



## Upper Structure

### ■ Boom

#### Patented Design

- Boom side plates have diamond shaped impressions for superior strength to weight ratio and 100,000 p.s.i. (689.5 MPa) steel angle chords for lateral stiffness.
- Boom telescope sections are supported by top, bottom and adjustable side wear shoes to prevent metal to metal contact.

#### Boom

- 38 – 115' (11.58 – 35.05 m) four-section full power boom.
- Two mode boom extension
- The basic mode is the full power, synchronized mode of telescoping all sections proportionally to 115' (35.05 m).
- The exclusive "A-max" mode (or mode 'A') extends only the inner mid section to 63' 6" (19.39 m) offering increased capacities for in-close, maximum capacity picks.

#### Boom Head

- Five 16–1/2" (0.42 m) root diameter nylon sheaves with a fifth nylon sheave available to handle up to 10 parts of wire rope.
- Easily removable wire rope guards
- Rope dead end lugs provided on each side of boom head.
- Boom head designed for quick reeve of hook block.
- Fly pinning alignment tool.

#### Boom Elevation

- One Link-Belt designed hydraulic cylinder with holding valve and bushing in each end.
- Hand control for controlling boom elevation from -3° to +78°.

#### Optional Auxiliary Lifting Sheave

- Single 16–1/2" (0.42 m) root diameter nylon sheave with removable wire rope guard, mounted to boom.
- Use with one or two parts of line off the optional front winch.
- Does not affect erection of fly or use of main head sheaves for multiple reeving.

#### Optional

- 70-ton (63.5 mt) quick reeve hook block.
- 8–1/2 ton (7.7 mt) hook ball.
- Boom floodlight.
- Mechanical Boom Angle Indicator

### ■ Fly

#### Optional

- 36' 6" (11.13 m) One piece lattice fly, stowable, offsettable to 2°, 20° and 40°.
- Lugs to allow for second section.
- 36' 6" – 61' (11.13 – 18.59 m) Two piece (bifold) lattice fly, stowable, offsettable to 2°, 20° or 40°.

### ■ Cab and Controls

#### Environmental Ultra-Cab™

- Laminated fibrous composite material; isolated from sound with acoustical fabric insulation.

- Windows are tinted and tempered safety glass.
- Sliding rear and right side windows and swing-up roof window for maximum visibility and ventilation.
- Slide-by-door opens to 3' (0.91 m) width.
- Six-way adjustable seat, with seat belt, for maximum operator comfort.
- Hand-held outrigger controls and sight level bubble located on left side of cab.
- Diesel cab heater
- Pull-out Cabwalk™
- Audible swing alarm
- Backup alarm
- Fire extinguisher
- 12-volt accessory outlet
- Electric windshield wiper
- Windshield washer
- Top hatch window wiper
- Circulating fan
- Warning horn
- Dome light
- Cup holder
- Sun screen
- Hand throttle
- Mirrors
- Defroster fan

#### Optional

- Amber strobe light
- Emergency steering system
- Amber rotating beacon
- Hydraulic heater
- Air conditioning

#### Controls

Hydraulic controls (joystick type) for:

- Swing
- Optional auxiliary winch
- Main winch
- Boom hoist

Foot controls for:

- Boom telescope
- Engine throttle
- Swing brake

#### Optional

- Single axis controls
- Auxiliary winch

#### Cab Instrumentation

Cornerpost-mounted gauges for:

- Hydraulic oil temperature
- Audio/Visual warning system
- Tachometer
- Voltmeter
- Water temperature
- Oil pressure
- Fuel

### ■ Rated Capacity Limiter

- **Microguard 434** Graphic audio-visual warning system built into dash with anti-two block and function limiters.

Operating data available includes:

- Machine configuration.
- Boom length
- Head height
- Allowed load
- % of allowed load
- Boom angle
- Radius of load
- Actual load

Pre-settable alarms include:

- Maximum and minimum boom angles.
- Maximum tip height.
- Maximum boom length.
- Swing left/right positions.
- Operator defined area alarm is standard.
- Anti-two block weight designed for quick reeve of hookblock.

#### Optional

- **Internal RCL light bar:** Visually informs operator when crane is approaching maximum load capacity with a series of green, yellow and red lights.
- **External RCL light bar:** Visually informs ground crew when crane is approaching maximum load capacity kickouts and pre-settable alarms with a series of three lights; green, yellow and red.

### ■ Swing

Bi-directional hydraulic swing motor mounted to a planetary reducer for 360° continuous smooth swing at 1.7 r.p.m.

- **Swing park brake** – 360°, electric over hydraulic (spring applied, hydraulic released) multi-disc brake mounted on the speed reducer. Operated by toggle switch in overhead control console.
- **Swing brake** – 360°, foot operated, hydraulic applied disc brake mounted on the speed reducer.
- **Swing lock** – Standard; two position travel lock operated from the operator's cab.
- **Counterweight**
  - Standard – Pinned to upper structure frame. 12,000 lbs. (5 443 kg) three-piece design (4,000 lbs. each).
  - Optional – 16,000 lbs. (7 258 kg) five piece design. (Dolly required for five piece arrangement).
- Hydraulically controlled counterweight removal, standard. Counterweight sections may be lowered on and pinned to carrier deck to balance axle loadings for travel.

#### Optional

- 360° (Pawl-in-Gear) swing lock. Meets New York City requirements.

### ■ Hydraulic System

#### Main Pump

- Two gear pump with a total of five sections.
- Combined pump capacity of 152 gpm (575 lpm). Powered by carrier engine with pump disconnect.
- Spline type pump disconnect, engaged / disengaged from carrier cab.
- Maximum system operating pressure is 3,500 psi (24 133 kPa).

#### Pilot Pressure / Counterweight Removal Pump

- Pressure compensated piston pump powered by carrier engine with pump disconnect. Operates at 1,500 psi (10 343 kPa) maximum.

#### Steering / Fifth Outrigger Pump

- Single gear type pump, 8 gpm (30 lpm). Powered by carrier engine through front gear housing. Max. pump operating pressure is 2,000 psi (13 790 kPa).
- Reservoir – 169 gallon (639.7 L) capacity. One diffuser for deaeration.

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## Filtration

- One, 10-micron filter located inside hydraulic reservoir
- Accessible for easy replacement

## Control valves

- Six separate pilot operated control valves allow simultaneous operation of all crane functions.

