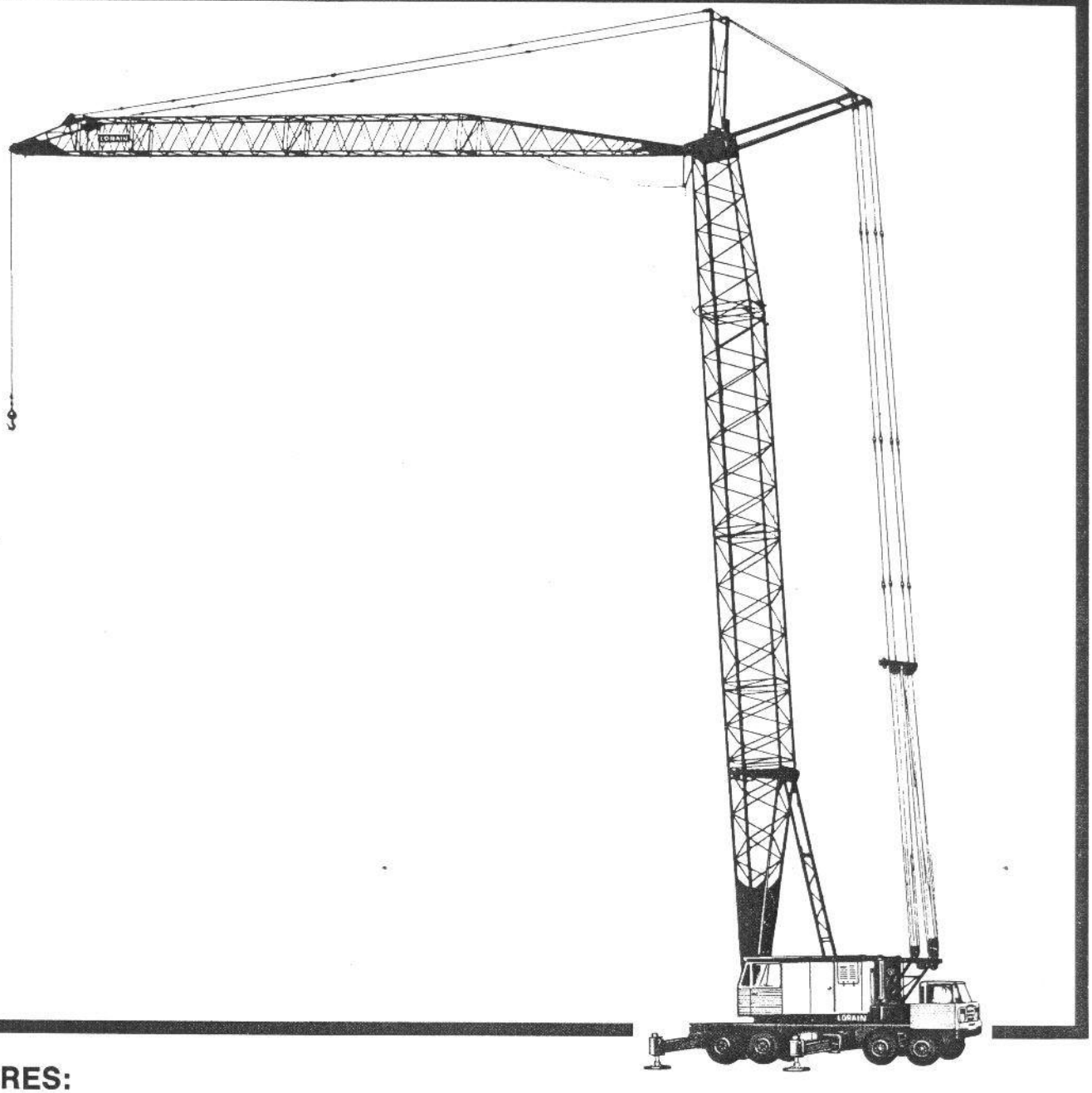
LORAIN
strong on performance

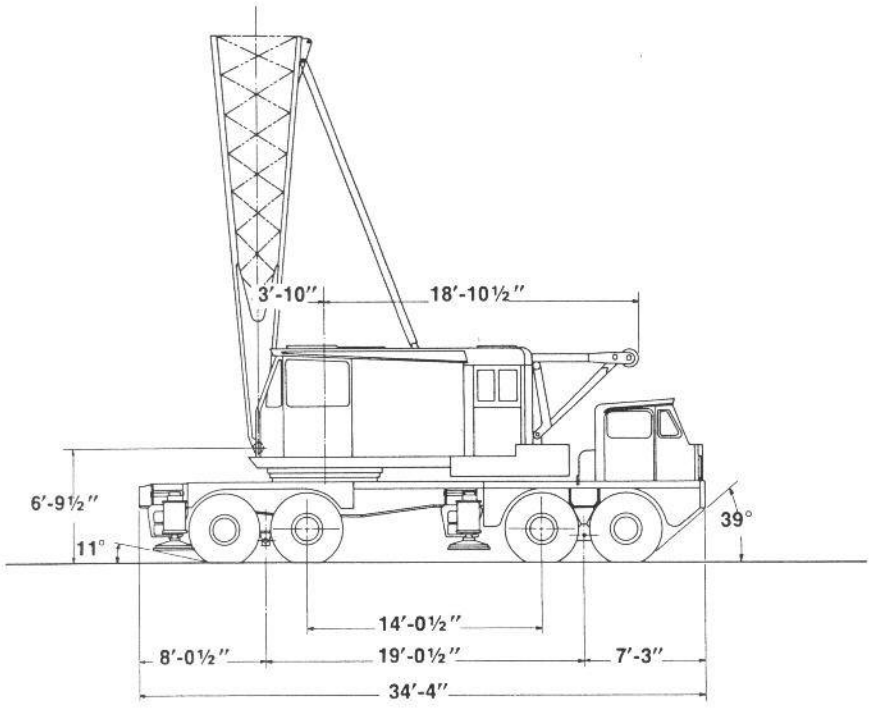
MC 790 | MOTO-TOWER®

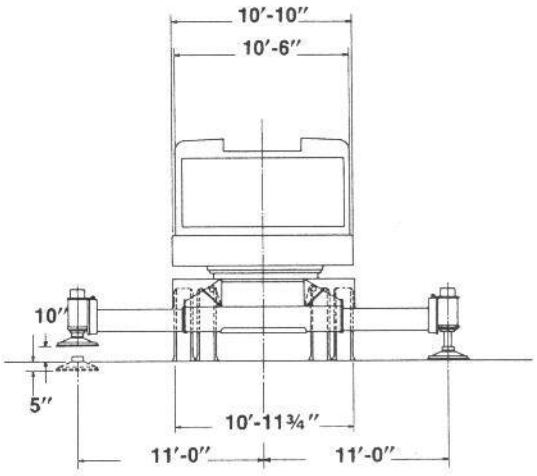
SPECIFICATIONS



FEATURES:

- Preferred Square Tubular Chord Boom
- 152′ Effective Tower Height
- 150′ Tower Boom Length
- Dual Drum Boom Hoist
- Tandem Hoist Drums—Super Spooling Capacity
- Enclosed All Gear Drive
- Metered Air Controls
- Independent Hydraulic Swing
- Performance Matched Lorain-Built Carrier
- Easy Weight Reduction





TURNTABLE SPECIFICATIONS

Power

Diesel	Cummins, N-855C-I-TC, 6 cyl.
Bore and Stroke	5½ in. x 6 in.
Displacement	855 cu. in.
Horsepower	210 H.P.
Power Take-Off	Torque Converter
Fuel Tank	75 gals.

