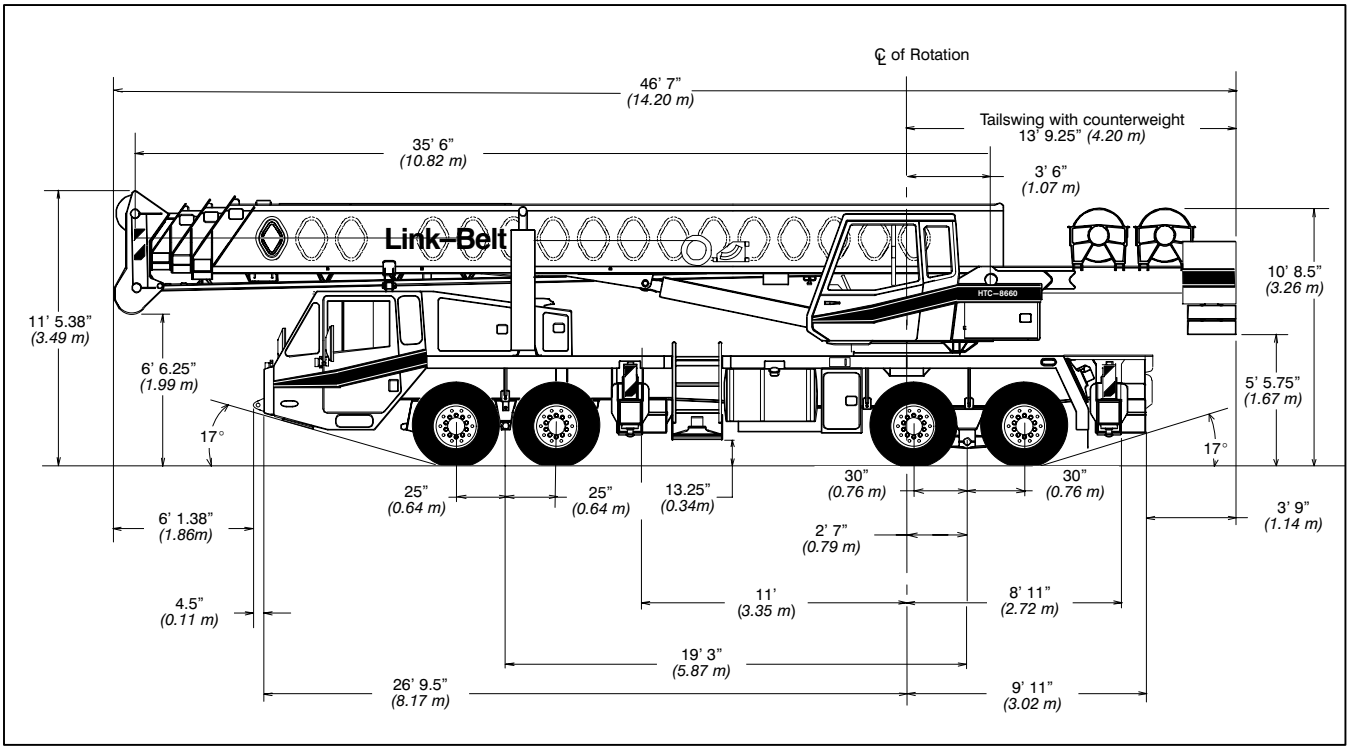
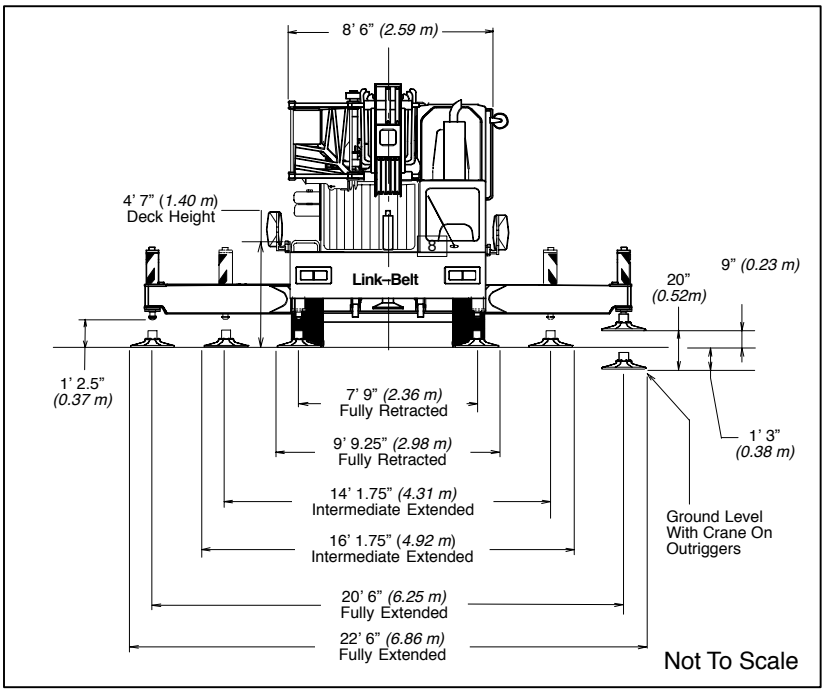
Specifications