## Load Hoist System

### Standard

- 2M main winch with grooved lagging.
- Two-speed motor and automatic brake.

- Power up/down mode of operation.
- Hoist drum cable followers.
- Bi-directional piston-type hydraulic motor driven through planetary reduction unit for positive control under all load conditions.
- Asynchronous parallel double crossover grooved drums minimize rope harmonic motion.
- Winch circuit control provides balanced oil flow to both winches for smooth, simultaneous operation.
- Rotation resistant wire rope.
- Drum Rotation Indicators.

## Line Pulls and Speeds

- Maximum available line pull 16,506 lbs. (7 484 kg) and maximum line speed of 513 f.p.m. (156 m/min) on 16" (0.41 m) root diameter grooved drum.

## Optional

- 2M auxiliary winch with two-speed motor, automatic brake, and winch function lock-out. Power up/down modes.
- Hoist drum cable followers.
- Third wrap indicators.

## Carrier

### Type

- 8' 6" (2.59 m) wide, 231" (5.87 m) wheel-base. 8 x 4 drive – standard

### Frame

- 100,000 p.s.i. (689.5 MPa) steel, double walled construction with integral 100,000 p.s.i. steel outrigger boxes

### Optional

- Carrier mounted storage boxes
- Pintle hook
- Electric and air connections for trailers and boom dollies

## Axles

### Front

- Tandem, 84.38" (2.14 m) track.

### Rear

- Tandem, 72.8" (1.85 m) track. 6.17 to 1.0 ratio with interaxle differential with lockout.

## Suspension

### Front axle

- Leaf spring suspension

### Rear axle

- Solid mount, bogie beam type

## Wheels

### Standard

- Front and rear hub piloted aluminum disc

### Optional

- Spare tire and wheel assemblies

## Tires

### Standard Front

- 445/65R22.5 (Load range "L") single tubeless radials

### Standard Rear

- 12R22.5 (Load range "L") dual tubeless radials

## Brakes

### Service

- Full air brakes on all wheel ends with automatic slack adjusters. Dual circuit with modulated emergency brakes.
  - Front – 16.5 x 6 S-Cam brakes.
  - Rear – 16.5 x 7 S-Cam brakes.

## Parking/Emergency

- One spring set, air released chamber per rear axle end.
- Parking brake applied with valve mounted on carrier dash.
- Emergency brakes apply automatically when air drops below 40 psi (275.8 kPa) in both systems.

## Steering

- Sheppard rack and pinion design.

## Transmission

**Standard** – Eaton RTO-14709MLL; 11 speeds forward, 3 reverse.

## Electrical

- Four, 12-volt batteries provide 12-volt starting.
- 2,800 cold cranking amps available.
- 12-volt operating system, 130-amp alternator.

## Lights

- Four dual beam sealed headlights.
- Front, side, and rear directional signals.
- Stop, tail and license plate lights.
- Rear and side clearance lights.
- Hazard warning lights.

## Outriggers

- Three position operation capability.
- Four hydraulic, telescoping beam and jack outriggers.
- Vertical jack cylinders equipped with integral holding valve.
- Beams extend to 24' (7.32 m) centerline-to-centerline and retract to within 8' 6" (2.59 m) overall width.
- Equipped with stowable, lightweight 24" (0.61 m) diameter aluminum floats.
- Standard fifth outrigger, 14 3/4" (0.37 m) self storing steel pad is operable from ground or operator's cab.
- Hand-held controls and sight level bubble located on carrier deck.

## Confined Area Lifting Capacities

### (CALC™) System

- The crane is operational in one of the three outriggers positions and operational in confined areas in two positions (intermediate and full retraction).

The three outrigger positions are:

- Full extension – 24' 0" (7.32 m).
- Intermediate position – 14' 7" (4.45 m).
- Full retraction – 7' 9" (2.36 m).
- Capacities are available with the outrigger beams in the intermediate and full retraction positions.
- When the outrigger position levers (located on the outrigger beams) are engaged, the operator can set the crane in the intermediate or full retraction outrigger position without having to leave the cab.

## Carrier Cab

- One-man cab of laminated fibrous composite material acoustical insulation with cloth covering.

## Equipped with:

- Air-ride adjustable operator's seat with seat belt.
- Tilting and locking steering wheel.
- Door and windows locks.
- Left-hand and right-hand rear view mirrors.
- Sliding right-hand and rear tinted windows.
- Roll up/down left-hand tinted window.
- Desiccant-type air dryer.
- Steps to upper, lower cab and rear carrier.
- 120-volt electric engine block heater.
- Back-up warning alarm.
- Tow hooks and shackles.
- Aluminum fenders and mud flaps.
- Carrier mounted outrigger controls with throttle control.
- Electric windshield wiper and washer.
- Rotating beacon
- Horn
- Fire extinguisher
- 36,000 BTU heater
- Dome light
- High beam light switch
- Travel lights
- Mud flaps
- Ashtray
- Defroster
- Cruise control

## Cab instrumentation

- Illuminated instrument panel speedometer.
- Tachometer
- Fuel gauge
- Oil pressure gauge
- Turn signal indicator
- Water temperature gauge.
- Front and rear air pressure gauges.
- Audio/visual warning system.
- Check engine and stop engine lights.
- Automotive type ignition.
- Optional – Amber strobe light.
- Optional – Air conditioning
- Hourmeter
- Fuses
- Odometer
- Voltmeter

## Carrier Speeds *(Manual Transmission – Standard tires)*

Gear	High				Low					Deep reduction		Hi rev.	Lo rev.	Deep reduction	Deep reduction @ 600 rpm	Deep reduction @ 600 rpm	
	8	7	6	5	4	3	2	1	Low	LL2	LL1	Rev.	Rev.	Rev.	LL1	Low	
Ratio	0.73	1.00	1.38	1.95	2.77	3.79	5.23	7.41	16.30	11.85	26.08	4.15	15.76	25.21	26.08	25.21	
Speed	mph	58.20	42.49	30.79	21.79	15.34	11.21	8.12	5.73	2.61	3.59	1.63	10.24	2.70	1.69	0.47	0.48
	km/hr.	93.65	68.36	49.54	35.06	24.68	18.04	13.07	9.23	4.19	5.77	2.62	16.47	4.34	2.71	0.75	0.72