OPERATING CHARACTERISTICS

Line Pulls and Line Speeds:	Hand Throttle	Foot Throttle
Rear Drum 25" P.D. Lagging		
1st Layer	30,300# @ 157 F.P.M.	22,130# @ 248 F.P.M.
3rd Layer	26,600# @ 179 F.P.M.	19,400# @ 283 F.P.M.
Front Drum 25" P.D. Lagging		
1st Layer	29,700# @ 157 F.P.M.	21,680# @ 248 F.P.M.
3rd Layer	26,050# @ 179 F.P.M.	19,000# @ 283 F.P.M.
Swing Speed	0 to 4 R.P.M.	

Controls

Hoist and Derricking Clutches	Metered Air
Swing	Independent Hydraulic

Other Equipment

Boom Hoist	Dual Drum
Gantry	Power Operated Back Hitch
Counterweight (with Hydraulic Kit for Removal)	20,000 lbs.
Turntable Connection	Internal Gear Shear-Ball®

MOTO-CRANE SPECIFICATIONS

Power

Diesel	Cummins, NTC-290, 6 cyl.
Bore and Stroke	5½ in. x 6 in.
Displacement	855 cu. in.
Horsepower	270 H.P.
Power Take-Off	Plate Clutch
Fuel Tank	75 gals.

Transmissions

Main	5 Speeds
Auxiliary	4 Speeds
Speeds Forward	20
Speeds Reverse	4

Speeds

Low-low 1.3 M.P.H. High-high 42.5 M.P.H.

Outriggers

Standard POWRSPAN Hydraulically Operated, Complete with Floats
Optional Rear Auxiliary Outriggers with Floats.
Required for Towers 122 ft. and over.

Rear Bogie

Axles (Planetary)	Double Reduction Gear Drive First reduction thru hypoid gears; final reduction thru planetary wheel hubs; high-traction differentials. Interaxle differential with air lockout.
Mounting	Two Axles in tandem, with "through-Drive," mounted on equalizer beams.
Front Tandem	Two non-driving axles on equalizer beams.
Steering	Centralized, Hydraulic Power Assist
Turning Radius (to Front Corner of Vehicle)	57'-3"
Brakes (Spring-Set for Emergency and Parking)	Air
Rear	4 Brakes; 20¼ in. dia. x 7 in. wide
Front	4 Brakes; 17¼ in. dia. x 4 in. wide
Tires (Tube)	14:00 x 24, 18 P.R.

BOOM EQUIPMENT

Crane Boom

Design	Square-Tubular-Chord
Type of Connection	Pin-Connected
Boom Length	See Range Diagram
Number of Hoist Line Sheaves at Boom Head on Anti-Friction Bearings	5

Lifting Crane Component

Laggings	Two, 25 in. P.D. Full Width
Floating Harness	16 parts of line
Swing Brake	Standard
Power Load Lowering (both hoist drums)	Available
Third Drum	Available

TOWER EQUIPMENT

Tower

Design	Square, Tubular-Chord
Type of Connection	Pin-Connected
Tower Height	See Range Diagram
Top Section	Includes 2 pendants, 2 boom masts.
Boom Position Indicator	Standard
Overload Indicator	Required

APPROXIMATE SHIPPING WEIGHTS*

Standard Equipped Machine With,	
85-ft. Tower with 50-ft. Boom	152,890 lbs.
152-ft. Tower with 150-ft. Boom	167,620 lbs.

*Total weight of unit may be reduced 20,000 lbs. by removing counterweight for road travel—(hydraulic removal kit included). Additional reductions may be made by removal of outrigger boxes and beams.

