



900 SERIES

MODEL 9310A

CRAWLER CRANE

LIFT CRANE RATINGS IN POUNDS

With 77H Tubular Chord Boom with Hammerhead and "T-T" Counterweight (140,000 lbs.)

Boom Length (Feet)	Radius in Feet	Boom Angle Degrees	Lift Rating in Pounds		Feet From Boom Point
			Side Frames Retracted	Side Frames Extended	
70 feet	16	82.8		450,000 *	77
	20	79.5		349,140	77
	25	75.4		239,580	75
	30	71.1		181,410	74
	35	66.7		145,410	72
	40	62.2	106,030	120,970	70
	50	52.4	79,130	89,630	63
	60	41.0	62,560	70,600	53
70	25.6	51,170	57,680	37	
80 feet	17	83.0		410,080 *	87
	20	80.8		349,060	87
	25	77.2		239,430	86
	30	73.5		181,220	84
	35	69.8		145,210	83
	40	65.9	105,800	120,770	81
	50	57.8	78,890	89,410	75
	60	48.8	62,340	70,400	68
70	38.2	50,960	57,480	57	
80	23.8	42,700	48,160	39	
90 feet	19	82.5		365,740 *	97
	20	81.9		348,940	97
	25	78.7		239,260	96
	30	75.4		181,000	95
	35	72.1	126,160	144,990	93
	40	68.7	105,550	120,540	92
	50	61.7	78,620	89,160	87
	60	54.2	62,080	70,170	81
70	45.8	50,710	57,240	72	
80	35.9	42,460	47,930	60	
90	22.4	36,200	40,900	41	
100 feet	20	82.7		329,260 *	107
	25	79.8		239,030	106
	30	76.9		180,740	105
	35	73.9	125,850	144,720	104
	40	70.9	105,250	120,270	102
	50	64.8	78,290	88,860	98
	60	58.2	61,780	69,880	93
	70	51.2	50,400	56,940	85
80	43.3	42,150	47,630	76	
90	34.0	36,020	40,730	63	
100	21.2	31,070	35,190	43	
110 feet	21	82.8		297,280 *	117
	25	80.7		238,790	116
	30	78.1		180,470	115
	35	75.4	125,340	144,430	114
	40	72.7	104,940	119,980	113
	50	67.2	77,970	88,540	109
	60	61.4	61,470	69,580	104
	70	55.3	50,080	56,640	98
80	48.6	41,830	47,320	90	
90	41.2	35,740	40,460	80	
100	32.3	30,800	34,930	66	
110	20.1	26,810	30,480	45	
120 feet	22	82.9		263,600 *	127
	25	81.5		238,600	126
	30	79.1	155,110	180,240	126
	35	76.7	125,270	144,190	124
	40	74.2	104,690	119,750	123
	50	69.2	77,690	88,280	120
	60	64.0	61,210	69,330	115
	70	58.5	49,830	56,390	110
80	52.7	41,570	47,070	103	
90	46.4	35,520	40,240	94	
100	39.3	30,580	34,720	83	
110	30.9	26,610	30,290	69	
120	19.2	23,320	26,630	47	

