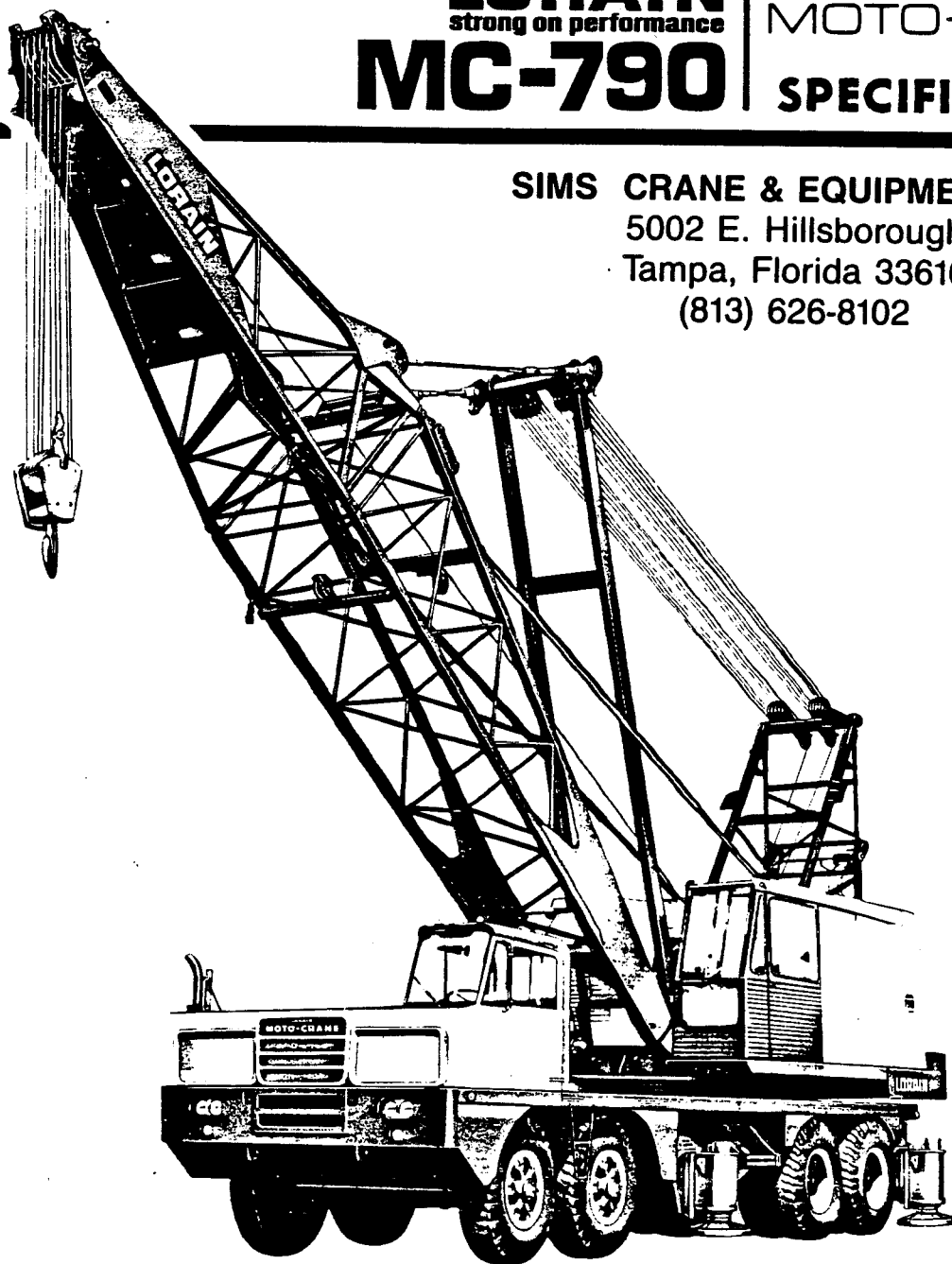




LORAIN
strong on performance
MC-790

MOTO-CRANE®
SPECIFICATIONS