## Engine

Engine	Detroit Diesel Series 60 12.7 L
Cylinders – cycle	6 / 4
Bore	5.12" (0.13 m)
Stroke	6.30" (0.16 m)
Displacement	778 cu. in. (12 751 cm <sup>3</sup> )
Maximum brake hp.	365 @ 1,800 rpm; 350 @ 2,100 rpm
Peak torque	1,350 ft. lbs. (1 831 J) @ 1,200 rpm
Electric system	12-volt neg. ground / 12 volt starting
Fuel capacity	100 gallons (378.5 L)
Alternator	12 volt, 130 amps
Crankcase capacity	32 qts. (30 L)

- Engine brake – standard
- Ether injection starting package – optional

## Axle Loads

Base machine with standard 38.5' – 115' (11.73 – 35.05 m) four-section boom, 2M main winch with 2-speed hoisting and power up/down, 630' (192.02 m), 3/4" (19 mm) wire rope, 8 x 4, 8.5' (2.59 m) carrier with Detroit Diesel Series 60 engine, 100 gal. (378 L) fuel and no counterweight.	G.V.W. <sup>1</sup>		Upper Facing Front			
			Front Axle		Rear Axle	
	lbs.	kg.	lbs.	kg.	lbs.	kg.
	76,118	34 527	34,542	15 668	41,576	18 859
Cold weather starting aids – propane and ether	40	18	57	26	-17	-8
Aluminum storage box	57	26	16	7	41	19
Driver in carrier cab	200	91	254	185	-54	-24
Pintle hook w/air and electrical hook-ups	30	14	-12	-5	42	19
Air conditioning in carrier cab	100	45	127	57	-27	-12
Auxiliary winch with 630' (192.02 m) front rope	855	388	-282	-128	1,137	516
Hydraulic heater	170	77	1	0.5	169	77
Air conditioning in upper cab	120	54	-4	-2	124	56
One slab of counterweight on upper	4,000	1 814	-2,140	-971	6,140	2 785
Two slabs of counterweight on upper	8,000	3 628	-4,281	-1 942	12,281	5 571
Three slabs of counterweight on upper	12,000	5 443	-6,421	-2 913	18,421	8 356
Three slabs of counterweight on upper plus two cheek weights	16,000	7 257	-8,561	-3 883	24,561	11 140
Fly brackets on boom base section for fly options	160	72	147	68	11	5
36.5' (11.13 m) offsettable fly with tip lugs – stowed	1,542	700	1,349	612	193	88
36.5' to 61 ft. (11.13 – 18.59 m) two-piece fly – stowed	2,248	1 020	1,711	776	537	244
40-ton (36.3 mt) hookblock at front bumper	720	327	1,175	533	-455	-206
70-ton (63.5 mt) hookblock at front bumper	1,400	635	2,284	1 036	-884	-401
Hookball to front bumper	360	163	587	266	-227	-103
Auxiliary arm	125	57	230	104	-105	-48

	Front axle		Rear axle	
Transfer one slab of counterweight to carrier deck	5,333	2 419	-5,333	-2 419
Transfer two slabs of counterweight to carrier deck	10,666	4 828	-10,666	-4 838
Transfer three slabs of counterweight to carrier deck	15,999	7 257	-15,999	-7 257

<sup>1</sup> Adjust gross vehicle weight & axle loading according to component weight. Note: All weights are ± 3%.

Axle	Max. Load @ 65 mph. (105 km/h)
Front	46,400 lbs. (21 047 kg) – Aluminum disc wheels with 445/65R22.5 tires
Rear	50,350 lbs. (22 838 kg) – Aluminum disc wheels with 12R22.5 tires

# Lifting Capacities

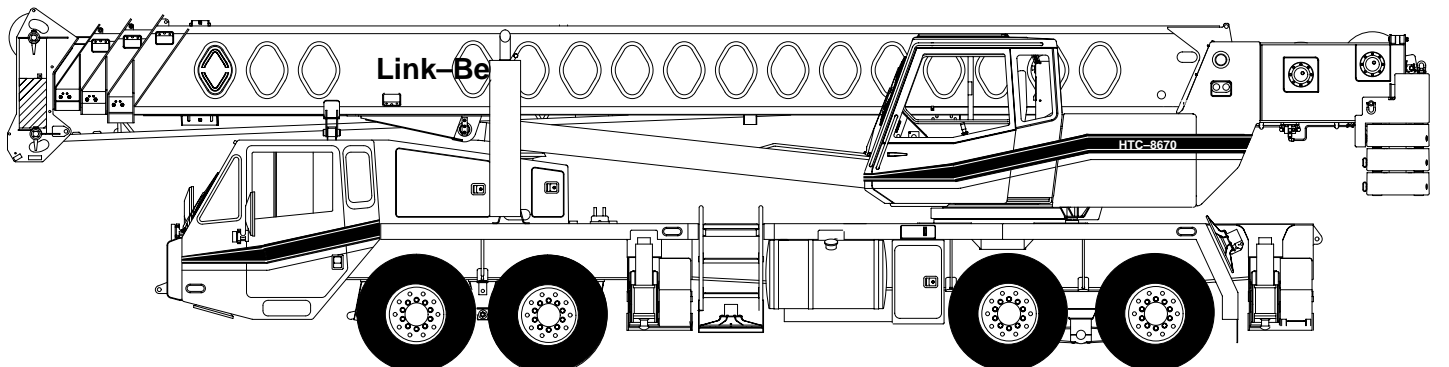
Telescopic Hydraulic Truck Crane

## **HTC-8670**      70-ton (63.5 metric ton)

Boom and fly capacities for this machine are listed by the following sections:

### **Fully Extended Outriggers**

- Working Range Diagram (16,000 lbs. Counterweight)
- 38 to 63.5 ft. (11.58 – 19.39 m) main boom capacities, **A-max** mode
- 38 to 115 ft. (11.58 – 35.05 m) main boom capacities, Basic Mode “B”
- 36.5 (11.13 m) ft. offset fly capacities, Basic Mode “B”
- 36.5 to 61 ft. (11.13 – 18.59 m) two-piece offset fly capacities, Basic mode “B”



**CAUTION:** This material is supplied for reference use only. Operator must refer to in-cab Crane Rating Manual to determine allowable machine lifting capacities and operating procedures.