Boom Length (Feet)	Radius in Feet	Boom Angle Degrees	Lift Rating in Pounds		Feet From Boom Point
			Side Frames Retracted	Side Frames Extended	
130 feet	24	82.6		233,390 *	137
	25	82.2		233,390 *	137
	30	79.9	154,760	179,930	136
	35	77.7	124,930	143,880	135
	40	75.4	104,360	119,440	134
	50	79.8	77,330	87,940	131
	60	66.1	60,860	68,990	127
	70	61.2	49,460	56,030	122
	80	56.0	41,200	46,710	115
	90	50.5	35,180	39,910	108
100 feet	100	44.5	30,250	34,400	99
	110	37.7	26,280	29,970	87
	120	29.6	22,990	26,320	71
	130	18.4	20,250	23,260	48
	140 feet	25	82.7		206,680 *
30		80.7	154,430	179,640	146
35		78.6	124,580	143,560	145
40		76.5	104,020	119,120	144
50		72.3	76,960	87,590	141
60		67.9	60,510	68,660	137
70		63.4	49,110	55,690	133
80		58.7	40,850	46,360	127
90		53.8	34,840	39,590	121
100		48.5	29,920	34,070	112
110		42.8	25,940	29,640	102
120		36.3	22,670	26,000	90
130		28.5	19,930	22,950	74
140		17.7	17,580	20,350	50
150 feet	26	82.8	183,600 *	183,600 *	157
	30	81.3	154,070	179,320	156
	35	79.3	124,230	143,230	155
	40	77.4	103,650	118,780	154
	50	73.5	76,580	87,220	152
	60	69.4	60,140	68,300	148
	70	65.3	48,730	55,320	144
	80	61.0	40,450	45,980	139
	90	56.6	34,480	39,230	133
	100	51.8	29,540	33,710	125
	110	46.8	25,580	29,280	117
	120	41.2	22,310	25,640	106
	130	35.0	19,570	22,600	93
	140	27.5	17,230	20,010	76
150	17.1	15,220	17,790	51	
160 feet	27	82.9	164,670 *	164,670 *	167
	30	81.8	153,720	164,670 *	166
	35	80.0	123,860	142,900	165
	40	78.2	103,300	118,450	164
	50	74.5	76,200	86,860	162
	60	70.8	59,770	67,940	159
	70	66.9	48,350	54,960	155
	80	63.0	40,080	45,610	150
	90	58.9	34,120	38,880	145
	100	54.6	29,200	33,360	138
	110	50.1	25,220	28,920	130
	120	45.2	21,950	25,290	121
	130	39.8	19,210	22,240	110
	140	33.8	16,880	19,660	96
150	26.6	14,870	17,440	79	
160	16.5	13,130	15,520	53	
170 feet	28	83.0	147,550 *	147,550 *	176
	30	82.3	147,550 *	147,550 *	176
	35	80.6	123,550	142,610	175
	40	78.9	102,990	118,160	175
	50	75.5	75,870	86,550	172
	60	72.0	59,450	67,630	169
	70	68.4	48,020	54,640	166
	80	64.7	39,740	45,280	161

Boom Length (Feet)	Radius in Feet	Boom Angle Degrees	Lift Rating in Pounds		Feet From Boom Point
			Side Frames Retracted	Side Frames Extended	
170 feet (cont.)	90	60.9	33,810	38,570	156
	100	57.0	28,880	33,050	150
	110	52.8	24,900	28,610	143
	120	48.5	21,630	24,980	135
	130	43.8	18,900	21,940	125
	140	38.6	16,570	19,350	113
	150	32.7	14,570	17,140	99
	160	25.7	12,830	15,210	81
	170	16.0	11,290	13,520	54
	180 feet	30	82.7	134,500 *	134,500 *
35		81.1	123,180	134,500 *	186
40		79.5	102,630	117,820	185
50		76.3	75,480	86,170	183
60		73.0	59,070	67,260	180
70		69.6	47,630	54,260	176
80		66.2	39,350	44,900	172
90		62.7	33,440	38,210	168
100		59.0	28,500	32,680	162
110		55.2	24,520	28,240	155
120		51.2	21,250	24,600	148
130		47.0	18,510	21,560	139
140		42.5	16,190	18,980	129
150		37.5	14,180	16,760	117
160		31.8	12,450	14,840	102
170		25.0	10,920	13,150	83
180		15.5	9,570	11,660	55
190 feet		31	82.8	120,610 *	120,610 *
	35	81.6	120,610 *	120,610 *	196
	40	80.1	102,270	117,480	195
	50	77.0	75,090	85,800	193
	60	73.9	58,690	66,900	190
	70	70.8	47,250	53,880	187
	80	67.5	38,950	44,510	183
	90	64.2	33,060	37,840	179
	100	60.8	28,120	32,310	174
	110	57.3	24,150	27,880	167
200 feet	32	82.9	110,090 *	110,090 *	206
	35	82.0	110,090 *	110,090 *	206
	40	80.6	101,900	110,090 *	205
	50	77.7	74,700	85,420	203
	60	74.7	58,300	66,520	201
	70	71.7	46,850	53,490	198
	80	68.7	38,540	44,110	194
	90	65.5	32,670	37,460	190
	100	62.4	27,740	31,940	185
	110	59.1	23,760	27,490	179
120	55.7	20,480	23,840	173	
130	52.2	17,740	20,800	165	
140	48.4	15,420	18,220	157	
150	44.5	13,410	16,000	148	
160	40.2	11,680	14,070	136	
170	35.5	10,150	12,390	123	
180	30.1	8,800	10,900	108	
190	23.7	7,600	9,570	87	
200	14.7	6,530	8,390	58	

(continued)

LIFT CRANE RATINGS IN KILOGRAMS (continued)

With 77H Tubular Chord Boom with Tapered Tip and “T-T” Counterweight (63504 Kgs.)