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

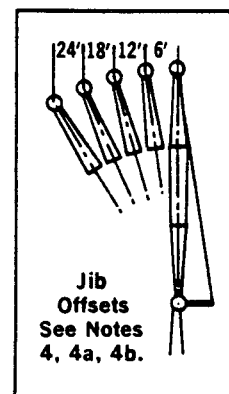
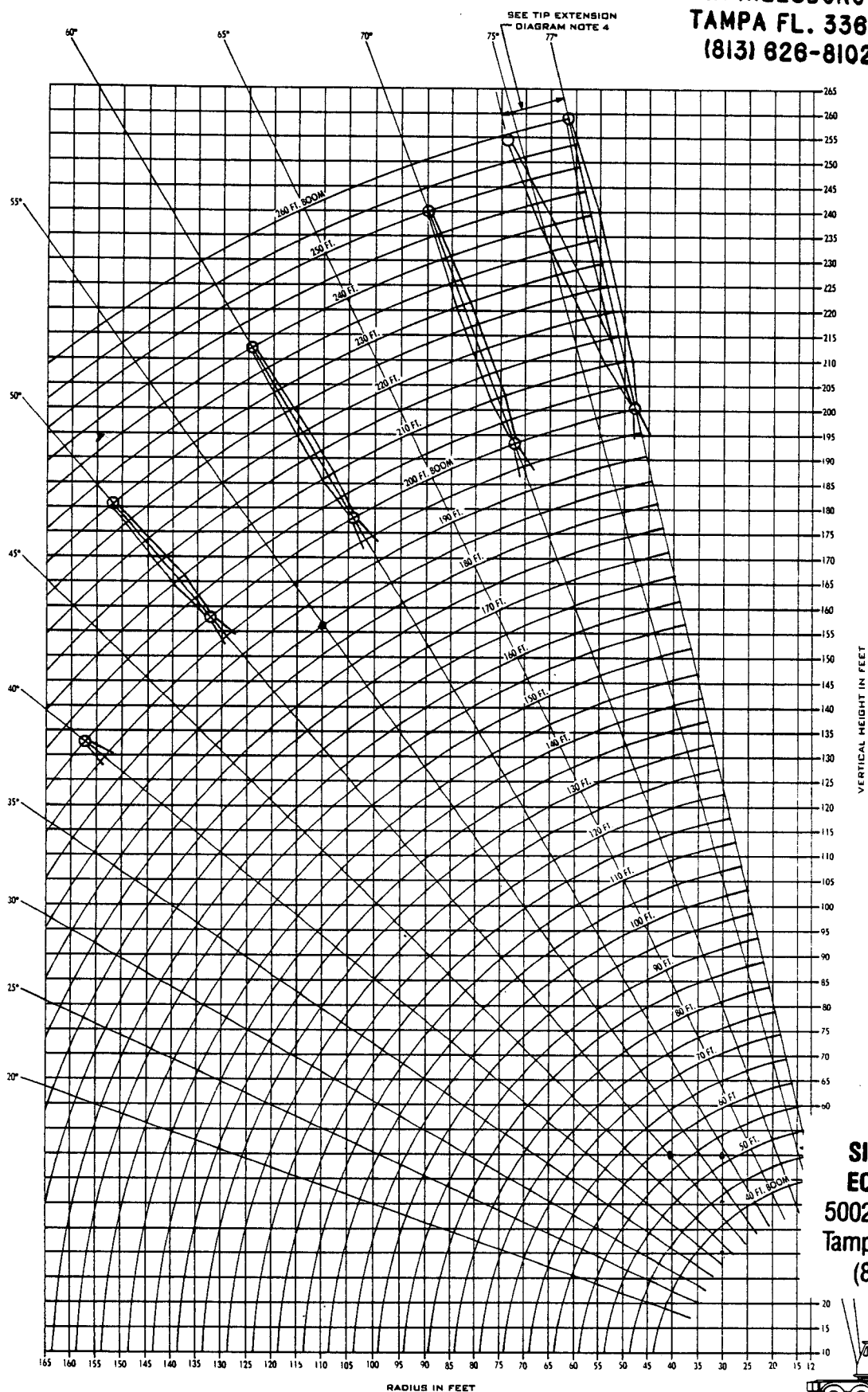