## WARNING

**READ AND UNDERSTAND THE OPERATOR'S AND SAFETY MANUALS AND THE FOLLOWING INSTRUCTIONS AND RATED LIFTING CAPACITIES BEFORE OPERATING THE CRANE. OPERATION WHICH DOES NOT FOLLOW THESE INSTRUCTIONS MAY RESULT IN AN ACCIDENT.**

## OPERATING INSTRUCTIONS

### GENERAL:

- 1 . Rated lifting capacities in pounds as shown on lift charts pertain to this crane as originally manufactured and normally equipped. Modifications to the crane or use of optional equipment other than that specified can result in a reduction of capacity.
- 2 . Construction equipment can be dangerous if improperly operated or maintained. Operation and maintenance of this crane must be in compliance with the information in the Operator's, Parts, and Safety Manuals supplied with this crane. If these manuals are missing, order replacements through the distributor.
- 3 . The operator and other personnel associated with this crane shall read and fully understand the latest applicable American National Standards (ASME B30.5) safety standards for cranes.
- 4 . The rated lifting capacities are based on crane standing level on firm supporting surface.

### SET UP:

- 1 . The crane shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger pontoons or tires to spread the load to a larger bearing surface.
- 2 . When making lifts on outriggers, all tires must be free of supporting surface. All outrigger beams must be extended to the same length; fully retracted, intermediate extended, or fully extended. The front bumper outrigger must be properly extended.
- 3 . When operating on fully retracted outriggers, do not exceed 64° maximum boom angle with 16,000 lb. counterweight or 71° maximum boom angle with 12,000 lb. counterweight. Loss of backward stability will occur causing a backward tipping condition.
- 4 . When making lifts on tires, they must be inflated to the recommended pressure. (See Operation note 19 and Tire Inflation.)
- 5 . Before swinging boom to over side position on tires, or on fully retracted outriggers where capacities are not published, boom sections must be fully retracted and 45° boom angle maintained.
- 6 . For required parts of line, see Wire Rope Capacity and Winch Performance.
- 7 . Before setting up on intermediate outriggers, retracted outriggers, or tires, refer to Working Range Diagrams and rated lifting capacities to determine allowable crane configurations.

### OPERATION:

- 1 . Rated lifting capacities at rated radius shall not be exceeded. Do not tip the crane to determine allowable loads. For concrete bucket operation, weight of bucket and load shall not exceed 80% of rated lifting capacities. For clamshell bucket operation, weight of bucket and bucket contents is restricted to a maximum weight of 7,000 pounds or 80% of rated lifting capacity, whichever is less. For magnet operation, weight of magnet and load is restricted to a maximum weight of 7,000 pounds or 80% of rated lifting capacity, whichever is less. For clamshell and magnet operation, maximum boom length is restricted to 55 ft. and the boom angle is restricted to a minimum of 35 degrees. Lifts with either fly erected is prohibited for both clam and magnet operation.
- 2 . Rated lifting capacities shown on fully extended outriggers do not exceed 85% of the tipping loads. Rated lifting capacities shown on intermediate extended or fully retracted outriggers are determined by the formula, rated load = (tipping load – 0.1 X load factor)/1.25. Rated lifting capacities shown on tires do not exceed 75% of the tipping loads. Tipping loads are determined by SAE crane stability test code J-765.
- 3 . Rated lifting capacities in the shaded areas above the bold lines, are based on structural strength or hydraulic limitations and have been tested to meet minimum requirements of SAE J-1063 cantilevered boom crane structures— method of test. The rated lifting capacities below the bold lines are based on stability ratings. Some capacities are limited by a maximum obtainable 78° boom angle.
- 4 . Rated lifting capacities include the weight of the hook block, hook ball, slings, bucket, magnet, and auxiliary lifting devices. Their weights must be subtracted from the listed rated capacity to obtain the net load which can be lifted. Rated lifting capacities include the deduct for either fly stowed on the base of the boom. For deducts of either fly erected, but not used, see Capacity Deductions For Auxiliary Load Handling Equipment.
- 5 . Rated lifting capacities are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
- 6 . Rated lifting capacities are for lift crane service only.
- 7 . Do not operate at radii or boom lengths (minimum or maximum) where capacities are not listed. At these positions, the crane can tip or cause boom failure.
- 8 . The maximum loads which can be telescoped are not definable because of variation in loadings and crane maintenance, but it is permissible to attempt retraction and extension within the limits of the applicable load rating chart.
- 9 . For main boom capacities when either boom length or radius or both are between values listed, proceed as follows:
  - a . For boom lengths not listed, use rating for next longer boom length or next shorter boom length, whichever is smaller.
  - b . For load radii not listed, use rating for next larger radius.

- 10 . The user shall operate at reduced ratings to allow for adverse job conditions, such as: soft or uneven ground, out of level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, traveling with loads, electrical wires, etc. Side load on boom or fly is dangerous and shall be avoided.
- 11 . Rated lifting capacities do not account for wind on suspended load or boom. Rated capacities and boom length shall be appropriately reduced as wind velocity approaches or exceeds 20 mph.
- 12 . When making lifts with auxiliary head machinery, the effective length of the boom increases by 2 ft.
- 13 . Power sections of boom must be extended in accordance with boom mode "A" or "B". In boom mode "B" all power sections must be extended or retracted equally.
- 14 . Rated lifting capacities are based on correct reeving. Deduction must be made for excessive reeving. Any reeving over minimum required (see Wire Rope Capacity) is considered excessive and must be accounted for when making lifts. Use working range diagram to estimate the extra feet of rope then deduct 1 lb. for each extra foot of wire rope before attempting to lift a load.
- 15 . The loaded boom angle combined with the boom length give only an approximation of the operating radius. The boom angle, before loading, should be greater to account for deflection. For main boom capacities, the loaded boom angle is for reference only. For fly capacities, the loaded radius is for reference only.
- 16 . For fly capacities with main boom length less than 115 ft. and greater than 95 ft., the rated capacities are determined by the boom angle using the 115 ft. boom and fly chart. For angles not shown use the next lower boom angle to determine the rated capacity.
- 17 . For fly capacities with main boom length less than 95 ft., the rated capacities are determined by the boom angle only using the 95 ft. boom and fly chart. For angles not shown, use the next lower boom angle to determine the rated capacity.
- 18 . The 38 ft. boom length rated lifting capacities are based on boom fully retracted. If the boom is not fully retracted, do not exceed capacities shown for the 45 ft. boom length.
- 19 . Rated lifting capacities on tires depend on tire capacity, condition of tires, and tire air pressure. On tire capacities require lifting from main boom head only on a smooth and level surface. Pick and carry operations are restricted to maximum speed of 1 mph. The boom must be centered over the rear of the crane with two position travel swing lock engaged and the load must be restrained from swinging. For correct tire pressure, see "Tire Inflation".

