

**bmc**  
*Tech Spec*

**MAXIM**  
1-877-MAX-LIFT

**IC-400-3A**  
*Industrial Crane*

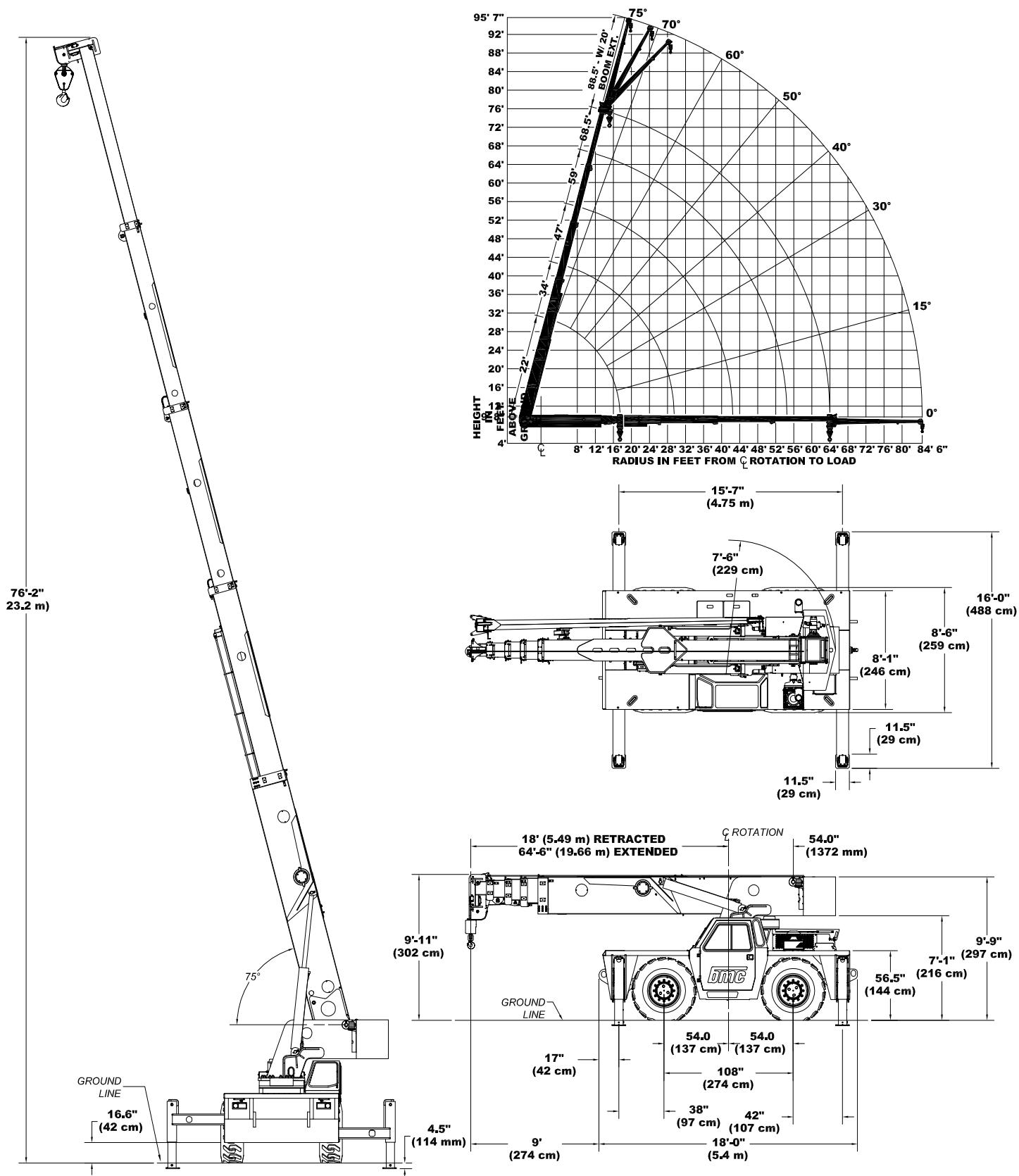
**25-Ton Max. Capacity  
(22,700 kg)**

- Rated Capacity Limiter ... Standard
- Capacity on Outriggers ... 50,000 lbs (22,700 kg)
- Pick and Carry Capacity ... up to 24,400 lbs (11,000 kg)
- Height ... 9' 11" (2.96 m)
- Width ... 8' 6" (2.59 m)
- Boom Rotation ... 360 Degree Continuous
- Sheave Height ... up to 95' 0" (28.96 m)
- Horizontal Reach ... up to 84' 6" (25.76 m)
- Tight Turning Radius
- 4-Wheel Steer ... Standard
- 4-Wheel Drive ... Standard
- Powershift Transmission ... Standard
- Electro-Hydraulic Control of Crane Functions
- Independent Outrigger Controls
- Diesel Engine ... Standard

**BRODERSON**  
*Manufacturing Corp.*



# IC-400-3A



# IC-400-3A

## Specifications

### GENERAL:

<b>Boom Movement:</b>	<b>Rotation</b>	<b>Elevation</b>	<b>Extension</b>
	Continuous	0° to 75°	46' 6" (14.17m)
	0.7 RPM	30 sec.	56 sec.
<b>Boom Speeds:</b>			
<b>Weight:</b>			
Total	54,900 lbs. (24,900kg)		
Front Axle	29,400 lbs. (13,330kg)		
Rear Axle	25,500 lbs. (11,570 kg)		
<b>Gradeability:</b>	70% (34°)		
<b>Turning Radius:</b>	15 Ft. 10 in. (4.83m)		

### ENGINE:

<b>Make</b>	<b>Cummins</b>
<b>Model</b>	QSB4.5 (US EPA Tier 3)
<b>Type</b>	Turbocharged-Diesel, charge air cooled
<b>No. Cyl.</b>	4
<b>Displacement</b>	4.5L
<b>HP @ Gov. Speed</b>	160 H.P.
<b>Fuel Tank Capacity</b>	50 Gallons

### TRANSMISSION:

Powershift transmission with 6-speeds forward & 3-reverse. Provides power shifts at any engine speed in any gear. All shifting is done with a single lever electrical control. Equipped with torque convertor & transmission oil cooler. Torque convertor has stall ratio of 2.640:1.

