

IC-400-C



Carry-Deck Industrial Crane

Broderon's long reach 25 US ton capacity carry deck crane, the IC-400 provides heavy duty capacity to take care of all your long reach light and heavy duty lifting needs.

Capacity

50,000 lbs. (22,700 kg)

Sheave Height

98' 6" (30.02 m)

Horizontal Reach

88' (26.83 m)

Height

9' 11" (2.96 m)

Width

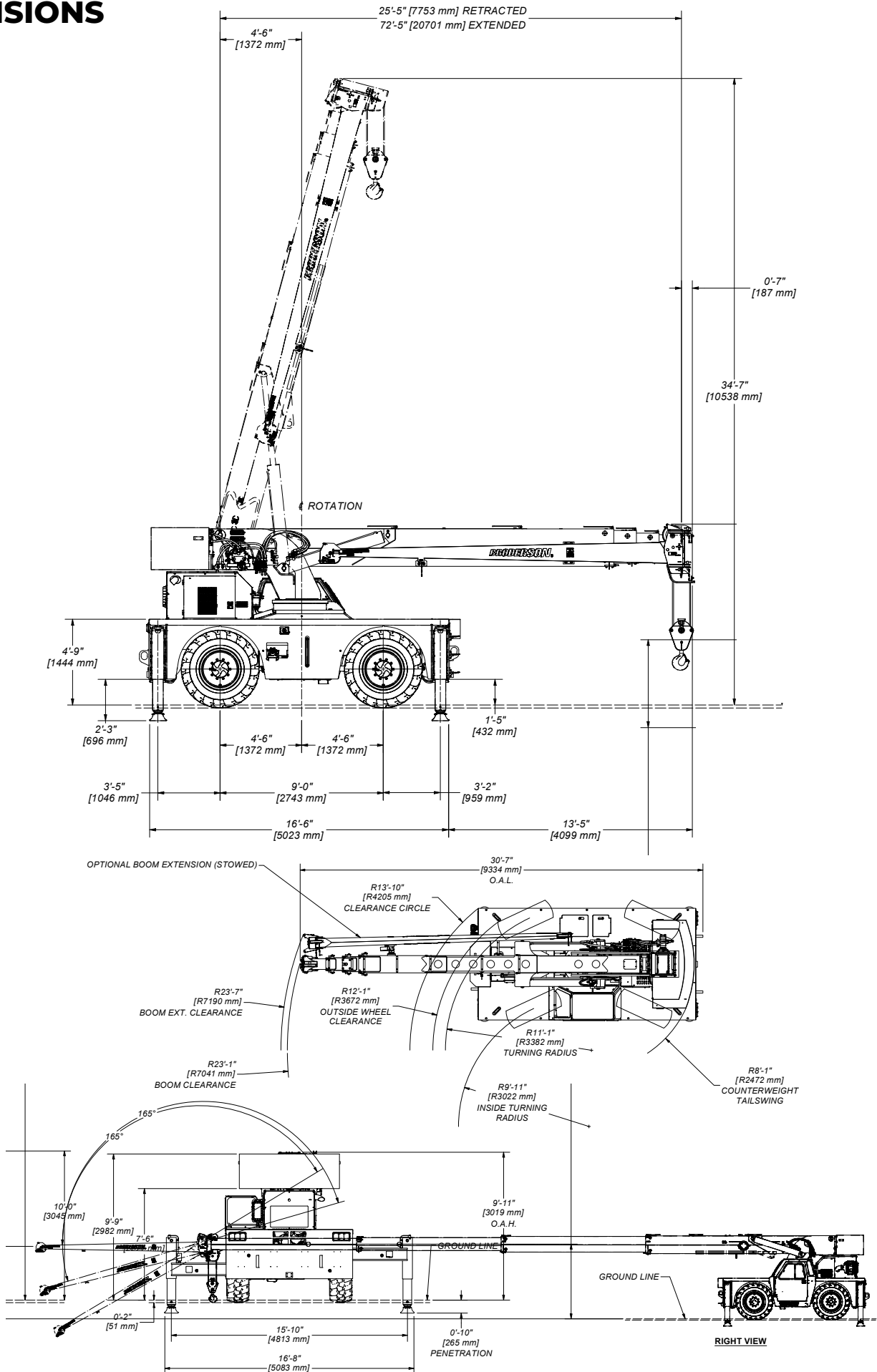
8' 6" (2.59 m)

