

National Crane Series NBT45

Product Guide

ASME B30.5
Imperial 85%

Features

- 40,8 t (45 USt) rating
- 49,1 m (161 ft)
five-section boom
- Self-lubricating Easy
Glide wear pads
- 2041 kg (4500 lb)
tailswing counterweight



43,29 m (142 ft) main boom, full span outrigger, without jib

Radius in feet	#01								
	Main boom length in feet								
	34	47-A	61-B	74-C	88-D	101-E	115-F	128-G	142
7	90,000 (74.9)								
8	79,600 (73.1)								
10	68,200 (69.4)	40,000 (75.6)							
12	57,100 (65.7)	40,000 (73.1)	40,000 (77.4)						
15	44,750 (59.7)	40,000 (69.2)	39,500 (74.5)	35,200 (77.7)					
20	32,100 (48.9)	32,700 (62.3)	33,100 (69.5)	31,500 (73.7)	23,050 (76.7)	17,400 (78.8)			
25	24,300 (35.6)	24,950 (55)	25,300 (64.3)	25,550 (69.6)	20,700 (73.4)	15,750 (76)	13,000 (78.3)		
30	18,950 (13.5)	19,700 (46.9)	20,100 (58.8)	20,300 (65.2)	18,750 (70)	14,300 (73.1)	12,150 (75.8)	10,050 (78)	8000 (79.5)
35		15,900 (37.5)	16,300 (52.9)	16,500 (60.7)	16,700 (66.4)	13,200 (70.1)	11,150 (73.5)	9550 (75.8)	7600 (77.7)
40		13,000 (25.2)	13,400 (46.6)	13,650 (56.1)	13,850 (62.7)	12,200 (67.1)	10,400 (71)	9050 (73.7)	7450 (75.9)
45			11,200 (40.2)	11,400 (51.1)	11,550 (58.8)	11,100 (64.2)	9750 (68.4)	8550 (71.4)	7200 (74)
50			9400 (31.9)	9650 (46.2)	9800 (55.1)	10,000 (60.9)	9100 (65.7)	8050 (69.1)	6800 (72)
55			7750 (20.7)	8000 (40.4)	8200 (50.9)	8350 (57.5)	8500 (62.9)	7600 (66.7)	6550 (70)
60				6700 (33.7)	6900 (46.4)	7000 (53.8)	7150 (59.9)	7150 (64.3)	6200 (67.9)
65				5600 (25.4)	5800 (41.5)	5900 (50)	6050 (56.7)	6200 (61.6)	5600 (65.6)
70				4650 (12.7)	4850 (36)	5000 (46)	5100 (53.5)	5250 (58.8)	5350 (63.4)
75					4100 (29.7)	4200 (41.7)	4300 (50.1)	4450 (55.9)	4550 (60.9)
80					3400 (21.7)	3500 (37)	3650 (46.5)	3750 (52.9)	3850 (58.3)
85					2750 (7.2)	2950 (31.6)	3050 (42.8)	3100 (49.8)	3200 (55.6)
90						2400 (25.3)	2500 (38.7)	2600 (46.5)	2650 (52.9)
95						1950 (16.6)	2050 (34.1)	2100 (43.1)	2200 (50)
100							1600 (29)	1700 (39.4)	1750 (47)
105							1250 (22.7)	1300 (35.4)	1400 (43.9)
110							900 (13.8)	950 (30.9)	1050 (40.6)
Minimum boom angle (°) for indicated length (no load)							0	25.6	36.9
Maximum boom length (ft) at 0° boom angle (no load)								115	

NOTE: Loads displayed in pounds. () Boom angles are in degrees.
#LMI operating code. Refer to LMI manual for operating instructions.

