

National Series 1200

**A high-capacity telescoping crane from National,
America's truck-mounted hydraulic crane leader**

Maximum Capacity: 35,000 Pounds (15.6 Metric Tons)

Maximum Height: 150 Feet (46.7 Meters)



Why buy a National Series 1200?



National Crane, America's truck-mounted hydraulic crane leader, features the industry's premier line-up of telescoping and articulating cranes. The extra-heavy-duty Series 1200 offers you a rated capacity of 35,000 pounds at a ten-foot radius. Its 95-foot all-hydraulic four-section boom reaches vertically to more than 100 feet (and to 150 feet with the optional 52-foot manual pull-out jib). The 1200 offers you these many advantages:

Field-proven durability

- National has manufactured cranes since 1963.
- More than 17,000 field-proven cranes verify National's manufacturing expertise.
- Nearly 90% of all National cranes ever manufactured are working on the job today.

Attention to quality

- National's industry-leading testing program subjects all prototype models to state-of-the-art strain gauge and life-cycle testing to verify structural integrity.
- Each 1200 undergoes numerous quality inspections at all levels of manufacture and assembly. All mounted cranes are fully tested prior to shipment.

Retained market value

- National cranes traditionally retain higher resale value year after year.

Responsive service

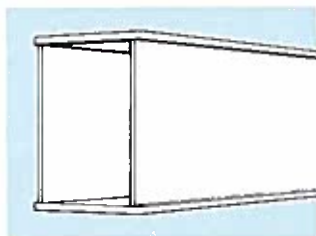
- Each 1200 is backed by strong after-sale and service support. National's professional dealer network spans the nation.
- Authorized National dealers maintain a parts stocking program for your 1200.
- When a dealer cannot immediately supply a part, the factory's back-up program provides 24-hour parts shipping in 90% of all breakdown rush orders.

Strong warranty protection

- The 1200 is backed by a solid warranty covering defects in materials and workmanship for six months from date of shipment.

Efficient boom design

- Computer-aided design enables National to maximize the weight efficiency of Series 1200 boom sections.



- Telescoping boom sections are fabricated from four high-strength steel members welded with perpendicular corners. This "box-section" boom design has thicker top and bottom plates to maximize strength and thinner side plates to increase capacity through lower boom weight.
- Only strong, low-alloy steel is used in boom fabrication.
- Welds are made with automatic, low-hydrogen techniques to ensure strong seams.
- Corner seams are ultrasonically tested for proper weld penetration.
- Large nylon, bolt-in wear pads impregnated with lubricants provide a smooth, long-life operation and are easily replaced.

Proportional boom extension

- Proportional (cable crowd) boom extension (each section extends and retracts proportionally during the telescoping operation) maximizes efficiency and yields higher capacities (particularly in normal working radii) through efficient boom weight distribution.
- The design permits minimum overlap to get the most reach with minimum retracted length for maneuverability.
- The utilization of cable, rather than chain, means longer service life and less maintenance.
- The boom extend cylinder is fully protected with a direct mount holding valve.
- There are no fitting tubes or hoses inside the boom, and since the system utilizes only one extend cylinder, hydraulic maintenance is minimized.

Planetary winch

- The high performance two-speed planetary gear winch with roller bearings throughout and highly efficient, axial piston motor

provides the smoothest and fastest winch operation that National has ever offered.

- Standard $\frac{3}{16}$ " diameter rotation resistant cable provides tangle-free, multi-part loadline applications. It restricts wire rope spinning, resulting in better load control.
- An optional auxiliary planetary winch is available for use in picking lighter loads at higher speeds when the standard winch is rigged for heavy-load lifting at slower speeds with multi-part reeving.

Multiple part reeving

- The sheave case is rigged with two sheaves on top and three underneath for easy multiple part reeving and to accommodate the optional auxiliary winch.
- One, two, and three part load blocks are standard. Four and five part load blocks, for greater lifting capacities while using the winch, are optional.

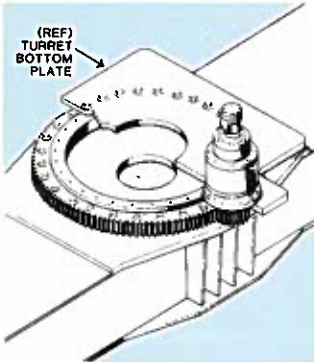
Anti-two-block protection

- The standard anti-two-block sensory device helps prevent damage caused by two-blocking (i.e., when the winch cable or attachments contact the underside of the boom sheave case, either by winching up or extending the boom without paying out the winch cable).

