

# National Crane 600E2 Series

## Product Guide



### Features

- 27,4 m (90 ft) four-section boom
- 18,1 t (20 USt) rating
- Self-lubricating Easy Glide wear pads
- Internal anti-two block



# Features



## National Crane Series 600E2

- 16,3 t (18 USt) maximum capacity
- 36,9 m (121 ft) maximum vertical reach
- 24,7 m (81 ft) maximum vertical hydraulic reach



## Four-section boom

At 90 ft, the Series 600E2 four-section boom is the longest in its size range. The long boom allows the operator to perform more lifts without the use of a jib, reducing setup time and improving efficiency.

## Easy Glide boom wear pads

Easy Glide boom wear pads reduce the conditions that cause boom chatter and vibration. The net result is smoother crane operation.



## Outriggers

The Series 600E2 comes equipped with A-frame outriggers and ASH rear stabilizers. An optional single front stabilizer is available for 360° stability. Rear stabilizers include an independent stabilizer control and bolt/clamp-on mounting. Outriggers are equipped with a motion alarm and an outrigger monitoring system.

Front:

6,73 m (22.08 ft) span

Rear:

3 m (10 ft) span

# Features



° Product may be shown with optional equipment.

## Best in class performance and serviceability

- The steel torsion box and flatbed further reduce frame flex
- Speedy-reeve boom tip and sheave blocks simplify rigging changes by decreasing the time needed to change line reeving
- Crane components painted before assembly reduce the chance of rust, improve serviceability and enhance the appearance of the crane
- A control knob located on the swing motor brake release valve can be easily adjusted to the crane operator's swing speed preference
- Engine start/stop switches
- Emergency stop overrides located at control station
- Hydraulic reservoir capacity of 66 gal

## Serviceability

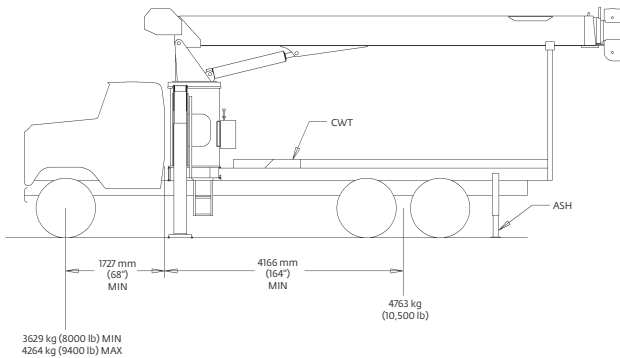
- Bearings on the boom and retract cables can be greased through access holes in the boom side plates.
- Removable winch allows the internal telescoping cylinder to be removed quickly, without dismantling the boom
- Internal anti-two-block wire routing eliminates external reel and wire to protect crane components
- The boom sheave case is open, allowing access to replace the internal anti-two-block wire and to observe internal boom components
- Internal boom parts have been reduced, decreasing service time when rebuilding the machine

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# Mounting configurations

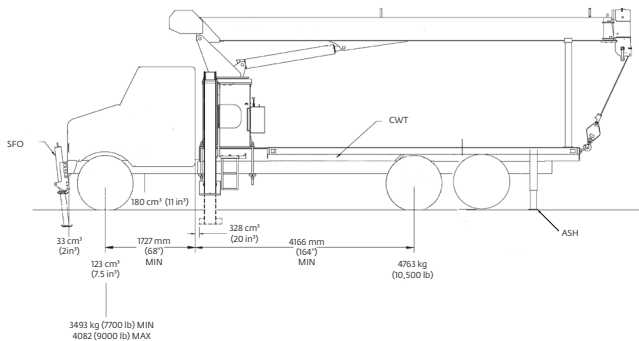
The configurations are based on the Series 600E2 with an 85% stability factor. The complete unit must be installed in accordance with factory requirements and a test performed to determine actual stability and counterweight requirements since individual truck chassis vary.



## Configuration 1 with Torsion Box – 180° Full Capacity Work Area

|   |   |
|---|---|
| Working area .....                                | 180°  |
| Gross Axle Weight Rating Front.....               | 6350 kg (14,000 lb)                         |
| Gross Axle Weight Rating Rear.....                | 15 442 kg (34,000 lb)                       |
| Gross Vehicle Weight Rating.....                  | 21 773 kg (48,000 lb)                       |
| Wheelbase.....                                    | 589 cm (232 in)                             |
| Cab to Axle/trunnion (CA/CT) .....                | 417 cm (164 in)                             |
| Frame Section Modulus (SM) under crane:           |   |
| (758 MPa 110,000 PSI).....                        | 261 cm <sup>3</sup> (15.9 in <sup>3</sup> ) |
| Frame Section Modulus (SM) over rear stabilizers: |   |
| (758 MPa 110,000 PSI).....                        | 213 cm <sup>3</sup> (13 in <sup>3</sup> )   |
| Stability Weight, Front .....                     | 3629 kg (8000 lb) minimum*                  |
| Stability Weight, Rear.....                       | 4763 kg (10,500 lb) minimum*                |
| Estimated Average Final Weight .....              | 13 608 kg (30,000 lb)                       |

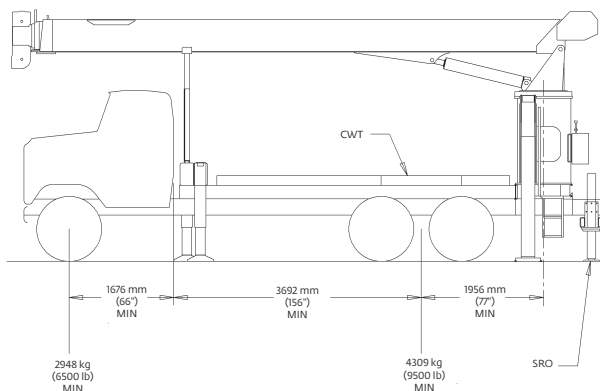
Requires front SFO stabilizer to give machine full capacity 360° around the truck. Truck must meet the minimum requirements above. Front stabilizer gives the machine a solid base, helping the operator control loads precisely. Extended front frame rails required for SFO installation.



## Configuration 2 with Torsion Box – 360° Full Capacity Work Area

|   |   |
|---|---|
| Working area .....                                | 360°                                      |
| Gross Axle Weight Rating Front.....               | 6350 kg (14,000 lb)                       |
| Gross Axle Weight Rating Rear.....                | 15 442 kg (34,000 lb)                     |
| Gross Vehicle Weight Rating.....                  | 21 773 kg (48,000 lb)                     |
| Wheelbase.....                                    | 589 cm (232 in)                           |
| Cab to Axle/trunnion (CA/CT) .....                | 417 cm (164 in)                           |
| Frame Section Modulus (SM) under crane:           |   |
| (758 MPa 110,000 PSI).....                        | 328 cm <sup>3</sup> (20 in <sup>3</sup> ) |
| Frame Section Modulus (SM) over rear stabilizers: |   |
| (758 MPa 110,000 PSI).....                        | 213 cm <sup>3</sup> (13 in <sup>3</sup> ) |
| Stability Weight, Front .....                     | 3130 kg (7700 lb) minimum*                |
| Stability Weight, Rear.....                       | 3175 kg (10,500 lb) minimum*              |
| Estimated Average Final Weight .....              | 13 879 kg (30,600 lb)                     |

Allows the installation of the Model 600E2 on a chassis. In most cases, the chassis will not require reinforcing, and the amount of counterweight required is minimized, increasing payload capacities. Extended front frame rails required for SFO installation.



