National Crane Series 1300A
Product Guide
ASME B30.5
Imperial 85%

Features

• 27.2 t (30 USt) rating
• 33,52 m (110 ft) four-section boom
• Self-lubricating Easy Glide wear pads
• Internal anti-two-block
• Vision cab
**Features**

**National Crane Series 1300A**
- 27,2 t (30 USt) maximum capacity
- 49,68 m (163 ft) with optional jib maximum vertical reach
- 36,27 m (119 ft) maximum vertical hydraulic reach

**Four-section boom**
The 1300A Series can be equipped with a 33,52 m (110 ft) or a 30,5 m (100 ft) four-section boom. A 7,6 m - 13,4 m (25 ft - 44 ft) two-section jib is also available.

**Outriggers**
Two sets of “HO” style outriggers with 6,09 m (20 ft) span and 4,27 m (14 ft) mid span setting. Outriggers are equipped with removable ball and socket aluminum foot pads. Independent outrigger controls (umbilical design) are located at the rear of the crane and includes sight bubble level indicator.

**Operator’s cab**
The Series 1300A’s Vision cab has a rigid powder coated steel structure and is well insulated with ample safety glass for operator visibility and comfort. A multi-position seat with arm rest and single axis joystick controls, ventilation fans, diesel heater, wipers are also included. Air conditioning is available as an option.

**Easy Glide boom wear pads**
Easy Glide boom wear pads reduce the conditions that cause boom chatter resulting in smoother crane operation.
Best in class performance and serviceability

• The stronger standard torsion box improves rigidity, reduces truck frame flex and reduces the need for counterweight

• 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

• Internal anti-two block wiring standard on the 1300A routes the wiring through the inside of the boom eliminating the possibility of snagging the wire on obstructions

• Bearings on the boom extend and retract cables can be greased through access holes in the boom side plates and a number of internal boom parts has been reduced improving serviceability

• The Series 1300A is supplied with 360° continuous rotation standard along with the “glide swing” feature allowing free swing during rotation and a manually applied foot brake

• Adjustable swing speed comes standard on the 1300A. A control knob located on the swing motor brake release valve can be easily adjusted to the crane operator’s swing speed preference

• Oil cooler-radiator mounted on top of front outriggers with electric fan is standard

*Product may be shown with optional equipment.
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The mounting configuration shown is based on an 85% stability factor. The complete unit must be installed on the truck in accordance with factory requirements, and a test performed to determine actual stability and counterweight requirements, since individual truck chassis vary. If bare truck weights are not met, counterweight will be required. A summary of mounting and truck requirements are:

**Working area:**

360°

**Gross axle weight rating (GAWR):**
- Front 8165 kg (18,000 lb)
- Rear 15 455 kg (34,000 lb)

**Gross vehicle weight rating:**
- 23 587 kg (52,000 lb)

**Wheelbase (WB):**
- 6.55 m (258 in)

**Cab to axle/trunnion (CT):**
- 4877 mm (192 in)

**After frame (AF):**
- 2667 mm (105 in) minimum

Frame section modulus (SM), front axle to end of afterframe:
- 759 MPa (110,000 psi) 327 cm³ (20 in³) See “Truck Frame Strength” section.

Estimated bare chassis weight required for stability prior to installation of crane or accessories:
- Front 4082 kg (9000 lb)
- Rear 3856 kg (8500 lb)*
- 4536 kg (10,000 lb) with optional bed

**Front axle maximum weight**: 4763 kg (10,500 lb)

4536 kg (10,000 lb) is required at the rear axle for 360° stability. This weight does include the weight of the optional bed. Counterweight will be required above the 3856 kg (8500 lb) minimum bare chassis if the optional bed is not used to attain the 4536 kg (10,000 lb) stability weight.

***Optional front stabilizer***

### Optional front stabilizer

**Clear of obstructions (mufflers, exhaust stacks, etc.) on top of truck frame for full 2.4 m (8') width.**

**360° Full Capacity Working Area**

### 360° Full Capacity Working Area

**NOTE 1:** 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.

**NOTE 2:** Diesel engines require a variable speed governor for smooth crane operation; electronic fuel injection is required.

