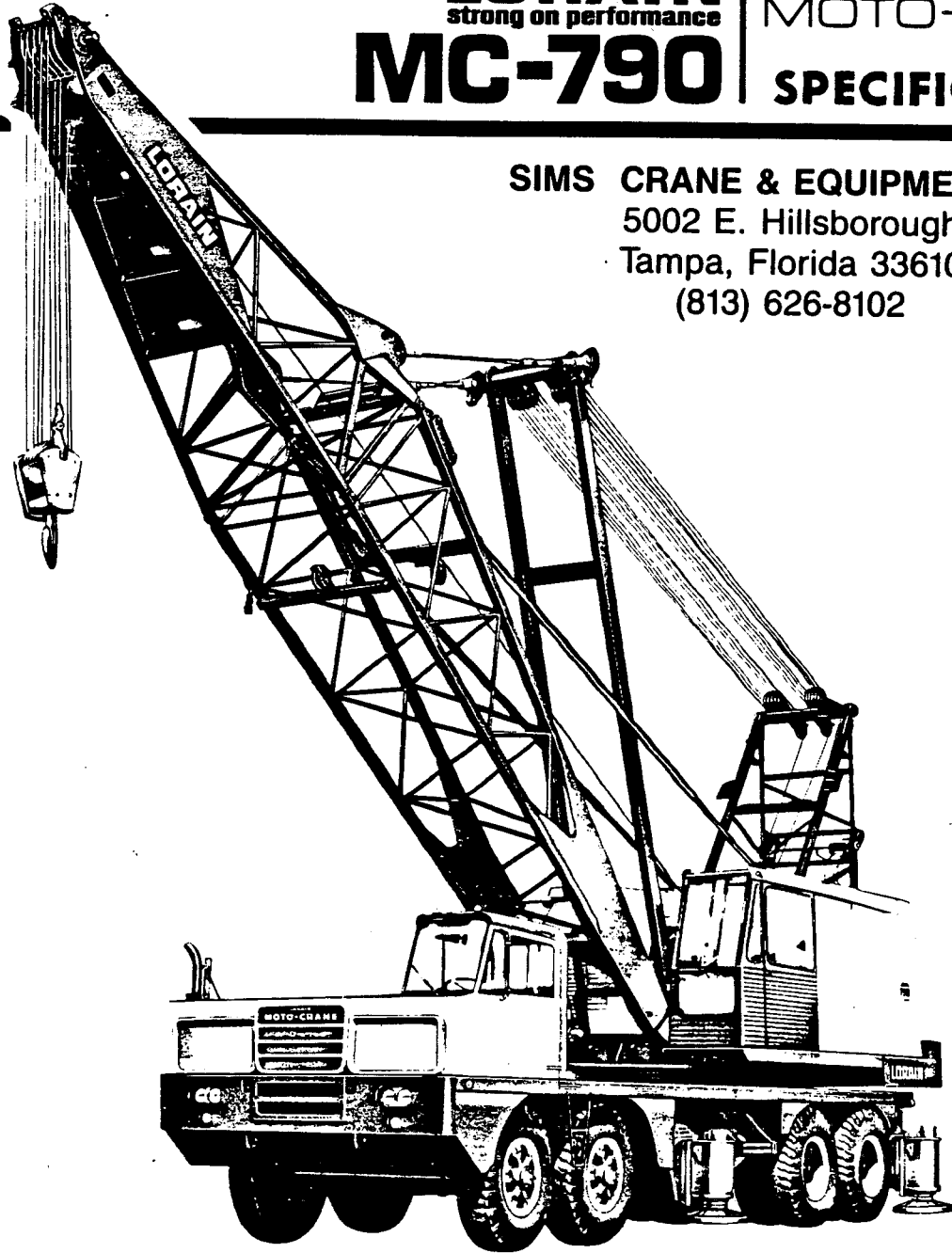


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MC-790

MOTO-CRANE®
SPECIFICATIONS

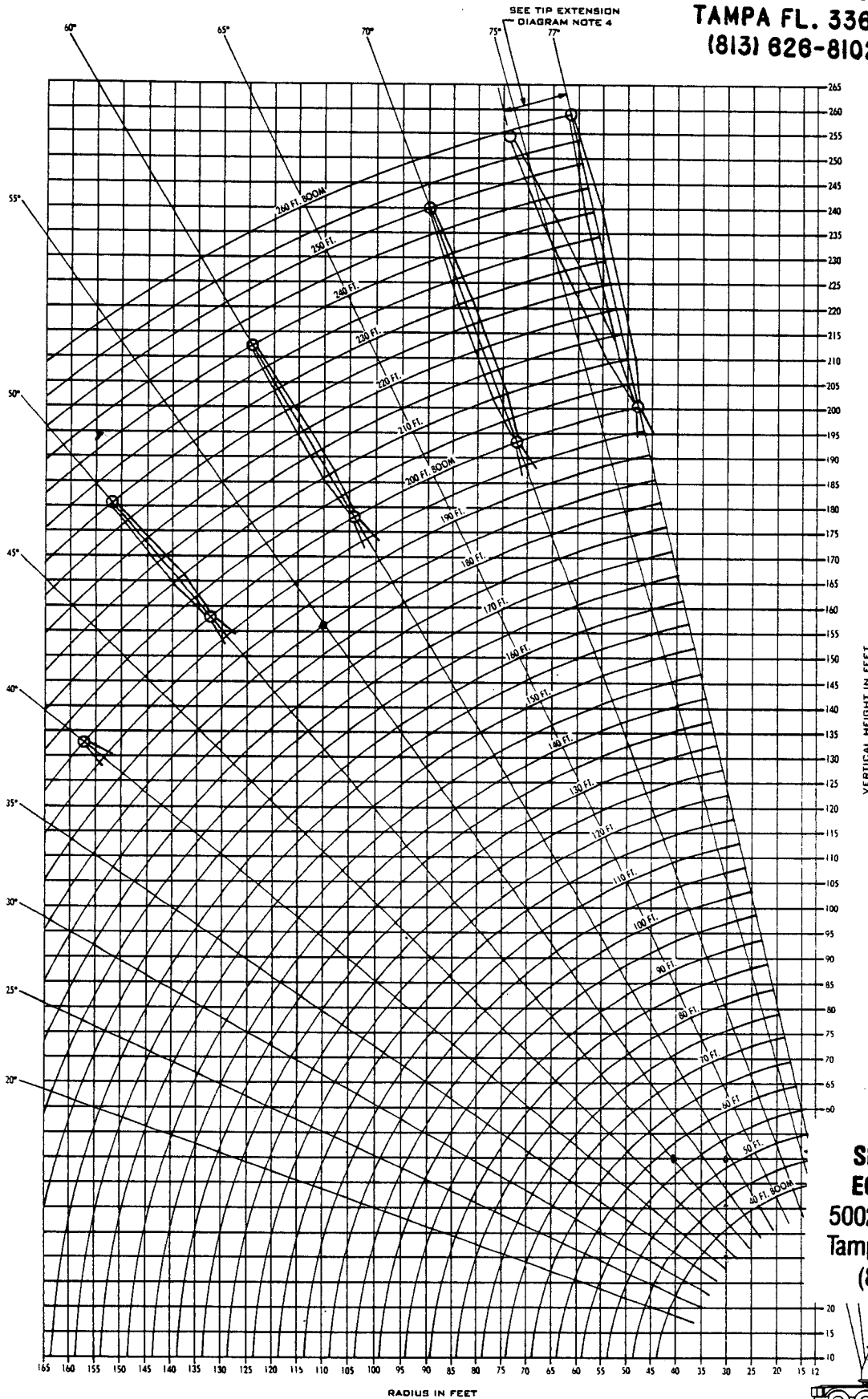
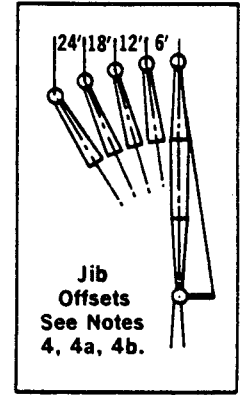
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FEATURES:

- Preferred Square Tubular Chord Boom
- Choice of Three Peaks — Offset, Tapered, Hammerhead
- 270'-Boom and Jib Combination
- Dual Drum Boom Hoist
- Tandem Hoist Drums — Super Spooling Capacity
- Tower Available
- Enclosed All Gear Drive
- Metered Air Controls
- Independent Hydraulic Swing
- 10-Year Warranted "Shear-Ball" Turntable Connection
- Performance Matched Lorain-Built Carrier
- Easy Weight Reduction

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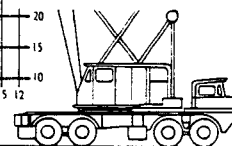


**D-17 BOOM
 WORKING
 RANGES
 MC-790
 8X4**

P.C.S.A. 12-454

**OFFSET BOOM
 PEAK**

**SIMS CRANE &
 EQUIPMENT CO.**
 5002 E. Hillsborough
 Tampa, Florida 33610
 (813) 626-8102



Koehring
Lorain Division
 Chattanooga, Tennessee 37405

We reserve the right to amend these specifications at any time without notice. The only warranty applicable is our standard written warranty. We Make No Other Warranty, Expressed Or Implied.

**CRANE LIFTING CAPACITIES, POUNDS...
D-17 BOOM, OFFSET BOOM PEAK... 8X4**

LORAIN MC-790
strong on performance

**MOTO-CRANE®
LIFTING CAPACITIES
AND WORKING RANGES**

NOTES

- The rated loads as determined by boom length, radius and weight of load in pounds pertain to this machine as originally manufactured and equipped and as mounted on a Thew manufactured MC-790, 8 x 4 carrier. THEY ARE MAXIMUM lifting capacities. The rated loads are in accordance with standards of Power Crane & Shovel Association as issued by the U.S. Department of Commerce Commercial Standard CS90-58 and the SAE Crane Load Stability Test Code J765.