## Configuration 3 with Torsion Box – Rear Mount

|   |   |
|---|---|
| Working area .....                                | 360°  |
| Gross Axle Weight Rating Front.....               | 5443 kg (12,000 lb)                         |
| Gross Axle Weight Rating Rear.....                | 15 442 kg (34,000 lb)                       |
| Gross Vehicle Weight Rating.....                  | 20 865 kg (46,000 lb)                       |
| Wheelbase.....                                    | 564 cm (222 in)                             |
| Cab to Axle/trunnion (CA/CT) .....                | 396 cm (156 in)                             |
| Frame Section Modulus (SM) under crane:           |   |
| (758 MPa 110,000 PSI).....                        | 261 cm <sup>3</sup> (15.9 in <sup>3</sup> ) |
| Frame Section Modulus (SM) over rear stabilizers: |   |
| (758 MPa 110,000 PSI).....                        | 213 cm <sup>3</sup> (15.9 in <sup>3</sup> ) |
| Stability Weight, Front .....                     | 3629 kg (6500 lb) minimum*                  |
| Stability Weight, Rear.....                       | 4763 kg (9500 lb) minimum*                  |
| Estimated Average Final Weight .....              | 13 040 kg (28,750 lb)                       |

### 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 600E2 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 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.

# Specifications

## Boom and jib combinations data

### Available in six basic models:

**Model 638E2** – Equipped with a 4,88 m - 11,58 m (16 ft - 38 ft) three-section boom. Maximum tip height is 14,63 m (48 ft) (no jib option available).

4,88 m - 11,58 m (16 ft - 38 ft) three-section boom



**Model 649E2** – Equipped with a 4,88 m - 15 m (16 ft - 49 ft) four-section boom. Maximum tip height is 17,98 m (59 ft).

4,88 m - 15 m (16 ft - 49 ft) four-section boom

**6FJ29M** 4,6 m - 7,6 m (15 ft - 25 ft) two-section jib



**Model 660E2** – Equipped with a 7,12 m - 18,3 m (24 ft - 60 ft) three-section boom. Maximum tip height is 21,3 m (70 ft) (no jib option available).

7,2 m - 18,3 m (24 ft - 60 ft) three-section boom



**Model 671E2** – Equipped with a 8,23 m - 21,64 m (27 ft - 71 ft) three-section boom. This model can be equipped with a 7,62 m - 13,72 m (25 ft - 45 ft) two-section jib. Maximum tip height with 13,72 m (45 ft) jib is 38,25 m (125 ft).

8,23 m - 21,64 m (27 ft - 71 ft) three-section boom

**6FJ45M** 7,62 m - 13,72 m (25 ft - 45 ft) two-section jib



**Model 680E2** – Equipped with a 7,32 m - 24,38 m (24 ft - 80 ft) four-section boom. Maximum tip height is 27,44 m (90 ft) (no jib option available).

7,32 m - 24,38 m (24 ft - 80 ft) four-section boom



**Model 690E2** – Equipped with a 8,23 m - 27,43 m (27 ft - 90 ft) four-section boom. This model can be equipped with a 7,62 m - 13,72 m (25 ft - 45 ft) two section jib. Maximum tip height with 13,72 m (45 ft) jib is 43,95 m (144 ft).

8,23 m - 27,43 m (27 ft - 90 ft) four-section boom

**6FJ45M** 7,62 m - 13,72 m (25 ft - 45 ft) two-section jib

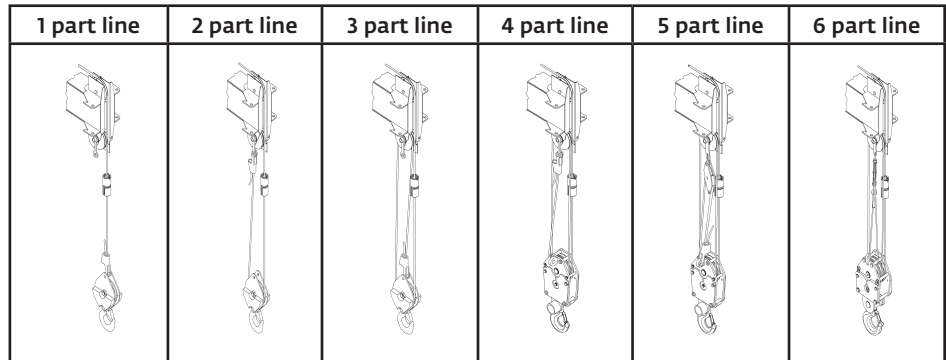


**Note:** Maximum tip is measured with outriggers/stabilizers fully extended.

# Specifications

## 600E2 winch data

- All winch pulls and speeds are shown on the fourth layer.
- Winch line pulls would increase on the first and second layers.
- Winch line pulls may be limited by the winch capacity or the ANSI 5 to 1 cable safety factor, shown below this chart.
- Hook blocks are rated at maximum capacity for the block. **Do not exceed rated cable pull with any block.**



| Winch                    | Cable supplied                      | Average breaking strength | Max pull             | Max pull               | Max pull                 | Max pull                 | Max pull                 | Max pull                 |
|--------------------------|-------------------------------------|---------------------------|----------------------|------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Standard planetary winch | 9/16 in diameter rotation resistant | 17 463 kg (38,500 lb)     | 3492,66 kg (7700 lb) | 6985,32 kg (15,400 lb) | 10 477,98 kg (23,100 lb) | 13 970,65 kg (30,800 lb) | 14 514,96 kg (38,500 lb) | 14 514,96 kg (40,000 lb) |

| Layer | Winch pull |        | Winch speed |     | BOS winch speed |     | Rope capacity |     |
|-------|------------|--------|-------------|-----|-----------------|-----|---------------|-----|
|       | kg         | lb     | mpm         | fpm | mpm             | fpm | m             | ft  |
| 1     | 4708       | 10,380 | 48          | 157 | 68              | 222 | 19            | 64  |
| 2     | 4246       | 9360   | 53          | 175 | 75              | 246 | 41            | 136 |
| 3     | 3865       | 8520   | 59          | 192 | 83              | 271 | 65            | 215 |
| 4     | 3547       | 7820   | 64          | 209 | 90              | 294 | 91            | 301 |
| 5     | 3279       | 7230   | 69          | 257 | 97              | 318 | 120           | 394 |

**Note:** All ratings based on 128,7 LPM at 22,75 MPa (34 GPM at 3300 psi)  
Burst of Speed maximum pull = 1361 kg (3000 lb)

| Winch                                 | Bare drum pull      | Allowable cable pull |
|---------------------------------------|---------------------|----------------------|
| With standard rotation resistant rope | 4627 kg (10,200 lb) | 3493 kg (7700 lb)    |

