

# CD4415

ROUGH TERRAIN  
CRANE



## **BIG JOB? SMALL SPACE? NO PROBLEM.**

The new Badger CD4415 Rough Terrain Crane features:

- Rated capacity: 15 Ton (13.6 mT) at 10 ft. (3.0 m) working radius
- Maximum boom length: 62.5 ft. (19 m)
- Maximum tip height: 85.5 ft. (21.6 m)

# CONTENTS

Dimensions	
Crane Dimensions, Crane Weights	3
Range Diagram	4
Area of Operation	5
Load Charts	
Load Charts, Notes	6 - 8
Technical Descriptions	
Boom, Hoist, Rope and Hook	9
Superstructure, Cab, Controls, Operator Aids and Load Limiter / Load Indicator	10
Carrier, Engine, Drive-line and Hydraulic System	11
Vehicle Performance, Tires	12

# KEY

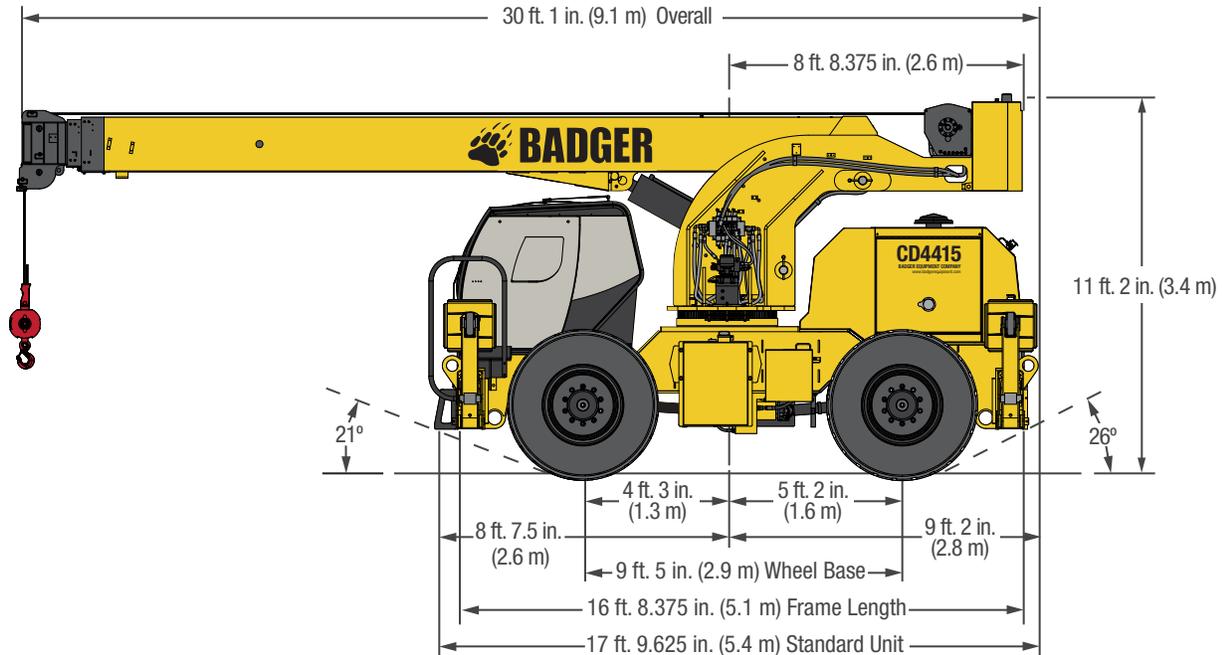
	Gross vehicle weight		Weight on rear axle
	Standard (without hook block)		Gradeability
	Weight on front axle		Swing on jib stowed
	Lifting on wheels / Pick & carry		Outriggers / Lifting on outriggers
	Hook block		Mechanical transmission
	Distance from hook to head sheave pin		Steering
	Working radius		Speed
	Boom length		Tire
	General performance		Engine
	Hydraulic actuated boom		Cab
	Boom elevation angle		Heating / Air conditioning
	Main hoist		Controls
	Operator aids / Load limiter / indicator		Rope - Standard / Optional
	Rope length		Slewing gears
	Hook and ball		Slewing brake
	Slewing locked / locked at specified position		Hydraulics
	Counterweight		Telescoping mode
	Tip height		Max. boom length with extension
	Full power mechanically synchronized		Boom with extension
	Hoist speed		Rope diameter
	Maximum line pull		Slewing / Allowable slewing range



Constant improvements and engineering progress make it necessary that Badger Equipment Company reserves the right to change designs, specifications and price changes without notice or obligation.

