



CUSTOM SERVICE CRANE, INC.



National Crane Series 1400A

Product Guide

ASME B30.5
Imperial 85%



Features

- 29,9 t (33 USt) rating
- 38,72 m (127 ft) five-section boom
- Self-lubricating "Easy Glide" wear pads
- Internal anti-two-block
- Vision™ cab



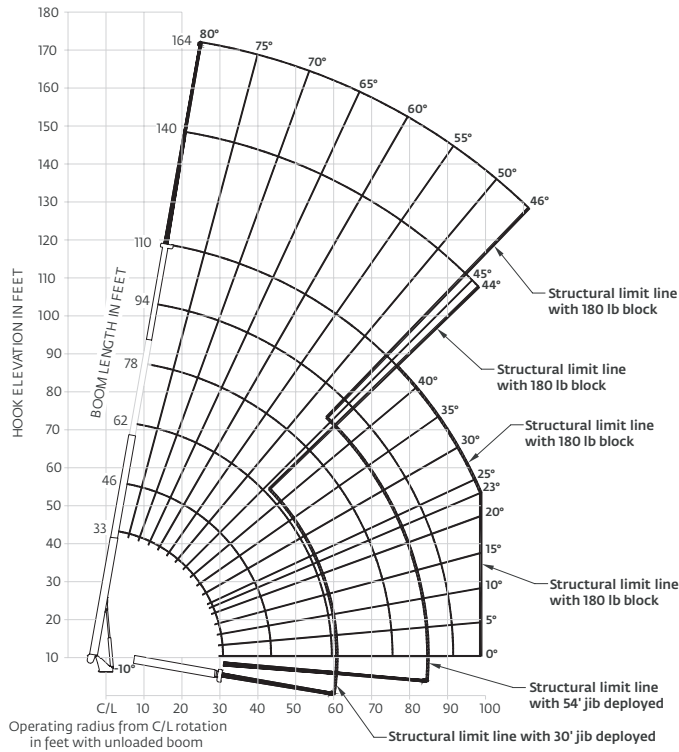
CUSTOM SERVICE CRANE, INC.

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Capacities

110 ft boom with 30 ft - 54 ft jib, full-span outrigger

Other Series 1400A Load Rating Charts are available. National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.



CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 3 m (10 ft) of live power lines or other conductors of electricity.
- Jib and boom capacities shown are maximum for each section.
- Do not exceed capacities at reduced radii.
- Load ratings shown on the appropriate charts are maximum allowable loads with the crane mounted on a factory-approved truck and all outriggers at either full span or at mid span range and set on a firm level surface so that the crane is level and all tires are suspended.
- Always level the crane with the level indicator located on the crane.
- The operator must reduce load to allow for factors such as wind, ground conditions, operating speeds and their effects on freely suspended loads.
- Overloading this crane may cause structural collapse or instability.
- Weights on any accessories attached to the boom or loadline must be deducted from the load chart capacities.
- Do not exceed jib capabilities at any reduced boom lengths.
- Do not deadhead lineblock against boom tip when extending boom or winching up.
- Keep at least three wraps of loadline on drum at all times.
- Use only specified cable with this machine.

NOTE:

1. Operate with jib by radius when main boom is fully extended. If necessary increase boom angle to maintain loaded radius.
2. Operate with jib by boom angle when main boom is not fully extended. Do not exceed rated jib capacities at any reduced boom lengths.

Load chart

33 ft - 110 ft BOOM RATED LOADS WITHOUT JIB

LOAD RADIUS (ft)	LOADED BOOM ANGLE	33 ft BOOM (lb)	LOADED BOOM ANGLE	A 46 ft BOOM (lb)	LOADED BOOM ANGLE	B 62 ft BOOM (lb)	LOADED BOOM ANGLE	C 78 ft BOOM (lb)	LOADED BOOM ANGLE	D 94 ft BOOM (lb)	LOADED BOOM ANGLE	110 ft BOOM (lb)
6	76.7	66,000										
8	72.8	51,700										
10	68.9	42,200	76	37,000								
12	64.9	38,400	73.4	33,400	78.2	26,900						
15	58.6	32,200	69.3	28,000	75.6	24,900	79.4	22,800				
20	48.5	23,900	62.2	21,650	70.2	19,300	74.8	17,900	78.2	14,100		
25	33.3	17,600	54.4	17,800	64.9	16,050	71	14,550	75.1	12,400	77.4	9200
30			46.2	15,100	59.8	13,600	67	12,300	71.9	11,200	75.1	8700
35			36.3	12,750	54	12,050	63	10,600	68.5	9750	72.5	8000
40			22.9	10,100	47.8	10,450	58.7	9300	65.5	8550	69.6	7200
45					41.6	8750	54.5	7800	61.9	7350	67	6400
50					33.9	7200	49.7	6900	58.2	6250	63.9	5700
55					23.6	5600	44.5	6000	54.4	5500	60.8	4700
60							38.6	4900	50.5	4800	57.6	4000
65							31.9	4000	46.3	4200	54.4	3400
70							23.3	3250	41.7	3450	51	2700
75							8.7	2500	36.6	2750	47.4	2300
80									30.7	2250	43.6	1800
85									23.5	1750	39.3	1200
90									12.5	1250	34.7	1000
95											29.6	800
100											23.3	600
	0	12,000	0	7500	0	4500	0	2100	0	1000		

*Shaded areas are structurally limited capacities.