BMC[®] **BRODERSON**[®]
Manufacturing Corp.

www.Broderon.com

IC-400-C

DIMENSIONS



SPECIFICATIONS

GENERAL

	ROTATION	ELEVATION	EXTENSION
Boom Movement	Continuous	0° to 75°	47' (14.33m)
Weight Total	52,300 lbs. (23,725 kg.)		
Front Axle	26,570 lbs. (12,050 kg.)		
Rear Axle	25,730 lbs. (11,675 kg.)		
Gradeability	70% (34°)		
Turning Radius	11' 1" (3.382 m)		

ENGINE

Make	Cummins
Model	QSF 3.8 (US EPA Tier 4F/EU Stage V)
Type	Turbocharged-Diesel, charge air cooled
Cylinder	4
Displacement	3.8 L
HP at Gov. Speed	154 HP
Fuel Tank Capacity	80 gal. (302.8 L)

TRANSMISSION

POWERSHIFT TRANSMISSION with 6-speeds (2 range, 3 speeds/range) forward and reverse. Oil cooler and filter. Operator interface to shift and disconnect front axle for 2-wheel drive operation.

FORWARD GEAR RATIOS & SPEEDS			REVERSE GEAR RATIOS & SPEEDS		
GEAR	RATIO	SPEED (MPH)	GEAR	RATIO	SPEED (MPH)
1st	9.05	1.7 (2.7 km/h)	1st	9.05	1.7 (2.7 km/h)
2nd	4.68	3.4 (5.5 km/h)	2nd	4.68	3.4 (5.5 km/h)
3rd	1.72	9.2 (14.8 km/h)	3rd	1.72	9.2 (14.8 km/h)
4th	3.73	4.2 (6.8 km/h)	4th	3.73	4.2 (6.8 km/h)
5th	1.93	8.2 (13.2 km/h)	5th	1.93	8.2 (13.2 km/h)
6th	0.71	22.3 (36 km/h)	6th	0.71	22.3 (36 km/h)

AXLES

FRONT
Planetary drive/steer front axle with 19:333 to 1.0 ratio. Differential equipped with 30% "limited slip" feature. Front axle mounted rigidly to frame.

REAR
Planetary drive/steer axle with 19:333 to 1.0 ratio. Rear axle is rigid mounted. Axle has a 30% limited slip-differential.

STEERING

Hydraulic steering unit with a 4 inch (101 mm) bore cylinder attached to each axle. Allows limited steering when engine is not running. Push button operator interface to select between four steer modes: front-wheel, 4-wheel, rear-wheel, or crab steer.

BRAKES

Service: 4-wheel hydraulic internal wet-disc brakes.

Parking: Internal wet disc, spring applied and hydraulically released and integral to the rear axle.

TIRES

Standard:
17.5 x 25, 20-ply rating, mud lug, bi-directional.

CHASSIS

CARGO DECK
Total Deck Area: 74 sq. ft. (6.94 m²) of deck area. 20,000 lbs. (9,100 kg) capacity on deck when load is centered over or between axles. Six deck stakes are provided along edge of deck for 1" (25 mm) pipe stakes. Stakes furnished. Cargo decks have skid resistant coating.

HEADLIGHT AND TAILLIGHT GRILLES
Steel protective grilles for headlights and taillights.

OUTRIGGERS
Four hydraulic out and down outriggers of box beam construction. Independent controls for each outrigger. Outrigger beams have extension sensing and crane has load charts for the positions: out-and-down, mid-and-down, and in-and-down. Outrigger pad dimensions: 11" (27.9 cm). Larger pads available as an option.

ACCESSORY STORAGE BOX
Hinged front deck plate serves as a lockable cover, and box for carrying downhaul weight and other items. Box dimensions 12.25" (.31 m) deep x 13.5" (.34 m) long x 40.25" (1 m) wide.

LIFTING RINGS
Lifting rings at each corner of cargo deck so sling can be attached for lifting crane. Rings hang below surface when not in use.

OPERATOR COMPARTMENT

Provides one-position access to all chassis and crane functions. Includes adjustable operator's seat and seat belt, arm rests, and tilt steering column. Also includes access point to J1939 CAN Bus system.

ALL WEATHER CAB

Consists of rigid mounted canopy section and removable hinged door with safety glass. Rugged canopy structure with laminated glass front and top. Door is equipped with a keyed lock to protect operator's station. Includes defroster fan, dome light, heater with 2-speed fan and 12V electric windshield wiper and windshield washer, 12V power outlet. Emergency exit through rear window.