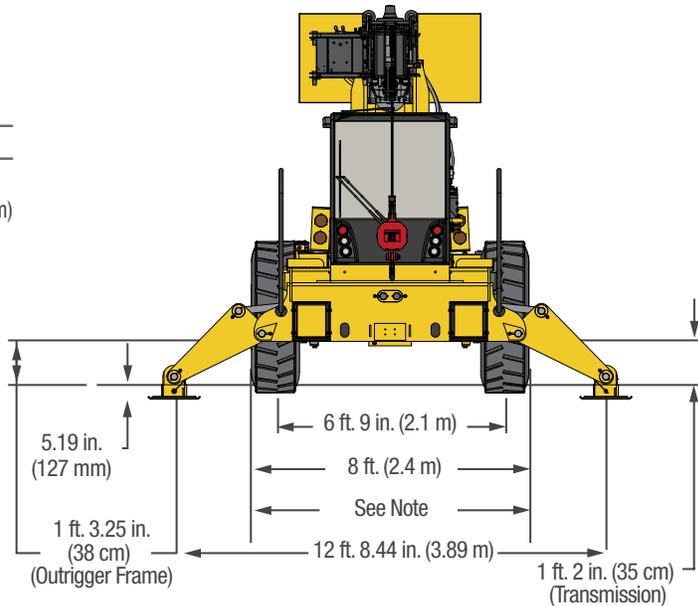
Drawings and/or photographs in this document are for illustrative purposes only and may include optional equipment and accessories and may not include all standard equipment. This document is non-contractual.

# DIMENSIONS



**NOTE:**

Tire Size	14.00 x 24	17 x 25
Track width	6 ft. 9 in. (2.1 m)	6 ft. 9 in. (2.1 m)
Overall width	7 ft. 11.8 in. (2.4 m)	8 ft. 4.9 in. (2.6 m)