KOEHRING.
CRANE AND EXCAVATOR GROUP
MILWAUKEE, WISCONSIN 53201

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VALUE IS OUR FIRST SPECIFICATION

LORAIN MC-790 MOTO-TOWER

LIFTING CAPACITIES AND WORKING RANGES

RATED LIFTING CAPACITIES (IN POUNDS)

152 FT. TOWER (effective)
145 FT. TOWER (pin to pin)

Radius	BOOM LENGTH — Ft. Over Rear and Side						
in Ft.	50	70	90	100	120	130	150
30	40000	40000					
35	36700	36700	36700				
40	33200	33200	33200	33200			
45	30200	30200	30200	30200	30200		
50	27400	27400	27400	27400	27400	27400	
55	23500	24200	24200	24200	24200	24200	
60		22800	22800	22800	22800	22800	22800
70		19200	19200	19200	19200	19200	19200
75		15800	16800	16800	16800	16800	16800
80			16000	16000	16000	16000	16000
90			13300	13300	13300	13300	13300
95			10500	11800	11800	11800	11800
100				11000	11400	11400	11400
105				8200	10300	10300	10300
110					10000	10000	10000
120					8700	9000	9000
125					6700	8200	8500
130						7700	8200
135						6300	7600
140							7300
150							6300
155							5300

122 FT. TOWER (effective)
115 FT. TOWER (pin to pin)

Radius	BOOM LENGTH — Ft. Over Rear and Side				
in Ft.	50	70	90	100	120
30	44000	44000			
35	37800	37800	37800		
40	34000	34000	34000	34000	
45	31300	31300	31300	31300	31300
50	29000	29000	29000	29000	29000
55	25000	26200	26200	26200	26200
60		24800	24800	24800	24800
70		21300	21300	21300	21300
75		18000	19000	19000	19000
80			18000	18000	18000
90			15000	15000	15000
95			12000	13200	13200
100				12400	12400
105				10400	10800
110					10300
120					9200
125					8000

92 FT. TOWER (effective)
85 FT. TOWER (pin to pin)

Radius	BOOM LENGTH — Ft. Over Rear and Side				
in Ft.	50	70	90		
30	52000	52000			
35	43500	43500	43500		
40	36500	36500	36500		
45	32000	32000	32000		
50	29400	29400	29400		
55	25000	26300	26300		
60		25000	25000		
70		21400	21400		
75		18000	19300		
80			18400		
90			15200		
95			12000		

NOTES

1. **The rated loads as determined by boom length, radius and weight of load apply to this machine as originally manufactured and equipped and as mounted on a Lorain manufactured MC-790, 8x4 carrier. THEY ARE MAXIMUM lifting capacities and comply with standards of the Power Crane & Shovel Association as issued by the U. S. Department of Commerce Commercial Standard CS90-58 and SAE Crane Load Stability Test Code J765.**

1a. **Rated loads do not exceed 75% of stability.**

1b. **Rated capacities apply only when tower is erected and pinned, with outriggers fully extended to 22 ft.-0 in. from center to center and gantry lowered.**

1c. **An Overload-Indicator is installed to supplement the operator's judgment.**

2. All load handling devices are considered part of the load lifted.

2a. For all capacities above the horizontal line, handling devices must weigh at least 3,000 lbs. to prevent boom from coming back against boom stop as load is released.

3. With outriggers retracted to clear the ground, the maximum tower and boom may be traveled with tower erected and with boom folded against tower.

