

# National Crane 900A Series

## Product Guide



### Features

- 31,4 m (103 ft) four-section boom
- 23,6 t (26 USt) rating
- Self-lubricating Easy Glide wear pads
- Internal anti-two block

## Features

### Boom

The 31,4 m (103 ft) four-section boom is the longest in its size range. The longer boom allows the operator to perform more lifts without the use of a jib, reducing setup time and improving efficiency.



### Outriggers

"A" frame main outriggers with 21 ft span. RSOD 16 ft out and down, rear stabilizers for standard behind-cab mount.



### Two-speed auger option

Available on the 990A, the 14,000 ft/lb two-speed drive auger with a maximum digging radius of 39 ft gives your crane enhanced working capabilities. Controls are located at the operator's console and hose slider on boom. Auger flighting is available.

### Easy Glide boom wear pads

Reduce the conditions that cause boom chatter and vibration resulting in smoother crane operation.



# Features

## Performance you can rely on

- The Series 900A is standard with 375° non-continuous rotation
- Burst of speed winch provides faster winch payout and pickup of unloaded cable
- The stronger standard torsion box improves rigidity, reduces truck frame flex and reduces the need for counterweight
- A control knob located on the swing motor brake release valve can be easily adjusted to the crane operator's swing speed preference.



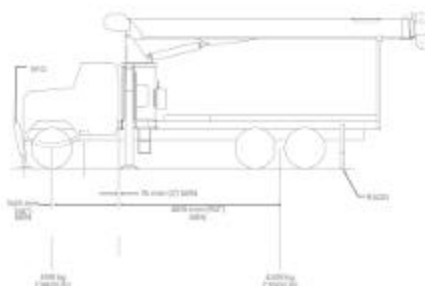
\* Product may be shown with optional equipment.

## Improved serviceability and reliability help keep you working longer

- Bearings on the boom and retract cables can be greased through access holes in the boom side plates
- Number of internal boom parts has been reduced, decreasing service time when rebuilding the machine
- Standard on the 900A, internal anti-two block wire routing eliminates the external reel and wire, removing the possibility of snagging reel or wire on obstructions and causing damage.
- Painting crane components before assembly reduces the possibility of rust, improves serviceability and enhances the appearance of the machine
- A removable winch allows the internal telescoping cylinder to be removed quickly, without dismantling the boom.
- Speedy-reeve boom tip and sheave blocks simplify rigging changes by decreasing the time needed to change line reeving

# Mounting configurations

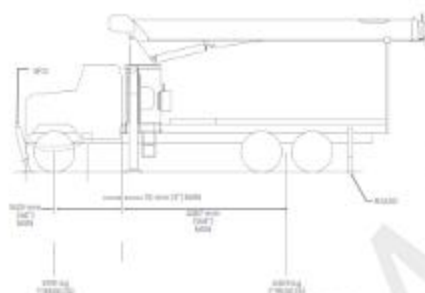
The configurations are based on the Series 900A with an 85% stability factor. The complete unit must be installed in accordance with factory requirements and a test performed to determine actual stability and counterweight requirements since individual truck chassis vary.



## Configuration 1 – 9103A with SFO (Extended front frame rails required for SFO installation.)

Working area	360'
Gross Axle Weight Rating Front	7257 kg (16,000 lb)
Gross Axle Weight Rating Rear	15 422 kg (34,000 lb)
Gross Vehicle Weight Rating	22 679 kg (50,000 lb)
Wheelbase	650 cm (256 in)
Cab to Axle/runion (CA/CT)	488 cm (192 in)
Frame Section Modulus (SM) under crane: 758 MPa (110,000 PSI)	327 cm <sup>3</sup> (20 in <sup>3</sup> )
Frame Section Modulus (SM) over rear stabilizers: 758 MPa (110,000 PSI)	245 cm <sup>3</sup> (15 in <sup>3</sup> )
Stability Weight, Front	3991 kg (8800 lb) minimum*
Stability Weight, Rear	4309 kg (9500 lb) minimum*
Estimated Average Final Weight	19 459 kg (42,900 lb)

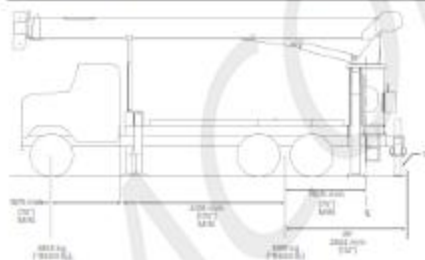
This mount requires front stabilizer for full capacity 360° around the truck. Front stabilizer gives the machine a solid base, helping the operator control loads. This configuration requires a 6,71 m (22 ft) bed.



