

GUAY

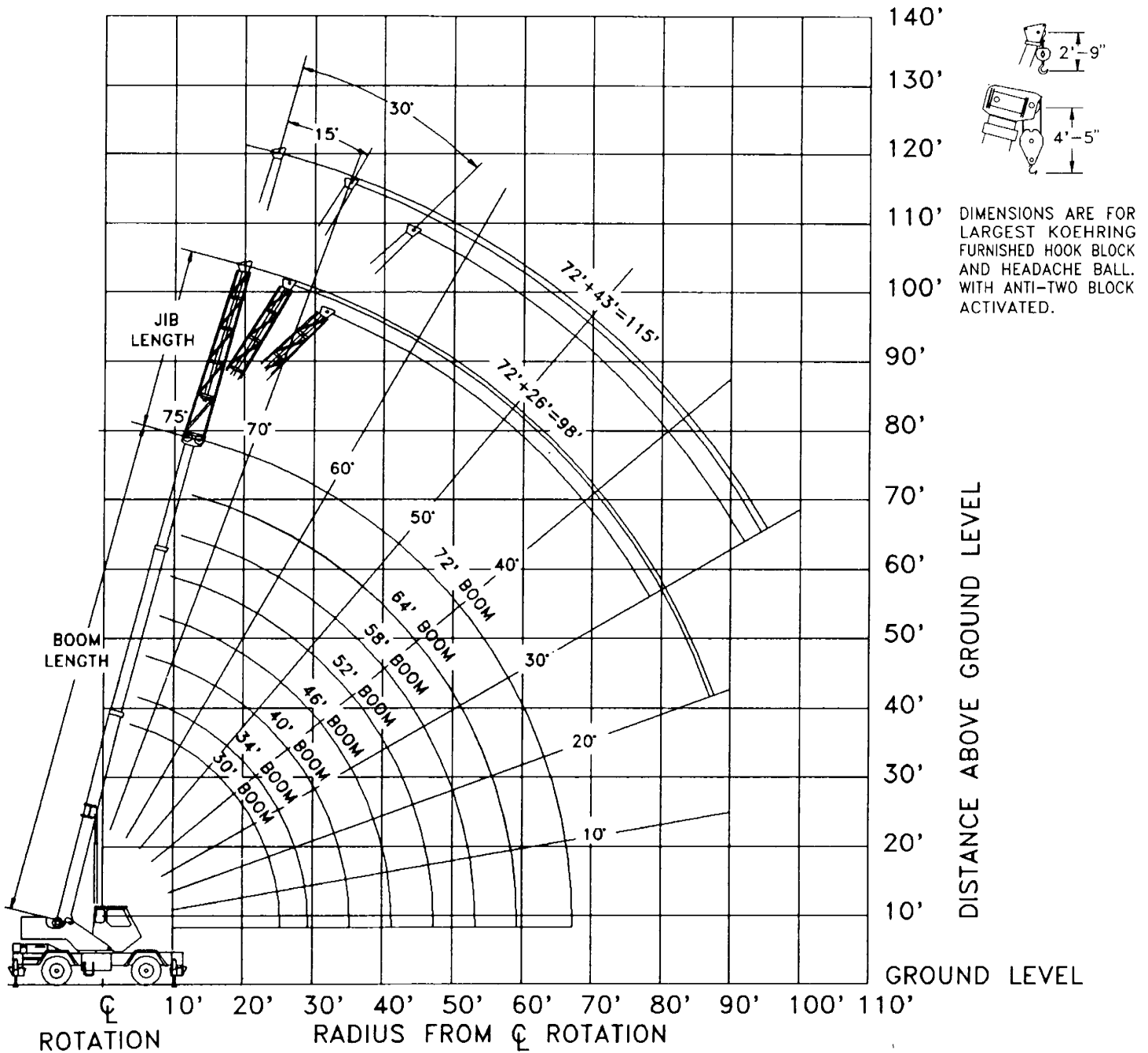
**LORAIN®
LRT 275D**

rough terrain crane
27.5 ton capacity

**range diagram &
capacity charts**

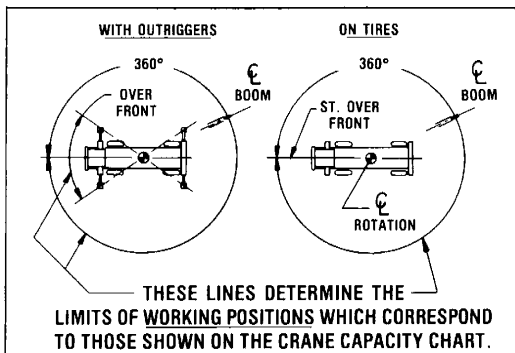


Range Diagram (30'-72' boom)



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

CRANE WORKING CONDITIONS



REDUCTION IN MAIN BOOM CAPACITY

All Jibs in Stowed Position	0 Lbs.
15'-20' Stowaway Jib Erected	950 Lbs.
25' Side Stow Jib Erected	1,850 Lbs.
42' Side Stow Jib Erected	2,210 Lbs.
Aux. Boom Head Sheave	100 Lbs.