Lifting capacities at zero degree boom angle									
Boom angle	Main boom length in feet								
	34	47-A	61-B	74-C	88-D	101-E			
0°	17,950 (31.5)	11,200 (44.5)	6,750 (58.5)	4,400 (71.5)	2,700 (85.5)	1,600 (98.5)			

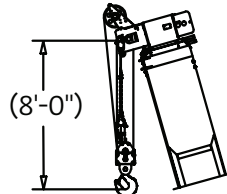
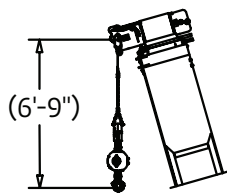
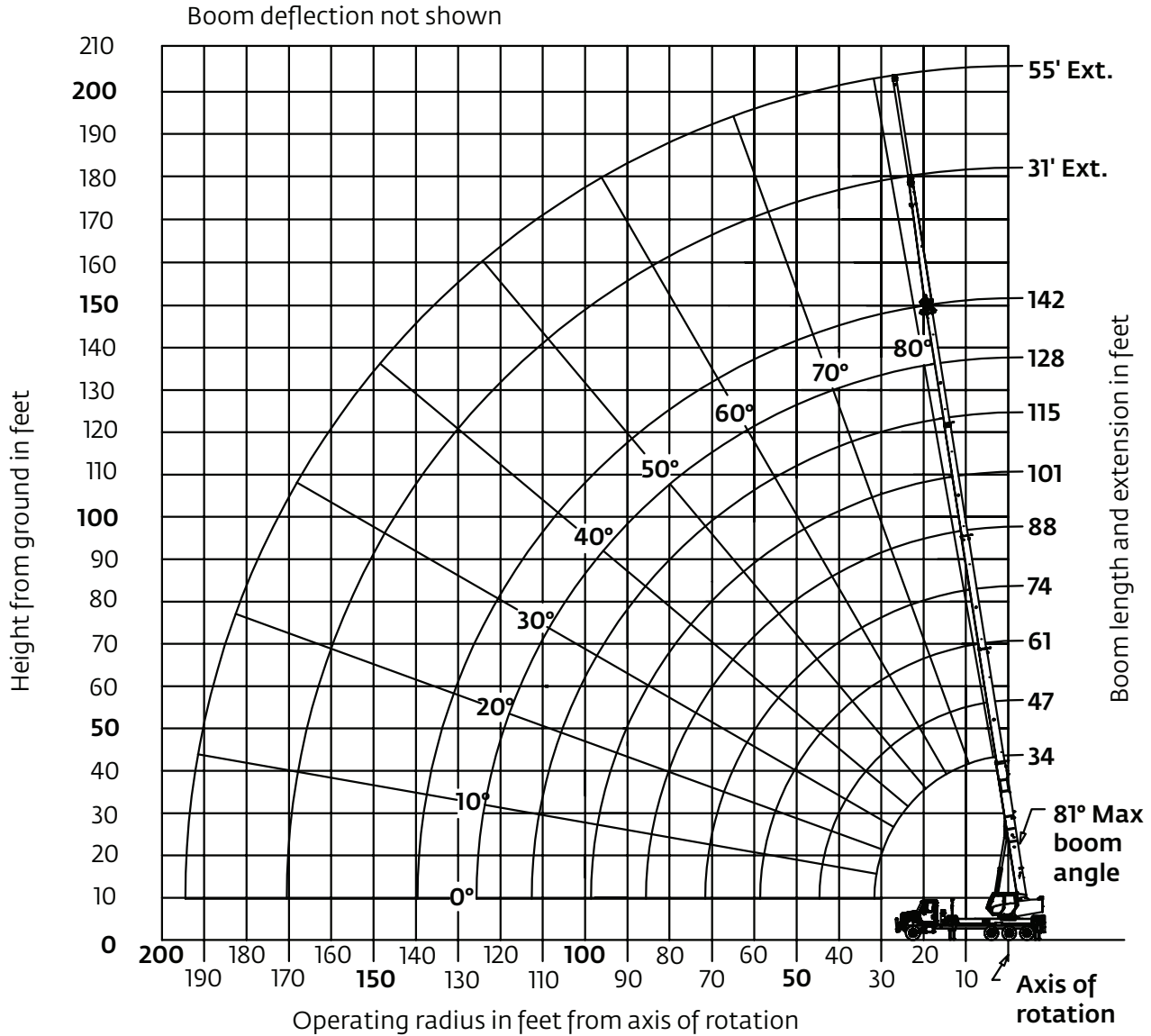
NOTE: () Reference radii in feet. 80026636

Rated Load Reductions from main boom capacity when lifting over main boom nose with:									
tele. erected (retracted)	2300	2150	2000	1950	1900	1850	1800	1750	1700
26° erected	1050	1000	950	925	900	900	875	875	850

Working range



43,29 m (142 ft) main boom, full span outrigger, with 9,45 m - 16,76 m (31 ft - 55 ft) jib



Dimensions are for largest furnished hookblock and headache ball with anti-two block activated.