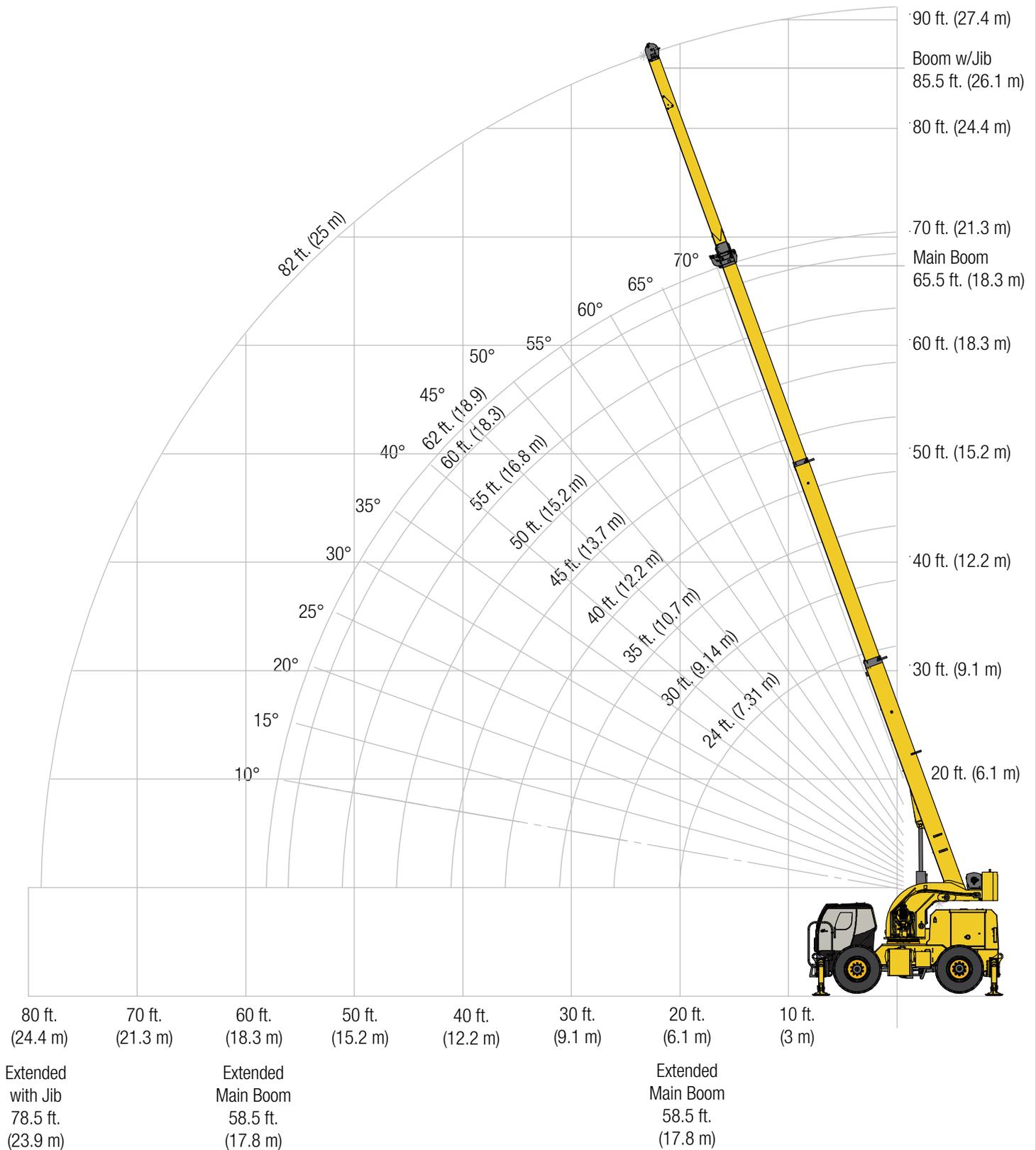
# CRANE WEIGHTS



	Standard (Without hook block)	41,800 lb. (18,960 kg)	17,480 lb. (7,930 kg)	24,324 lb. (11,033 kg)
	24 ft. (7.3 m) to 62 ft. (18.9 m) swing on jib stowed	+609 lb. (+276 kg)	+86 lb. (+39 kg)	+523 lb. (+237 kg)
	15T (13.6 mT) 2 sheave hook block	+456 lb. (+207 kg)	+1,249 lb. (+566 kg)	-793 lb. (-360 kg)
	7T (6.35 mT) hook & ball	+180 lb. (82 kg)	+493 lb. (+224 kg)	-313 lb. (-142 kg)

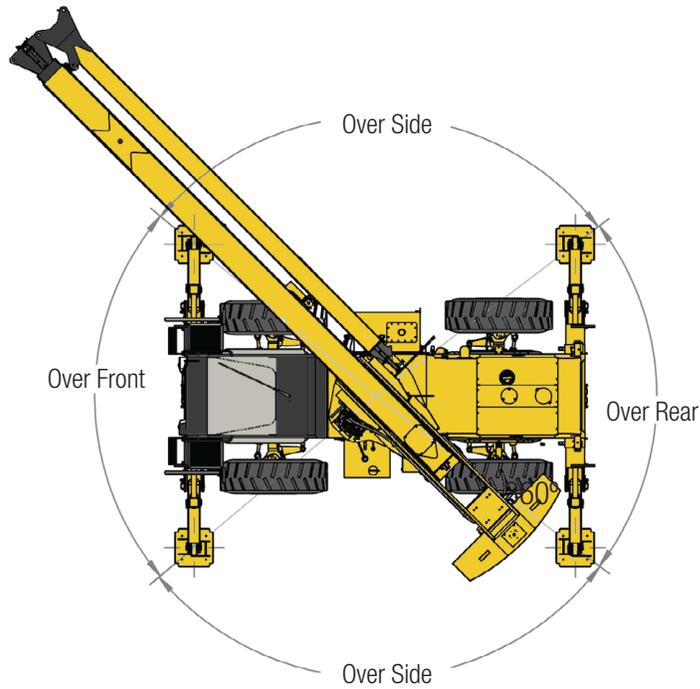
Note: Values are subject to 2% variation