CLIMATE CONTROL/OPERATOR COMFORT

Integrated heater and air conditioning standard.

ELECTRONIC CONTROLS

Dual, two-axis joysticks provide control of boom functions and hoist. Triggers prevent inadvertent boom motion. Arming command, in conjunction with the seat switch, enables or disables the function of the joysticks. Electronic keypad on dash controls outrigger functions.

LIGHTING PACKAGE

One pair of LED headlamps, LED front turn signals, LED taillights with brake, backup and turn signal lights in rear; and one (1) emergency flasher.

OPERATOR DISPLAY

In-dash LED screen show engine data including RPMs, battery voltage, fuel level, hydraulic oil level and temperature, DEF fluid level percent, engine hourmeter, engine fault codes, and control system faults, and hydraulic oil.

Also included are lights for engine warning, engine shutdown, hoist high-speed mode, hydraulic fine control mode and hoist minimum wrap.

BACK-UP ALARM

Provides pulsating sound from 97 dB alarm when transmission is in reverse.

OUTRIGGER ALARM SYSTEM

Two-tone alarm is activated when the OUTRIGGER DOWN, OUTRIGGER BEAMS OUT, and OUTRIGGER BEAMS IN controls are operated.

EMERGENCY STOP SWITCH

A two-position push button switch located on the top left-hand of the dash panel. Designed to stop the engine and shut down the hydraulic system.

HYDRAULIC

TWO AXIAL PISTON PUMPS mounted on and driven by the main transmission, deliver a combine flow of 95 gpm (360L / min) at 4,000 psi (280 bar) and 2,500 RPM engine speed. System protected by relief valves, suction-line strainers, and a 150 gpm, 10-micron return-line filter.

HYDRAULIC RESERVOIR

81 gal (307L) capacity, equipped with a 10-micron breather filter on top and oil level gauge on side.

Four-section, high-strength steel construction, 25' 5" (7.753 m) retracted length 72' 5" (20.7 m) expended length. Hydraulic cylinder with wire rope system that extends and retracts the second, third, and fourth stages proportionally. The telescope cylinder and the boom elevation cylinders are equipped with cylinder mounted holding valves. Boom angle indicator is provided on left side of boom.

BOOM ROTATION

Heavy-duty ball bearing rotation gear with external teeth. Rotation is powered by hydraulic motor and worm gear drive. Rotation gear box may be adjusted as wear occurs to minimize backlash.

BOOM HOIST

Two-speed hoist. A 12 VDC solenoid at motor for speed selection, this is a planetary gear hoist with spring set, hydraulically released brake and load holding valve. The maximum bare drum Line Pull is 17,262 lbs. (7,830 kg), and maximum line speed is 329 ft/min (100.3 m/min) (6th layer). Main hoist rope: 425 ft. (130 m) long, compact 35 rotation resistant, IWRC RRL lay, grade 2160 wire rope with a minimum breaking strength of 56,400 lbs (251 kN). Weight per foot: 0.88 lbs (11.31 kg per/m). Note: rope weight is not included in load calculations. Downhaul weight and hook included — standard.

ANTI-TWO-BLOCK DEVICE

Prevents damage to hoist rope and/or crane components from pulling load hook against tip.

BRODERSON RATED CAPACITY LIMITER

Warns operator of impending overload with audible and visual signals, stopping boom functions that will cause overloads.

FOUR-PART-LINE SHEAVE BLOCK

Double-sheave block for 4-part-line requirements. Downhaul weight and hook included as standard.



Main Features

RATED CAPACITY LIMITER
Broderson RCL Standard

CAPACITY ON OUTRIGGERS
50,000 lbs. (22,700 kg)

PICK AND CARRY CAPACITY
25,000 lbs. (11,340 kg)

HEIGHT
11'3" (3.43 m)

WIDTH
8' 6" (2.59 m)

BOOM ROTATION
360°

SHEAVE HEIGHT
up to 99' (30.18 m)

HORIZONTAL REACH
up to 90' (27.03 m)

FOUR-WHEEL STEER
Standard

FOUR-WHEEL DRIVE
Standard

POWERSHIFT TRANSMISSION
Standard

TIGHT TURNING RADIUS

**FULLY ELECTRONIC CONTROLS
FOR SMOOTH, PRECISE
OPERATIONS**

**INDEPENDENT OUTRIGGER
CONTROLS**
3 Outrigger widths

Additional Features

TIRE OPTIONS
Spare tire and wheel

CHASSIS OPTIONS

Auxiliary Winch

Planetary gear winch mounted beneath chassis frame, with push-button control in operator's console.