Telescopic Boom Truck Crane

HTC–8660

60–ton *(54.43 metric tons)*





General Dimensions	feet	*meters*
Turning radius – wall to wall	49' 9.56"	*15.17*
Turning radius – curb to curb	41' 10.5"	*12.76*
Ground clearance	13.25"	*0.34*
Tailswing	13' 9.25"	*4.20*

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

- 35.5' – 110' *(10.82 – 33.53 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 110' *(33.53 m)*.
- The exclusive "***A–max***" mode (or mode 'A') extends only the inner mid section to 60.3' *(18.38 m)* offering increased capacities for in–close, maximum capacity picks.
- Mechanical Boom Angle Indicator

Boom Head

- Five 16.5" *(0.42 m)* root diameter nylon sheaves to handle up to ten 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.

Boom Elevation

- Two Link–Belt designed hydraulic cylinders with holding valves and bushings in each end.
- Hand control for controlling boom elevation from –3° to +78°

Optional Auxiliary Lifting Sheave

- Single 16.5" *(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

- 40–ton *(36.3 mt)* quick–reeve hook block
- 60–ton *(54.43 mt)* quick–reeve hook block
- 70–ton *(63.30 mt)* quick–reeve hook block
- 8.5–ton *(7.71 mt)* hook ball
- Boom floodlight.

■ Fly

Optional

- 34' *(10.36 m)* one–piece lattice fly, stowable, offsettable to 2°, 20° and 40°
- 34' – 56' *(10.36 – 17.07 m)* two–piece (bi-fold) lattice fly, stowable, offsettable to 2°, 20° and 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 in cab.
- Diesel cab heater
- Top hatch window wiper
- Audible swing alarm
- Fire extinguisher
- Sun screen
- Electric windshield wiper
- Windshield washer
- Cab work lights
- Pull–out Cabwalk™
- Circulating fan
- Warning horn
- Cup holder
- Backup alarm
- Hand throttle
- Mirrors
- Defroster fan

Optional

- Amber strobe light
- Third wrap indicator
- Amber rotating beacon
- Hydraulic heater
- RCL light bar
- 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

- Auxiliary winch
- Single axis controls

Cab Instrumentation

Cornerpost–mounted gauges for:

- Hydraulic oil temperature
- Audio/Visual warning system
- Check and stop engine indicator lights
- 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

Presettable 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 presettable 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 2.1 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 (pin device) operated from the operator's cab.
- **Counterweight**
  - Standard – Pinned to upper structure frame. 12,000 lbs. *(5 443 kg)* three–piece design. Consist of one 6,000 lbs. *(2 722 kg)* piece bolted to upper structure and two 3,000 lbs. *(1 361 kg)* pieces pinned to standard counterweight.
  - Two counterweight sections can be hydraulically lowered on, and pinned to carrier deck to balance axle loadings for travel.
- **Optional**
  - 360° swing lock. Meets New York City requirements.

■ Hydraulic System

Main Pump

- One gear pump with a total of four sections.
- Combined pump capacity of 176 gpm *(666 lpm)*.
- Powered by carrier engine with pump disconnect.
- Rocker switch controlled, air applied pump disconnect engaged / disengaged from carrier cab.
- Maximum system operating pressure is 3,000 psi *(20 685 kPa)*.
- O–ring face seals technology used throughout with hydraulic oil cooler standard.

Pilot Pressure / Counterweight Removal Pump

- Pressure compensated piston pump powered by carrier engine. Maximum pump operating pressure is 1,500 psi *(10 342 kPa)*.

Steering / Fifth Outrigger Pump

- Single gear type pump, 8 gpm *(30 lpm)*. Powered by carrier engine through front gear housing.
- Maximum pump operating pressure is 2,000 psi *(13 790 kPa)*

Reservoir

- 169 gallon *(639.7 L)* capacity. One diffuser for deaeration.

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
- Bi–directional gear–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.
- Pressure compensated winch circuit 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 16,438 lbs. *(7 454 kg)* and maximum line speed of 463 f.p.m. *(141 m/min)* on 16" *(0.41 m)* root diameter grooved drum.

