# SERIES TONAL 214CM

**Corner Mount** 

**Truck-Mounted Hydraulic Crane and Accessories** 

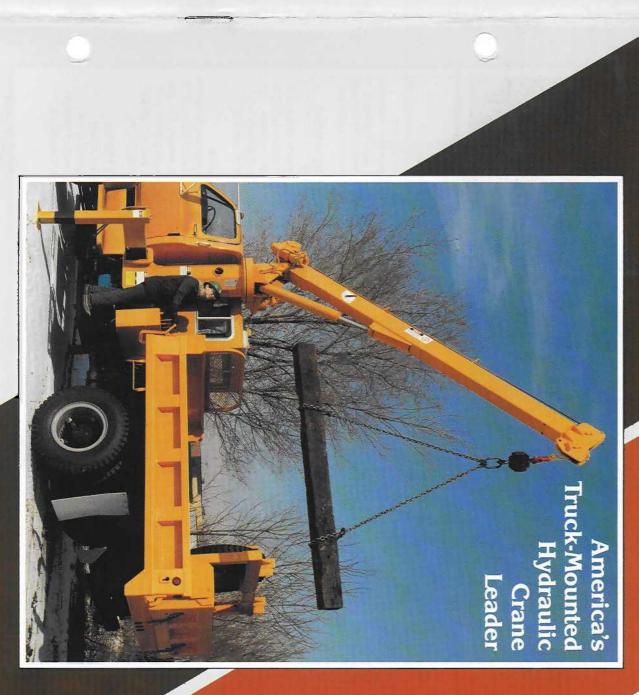
Maximum Vertical Reach: 24 Feet (7.3 Meters)

Maximum Capacity at 4-Foot Radius: 11,000 Pounds (5.0 Metric Tons)



**General Offices:**11200 North 148th Street/Waverly, NE 68462
402/786-2240 Telex: 438061

**Service Center:** 701 N.W. 27th Street/Lincoln, NE 68528 402/474-2666



# **NATIONAL SERIES 214CM**



trusted one all along America's as the "all-around" product for makes the National name a for many years. A tradition of committed to serving the railrailroad maintenance. continues that quality tradition railways. The Series 214CM innovation and improvement oad industry's litting needs

National Crane has been

serve. As a National owner, design and manufacture the needs of the customers we products that will best meet At National, we strive to Trovide our with NOLLY NO

vide our customers with reli-able products designed for quality is our pledge to pro-

component of this country's continued growth and service industry and committed to proud to be a part of the ransportation system. We are The railroads are a valuable

you are assured of receiving a highly engineered, wellmachine. Our commitment to years of service. manufactured and fully tested

to this important market.

more.

Mobility

body or flat bed, rail racks and unit with space for a crew cab plete, multipurpose service

adjacent to the crane, a dump

 Rotation resistant wire rope

NATIONAL

products where Quality and Reliability are integral with

tains heavy-duty capacities without spin or twist while designed wire rope that main-National uses specially-

design and manufacturing.

2

# Series 214CM **National**

**Corner Mount Unit** 

Versatility

The corner mount design turns one truck into a com-

mınımızes expense. A smaller application of this unit The special engineering and Economy maximize value at a low cost. ess expensive crane features ehicle can be utilized and

# Planetary rotation gearbox

Hydraulic release brake and against damage from slip-through feature help proaccidental side loading ect the rotation system

# Outriggers

ger span for stability. Out and down outrigger powers both horizontally and vertically to clear any obstructions. mount unit centered in outrig-Offset outrigger keeps corner

operation even in a confined maneuverability and ease of service allowing greater truck can be utilized for A smaller, single rear-axle

work area.

# Holding Valves

All holding valves are the event of hose failure. cylinder for added safety in mounted directly to the

# National Series 214CM **Poom Data**

# Winch Data National Series 214CM

# accessories within 10 Do not operate cranes or

1. Load ratings shown are maximum allowable loads with the outriggers properly extended on a firm, level surand mounted in a factoryface and the crane leveled recommended configuration feet of live power lines.

> effect of freely suspended as wind, ground conditions, 2. The operator must reduce operating speeds and the loads to allow for factors such

cause structural collapse or Overloading the crane may instability

Use only the specified

cable on this machine.

all times

Keep at least three wraps

WARNING

One Part Line

Two Part Line

of load line on drum at

4. Weights of any accessories attached to the boom or loadthe load chart capacities. line must be deducted from



All winch pulls and speeds are shown on the third layer. Winch pulls would increase on the first layer. Winch line speeds would decrease on the first layer. Winch line pulls may be limited by the winch capacity or the OSHA 5 to 1 safety factor. These are shown

Standard Worm Gear Winch Bare Drum Pull 7,100 lbs. Allowable Cable Pull 5,500 lbs.

standard on all models. National Crane features rotation resistant wire rope as

			HT IN FEE		
0	Ω	10	<del>15</del> –	20	25
CAPACITY IN POUNDS 5 10 15 20 RADIUS IN FEET		20° 4100 10° 4000 —	50° 50° 40°	6950 5950	11000 8850

# National Series 214CM **ruck Specificiations**



stability and counterweight requirements since individual 214CM is corner mounted be noted that since the under the Frame Section rame rail requirements differ ruck chassis vary. It should performed to determine actual ory requirements and a test ruck in accordance with facunit must be installed on the The complete Series 214CM

NOTES:

Gross Axle Weight Modulus specifications for Rating (GAWR) other side. mounting side versus the