**RANGE DIAGRAM**

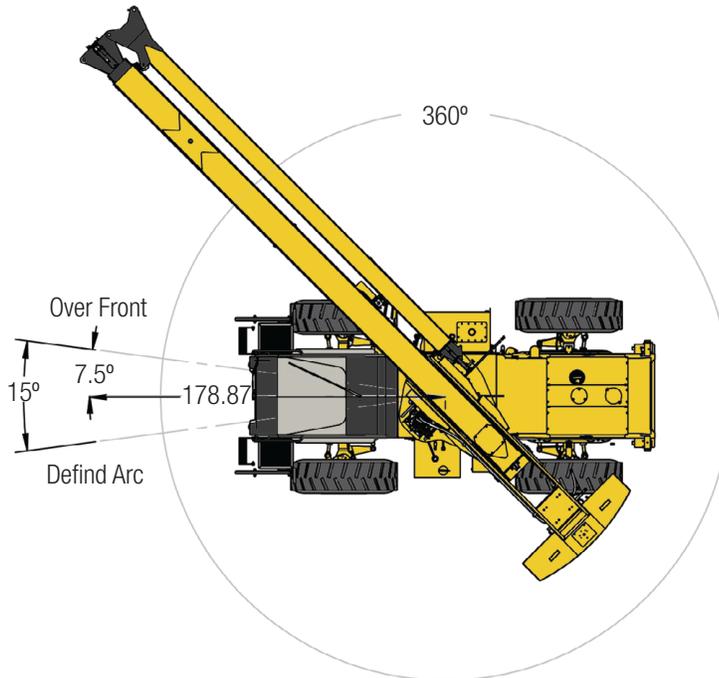


# AREA OF OPERATION

## ON OUTRIGGERS



## ON TIRES



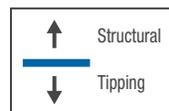
# LOAD CHART: Main Boom - On Outriggers

Lifting Capacities 3 Section Boom 24 ft. (7.3 m) - 62 ft. (18.9 m)  7,500 lb.  12 ft. 8.4 in. (100%)  360° Standard ASME B30.5

	24.5 ft. Boom			30 ft. Boom			38 ft. Boom			46 ft. Boom			54 ft. Boom			62.5 ft. Boom		
	Boom Angle (Deg)	Over Front (lbs.)	360° (lbs.)	Boom Angle (Deg)	Over Front (lbs.)	360° (lbs.)	Boom Angle (Deg)	Over Front (lbs.)	360° (lbs.)	Boom Angle (Deg)	Over Front (lbs.)	360° (lbs.)	Boom Angle (Deg)	Over Front (lbs.)	360° (lbs.)	Boom Angle (Deg)	Over Front (lbs.)	360° (lbs.)
10 ft.	55°	30,000	30,000	62°	30,000	30,000	68°	30,000	30,000									
12 ft.	49°	30,000	30,000	58°	30,000	30,000	65°	28,000	28,000	70°	22,500	22,500						
14 ft.	42°	26,300	26,300	53°	26,400	26,400	62°	25,300	25,300	67°	20,900	20,900						
15 ft.	39°	24,400	24,400	51°	24,600	24,600	60°	24,000	24,000	66°	20,100	20,100	69°	17,000	17,000			
16 ft.	35°	22,800	22,800	48°	23,000	23,000	58°	23,000	23,000	64°	19,600	19,600	68°	16,400	16,400			
18 ft.	25°	20,100	20,100	43°	20,300	20,300	55°	20,400	20,400	61°	18,300	18,300	66°	15,400	15,400			
20 ft.	11°	17,900	17,900	37°	18,100	18,100	51°	18,200	18,200	58°	17,200	17,200	64°	14,600	14,600	67°	12,700	12,700
22 ft.				30°	16,200	16,200	47°	16,400	16,400	56°	16,300	16,300	61°	13,900	13,900	65°	12,000	12,000
24 ft.				21°	14,700	14,300	43°	14,900	14,500	52°	15,000	14,600	59°	13,100	13,100	63°	11,300	11,300
25 ft.				16°	14,000	13,400	40°	14,200	13,600	51°	14,300	13,700	57°	12,800	12,800	62°	10,900	10,900
26 ft.				6°	13,300	12,600	38°	13,600	12,800	49°	13,700	12,900	56°	12,400	12,400	61°	10,600	10,600
28 ft.							33°	12,400	11,400	46°	12,500	11,600	54°	11,700	11,500	59°	10,100	10,100
30 ft.							27°	11,200	10,300	42°	11,300	10,400	51°	11,000	10,400	57°	9,500	9,500
35 ft.										32°	8,900	8,200	44°	8,800	8,200	51°	8,400	8,400
40 ft.										17°	7,200	6,700	35°	7,200	6,700	45°	7,300	6,800
45 ft.													25°	5,900	5,500	38°	6,100	5,700
50 ft.													4°	5,000	4,700	30°	5,200	4,800
55 ft.																19°	4,400	4,100