HOOK BLOCK WEIGHTS

Hook & Ball	121 Lbs.
Hook Block (2 Sheave)	330 Lbs.
Hook Block (3 Sheave)	360 Lbs.
Hook Block (4 Sheave)	427 Lbs.

Capacity Charts — Pounds (30'-72' boom)

MODEL LRT 275D

COUNTERWEIGHT
W/AUX. WINCH 6100 lb.
W/O AUX. WINCH 7200 lb.
BOOM LENGTH 30-72 ft.
OUTRIGGER SPREAD 18 ft.

STABILITY PCT.
ON OUTRIGGERS 85%
ON TIRES 75%
PCSA CLASS 10-95

IMPORTANT: This specification sheet is not to be used as load rating chart in the machine as data may be subject to change.

ON OUTRIGGERS

RAD. I. S.	BOOM LENGTH 30'		BOOM LENGTH 34'		BOOM LENGTH 40'		BOOM LENGTH 46'		BOOM LENGTH 52'		BOOM LENGTH 58'		BOOM LENGTH 64'		BOOM LENGTH 72'		RAD. I. S.								
	FRONT	360°	FRONT	360°	FRONT	360°	FRONT	360°	FRONT	360°	FRONT	360°	FRONT	360°	FRONT	360°									
10	65	55,000*	55,000*	68	49,100*	49,100*	72	47,100*	47,100*	75	45,600*	45,600*					10								
12	61	45,800*	45,800*	65	44,300*	44,300*	69	42,400*	42,400*	72	40,900*	40,900*	75	37,800*	37,800*		12								
15	54	38,000*	38,000*	59	38,100*	38,100*	64	37,100*	37,100*	68	35,600*	35,600*	71	34,100*	34,100*	73	30,600*	30,600*	75	29,000*	29,000*		15		
20	40	27,200*	27,200*	47	27,300*	27,300*	56	27,500*	27,500*	61	27,600*	27,600*	65	27,600*	27,600*	68	26,300*	26,300*	71	25,300*	25,300*	75	21,300*	21,300*	20
25	16	20,600*	20,600*	33	20,800*	20,800*	46	21,000*	21,000*	53	21,100*	21,100*	59	21,100*	21,100*	63	21,200*	21,200*	66	20,700*	20,700*	70	19,000*	19,000*	25
30							34	16,600*	15,700	45	16,700*	16,000	52	16,800*	16,200	57	16,900*	16,300	61	16,900*	16,300	66	16,000*	16,000*	30
35							11	13,300	11,600	34	13,600*	12,000	45	13,700*	12,300	56	13,800*	12,400	61	13,800*	12,400	66	13,700*	12,400	35
40										18	10,600	9,200	35	10,800	9,500	44	10,900	9,600	50	11,000	9,700	56	11,100	9,800	40
45													22	8,600	7,500	35	8,700	7,600	43	8,800	7,700	51	9,000	7,800	45
50																24	7,100	6,100	36	7,200	6,200	45	7,300	6,300	50
55																		25	5,900	5,000	39	6,000	5,200	55	
60																					31	5,000	4,200	60	
65																					21	4,100	3,400	65	

ON TIRES

RAD. I. S.	MAX. MIN.	16:00 X 25-24 PR				20.5 X 25-24PR				RAD. I. S.	
		STATIONARY		PICK & CARRY CREEP 2.5 MPH		STATIONARY		PICK & CARRY CREEP 2.5 MPH			
		360°	ST. OVER FRONT	360°	ST. OVER FRONT	360°	ST. OVER FRONT	360°	ST. OVER FRONT		
10	67	67	23,100	36,100	33,900*	24,500*	23,700*	40,600*	34,100*	24,700*	10
12	63	63	16,600	26,500	26,500	21,100*	17,500	31,400	29,600*	21,300*	12
15	56	56	11,200	20,500	20,500	17,300*	11,800	20,700	20,700	17,400*	15
20	50	42	6,400	12,200	12,200	12,200	6,700	12,400	12,400	12,400	20
25	47	18	3,700	8,000	8,000	8,000	4,100	8,100	8,100	8,100	25
30	45	0	2,300	5,600	5,600	5,600	2,600	5,700	5,700	5,700	30
35	42	0	1,400	4,100	4,100	4,100	1,600	4,200	4,200	4,200	35
40	40	0		3,100	3,100	3,100		3,200	3,200	3,200	40
45	38	0		2,300	2,300	2,300		2,400	2,400	2,400	45
50	35	0		1,700	1,700	1,700		1,700	1,700	1,700	50