Optional
- 2M auxiliary winch with two–speed motor, automatic brake, and winch function lockout. Power up/down modes.
- Third wrap indicators

Carrier

■ Type
- 8' 6" *(2.59 m)* wide, 231" *(5.87 m)* wheelbase. 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
- Air–ride, bogie beam type, suspension.

■ Wheels

Standard
- Hub piloted aluminum disc

Optional
- Hub piloted aluminum disc
- Spare tire and wheel assemblies

■ Tires

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

Standard Rear
- 12R22.5 (Load range "H") rib type, dual tubeless radials

■ Brakes

Service
- Full air brakes on all wheel ends with automatic slack adjustors. 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–14909ALL; 11 speeds forward, 3 reverse with Series 60 engine

■ Electrical
- Two 12–volt batteries provide 12–volt starting. 130–amp alternator
- 2,800 cold cranking amps available
- 12–volt operating system

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 20' 6" *(6.25 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 in operators cab and 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 – 20' 6" *(6.25 m)*
- Intermediate position – 14' 1.75" *(4.31 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, six–way adjustable operator's seat.
- Four–way adjustable tilting and lockable 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
- 110–volt electric engine block heater
- Back–up warning alarm
- Tow hooks and shackles
- Aluminum fenders with ground control outriggers.
- Electric windshield wiper and washer.
- Travel lights
- Fire extinguisher
- 36,000 BTU heater
- Dome light
- Mud flaps
- Horn
- Ashtray
- Defroster
- Cruise control

Optional
- Air conditioning
- Amber strobe light
- Rotating beacon

Cab instrumentation
- Illuminated instrument panel speedometer.
- Tachometer
- Fuel gauge
- Oil pressure gauge
- Turn signal indicator
- Hourmeter
- Fuses
- Odometer
- Voltmeter
- Water temperature gauge
- Front and rear air pressure gauges
- Audio/visual warning system
- Automotive type ignition

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CONSTRUCTION EQUIPMENT

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

Gear		High				Low					Deep reduction		Hi rev.	Lo rev.	Deep reduction	Deep reduction @ 700 rpm	Deep reduction @ 700 rpm
		8	7	6	5	4	3	2	1	Low	LL2	LL1	Rev	Rev	Rev.	LL1	Rev
Ratio		0.73	1.00	1.38	1.95	2.77	3.79	5.23	7.41	16.30	11.85	26.08	3.43	13.03	20.85	26.08	20.85
Speed	mph	58.20	42.49	30.79	21.79	15.34	11.21	8.12	5.73	2.61	3.59	1.63	12.13	3.19	1.89	0.55	0.66
	km/hr.	*93.65*	*68.36*	*49.54*	*35.06*	*24.68*	*18.04*	*13.07*	*9.23*	*4.19*	*5.77*	*2.62*	*19.52*	*5.13*	*3.20*	*0.88*	*1.06*

■ Engine

Engine – standard	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^3)*
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 35.5' – 110' *(10.82 – 33.53 m)* four–section boom, 2M main winch with 2–speed hoisting and power up/down, 600' *(182.88 m)*, 3/4" *(19 mm)* wire rope, 8 x 4, 8.5' *(2.59 m)* carrier with Detroit Diesel Series 60 12.7 L engine, 100 gal. *(378.5 L)* fuel, aluminum fenders and 12,000 lb. *(5 443 kg.)* counterweight.	G.V.W. [1]		Upper Facing Front			
			Front Axle		Rear Axle	
	lbs.	*kg.*	lbs.	*kg.*	lbs.	*kg.*
	82,052	*37 218*	28,742	*13 037*	53,310	*24 181*
Carrier aluminum storage box	**57**	***26***	**16**	***7***	**41**	***19***
Engine block heater – propane	83	*38*	105	*48*	–22	*–10*
Ether injection	6	*3*	6	*3*	0	*0*
Air conditioning – Carrier cab	124	*56*	158	*71*	–34	*–15*
Pintle hook	25	*11*	–10	*–5*	35	*16*
Electrical and air electrical hook–ups for dolly or trailer	7	*3*	0	*0*	7	*3*
Driver in carrier cab	200	*91*	252	*114*	–52	*–23*
Cab heater assembly (hydraulic)	**129**	***59***	**2**	***1***	**127**	***57***
Cab air conditioning	264	*120*	2	*1*	262	*119*
Remove one slab of counterweight on upper	**–3,000**	***–1 361***	**1,572**	***713***	**–4,572**	***–2 074***
Remove two slabs of counterweight on upper	–6,000	*–2 722*	3,143	*1 425*	–9,143	*–4 147*
Rear winch roller	93	*42*	–44	*–20*	137	*62*
Winch with two speeds and 600' *(182.88 m)* of wire rope	712	*323*	–197	*–89*	909	*412*
Front winch roller	93	*42*	–31	*–14*	124	*56*
Remove 600' *(182.88 m)* of rope from rear winch	–660	*–299*	279	*127*	–939	*–426*
Remove 600' *(182.88 m)* of rope from front winch	–660	*–299*	185	*84*	–845	*–383*
Boom float kit	56	*25*	14	*6*	42	*19*
Add fly brackets to boom base section fly options	160	*73*	141	*64*	19	*9*
Add 34' *(10.36 m)* offsettable fly w/ATB weight (stowed)	**1,478**	***670***	**1,456**	***660***	**22**	***10***
Add 34' – 56' *(10.36 – 17.07 m)* offsettable fly w/ATB weight (stowed)	2,134	*968*	1,857	*842*	277	*126*
Add floodlight to front of boom base section	10	*5*	16	*7*	–6	*–2*
Add 40–ton *(36.43 mt)* hookblock stowed behind bumper (4–sheaves)	720	*327*	1,201	*545*	–481	*–218*
Add 60–ton *(54.43 mt)* hookblock stowed behind bumper (5–sheaves)	1,109	*503*	1,850	*839*	–741	*–336*
Hookball to front bumper	360	*163*	600	*272*	–240	*–109*
Auxiliary arm w/ATB switch to boomhead	95	*43*	178	*81*	–83	*–38*
			Front Axle		**Rear Axle**	
Transfer one slab of counterweight to carrier deck			3,948	*1 791*	–3,948	*–1 791*
Transfer two slabs of counterweight to carrier deck			7,896	*3 582*	–7,896	*–3 582*

