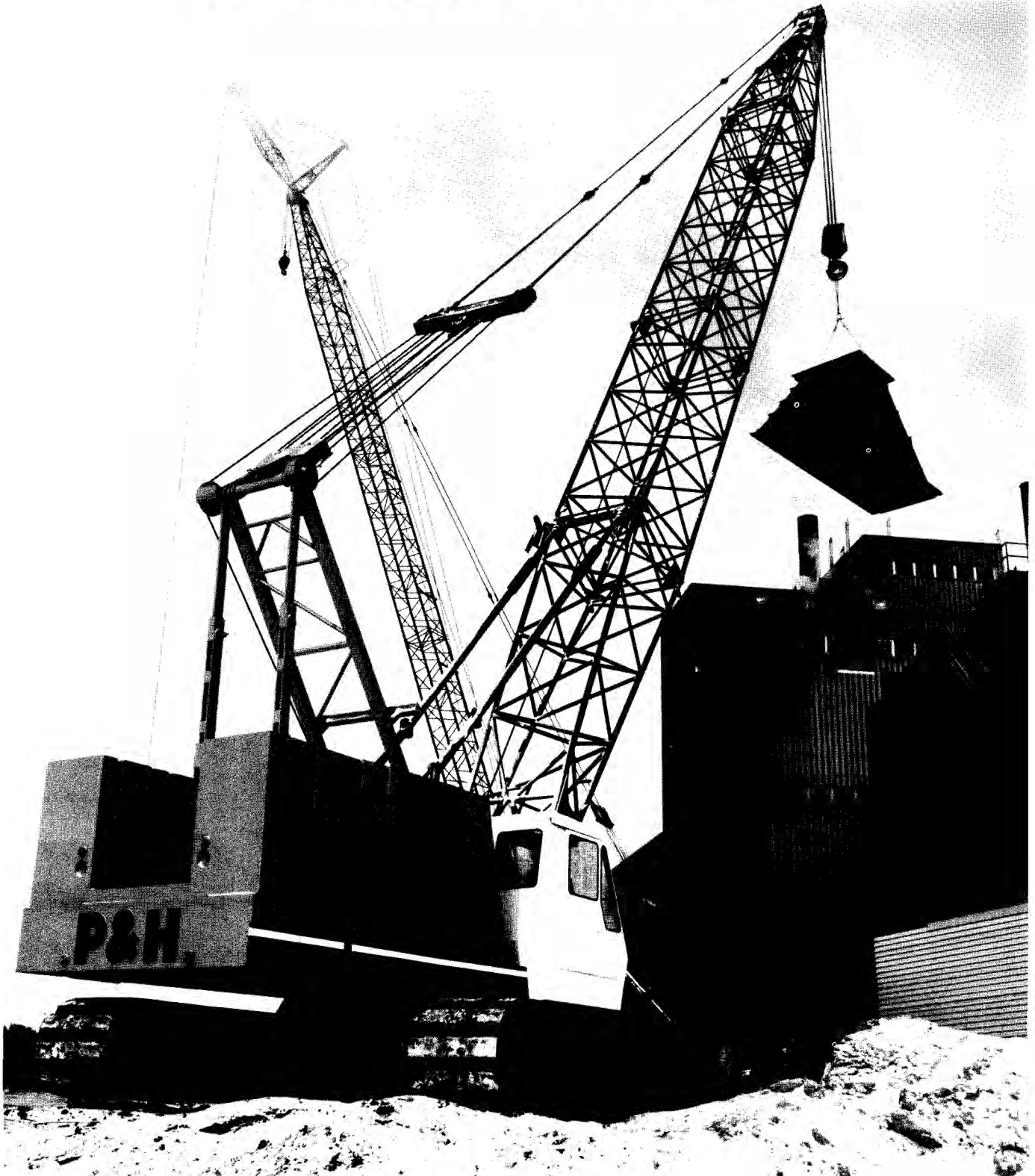


P&H[®] 5100

100-ton Crawler Crane

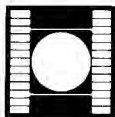


- Hydraulically Retractable Crawlers
- Torque Converter Transmission
- Longest Boom in Class
- Hydrostatic Propel
- Short Lever Controls
- Super-Quiet Modular Cab

Specifications



UNDERCARRIAGE



CAR BODY: Car body of Alloy Steel welded construction with double axle housing integral and hydraulic swivel for crawler drive. Crawler frames shear mounted and bolted to end of extendible axles.