Forward gear ratios & speeds: Reverse gear ratios & speeds:

Gear	Ratio	Speed (MPH)	Gear	Ratio	Speed (MPH)
1st	8.20	2.7 (4.3km/h)	1st	8.20	2.7 (4.3km/h)
2nd	4.64	4.8 (7.7km/h)	2nd	3.53	6.3 (10.1km/h)
3rd	3.53	6.3 (10.1km/h)	3rd	1.41	15.8 (25.4km/h)
4th	2.00	11.2 (18 km/h)			
5th	1.41	15.8 (25 km/h)			
6th	0.80	23.0 (37 km/h)			

### AXLES:

#### Front Axle:

Planetary drive/steer front axle with 16:42 to 1.0 ratio. Differential equipped with "limited slip" feature. Front axle mounted rigidly to frame.

#### Rear Axle:

Planetary drive/steer axle with 16.42 to 1.0 ratio. Rear axle mounted with rubber elements to allow oscillation.

### STEERING:

Hydraulic steering unit with two cylinders attached to each axle. Allows limited steering when engine is not running. A switch on the control panel is used to select rear-wheel steering, 4-wheel steering or crab steering. Electronic sensors and control box automatically align the steering after a new mode is selected.

### BRAKES:

Service:	4-wheel hydraulic disc-type brakes
Parking:	Spring-applied & hydraulically released disc-type parking brake on transmission.

### TIRES:

17.5 x 25, 20-ply rating, mud lug.

### CHASSIS:

#### CARGO DECK:

74 sq. ft.(6.94m<sup>2</sup>) of deck area. 20,000 lbs. (91,000kg) capacity on deck when load is centered over or between axles.

#### Headlight & Taillight Grilles:

Steel protective grilles for headlights & taillights. Easily removable for replacing bulbs.