**Notes:**

- Deduct 400 lbs. for stowed jib
- Deduct 1,000 lbs. for erect jib
- Loads above heavy line are based on structural rating
- Loads below heavy line are based on tipping rating
- All "On Outrigger" tipping loads are based on 85% tipping
- Boom angles are undeflected boom angles
- 9/16" - 6 x 19 class - 6 x 25 FW, PRF, RRL, XIP, IWRC Wire Rope
- These load ratings are for lift service only
- Weight of hook blocks and slings is part of the load, and is to be deducted from the capacity ratings. Consult operation manual for further details.



# LOAD CHART: Main Boom - On Tires

Lifting Capacities 3 Section Boom 24 ft. (7.3 m) - 62 ft. (18.9 m)

7,500 lb.



On tires  
20.5 x 25-24 PR

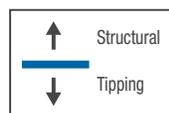
360°

Standard ASME B30.5

Boom Angle (Deg)	24.5 ft. Boom			30 ft. Boom			38 ft. Boom			46 ft. Boom			54 ft. Boom			62.5 ft. Boom		
	Over Front (lbs.)	360° (lbs.)	Boom Angle (Deg)	Over Front (lbs.)	360° (lbs.)	Boom Angle (Deg)	Over Front (lbs.)	360° (lbs.)	Boom Angle (Deg)	Over Front (lbs.)	360° (lbs.)	Boom Angle (Deg)	Over Front (lbs.)	360° (lbs.)	Boom Angle (Deg)	Over Front (lbs.)	360° (lbs.)	
10 ft.	55°	24,500	19,500	62°	24,700	19,600	68°	24,800	19,800									
12 ft.	49°	17,800	14,600	58°	17,900	14,800	65°	18,100	14,900									
14 ft.	42°	13,700	11,600	53°	13,900	11,700	62°	14,100	11,900									
15 ft.	39°	12,300	10,500	51°	12,400	10,600	60°	12,700	10,700									
16 ft.	35°	11,100	9,600	48°	11,200	9,700	58°	11,400	9,800									
18 ft.	25°	9,200	8,000	43°	9,300	8,200	55°	9,500	8,300									
20 ft.	11°	7,700	6,900	37°	7,900	7,000	51°	8,100	7,100	58°	8,200	7,200						
22 ft.				30°	6,800	6,100	47°	7,000	6,200	56°	7,100	6,300						
24 ft.				21°	5,900	5,400	43°	6,100	5,500	52°	6,200	5,600						
25 ft.				16°	5,600	5,000	40°	5,700	5,200	51°	5,800	5,200						
26 ft.				6°	5,200	4,700	38°	5,400	4,900	49°	5,500	4,900						
28 ft.							33°	4,800	4,300	46°	4,900	4,400						
30 ft.							27°	4,300	3,900	42°	4,400	4,000						
35 ft.										32°	3,400	3,100	44°	3,400	3,100			
40 ft.										17°	2,700	2,400	35°	2,700	2,400			
45 ft.													25°	2,100	1,900	38	2,300	2,000
50 ft.													4°	1,700	1,500	30°	1,800	1,700
55 ft.																19°	1,500	1,300
										60°	Max Angle		50°	Max Angle		45°	Max Angle	

**Notes:**

- Deduct 400 lbs. for stowed jib
- Deduct 1,000 lbs. for erect jib
- 17.5 x 25.20 ply tires, 90 psi recommended tire pressure
- Loads above heavy line are based on structural rating
- Loads below heavy line are based on tipping rating
- Lifting with jib on tires is not permitted
- Transport of erect jib is allowed with boom fully retracted, 5mph max
- Rotation of erect jib is allowed with boom fully retracted, creep only
- All "On Tires" tipping loads are based on 75% tipping
- Boom angles are undeflected boom angles
- 9/16" - 6 x 19 class - 6 x 25 FW, PRF, RRL, XIP, IWRC Wire Rope

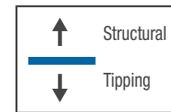


- These load ratings are for lift service only.
- Weight of hook blocks and slings is part of the load, and is to be deducted from the capacity ratings. Consult operation manual for further details.
- Data published herein is intended as a guide only and shall not be construed to warrant applicability for lifting purposes.
- Crane operation is subject to the load charts or computer and operation manual both supplied with the crane.
- Pick & Carry permissible only with boom and load centered over front.