NOTES FOR ON TIRE CAPACITIES

- A. For Pick and Carry operations, boom must be centered over the front of the crane with swing brake locked or with mechanical swing lock engaged, if crane is so equipped. Use minimum boom point height and keep load close to ground surface.
- B. The load should be restrained from swinging. NO ON TIRE OPERATION WITH JIB ERRECTED.
- C. Without outriggers, never maneuver the boom beyond listed load radii for applicable tires to ensure stability.
- D. Creep speed is crane movement of less than 200 Ft. (61m) in a 30 minute period and not exceeding 1.0 mph (1.6 km/h).
- E. Refer to General Notes for additional information.

SIDE STOW JIB ON OUTRIGGERS

RAD. I. S.	26' OFFSET JIB						43' OFFSET JIB						RAD. I. S.
	0° OFFSET		15° OFFSET		30° OFFSET		0° OFFSET		15° OFFSET		30° OFFSET		
	RAD. (REF)	360°	RAD. (REF)	360°	RAD. (REF)	360°	RAD. (REF)	360°	RAD. (REF)	360°	RAD. (REF)	360°	
75	26.0	12,500*	31.0	7,300*	36.0	5,100*	30.0	5,000*	40.0	3,200*	48.5	2,600*	75
73	28.0	11,500*	33.0	6,900*	38.0	4,900*	33.0	4,500*	43.5	3,100*	52.0	2,500*	73
70	33.0	10,200*	38.0	6,300*	42.5	4,700*	39.0	4,100*	49.0	3,000*	57.0	2,400*	70
67	38.0	9,100*	43.0	5,800*	47.0	4,500*	45.0	3,700*	54.5	2,800*	62.0	2,300*	67
64	42.5	8,200*	47.5	5,400*	51.5	4,400*	50.5	3,400*	59.5	2,700*	66.5	2,200*	64
61	47.0	7,200	52.0	5,100*	55.5	4,200*	56.0	3,200*	65.0	2,600*	71.0	2,200*	61
58	51.5	6,300	56.0	4,800*	59.5	4,100*	61.0	3,000*	69.5	2,500*	75.0	2,100*	58
54	57.0	5,100	61.0	4,400*	64.5	3,900*	67.5	2,800*	75.5	2,400*	80.5	2,000*	54
50	62.0	4,200	66.0	3,900	69.0	3,400	74.0	2,700*	81.0	2,300*	85.5	2,000*	50
46	67.0	3,500	70.5	3,200	73.5	3,000	80.0	2,600*	86.0	2,200*	90.0	2,000*	46
42	71.5	3,000	75.0	2,700	77.0	2,600	85.5	2,200	91.0	2,100*	94.0	1,900*	42
38	76.0	2,500	78.5	2,300	80.5	2,300	90.0	1,900	95.0	1,700	97.5	1,700	38
34	79.5	2,100	82.0	2,000	83.5	2,000	94.5	1,700	99.0	1,500	100.5	1,500	34
30	83.0	1,800	85.0	1,700	86.0	1,700	98.0	1,500	102.0	1,400	103.0	1,400	30
26	86.0	1,600	88.0	1,500			102.0	1,200	105.0	1,100			26
23	88.0	1,400	89.5	1,400			104.5	1,100					23
20	90.0	1,200	91.5	1,200									20
17	91.5	1,100	93.0	1,100									17

NOTES FOR JIB CAPACITIES

- F. For all boom lengths less than the maximum with a jib erected, the rated loads are determined by boom angle only in the appropriated column.
- G. For boom angle not shown, use the capacity of the next lower boom angle.
- H. Listed radii are for fully extended main boom only.