FEATURES:

- 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



SIMS CRANE & EQUIPMENT CO.
 5002 E. HILLSBOROUGH AVE.
 TAMPA FL. 33610
 (813) 626-8102

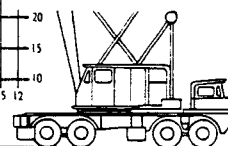


**D-17 BOOM
 WORKING
 RANGES
 MC-790
 8X4**

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
strong on performance

MC-790
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-B 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 Lgh.	Radius	Max. Lgh. of Boom incl. Jib	Maximum Lifting Capacity (Lbs.)					Weight of Jib and Backstays
			Offset from Centerline of Boom	0 FL	6 FL	12 FL	18 FL	
30 Ft.	Up thru 60' Over 60'	230 Ft.	30000 20000	25000 17000	22000 15000	18000 10000	14000 8000	1700 lbs.
40 Ft.	Up thru 60' Over 60'	240 Ft.	21000 14000	18000 12000	16000 11000	10000 8000	7000 5000	2100 lbs.
50 Ft.	Up thru 60' Over 60'	250 Ft.	15000 10000	13000 9000	12000 8000	9000 7000	8000 6000	2350 lbs.
60 Ft.	Up thru 60' Over 60'	260 Ft.	12000 8000	11000 7500	10000 7000	8000 6000	7000 5000	2550 lbs.