Boom Length (Meters)	Radius in Meters	Boom Angle Degrees	Lift Rating in Kilograms		Meters From Boom Point
			Side Frames Retracted	Side Frames Extended	
85.3 meters (cont.)	80.0	23.2		1700	35
	82.0	19.5		1530	30
	84.0	14.9		1360	24
88.4 meters	15.4	81.0	25,140 *	25,140 *	89
	16.0	80.6	25,140 *	25,140 *	89
	17.0	79.9	24,970 *	24,970 *	89
	18.0	79.3	24,840 *	24,840 *	88
	19.0	78.6	24,620 *	24,620 *	88
	20.0	77.9	23,160	24,470 *	88
	22.0	76.6	20,180	23,110	88
	24.0	75.3	17,770	20,370	87
	26.0	73.9	15,750	18,100	87
	28.0	72.6	14,340	16,480	86

Boom Length (Meters)	Radius in Meters	Boom Angle Degrees	Lift Rating in Kilograms		Meters From Boom Point
			Side Frames Retracted	Side Frames Extended	
88.4 meters (cont.)	30.0	71.2	12,890	14,850	85
	32.0	69.8	11,630	13,440	85
	34.0	68.5	10,520	12,210	84
	36.0	67.1	9,550	11,130	83
	38.0	65.6	8,690	10,160	82
	40.0	64.2	7,920	9,300	81
	42.0	62.8	7,230	8,540	80
	44.0	61.3	6,600	7,840	79
	46.0	59.8	6,030	7,210	78
	48.0	58.3	5,520	6,640	77
	50.0	56.7	5,040	6,110	75
	52.0	55.2	4,600	5,620	74
	54.0	53.6	4,200	5,180	73

Boom Length (Meters)	Radius in Meters	Boom Angle Degrees	Lift Rating in Kilograms		Meters From Boom Point
			Side Frames Retracted	Side Frames Extended	
88.4 meters (cont.)	56.0	52.0	3,820	4,770	71
	58.0	50.3	3,480	4,380	70
	60.0	48.6	3,160	4,030	68
	62.0	46.8	2,860	3,700	66
	64.0	45.0	2,580	3,390	64
	66.0	43.2	2,320	3,100	62
	68.0	41.3	2,070	2,830	60
	70.0	39.2	1,840	2,570	57
	72.0	37.1	1,620	2,340	55
	74.0	34.9	1,410	2,110	52
	76.0	32.6	1,230	1,900	49
	78.0	30.1		1,700	46
	80.0	27.4		1,510	42

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CRANE RATING DATA

WARNING

These lift ratings are invalid if the crane has been modified or altered by use of other than GENUINE AMERICAN PARTS as such modifications or alterations may affect its capacity or safe operation. See American Crane Corporation Service Bulletin #259.

The ratings in this chart are for planning purposes only. Only those ratings specifically assigned to a crane and mounted in the operator’s cab or in the Operator’s Manual should be used for actual operation.

Ratings in this chart are in POUNDS (KGS) and do not exceed the percentage of tipping specified for this crane by ANSI B30.5. All ratings require that the crane be standing level on a firm uniformly supporting surface.

Do not lift loads in excess of those shown on this chart. Lifting loads in excess of those shown or operation not in accordance with good operating practice, including limitations shown on page 3499 of Operator’s Manual, can cause tipping, structural damage or catastrophic failure.

Asterisk(*) areas on this chart indicate ratings which are limited by strength of material or factors other than stability (tipping).

“RADIUS IN FEET” is the horizontal distance at ground level from the crane centerline of rotation to a vertical line through the center of gravity of the suspended load.

When using the main boom fall with jib in place, the main fall ratings must be reduced by the jib effective weight shown on the jib rating chart, plus twice the weight of all suspended blocks, slings, rope, etc., at the jib fall. See Appendix A.