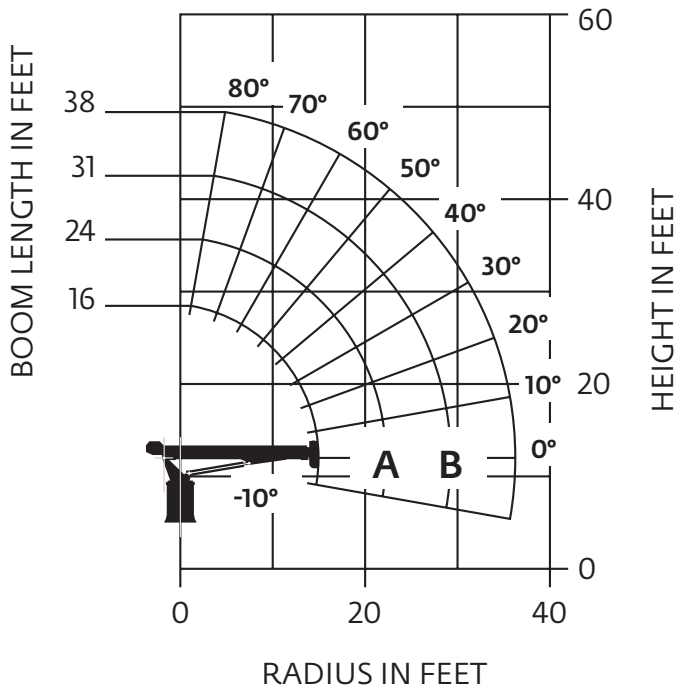
| Block type      | Loadline deduct     |                 |
|-----------------|---------------------|-----------------|
|                 | Rating              | Weight          |
| Downhaul weight | 3,49 t (3.85 USt)   | 68 kg (150 lb)  |
| 1-sheave block  | 10,48 t (11.55 USt) | 91 kg (200 lb)  |
| 2-sheave block  | 17,46 t (19.25 USt) | 161 kg (355 lb) |



# Capacities

## Series 638E2: 11,58 m (38 ft) boom

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 load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- 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.

### Load chart

| LOADED RADIUS (ft) | LOADED BOOM ANGLE (deg) | 16 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | A 24 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | B 31 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | 38 ft BOOM (lb) |
|--------------------|-------------------------|-----------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-----------------|
| 5                  | 67                      | 40,000          |                         |                   |                         |                   |                         |                 |
| 6                  | 63                      | 36,150          |                         |                   |                         |                   |                         |                 |
| 8                  | 55.5                    | 30,250          | 68                      | 28,550            | 74                      | 27,500            | 77                      | 25,750          |
| 10                 | 45.5                    | 25,600          | 62.5                    | 24,300            | 69                      | 23,450            | 73                      | 22,200          |
| 12                 | 34                      | 21,900          | 56.5                    | 20,900            | 65                      | 20,150            | 70.5                    | 19,200          |
| 14                 | 15                      | 16,750          | 50                      | 18,150            | 60.5                    | 17,800            | 66.5                    | 17,050          |
| 16                 |                         |                 | 43                      | 16,200            | 56                      | 15,800            | 64.5                    | 15,200          |
| 18                 |                         |                 | 34.5                    | 14,200            | 51.5                    | 14,150            | 59.5                    | 13,750          |
| 20                 |                         |                 | 26.5                    | 12,200            | 47                      | 12,900            | 57                      | 12,500          |
| 25                 |                         |                 |                         |                   | 31.5                    | 10,150            | 46                      | 9950            |
| 30                 |                         |                 |                         |                   |                         |                   | 35.5                    | 8350            |
| 35                 |                         |                 |                         |                   |                         |                   | 18.5                    | 6200            |
|                    | 0                       | 10,850          | 0                       | 7050              | 0                       | 5100              | 0                       | 3850            |

### NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

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

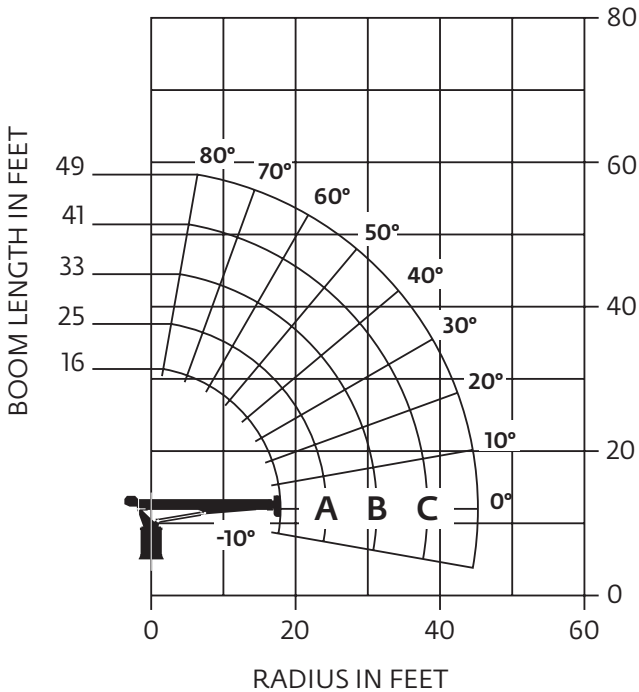
The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.



# Capacities

## Series 649E2: 15 m (49 ft) boom

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 load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- 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.

### Load chart

| LOADED RADIUS (ft) | LOADED BOOM ANGLE (deg) | 16 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | A 25 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | B 33 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | C 41 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | 49 ft BOOM (lb) |
|--------------------|-------------------------|-----------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-----------------|
| 5                  | 67                      | 40,000          | 76                      | 38,100            |                         |                   |                         |                   |                         |                 |
| 8                  | 54                      | 29,600          | 68                      | 27,400            | 74                      | 26,200            | 77.5                    | 25,300            |                         |                 |
| 10                 | 44                      | 24,700          | 63                      | 23,200            | 70.5                    | 22,200            | 74.5                    | 21,300            | 77.5                    | 19,500          |
| 12                 | 31.5                    | 20,400          | 57.5                    | 20,200            | 66.5                    | 19,250            | 71.5                    | 18,450            | 75                      | 17,500          |
| 14                 | 8.5                     | 13,750          | 51.5                    | 17,750            | 62.5                    | 17,000            | 68.5                    | 16,300            | 72.5                    | 15,000          |
| 16                 |                         |                 | 45                      | 15,750            | 58.5                    | 15,200            | 65.5                    | 14,550            | 70                      | 13,750          |
| 20                 |                         |                 | 29                      | 12,100            | 49.5                    | 12,500            | 59                      | 12,050            | 65                      | 11,750          |
| 25                 |                         |                 |                         |                   | 36                      | 9850              | 50                      | 9800              | 58                      | 9600            |
| 30                 |                         |                 |                         |                   | 16.5                    | 6950              | 40                      | 8050              | 50.5                    | 8050            |
| 35                 |                         |                 |                         |                   |                         |                   | 27.5                    | 6450              | 43                      | 6800            |
| 40                 |                         |                 |                         |                   |                         |                   |                         |                   | 33                      | 5650            |
| 45                 |                         |                 |                         |                   |                         |                   |                         |                   | 18.5                    | 4300            |
|                    |                         |                 |                         |                   |                         |                   |                         |                   |                         |                 |
|                    | 0                       | 10,950          | 0                       | 6350              | 0                       | 4350              | 0                       | 3200              | 0                       | 2600            |

### NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

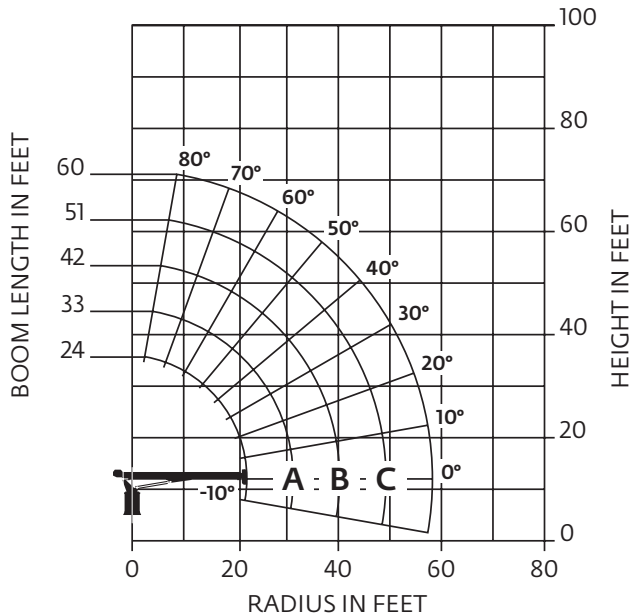
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

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

# Capacities

## Series 660E2: 18,3 m (60 ft) boom

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 load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- 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.

### Load chart

| LOADED RADIUS (ft) | LOADED BOOM ANGLE (deg) | 24 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | A 33 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | B 42 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | C 51 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | 60 ft BOOM (lb) |
|--------------------|-------------------------|-----------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-----------------|
| 5                  | 75.5                    | 40,000          |                         |                   |                         |                   |                         |                   |                         |                 |
| 8                  | 67.5                    | 27,200          | 74                      | 25,800            | 77.5                    | 25,000            |                         |                   |                         |                 |
| 10                 | 62                      | 22,800          | 70                      | 21,600            | 75                      | 20,700            | 78                      | 20,400            |                         |                 |
| 12                 | 56                      | 19,650          | 67                      | 18,700            | 72                      | 17,800            | 75.5                    | 17,400            | 78.5                    | 17,150          |
| 14                 | 49.5                    | 17,150          | 62.5                    | 16,400            | 69                      | 15,750            | 73                      | 15,250            | 76.5                    | 14,950          |
| 16                 | 43                      | 15,150          | 58.5                    | 14,600            | 66                      | 14,050            | 71                      | 13,600            | 74.5                    | 13,200          |
| 20                 | 24.5                    | 11,150          | 49.5                    | 11,950            | 60                      | 11,550            | 66                      | 11,200            | 70.5                    | 10,850          |
| 25                 |                         |                 | 37.5                    | 9400              | 51.5                    | 9350              | 59.5                    | 9100              | 65.5                    | 8800            |
| 30                 |                         |                 | 18                      | 6600              | 42                      | 7700              | 53                      | 7600              | 60                      | 7400            |
| 35                 |                         |                 |                         |                   | 30.5                    | 6100              | 45.5                    | 6400              | 54.5                    | 6200            |
| 40                 |                         |                 |                         |                   |                         |                   | 36.5                    | 5350              | 48                      | 5400            |
| 45                 |                         |                 |                         |                   |                         |                   | 25                      | 4250              | 41                      | 4550            |
| 50                 |                         |                 |                         |                   |                         |                   |                         |                   | 33                      | 3900            |
| 55                 |                         |                 |                         |                   |                         |                   |                         |                   | 21.5                    | 3000            |
|                    | 0                       | 6150            | 0                       | 3950              | 0                       | 2700              | 0                       | 1950              | 0                       | 1300            |

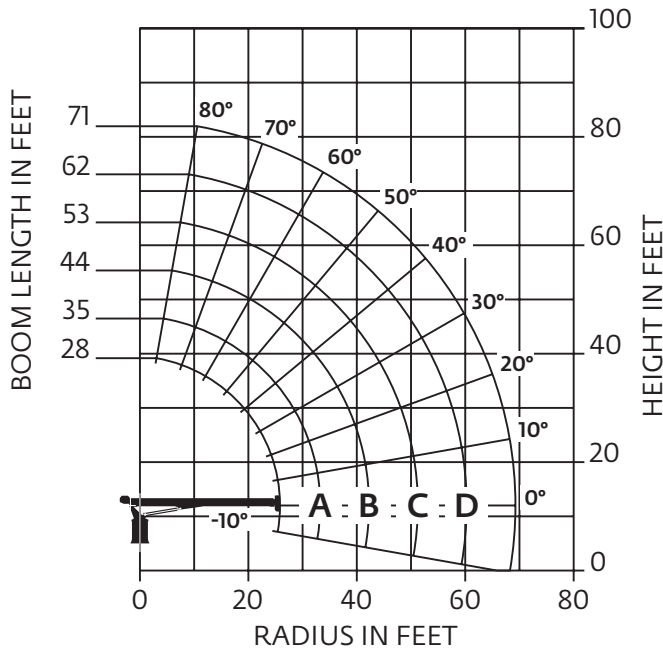
### NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

# Capacities

## Series 671E2: 21,64 m (71 ft) boom

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 load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- 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.

### Load chart

| LOADED RADIUS (ft) | LOADED BOOM ANGLE (deg) | 28 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | A 35 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | B 44 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | C 53 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | D 62 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | 71 ft BOOM (lb) |
|--------------------|-------------------------|-----------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-----------------|
| 5                  | 77                      | 40,000          |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |
| 8                  | 70.5                    | 26,150          | 75                      | 25,200            | 78.5                    | 24,600            |                         |                   |                         |                   |                         |                 |
| 10                 | 65.5                    | 21,600          | 71.5                    | 21,450            | 76                      | 20,800            | 79                      | 20,400            |                         |                   |                         |                 |
| 12                 | 61                      | 18,500          | 68                      | 18,400            | 73                      | 17,800            | 76.5                    | 17,450            | 79                      | 16,800            |                         |                 |
| 14                 | 56                      | 16,600          | 64.5                    | 16,000            | 70.5                    | 15,850            | 74.5                    | 15,300            | 77                      | 14,650            |                         |                 |
| 16                 | 50.5                    | 14,900          | 60.5                    | 14,200            | 67.5                    | 14,000            | 72                      | 13,550            | 75                      | 13,000            | 77.5                    | 12,650          |
| 20                 | 38                      | 11,900          | 52.5                    | 11,600            | 61.5                    | 11,350            | 67                      | 11,000            | 71                      | 10,600            | 74                      | 10,300          |
| 25                 | 15.5                    | 8250            | 40.5                    | 9400              | 53.5                    | 9100              | 61                      | 8800              | 66                      | 8550              | 69.5                    | 8300            |
| 30                 |                         |                 | 26                      | 7100              | 45.5                    | 7500              | 55                      | 7300              | 61                      | 7100              | 65.5                    | 6850            |
| 35                 |                         |                 |                         |                   | 35                      | 6200              | 48.0                    | 6150              | 55.5                    | 6000              | 61                      | 5950            |
| 40                 |                         |                 |                         |                   | 20                      | 4500              | 40.0                    | 5200              | 49.5                    | 5100              | 56                      | 5050            |
| 45                 |                         |                 |                         |                   |                         |                   | 29.5                    | 4350              | 43                      | 4350              | 51                      | 4400            |
| 50                 |                         |                 |                         |                   |                         |                   | 14.0                    | 2800              | 35                      | 3700              | 45.5                    | 3800            |
| 55                 |                         |                 |                         |                   |                         |                   |                         |                   | 25.5                    | 3000              | 39                      | 3250            |
| 60                 |                         |                 |                         |                   |                         |                   |                         |                   | 5.5                     | 1800              | 31.5                    | 2750            |
| 65                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   | 22                      | 2150            |
|                    | 0                       | 4800            | 0                       | 3600              | 0                       | 2250              | 0                       | 1500              | 0                       | 950               | 0                       | 550             |

### NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

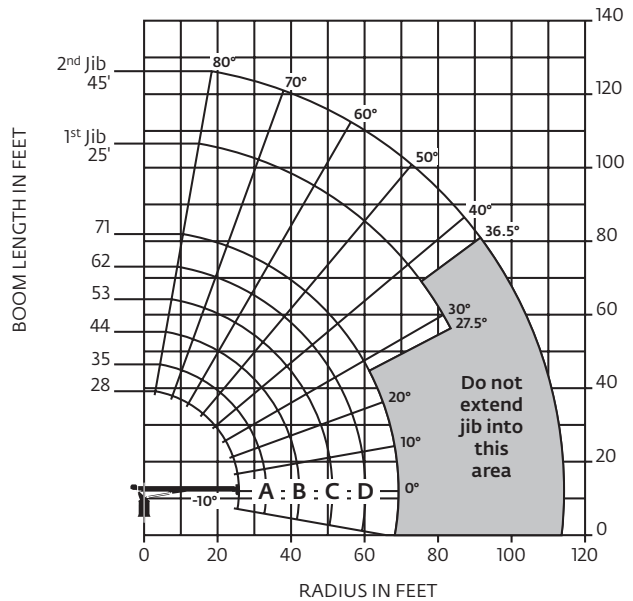
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

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

# Capacities

## Series 671E2: 21,64 m (71 ft) boom with 13,72 m (45 ft) jib

National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.



### 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.

### 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 load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- 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.

### Load chart

| LOADED RADIUS (ft) | LOADED BOOM ANGLE (deg) | 28 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | A 35 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | B 44 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | C 53 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | D 62 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | 71 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | 25 ft JIB (lb) | LOADED BOOM ANGLE (deg) | 45 ft JIB (lb) |      |
|--------------------|-------------------------|-----------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-----------------|-------------------------|----------------|-------------------------|----------------|------|
| 5                  | 77                      | 40,000          |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |                         |                |                         |                |      |
| 8                  | 70.5                    | 25,550          | 75                      | 24,750            | 78.5                    | 24,250            |                         |                   |                         |                   |                         |                 |                         |                |                         |                |      |
| 10                 | 65.5                    | 21,000          | 71.5                    | 21,000            | 76                      | 20,450            | 79                      | 20,100            |                         |                   |                         |                 |                         |                |                         |                |      |
| 12                 | 61                      | 17,900          | 68                      | 17,950            | 73                      | 17,450            | 76.5                    | 17,150            | 79                      | 16,550            |                         |                 |                         |                |                         |                |      |
| 14                 | 56                      | 16,000          | 64.5                    | 15,550            | 70.5                    | 15,500            | 74.5                    | 15,000            | 77                      | 14,400            | 79                      | 12,450          |                         |                |                         |                |      |
| 16                 | 50.5                    | 14,300          | 60.5                    | 13,700            | 67.5                    | 13,650            | 72                      | 13,250            | 75                      | 12,750            | 77.5                    | 12,450          |                         |                |                         |                |      |
| 20                 | 38                      | 11,300          | 52.5                    | 11,100            | 61.5                    | 10,950            | 67                      | 10,700            | 71                      | 10,350            | 74                      | 10,050          |                         |                |                         |                |      |
| 25                 | 19.5                    | 7650            | 40.5                    | 8900              | 53.5                    | 8700              | 61                      | 8500              | 66                      | 8300              | 69.5                    | 8050            | 75.5                    | 4400           |                         |                |      |
| 30                 |                         |                 | 26                      | 6600              | 45.5                    | 7100              | 55                      | 7000              | 61                      | 6850              | 65.5                    | 6600            | 72.5                    | 3900           | 76.5                    | 2600           |      |
| 35                 |                         |                 |                         |                   | 35                      | 5800              | 48.0                    | 5850              | 55.5                    | 5750              | 61                      | 5700            | 69                      | 3200           | 74                      | 2450           |      |
| 40                 |                         |                 |                         |                   | 20                      | 4100              | 40.0                    | 4900              | 49.5                    | 4850              | 56                      | 4800            | 66                      | 2750           | 72                      | 2300           |      |
| 45                 |                         |                 |                         |                   |                         |                   |                         | 29.5              | 4050                    | 43                | 4050                    | 51              | 4150                    | 62.5           | 69                      | 2100           |      |
| 50                 |                         |                 |                         |                   |                         |                   |                         | 14.0              | 2450                    | 35                | 3400                    | 45.5            | 3550                    | 59.5           | 2000                    | 66.5           | 1900 |
| 55                 |                         |                 |                         |                   |                         |                   |                         |                   |                         | 25.5              | 2700                    | 39              | 3000                    | 55.5           | 1750                    | 64             | 1700 |
| 60                 |                         |                 |                         |                   |                         |                   |                         |                   |                         | 10                | 1500                    | 31.5            | 2500                    | 52             | 1500                    | 61             | 1500 |
| 65                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   |                         | 22              | 1900                    | 48             | 1300                    | 58.5           | 1350 |
| 70                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |                         | 43.5           | 1100                    | 55             | 1200 |
| 75                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |                         | 39             | 900                     | 52             | 1050 |
| 80                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |                         | 33.5           | 700                     | 48.5           | 900  |
| 85                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |                         | 27.5           | 600                     | 45             | 800  |
| 90                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |                         |                | 41                      | 700            |      |
| 95                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |                         |                | 36.5                    | 600            |      |
|                    | 0                       | 4200            | 0                       | 3100              | 0                       | 1850              | 0                       | 1150              | 0                       | 650               |                         |                 |                         |                |                         |                |      |

### NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

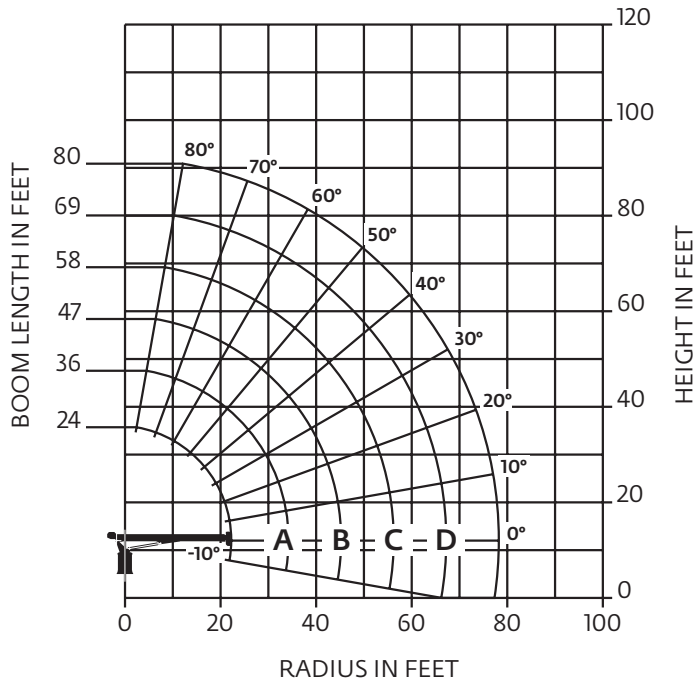
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

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

# Capacities

## Series 680E2: 24,38 m (80 ft) boom

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 load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- 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.

### Load chart

| LOADED RADIUS (ft) | LOADED BOOM ANGLE (deg) | 24 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | A 36 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | B 47 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | C 58 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | D 69 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | 80 ft BOOM (lb) |
|--------------------|-------------------------|-----------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-----------------|
| 5                  | 76                      | 40,000          |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |
| 8                  | 68                      | 27,100          | 75                      | 25,400            |                         |                   |                         |                   |                         |                   |                         |                 |
| 10                 | 62.5                    | 22,400          | 72                      | 21,400            | 76.5                    | 20,600            |                         |                   |                         |                   |                         |                 |
| 12                 | 56.5                    | 19,500          | 68.5                    | 18,350            | 74                      | 17,550            | 77.5                    | 17,050            |                         |                   |                         |                 |
| 14                 | 50.5                    | 17,100          | 65                      | 16,000            | 71.5                    | 15,300            | 75.5                    | 14,750            |                         |                   |                         |                 |
| 16                 | 43.5                    | 14,750          | 61                      | 14,200            | 70                      | 13,550            | 73.5                    | 13,050            | 77                      | 12,150            |                         |                 |
| 20                 | 27                      | 11,100          | 53.5                    | 11,450            | 63.5                    | 11,000            | 69.5                    | 10,550            | 73.5                    | 10,100            | 77                      | 8550            |
| 25                 |                         |                 | 43                      | 9150              | 55.5                    | 9000              | 64                      | 8450              | 69                      | 8200              | 73                      | 8000            |
| 30                 |                         |                 | 29.5                    | 7000              | 48                      | 7200              | 58.5                    | 7050              | 64.5                    | 6850              | 69                      | 6550            |
| 35                 |                         |                 |                         |                   | 39                      | 5850              | 52                      | 5900              | 59.5                    | 5700              | 65                      | 5500            |
| 40                 |                         |                 |                         |                   | 28                      | 4650              | 45                      | 4800              | 54.5                    | 4850              | 61                      | 4650            |
| 45                 |                         |                 |                         |                   | 7.5                     | 2600              | 37                      | 4100              | 49                      | 4150              | 56.5                    | 4000            |
| 50                 |                         |                 |                         |                   |                         |                   | 28                      | 3450              | 43                      | 3500              | 52                      | 3450            |
| 55                 |                         |                 |                         |                   |                         |                   | 13.5                    | 2200              | 36                      | 2950              | 47                      | 3000            |
| 60                 |                         |                 |                         |                   |                         |                   |                         |                   | 28                      | 2450              | 41.5                    | 2550            |
| 65                 |                         |                 |                         |                   |                         |                   |                         |                   | 16                      | 1550              | 35.5                    | 2150            |
| 70                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   | 28.5                    | 1700            |
| 75                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   | 18.5                    | 1150            |
|                    | 0                       | 5800            | 0                       | 3050              | 0                       | 1750              | 0                       | 1000              |                         |                   |                         |                 |

### NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

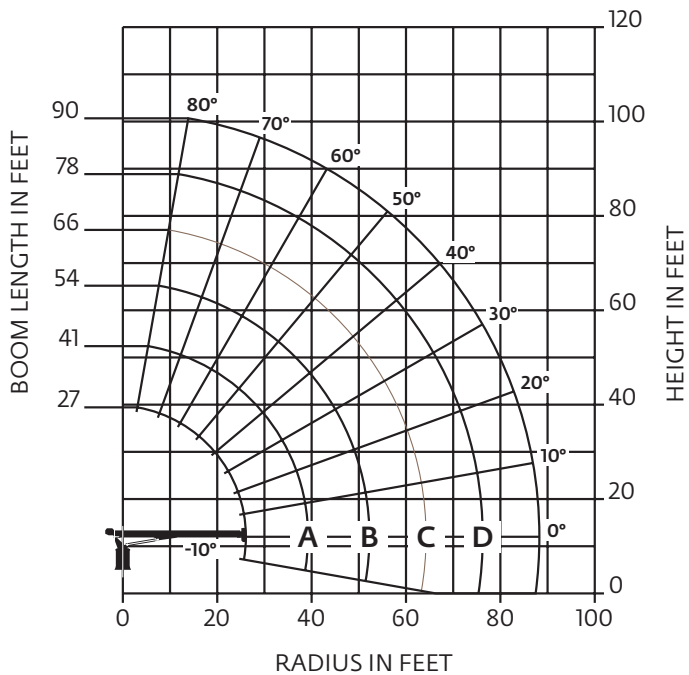
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The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

# Capacities

## Series 690E2: 27,43 m (90 ft) boom

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 are maximum for each section.
- Do not exceed capacities at reduced radii
- Load ratings shown on the load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- 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.