- 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
2400 lbs. for 40 ft. jib
2750 lbs. for 50 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
130 ft. boom and 30 ft. jib
120 ft. boom and 40 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
80 ft. boom and 30 ft. jib
70 ft. boom and 60 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
190 ft. boom plus 30 ft. jib
180 ft. boom plus 50 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 3/4 in. swaged pendants with breaking strength of 96 tons and 16 parts of 5/8 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 Side		Without Outriggers Over Rear Over Side	
			Over Rear	Over Side	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	
50 Ft.	40	25.2	45600	21100	18000	
	15	77.0	158100	73700	65800	
	20	71.1	120000	50200	44000	
	25	64.8	93000	37700	32700	
	30	58.4	69300	30000	25800	
60 Ft.	40	43.6	45400	20900	17800	
	50	22.5	33300	15700	13200	
	15	79.1	157700	73400	65500	
	20	74.3	119600	49900	43800	
	25	69.3	92900	37500	32500	
70 Ft.	30	64.0	69200	29700	25600	
	40	52.9	45200	20600	17500	
	50	39.6	33200	15500	13000	
	60	20.5	25700	12100	10100	
	20	76.6	119300	49700	43600	
80 Ft.	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	
90 Ft.	70	19.0	20600	9600	7800	
	20	78.2	118900	49500	43300	
	25	74.6	92700	37000	32000	
	30	70.9	68900	29300	25100	
	40	63.0	44900	20200	17100	
100 Ft.	50	54.7	32800	15000	12500	
	60	45.4	25300	11700	9600	
	70	34.1	20400	9300	7600	
	80	17.8	16900	7600	6100	
	20	79.5	118600	49200	43100	
110 Ft.	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	
120 Ft.	70	42.6	20200	9100	7300	
	80	32.1	16700	7400	5800	
	90	16.7	14100	6100	4700	
	20	77.7	92400	36500	31600	
	30	74.8	68600	28800	24600	
130 Ft.	40	68.7	44500	19700	16600	
	50	62.4	32400	14500	12000	
	60	55.8	24900	11200	9100	
	70	48.5	20000	8900	7100	
	80	40.3	16500	7200	5600	
140 Ft.	90	30.4	13900	5800	4500	
	100	15.9	11800	4800	3500	
	20	78.8	92300	36300	31300	
	30	76.2	68400	28500	24400	
	40	70.8	44300	19500	16400	
150 Ft.	50	65.1	32200	14300	11800	
	60	59.2	24800	11000	8900	
	70	53.0	19800	8600	6900	
	80	46.1	16300	6900	5400	
	90	38.3	13700	5600	4200	
160 Ft.	100	29.0	11600	4600	3300	
	110	15.1	10000	3700	2600	
	20	77.3	68300	28300	24200	
	30	72.4	44200	19200	16100	
	40	67.2	32000	14100	11600	
170 Ft.	50	62.0	24600	10700	8700	
	60	56.5	19600	8400	6600	
	70	50.5	16100	6700	5100	
	80	44.1	13400	5400	4000	
	90	36.6	11400	4300	3100	
180 Ft.	100	27.7	9800	3500	2300	
	110	14.5	8700	2800	1300	
	20	78.3	68100	28100	23900	
	30	73.8	44000	19000	15900	
	40	69.1	31800	13800	11300	
190 Ft.	50	64.3	24400	10500	8400	
	60	59.3	19400	8200	6400	
	70	54.1	15900	6400	4900	
	80	48.4	13200	5100	3800	
	90	42.2	11200	4100	2800	
200 Ft.	100	35.2	9600	3200	2100	
	110	26.6	8200	2500		
	120	13.9	7100			
	20	79.1	68000	27800	23700	
	30	75.0	43800	18700	15700	
210 Ft.	40	70.7	31600	13600	11100	
	50	66.2	24200	10200	8200	
	60	61.7	19200	7900	6200	
	70	57.0	15700	6200	4700	
	80	52.0	13000	4900	3500	
220 Ft.	90	46.6	11000	3800	2600	
	100	40.6	9300	3000		
	110	33.9	8000	2300		
	120	25.6	6900			
	130	13.4	6000			
230 Ft.	140					
	20	77.9	53300	22300	18800	
	30	76.0	43600	18500	15400	
	40	72.0	31500	13300	10900	
	50	67.8	24000	10000	8000	
240 Ft.	60					
	20	79.6	53200	22200	18700	
	30	77.4	43500	18400	15300	
	40	73.2	31400	13200	10800	
	50	69.1	23900	9900	7900	
250 Ft.	60					
	20	79.6	53200	22200	18700	
	30	77.4	43500	18400	15300	
	40	73.2	31400	13200	10800	
	50	69.1	23900	9900	7900	
260 Ft.	60					
	20	79.6	53200	22200	18700	
	30	77.4	43500	18400	15300	
	40	73.2	31400	13200	10800	
	50	69.1	23900	9900	7900	