**NOTE 3:** All mounting data is based on a National Crane Series 1300A with subbase and an 85% stability factor.

**NOTE 4:** The complete unit must be installed in accordance with factory requirements, and a test performed to determine actual stability and counterweight requirements; contact the factory for details.

**NOTE 5:** Transmission neutral safety interlock switch is required.
Specifications

Boom and jib combinations data

Available in two basic models.

Model 13100A — Equipped with a 8.83 m - 30.48 m (29 ft - 100 ft) four-section boom. This model can be equipped with a 7.62 m - 13.41 m (25 ft - 44 ft) two section jib. Maximum tip height with 13.41 m (44 ft) jib is 44.63 m (153 ft).

8.83 m - 30.48 m (29 ft - 100 ft) four-section boom. 13FJ44M 7.62 m - 13.41 m (25 ft - 44 ft) two-section jib

Model 13110A — Equipped with a 10.05 m - 33.52 m (33 ft - 110 ft) four-section boom. This model can be equipped with a 7.62 - 13.41 m (25 ft - 44 ft) two-section jib. Maximum tip height with 13.41 m (44 ft) jib is 49.68 m (163 ft).

10.05 m - 33.52 m (32 ft - 110 ft) four-section boom. 13FJ44M 7.62 m - 13.41 m (25 ft - 44 ft) two-section jib

Note: Maximum tip height is measured with outriggers/stabilizers fully extended.
### Specifications

#### 1300A winch data

- Do not deadhead line block against boom tip when extending boom.
- Keep at least three wraps of load line on drum at all times.
- Use only 9/16 in diameter rotation-resistant cable with 38,400 lb breaking strength on this machine.
- MAXIMUM BOOM LENGTH AT MAXIMUM ELEVATION WITH RIGGING SHOWN WITH LOAD BLOCK AT GROUND LEVEL.

<table>
<thead>
<tr>
<th>Winch</th>
<th>Cable supplied</th>
<th>Average breaking strength</th>
<th>Lift and speed</th>
<th>Lift and speed</th>
<th>Lift and speed</th>
<th>Lift and speed</th>
<th>Lift and speed</th>
<th>Lift and speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard planetary winch</td>
<td>9/16&quot; diameter rotation resistant</td>
<td>17 464 kg (38,500 lb)</td>
<td>10 478 kg (23,100 lb)</td>
<td>13 971 kg (30,800 lb)</td>
<td>17 464 kg (38,500 lb)</td>
<td>20 956 kg (46,200 lb)</td>
<td>24 449 kg (53,900 lb)</td>
<td></td>
</tr>
<tr>
<td>&quot;Burst of speed winch&quot;</td>
<td>9/16&quot; diameter rotation resistant</td>
<td>17 464 kg (38,500 lb)</td>
<td>1361 kg (3000 lb)</td>
<td>2722 kg (6000 lb)</td>
<td>4083 kg (9000 lb)</td>
<td>6804 kg (15,000 lb)</td>
<td>8165 kg (18,000 lb)</td>
<td></td>
</tr>
</tbody>
</table>

All winch pulls and speeds in this chart 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. These are shown below.

<table>
<thead>
<tr>
<th>Winch</th>
<th>4th layer drum pull</th>
<th>Allowable cable pull</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard planetary</td>
<td>3493 kg (7700 lb)</td>
<td>3492 kg (7700 lb)</td>
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<tr>
<td>&quot;Burst of Speed&quot;</td>
<td>1361 kg (3000 lb)</td>
<td>1361 kg (3000 lb)</td>
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### Load line deduct

<table>
<thead>
<tr>
<th>Block type</th>
<th>Rating</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Down haul weight</td>
<td>4,53 t (5 USt)</td>
<td>68 kg (150 lb)</td>
</tr>
<tr>
<td>1-sheave block</td>
<td>10,89 t (12 USt)</td>
<td>139 kg (305 lb)</td>
</tr>
<tr>
<td>2-sheave block</td>
<td>17,24 t (19 USt)</td>
<td>159 kg (350 lb)</td>
</tr>
<tr>
<td>3-sheave block</td>
<td>27,22 t (30 USt)</td>
<td>261 kg (575 lb)</td>
</tr>
</tbody>
</table>
### Capacities

#### 13100A: 100 ft boom, with 25 ft - 44 ft jib, full span outriggers

Other Series 1300A Load Rating Charts are available. National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.