### **DEFINITIONS:**

- 1 . Load Radius: Horizontal distance from a projection of the axis of rotation to the supporting surface before loading to the center of the vertical hoist line or tackle with load applied.
- 2 . Loaded Boom Angle: The angle between the boom base section and horizontal with freely suspended load at the rated radius.
- 3 . Working Area: Area measured in a circular arc about the center line of rotation as shown on the Working Area Diagram.
- 4 . Freely Suspended Load: Load hanging free with no direct external force applied except by the hoist line.
- 5 . Side Load: Horizontal side force applied to the lifted load either on the ground or in the air.
- 6 . No Load Stability Limit: The radius or boom angle beyond which it is not permitted to position the boom because the crane can overturn without any load on the hook.
- 7 . Load Factor: Load applied at the boom tip which gives the same moment effect as the boom mass.

## BOOM EXTENSION

Boom Mode "A"	Boom Length (ft.)
Only inner mid section telescopes	38
	45
	55
	63.5
Inner Mid Section 308" Stroke	Base Section

Boom Mode "B"	Boom Length (ft.)		
Inner mid, outer mid and tip sections telescope simultaneously.	38		
	45		
	55		
	65		
	75		
	85		
	95		
	105		
	115		
Tip Section 308" Stroke	Outer Mid Section 308" Stroke	Inner Mid Section 308" Stroke	Base Section

## TIRE INFLATION

Tire Size	Operation	Tire Pressure (psi)
12 R 22.5	1 MPH Stationary	120 120

## PONTOON LOADINGS

Maximum Pontoon Load:	Maximum Pontoon Ground Bearing Pressure:
97,400 lbs.	215 psi

## CAPACITY DEDUCTIONS FOR AUXILIARY LOAD HANDLING EQUIPMENT

Load Handling Equipment:	(lbs.)
Auxiliary Head Attached	150
70-ton quick reeve 5 sheave hook block (see hook block for actual weight)	1,400
40-ton quick reeve 4 sheave hook block (see hook block for actual weight)	720
8.5-ton hook ball (see hook ball for actual weight)	360
Lifting From Main Boom With:	(lbs.)
36.5 ft. or 61 ft. fly stowed on base (see operation note 4)	0
36.5 ft. offset fly erected but not used	6,100
61 ft. offset fly erected but not used	7,600
Lifting From 36.5 ft. Offset Fly With:	
24.5 ft. fly tip erected but not used	PROHIBITED
24.5 ft. fly tip stowed on 36.5 ft. offset fly	PROHIBITED
Note: Capacity deductions are for Link-Belt supplied equipment only.	

## WINCH PERFORMANCE

Wire Rope Layer	Winch Line Pulls		Drum Rope Capacity (ft.)	
	Two Speed Winch		Layer	Total
	Low Speed	High Speed		
	Available lbs.*	Available lbs.		
1	16,805	8,290	110	110
2	15,620	7,710	118	228
3	14,590	7,200	126	354
4	13,690	6,760	134	488
5	12,890	6,360	143	631
6	12,190	6,020	151	782

\*Maximum lifting capacity: Type RB Rope = 12,920 Type ZB Rope = 15,600

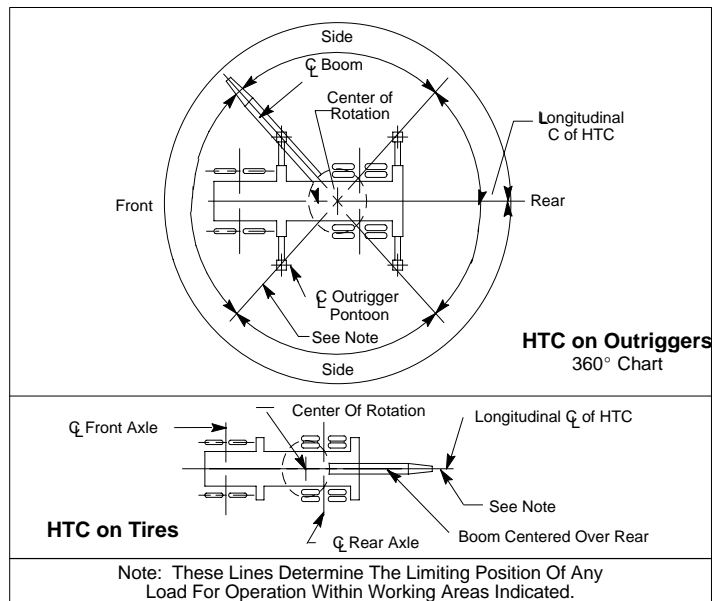
## WIRE ROPE CAPACITY

Maximum Lifting Capacities Based On Wire Rope Strength			
Parts of Line	3/4"		Notes
	Type RB	Type ZB	
1	12,920	15,600	Capacities shown are in pounds and working loads must not exceed the ratings on the capacity charts in the Crane Rating Manual.  Study Operator's Manual for wire rope inspection procedures and single part of line applications.
2	25,840	31,200	
3	38,760	46,800	
4	51,680	62,400	
5	64,600	78,000	
6	77,520	93,600	
7	90,440	109,200	
8	103,360	124,800	
9	116,280	140,400	
10	129,200	156,000	
LBCE		DESCRIPTION	
TYPE RB		18 X 19 Rotation Resistant – Compact Strand, High Strength Preformed, Right Regular Lay	
TYPE ZB		36 X 7 Rotation Resistant – Extra Improved Plow Steel – Right Regular Lay	

## HYDRAULIC CIRCUIT PRESSURE SETTINGS

Function	Pressure (PSI)
Front and Rear Winch	3,500
Outriggers	3,000
Boom Hoist	3,500
Telescope	3,000
Swing	1,500
Steering	1,600
Bumper Outrigger	650
Pilot Control	500
Counterweight Removal	1,700
Swing Park Brake Release	250