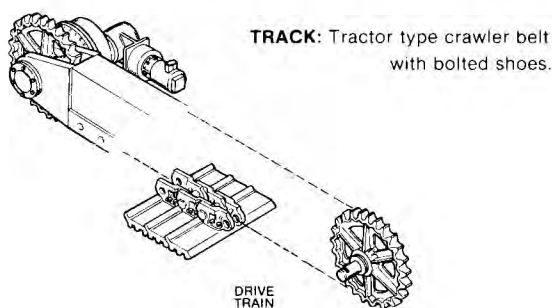
CRAWLER:

Crawler side frames are extendible and retractable by means of hydraulic cylinders to convert from wide track operating condition to a narrower overall width for travel and transportation. Two banks of valves, one on each end of the car body, control the extension cylinders to each side frame. A valve in the upper diverts fluid from the upper control system to the extension cylinders. Jacks are not needed to extend or retract crawlers. Crawlers designed with quick hydraulic line disconnect feature for individual removal as a unit from axles. Crawler belt tension maintained by shims between track adjusting bearing block and frame. 13 lower rollers in each frame, with double rolling surfaces, 11.5" (279 mm) dia.

CRAWLER DRIVE: Independent hydraulic propel drive built into each crawler side frame. Each drive consists of a piston type motor propelling a driving sprocket (wheel) through a planetary gear box. Self-contained system eliminates gear and chain drives in carbody and shaft extensions when axles are extended.

CRAWLER BRAKES: Spring set, hydraulically released parking brakes are built into each propel drive.

STEERING MECHANISM: The hydraulic propel system provides both differential speed steering (driving one track faster than the other) and counter-rotating steering (driving each track in opposite direction) with single joystick control.



TRACK: Tractor type crawler belt with bolted shoes.

DRIVE TRAIN

CRAWLER SHOES: Total number 118 both sides. 36" (914 mm) flat forged (std.), 42" (1067 mm) flat forged optional extra.

OPTIONAL EQUIPMENT: Load moment device, load indicating device, anti-two block device, spreader control, magnet and controls, two-speed hoist, hydraulic boom foot pin assembly, automatic brakes, dead-man controls, light and generating package (either automotive or 110V-AC), dragline bucket, and clamshell bucket.

WEIGHTS:

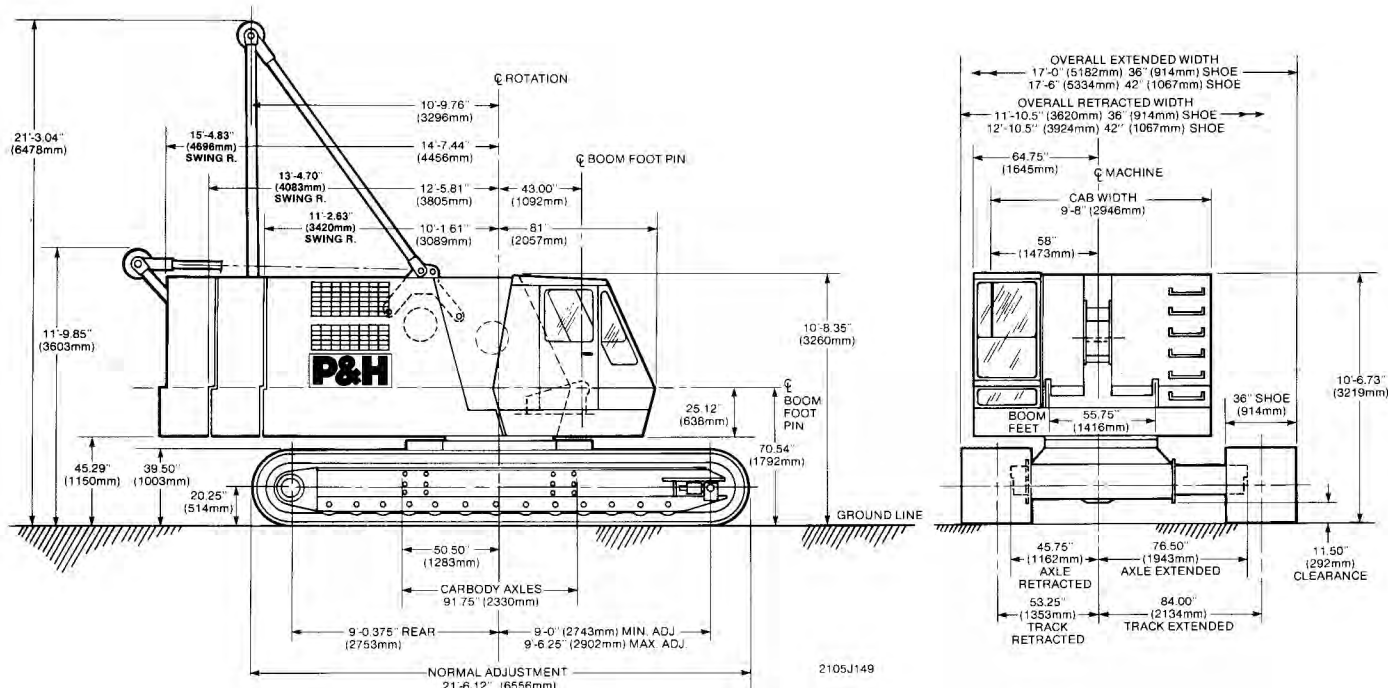
Basic machine, with 50 gallons fuel,	
two counterweights, 36" shoes, 50	
foot boom, 3 part hoist rope, 30 ton	
hook block	172,786 lbs. (78,376 Kg)
Basic machine with one counterweight	142,286 lbs. (64,541 Kg)
Upper structure (basic machine) with 50	
gallons fuel, 3 part hoist rope, gantry,	
backstops, cab but less counterweight	39,389 lbs. (17,867 Kg)
Lower machine with crawlers, 36" shoes	65,286 lbs. (29,614 Kg)
Carbody with Swing Circle®, cylinders,	
axles	19,010 lbs. (8,623 Kg)
Crawler side frame with 36" shoes	23,813 lbs. (10,802 Kg)
Crawler side frame with 42" shoes	28,238 lbs. (12,809 Kg)
Counterweight (each)	30,500 lbs. (13,835 Kg)
Boom Weights:	
Boom Base with pins	2,700 lbs. (1,225 Kg)
Boom tip with pendants, pins	3,161 lbs. (1,434 Kg)
10 foot insert with pendants, pins	960 lbs. (435 Kg)
20 foot insert with pendants, pins	1,480 lbs. (671 Kg)
30 foot insert with pendants, pins	2,010 lbs. (912 Kg)
50 foot insert with pendants, pins	3,000 lbs. (1,361 Kg)
Jib weights:	
Jib Base with pins	330 lbs. (150 Kg)
Jib Tip with pins	404 lbs. (183 Kg)
Jib Strut with pins	415 lbs. (188 Kg)
10 foot insert with pins	178 lbs. (81 Kg)
20 foot insert with pins	320 lbs. (145 Kg)