 - DO NOT TIP the machine to determine the allowable loads. Rated loads should not be exceeded. Rated loads are based on 85% of stability except where identified by bold face type in which case they are based on machinery and structural strength.
 - All rated loads are based on the machine being on a firm, level and uniform supporting surface. Before lifting at, or near, rated loads, the machine should be leveled with a commercial level in two directions. FOR SAFE WORKING LOADS THE USER is expected to make due allowances for his particular job conditions such as: Soft or uneven ground, out of level conditions, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, etc. Side pull on boom or jib is extremely dangerous. CAUTION: The operator and other personnel should fully read and acquaint themselves with Operators Manual furnished by the manufacturer BEFORE operating this machine, and Rules for Safe Operation of equipment should be adhered to at all times. Operators and supervisors should also acquaint themselves with Standard Safety Codes for Cranes, Derricks and Hoists, ASA-8 30.2-1943 (R-1952).
 - Do not exceed the "over-the-rear" capacities when lifting over a corner.
 - All lifting must be done with gantry erected. When working conditions will not permit erected gantry, consult Lorain for proper capacity chart.
 - Boom over 170 ft. long requires mast in addition to erected gantry. Mast with erected gantry may also be used with boom lengths of 170 ft. and under.
 - The total weight of bucket plus load must not exceed 80% of the rated "without outriggers" lifting capacities up to a maximum of 13,500 lbs. for dragline service and 15,000 lbs. for clamshell service.
 - More than one part hoist line must be used on any boom when lifting radius is less than 20 ft.
- Load-handling devices are part of the load. For jibs, see notes 4, 4a and 4b.
- Maximum length of main boom 200 ft.
- Jibs may be used straight or goosenecked. 30 ft. jib is two-piece and may be extended to 60 ft. with center sections. The following data apply.