Gross Axle Weight Hear Front Wheelbase (WB) . . 177 inches Cab to Axle (CA) . . 108 inches Rating (GAWR) Frame Section Modulus (SM) 17,500 pounds 9,000 pounds

front axle to rear axle 50,000 PSI mounting side 110,000 PSI ront axle to rear axle 21 inch<sup>3</sup> 28 inch<sup>3</sup>

trucks.

other side 50,000 PSI 110,000 PSI 10 inch<sup>3</sup> . 10 inch<sup>3</sup>

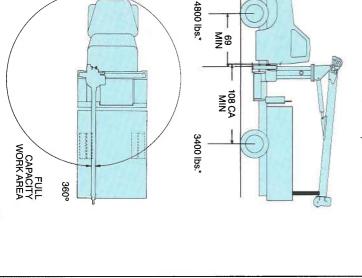
noid for smooth crane

Weight Rear Front sories Estimated Final Average required for stability prior to Estimated bare chassis weight nstallation of crane or acces-. 13,000 pounds 3,400 pounds 4,800 pounds

(2) GAWR means Gross Axle Requirements for maximum front and rear axle weights vary from state to details. state. Contact factory for

GAWR when purchasing facturer's recommendaas axles, tires, springs, frame, etc., meeting manunents of the vehicle such dependent on all compo-Weight Rating and is ion. Always specify

(4) Diesel engines require vari-(3) Minimum axle requiremore payload carrying energize-to-run tuel solements may increase if able speed governor and and local regulations allow. capabilities are required



Bed weight of 1,250 pounds is required for stability with noted axle weights.

# **National Warranty** Parts and Service

# Our warranty covers your The National Warranty

crane against defects in conditions of the warranty. six full months from the date of shipment, subject to the materials or workmanship for

product we make. special concern for every ranty service network, strong warranty protection and our crane, you're getting more ting a nationwide dealer warthan just a crane. You're get-Read our warranty. Then, When you select a National

Waverly, NE 68462 National Warranty Service plete information, write don't settle for less. For com-



II II

Parts System The National

crane will be back on the job fast. National maintains a service questions and expe-Parts staff to answer dealer highly trained Service and requests means that your responsiveness to dealer tory can normally provide the supply a needed part, the faca dealer cannot immediately cranes in each dealer's area. If ply to support the National dealers maintain a parts sup-Authorized National Crane part to the dealer within 48 nours on request. National's

### Service Center The National

dite parts shipping.

unusual modifications or most can perform all but the most cial modifications or extreme easy to return cranes for spewell-equipped service center. National Crane maintains a repairs. Most National dealers Our central location makes it

care and see it's returned as service, we will give it priority tion, warranty repair or other serious repairs. soon as possible. your crane to us for modifica-Should you need to return

# National Series 214CM Specifications

# **General Construction**

High-strength, low alloy and other steel including T-1, Ex-Ten, Stressproof and Hi-Yield are combined with special low-hydrogen welding techniques wherever advantageous. Standard color: Painted National Ivory.

## Frame

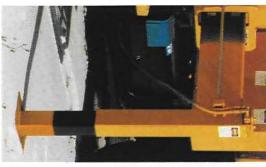
The frame is constructed of high strength, low alloy steel shear plate mounted.

# Rotation

375° non-continuous. Rotation force 70,000 in-lbs. Turret rotation is by hydraulic orbit motor and planetary gear box driving a pinion. The turret rotates on a ball-bearing race. Spring-applied hydraulic release brake provides positive, no-drift lateral positioning. Slip-through feature helps protect the rotation system against damage from against damage form

# Outriggers

One beam and box style outand-down stabilizer and one horizontally fixed unit with vertical extension. Span is 9'11" from pad to pad. All-hydraulic extension provides 25" vertical travel and 24" horizontal movement. Standard automatic check valves and cylinder locks.



6

### Lift

Double-acting hydraulic cylinder raises and lowers boom. Butt-mounted safety holding valve prevents boom fall in event of hose failure.

fall in event of hose failure. **Boom**Fixed 14 ft. boom. Rectangular steel tube construction for strength with economy.

# Controls

Dual hydraulic controls on operator's platform. Platform is separate piece from crane allowing most advantageous mounting position. Control platform bolts to truck frame.



# Boom Mounted Winch

Worm gear with automatic friction brake and hydraulic motor control valve brake. Equipped with 70 ft. of 1/2" 19x7 Dyform rotation resistant 13.75-ton breaking strength wire rope. Line pull and speed: 1st layer, 7,100 lbs./46 fpm; 2nd layer, 6,500 lbs./55 fpm; 3rd layer, 5,500 lbs./55



### ᅙ

Vickers vane type single pump with replaceable cartridge. Provides 7.5 and 17.5 gpm, maximum.

### Filter

Return line 10-micron spin-on type.

# Cylinders

All shafts chrome-plated and stress-relieved. Polyurethane "U" cup packing and seals. All load supporting cylinders have direct-mounted load holding valves. Butt-mounted.

### Valves

Main control valves are stackable, 4-Way, 3-position with main system relief set at 2,850 psi to protect pump. Low-effort spools with fine metering. Fittings and valves engineered for maximum serviceability. Emergency stop and horn switches on console.

### Hose

All high pressure, wire braid reinforced hose with minimum 4 to 1 safety factor.

# Operating Speeds:

Rotate 375°: 35 sec. (1.75 RPM). Tilt up, -20° to 75°: 16 sec. Tilt down, +75° to -25°: 12 sec. Speeds based on 7.5 GPM at 2,850 psi

# Oil Tank Capacities

21-gallon capacity, Mounted on operator's platform for easy access.