## Configuration 2 – 990A / 969A with SFO (Extended front frame rails required for SFO installation.)

Working area	360'
Gross Axle Weight Rating Front	7257 kg (16,000 lb)
Gross Axle Weight Rating Rear	15 422 kg (34,000 lb)
Gross Vehicle Weight Rating	22 679 kg (50,000 lb)
Wheelbase	589 cm (232 in)
Cab to Axle/runion (CA/CT)	427 cm (168 in)
Frame Section Modulus (SM) under crane: 758 MPa (110,000 PSI)	327 cm <sup>3</sup> (20 in <sup>3</sup> )
Frame Section Modulus (SM) over rear stabilizers: 758 MPa (110,000 PSI)	245 cm <sup>3</sup> (15 in <sup>3</sup> )
Stability Weight, Front	3991 kg (8800 lb) minimum*
Stability Weight, Rear	4309 kg (9500 lb) minimum*
Estimated Average Final Weight	18 551 kg (40,900 lb)

This configuration allows the installation of the 990A or 969A on a chassis by using a subbase for a 6,10 m (20 ft) bed or a different subbase for a 6,71 m (22 ft) bed. This mount requires front stabilizer for full capacity 360° around the truck. Front stabilizer gives the machine a solid base, helping the operator control loads.



## Configuration 3 – Rear Mount

Working area	360'
Gross Axle Weight Rating Front	7257 kg (16,000 lb)
Gross Axle Weight Rating Rear	18 143 kg (40,000 lb)
Gross Vehicle Weight Rating	25 401 kg (56,000 lb)
Wheelbase	620 cm (244 in)
Cab to Axle/runion (CA/CT)	MINIMUM 432 cm (170 in)
Frame Section Modulus (SM) under crane: 758 MPa (110,000 PSI)	260 cm <sup>3</sup> (15.9 in <sup>3</sup> )
Stability Weight, Front	3855 kg (8500 lb) minimum*
Stability Weight, Rear	3991 kg (7000 lb) minimum*
Estimated Average Final Weight	19 504 kg (43,000 lb)

This configuration allows the rear-mount installation of the Series 900A. This configuration is 360° stable and allows the effective use of close working area to lift the heavier capacity loads. Maximum bed length is 4,87 m (16 ft).

### Notes:

- Gross Vehicle Weight Rating (GVWR) is dependent on all components of the vehicle (axles, tires, springs, frame, etc.) meeting manufacturers' recommendations; always specify GVWR when purchasing trucks
- Diesel engines require a variable speed governor and energize-to-run fuel solenoid for smooth crane operation; electronic fuel injection requires EET engine remote throttle

- All mounting data is based on a National Series 900A with an 85 percent stability factor
- The complete unit must be installed in accordance with factory requirements, and a test performed to determine actual stability and counterweight requirements per SAE J765; contact the factory for details
- Transmission neutral safety interlock switch is required with optional remote control

\*Estimated axle scale rates prior to installation of crane, stabilizers and subbase for 85% stability.

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.

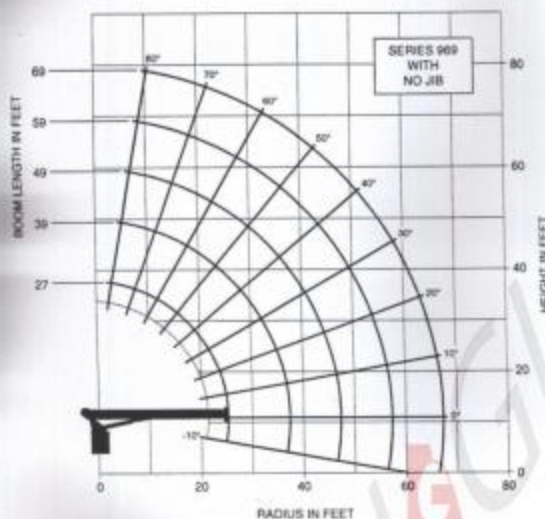


# CAPACITY CHART

876644

## NATIONAL CRANE CORPORATION

876644



LMI OPERATING CODE SWITCH	
SWITCH POSITION (REF #17)	OPERATING MODE
01	MAIN BOOM - NO JB STOWED
11	MAN BASKET ON MAIN BOOM