#### OUTRIGGERS:

Four hydraulic out & down outriggers of box beam construction with direct-connected holding valves. Independent controls for each outrigger. Outrigger pad dimension 11.5" (29cm) x 11.5" (29cm).

#### ACCESSORY STORAGE BOXES:

One side deck compartment & one front deck compartment, each box has hinged lockable cover.

#### Lifting Rings

Lifting rings at each corner of cargo deck so sling can be attached for lifting crane.

### OPERATOR COMPARTMENT:

Provides one-position access to all chassis & crane functions. Includes adjustable operator's seat, retracting seat belts, fire extinguisher, electronic level gauge & tilt steering wheel.

#### Drum Rotation Indicator:

An indicator lamp on engine display unit flashes as hoist drum rotates.

#### All Weather Cab:

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

#### Air Conditioning:

Provides factory system R134a refrigerant.

#### Electronic Controls:

Dual two-axis joysticks provide control of boom motions and hoist.

### ELECTRICAL:

#### 12 Volt System

#### Lighting Package:

One pair headlights with high & low beams; tail, brake & turn signal lights & back-up lights in rear; turn signals & emergency flasher switch at operator's station.

#### Instrument Package:

Located on the dashboard at the operator's station is the key pad for outrigger operation, an engine display unit, rocker switches for various functions, and indicator lights. Included with the engine display are simulated gages displaying real-time values for engine RPM, battery voltage, engine hours, fuel level, oil pressure, and coolant temperature. Additional warning lamps monitor vitals like engine status, low fuel, low battery, low oil pressure, and high hydraulic fluid temperature.

#### Back-Up Alarm:

Provides pulsating sound from 102dB alarm when transmission is in reverse.

#### Outrigger Alarm System:

Two-tone alarm is activated when "jack down" or "beam out" 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 & shut down the hydraulic system.

### HYDRAULIC SYSTEM:

Triple vane pump, delivers 13, 25 & 40 GPM (53, 106 & 151 L/min) at rated 3,000 PSI (207 bar) and 2,500 RPM engine speed. Hydraulic oil tank capacity of 81 gallons (307 L).

### BOOM ASSEMBLY:

Five-section, high-strength steel construction, equipped with bearing pads for efficient support and extension. Second stage uses a double-acting hydraulic cylinder to telescope sequentially. Double-acting hydraulic cylinder and chain system telescopes boom sections 3, 4, & 5 proportionally. The telescope cylinders and the double-acting boom elevation cylinders are equipped with cylinder-mounted holding valves. Boom angle indicator is on cab side of boom.

#### Boom Rotation:

Heavy-duty ball bearing rotation gear with external teeth. Rotation is powered by hydraulic motor & worm gear drive.

#### Boom Hoist:

Turret-mounted 2-speed planetary gear hoist, is hydraulically powered to provide a low speed bare-drum line pull of 17,850 lbs(8100kg) and a speed of 123 ft/min(37m/min) and a high speed bare-drum line pull of 7,400 lbs(3350kg) and a speed of 300 ft/min(91m/min). Hoist drum is a grooved 10 5/8-inch(270mm) diameter by 17-1/8 in(435mm) long. The hoist includes 370 ft(113m) of 5/8in(16mm) wire rope, cable tensioner, downhaul weight and swivel hook

#### Anti-Two-Block Device:

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

#### Rated Capacity Limiter:

Warns operator of impending overload with audible & 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 also included.

# **IC-400-3A**

## **Options**

**Listed below are brief descriptions of options available for this product.  
Consult the IC-400-3A Engineering Spec for additional information.**

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**MODEL:**  
**IC-400-3A** Industrial Crane

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**ENGINE OPTIONS:**  
**Spark Arrester Muffler**  
Installed in addition to std. muffler.

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**TIRE OPTIONS:**  
**Spare Tire & Wheel**

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**CHASSIS OPTIONS:**  
**Auxiliary Winch**  
Mounted on front outrigger bumper, hydraulically driven with control in operator's console.

**Pintle Hook:**  
**Pintle Hook, Rear**  
**Pintle Hook, Front**

**Rearview Mirrors**  
One mounted on right-hand deck stake and one mounted on left-hand deck stake.

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**OPERATOR COMPARTMENT:**  
**Floor Mat**

Vinyl mat with foam backing.