Pintle Hook

T-60-AOL Holland pintle hook mounted on front outrigger frame member or rear frame member.

OPERATOR COMPARTMENT

Floor Mat

Vinyl mat with foam backing.

Sun Visor

Adjustable sun visor for reducing glare mounted in roof of cab.

ELECTRICAL OPTIONS

Strobe Lights

Yellow LED strobe light mounted on each side of turret weight box

Camera System

Camera video system (consisting of up to 4 cameras) to assist operator with hard-to-see viewpoints

Or: Rear camera system: 1 back up camera. Display in cabin.

Boom Work Lights

One LED worklight mounted to boom to light boom tip, and one work light mounted to turret to light ground under boom tip.

RCL Light Bar

3 color light bar for external indication of load status

Diagnostic Modem

For crane control system to diagnose faults, allow remote support, and provide software updates.

BOOM ATTACHMENTS:

Boom Extension

20 ft. (6.1 m) offset. Boom stowable. Boom extension is offsettable to 3 different positions; 0 degree (in-line), 15 degree and 30 degree offset. Maximum Sheave height is 99'3", and maximum reach is 90'.

CONSULT THE IC-400-C ENGINEERING SPEC FOR ADDITIONAL INFORMATION.

Broderson Cranes are manufactured to ISO 9001 certified standards and have a market leading reputation for quality and reliability. Broderson Cranes are engineered for operating efficiency and are easy to operate and maintain.

An extensive network of full-service dealers offer parts and service support by factory-trained technicians.

For additional options or special equipment not listed, please consult your dealer salesperson or contact **Broderson Manufacturing Corp.**

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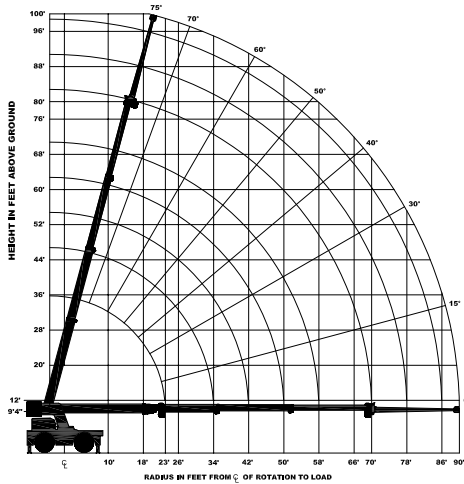
Dimensions and values shown are for reference purposes only. Specifications subject to change.



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LN324C

Load Chart US Standard



In and Down 360 capacities apply when operating over the sides or rear with beams at less than full extension.

For boom lengths between columns, use the next longer boom length column. For load radii between rows, use the next longest load radius row.

Load radius is the horizontal distance from the center of rotation of the unloaded crane to the vertical load line with load applied.

CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE								
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS							
	360° ROTATION				OVER FRONT			
	ON RUBBER	OUTRIGGERS OUT & DOWN	OUTRIGGERS MID & DOWN	OUTRIGGERS IN & DOWN	ON RUBBER	ON OUTRIGGERS		
8	17000	50000	47500	42000	24400	50000		
10	13200	42000	38000	28300	20300	42000		
12	10500	36000	31800	20600	17200	36000		
14	8500	35100	27300	16000	14700	35100		
16	6900	30100	23500	12800	12700	30100		
18	5600	23600	20300	10600	11100	23600		
20	4600	21100	17200	8800	9400	21100		
22	3700	19000	14400	7400	7900	19000		
24	3000	17100	11800	6300	6600	17100		
26	2300	15400	10600	5300	5600	15400		
28	1800	13300	8700	4600	4800	12900		
30	1300	12200	7600	3900	4100	11800		
32	1100	11200	7000	3300	3600	11200		
36	700	9100	5400	2300	2800	8900		
40	---	7400	4300	1600	2200	7400		
42	---	6800	3900	1300	2000	6800		
44	---	6200	3400	1100	1800	6100		
48	---	5400	2900	700	1400	5300		
52	---	4700	2600	---	1100	4700		
54	---	4400	2400	---	1000	4400		
56	---	4400	2400	---	900	4400		
60	---	4100	2000	---	---	4000		
64	---	3600	1600	---	---	3600		
68	---	3200	1300	---	---	3200		
72	---	2800	---	---	---	2700		
76	---	2400	---	---	---	2300		
80	---	2100	---	---	---	2100		
84	---	1900	---	---	---	1900		
88	---	1500	---	---	---	1500		
BOOM EXT.	20-FOOT BOOM EXTENSION CAPACITIES							
	MAIN BOOM ANGLE							
	0°	15°	30°	40°	50°	60°	75°	
	0°	2600	2750	3000	3400	4100	5100	6200
15°	---	2500	2600	2700	2900	3300	4300	4800
30°	---	---	2300	2400	2500	2700	3200	3400