## WORKING AREAS

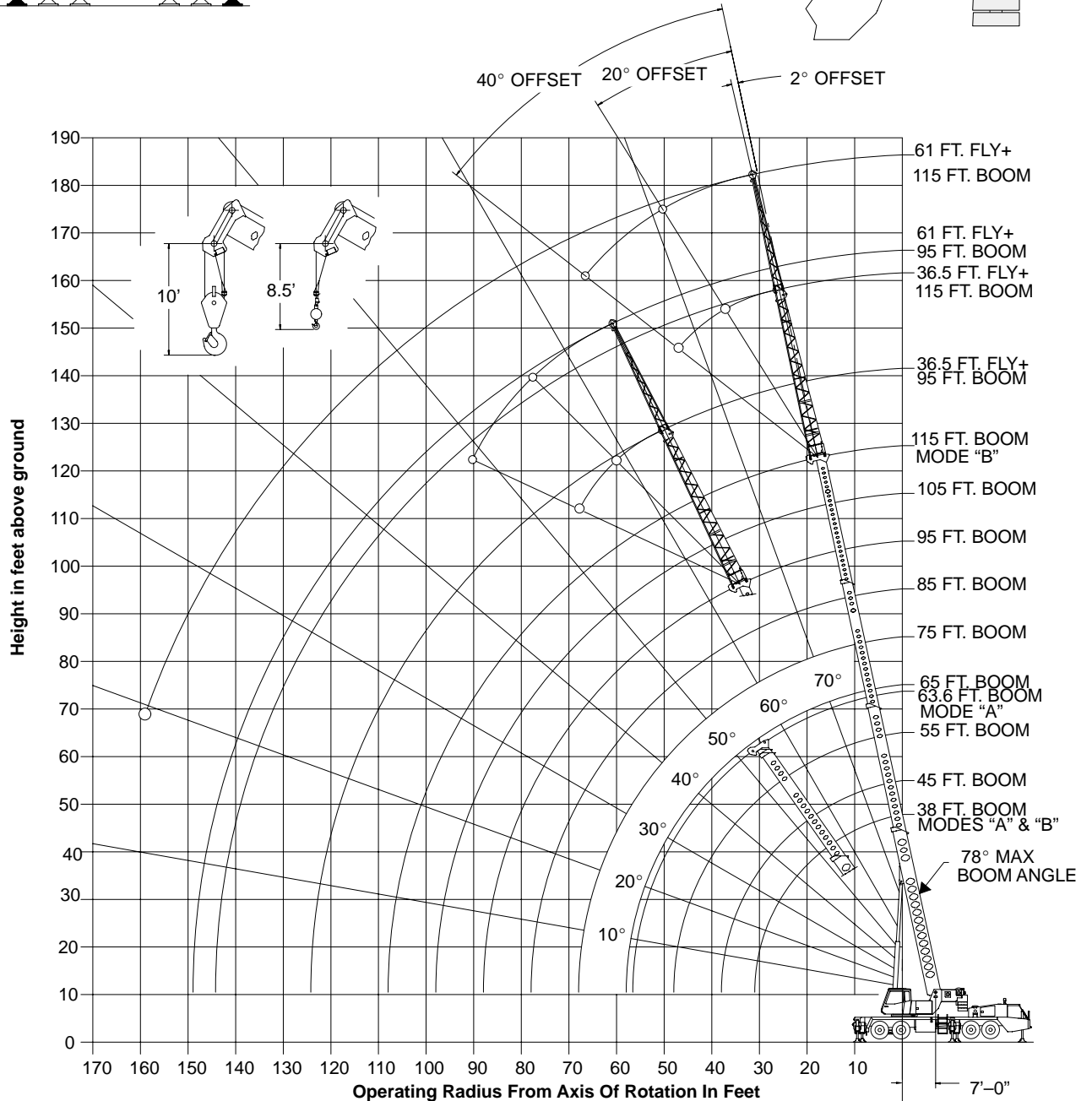
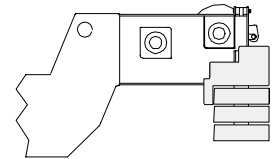
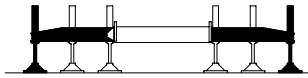




# WORKING RANGE DIAGRAM

Working Range Diagram  
On Fully Extended Outriggers

16,000# Counterweight



○ Denotes Main Boom + 61' Fly—Boom Mode "B"

⊙ OF ROTATION

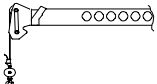
Note: Boom and fly geometry shown are for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.



## WARNING

Do Not Lower The Boom Below The Minimum Boom Angle For No Load As Shown In The Lift Charts For The Boom Lengths Given. Loss Of Stability Will Occur Causing A Tipping Condition.

**Note: Refer To Page 4 For “Capacity Deductions” Caused By Auxiliary Load Handling Equipment.**



**Boom Mode “A”**  
16,000 lbs. Counterweight

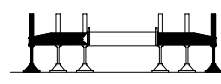


Rated Lifting Capacities In Pounds On Fully Extended Outriggers See Set Up Note 2.

Load Radius (ft)	38 Ft.			45 Ft.		
	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear
9	69.0	140,000	140,000			
10	67.0	132,000	132,000	71.0	87,400	87,400
12	64.0	116,900	116,900	68.5	87,400	87,400
15	58.5	100,200	100,200	64.0	87,400	87,400
20	48.5	75,900	75,900	56.5	75,500	75,500
25	36.5	58,700	58,700	48.0	58,300	58,300
30	17.5	45,400	45,400	38.0	45,100	45,100
35				24.5	34,500	34,500
Min.Bm. Ang./Cap.	0 (31.0)	25,200	25,200	0 (38.0)	20,200	20,200
Load Radius (ft)	55 Ft.			60.3 Ft.		
	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear
10	75.0	85,600	85,600			
12	73.0	85,600	85,600	75.5	56,300	56,300
15	69.5	85,600	85,600	73.0	56,300	56,300
20	64.0	75,000	75,000	68.0	53,000	53,000
25	57.5	57,900	57,900	63.0	44,900	44,900
30	51.0	44,400	44,400	57.5	38,700	38,700
35	43.0	34,100	34,100	51.5	33,700	33,700
40	34.5	27,000	27,000	45.5	26,700	26,700
45	22.0	21,800	21,800	38.0	21,600	21,600
50				29.0	17,700	17,700
55				16.0	14,600	14,600
Min.Bm. Ang./Cap.	0 (48.0)	14,100	14,100	0 (56.6)	10,400	10,400