[1] 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

Link–Belt Construction Equipment Company Lexington, Kentucky www.linkbelt.com

Lifting Capacities

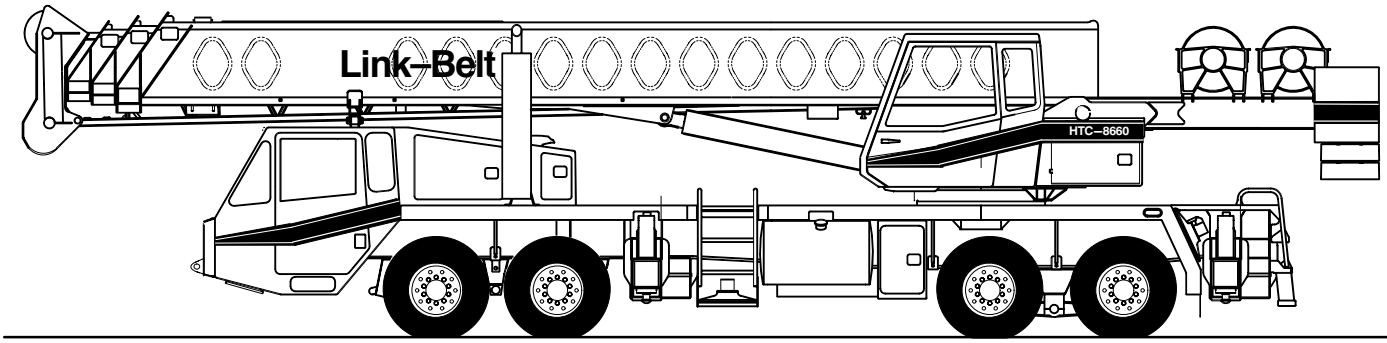
Telescopic Hydraulic Truck Crane

HTC–8660 **60–ton** *(54.43 metric ton)*

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

Fully Extended Outriggers

- Working Range Diagram (12,000 lbs. Counterweight)
- 35.5 to 60.3 ft. *(10.82 – 18.38 m)* main boom capacities, ***A–max*** mode
- 35.5 to 110 ft. *(10.82 – 33.53 m)* main boom capacities, Basic Mode “B”
- 34 *(10.36 m)* ft. offset fly capacities, Basic Mode “B”
- 34 to 56 ft. *(10.36 – 33.53 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 70° 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 20 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. When installing or removing counterweights, crane must be on fully extended outriggers and boom fully retracted. Do not exceed a 30 ft. radius when moving counterweights.
8. 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 . The least stable rated working area depends on the configuration of the crane set up.
15 . 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.
16 . 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.
17 . For fly capacities with main boom length less than 110 ft. and greater than 85 ft., the rated capacities are determined by the boom angle using the 110 ft. boom and fly chart. For angles not shown use the next lower boom angle to determine the rated capacity.
18 . For fly capacities with main boom length less than 85 ft., the rated capacities are determined by the boom angle only using the 85 ft. boom and fly chart. For angles not shown, use the next lower boom angle to determine the rated capacity.
19 . The 35.5 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.
20 . 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:

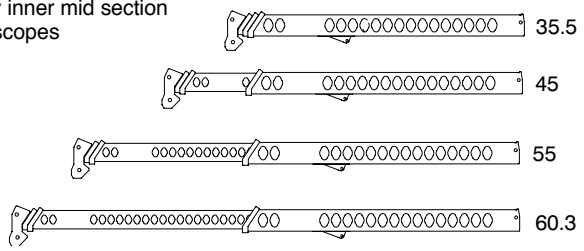
1 . Load Radius: Horizontal distance from a projection of the axis of rotation to the supporting surface before loading to the center of the vertical hoist line or tackle with load applied.
2 . Loaded Boom Angle: The angle between the boom base section and horizontal with freely suspended load at the 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.

Link-Belt
CONSTRUCTION EQUIPMENT

BOOM EXTENSION

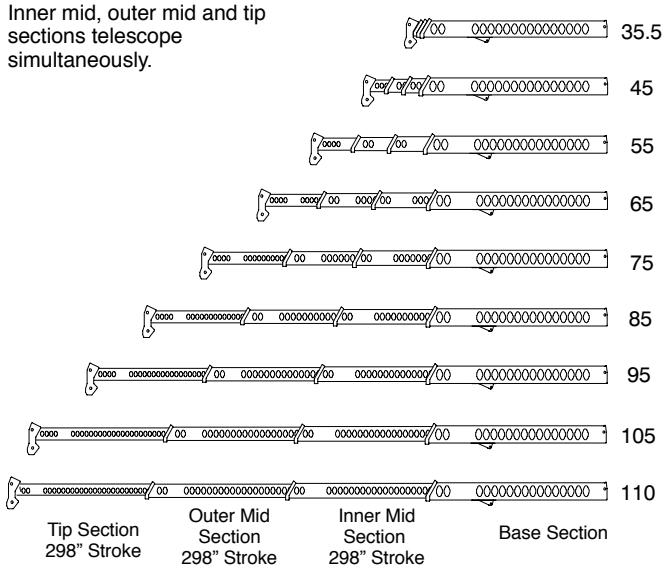
Boom Mode "A"
Only inner mid section telescopes

Boom Length (ft.)



Boom Mode "B"
Inner mid, outer mid and tip sections telescope simultaneously.

Boom Length (ft.)



TIRE INFLATION

Tire Size	Operation	Tire Pressure (psi)
12 R 22.5	1 MPH Stationary	120 120
295/80 R 22.5	1 MPH Stationary	110 110

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	100
40–ton quick reeve 4 sheave hook block (see hook block for actual weight)	720
60–ton quick reeve 4 sheave hook block (see hook block for actual weight)	1,100
70–ton quick reeve 5 sheave hook block (see hook block for actual weight)	1,400
8.5–ton hook ball (see hook ball for actual weight)	360
Lifting From Main Boom With:	**(lbs.)**
34 ft. or 56 ft. fly stowed on base (see operation note 4)	0
34 ft. offset fly erected but not used	4,200
56 ft. offset fly erected but not used	7,300
Lifting From 28.5 ft. Offset Fly With:	
22 ft. fly tip erected but not used	**PROHIBITED**
22 ft. fly tip stowed on 28.5 ft. offset fly	**PROHIBITED**

Note: Capacity deductions are for Link–Belt supplied equipment only.

WINCH PERFORMANCE

Wire Rope Layer	Winch Line Pulls: Two Speed Winch, Low Speed, Available Lbs.*	Winch Line Pulls: Two Speed Winch, High Speed, Available lbs.	Drum Rope Capacity (ft.): Layer	Drum Rope Capacity (ft.): Total
1	16,407	7,793	110	110
2	15,085	7,165	119	229
3	13,959	6,631	129	358
4	12,990	6,170	138	496
5	12,147	5,770	148	644
6	N/A	N/A	158	802

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

WIRE ROPE CAPACITY

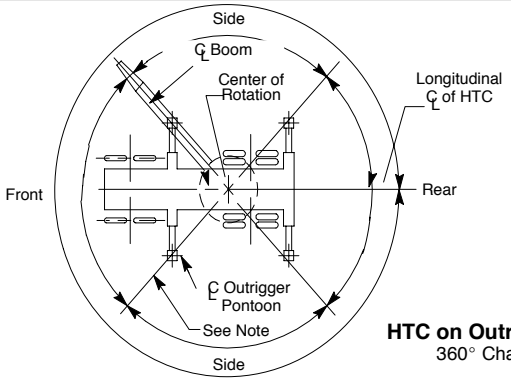
Maximum Lifting Capacities Based On Wire Rope Strength			
Parts of Line	3/4" Type RB	3/4" Type ZB	Notes
1	12,920	15,600	Capacities shown are in pounds and working loads must not exceed the ratings on the capacity charts in the Crane Rating Manual. Study Operator's Manual for wire rope inspection procedures and single part of line applications.
2	25,840	31,200	
3	38,760	46,800	
4	51,680	62,400	
5	64,600	79,000	
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