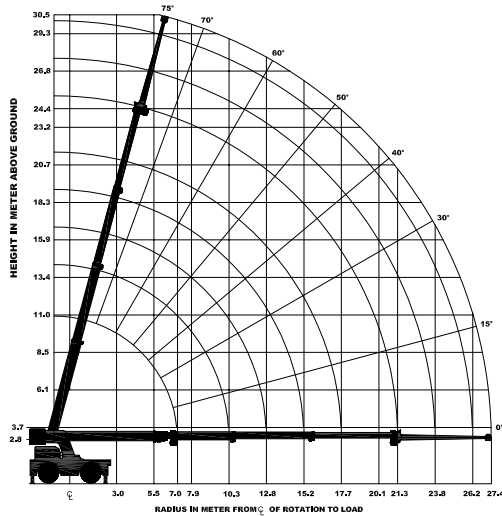
CAPACITIES ON OUTRIGGERS ARE 85% OF TIPPING LOADS. CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES BELOW BOLD LINE ARE LIMITED BY TIPPING. OTHER CAPACITIES ARE LIMITED BY STRUCTURAL OR HYDRAULIC CAPABILITY.

HYDRAULIC FUNCTIONS OPERATE AT MID-RANGE SPEED ON RUBBER OR IF CRANE IS NOT LEVEL.

BOOM EXTENSION MAY NOT LIFT LOADS ON RUBBER.

CAUTION: BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY. LOAD RADII BELOW DOUBLE LINES REQUIRE BOOM EXTENSION. DO NOT POSITION BOOM AT LOAD RADII WHERE "—" CAPACITIES ARE SHOWN. EXCEEDING CAPACITY RATINGS OR APPLYING SIDE LOADS TO THE BOOM OR BOOM EXTENSION IS MISUSE, HAZARDOUS, AND VOIDS WARRANTY.

Load Chart Metric



In and Down 360 capacities apply when operating over the sides or rear with beams at less than full extension.

For boom lengths between columns, use the next longer boom length column. For load radii between rows, use the next longest load radius row.

Load radius is the horizontal distance from the center of rotation of the unloaded crane to the vertical load line with load applied.

CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE									
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS								
	360° ROTATION				OVER FRONT				
	ON RUBBER	OUTRIGGERS OUT & DOWN	OUTRIGGERS MID & DOWN	OUTRIGGERS IN & DOWN	ON RUBBER	ON OUTRIGGERS			
8	17000	50000	47500	42000	24400	50000			
10	13200	42000	38000	28300	20300	42000			
12	10500	36000	31800	20600	17200	36000			
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36	700	9100	5400	2300	2800	8900			
40	---	7400	4300	1600	2200	7400			
42	---	6800	3900	1300	2000	6800			
44	---	6200	3400	1100	1800	6100			
48	---	5400	2900	700	1400	5300			
52	---	4700	2600	---	1100	4700			
54	---	4400	2400	---	1000	4400			
56	---	4400	2400	---	900	4400			
60	---	4100	2000	---	---	4000			
64	---	3600	1600	---	---	3600			
68	---	3200	1300	---	---	3200			
72	---	2800	---	---	---	2700			
76	---	2400	---	---	---	2300			
80	---	2100	---	---	---	2100			
84	---	1900	---	---	---	1900			
88	---	1500	---	---	---	1500			
BOOM EXT.	20-FOOT BOOM EXTENSION CAPACITIES								
	BOOM EXT. OFFSET ANGLE	MAIN BOOM ANGLE							
		0°	15°	30°	40°	50°	60°	70°	75°
		0°	2600	2750	3000	3400	4100	5100	6200
15°		---	2500	2600	2700	2900	3300	4300	4800
30°	---	---	2300	2400	2500	2700	3200	3400	

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