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

**Note:**
1. All capacities are in pounds, angles in degrees, and radii in feet.
2. Load chart capacities are maximum allowable loads with the crane mounted on a factory-approved truck and all outriggers at either full span or at mid span range and set on a firm level surface so that the crane is level and all tires are suspended.
3. Shaded areas are structurally limited capacities.
4. Handling of personnel is only permitted with full span extension of all outrigger and stabilizer beams.
5. See owners manuals. The 60,000 lb load requires optional 9/16” diameter 6x25 WRC cable.

#### Load chart

<table>
<thead>
<tr>
<th>LOADED RADIUS (ft)</th>
<th>LOADED BOOM ANGLE (deg)</th>
<th>25 ft JIB (lb)</th>
<th>35 ft JIB (lb)</th>
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<tbody>
<tr>
<td>10</td>
<td>75</td>
<td>40</td>
<td>25</td>
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<td>75</td>
<td>40</td>
<td>25</td>
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<tr>
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<td>40</td>
<td>25</td>
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<tr>
<td>95</td>
<td>75</td>
<td>40</td>
<td>25</td>
</tr>
<tr>
<td>100</td>
<td>75</td>
<td>40</td>
<td>25</td>
</tr>
</tbody>
</table>

*Shaded areas are structurally limited capacities.

**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.
13110A: 110 ft boom, with 25 ft - 44 ft jib, full span outriggers

Other Series 1300A Load Rating Charts are available. National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.

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- Keep at least three wraps of load line on drum at all times.
- Use only specified cable with this machine.

NOTE:
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<table>
<thead>
<tr>
<th>Load chart</th>
<th>32 ft – 110 ft BOOM RATED LOADS WITHOUT JIB</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOADED RADIUS (ft)</td>
<td>32 ft BOOM (ft)</td>
</tr>
<tr>
<td>5</td>
<td>78.5</td>
</tr>
<tr>
<td>7.5</td>
<td>44,000</td>
</tr>
<tr>
<td>10</td>
<td>70.5</td>
</tr>
<tr>
<td>12</td>
<td>66.5</td>
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<tr>
<td>15</td>
<td>60</td>
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<tr>
<td>20</td>
<td>48.5</td>
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<tr>
<td>25</td>
<td>34</td>
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<tr>
<td>30</td>
<td>26</td>
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<tr>
<td>35</td>
<td>18.5</td>
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<tr>
<td>40</td>
<td>27</td>
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<tr>
<td>45</td>
<td>33.5</td>
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<td>50</td>
<td>36</td>
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<td>55</td>
<td>40.5</td>
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<tr>
<td>60</td>
<td>8.5</td>
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<tr>
<td>65</td>
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<td>70</td>
<td>18.5</td>
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<tr>
<td>90</td>
<td>25</td>
</tr>
<tr>
<td>95</td>
<td>31</td>
</tr>
</tbody>
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<thead>
<tr>
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</table>

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.

*Shaded areas are structurally limited capacities.
Dimensions

<table>
<thead>
<tr>
<th>Series</th>
<th>G</th>
<th>With oil weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>13100A</td>
<td>108.6 ft</td>
<td>12,806 kg (28,233 lb)</td>
</tr>
<tr>
<td>13110A</td>
<td>113.9 ft</td>
<td>13,141 kg (28,971 lb)</td>
</tr>
</tbody>
</table>

*Weight includes all items including complete HO outriggers, 68 kg (150 lb) down haul weight, reservoir, wood decks, oil cooler, ladders, jib and cab, booms fully retracted.

Dimensions are in mm (in) unless otherwise specified.

**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. • NB4R

Heavy-duty Personnel Basket –
544 kg (1200 lb) 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) • BSAY-2

Air Conditioning –
Back of cab mounted, self contained modular unit with in cab cool air outlets. Requires 130+ amp chassis alternator. • AC

Outrigger Controls at operator’s seat in addition to ground controls. • ICORC

Single Front Outrigger –
Center mount front stabilizer with a 25 in vertical stroke with first-up feature. • SFO

Open Seat Controls –
Open seat controls with railing in lieu of cab. • SSC

Spanish-Language Danger Decals, Control Knobs, and Operators’ Manuals • SDD • SOM
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Shady Grove

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