	13,600	13,600	13,400	9,000								
35	13,600	13,600	13,400	9,000			6,600					
40	13,600	13,600	13,400	9,000	8,800		6,600			4,600		
45	13,600	13,600	13,400	9,000	8,800	8,600	6,600			4,600		
50	13,600	13,600	13,400	9,000	8,800	8,400	6,600	6,800		4,600	4,600	
55	13,600	13,200	12,800	9,000	8,800	8,200	6,600	6,800		4,600	4,600	
60	13,600	13,000	12,200	9,000	8,400	8,200	6,600	6,800	6,800	4,600	4,600	4,600
65	13,600	12,600	11,800	8,600	8,200	8,000	6,600	6,800	6,800	4,600	4,600	4,600
70	12,000	12,400	11,600	8,400	7,800	7,800	6,600	6,800	6,800	4,600	4,600	4,600
75	10,000	10,800	11,200	8,200	7,600	7,800	6,600	6,800	6,800	4,600	4,600	4,600
80	8,400	9,200	9,600	7,800	7,400	7,600	6,600	6,800	6,800	4,600	4,600	4,600
85	7,200	7,800	8,200	7,600	7,400	7,400	6,600	6,800	6,800	4,600	4,600	4,600
90	6,000	6,400	6,800	6,800	7,200	7,400	6,200	6,800	6,800	4,600	4,600	4,600
95	4,800	5,400	5,800	5,800	6,800	7,200	5,200	6,200	6,600	4,600	4,600	4,600
100	4,000	4,400	4,600	4,800	5,800	6,400	4,400	5,200	6,000	4,200	4,600	4,600
105	3,000	3,400	3,800	4,000	4,800	5,400	3,600	4,400	5,000	3,600	4,400	4,600
110	2,400	2,800	3,000	3,200	4,000	4,600	2,800	3,600	4,200	2,800	3,600	4,200
115		2,000	2,200	2,600	3,200	3,800	2,200	3,000	3,600	2,200	3,000	3,600
120		1,400	1,600	2,000	2,600	3,000	1,600	2,400	2,800	1,600	2,400	2,800
125				1,400	2,000	2,400		1,800	2,200		1,800	2,200
130					1,400	1,800			1,600			1,600
135						1,200						

T1 T2 T3 T4 %

T1	100	100	100	100	100	100	100	100	100	100	100	100
T2	100	100	100	100	100	100	100	100	100	100	100	100
T3	100	100	100	100	100	100	100	100	100	100	100	100
T4	100	100	100	100	100	100	100	100	100	100	100	100



141 ft.
(43 m)



26 - 43 ft.
(8 - 13 m)



9,000 lbs.
(4200 kg)