MAX. PERMISSIBLE HOIST LINE LOAD

LINE PARTS	1	2	3	4	5	6	7	8
MAX. LOAD	7,600	15,200	22,800	30,400	38,000	45,600	53,200	55,000
BOOM HEAD	2	2-D	2-3	1-2-D	1-2-3	1-2-3-D	1-2-3-4	1-2-3-4-D
HOOK BLOCK	D	2	2-D	1-2	1-2-D	1-2-3	1-2-3-D	1-2-3-4
WIRE ROPE:	6 X 19 OR 6 X 37 CLASS, 26,600 Lbs. MINIMUM BREAKING STRENGTH. 1/2" DIAMETER, X.I.P.S., I.W.R.C., PREFORMED 9/16" DIAMETER, I.P.S., I.W.R.C., PREFORMED 5/8" DIAMETER, P.S., I.W.R.C., PREFORMED							

RECOMMENDED TIRE PRESSURES

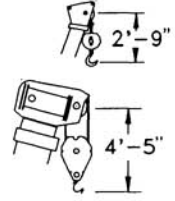
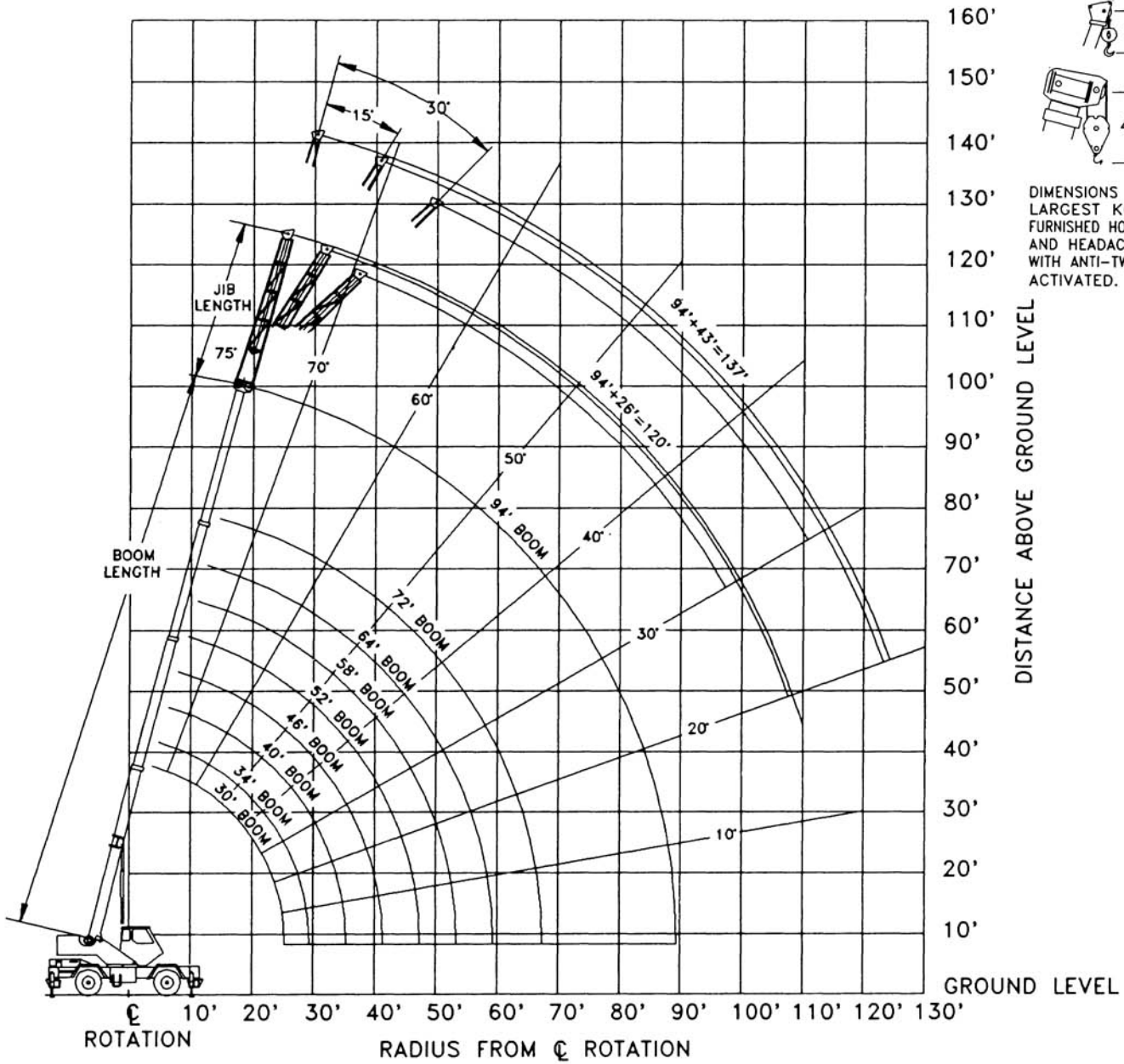
TIRE SIZE	STATIONARY	CREEP	2 1/2 MPH	TRAVEL
16:00 X 25-24 PR	115 PSI	115 PSI	95 PSI	80 PSI
20:50 X 25-24 PR	80 PSI	80 PSI	65 PSI	65 PSI