### Load chart

| LOADED RADIUS (ft) | LOADED BOOM ANGLE (deg) | 27 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | A 41 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | B 54 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | C 66 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | D 78 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | 90 ft BOOM (lb) |
|--------------------|-------------------------|-----------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-----------------|
| 5                  | 77                      | 40,000          |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |
| 8                  | 70                      | 25,750          |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |
| 10                 | 66                      | 21,400          | 74                      | 20,950            |                         |                   |                         |                   |                         |                   |                         |                 |
| 12                 | 61.5                    | 18,450          | 71                      | 17,750            | 76                      | 17,000            |                         |                   |                         |                   |                         |                 |
| 14                 | 57                      | 16,400          | 68                      | 15,250            | 74                      | 15,000            | 77.5                    | 14,450            |                         |                   |                         |                 |
| 16                 | 51                      | 14,750          | 65.5                    | 13,300            | 71.5                    | 13,200            | 75.5                    | 12,600            |                         |                   |                         |                 |
| 20                 | 40                      | 11,250          | 58.5                    | 10,800            | 67.5                    | 10,500            | 72                      | 9950              | 76                      | 9700              | 77.5                    | 7850            |
| 25                 | 19                      | 7500            | 50                      | 9050              | 61.5                    | 8150              | 67                      | 7900              | 71.5                    | 7750              | 74.5                    | 7550            |
| 30                 |                         |                 | 40                      | 7550              | 55                      | 6750              | 62.5                    | 6450              | 68                      | 6250              | 71.5                    | 6150            |
| 35                 |                         |                 | 26.5                    | 5250              | 48                      | 5700              | 58                      | 5450              | 63.5                    | 5200              | 68                      | 5050            |
| 40                 |                         |                 |                         |                   | 40                      | 4600              | 52                      | 4550              | 59.5                    | 4400              | 64.5                    | 4200            |
| 45                 |                         |                 |                         |                   | 32                      | 3850              | 46.5                    | 3850              | 54.5                    | 3700              | 61                      | 3550            |
| 50                 |                         |                 |                         |                   | 16.5                    | 2450              | 39.5                    | 3150              | 50                      | 3150              | 57                      | 3000            |
| 55                 |                         |                 |                         |                   |                         |                   | 31                      | 2550              | 44.5                    | 2650              | 53.0                    | 2550            |
| 60                 |                         |                 |                         |                   |                         |                   | 21.5                    | 1800              | 39.5                    | 2250              | 48.5                    | 2150            |
| 65                 |                         |                 |                         |                   |                         |                   |                         |                   | 32.5                    | 1750              | 44                      | 1850            |
| 70                 |                         |                 |                         |                   |                         |                   |                         |                   | 24                      | 1250              | 39                      | 1500            |
| 75                 |                         |                 |                         |                   |                         |                   |                         |                   | 11                      | 450               | 33                      | 1150            |
| 80                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   | 26.5                    | 800             |
|                    | 0                       | 4150            | 0                       | 1950              | 0                       | 850               |                         |                   |                         |                   |                         |                 |

### NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

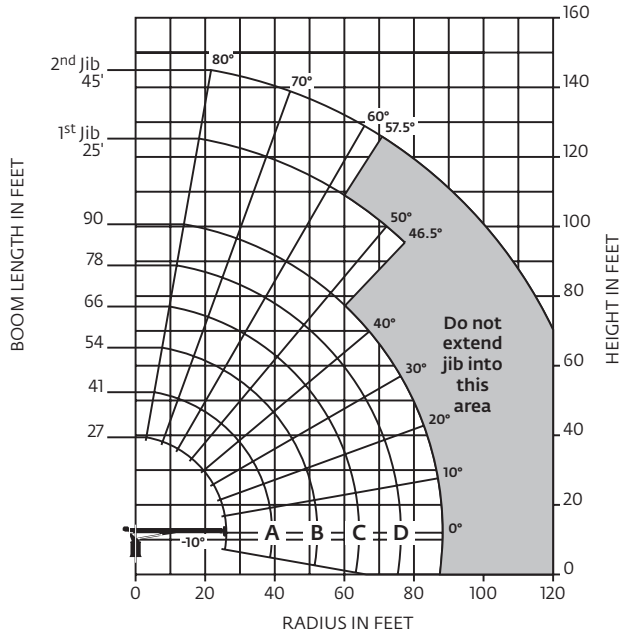
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The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

# Capacities

## Series 690E2: 27,43 m (90 ft) boom with 13,72 m (45 ft) jib

National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.



**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.

**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 load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- 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.

### Load chart

| LOADED RADIUS (ft) | LOADED BOOM ANGLE (deg) | 27 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | A 41 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | B 54 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | C 66 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | D 78 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | 90 ft BOOM (lb) | LOADED BOOM ANGLE (deg) | 25 ft JIB (lb) | LOADED BOOM ANGLE (deg) | 45 ft JIB (lb) |
|--------------------|-------------------------|-----------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-----------------|-------------------------|----------------|-------------------------|----------------|
| 5                  | 77                      | 40,000          |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |                         |                |                         |                |
| 8                  | 70                      | 25,200          |                         |                   |                         |                   |                         |                   |                         |                   |                         |                 |                         |                |                         |                |
| 10                 | 66                      | 20,800          | 74                      | 20,550            |                         |                   |                         |                   |                         |                   |                         |                 |                         |                |                         |                |
| 12                 | 61.5                    | 17,850          | 71                      | 17,350            | 76                      | 16,700            |                         |                   |                         |                   |                         |                 |                         |                |                         |                |
| 14                 | 57                      | 15,800          | 68                      | 14,850            | 74                      | 14,700            | 77.5                    | 14,250            |                         |                   |                         |                 |                         |                |                         |                |
| 16                 | 51                      | 14,150          | 65.5                    | 12,900            | 71.5                    | 12,900            | 75.5                    | 12,350            |                         |                   |                         |                 |                         |                |                         |                |
| 20                 | 40                      | 10,650          | 58.5                    | 10,400            | 67.5                    | 10,200            | 72                      | 9700              | 76                      | 9500              | 77.5                    | 7700            |                         |                |                         |                |
| 25                 | 19                      | 6900            | 50                      | 8650              | 61.5                    | 7850              | 67                      | 7650              | 71.5                    | 7550              | 74.5                    | 7400            | 78                      | 2800           |                         |                |
| 30                 |                         |                 | 40                      | 7150              | 55                      | 6450              | 62.5                    | 6200              | 68                      | 6050              | 71.5                    | 6000            | 75.5                    | 2500           | 78.5                    | 1700           |
| 35                 |                         |                 | 26.5                    | 4850              | 48                      | 5400              | 58                      | 5200              | 63.5                    | 5000              | 68                      | 4850            | 73                      | 2200           | 76.5                    | 1500           |
| 40                 |                         |                 |                         |                   | 40                      | 4300              | 52                      | 4300              | 59.5                    | 4200              | 64.5                    | 4000            | 70                      | 1900           | 74                      | 1300           |
| 45                 |                         |                 |                         |                   | 32                      | 3550              | 46.5                    | 3600              | 54.5                    | 3500              | 61                      | 3350            | 67.5                    | 1600           | 72                      | 1100           |
| 50                 |                         |                 |                         |                   | 16.5                    | 2150              | 39.5                    | 2900              | 50                      | 2950              | 57                      | 2800            | 65.5                    | 1400           | 70                      | 1000           |
| 55                 |                         |                 |                         |                   |                         |                   | 31                      | 2300              | 44.5                    | 2450              | 53                      | 2350            | 62.5                    | 1200           | 67.5                    | 900            |
| 60                 |                         |                 |                         |                   |                         |                   | 21.5                    | 1550              | 39.5                    | 2050              | 48.5                    | 1950            | 59.5                    | 1000           | 65.5                    | 800            |
| 65                 |                         |                 |                         |                   |                         |                   |                         |                   | 32.5                    | 1550              | 44                      | 1650            | 56.5                    | 800            | 63                      | 700            |
| 70                 |                         |                 |                         |                   |                         |                   |                         |                   | 24                      | 1050              | 39                      | 1300            | 53.5                    | 700            | 60.5                    | 600            |
| 75                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   | 33                      | 950             | 50                      | 600            | 58                      | 500            |
| 80                 |                         |                 |                         |                   |                         |                   |                         |                   |                         |                   | 26.5                    | 600             | 47                      | 500            |                         |                |
|                    | 0                       | 3550            | 0                       | 1550              | 0                       | 550               |                         |                   |                         |                   |                         |                 |                         |                |                         |                |