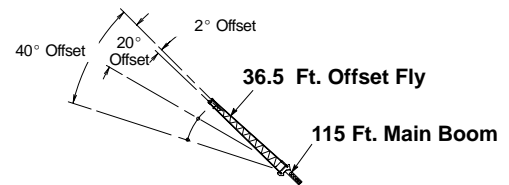
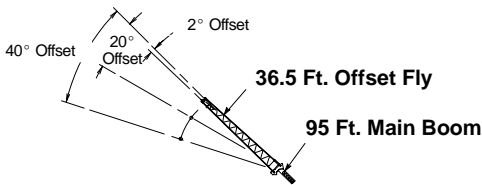


**Boom Mode “B”**  
16,000 lbs. Counterweight



Rated Lifting Capacities In Pounds On Fully Extended Outriggers See Set Up Note 2.

Load Radius (ft)	35.5 Ft.			45 Ft.			55 Ft.		
	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear
9	69.0	140,000	140,000						
10	67.0	132,000	132,000	71.0	42,000	42,000	74.5	42,000	42,000
12	64.0	116,900	116,900	68.0	42,000	42,000	72.5	42,000	42,000
15	58.5	100,200	100,200	64.0	42,000	42,000	69.0	42,000	42,000
20	48.5	75,900	75,900	56.5	42,000	42,000	63.5	42,000	42,000
25	36.5	58,700	58,700	48.0	42,000	42,000	57.5	42,000	42,000
30	17.5	45,400	45,400	38.0	42,000	42,000	50.5	42,000	42,000
35				24.5	35,600	35,600	43.0	36,300	36,300
40							34.0	29,100	29,100
45							22.0	23,800	23,800
Min.Bm. Ang./Cap.	0 (31.0)	25,200	25,200	0 (38.0)	19,200	19,200	0 (48.0)	13,700	13,700
Load Radius (ft)	65 Ft.			75 Ft.			85 Ft.		
	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear
12	75.5	42,000	42,000						
15	73.0	42,000	42,000	75.5	42,000	42,000	77.5	42,000	42,000
20	68.0	42,000	42,000	71.5	42,000	42,000	74.5	42,000	42,000
25	63.5	42,000	42,000	68.0	42,000	42,000	71.0	41,800	41,800
30	58.0	42,000	42,000	63.5	42,000	42,000	67.0	36,900	36,900
35	52.5	36,600	36,600	59.0	36,800	36,800	63.5	32,900	32,900
40	46.5	29,400	29,400	54.0	29,600	29,600	59.5	29,700	29,700
45	39.5	24,300	24,300	49.0	24,500	24,500	55.0	24,600	24,600
50	31.5	20,300	20,300	43.0	20,600	20,600	50.5	20,700	20,700
55	20.0	17,200	17,200	37.0	17,500	17,500	46.0	17,600	17,600
60				29.5	15,000	15,000	40.5	15,100	15,100
65				19.0	12,900	12,900	34.5	13,100	13,100
70							27.5	11,400	11,400
75							18.0	9,900	9,900
Min.Bm. Ang./Cap.	0 (58.0)	10,100	10,100	0 (68.0)	7,600	7,600	0 (78.0)	5,700	5,700
Load Radius (ft)	95 Ft.			105 Ft.			115 Ft.		
	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear
20	76.5	38,600	38,600						
25	73.5	33,800	33,800	75.5	30,300	30,300	77.0	24,500	24,500
30	70.0	29,800	29,800	72.5	27,000	27,000	74.5	24,500	24,500
35	67.0	26,600	26,600	69.5	24,100	24,100	72.0	22,200	22,200
40	63.5	23,900	23,900	66.5	21,700	21,700	69.5	20,000	20,000
45	60.0	21,700	21,700	63.5	19,600	19,600	66.5	18,100	18,100
50	56.0	19,800	19,800	60.5	17,900	17,900	63.5	16,300	16,300
55	52.5	17,700	17,700	57.0	16,200	16,200	61.0	14,900	14,900
60	48.0	15,200	15,200	53.5	14,900	14,900	58.0	13,600	13,600
65	43.5	13,200	13,200	50.0	13,300	13,300	54.5	12,500	12,500
70	38.5	11,600	11,600	46.0	11,600	11,600	51.5	11,600	11,600
75	33.0	10,100	10,100	41.5	10,200	10,200	48.0	10,300	10,300
80	26.5	8,800	8,800	37.0	8,900	8,900	44.0	9,000	9,000
85	17.0	7,700	7,700	31.5	7,800	7,900	40.0	7,800	7,900
90				25.5	6,800	6,900	35.5	6,900	7,000
95				16.5	5,900	6,000	30.5	6,000	6,100
100							24.5	5,200	5,400
105							16.0	4,600	4,700
Min.Bm. Ang./Cap.	0 (88.0)	4,300	4,300	0 (98.0)	3,100	3,100	0 (108.0)	2,200	2,200



**Boom Mode "B"**  
16,000 lbs. Counterweight

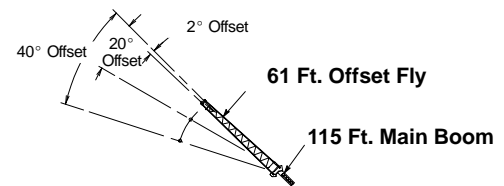
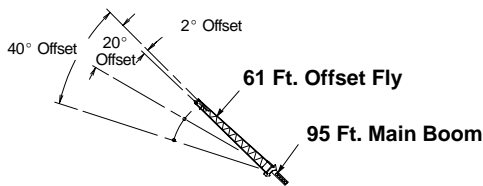
Rated Lifting Capacities In Pounds On Fully Extended Outriggers See Set Up Note 2.