Blocks, slings, buckets and other load carrying devices are considered part of the load. The weight of standard hoisting ropes for the rating at a given radius has been calculated as part of the boom point load and need not be considered in determining net allowable loads. See Appendix A.

Boom with tapered tip, use hanger block when more than 2 parts of line are required. Reduce ratings 800 pounds when hanger block is in place.

Ratings shown on this chart make no allowance for such factors as out of plumb loads, wind, poor soil conditions, improper inflation of rubber tires and dynamic effects due to excessive operating speeds. The user (operator) must exercise judgement to make allowance for these conditions. See page 3499 of Operator’s Manual for detailed information.

No account is taken of the wind force on the load. This effect, which can be substantial for loads with large surface areas, must be considered by the user. In any wind it is strongly recommended that taglines be used to control the load.

BOOM HOIST LINE is 14 parts of .875 inch diameter, 6 x 26, WS, FW, RAL, IWRC, EIPS wire rope with a minimum breaking strength of 79,600 pounds.

PENDANT SUSPENSION LINE is 4 parts of 1.375 inch diameter AAA wire rope with a minimum breaking strength of 211,000 pounds.

MAIN LOAD LINE is 1.125 inch diameter 6 x 25, FW, RRL, IWRC super strength wire rope with a weight of 2.34 lbs/ft and a minimum breaking strength of 143,000 pounds.

Combinations of boom or boom and jib with a total length exceeding 350’ can be operated at full rated capacity only in wind speeds of 15 MPH or less. If lifts are to be performed in winds between 15 MPH and 25 MPH, ratings must be reduced 10%. No operation of the above combinations should be attempted in wind speeds over 25 MPH. The above limitations do not take into account loads with excessive surface area which are not restrained by tag lines.

Erection over the idler end with A-Frame raised and idler tumblers blocked. Erection over the side with A-Frame fully raised and Side Frames extended. Blocks, slings and other load carrying devices must be on the ground during erection.

LOAD HOISTING DATA

Maximum Lifting Capacity In Pounds	Minimum Parts of Load Line	Maximum Hoisting Distance		
		RH Drum With Controlled Load Lowering Feet	LH Drum With Controlled Load Lowering Feet	LH Drum Without Controlled Load Lowering Feet
450,000	12	69	35	53
449,420	11	76	38	58
408,570	10	83	42	64
367,710	9	93	47	71
326,850	8	104	52	80
286,000	7	119	60	92
245,140	6	139	70	107
204,280	5	167	84	129
163,420	4	209	105	161
122,570	3	279	141	215
81,710	2	419	211	323
40,850	1	839	423	647

Based on 1-1/8" Super Grade Rope

Maximum Lifting Capacity In Kgs.	Minimum Parts of Load Line	Maximum Hoisting Distance		
		RH Drum With Controlled Load Lowering Meters	LH Drum With Controlled Load Lowering Meters	LH Drum Without Controlled Load Lowering Meters
204,120	12	21	10	16
203,786	11	23	11	18
185,260	10	25	12	19
166,734	9	28	14	22
148,208	8	32	16	24
129,682	7	36	18	28
111,156	6	42	21	33
92,630	5	51	25	39
74,104	4	64	32	49
55,578	3	85	43	65
39,052	2	128	64	98
18,526	1	256	128	197

Based on 28.6 mm Super Grade Rope

77H TAPERED TIP BOOM COMPOSITION

Boom Length		30 Ft. (9.14m) 77S	10 Ft. (3.05m) 77S	20 Ft. (6.10m) 77S	50 Ft. (15.24m) 77S	40 Ft. (12.19m) 77H	30 Ft. (9.2m) 77H
Ft.	Meters	Inner	Center	Center	Center	Outer Base	Outer Base
100	30.5	1	-	-	-	1	1
110	33.5	1	1	-	-	1	1
120	36.6	1	-	1	-	1	1
130	39.6	1	1	1	-	1	1
140	42.7	1	-	2	-	1	1
150	45.7	1	-	-	1	1	1
160	48.8	1	1	-	1	1	1
170	51.8	1	-	1	1	1	1
180	54.9	1	1	1	1	1	1
190	57.9	1	-	2	1	1	1
200	61.0	1	-	-	2	1	1
210	64.0	1	1	-	2	1	1
220	67.1	1	-	1	2	1	1
230	70.1	1	1	1	2	1	1
240	73.2	1	-	2	2	1	1
250	76.2	1	-	-	3	1	1
260	79.2	1	1	-	3	1	1
270	82.3	1	-	1	3	1	1
280	85.3	1	1	1	3	1	1
290	88.4	1	-	2	3	1	1