Positive planetary turret rotation

- The planetary rotation gearbox with a hydraulic release brake allows the gearbox to backdrive when excessive side load is applied to the boom, reducing shock loads on the upper and lower crane structure and gearbox.
- The turret drive is designed with extra-heavy bearings below the drive pinion. The turntable bearing full-circle bolt pattern extends the bearing life due to uniform loads on the bearing.

- The gearbox and rotation bearing mounting surfaces are precision-machined after welding to ensure consistent tooth alignment for smooth rotation and low wear, even under maximum loads.
- The rotation stop design eliminates the sudden stop on noncontinuous rotation machines by gradually slowing the rotation of the boom.
- Rotation is 375° non-continuous.



Operator's cabin

- A spacious, well-ventilated operator's cabin that rotates with horizontal boom movement is standard.
- The cabin design provides for constant forward vision of the boom hook and load.
- Safety glass windows on all four sides of the cab and an impact-resistant, durable Lexan window above the cab allow for excellent visibility. The Lexan top lifts up for ventilation.
- Cab features include a sliding door, front windshield wiper, dome light, circulation fan, optional heater and defroster system, and a cushioned, adjustable seat that can be easily positioned for comfort.
- The cab houses the control console, the horn, start/stop switches, a pressure gauge monitoring all functions, and foot and hand control throttles.



Solid, reliable stability

- Two sets of hydraulic, out and down, cross-frame outriggers—each with a wide 18½ foot (5.64m) span, afford solid stability.
- Outriggers retract smoothly, without binding under load.
- Outrigger controls are located at the rear of the crane. A precision-mounted level indicator aids the operator in leveling the unit during the set-up procedure.

Mounting features

- The 1200 mounts on standard, commercially available tandem rear axle trucks, yet it meets DOT and stability standards with ease.
- Procedures allow easy mounting of the crane. A subbase is supplied to eliminate truck reinforcing and, in most cases, counterweight (many diesel engine trucks require no counterweight).

Angle indicator

- The angle indicator is located on the cylinder barrel and is readily visible, at all boom angles, from the operator's station.
- The positive movement of the boom lift cylinder and the wide spacing of the angle markings make the indicator exceptionally easy to read.

Precise controls

- A single station control console is located in the cab.

- Labeled control knobs make it easy for the operator to determine the function of each control.
- Extra-fine metering and low spool forces coupled with adjustable levers provide smooth, precise, fingertip control of crane functions and foot control of telescope functions.
- Control rods are supported by bearings, promoting smooth operation and serviceability.
- A horn, start/stop switches, a pressure gauge monitoring all functions and a foot and hand throttle are located at the control station in the operator's cabin.
- The pressure gauge on the operator's console permits the operator to monitor the hydraulic system pressure to ensure maximum performance.
- Outrigger controls are located at the rear of the crane.



Easy service, low downtime

- Boom access holes enhance serviceability and allow viewing of the extension system.

- Valves are positioned for convenient accessibility and servicing.
- Oil filters and reservoir are located externally to enhance maintenance.
- Boom pivot and hoist cylinder bearings provide longer life and lower maintenance.

Heavy-duty hydraulic system

- The standard three-pump system isolates the winch and rotation functions to provide an independent operation capability.
- Outrigger and stabilizer hydraulic power is sufficient to allow the leveling of a fully-loaded truck and still not lock up in the air.
- The 100-gallon oil reservoir has dual spin-on return line filters, dirty filter indicator, oil level and temperature gauge, magnetic plug, clean-out, three suction strainers, and a diffuser.
- The aluminized hydraulic reservoir prevents the gathering of rust in the system, keeping the hydraulic oil clean.

Versatile accessories

- A selection of boom/jib combinations (see the following chart) allows you to tailor your 1200 to your job requirements.
- A comprehensive accessory line (see backside of this brochure) adds to the versatility of your 1200.