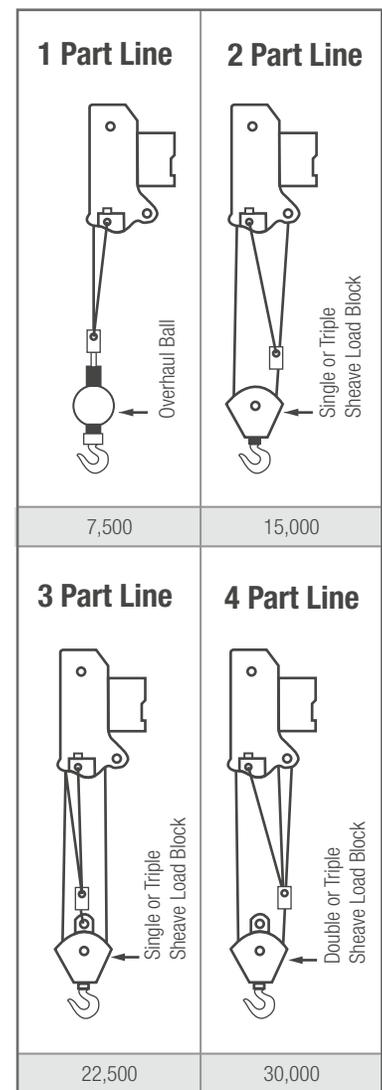
# LOAD CHART: Main Boom - On Outriggers with 20 ft. Jib

Lifting Capacities 3 Section Boom 24 ft. (7.3 m) - 62 ft. (18.9 m)  7,500 lb.  12 ft. 8.4 in. (100%)  360° Standard ASME B30.5  
 Boom Length (Base ft. + 20 ft.)

	44 ft. Boom		50 ft. Boom		58 ft. Boom		66 ft. Boom		74 Boom		82 ft. Boom	
	Boom Angle (Deg)	Jib 360° (lbs.)										
10 ft.	70°	6,500										
12 ft.	68°	6,500										
14 ft.	65°	4,800	69°	6,500								
15 ft.	63°	4,800	64°	4,800								
16 ft.	62°	4,800	66°	4,800								
18 ft.	59°	3,900	63°	4,800	67°	4,800						
20 ft.	56°	3,900	60°	3,900	65°	4,800	69°	4,800				
22 ft.	53°	3,900	58°	3,900	63°	4,800	67°	4,800				
24 ft.	49°	3,300	55°	3,900	61°	3,900	65°	4,800	68°	4,800		
25 ft.	48°	3,300	54°	3,900	60°	3,900	64°	4,800	68°	4,800		
26 ft.	47°	3,300	52°	3,900	59°	3,900	63°	4,800	67°	4,800		
28 ft.	43°	3,300	50°	3,300	56°	3,900	61°	3,900	65°	4,800	68°	4,800
30 ft.	39°	2,900	47°	3,300	54°	3,900	59°	3,900	64°	4,800	67°	4,800
35 ft.	28°	2,700	38°	2,900	48°	3,300	54°	3,900	59°	3,900	63°	3,900
40 ft.	7°	1000	28°	2,700	41°	2,900	49°	3,300	55	3,900	59°	3,900
45 ft.			11°	2,600	32°	2,900	43°	3,300	50°	3,300	55°	3,900
50 ft.					22°	2,600	36°	2,900	44°	3,300	50°	3,300
55 ft.							27°	2,700	38°	2,900	46°	3,300
60 ft.							15°	2,700	31°	2,700	41°	2,900
65 ft.									23°	2,700	35°	2,700
70 ft.									5°	1,000	28°	2,600
75 ft.											18°	2,600
0 ft.												1000



## Allowable Line Pull (Lbs)



# TECHNICAL DESCRIPTION

## Boom

### Standard Configuration:



3 section hydraulic actuated boom



Full power mechanically synchronized



Min. / Max.

24 ft. / 62.5 ft. (7.3 m / 19 m)



Boom elevation angle range (min. / max.)