30 ft - 54 ft JIB RATED LOADS				
LOAD RADIUS (ft)	LOADED BOOM ANGLE	30 ft JIB (lb)	LOADED BOOM ANGLE	54 ft JIB (lb)
30	79.1	5050		
35	77.4	5000	79.5	2650
40	75.6	4950	78.1	2600
45	74.7	4700	77.6	2500
50	71.6	4300	75	2400
55	69.5	4000	73.2	2300
60	67.3	3700	71.4	2200
65	65.1	3400	69.6	2100
70	62.9	3150	67.8	2000
75	60.5	2850	66	1850
80	58	2500	64.1	1750
85	55.5	2000	62.2	1600
90	52.8	1600	60.2	1500
95	50	1200	58	1400
100	47.1	850	55.8	1300
105	43.9	500	53.6	1200
110			51.2	1000
115			48.7	750
120			46.1	500

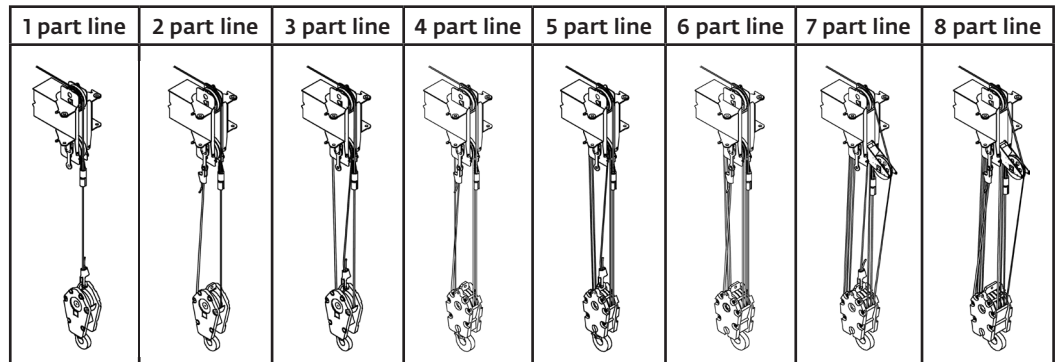
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

Specifications

1400A winch data

- Do not deadhead line block against boom tip when extending boom
- Keep at least 3 wraps of loadline on drum at all times.
- Use only 5/8 in diameter rotation-resistant cable with 45,400 lb breaking strength on this machine.
- MAXIMUM BOOM LENGTH AT MAXIMUM ELEVATION WITH RIGGING SHOWN WITH LOAD BLOCK AT GROUND LEVEL



Winch	Cable supplied	Average breaking strength	Lift and speed	Lift and speed	Lift and speed	Lift and speed	Lift and speed	Lift and speed	Lift and speed	Lift and speed
Low speed	5/8" diameter rotation resistant	20 593 kg (45,400 lb)	4082 kg (9000 lb) 52 m/min (170 fpm)	8165 kg (18,000 lb) 26 m/min (85 fpm)	12 247 kg (27,000 lb) 17 m/min (57 fpm)	16 329 kg (36,000 lb) 13 m/min (43 fpm)	20 412 kg (45,000 lb) 10 m/min (34 fpm)	24 494 kg (54,000 lb) 9 m/min (28 fpm)	28 576 kg (63,000 lb) 7 m/min (24 fpm)	29 937 kg (66,000 lb) 6 m/min (21 fpm)
High speed	5/8" diameter rotation resistant	20 593 kg (45,400 lb)	1996 kg (4400 lb) 104 m/min (340 fpm)	3992 kg (8800 lb) 52 m/min (170 fpm)	5987 kg (13,200 lb) 34 m/min (113 fpm)	7983 kg (17,600 lb) 26 m/min (85 fpm)	9979 kg (22,000 lb) 21 m/min (68 fpm)	11 975 kg (26,400 lb) 17 m/min (57 fpm)	13 971 kg (30,800 lb) 15 m/min (49 fpm)	15 967 kg (35,200 lb) 13 m/min (43 fpm)

Winch	Full drum pull	Allowable cable pull
Standard planetary	1996 kg (4400 lb) high speed 4082 kg (9000 lb) low speed	4119 kg (9080 lb)

Loadline deduct		
Block type	Rating	Weight
Aux boom head		45 kg (100 lb)
Downhaul weight	4,53 t (5 USt)	82 kg (180 lb)
1-sheave block	13,60 t (15 USt)	170 kg (375 lb)
2-sheave block	22,67 t (25 USt)	290 kg (640 lb)
3-sheave block	31,74 t (35 USt)	395 kg (870 lb)
4-sheave block	32,65 t (36 USt)	440 kg (970 lb)



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