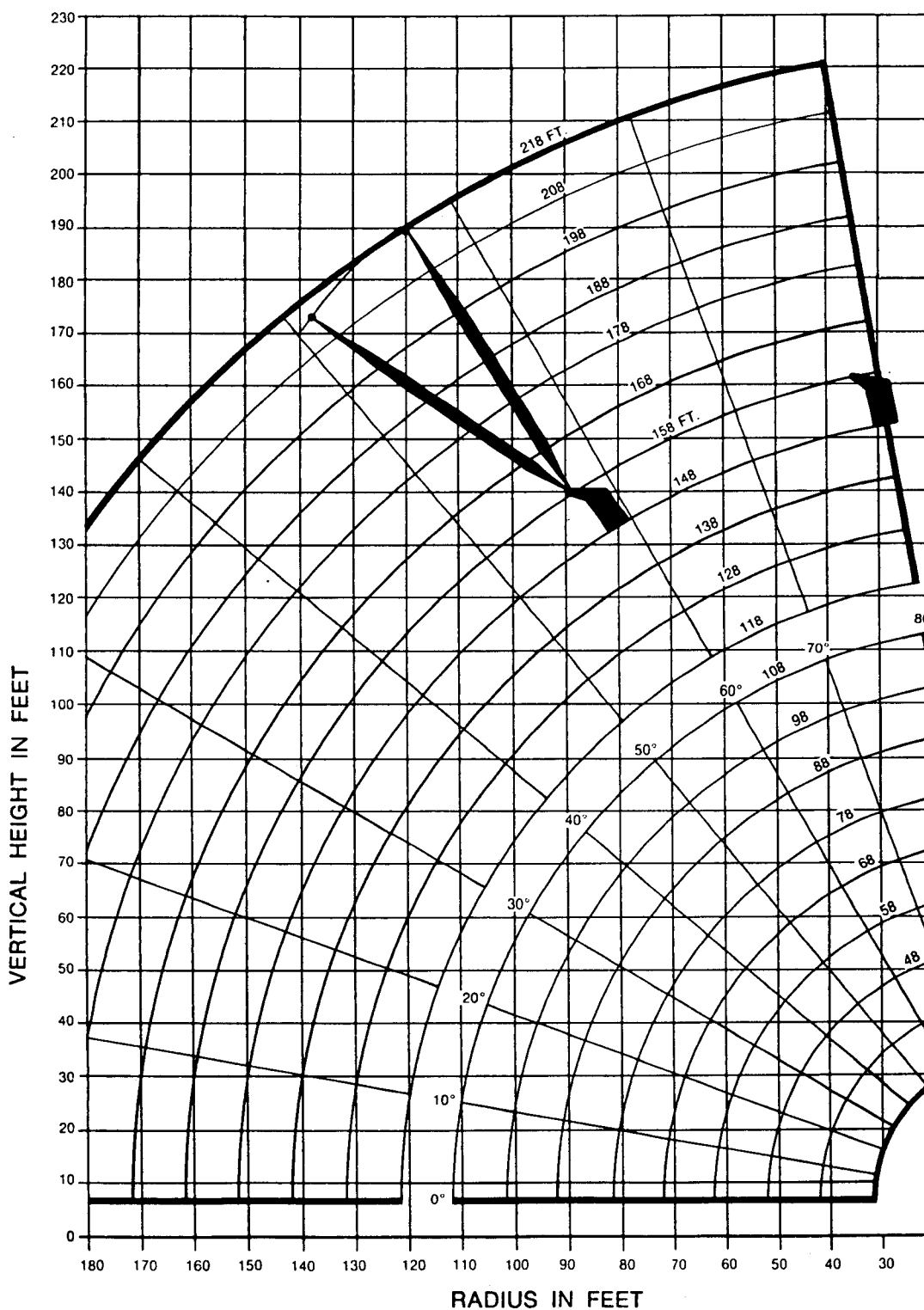


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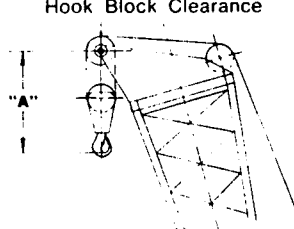
MOTO-CRANE[®]
LOAD RATINGS

SIMS CRANE & EQUIPMENT CO.