Range Diagram (30'-94' boom)

MODEL LRT 275D

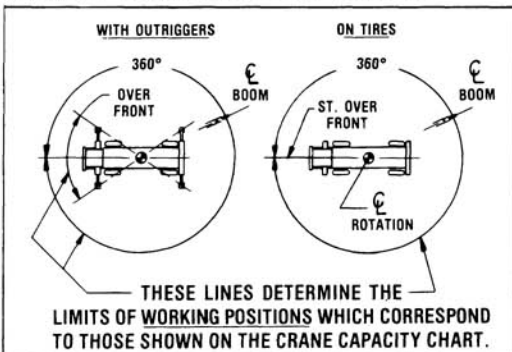
COUNTERWEIGHT
 W/AUX. WINCH 6100 lb.
 W/O AUX. WINCH 7200 lb.
 BOOM LENGTH 30-94 ft.
 OUTRIGGER SPREAD 18 ft.

STABILITY PCT.
 ON OUTRIGGERS 85%
 ON TIRES 75%
 PCSA CLASS 10-89



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

CRANE WORKING CONDITIONS



REDUCTION IN MAIN BOOM CAPACITY

All Jibs in Stowed Position	0 Lbs.
15'-20' Stowaway Jib Erected	950 Lbs.
25' Side Stow Jib Erected	1,850 Lbs.
42' Side Stow Jib Erected	2,210 Lbs.
Aux. Boom Head Sheave	100 Lbs.

HOOK BLOCK WEIGHTS

Hook & Ball	121 Lbs.
Hook Block (2 Sheave)	330 Lbs.
Hook Block (3 Sheave)	360 Lbs.
Hook Block (4 Sheave)	427 Lbs.

Capacity Charts — Pounds (30'-94' boom)

ON OUTRIGGERS

IMPORTANT: This specification sheet is not to be used as load rating chart in the machine as data may be subject to change.

RAD I U S	BOOM LENGTH 30'		BOOM LENGTH 34'		BOOM LENGTH 40'		BOOM LENGTH 46'		BOOM LENGTH 52'		BOOM LENGTH 58'		BOOM LENGTH 64'		BOOM LENGTH 72'		BOOM LENGTH 94'(1)		RAD I U S
	FRONT	360°	FRONT	360°	FRONT	360°	FRONT	360°	FRONT	360°	FRONT	360°	FRONT	360°	FRONT	360°	FRONT	360°	
10	65	55,000*	55,000*	68	48,400*	48,400*	72	46,400*	46,400*	79	44,900*	44,900*	75	39,000*	39,000*				10
12	61	45,200*	45,200*	65	43,700*	43,700*	69	41,700*	41,700*	72	40,200*	40,200*	71	33,700*	33,700*				12
15	54	37,500*	37,500*	59	37,800*	37,800*	64	38,300*	38,300*	68	34,800*	34,800*	71	32,700*	32,700*	75	32,000*	32,000*	15
20	40	26,600*	26,600*	47	26,700*	26,700*	56	26,800*	26,800*	61	26,800*	26,800*	65	26,800*	26,800*	68	26,700*	26,700*	20
25	16	19,900*	19,900*	33	20,100*	20,100*	46	20,200*	20,200*	53	20,300*	20,300*	59	20,300*	20,300*	63	20,300*	20,300*	25
30							34	15,800*	15,400*	45	15,900*	15,600*	52	15,900*	15,700*	57	15,900*	15,800*	30
35							11	12,600*	11,200*	34	12,700*	11,500*	45	12,800*	11,700*	51	12,800*	11,800*	35
40										18	9,900	8,700	35	10,100	8,900	44	10,200	9,000	40
45													22	7,900	6,800	35	8,000	6,900	45
50																24	6,300	5,400	50
55																25	5,100	4,300	55
60																31	4,100	3,400	60
65																21	3,300	2,600	65
70																			70
75																			75
80																			80
85																			85

(1) FOR BOOM LENGTHS LESS THAN MAXIMUM WITH THE PULLOUT 4TH SECTION EXTENDED, THE RATED LOADS ARE DETERMINED BY BOOM ANGLE ONLY IN THE 94 FT. BOOM LENGTH COLUMN. FOR BOOM ANGLES NOT SHOWN, USE THE CAPACITY OF THE NEXT LOWER BOOM ANGLE.