**NOTE:**

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

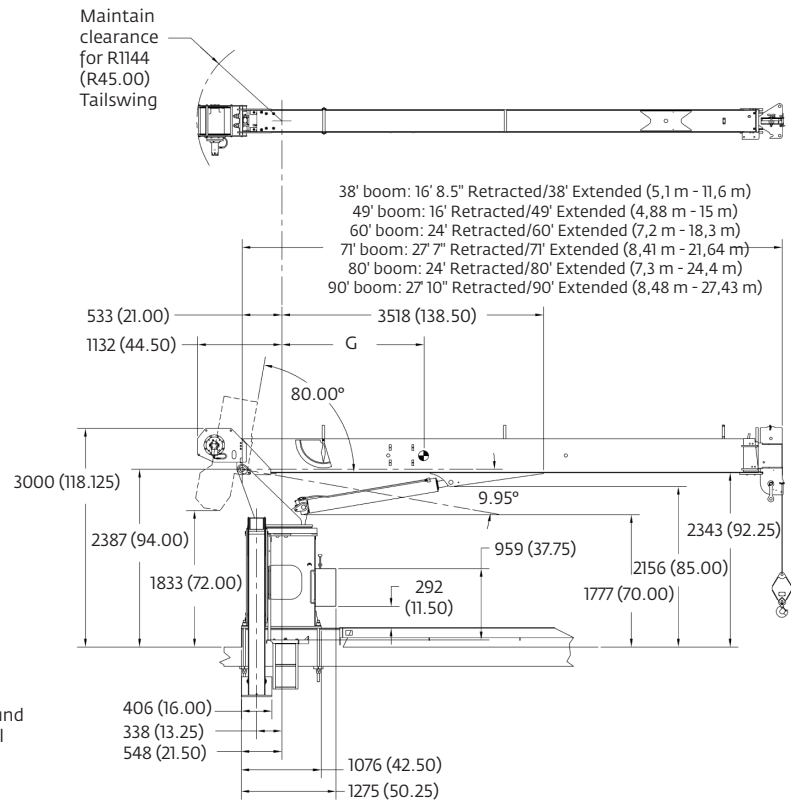
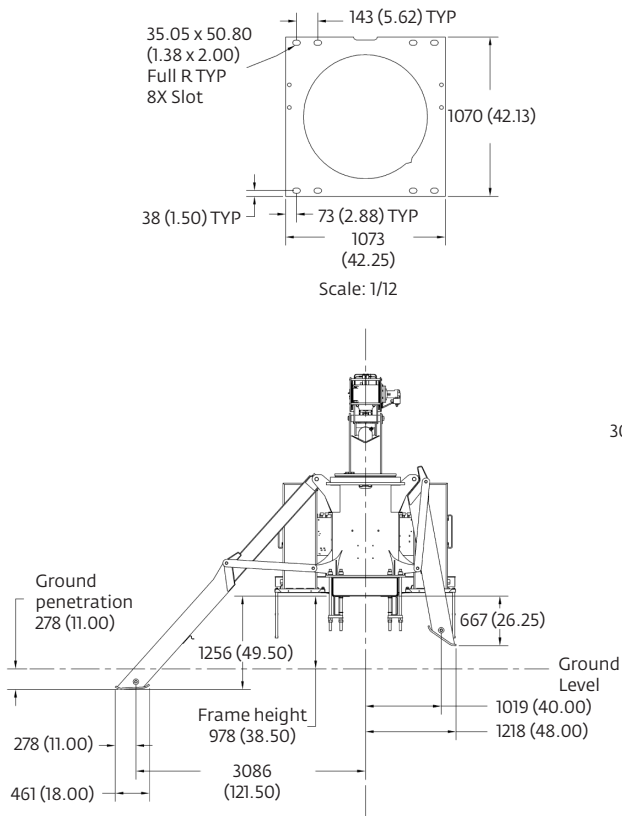
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# Dimensions

Dimensions are in mm (in) unless otherwise specified.



Weight includes all items except Ash 363 kg (830 lb) and bed.

| Series | Retracted length | Extended length | Subbase | G (wet)          | Dry/Wt              | With oil/wt         |
|--------|------------------|-----------------|---------|------------------|---------------------|---------------------|
| 638E2  | 16 ft 7 in       | 38 ft 3 in      | 18 ft   | 1,23 m (48.3 in) | 6192 kg (13,651 lb) | 6462 kg (14,246 lb) |
| 649E2  | 16 ft            | 49 ft           | 18 ft   | 1,28 m (50.7 in) | 6481 kg (14,289 lb) | 6751 kg (14,884 lb) |
| 660E2  | 24 ft            | 60 ft           | 18 ft   | 1,52 m (59.9 in) | 6748 kg (14,876 lb) | 7018 kg (15,471 lb) |
| 671E2  | 27 ft 7 in       | 71 ft           | 20 ft   | 1,90 m (74.7 in) | 7181 kg (15,831 lb) | 7451 kg (16,426 lb) |
| 680E2  | 24 ft            | 80 ft           | 18 ft   | 1,71 m (67.5 in) | 7256 kg (15,996 lb) | 7526 kg (16,591 lb) |
| 690E2  | 27 ft 10 in      | 90 ft           | 20 ft   | 1,98 m (78.1 in) | 7700 kg (16,976 lb) | 7970 kg (17,571 lb) |

| Subbase        | Weight            | C.G. length     |
|----------------|-------------------|-----------------|
| Standard 18 ft | 1229 kg (2710 lb) | 2,87 m (113 ft) |
| Standard 20 ft | 1345 kg (2965 lb) | 2,87 m (113 ft) |
| Standard 22 ft | 1444 kg (3184 lb) | 3,18 m (125 ft) |

Subbase C.G. are located from center of rotation

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.

# Accessories

## **Radio Remote Controls –**

Eliminate the handling and maintenance concerns that accompany cabled remotes. Operate to a range of about 76 m (250 ft), varying with conditions.

- RB4R

## **Heavy-duty Personnel Basket –**

1200 lb (544 kg) capacity steel basket with safety loops for two passengers. Gravity leveling 183 cm x 107 cm (72 in x 42 in) platform. Fast attachment and secure locking systems. Load chart must show 1043 kg (2300 lb) minimum to operate this accessory.

- BSA-1
- BSA-R1 (provides rotation)

## **Duty Cycle Package –**

Burst-of-Speed winch control option, with dual stand up control and hydraulic oil cooler, self-contained radiator system with electric fan.

- DCPKG

## **Continuous Rotation–**

Allows rotation of turret/boom without rotation stop.

- CR

## **Single Front Outrigger –**

Center mount front stabilizer for 360° stability with a 25 in vertical stroke.

- SFO

## **Bulkhead Options –**

Steel 30 in solid wall bulkhead

- BHSI
- BHSD

## **Spanish-Language Danger Decals, Control Knobs, and Operators' Manuals**

- SDD
- SOM

# Notes



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Manitowoc

Port Washington

Shady Grove

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