5002 E. Hillsborough
Tampa, Florida 33610
(813) 626-8102



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"
8 1/2 Ton	None	615 #	4' 6"

**HAMMERHEAD
PEAK BOOM**

MC-790
8 × 4

**P.C.S.A.
CLASS
12-447**

WORKING RANGES



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	6200		
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		

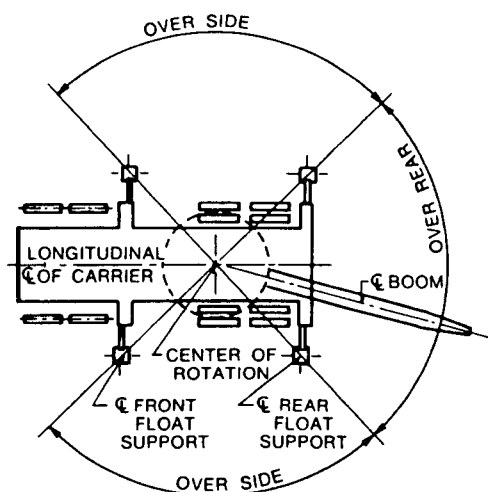


LOADINGS - POUNDS

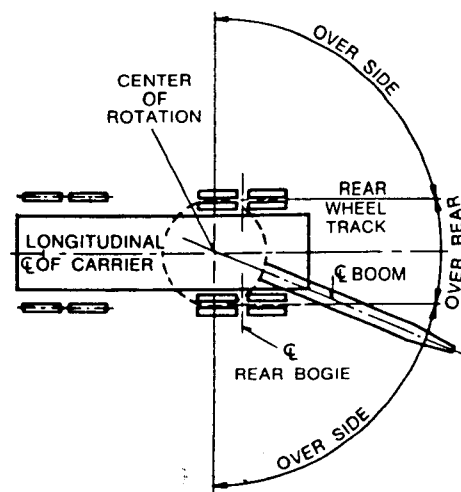
Boom Radius Feet	Boom Angle Degrees	Boom Peak Height Feet	With Outriggers		Without Outriggers	
			Over Rear	Over Side	Over Rear	Over Side
158 Ft. Boom						
35	79.8	161.7	47500 *	47500 *	22700	19200
40	77.9	160.6	43800 *	43800 *	18900	15800
50	74.1	157.9	31700	31700	13800	11300
60	70.3	154.5	24200	24200	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

1. 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.**

2. 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.

3. 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.

4. **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.

5. 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.

6. All lifting must be done with gantry in raised position.

7. Do not exceed the "over-the-rear" capacities when lifting over a corner.

8. Use blocking under front tires or front part of carrier frame if boom and/or load is to be moved forward of front outriggers.

9. "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.

10. 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.

11. More than one part hoist line must be used on any boom when lifting radius is less than 20 ft.

12. Mast not required, but may be used with raised gantry.

13. Maximum length of boom (without jib).....158 ft.

14. 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

15. 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

16. 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

17. 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.

18. Crane load ratings are based on the use of:

1¾" 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

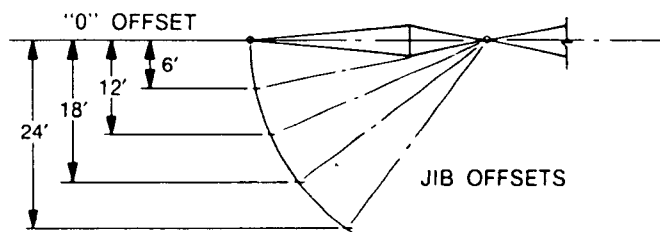
1. Jibs may be used straight or offset. 30 ft. jib is of two-piece design and may be extended to 60 ft. with center sections. The following data apply:

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 20000	25000 17000	22000 15000			1880 Lbs.
40 Ft.	Up thru 60' Over 60'	198 Ft.	21000 14000	18000 12000	16000 11000	10000 8000		2280 Lbs.
50 Ft.	Up thru 60' Over 60'	208 Ft.	15000 10000	13000 9000	12000 8000	9000 7000	8000 6000	2530 Lbs.
60 Ft.	Up thru 60' Over 60'	218 Ft.	12000 8000	11000 7500	10000 7000	8000 6000	7000 5000	2730 Lbs.

2. 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.

3. 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



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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.



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