Jib Lght.	Radius	Max. Lght. of Boom incl. Jib	Maximum Lifting Capacity (Lbs.)					Weight of Jib and Backstays
			Offset from	Extended Centerline of Boom				
			0 FT.	6 FT.	12 FT.	18 FT.	24 FT.	
30 Ft.	Up thru 60'	230 Ft.	30000	25000	22000			1700 lbs.
	Over 60'		20000	17000	15000			
40 Ft.	Up thru 60'	240 Ft.	21000	18000	16000	10000		2100 lbs.
	Over 60'		14000	12000	11000	8000		
50 Ft.	Up thru 60'	250 Ft.	15000	13000	12000	9000	8000	2350 lbs.
	Over 60'		10000	9000	8000	7000	6000	
60 Ft.	Up thru 60'	260 Ft.	12000	11000	10000	8000	7000	2550 lbs.
	Over 60'		8000	7500	7000	6000	5000	

- Capacities for jibs are the same as for the boom length which is equal to the length of main boom plus jib, but in no case may they exceed the capacities shown above.
- With jib installed, lifting capacities over main boom head must be reduced as follows:
1800 lbs. for 30 ft. jib 2750 lbs. for 50 ft. jib
2400 lbs. for 40 ft. jib 3000 lbs. for 60 ft. jib
- With gantry erected (21 ft. 7 in. overall height), the following maximum lengths may be carried* over the back without outriggers:
150 ft. boom without jib 120 ft. boom and 40 ft. jib
130 ft. boom and 30 ft. jib 110 ft. boom and 60 ft. jib
*For straight back and forward movement. Remove 10 ft. of boom from that specified for conditions which require maneuverability.
- With gantry lowered or gantry lowered and mast pinned to the base section (12 ft. 9 in. overall height), the following maximum boom lengths may be carried over the back without outriggers:
110 ft. boom without jib 70 ft. boom and 60 ft. jib
80 ft. boom and 30 ft. jib
- With outriggers set, the following maximum boom lengths may be raised unassisted, from the horizontal over the rear. Mast and gantry must be erected.
200 ft. boom without jib 180 ft. boom plus 50 ft. jib
190 ft. boom plus 30 ft. jib 170 ft. boom plus 60 ft. jib
- For boom and jib combinations longer than shown in Note 6, and up to 200 ft. boom and 60 ft. jib, rear aux. outriggers are required.
- Minimum number of parts of hoist line to be determined by dividing the load to be lifted by 19,000 lbs. for 7/8 in. hoist cable with breaking strength of 34.6 tons.
- To handle rated lifting capacities, mast, gantry and floating harness required with 1 1/2 in. swaged pendants with breaking strength of 96 tons and 16 parts of 3/4 in. derricking cable with breaking strength of 19.6 tons.
- Expansion cables must be used on booms over 200 ft. long.

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Boom Length	Radius	Boom Angle	With		
			Outriggers Over Rear And Sides	Over Rear	Over Side
40 Ft.	12	78.1	180000	101500	92300
	15	73.7	158500	73900	66000
	20	66.0	120400	50400	44300
	25	58.0	93200	37900	33000
	30	49.1	69500	30200	26000
	40	25.2	45600	21100	18000
50 Ft.	15	77.0	158100	73700	65800
	20	71.1	120000	50200	44000
	25	64.8	93000	37700	32700
	30	58.4	69300	30000	25800
	40	43.6	45400	20900	17800
	50	22.5	33300	15700	13200
60 Ft.	15	79.1	157700	73400	65500
	20	74.3	119600	49900	43800
	25	69.3	92900	37500	32500
	30	64.0	69200	29700	25600
	40	52.9	45200	20600	17500
	50	39.6	33200	15500	13000
70 Ft.	20	76.6	119300	49700	43600
	25	72.3	92800	37200	32300
	30	67.9	69000	29500	25300
	40	58.8	45100	20400	17300
	50	48.7	33000	15200	12700
	60	36.6	25500	11900	9800
80 Ft.	20	78.2	118900	49500	43300
	25	74.6	92700	37000	32000
	30	70.9	68900	29300	25100
	40	63.0	44900	20200	17100
	50	54.7	32800	15000	12500
	60	45.4	25300	11700	9600
90 Ft.	20	79.5	118600	49200	43100
	25	76.3	92500	36800	31800
	30	73.0	68700	29000	24900
	40	66.2	44700	19900	16800
	50	59.1	32600	14800	12300
	60	51.3	25100	11400	9400
100 Ft.	20	77.7	92400	36500	31600
	25	74.8	68600	28800	24600
	30	71.8	44500	19700	16600
	40	62.4	32400	14500	12000
	50	55.8	24900	11200	9100
	60	48.5	20000	8900	7100
110 Ft.	25	78.8	92300	36300	31300
	30	76.2	68400	28500	24400
	40	70.8	44300	19500	16400
	50	65.1	32200	14300	11800
	60	59.2	24800	11000	8900
	70	53.0	19800	8600	6900
120 Ft.	30	77.3	68300	28300	24200
	40	72.4	44200	19200	16100
	50	67.2	32000	14100	11600
	60	62.0	24600	10700	8700
	70	56.5	19600	8400	6600
	80	50.5	16100	6700	5100
130 Ft.	30	78.3	68100	28100	23900
	40	73.8	44000	19000	15900
	50	69.1	31800	13800	11300
	60	64.3	24400	10500	8400
	70	59.3	19400	8200	6400
	80	54.1	15900	6400	4900
140 Ft.	30	79.1	68000	27800	23700
	40	75.0	43800	18700	15700
	50	70.7	31600	13600	11100
	60	66.2	24200	10200	8200
	70	61.7	19200	7900	6200
	80	57.0	15700	6200	4700
150 Ft.	35	77.9	53300	22300	18800
	40	76.0	43600	18500	15400
	50	72.0	31500	13300	10900
	60	67.8	24000	10000	8000
	70	63.4	18000	7700	6000
	80	58.4	14000	6000	4600