AVERAGE GROUND BEARING PRESSURE

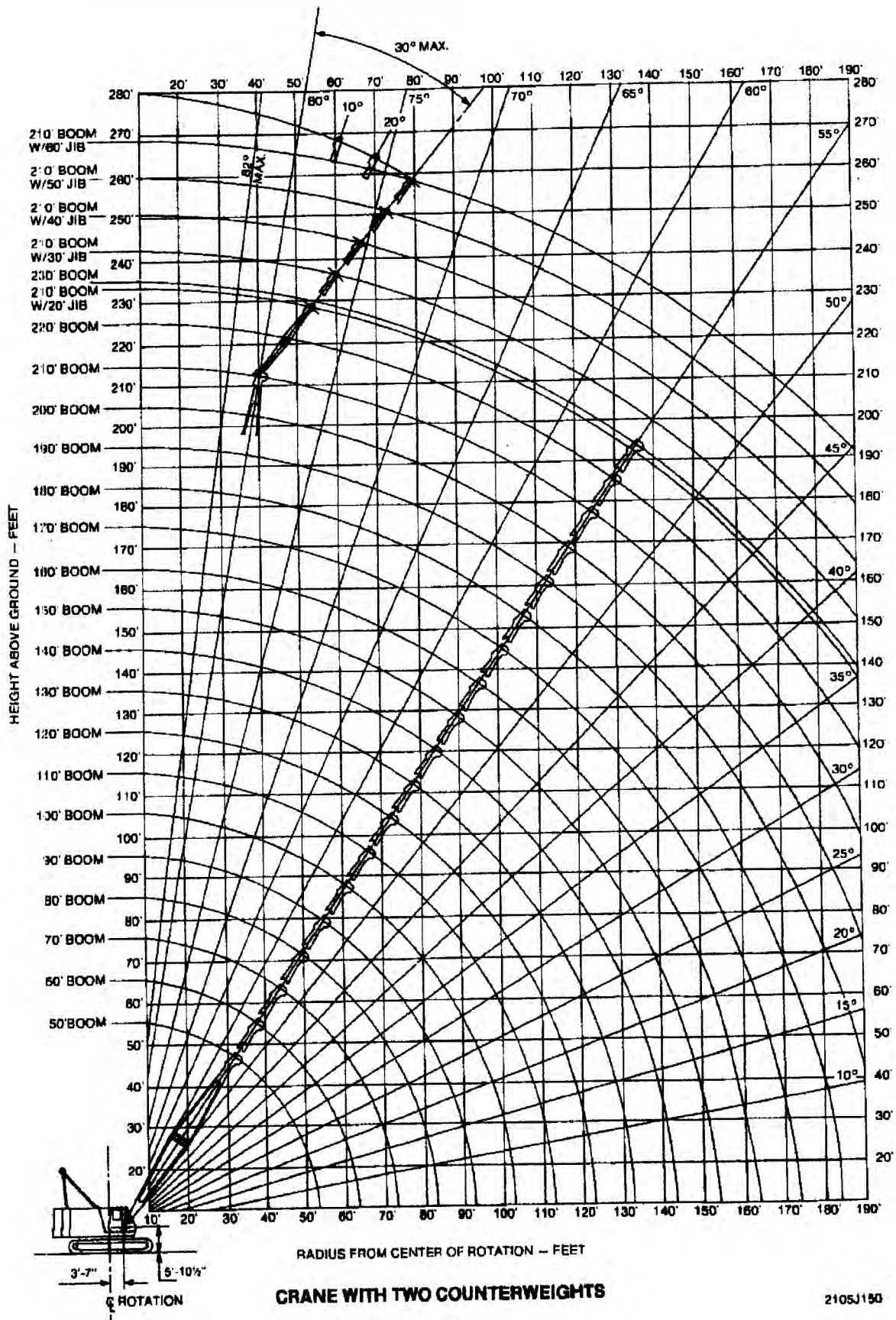
BASIC MACHINE:	PSI	Kg/cm ²
with 2 counterweights, 36" shoes	10.24	0.72
42" shoes	9.23	0.65
with 1 counterweight, 36" shoes	8.43	0.59
42" shoes	7.68	0.54

TRAVEL SPEED: 1.09 mph (1.75 km/h) approximate.

Maximum grade recommended for travel is 20%.