See your National dealer for more reasons why the 1200 is the optimum answer to your medium-to-heavy-duty lifting requirements. Ask him for **Series 1200 Buyer's Guide**, a comprehensive catalog with detailed information, including:

- Load rating charts for all Series 1200 models
- Winch data
- Truck specifications
- Option and accessory information

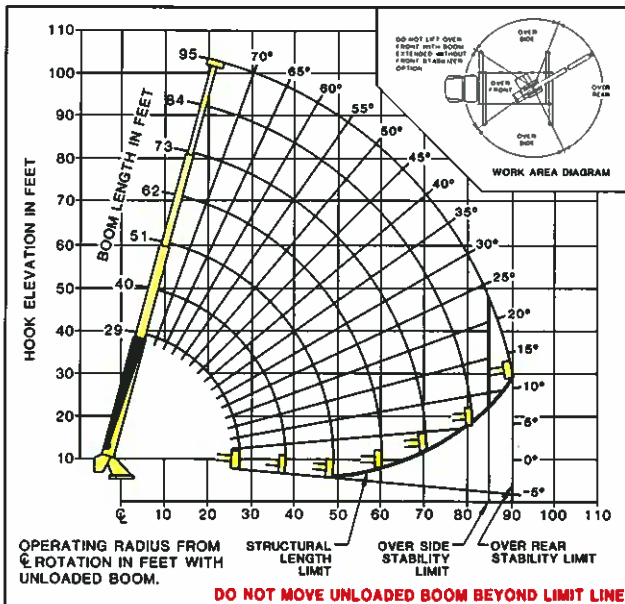
National Series 1200 Booms and Jibs

Boom and Jib Combinations

1255: 23' to 55' three section	
1255: 23' to 55' three section	12FJ40M: 23' to 40' manual pull-out*
1273: 29' to 73' three section	
1273: 29' to 73' three section	12FJ52M: 29' to 52' manual pull-out*
1295: 29' to 95' four section	
1295: 29' to 95' four section	12FJ52M: 29' to 52' manual pull-out*

* Jib options include anti-two-block system.

The 1295 (chart shown below) is equipped with a 29- to 95-foot, fully hydraulic, four-section proportional boom offering over a 100-foot vertical reach. A 52-foot manual jib extends the vertical reach to 150 feet. See the **Series 1200 Buyer's Guide** (available at your National Dealer) for complete load rating information.



Do not operate cranes or accessories within 10 feet of live power lines.

1. Load ratings shown on these charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted in a factory-recommended configuration.

2. Always level the crane with the level indicator on the crane frame.
3. The operator must reduce loads to allow for such factors as wind, ground conditions, operating speeds and the effect of freely suspended loads.
4. Overloading the crane may cause structural collapse or instability.

LOAD RADIUS	29' BOOM LENGTH		40' BOOM LENGTH		51' BOOM LENGTH		62' BOOM LENGTH		
	LOADED BOOM ANGLE	OVER SIDE	OVER REAR	LOADED BOOM ANGLE	OVER SIDE	OVER REAR	LOADED BOOM ANGLE	OVER SIDE	OVER REAR
10'	67	35,000	35,000	73½	33,300	33,300			
15'	55	24,300	24,300	65½	23,400	23,400	71½	22,600	22,600
20'	41	17,800	17,800	57	17,500	17,500	65½	17,100	17,100
25'	21	11,800	11,800	48	13,800	13,800	59	13,500	13,500
30'				37	10,800	10,650	52	11,000	10,900
35'				22	7,400	7,400	44	8,800	8,450
40'							35	6,750	6,700
45'							23	4,900	4,900
50'									
55'									

LOAD RADIUS	73' BOOM LENGTH		84' BOOM LENGTH		95' BOOM LENGTH	
	LOADED BOOM ANGLE	OVER SIDE	OVER REAR	LOADED BOOM ANGLE	OVER SIDE	OVER REAR
20'	74	15,700	15,700			
25'	70	12,700	12,700	73	12,200	12,200
30'	65½	10,400	10,400	69½	9,900	9,900
35'	61	8,600	8,600	65½	8,200	8,200
40'	56½	7,100	7,000	62	6,900	6,900
45'	51½	5,550	5,650	58	5,650	5,700
50'	46	4,350	4,550	53½	4,450	4,650
55'	40	3,450	3,750	49	3,550	3,800
60'	33	2,700	3,050	44	2,800	3,100
65'	24½	2,100	2,300	39	2,200	2,550
70'				33	1,700	2,050
75'				26	1,250	1,600
80'						
85'						
90'						

NOTE: 1. ALL CAPACITIES IN POUNDS, ANGLES IN DEGREES, RADIUS IN FEET.
 2. LOADED BOOM ANGLES ARE GIVEN AS REFERENCE ONLY.
 3. SHADED AREAS ARE STRUCTURALLY LIMITED CAPACITIES.

5. Weights of any accessories attached to the boom or loadline must be deducted from the load chart capacities.
6. Do not exceed jib capacities at any reduced boom length.

The capacities shown will be reduced when accessories are attached to the boom or loadline.