Boom Length	Radius	Boom Angle	With			
			Outriggers Over Rear And Side	Over Rear	Over Side	
150 Ft.	70	63.7	19000	7700	5900	
	80	59.4	15500	6000	4400	
	90	54.9	12800	4700	3300	
	100	50.1	10800	3600	2400	
	110	44.9	9100	2800	2100	
	120	39.1	7800			
	130	32.7	6700			
	140	24.7	5800			
	150	12.9	4900			
	160 Ft.	35	78.6	53200	22100	18600
40		76.9	43400	18300	15200	
50		73.2	31300	13100	10600	
60		69.4	23800	9800	7700	
80		61.5	15300	5700	4200	
100		53.0	10600	3400	2100	
120		43.4	7600			
140		31.6	5500			
160		12.5	4000			
170 Ft.		35	79.3	53000	21800	18300
	40	77.6	43300	18000	15000	
	50	74.2	31100	12900	10400	
	60	70.7	23600	9500	7500	
	80	63.3	15000	5500	4000	
	100	55.5	10300	3100		
	120	46.8	7400			
	140	36.7	5300			
	160	23.2	3800			
	180 Ft.	40	78.3	38000	17600	14500
50		75.1	30800	12500	10000	
60		71.8	23400	9200	7100	
80		64.8	14800	5200	3600	
100		57.6	10100	2800		
120		49.8	7100			
140		40.8	5100			
160		29.8	3600			
180		11.8	2400			
190 Ft.		40	78.9	37700	17400	14300
	50	75.9	30600	12200	9800	
	60	72.7	23200	8900	6900	
	80	66.2	14600	4900	3400	
	100	59.5	9900	2600		
	120	52.3	6900			
	140	44.2	4900			
	160	34.6	3400			
	180	21.9	2200			
	200 Ft.	40	79.4	35000	17100	14100
50		76.6	29200	12000	9500	
60		73.6	23000	8700	6700	
80		67.4	14400	4700	3200	
100		61.2	9700	2300		
120		54.4	6700			
140		47.0	4600			
160		38.6	3100			
180		28.2	2000			
CAPACITIES BELOW INCLUDE JIB (SEE NOTE 4a)						
210 Ft.	45	78.6	30000	14000	11300	
	50	77.2	27500	11800	9300	
	60	74.4	22800	8500	6400	
	80	68.7	14200	4500	2900	
	100	62.7	9500	2100		
	120	56.4	6500			
	140	49.5	4400			
	160	41.9	2900			
	220 Ft.	45	79.1	30000	13800	11100
		50	77.8	25900	11500	9100
60		75.1	22500	8200	6200	
80		69.7	14000	4200	2700	
100		64.0	9300			
120		58.1	6300			
140		51.7	4200			
160		44.7	2700			
230 Ft.		45	79.5	30000	13500	10800
		50	78.3	25700	11300	8900
	60	75.8	19000	8000	6000	
	80	70.6	13800	4000	2500	
	100	65.2	9100			
	120	59.6	6100			
	140	53.6	4000			
	160	47.2	2500			
	240 Ft.	50	78.8	21000	11000	8600
		60	76.4	17500	7700	5700
80		71.4	12900	3700	2200	
100		66.2	8800			
120		61.0	5800			
140		55.4	3800			
160		49.4	2200			
250 Ft.		50	79.2	15000	10800	8400
		60	76.9	15000	7500	5500
		80	72.2	12200	3500	2000
	100	67.2	8600			
	120	62.2	5600			
	140	56.9	3500			
	160	51.3	2000			
	260 Ft.	50	79.6	12000	10600	8100
		60	77.4	12000	7300	5300
		80	72.9	10000	3300	
100						