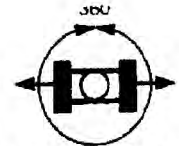
working ranges





two counterweights

RATINGS **LIFT CRANE SERVICE** **62" x 62" boom**



crawlers fully extended

75% stability					rated boom loads in pounds									
Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	360° Rated Load (lbs)	Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	360° Rated Load (lbs)	Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	360° Rated Load (lbs)
50	11	82	56.9	200,000	110	20	82	116.2	100,000	150	30	80	155.1	60,000
	12	81	56.7	200,000		25	79	115.4	79,900		35	78	154.2	48,600
	15	78	56.2	160,000		30	77	114.4	61,300		40	76	153.1	40,500
	20	72	54.9	113,900		35	74	113.1	49,400		45	74	151.8	34,300
	25	66	53.0	80,800		40	71	111.5	41,200		50	72	150.3	29,700
	30	59	50.5	62,300		45	68	109.7	35,100		60	68	146.8	23,000
	35	52	47.0	50,400		50	65	107.6	30,500		70	64	142.8	18,900
	40	44	42.5	42,300		60	60	102.4	23,800		80	60	137.5	15,500
	45	35	36.3	36,200		70	54	95.4	19,700		90	56	131.2	13,000
	50	23	25.8	31,600		80	47	88.0	16,300		100	51	123.7	11,000
60	15	80	66.4	159,500	120	20	80	125.6	79,800	160	30	81	165.3	60,000
	20	75	65.3	113,800		30	78	124.6	61,200		35	79	164.4	48,400
	25	70	62.8	80,700		35	75	123.4	49,300		40	77	163.4	40,200
	30	65	61.8	62,200		40	73	122.0	41,100		45	75	162.2	34,100
	35	59	59.1	50,300		45	70	120.4	35,000		50	73	160.8	29,400
	40	53	55.8	42,100		50	68	118.5	30,300		60	70	157.5	22,700
	45	47	51.6	36,000		60	62	113.9	23,700		70	66	153.8	18,600
	50	40	46.3	31,400		70	57	108.5	19,500		80	62	148.9	15,300
70	15	81	76.5	159,200	130	25	81	135.7	79,600	170	30	81	175.4	60,000
	20	77	75.6	113,700		30	79	134.8	61,000		35	80	174.6	48,200
	25	73	74.3	80,600		35	76	133.7	49,000		40	78	173.6	40,100
	30	68	72.6	62,100		40	74	132.5	40,900		45	76	172.5	33,900
	35	64	70.5	50,200		45	72	130.9	34,800		50	74	171.2	29,200
	40	59	67.8	42,000		50	69	129.2	30,100		60	71	168.1	22,500
	45	54	64.5	35,900		60	65	125.0	23,400		70	68	164.6	18,500
	50	49	60.6	31,300		70	60	120.2	19,300		80	64	160.2	15,100
80	15	81	76.5	159,200	140	25	82	145.8	79,400	170	30	81	175.4	60,000
	20	77	75.6	113,700		30	79	144.0	60,800		35	80	174.6	48,200
	25	73	74.3	80,600		35	77	144.0	48,800		40	78	173.6	40,100
	30	68	72.6	62,100		40	75	142.8	40,700		45	76	172.5	33,900
	35	64	70.5	50,200		45	73	141.4	34,600		50	74	171.2	29,200
	40	59	67.8	42,000		50	71	139.8	29,900		60	71	168.1	22,500
	45	54	64.5	35,900		60	67	136.0	23,200		70	68	164.6	18,500
	50	49	60.6	31,300		70	62	131.6	19,100		80	64	160.2	15,100
90	15	81	76.5	159,200	140	25	82	145.8	79,400	170	30	81	175.4	60,000
	20	77	75.6	113,700		30	79	144.0	60,800		35	80	174.6	48,200
	25	73	74.3	80,600		35	77	144.0	48,800		40	78	173.6	40,100
	30	68	72.6	62,100		40	75	142.8	40,700		45	76	172.5	33,900
	35	64	70.5	50,200		45	73	141.4	34,600		50	74	171.2	29,200
	40	59	67.8	42,000		50	71	139.8	29,900		60	71	168.1	22,500
	45	54	64.5	35,900		60	67	136.0	23,200		70	68	164.6	18,500
	50	49	60.6	31,300		70	62	131.6	19,100		80	64	160.2	15,100
100	15	81	76.5	159,200	140	25	82	145.8	79,400	170	30	81	175.4	60,000
	20	77	75.6	113,700		30	79	144.0	60,800		35	80	174.6	48,200
	25	73	74.3	80,600		35	77	144.0	48,800		40	78	173.6	40,100
	30	68	72.6	62,100		40	75	142.8	40,700		45	76	172.5	33,900
	35	64	70.5	50,200		45	73	141.4	34,600		50	74	171.2	29,200
	40	59	67.8	42,000		50	71	139.8	29,900		60	71	168.1	22,500
	45	54	64.5	35,900		60	67	136.0	23,200		70	68	164.6	18,500
	50	49	60.6	31,300		70	62	131.6	19,100		80	64	160.2	15,100

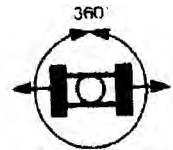
DEDUCTION FROM RATED BOOM LOADS WHEN LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT	30 FT	40 FT	50 FT	60 FT
DEDUCT — LBS	2100	2300	2800	3300	3800

WARNING

Do not attempt to lift more than **rated load** at **load radius** shown, or lift where no radius or load is listed, as crane may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.