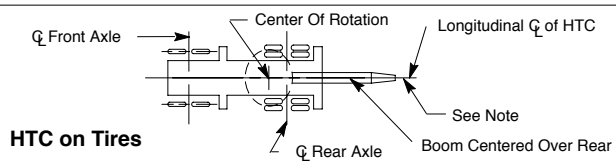
HYDRAULIC CIRCUIT PRESSURE SETTINGS

Function	Pressure (PSI)
Front And Rear Winch	2,750
Outriggers	3,000
Boom Hoist	2,900
Telescope	3,000
Swing	1,500
Steering	2,000
Bumper Outrigger	650
Pilot Control	500
Counterweight Removal	1,500

WORKING AREAS



HTC on Outriggers
360° Chart

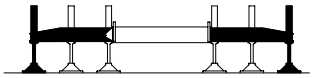


HTC on Tires

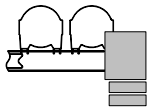
Note: These Lines Determine The Limiting Position Of Any Load For Operation Within Working Areas Indicated.

WORKING RANGE DIAGRAM

Working Range Diagram
On Fully Extended Outriggers



12,000# Counterweight



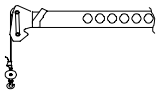
○ **Denotes Main Boom + 56' Fly–Boom Mode "B"**
□ **Denotes Main Boom + 34' Fly–Boom Mode "B"**
△ **Denotes Main Boom – Boom Mode "B"**

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.

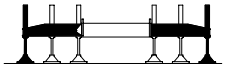
⚠ WARNING

Do Not Lower The Boom Below The Minimum Boom Angle For No Load Stability 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.



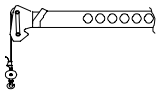
Boom Mode "A"
12,000 lbs. Counterweight



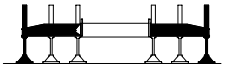
Rated Lifting Capacities In Pounds On Fully Extended Outriggers See Set Up Note 2.

Load Radius (ft)	35.5 Ft.			45 Ft.		
	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear
9	70.5	120,000	120,000			
10	68.5	108,900	108,900	73.5	87,100	87,100
12	65.0	96,900	96,900	71.0	87,100	87,100
15	59.5	82,700	82,700	66.5	82,200	82,200
20	49.5	64,500	64,500	59.5	64,100	64,100
25	37.5	48,300	49,800	51.5	47,500	49,500
30	20.0	33,500	37,700	42.5	33,200	37,600
35				32.0	24,600	28,500
40				15.5	18,700	22,200
Min. Boom Angle/Cap.	0	19,900	19,900	0	13,200	13,200

Load Radius (ft)	55 Ft.			60.3 Ft.		
	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear
10	77.0	79,500	79,500			
12	75.0	72,200	72,200	76.5	61,300	61,300
15	71.5	63,300	63,300	73.5	57,600	57,600
20	66.0	52,100	52,100	68.5	47,100	47,100
25	60.0	44,000	44,000	63.0	39,500	39,500
30	53.5	32,700	37,100	57.5	32,500	33,900
35	46.5	24,200	28,200	51.5	24,100	28,000
40	38.5	18,600	22,200	45.0	18,400	22,000
45	29.0	14,500	17,700	37.5	14,400	17,600
50	14.5	11,300	14,200	28.5	11,400	14,200
55				15.0	8,900	11,500
Min. Boom Angle/Cap.	0	8,400	8,400	0	6,500	6,500



Boom Mode "B"
12,000 lbs. Counterweight

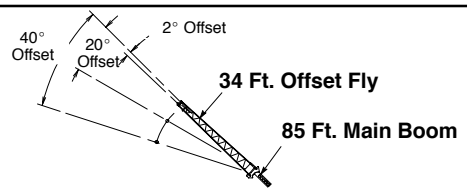


Rated Lifting Capacities In Pounds On Fully Extended Outriggers See Set Up Note 2.