Load Radius (ft)	2° Offset		20° Offset		40° Offset	
	Loaded Boom Angle (Deg.)	360°	Loaded Boom Angle (Deg.)	360°	Loaded Boom Angle (Deg.)	360°
30	76.5	16,900				
35	74.0	14,400				
40	72.0	13,700	76.5	10,200		
45	69.5	13,100	74.5	9,600		
50	67.5	12,400	72.0	9,100	76.5	6,800
55	65.0	11,800	69.5	8,700	74.0	6,800
60	62.5	11,200	67.0	8,300	71.5	6,600
65	60.0	10,500	64.5	7,900	68.5	6,400
70	57.5	9,800	62.0	7,600	66.0	6,300
75	55.0	9,300	59.5	7,300	63.0	6,100
80	52.0	8,700	56.5	7,000	60.0	6,000
85	49.0	8,300	53.5	6,700	57.0	5,900
90	46.0	7,800	50.5	6,500	53.5	5,800
95	42.5	7,200	47.0	6,300	50.0	5,700
100	39.0	6,500	43.5	6,100	46.0	5,700
105	35.0	5,800	39.5	6,000	41.5	5,700
110	30.5	5,100	35.0	5,400		
115	25.0	4,600	29.5	4,800		
120	18.5	4,100	22.0	4,200		
Min.Bm. Ang./Cap.	0	1,600	0	1,700	0	1,900

**Boom Mode "B"**  
16,000 lbs. Counterweight

Rated Lifting Capacities In Pounds On Fully Extended Outriggers See Set Up Note 2.

Load Radius (ft)	2° Offset		20° Offset		40° Offset	
	Loaded-Boom-Angle (Deg.)	360°	Loaded Boom Angle (Deg.)	360°	Loaded Boom Angle (Deg.)	360°
35	76.5	10,500				
40	75.0	10,500				
45	73.0	10,500	77.5	9,200		
50	71.5	10,500	75.5	8,900		
55	69.5	10,500	73.5	8,600	77.5	6,800
60	68.0	10,500	71.5	8,200	75.0	6,600
65	66.0	10,200	69.5	8,000	73.0	6,500
70	63.5	9,500	67.5	7,700	71.0	6,300
75	61.5	8,700	65.5	7,400	68.5	6,200
80	59.0	8,000	63.5	7,200	66.5	6,100
85	57.0	7,400	61.0	7,000	64.0	6,000
90	54.5	6,900	58.5	6,800	61.5	5,900
95	52.0	6,400	56.0	6,500	59.0	5,800
100	49.0	5,900	53.5	6,100	56.5	5,700
105	46.5	5,500	50.5	5,600	53.5	5,700
110	43.5	4,900	48.0	5,200	50.5	5,400
115	40.5	4,300	44.5	4,700	47.0	4,900
120	37.0	3,800	41.0	4,100	43.0	4,300
125	33.0	3,300	37.0	3,600		
130	29.0	2,900	32.5	3,100		
135	24.0	2,500	27.5	2,700		
140	17.5	2,200	20.5	2,300		
Min.Bm. Ang./Cap.	0	400	0	400	0	500



**Boom Mode "B"**  
16,000 lbs. Counterweight

Rated Lifting Capacities In Pounds On Fully Extended Outriggers See Set Up Note 2.

Load Radius (ft)	2° Offset		20° Offset		40° Offset	
	Loaded Boom Angle (Deg.)	360°	Loaded Boom Angle (Deg.)	360°	Loaded Boom Angle (Deg.)	360°
35	77.5	9,500				
40	75.5	9,100				
45	74.0	8,500				
50	72.0	7,900				
55	70.0	7,400	77.0	5,200		
60	68.0	6,900	75.0	4,900		
65	66.0	6,400	73.0	4,600		
70	64.0	6,000	71.0	4,400	77.5	3,400
75	62.0	5,600	69.0	4,200	75.0	3,300
80	60.0	5,300	66.5	4,000	73.0	3,200
85	57.5	5,000	64.5	3,900	70.5	3,100
90	55.5	4,700	62.5	3,700	68.0	3,100
95	53.0	4,500	60.0	3,600	65.5	3,000
100	50.5	4,200	57.5	3,400	63.0	2,900
105	48.0	4,000	55.0	3,300	60.0	2,900
110	45.5	3,800	52.0	3,200	57.5	2,800
115	43.0	3,600	49.5	3,100	54.0	2,800
120	40.0	3,500	46.5	3,000	50.5	2,800
125	36.5	3,300	43.0	2,900	47.0	2,800
130	33.0	3,200	39.5	2,900	42.5	2,800
135	29.0	3,100	35.0	2,800		
140	24.5	3,000	30.0	2,800		
145	18.0	2,700	22.5	2,800		
Min.Bm. Ang./Cap.	0	700	0	800	0	1,000

**Boom Mode "B"**  
16,000 lbs. Counterweight

Rated Lifting Capacities In Pounds On Fully Extended Outriggers See Set Up Note 2.

Load Radius (ft)	2° Offset		20° Offset		40° Offset	
	Loaded Boom Angle (Deg.)	360°	Loaded Boom Angle (Deg.)	360°	Loaded Boom Angle (Deg.)	360°
40	77.5	7,100				
45	76.5	7,100				
50	75.0	7,100				
55	73.5	7,000				
60	72.0	6,700	78.0°	4,900		
65	70.0	6,400	76.0	4,700		
70	68.5	6,200	74.5	4,500		
75	67.0	5,900	73.0	4,300		
80	65.0	5,600	71.0	4,200	76.5	3,300
85	63.5	5,300	69.0	4,000	74.5	3,200
90	61.5	5,100	67.5	3,900	72.5	3,100
95	59.5	4,800	65.5	3,700	70.5	3,000
100	57.5	4,600	63.5	3,600	68.5	3,000
105	55.5	4,400	61.5	3,500	66.5	2,900
110	53.5	4,200	59.5	3,400	64.0	2,900
115	51.5	4,000	57.0	3,300	62.0	2,800
120	49.0	3,800	55.0	3,200	59.5	2,800
125	46.5	3,400	52.5	3,100	57.0	2,800
130	44.0	3,100	50.0	3,000	54.0	2,700
135	41.5	2,900	47.5	2,900	51.0	2,700
140	38.5	2,600	44.5	2,800	48.0	2,700
145	35.5	2,300	41.5	2,500	44.0	2,700
150	32.0	2,000	38.0	2,300		
155	28.0	1,700	33.5	2,000		
160	23.5	1,400	28.5	1,600		

**WARNING**

Do Not Lower 61 Ft. Offset Fly In Working Position Below 20 Degrees Unless Main Boom Length Is 108 Ft. Or Less, Since Loss Of Stability Will Occur Causing A Tipping Condition.