RATINGS LIFT CRANE SERVICE

two counterweights

62" x 62" boom

crawlers fully extended

75% stability					rated boom loads in pounds				
Boom Length	Load Radius	Boom Angle	Boom Point Elev.	360° Rated Load	Boom Length	Load Radius	Boom Angle	Boom Point Elev.	360° Rated Load
(ft)	(ft)	Δ°	(ft)	(lbs)	(ft)	(ft)	Δ°	(ft)	(lbs)
180	30	82	185.5	52,700	200	35	81	205.0	37,500
	35	80	184.7	47,900		40	80	204.1	35,900
	40	79	183.8	39,800		45	78	203.2	33,200
	45	77	182.7	33,700		50	77	202.1	28,500
	50	75	181.5	29,000		60	74	199.8	21,400
	60	72	178.6	22,300		70	71	196.7	17,800
	70	69	175.4	18,300		80	68	193.0	14,400
	80	65	171.2	14,900		90	65	188.6	11,800
	90	62	166.3	12,300		100	62	183.6	9,800
	100	58	160.5	10,300		110	58	177.8	8,200
	110	54	153.8	8,600		120	55	171.3	6,800
	120	50	146.1	7,300		130	51	163.7	5,700
	130	46	137.1	6,200		140	48	155.2	4,800
	140	41	126.6	5,300		150	44	145.3	4,000
	150	36	114.0	4,400		160	39	133.8	3,300
	160	30	98.7	3,800		170	34	120.3	2,700
	170	23	78.7	3,200		180	29	103.9	2,200
	180	13	47.5	2,800		190	22	82.6	1,700
190	35	81	194.8	40,000	210	35	82	215.1	33,200
	40	79	194.0	39,600		40	80	214.3	31,700
	45	78	193.0	33,500		45	79	213.4	30,400
	50	76	191.8	28,800		50	77	212.4	28,300
	60	73	189.1	22,000		60	75	210.1	21,400
	70	70	186.1	18,000		70	72	207.2	17,600
	80	67	182.1	14,600		80	69	203.7	14,200
	90	63	177.5	12,100		90	66	199.6	11,600
	100	60	172.2	10,000		100	63	194.9	9,600
	110	56	166.0	8,400		110	60	189.5	8,000
	120	53	158.9	7,100		120	57	183.3	6,600
	130	49	150.7	6,000		130	54	176.4	5,500
	140	45	141.3	5,000		140	50	168.5	4,600
	150	40	130.3	4,200		150	46	159.5	3,800
	160	35	117.2	3,500		160	42	149.2	3,100
	170	30	101.3	2,900		170	38	137.3	2,500
	180	23	80.7	2,400		180	33	123.4	1,900
	190	13	48.6	1,900					

Boom Length	Load Radius	Boom Angle	Boom Point Elev.	360° Rated Load
(ft)	(ft)	Δ°	(ft)	(lbs)
220	35	82	225.2	29,100
	40	81	224.4	27,800
	45	79	223.6	26,300
	50	78	222.6	25,000
	60	76	220.5	21,300
	70	73	217.7	17,400
	80	70	214.4	14,000
	90	67	210.5	11,400
	100	64	206.0	9,300
	110	62	200.9	7,700
	120	59	195.2	6,400
	130	55	188.7	5,300
	140	52	181.3	4,300
	150	49	173.1	3,500
	160	45	163.7	2,800
	170	41	153.0	2,200
230	35	82	235.3	26,300
	40	81	234.6	25,300
	45	80	233.7	24,600
	50	79	232.8	23,700
	60	76	230.8	20,900
	70	74	228.1	17,100
	80	71	224.9	13,700
	90	68	221.3	11,100
	100	66	217.0	9,100
	110	63	212.2	7,500
	120	60	206.8	6,100
	130	57	200.7	5,000
	140	54	193.8	4,100
	150	51	186.1	3,300
	160	48	177.5	2,600
	170	44	167.8	1,900

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DEDUCTION FROM RATED BOOM LOADS WHEN LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT.	30 FT.	40 FT.	50 FT.	60 FT.
DEDUCT — LBS.	2100	2300	2800	3300	3800

WARNING

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as crane may tip or collapse.

Do not attempt to lift more than **rated loads shown in shaded areas** — a machine failure may occur.