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LOAD RATINGS

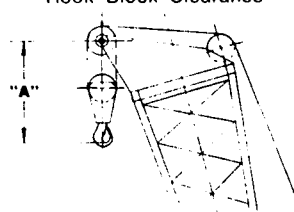
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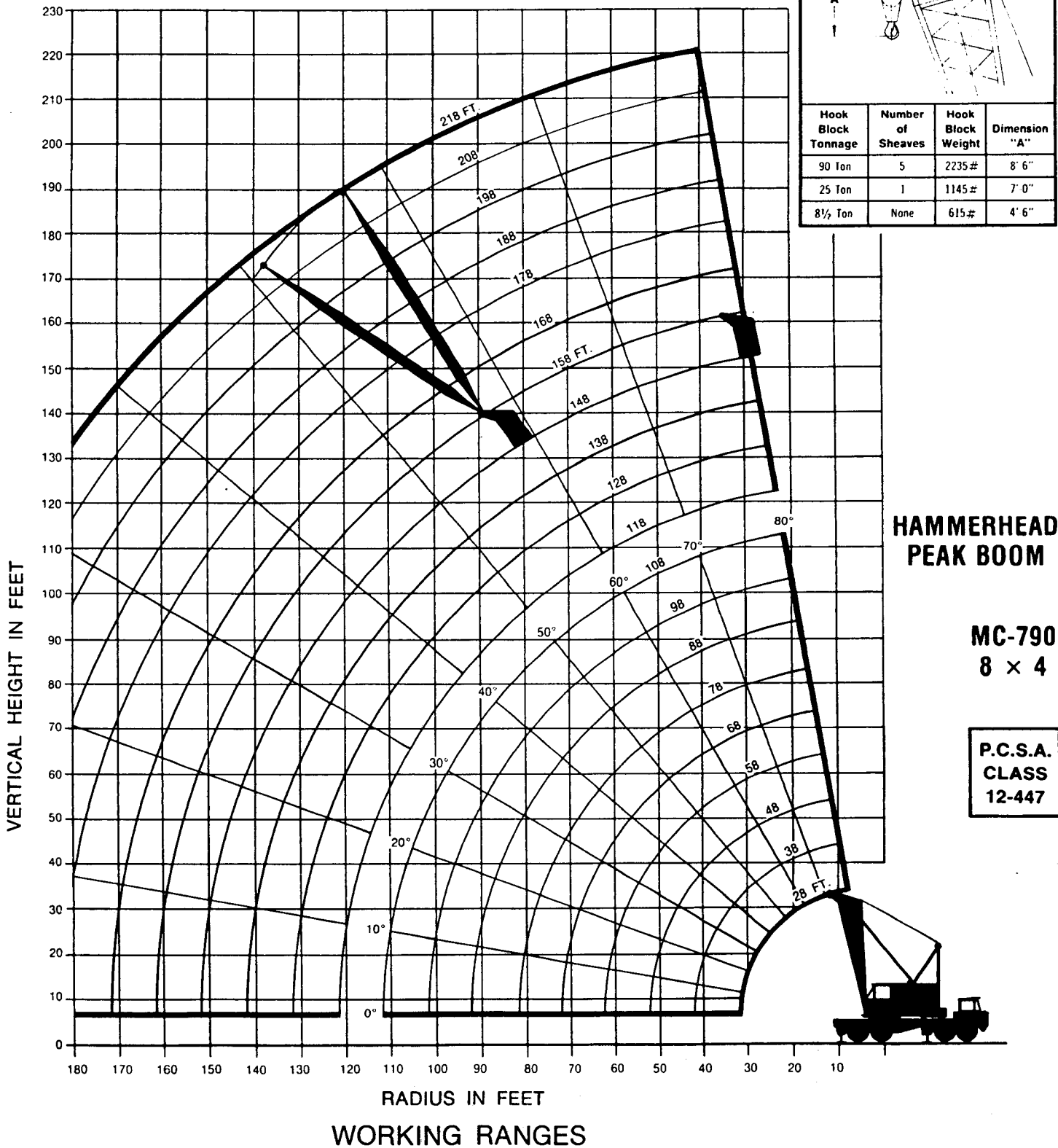
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Hook Block Clearance



Hook Block Tonnage	Number of Sheaves	Hook Block Weight	Dimension "A"
90 Ton	5	2235#	8' 6"
25 Ton	1	1145#	7' 0"
8½ Ton	None	615#	4' 6"



CRANE LOAD RA

Boom Radius Feet	Boom Angle Degrees	Boom Peak Height Feet	With Outriggers		Without Outriggers	
			Over Rear	Over Side	Over Rear	Over Side
28 Ft. Boom						
12	79.5	33.8	180000*	180000*	101100	91800
15	73.0	32.7	158200*	158200*	73400	65500
20	61.3	29.9	120000*	120000*	49900	43700
25	47.6	25.4	92300*	92300*	37500	32500
30	28.1	17.2	57300*	57300*	29700	25500
38 Ft. Boom						
12	82.3	44.0	163800*	163800*	100900	91700
15	77.7	43.2	158000*	158000*	73300	65400
20	69.6	41.3	119800*	119800*	49800	43600
25	61.0	38.5	92300*	92300*	37300	32300
30	51.3	34.5	68700*	68700*	29600	25400
40	23.1	18.9	43400	43400	20500	17400
48 Ft. Boom						
15	80.3	53.6	145000*	145000*	73200	65200
20	74.1	52.1	119600*	119600*	49700	43500
25	67.6	50.0	92300*	92300*	37200	32200
30	60.8	47.2	68600*	68600*	29500	25300
40	45.0	38.5	44800*	44800*	20400	17200
50	20.0	20.3	32700	32700	15200	12700
58 Ft. Boom						
15	82.0	63.8	134100*	134100*	73000	65100
20	76.9	62.6	119400*	119400*	49500	43400
25	71.7	60.9	92200*	92200*	37100	32100
30	66.3	58.6	68600*	68600*	29300	25200
40	54.6	52.2	44700*	44700*	20200	17100
50	40.4	42.0	32600*	32600*	15100	12600
60	17.8	21.6	25200	25200	11700	9600
68 Ft. Boom						
20	78.9	72.9	112900*	112900*	49400	43300
25	74.5	71.5	92200*	92200*	36900	32000
30	70.0	69.6	68500*	68500*	29200	25000
40	60.5	64.5	44600*	44600*	20100	17000
50	49.9	56.8	32500*	32500*	14900	12400
60	37.0	45.2	25100*	25100*	11600	9500
70	16.2	22.8	20200	20200	9300	7500
78 Ft. Boom						
20	80.3	83.2	105500*	105500*	49300	43100
25	76.6	81.9	92100*	92100*	36800	31800
30	72.7	80.3	68400*	68400*	29100	24900
40	64.7	76.0	44500*	44500*	20000	16800
50	56.0	69.7	32400*	32400*	14800	12300
60	46.3	61.0	25000*	25000*	11500	9400
70	34.3	48.2	20100*	20100*	9100	7400
80	14.9	23.9	16600	16600	7400	5900
88 Ft. Boom						
20	81.4	93.3	97000*	97000*	49100	43000
25	78.1	92.3	90100*	90100*	36700	31700
30	74.7	90.9	68400*	68400*	28900	24800
40	67.8	87.1	44400*	44400*	19800	16700
50	60.4	81.8	32300*	32300*	14700	12200
60	52.4	74.6	24900*	24900*	11300	9300
70	43.3	64.9	20000*	20000*	9000	7200
80	32.1	51.0	16500*	16500*	7300	5700
90	13.9	24.9	13900	13900	6000	4600
98 Ft. Boom						
25	79.4	102.5	84300*	84300*	36500	31600
30	76.3	101.3	68300*	68300*	28800	24600
40	70.2	97.9	44400*	44400*	19700	16600
50	63.7	93.3	32300*	32300*	14500	12000
60	56.9	87.2	24800*	24800*	11200	9100
70	49.4	79.1	19900*	19900*	8900	7100
80	40.8	68.5	16400*	16400*	7200	5600
90	30.3	53.6	13800*	13800*	5800	4500
100	13.1	25.9	11800	11800	4800	3600