**Noise Reduction Kit**  
Includes floor mat and side panels of foam backed vinyl for noise reduction.

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

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**ELECTRICAL OPTIONS:**  
**Strobe Lights**  
Yellow strobe light mounted on each side of turret weight box.

**Camera System**  
4-camera video system to assist operator with hard to see viewpoints

**Boom Work Lights**  
One work light mounted to boom to light boom tip and one work light mounted to turret to light ground under boom tip.

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**BOOM ATTACHMENTS:**

**Boom Extension, 20 Ft., Offset**

Boom stowable. Boom extension is offsettable to 3 different positions; 0 degree (in line), 15 degree and 30 degree offset.

Should you require an option or special equipment not listed please consult your dealer salesperson or

***BRODERSON***<sup>®</sup>  
**Manufacturing Corp.**

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

CAPACITIES IN POUNDS FOR OPERATION ON FIRM LEVEL SURFACE																		
LOAD RADIUS FEET	ON OUTRIGGERS										ON RUBBER		LOAD RADIUS FEET					
	OUT & DOWN 360° ROTATION OR IN & DOWN OVER FRONT					IN & DOWN 360° ROTATION					FRONT	360°						
	BOOM RETRACTED 22' BOOM	2ND STAGE OUT- 34' BOOM	47' BOOM	59' BOOM	FULLY EXTENDED 68.5' BOOM	BOOM RETRACTED 22' BOOM	2ND STAGE OUT- 34' BOOM	47' BOOM	59' BOOM	FULLY EXTENDED 68.5' BOOM	ANY BOOM	ANY BOOM						
8	50000	36000	36000			41900	36000	36000			24500	17100	8					
10	42000	36000	35200	34400		27800	26700	26700	28300		20400	13300	10					
12	36000	36000	31900	28100		20400	19300	19300	20700		17300	10600	12					
14	35200	34200	28600	26200	24300	15700	14800	14800	15900	16000	14800	8600	14					
16	30200	29200	25200	22900	21800	12500	11700	11700	12700	12900	12800	7000	16					
18	23600	23600	22300	20800	19800	10100	9400	9400	10400	10600	11200	5700	18					
20		21200	20500	19300	17800		7600	7600	8500	8900	9500	4700	20					
22		19100	18600	17900	16200		6100	6100	7000	7500	7900	3800	22					
24		17200	17200	16300	15000		4900	4900	5900	6400	6700	3100	24					
26		15400	15400	14400	13700		3900	3900	4900	5400	5700	2400	26					
28		13400	13400	13300	12600		3200	3200	4200	4700	4800	2300	28					
30		11800	11700	12200	11600		2600	2600	3400	3900	4200	1400	30					
32			10600	11300	10700			2100	2900	3300	3700	1200	32					
36			8600	9100	9100			1400	2000	2400	2800	800	36					
40			7300	7500	7900			900	1300	1600	2300	---	40					
42			6700	6800	7400			800	1000	1400	2100	---	42					
44				6300	6800				800	1200	1900	---	44					
48				5400	5500				---	700	1500	---	48					
52				4700	4700				---	---	1200	---	52					
54				4400	4400				---	---	1100	---	54					
56					4000					---	1000	---	56					
60					3600					---	---	---	60					
64					3200					---	---	---	64					
68					3100	CAPACITIES ON OUTRIGGERS OUT & DOWN ARE 85% OF TIPPING LOADS. CAPACITIES ON IN & DOWN OUTRIGGERS ARE LESS THAN 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-SPEED ON RUBBER IF CRANE IS NOT IN FULL SPEED.							
72				2800														
76				2400														
80				2100														
84				1900														
BOOM EXT. OFFSET ANGLE	20' BOOM EXTENSION STRUCTURAL CAPACITIES													BOOM EXTENSION NOT LIFT LOADS ON RUBBER.				
	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										

CAPACITIES ON OUTRIGGERS OUT & DOWN ARE 85% OF TIPPING LOADS. CAPACITIES ON IN & DOWN OUTRIGGERS ARE LESS THAN 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.