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	70.5	120,000	120,000						
10	68.5	108,900	108,900	73.0	42,000	42,000	76.5	42,000	42,000
12	65.0	96,900	96,900	70.5	42,000	42,000	74.5	42,000	42,000
15	59.5	82,700	82,700	66.5	42,000	42,000	71.5	42,000	42,000
20	49.5	64,500	64,500	59.5	42,000	42,000	66.0	42,000	42,000
25	37.5	48,300	49,800	51.5	42,000	42,000	60.0	42,000	42,000
30	20.0	33,500	37,700	42.5	34,700	39,000	53.5	35,300	39,500
35				32.0	26,000	29,800	46.5	26,600	30,500
40				15.5	20,000	23,500	38.5	20,800	24,300
45							29.0	16,600	19,700
50							14.0	13,400	16,200
Min. Boom Angle/ Cap.	0	19,900	19,900	0	14,300	14,300	0	10,200	10,200

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	77.0	42,000	42,000						
15	74.5	42,000	42,000	77.0	42,000	42,000			
20	70.0	42,000	42,000	73.0	42,000	42,000	75.5	35,900	35,900
25	65.5	42,000	42,000	69.0	41,700	41,700	72.0	31,500	31,500
30	60.0	35,600	39,800	65.0	35,800	37,100	68.5	28,100	28,100
35	54.5	26,900	30,800	60.5	27,100	30,900	64.5	25,400	25,400
40	49.0	21,200	24,700	56.0	21,400	24,900	61.0	21,500	23,000
45	42.5	17,000	20,200	51.0	17,200	20,400	56.5	17,400	20,500
50	35.5	13,900	16,800	45.5	14,100	17,000	52.5	14,300	17,200
55	26.5	11,500	14,000	40.0	11,800	14,400	48.0	12,000	14,500
60	13.0	9,400	11,800	33.0	9,800	12,200	43.0	10,000	12,400
65				25.0	8,200	10,400	37.5	8,400	10,700
70				12.5	6,800	8,800	31.5	7,100	9,100
75							23.5	5,900	7,900
80							12.0	4,900	6,700
Min. Boom Angle/ Cap	0	7,400	7,400	0	5,400	5,400	0	3,900	3,900

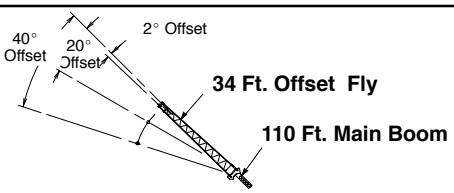
Load Radius (ft)	95 Ft.			105 Ft.			110 Ft.		
	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear
20	77.5	31,800	31,800						
25	74.5	28,300	28,300	76.0	25,700	25,700	77.0	22,600	22,600
30	71.0	25,300	25,300	73.5	23,100	23,100	74.5	22,100	22,100
35	68.0	22,800	22,800	70.5	20,900	20,900	71.5	20,000	20,000
40	64.5	20,800	20,800	67.5	19,000	19,000	69.0	18,300	18,300
45	61.0	17,500	19,000	64.5	17,400	17,400	66.0	16,700	16,700
50	57.5	14,400	17,300	61.5	14,500	15,900	63.0	14,500	15,200
55	53.5	12,100	14,600	58.0	12,200	14,700	60.0	12,200	13,900
60	49.5	10,100	12,600	54.5	10,200	12,600	57.0	10,300	12,400
65	45.5	8,600	10,800	51.0	8,700	10,900	53.5	8,700	10,900
70	41.0	7,200	9,300	47.5	7,300	9,400	50.0	7,400	9,500
75	35.5	6,100	8,100	43.5	6,200	8,200	46.5	6,300	8,200
80	30.0	5,100	6,900	39.0	5,300	7,100	42.5	5,300	7,100
85	22.5	4,300	6,000	34.0	4,400	6,100	38.0	4,500	6,200
90	11.5	3,500	5,100	28.5	3,700	5,300	33.5	3,800	5,400
95				21.5	3,000	4,500	28.0	3,100	4,600
100				11.0	2,400	3,900	21.5	2,500	3,900
Min. Boom Angle/ Cap.	0	2,700	2,700	4.5			17.0		



Boom Mode "B"
12,000 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°
25	77.5	18,600				
30	75.0	17,000				
35	73.0	15,600	77.5	11,000		
40	70.5	14,500	75.0	10,500		
45	68.0	13,600	72.5	10,100	77.0	8,200
50	65.0	12,700	70.0	9,600	74.5	7,900
55	62.5	11,900	67.5	9,300	71.5	7,600
60	60.0	11,100	64.5	8,900	69.0	7,400
65	57.0	9,900	62.0	8,600	66.0	7,200
70	54.0	8,500	59.0	8,200	62.5	7,000
75	50.5	7,400	56.0	7,900	59.5	6,800
80	47.0	6,400	52.5	7,000	56.0	6,700
85	43.5	5,600	48.5	6,100	52.0	6,500
90	40.0	4,800	45.0	5,300	48.0	5,600
95	35.5	4,200	40.5	4,600	43.0	4,800
100	31.0	3,600	35.5	3,900		
105	26.0	3,100	30.0	3,300		
110	19.0	2,600	23.0	2,800		
115	7.5	2,200				
Min.Bm. Ang./Cap.	0	1,700	0	1,800	0	1,900