77H HAMMERHEAD BOOM COMPOSITION

Boom Length		30 Ft. (9.14m) 77S	10 Ft. (3.05m) 77S	20 Ft. (6.10m) 77S	50 Ft. (15.24m) 77S	40 Ft. (12.19m) 77H	30 Ft. (9.2m) 77H
Ft.	Meters	Inner	Center	Center	Center	Outer Base	Outer Base
70	21.3	1	-	-	-	1	1
80	24.4	1	1	-	-	1	1
90	27.4	1	-	1	-	1	1
100	30.5	1	1	1	-	1	1
110	33.5	1	-	2	-	1	1
120	36.6	1	-	-	1	1	1
130	39.6	1	1	-	1	1	1
140	42.7	1	-	1	1	1	1
150	45.7	1	1	1	1	1	1
160	48.8	1	-	2	1	1	1
170	51.8	1	-	-	2	1	1
180	54.9	1	1	-	2	1	1
190	57.9	1	-	1	2	1	1
200	61.0	1	1	1	2	1	1
210	64.0	1	-	2	2	1	1
220	67.1	1	-	-	3	1	1
230	70.1	1	1	-	3	1	1
240	73.2	1	-	1	3	1	1
250	76.2	1	1	1	3	1	1
260	79.2	1	-	2	3	1	1

BOOM AND JIB ERECTION

77H Boom Length	No. 16HL Maximum Jib Length
290' Tapered Tip	100'
260' Hammerhead	100'

77H Boom Length	No. 16HL Maximum Jib Length
88.4m Tapered Tip	30.5m
79.2m Hammerhead	30.5m

WEIGHTS

	Lbs.	Kg		Lbs.	Kg
Lifting crane with basic 70 ft. (21.3m)			Outer bail assembly	2,450	1,110
77H crane boom and 44" (1.118m) shoes	355,780	161,378	A-frame	5,320	2,410
Components removable for shipment:			Side frames, 44" (1.118m) shoes (2)	71,600	32,480
Counterweight	140,000	63,502	Crawler axles (4)	13,100	5,940
Boom outer and hammerhead	7,870	3,570	Torque tubes (2)	920	420
Boom inner	2,540	1,150	Carbody	28,400	12,880
Telescopic boom stops	300	140			

NOTE: In accordance with varying material situations and the Company's policy of constant product improvement these specifications are subject to change without notice and without incurring responsibility to units previously sold.