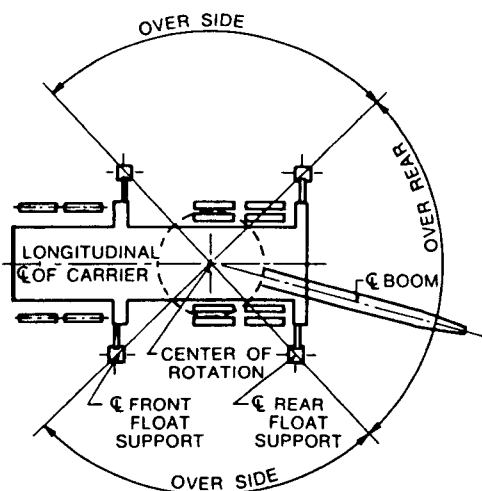
Boom Radius Feet	Boom Angle Degrees	Boom Peak Height Feet	With Outriggers		Without Outriggers	
			Over Rear	Over Side	Over Rear	Over Side
108 Ft. Boom						
25	80.4	112.7	77700*	77700*	36400	31400
30	77.6	111.6	68300*	68300*	28700	24500
40	72.1	108.6	44300*	44300*	19600	16500
50	66.4	104.5	32200*	32200*	14400	11900
60	60.3	99.1	24700*	24700*	11100	9000
70	53.9	92.2	19800*	19800*	8800	7000
80	46.8	83.4	16300*	16300*	7000	5500
90	38.8	72.0	13700*	13700*	5700	4300
100	28.8	56.0	11700*	11700*	4700	3400
110	12.3	26.8	10000	10000	3800	2700
118 Ft. Boom						
30	78.7	121.9	67600*	67600*	28500	24400
40	73.7	119.2	44200*	44200*	19400	16300
50	68.5	115.4	32100*	32100*	14300	11800
60	63.1	110.6	24600*	24600*	11000	8900
70	57.4	104.5	19700*	19700*	8600	6800
80	51.3	97.0	16200*	16200*	6900	5400
90	44.6	87.5	13600*	13600*	5600	4200
100	37.0	75.2	11500*	11500*	4500	3300
110	27.4	58.4	9900*	9900*	3600	2600
120	11.7	27.7	8600	8600	2800	
128 Ft. Boom						
30	79.6	132.1	63500*	63500*	28400	24300
40	75.0	129.6	44100*	44100*	19300	16200
50	70.3	126.2	32000*	32000*	14200	11700
60	65.4	121.9	24500*	24500*	10800	8700
70	60.3	116.4	19600*	19600*	8500	6700
80	54.9	109.7	16100*	16100*	6800	5200
90	49.1	101.5	13500*	13500*	5400	4100
100	42.7	91.3	11400*	11400*	4300	3100
110	35.4	78.4	9800*	9800*	3300	2300
120	26.3	60.6	8500*	8500*	2600	
130	11.2	28.6	7400	7400		
138 Ft. Boom						
30	80.4	142.3	57700*	57700*	28300	24100
40	76.1	140.0	44000*	44000*	19200	16100
50	71.8	136.9	31900*	31900*	14000	11500
60	67.3	132.9	24400*	24400*	10700	8600
70	62.6	127.9	19500*	19500*	8400	6600
80	57.8	121.9	16000*	16000*	6600	5100
90	52.7	114.6	13400*	13400*	5100	3900
100	47.1	105.8	11300*	11300*	4000	2800
110	41.0	95.0	9700*	9700*	3100	2000
120	34.0	81.3	8400*	8400*	2300	
130	25.2	62.8	7300*	7300*		
140	10.7	29.4	6300	6300		
148 Ft. Boom						
35	79.1	151.5	50800*	50800*	22900	19300
40	77.1	150.3	43900*	43900*	19100	16000
50	73.0	147.4	31800*	31800*	13900	11400
60	68.9	143.8	24300*	24300*	10600	8500
70	64.7	139.2	19400*	19400*	8200	6500
80	60.2	133.7	15900*	15900*	6300	4900
90	55.6	127.2	13200*	13200*	4900	3600
100	50.7	119.3	11200*	11200*	3700	2600
110	45.4	110.0	9600*	9600*	2800	
120	39.5	98.5	8300*	8200*	2000	
130	32.7	84.2	7100*	7000*		
140	24.3	64.9	6100*	6000*		
150	10.3	30.2	5200	5100		