100%



360°

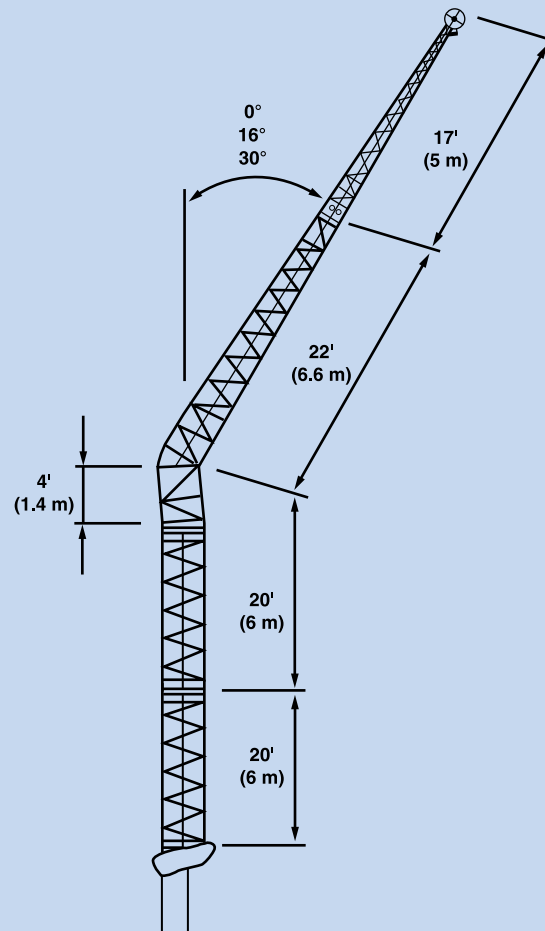


Pounds

	26 FEET			43 FEET		
(Feet)	0°	16°	30°	0°	16°	30°
25	13,600					
30	13,600	13,600	13,400	9,000		
35	13,600	13,600	13,400	9,000		
40	13,600	13,600	13,400	9,000	8,800	
45	13,600	13,600	13,400	9,000	8,800	8,600
50	13,600	13,600	13,400	9,000	8,800	8,400
55	13,600	13,200	12,800	9,000	8,800	8,200
60	11,600	12,600	12,200	9,000	8,400	8,200
65	9,400	10,200	11,000	8,600	8,200	8,000
70	7,600	8,400	9,000	8,400	7,800	7,800
75	6,000	6,800	7,400	7,000	7,600	7,800
80	4,600	5,400	5,800	5,600	7,000	7,600
85	3,600	4,200	4,600	4,600	5,600	6,600
90	2,600	3,200	3,600	3,600	4,600	5,400
95	1,800	2,200	2,600	2,600	3,600	4,400
100		1,400	1,800	1,800	2,800	3,400
105					2,000	2,600
110					1,400	1,800
T1 T2 T3 T4 %						
T1	100	100	100	100	100	100
T2	100	100	100	100	100	100
T3	100	100	100	100	100	100
T4	100	100	100	100	100	100

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE. The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

82' Boom Extension



BI-FOLD SWINGAWAY

Length (ft.)	BASE SECTION			TIP SECTION
	20' (6 m)	4' (1.4 m)	22' (6.6 m)	17' (5 m)
26'	_____	1 X	1 X	_____
43'	_____	1 X	1 X	1 X
62'	1 X	1 X	1 X	1 X
82'	2 X	1 X	1 X	1 X





































Rated lifting capacities

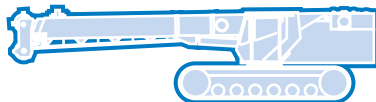
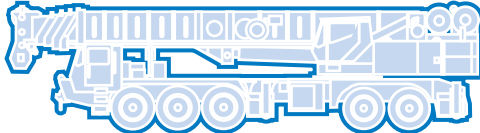
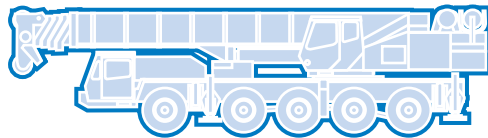
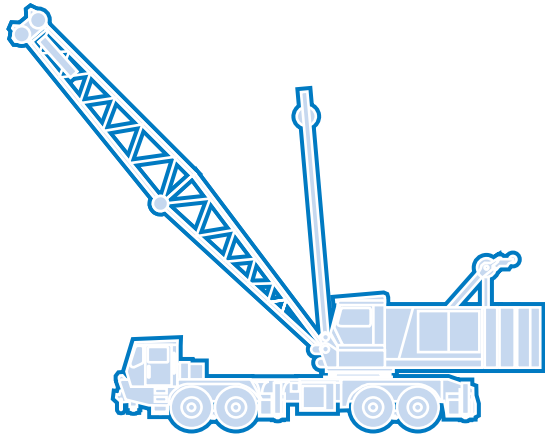
Important Notes:

Warning: THIS CHART IS ONLY A GUIDE.
The notes below are for illustration only and should not be relied upon to operate the crane. The individual crane's load chart, operating instructions and other instruction plates must be read and understood prior to operating the crane.

1. All rated loads have been tested to and meet minimum requirements of SAEJ1063 NOV93 - Cantilevered Boom Crane Structures - Method of Test, and do not exceed 85% of the tipping load on outriggers as determined by SAEJ765 OCT90 Crane Stability Test Code.
2. Capacities given do not include the weight of hook blocks, slings, auxiliary lifting equipment and load handling devices. Their weights must be added to the load to be lifted. When more than minimum required reeving is used, the additional rope weight shall be considered part of the load.
3. Tipping should never be relied upon as a capacity limitation.
4. All capacities are for crane on firm, level surface. It may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface.
5. When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or boom length shall be used.
6. For outrigger operation, ALL outriggers shall be properly extended with tires raised free of ground before raising the boom or lifting loads.

Symbols Glossary

	Frame		Steering
	Outriggers		Transmission
	Outrigger Controls		Axles
	Engine		Brakes
	Fuel Tank Capacity		Tires
	Electrical System		Suspension
	Drive		Rotation
	Lights		Boom Elevation
	Cab		Swing
	Boom		Counterweight
	Fixed Swingaway		Oil
	Tele-Swingaway		Hydraulic System
	Jib		Hoist
	Boom Nose		Radius
	Boom Extension		Boom Length
	Speed		Hookblock
	Grade		Gear
	Lattice Extension		Luffing Jib



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