0° / 70°

### Optional Configuration:



One section jib

20 ft. (6 m)

Offset

0° Fixed

Maximum tip height

85.5 ft. (20.1 m)

## Hoist, Rope and Hook

### Standard Configuration:



Grooved drum storage capacity

403 ft. (123 m)



	Single Speed (Standard)	Two Speed (Optional)
Without load in 5th layer (low range / high range)	242 fpm (1.23 mps)	297 fpm (1.78 mps)
Without load in 1st layer (low range / high range)	169 fpm (.85 mps)	207 fpm (1.05 mps) / 229 fpm (1.16 mps)



6 x 19 IWRC XIPS, right regular lay, preformed



0.56 in. (14.3 mm)



390 ft. (119 m)



	Single Speed (Standard)	Two Speed (Optional)	
Max. line pull: 1st layer low-range	10,750 lb. (4,886 kg)	Low Speed	11,350 lb. (5,160 kg)
Max. line pull permissible	7,500 lb. (3,400 kg)	High Speed	7,140 lb. (3,238 kg)

### Optional Configuration:



7T Hook and Ball

180 lb. (82 kg)

Low Profile

456 lb. (207 kg)

2 Sheaves

456 lb. (207 kg)

## Superstructure

### Standard Configuration:



Non stop  
Maximum rotation speed without load

360°  
4.5 rpm



Hydraulic motor  
Planetary reducer  
Spring applied hydraulic released brakes



360° house lock

Manually applied

## Cab, Controls, Operator Aids and Load Limiter/Indicator

### Standard Configuration:



Rubber floor mat  
Tinted safety glass  
Six way adjustable seat

Heater/Defroster  
Window wiper with washer and top window  
Two lockable doors with sliding windows



Armrest mounted dual axis electro-proportional joysticks  
Steering wheel column with gear selector on the right and directional light selector on the left  
Dashboard mounted switches for outrigger operation



Graphic interface for load indicator

### Optional Configuration:



Air conditioner  
LED work lights  
LED strobe light  
Perimeter lights

Rearview camera  
Front windshield guard  
Falling Object Protection System (F.O.P.S.)



Graphic interface for load indicator with Control Lever cut-out function

# Carrier, Engine, Drive-line and Hydraulic System

## Standard Configuration:



Hydraulic, independent extension:

Outrigger pad size

16 in. x 16 in. (406 mm x 406 mm)

Area of outrigger pads

256 in.<sup>2</sup> (1,652 cm<sup>2</sup>)



Cummins® QSB4.5 Tier 3, 4 cylinders

Rated power

160 hp (119 kW) @ 2,500 rpm

Maximum gross torque

460 ft.-lb. (624 Nm) @ 1,500 rpm

Intake

Turbocharger with intercooler

Fuel type

Diesel

Fuel tank capacity

50 gal. (189 L)

## Optional Configuration:



Cat® C4.4 Tier 3, 4 cylinders

Rated power

139 hp (104 kW) @ 2,200 rpm

Maximum gross torque

408 ft.-lb. (553 Nm) @ 1,400 rpm

Intake

Turbocharger with intercooler

Fuel type

Diesel

Fuel tank capacity

50 gal. (189 L)

## Standard Configuration:



6 x 6 powershift transmission with integral torque converter

Limited slip on front axle

4WD (Four-Wheel Drive) with rear axle disconnect

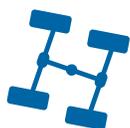
Hydraulic over-hydraulic drum brakes

Rigid mounted front axle

Parking brake on front axle

Dampened rear axle

Hydraulic oil cooler on carrier



Hydraulic power steering

Four wheel steering crab

Front wheel steering

Independent rear wheel steering package

Four wheel steering coordinated

Rear wheel centering light indication



Hydraulic Pump: Axial Piston

69.5 gpm (263 lpm) @ 3,500 psi (241 bar)

Hydraulic oil reservoir capacity

75 gal. (284 L)

Hydraulic oil suction filter

850 microns with magnet

Hydraulic oil return filter

10 microns

# Vehicle Performance

## Standard Configuration:



Maximum Gradeability

Up to 80%, based on oil pan restrictions



Maximum Speed (6th gear)

Cummins® Engine

Cat® Engine

26 mph (42 kph)

22 mph (35 kph)

## Tires

### Standard Configuration:



Wide tread earth mover pattern (E3)

20.5 x 25-20 PR

### Optional Configuration:



Industrial pattern

14.00 x 24-20 PR

## Notes:



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