LOADINGS - POUNDS

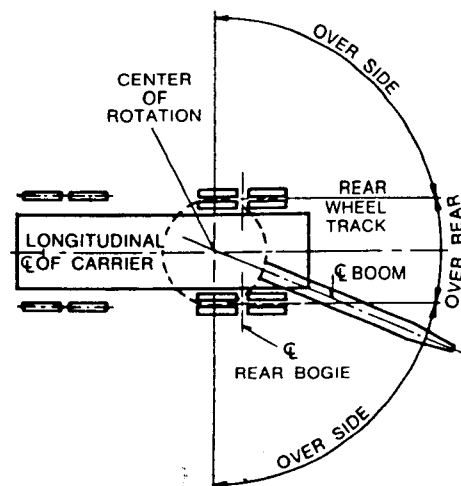
Boom Radius Feet	Boom Angle Degrees	Boom Peak Height Feet	With Outriggers		Without Outriggers	
			Over Rear	Over Side	Over Rear	Over Side
158 Ft. Boom						
35	79.8	161.7	47500*	47500*	22700	19200
40	77.9	160.6	43800*	43800*	18900	15800
50	74.1	157.9	31700	31700	13800	11300
60	70.3	154.5	24200	24200	10400	8400
70	66.4	150.3	19300	19300	7900	6300
80	62.3	145.3	15800	15800	6000	4600
90	58.1	139.3	13100	13100	4600	3300
100	53.6	132.2	11100	11100	3400	2300
110	48.9	123.8	9500	9400	2500	
120	43.8	113.9	8100	8000		
130	38.2	101.9	6900	6700		
140	31.6	87.0	5800	5700		
150	23.5	66.9	5000	4800		
160	9.9	31.0	4200	4100		
Following Load Ratings Include Jib (No Offset)						
168 Ft. Boom						
35	80.4	171.9	30000*	30000*	22600	19100
40	78.6	170.9	30000*	30000*	18800	15700
50	75.1	168.4	30000*	30000*	13600	11200
60	71.5	165.2	24100	24100	10300	8200
80	64.1	156.6	15700	15700	6200	4700
100	56.1	144.6	11000	11000	3600	2500
120	47.3	128.2	8000	8000		
140	36.9	105.2	6000	6000		
160	22.7	68.8	4400	4400		
178 Ft. Boom						
40	79.3	181.1	30000*	30000*	18700	15600
50	76.0	178.7	30000*	30000*	13500	11000
60	72.6	175.7	24000	24000	10200	8000
80	65.7	167.7	15600	15600	5900	4500
100	58.3	156.6	10900	10900	3300	2200
120	50.3	141.7	7900	7900		
140	41.1	121.5	5800	5700		
160	29.7	92.3	4100	4000		
180	9.3	32.4	2900	2800		

Boom Radius Feet	Boom Angle Degrees	Boom Peak Height Feet	With Outriggers		Without Outriggers	
			Over Rear	Over Side	Over Rear	Over Side
188 Ft. Boom						
40	79.9	191.3	30000*	30000*	18500	15400
50	76.7	189.1	30000*	30000*	13400	10900
60	73.6	186.2	23900	23900	10000	8000
80	67.1	178.7	15500	15500	5800	4400
100	60.2	168.4	10800	10800	3200	2100
120	52.8	154.6	7800	7800		
140	44.5	136.5	5700	5600		
160	34.8	111.5	4100	4000		
180	21.4	72.5	2800	2700		
198 Ft. Boom						
40	80.4	201.5	21000*	21000*	18400	15300
50	77.4	199.4	21000*	21000*	13200	10800
60	74.4	196.7	21000*	21000*	9900	7900
80	68.3	189.6	14000*	14000*	5500	4100
100	61.8	179.9	10700	10700	3000	
120	55.0	167.2	7700	7600		
140	47.5	150.6	5400	5300		
160	38.8	128.5	3800	3700		
180	28.1	97.2	2500	2400		
208 Ft. Boom						
45	79.4	210.7	15000*	15000*	15000*	12600
50	78.0	209.6	15000*	15000*	13000	10600
60	75.2	207.1	15000*	15000*	9700	7700
80	69.4	200.4	10000*	10000*	5700	4100
100	63.3	191.3	10000*	10000*	3100	
120	56.9	179.4	7500	7500		
140	50.0	164.1	5400	5400		
160	42.2	144.2	3900	3800		
180	33.0	117.4	2700	2600		
218 Ft. Boom						
45	79.9	220.9	12000*	12000*	12000*	12000*
50	78.6	219.9	12000*	12000*	12000*	10400
60	75.9	217.5	12000*	12000*	9500	7500
80	70.4	211.1	8000*	8000*	5500	3900
100	64.6	202.5	8000*	8000*	3100	2100
120	58.6	191.3	7300	7300		
140	52.2	177.1	5200	5200		
160	45.1	158.9	3700	3700		
180	36.9	135.2	2600	2600		