SIDE STOW JIB ON OUTRIGGERS

RAD I U S	26' OFFSET JIB								43' OFFSET JIB								RAD I U S								
	0' OFFSET		15' OFFSET		30' OFFSET		0' OFFSET		15' OFFSET		30' OFFSET		0' OFFSET		15' OFFSET			30' OFFSET							
	PULLOUT 4TH SECTION RET.	PULLOUT 4TH SECTION EXT.	PULLOUT 4TH SECTION RET.	PULLOUT 4TH SECTION EXT.	PULLOUT 4TH SECTION RET.	PULLOUT 4TH SECTION EXT.	PULLOUT 4TH SECTION RET.	PULLOUT 4TH SECTION EXT.	PULLOUT 4TH SECTION RET.	PULLOUT 4TH SECTION EXT.	PULLOUT 4TH SECTION RET.	PULLOUT 4TH SECTION EXT.	PULLOUT 4TH SECTION RET.	PULLOUT 4TH SECTION EXT.	PULLOUT 4TH SECTION RET.	PULLOUT 4TH SECTION EXT.		PULLOUT 4TH SECTION RET.	PULLOUT 4TH SECTION EXT.						
	RAD. (REF)	360°	RAD. (REF)	360°	RAD. (REF)	360°	RAD. (REF)	360°	RAD. (REF)	360°	RAD. (REF)	360°	RAD. (REF)	360°	RAD. (REF)	360°		RAD. (REF)	360°						
75	26.0	12,500*	35.5	7,000*	31.0	7,300*	40.5	4,700*	36.0	5,100*	44.0	3,300*	30.0	5,000*	41.0	4,000*	40.0	3,200*	51.0	3,100*	48.5	2,600*	58.5	2,400*	75
73	28.0	11,500*	38.0	6,800*	33.0	6,900*	42.5	4,400*	36.0	4,900*	46.5	3,200*	33.0	4,500*	44.5	3,900*	43.5	3,100*	54.0	3,000*	52.0	2,500*	62.0	2,300*	73
70	33.0	10,200*	44.5	6,300*	38.0	6,300*	48.5	4,000*	42.5	4,700*	52.5	3,000*	39.0	4,100*	52.5	3,700*	49.0	3,000*	61.0	2,800*	57.0	2,400*	68.0	2,200*	70
67	38.0	9,100*	50.5	5,800*	43.0	5,800*	54.0	3,700*	47.0	4,500*	58.5	2,800*	45.0	3,700*	59.5	3,600*	54.5	2,800*	68.0	2,700*	62.0	2,300*	74.0	2,100*	67
64	42.5	8,200*	56.0	5,400*	47.5	5,400*	59.5	3,500*	51.5	4,400*	63.5	2,700*	50.5	3,400*	66.0	3,400*	59.5	2,700*	74.0	2,600*	66.5	2,200*	79.5	2,000*	64
61	47.0	7,200*	61.5	4,400*	52.0	5,100*	65.0	3,300*	55.5	4,200*	68.5	2,600*	58.0	3,200*	72.5	3,300*	65.0	2,600*	79.5	2,500*	71.0	2,200*	85.0	2,000*	61
58	51.0	6,100	66.5	3,600	56.0	4,800*	70.5	3,200*	59.5	4,100*	73.5	2,600*	61.0	3,000*	78.5	3,000	69.5	2,500*	85.5	2,300*	75.0	2,100*	90.0	1,900*	58
54	56.5	4,800	73.0	2,800	61.0	4,300	77.0	2,600	64.5	3,900*	79.0	2,500*	67.5	2,800*	85.5	2,400	75.5	2,400*	92.5	2,100	80.5	2,000*	96.5	1,800*	54
50	61.5	3,700	79.0	2,200	66.0	3,400	82.5	2,000	68.5	3,200	84.5	2,000	74.0	2,700*	92.0	1,800	81.0	2,300*	98.5	1,600	85.5	2,000*	102.0	1,500	50
46	66.5	3,000	84.5	1,700	70.5	2,700	88.0	1,600	72.5	2,500	89.5	1,600	80.0	2,300	98.0	1,300	86.0	2,000	104.0	1,200	90.0	2,000*	107.5	1,100	46
42	71.0	2,400	90.0	1,200	74.5	2,200	93.0	1,200	76.5	2,100	94.0	1,200	85.5	1,800			91.0	1,600			94.0	1,600			42
38	75.5	1,900			78.5	1,800			80.0	1,700			90.0	1,400			95.0	1,300			97.5	1,300			38
34	79.0	1,600			82.0	1,500			83.0	1,400			94.5	1,100											34
30	82.5	1,300			85.0	1,200			85.5	1,100															30
27	85.0	1,100																							27

NOTES FOR JIB CAPACITIES

F. For all boom lengths less than the maximum with a jib erected, the rated loads are determined by boom angle only in the appropriated column.