National Series 1200

NATIONAL CRANE CORPORATION
To provide our customers with products where Quality and Reliability are integral with design and manufacturing.
COMMITMENT TO QUALITY

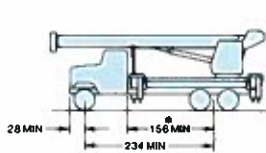


National Series 1200 Truck/Crane Specifications

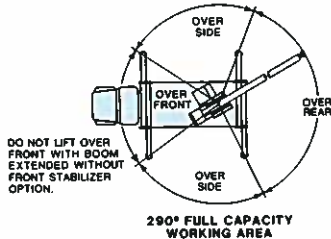
Truck Specifications

The mounting configuration shown below 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.

Working area, front outrigger to front outrigger	290°
Gross Axle Weight Rating (GAWR), Front	18,000 lbs.
Gross Axle Weight Rating (GAWR), Rear	34,000 lbs.
Wheelbase (WB)	234"
Cab to Axle/Trunnion (CA/CT) free of obstructions, full width in crane mounting area	156"
Frame Section Modulus (SM), front axle to rear axle	
50,000 PSI	25.0-inch ³
or	
100,000 PSI	15.0-inch ³
Estimated bare chassis weight required for stability prior to installation of crane or accessories:	
Front	8,000 lbs.
Rear	7,500 lbs.
Estimated Final Average Weight	45,000 lbs.



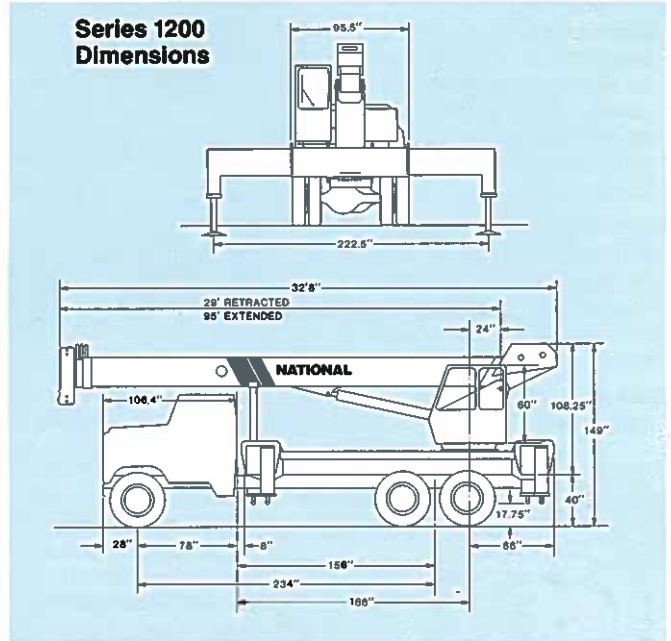
*Clear of obstructions (mufflers, exhaust stacks, etc.) on top of truck frame for full 8-foot width.



Notes:

- Maximum front and rear axle weights vary from state to state. Contact factory for details.
- GAWR means Gross Axle Weight Rating and is dependent on all components of the vehicle, such as axles, tires, springs, frame, etc., meeting manufacturer's recommendations. **Always specify GAWR when purchasing trucks.**
- Minimum axle requirements may increase if more payload carrying capabilities are required and local regulations allow.
- Diesel engines require variable speed governor and energize-to-run fuel solenoid for smooth crane operation.
- Air dryer option on truck is required for continuous rotation machines and is recommended for all other 1200 crane/truck applications.
- Air bag rear suspension system is not acceptable.

Series 1200 Dimensions



Optional Equipment

- One-person fiberglass basket (Models B1, B1-L)
- Two-person basket (Model BS-1)
- Boom length indicator
- Load movement indicator
- Auxiliary high-performance winch
- Pallet fork (Model MKF)
- Loose material clam bucket (Model LMC)
- Glide swing (requires continuous rotation)
- Positive swing lock
- Four- and five-part load blocks
- Continuous rotation
- Cab heater
- Front-mounted hydraulic stabilizer (Model SFO)
- Hydraulic oil cooler (Model HOC)
- R3 remote control

Do not operate National cranes or accessories within 10 feet of live power lines or other electrified sources. Weights of all accessories attached to the boom or loadline of the crane must be deducted from the effective lifting capacity. Some accessories cannot be used in combination with other accessories and/or certain boom/jib combinations. See your National dealer for details and specific accessory availability.



NATIONAL CRANE

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Your National Dealer:

National reserves the right to change designs, prices, and specifications at any time without notice.