CRANE WORKING AREAS



Carrier With Outriggers



Carrier Without Outriggers

GENERAL NOTES

- Crane load ratings in pounds as determined by boom length, radius or boom angle apply to the MC-790 Moto-Crane only as originally manufactured, equipped and mounted on an 8 x 4 Lorain MC-790 carrier. **THEY ARE MAXIMUM CRANE LOAD RATINGS.**
- Operating radius is the horizontal distance from the axis of rotation before loading, to the center of the vertical hoist line or tackle with load applied. Crane load ratings are for machines with 20,000 lbs. of counterweight and do not exceed 85% of tipping loads. Ratings identified with asterisk (*) are based on the machine's structural competence and not on the machine stability. Weight of hooks, hook blocks, slings and all other handling devices, except hoist rope shall be considered a part of the load. Crane load ratings with outriggers are based on outrigger fully extended and set to a distance of 11 ft. 0 in. from the longitudinal axis of the carrier to the outrigger float pivot connection and wheels within the boundary of the outriggers. Crane load ratings without outriggers depend on tire capacity and condition of tires inflated to 100 P.S.I.
- Crane load ratings are based on freely suspended loads with the machine leveled and standing on a firm, uniform supporting surface. Practical working loads depend on supporting surface, wind and other factors affecting stability, hazardous surroundings, experience of personnel and proper handling, all of which must be taken into account by the operator. Positioning or operation at radii and boom or jib lengths beyond the maximum and minimum shown, is not intended or approved.
- BEFORE** operating this machine the operator and other personnel should thoroughly read and understand the Operator's Manual and CIMA Crane User's Safety Manual furnished by the manufacturer.
- This crane and its load ratings are in accordance with Power Crane and Shovel Association Standards No. 1, SAE Crane Load Stability Test Code J-765a, SAE Method of Test for Crane Structure J-987 and Safety Code for Cranes, Derricks and Hoists, ANSI B30.5-1968.
- All lifting must be done with gantry in raised position.
- Do not exceed the "over-the-rear" capacities when lifting over a corner.
- Use blocking under front tires or front part of carrier frame if boom and/or load is to be moved forward of front outriggers.
- "Without Outriggers" crane load ratings are for over rear and over side as indicated. If loads are to be rotated over the corners of the vehicle, the outriggers should be extended to reduce tire and axle loadings.
- The total weight of bucket plus load must not exceed 80% of the "Without Outriggers" crane load ratings up to a maximum of 13,500 lbs. for dragline service and 15,000 lbs. for clamshell service.
- More than one part hoist line must be used on any boom when lifting radius is less than 20 ft.
- Mast not required, but may be used with raised gantry.
- Maximum length of boom (without jib).....158 ft.
- The lengths listed below may be carried over the rear under the following conditions, straight back or forward movement, outriggers clear of the ground, gantry erected (21 ft.-7 in. overall height) low-low gear. For conditions requiring maneuverability reduce boom length by 10 ft.

158 ft. boom without jib	148 ft. boom and 40 ft. jib
158 ft. boom and 30 ft. jib	138 ft. boom and 60 ft. jib

- With gantry in lowered position or gantry lowered and mast pinned to the base section, (12 ft. 9 in. overall height less jib) (15 ft. 10½ in. with jib) the following maximum boom lengths may be carried over the rear without outriggers:

108 ft. boom without jib	68 ft. boom and 60 ft. jib
78 ft. boom and 30 ft. jib	
- With outriggers set and gantry in raised position, the following maximum boom lengths may be raised unassisted, from the horizontal over the rear:

158 ft. boom without jib	158 ft. boom and 60 ft. jib
--------------------------	-----------------------------
- Hoist Cable Reeving:

Number of Parts of Hoist Lines	1	2	3	4	5	6	7	8	9	10
Maximum Loads (Lbs.)	19000	38000	57000	76000	95000	114000	133000	152000	171000	180000

Use ½" diameter hoist cable (6 x 25, IWRC) of 34 6 tons breaking strength.

- Crane load ratings are based on the use of:
 - 1½" diameter swaged pendants (6 x 25, IWRC) of 96 tons breaking strength and 16 parts of ¾" diameter derricking cable (6 x 30G, IWRC) of 19.6 tons breaking strength.

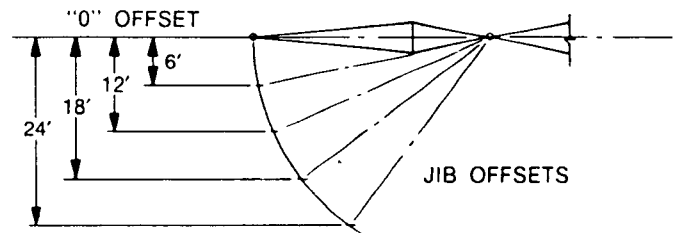
NOTES FOR JIB APPLICATION

- Jibs may be used straight or offset. 30 ft. jib is of two-piece design and may be extended to 60 ft. with center sections. The following data apply:

Jib Lgth.	Radius	Max. Lgth. of Boom Incl. Jib	Maximum Lifting Capacity (Lbs.) Offset from Extended C.L. of Boom					Weight of Jib and Backstays
			0 Ft.	6 Ft.	12 Ft.	18 Ft.	24 Ft.	
30 Ft.	Up thru 60' Over 60'	188 Ft.	30000	25000	22000			1880 Lbs.
			20000	17000	15000			
40 Ft.	Up thru 60' Over 60'	198 Ft.	21000	18000	16000	10000		2280 Lbs.
			14000	12000	11000	8000		
50 Ft.	Up thru 60' Over 60'	208 Ft.	15000	13000	12000	9000	8000	2530 Lbs.
			10000	9000	8000	7000	6000	
60 Ft.	Up thru 60' Over 60'	218 Ft.	12000	11000	10000	8000	7000	2730 Lbs.
			8000	7500	7000	6000	5000	

- Load ratings for jibs are the same as for the boom length which is equal to the length of main boom plus jib but in no case may they exceed the capacities shown above.
- With jib installed, load ratings over main boom head must be reduced as follows:

1980 lbs. for 30 ft. jib	2930 lbs. for 50 ft. jib
2580 lbs. for 40 ft. jib	3180 lbs. for 60 ft. jib



SIMS CRANE & EQUIPMENT CO.

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We reserve the right to amend these specifications at any time without notice. The only warranty applicable is our standard written warranty. We Make No Other Warranty, Expressed Or Implied.



Koehring
Crane and Excavator Group
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