G. For boom angle not shown, use the capacity of the next lower boom angle.

H. Listed radii are for fully extended main boom only.

ON TIRES

RAD I U S	MAX	MIN	16:00 X 25-24 PR				20.5 X 25-24PR				RAD I U S
			STATIONARY		PICK & CARRY		STATIONARY		PICK & CARRY		
			CREEP	2.5 MPH	CREEP	2.5 MPH	CREEP	2.5 MPH	CREEP	2.5 MPH	
			360°	ST. OVER FRONT	360°	ST. OVER FRONT	360°	ST. OVER FRONT	360°	ST. OVER FRONT	
10	67	67	22,900	42,600*	33,200*	23,800*	23,300*	39,900*	33,400*	24,000*	10
12	64	64	16,500	31,300	28,800*	20,400*	17,700	31,500	29,000*	20,600*	12
15	56	56	11,100	20,700	20,700	16,600*	11,800	20,700	20,700	16,700*	15
20	50	42	6,200	12,100	12,100	12,100*	6,700	12,100	12,100	12,100	20
25	47	19	3,500	7,800	7,800	7,800	3,800	7,800	7,800	7,800	25
30	45	0	1,900	5,300	5,300	5,300	2,200	5,400	5,400	5,400	30
35	42	0		3,700	3,700	3,700		3,800	3,800	3,800	35
40	40	0		2,600	2,600	2,600		2,600	2,600	2,600	40
45	38	0		1,700	1,700	1,700		1,700	1,700	1,700	45

NOTES FOR ON TIRE CAPACITIES

- A. For Pick and Carry operations, boom must be centered over the front of the crane with swing brake locked or with mechanical swing lock engaged, if crane is so equipped. Use minimum boom point height and keep load close to ground surface.
- B. The load should be restrained from swinging. NO ON TIRE OPERATION WITH JIB ERECTED.
- C. Without outriggers, never maneuver the boom beyond listed load radii for applicable tires to ensure stability.
- D. Creep speed is crane movement of less than 200 Ft. (61m) in a 30 minute period and not exceeding 1.0 mph (1.6 km/h).
- E. Refer to General Notes for additional information.

MAX. PERMISSIBLE HOIST LINE LOAD

LINE PARTS	1	2	3	4	5	6	7	8
MAX. LOAD	7,600	15,200	22,800	30,400	38,000	45,600	53,200	55,000
BOOM HEAD	2	2-D	2-3	1-2-D	1-2-3	1-2-3-D	1-2-3-4	1-2-3-4-D
HOOK BLOCK	D	2	2-D	1-2	1-2-D	1-2-3	1-2-3-D	1-2-3-4

WIRE ROPE: 6 X 19 OR 6 X 37 CLASS, 26,600 Lbs. MINIMUM BREAKING STRENGTH.
1/2" DIAMETER, X.I.P.S., I.W.R.C., PREFORMED
9/16" DIAMETER, I.P.S., I.W.R.C., PREFORMED
5/8" DIAMETER, P.S., I.W.R.C., PREFORMED

RECOMMENDED TIRE PRESSURES

TIRE SIZE	STATIONARY	CREEP	2 1/2 MPH	TRAVEL
16:00 X 25-24 PR	115 PSI	115 PSI	95 PSI	80 PSI
20:50 X 25-24 PR	80 PSI	80 PSI	65 PSI	65 PSI

WE RESERVE THE RIGHT TO AMEND THESE SPECIFICATIONS AT ANY TIME WITHOUT NOTICE. THE ONLY WARRANTY APPLICABLE IS OUR STANDARD WRITTEN WARRANTY APPLICABLE TO THE PARTICULAR PRODUCT AND SALE. WE MAKE NO OTHER WARRANTY, EXPRESSED OR IMPLIED.