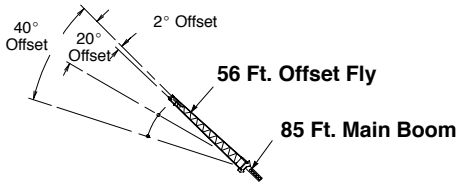
Boom Mode "B"
12,000 lbs. Counterweight

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	74.5	10,500				
45	72.5	10,500	77.0	9,500		
50	70.5	9,800	75.0	8,700		
55	68.5	8,900	72.5	8,000	76.5	7,400
60	66.5	8,200	70.5	7,400	74.0	6,900
65	64.0	7,500	68.5	6,800	72.0	6,400
70	62.0	6,900	66.0	6,400	69.5	6,000
75	59.5	6,400	63.5	6,000	67.0	5,600
80	57.0	6,000	61.5	5,600	64.5	5,300
85	54.5	5,300	59.0	5,200	62.0	5,000
90	52.0	4,500	56.5	4,900	59.5	4,700
95	49.0	3,900	53.5	4,400	56.5	4,500
100	46.5	3,300	50.5	3,800	53.5	4,100
105	43.5	2,800	47.5	3,200	50.0	3,500
110	40.0	2,300	44.0	2,700	46.5	2,900
115	37.0	1,900	40.5	2,200	42.5	2,400
120			37.0	1,800		

⚠ WARNING

Do Not Lower 34 Ft. Offset Fly In Working Position Below 36° Main Boom Angle Unless Main Boom Length Is 88 Ft. Or Less, Since Loss Of Stability Will Occur Causing A Tipping Condition.



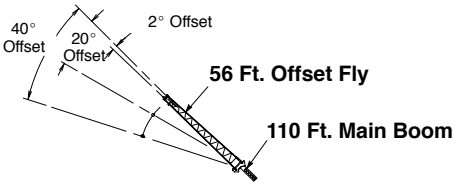
Boom Mode "B"
12,000 lbs. Counterweight

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	11,100				
40	74.5	10,500				
45	72.5	9,600				
50	70.0	8,800	77.0	6,200		
55	68.0	8,100	75.0	5,900		
60	66.0	7,600	73.0	5,600		
65	63.5	7,000	70.5	5,300	77.0	4,200
70	61.5	6,600	68.5	5,000	74.5	4,000
75	59.0	6,200	66.0	4,800	72.0	3,900
80	56.5	5,800	63.5	4,600	69.5	3,800
85	54.0	5,500	61.0	4,400	66.5	3,700
90	51.5	5,200	58.5	4,200	64.0	3,600
95	48.5	4,800	55.5	4,000	61.0	3,500
100	45.5	4,200	52.5	3,900	57.5	3,500
105	42.5	3,700	49.5	3,800	54.5	3,400
110	39.0	3,200	46.0	3,700	50.5	3,400
115	35.5	2,800	42.5	3,200	46.5	3,400
120	31.5	2,400	38.0	2,700	41.0	2,900
125	27.5	2,000	33.5	2,300		
130	22.0	1,700	27.5	1,900		

⚠ WARNING

Do Not Lower 56 Ft. Offset Fly In Working Position Below 20.5° Main Boom Angle Unless Main Boom Length Is 80 Ft. Or Less, Since Loss Of Stability Will Occur Causing A Tipping Condition.



Boom Mode "B"
12,000 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	77.0	6,900				
45	75.5	6,900				
50	74.0	6,900				
55	72.5	6,900				
60	70.5	6,400	77.0	5,600		
65	69.0	5,900	75.0	5,200		
70	67.0	5,400	73.0	4,800		
75	65.0	5,000	71.5	4,500	76.5	4,000
80	63.0	4,600	69.5	4,200	74.5	3,800
85	61.0	4,300	67.5	3,900	72.5	3,600
90	59.0	4,000	65.5	3,600	70.5	3,300
95	57.0	3,700	63.0	3,400	68.0	3,100
100	55.0	3,500	61.0	3,200	66.0	3,000
105	53.0	3,200	59.0	3,000	63.5	2,800
110	50.5	2,800	56.5	2,800	61.0	2,600
115	48.0	2,300	54.0	2,700	58.5	2,500
120			51.5	2,500	55.5	2,400
125			48.5	2,100	52.5	2,300
130					49.5	2,000

⚠ WARNING

Do Not Lower 56 Ft. Offset Fly In Working Position Below 45.5° Main Boom Angle Unless Main Boom Length Is 80 Ft. Or Less, Since Loss Of Stability Will Occur Causing A Tipping Condition.