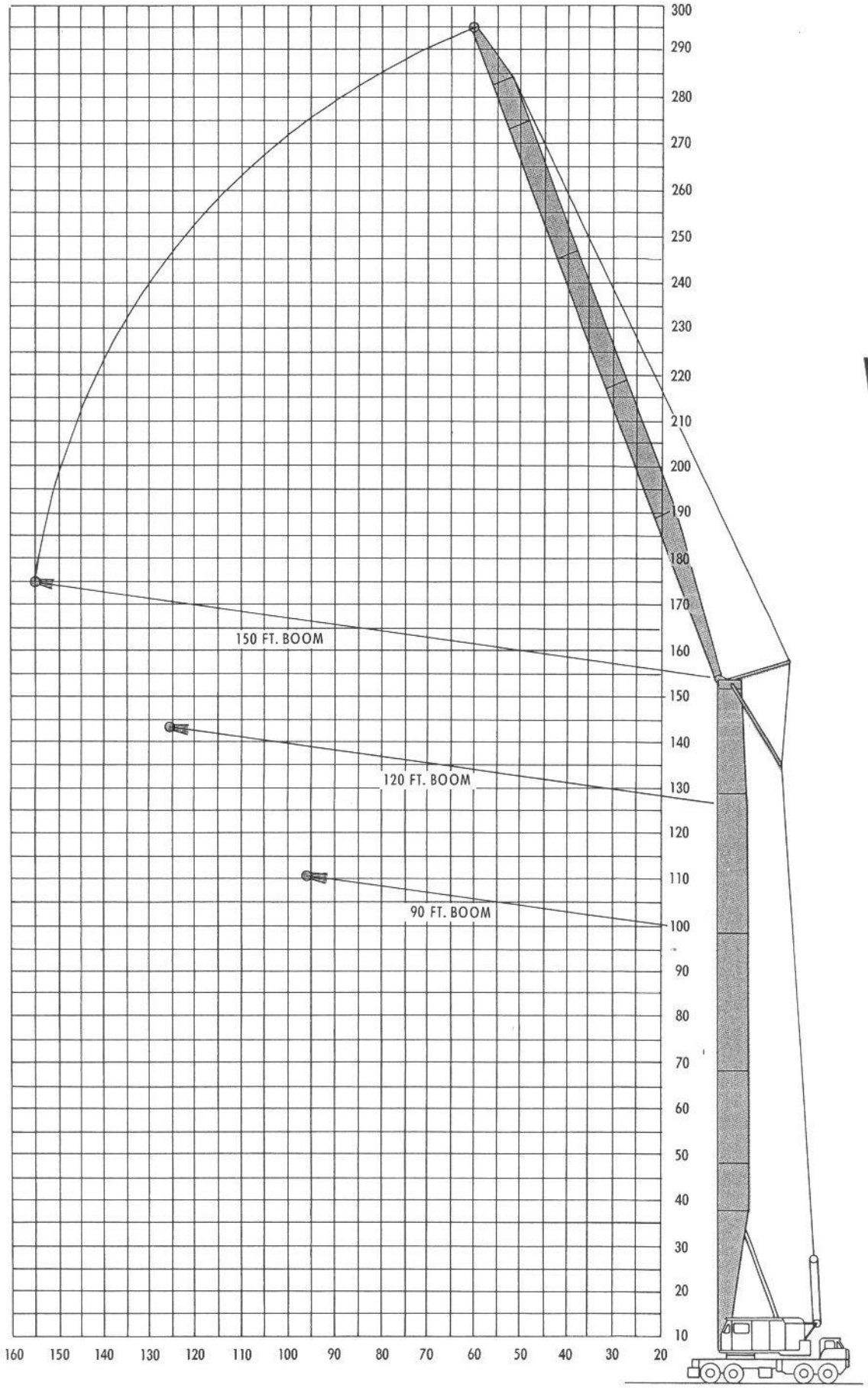
4. With outriggers set, the following maximum lengths of tower and boom may be raised over the rear unassisted. Gantry must be erected.

	Rear Aux. Outriggers
92 ft. Tower & 70 ft. Boom or 90 ft. Boom less 15 ft. Peak	No
122 ft. Tower & 100 ft. Boom or 120 ft. Boom less 15 ft. Peak	No
152 ft. Tower & 130 ft. Boom or 150 ft. Boom less 15 ft. Peak and 10 ft. Center Section	Yes

5. With gantry lowered (12 ft. 9 in. overall height) and superstructure counterweight removed, the 30 ft. tower base may be carried over the rear at highway speeds. With superstructure counterweight in place, reduce speed to 5 mph.

6. Minimum number of parts of hoist line required is 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.

WORKING RANGES MC-790 TOWER



KOEHRING

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