Koehring Cranes & Excavators, Inc.
Waverly, Iowa 50677

General Notes

GENERAL

1. Review Operator's Manual prior to operating this crane.
2. Crane load ratings as determined by boom length, radius, and boom angle apply to this crane only as originally manufactured and equipped. THEY ARE MAXIMUM LOAD RATINGS.
3. This crane and its load ratings are in accordance with Power Crane & Shovel Association Standard No. 4, SAE Crane Load Stability Test Code J-765a. SAE Method of Test for Crane Structure J1063 and Safety Code for Cranes, Derricks and Hoists, ANSI B30.5-1982.
4. Improperly operated or maintained equipment can be dangerous. The operator and other personnel should read and fully understand the Operator's Manual furnished by the manufacturer before operating or maintaining this crane. Rules for safe operation of equipment should be adhered to at all times. If either Manuals or a lift chart are missing, these should be ordered by crane serial number through the distributor.
5. Operators and supervisors must fully understand Safety Standards for Mobile Hydraulic Cranes ANSI B30.5 or latest, and be familiar with Federal, State, and local safety regulations.

SET-UP

6. Crane load ratings are based on the crane being leveled and standing on a firm, uniform supporting surface.
7. Crane load ratings on outriggers are based on all outrigger beams fully extended and the tires raised free of the supporting surface.
8. Crane load ratings on tires depend on appropriate inflation pressure and tire conditions. Caution must be exercised when increasing air pressures in tires. Consult Operator's Manual for precautions.
9. Use of jibs, lattice-type boom extension, or fourth section pullout extended is not permitted for pick and carry operations.
10. Consult appropriate section of the Operator's and Service Manual for more exact description of hoist line reeving.
11. The use of more parts of line than required by the load may result in having insufficient rope to allow the hook block to reach the ground.
12. Properly maintained wire rope is essential to safe crane operation. Consult Operator's Manual for proper maintenance and inspection requirements.
13. When spin-resistant wire rope is used, the allowable rope loading shall be the breaking strength divided by five (5) unless otherwise specified by the wire rope manufacturer.

OPERATION

14. Crane load ratings must not be exceeded. DO NOT ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
15. Crane load ratings are for lift crane service. Applications for other than lift crane (clamshell and magnet) are permitted. Due to significant variation in materials and applications, consult factory for optimum capability.

16. Weight of hooks, hook blocks, slings and all other load handling devices must be considered part of the load to be handled and must be subtracted from the load ratings to obtain the allowable load to be lifted.
17. Crane load ratings are based on freely suspended loads. SIDE LOAD ON BOOM OR JIB IS EXTREMELY DANGEROUS.
18. Practical working loads depend on the supporting surface, wind velocity, pendulum action, jerking or sudden stopping of loads, hazardous surroundings, experience of personnel and proper operation, tire inflation, tire condition, traveling with loads, multiple crane lifts, proximity of electrical wires, etc. Appropriate reduction of load ratings must be made for these and any other conditions which may affect practical working loads.
19. Crane load ratings with an asterisk (*) beside them are based on the crane's structure strength. All other ratings are based on stability and do not exceed the specified percentage of tipping load as determined by SAE Crane Stability Test Code J-765a.
20. When either radius or boom length, or both, are between listed values, the smaller of the two load ratings shall be used.
21. Do not operate at longer radii than those listed on the applicable load rating chart as tipping can occur without a load on the hook.
22. Power telescoping boom sections must be extended equally.
23. Load ratings are dependent upon the crane being maintained according to manufacturer's specifications.
24. The maximum load which may be telescoped is limited by boom angle, hydraulic pressure, boom lubrication, etc. It is safe to attempt to extend and retract within the limits to the capacity chart.
25. It is recommended that load handling devices, including hooks, and hook blocks, be kept away from boom head at all times.
26. The boom angles shown on the capacity chart give an approximation of the operating radius for a specified boom length. The boom angle, before loading, should be greater to account for boom deflection. It may be necessary to retract the boom if maximum boom angle is insufficient to maintain rated radius.
27. For MCH carrier-mounted cranes only: 360° capacities apply only to machine equipped with front outrigger jack with all five (5) outrigger jacks properly set. For 360° lift capacities, use Over Side capacity chart.

DEFINITIONS

28. Operating Radius: The horizontal distance from the axis of rotation before loading to the center of the vertical hoist line or tackle with a load applied.
29. Freely Suspended Load: Load hanging free with no direct external force applied except by the hoist rope.
30. Side Load: Horizontal force applied to the lifted load either on the ground or in the air.
31. Working Area: Areas measured in a circular arc around the centerline of rotation as shown on the working area diagram.