### LOAD RATINGS

LOAD RADIUS (FEET)	LOADED BOOM ANGLE	27FT BOOM (LBS)	LOADED BOOM ANGLE	36FT BOOM (LBS)	LOADED BOOM ANGLE	45FT BOOM (LBS)	LOADED BOOM ANGLE	54FT BOOM (LBS)	LOADED BOOM ANGLE	63FT BOOM (LBS)	LOADED BOOM ANGLE	72FT BOOM (LBS)	LOADLINE EQUIPMENT DEDUCT (LBS)
5	75	46,000											Downhaul weight _____ 150 One sheave block _____ 200 Two sheave block _____ 300 Three sheave block _____ 530
8	72	34,000											
10	67	28,000											
12	62	24,100	71.5	22,000	70	20,000	70	18,500	70.5	16,300			
14	57	21,100	68.5	19,300	73.5	18,000	77	17,000	75.5	16,000			
16	51	18,700	65	17,100	71	16,000	75	15,000	77.5	14,500			
20	38	15,000	58.5	14,000	68	13,000	70.5	12,000	74	11,700			
25			49	11,300	59	10,000	65	9,000	68.5	8,500			
30			37	9,200	52	8,000	58.5	7,000	65	7,000			
35			21	7,100	43.5	7,000	53.5	7,000	60	6,700			
40					34	6,300	47	6,000	55	5,900			
45					19	4,800	38.5	5,000	48.5	5,100			
50							30.5	4,500	40.5	4,500			
55							17	3,400	36.5	3,500			
60									28.5	3,200			
65									16	2,400			
	0	7,200	0	4,200	0	2,800	0	1,900	0	1,250			

1 PART LINE	2 PART LINE	3 PART LINE	4 PART LINE	5 PART LINE	6 PART LINE
MAX. PULL 7,700 lb	MAX. PULL 15,400 lb	MAX. PULL 23,100 lb	MAX. PULL 30,800 lb	MAX. PULL 38,500 lb	MAX. PULL 46,000 lb

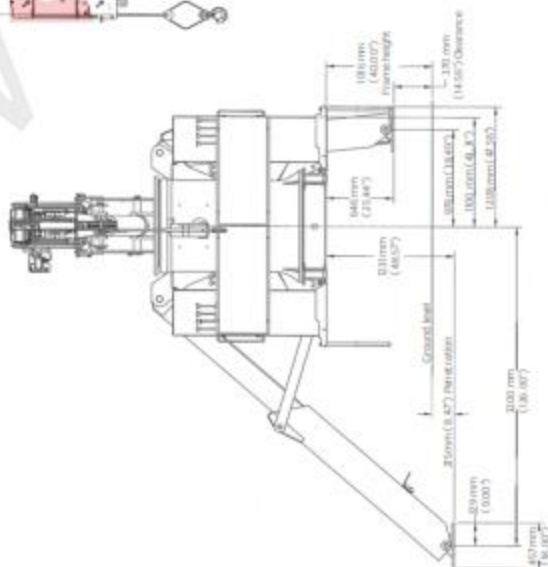
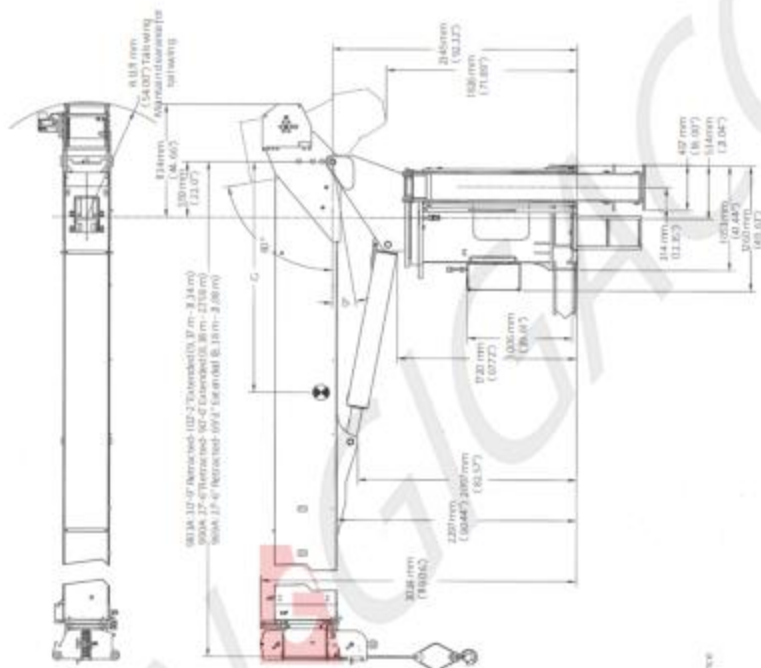
### NOTICE

- 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 3/16" diameter rotation resistant cable with 38,500 lb breaking strength on this machine.
- Maximum capacity with "burst of speed" is 3,000 lb.

# Dimensions

Series	Retracted length	Extended length	G	Dry weight*	W/hoil weight**
*90A	27 ft 6 in	69 ft 2 in	221 cm (87 in)	8,809 kg (19,400 lb)	9,002 kg (20,000 lb)
**90A	27 ft 6 in	90 ft 6 in	238 cm (94 in)	9,536 kg (21,025 lb)	9,802 kg (21,600 lb)
**910A	30 ft 9 in	102 ft 10 in	269 cm (106 in)	10,047 kg (22,150 lb)	10,310 kg (22,735 lb)

\*Includes standard 20 ft jib base  
\*\*Includes standard 22 ft jib base



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Shady Grove

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