LOAD RADIUS METERS	ON OUTRIGGERS										ON RUBBER		LOAD RADIUS METERS
	OUT & DOWN 360° ROTATION OR IN & DOWN OVER FRONT					IN & DOWN 360° ROTATION					FRONT	360°	
	BOOM RETRACTED 6.7 m BOOM	2ND STAGE OUT- 10.4 m BOOM	14.3 m BOOM	18.0 m BOOM	FULLY EXTENDED 20.9 m BOOM	BOOM RETRACTED 6.7 m BOOM	2ND STAGE OUT- 10.4 m BOOM	14.3 m BOOM	18.0 m BOOM	FULLY EXTENDED 20.9 m BOOM	ANY BOOM	ANY BOOM	
2.4	22700	16300	16300			19000	16300	16300			11000	7700	2.4
3.0	19300	16300	16000	15600		12900	12400	12300	12800		9300	6100	3.0
3.5	16900	16300	14800	13200		10000	9600	9500	9900		8100	5000	3.5
4.0	16100	15900	13600	12200	9900	7900	7500	7400	8100	7200	7100	4200	4.0
4.5	15100	14600	12400	11300	9500	6500	6100	6000	6600	6700	6300	3500	4.5
5.0	13100	12700	11100	10100	8700	5400	5000	5000	5500	5600	5600	3000	5.0
5.5	10500	10600	10100	9400	8000	4600	4200	4200	4700	4800	5000	2500	5.5
6.0	2100	9700	9400	8800	7400		3500	3500	3900	4100	4400	2100	6.0
7.0	1900	8200	8100	7700	6300		2400	2400	2800	3100	3300	1500	7.0
8.0	1600	6800	6800	6400	5500		1700	1700	2100	2400	2500	1000	8.0
9.0	1500	5400	5400	5600	4800		1200	1200	1600	1800	1900	600	9.0
10.0	1300	1700	4500	4900	4200			800	1100	1400	1500	400	10.0
11.0	1200	1600	3800	4100	3700			600	800	1000	1200	---	11.0
12.0		1500	3300	3400	3300			400	600	700	1000	---	12.0
13.0		1300	2900	3000	2900			---	300	500	800	---	13.0
14.0		1200	1600	2600	2600				---	400	700	---	14.0
15.0		1200	1500	2300	2300				---	---	600	---	15.0
16.0			1400	2100	2000				---	---	500	---	16.0
16.5			1300	2000	1900				---	---	400	---	16.5
17.0			1300	2000	1800					---	400	---	17.0
18.0			1200	1900	1600					---	---	---	18.0
19.0			1200	1700	1400					---	---	---	19.0
19.5				1600	1300					---	---	---	19.5
21.0				1400	1300	CAPACITIES ON OUTRIGGERS OUT & DOWN ARE 85% OF TIPPING LOADS. CAPACITIES ON IN & DOWN OUTRIGGERS ARE LESS THAN 85% OF TIPPING LOADS. CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES BELOW BOLD LINE ARE LIMITED BY TIPPING OR BOOM EXTENSION STRUCTURAL CAPABILITY. OTHER CAPACITIES ARE LIMITED BY STRUCTURAL OR HYDRAULIC CAPABILITY.					DO NOT LIFT LOADS ON BOOM EXTENSION WHEN ON RUBBER OR OVER SIDE ON IN & DOWN OUTRIGGERS.		
22.0			1200	1200									
23.0				1100									
24.0				1000									
25.6				800									
BOOM EXT. OFFSET ANGLE	6.1 m BOOM EXTENSION STRUCTURAL CAPACITIES												
	MAIN BOOM ANGLE												
	0°	15°	30°	40°	50°	60°	70°	75°					
0°	1200	1200	1300	1500	1800	2300	2800	3100					
15°	---	1100	1200	1200	1300	1500	1900	2200					
30°	---	---	1000	1100	1100	1200	1400	1500					

DO NOT LIFT LOADS ON BOOM EXTENSION WHEN ON RUBBER OR OVER SIDE ON IN & DOWN OUTRIGGERS.