GROUND PRESSURE

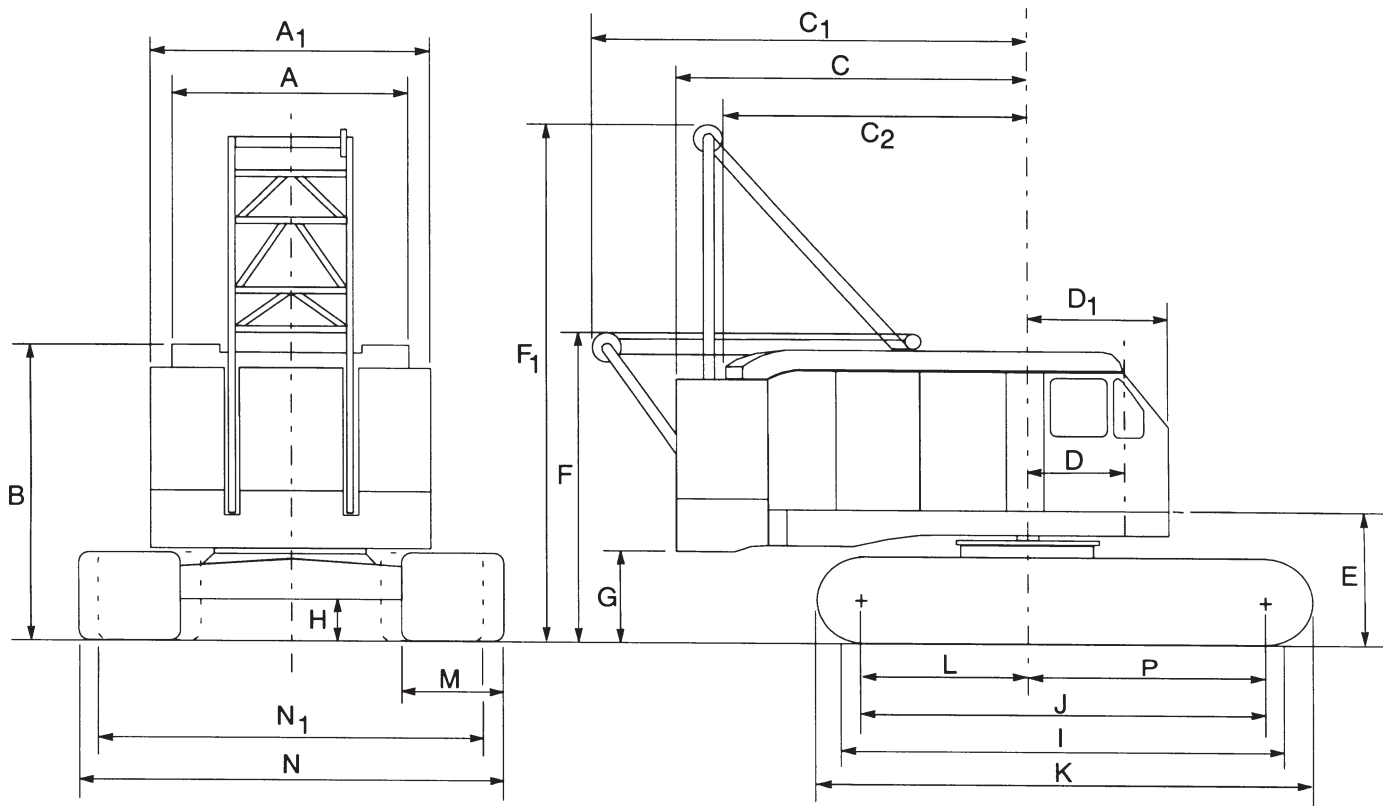
Lifting crane (equipped as above)	13.0 Lb.in ²	.91 Kg/cm ²
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PERFORMANCE

TRAVEL SPEED:	1.1 MPH	1.77 KPH
Friction Swing	2.28 RPM	maximum
Hydrostatic Swing	1.9 RPM	maximum
SINGLE LINE SPEED:		
Crane Hoist	165 FPM	50.3 MPM
Third Drum	192 FPM	58.5 MPM
or	142 FPM	43.3 MPM
LINE PULL:		
Crane Hoist SLP	40,000 lbs.	18,144 Kg
Third Drum SLP	15,000 lbs.	6,804 Kg
or SLP	21,000 lbs.	9,526 Kg

Performance figures are based on machine equipped with standard engine.