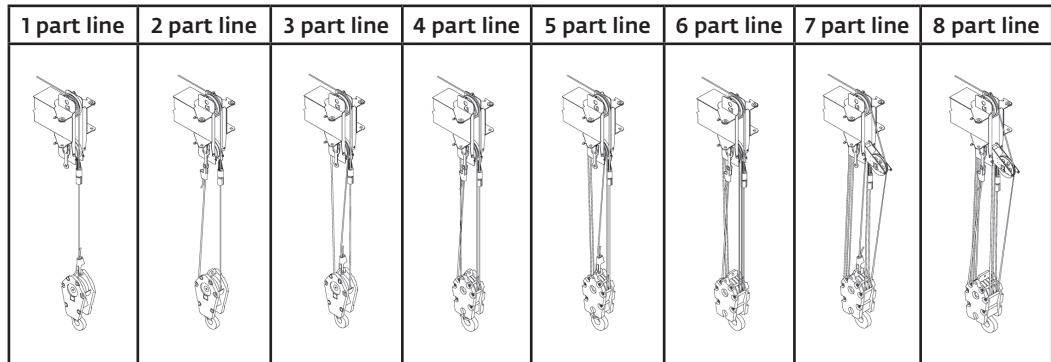
*Drawing is to show the physical reach of the machine. Always refer to load chart to see what portions of this range are structurally and stability limited.

Specifications



NBT45 winch data

- All winch pulls and speeds are shown on the fourth layer.
- Winch line pulls would increase on the first, second, and third layers.
- Winch line speed would decrease on the first, second, and third layers.
- Winch line pulls may be limited by the winch capacity or the ANSI 5 to 1 cable safety factor.



Standard planetary winch	Cable supplied	Average breaking strength	1 part line Max. pull	2 part line Max. pull	3 part line Max. pull	4 part line Max. pull	5 part line Max. pull	6 part line Max. pull	7 part line Max. pull	8 part line Max. pull
Low speed	5/8" diameter rotation resistant IWRC	25 583 kg (56,400 lb)	5103 kg (11,250 lb) 62 m/min (205 fpm)	10 206 kg (22,500 lb) 31 m/min (103 fpm)	15 309 kg (33,750 lb) 21 m/min (68 fpm)	20 412 kg (45,000 lb) 16 m/min (51 fpm)	25 515 kg (56,250 lb) 13 m/min (41 fpm)	30 618 kg (67,500 lb) 10 m/min (34 fpm)	35 721 kg (78,750 lb) 9 m/min (29 fpm)	40 824 kg (90,000 lb) 8 m/min (26 fpm)
High speed	5/8" diameter rotation resistant IWRC	25 583 kg (56,400 lb)	2268 kg (5000 lb) 125 m/min (410 fpm)	4536 kg (10,000 lb) 62 m/min (205 fpm)	6804 kg (15,000 lb) 42 m/min (137 fpm)	9072 kg (20,000 lb) 31 m/min (103 fpm)	11 340 kg (25,000 lb) 25 m/min (82 fpm)	13 608 kg (30,000 lb) 21 m/min (68 fpm)	15 876 kg (35,000 lb) 18 m/min (59 fpm)	18 144 kg (40,000 lb) 16 m/min (51 fpm)

Winch	Fourth layer pull	Allowable cable pull
Standard planetary and auxiliary planetary	2268 kg (5000 lb) high speed 5103 kg (11,250 lb) low speed	5117 kg (11,280 lb) 5117 kg (11,280 lb)

Block type	Rating	Weight
Aux boom head		45 kg (100 lb)
Downhaul weight	4,53 USt (7 USt)	78 kg (172 lb)
1-sheave block	13,60 t (20 USt)	149 kg (329 lb)
2-sheave block	22,67 t (30 USt)	290 kg (640 lb)
3-sheave block	31,74 t (40 USt)	272 kg (600 lb)
4-sheave block	32,65 t (50 USt)	361 kg (796 lb)

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.