AMERICAN MODEL 9310A CRAWLER CRANE

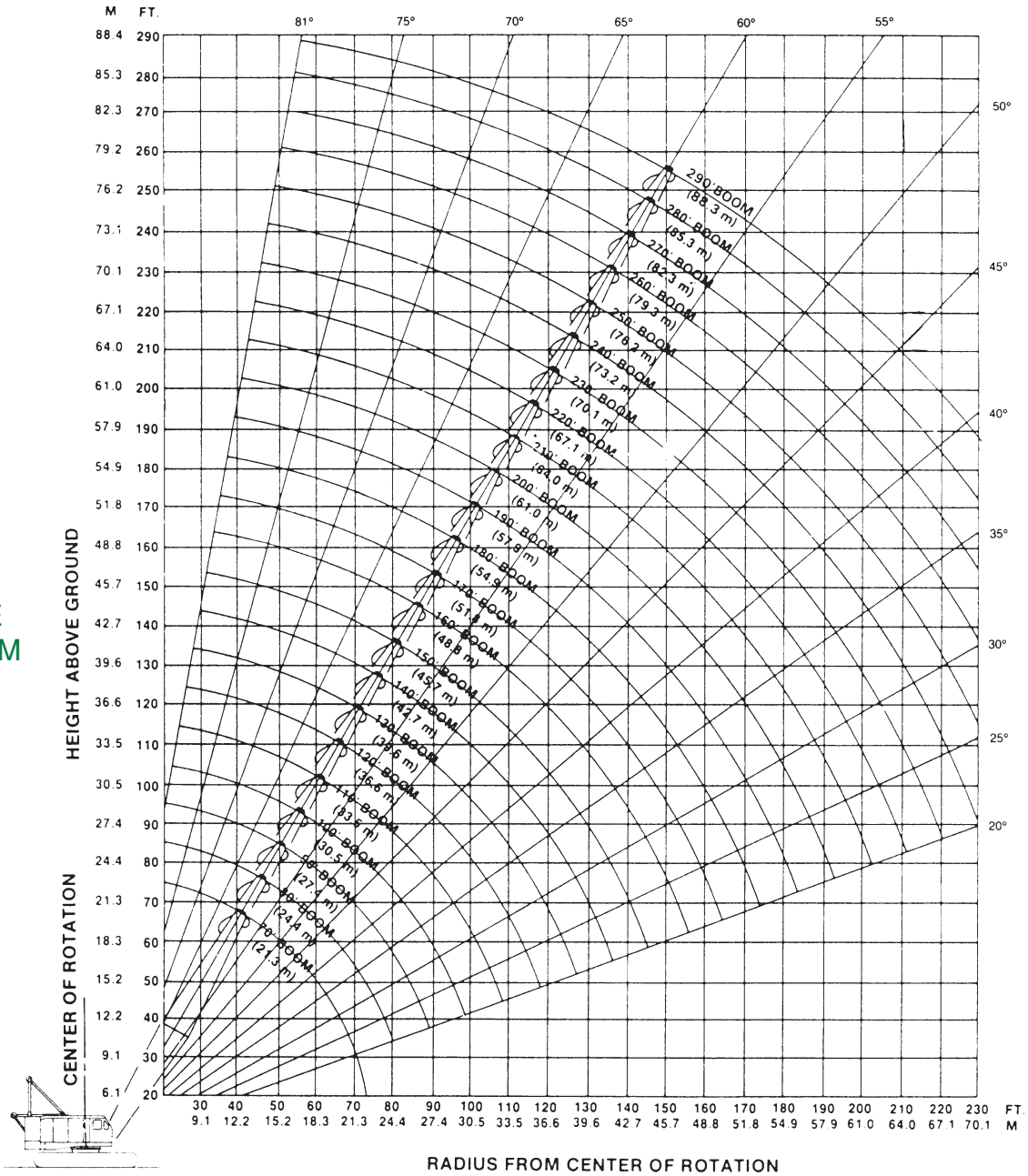


9310A GENERAL DIMENSIONS

	FT	MM
A Width of cab	11'-0"	3353
A ₁ Width over counterweight	13'-2"	4013
B Height over cab	13'-7 1/8"	4143
C Tailswing	17'-0"	5182
C ₁ Tailswing with A-frame, lowered	24'-9"	7544
C ₂ Tailswing less A-frame and counterweight	14'-11"	4546
D Center of rotation to center of boom foot	5'-0 3/4"	1544
D ₁ Center of pivot to front of cab	6'-10 1/2"	2095
E Ground to center boom foot	6'-9 1/8"	2061
F Height over A-frame, lowered - cwt. on	14'-8 5/8"	4485
F Height over A-frame, lowered - cwt. off	14'-9 7/8"	4518
F ₁ Height over A-frame, raised	30'-4 7/8"	9268
G Ground to bottom of counterweight	4'-4 3/8"	1330
H Minimum ground clearance under crawler base	1'-9"	533
I Crawler bearing length	25'-6"	7772
J Center to center crawler tumblers	24'-2"	7366
K Overall length of crawlers	28'-2"	8585
L Center of rotation to center of drive tumbler	11'-0 1/4"	3359
M Width of tread shoes	44'-0"	1118
N Overall width over crawlers - extended	20'-7"	6274
N ₁ Overall width over crawlers - retracted	13'-1 3/4"	5511
P Center of rotation to center of idler tumbler	13'-1 3/4"	4007

AMERICAN MODEL 9310A CRAWLER CRANE WORKING RANGES

BOOM
ANGLE
DIAGRAM



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