

HTC-11100

Hydraulic Truck Crane

100-ton (90.78 metric ton)



HTC-11100 ADDED VALUE FEATURES

UPPERSTRUCTURE

Integral Rated Capacity Limiter



Microguard 434 system aids in efficient operation by continuously monitoring boom length, boom angle, head height, radius of load, machine configuration, allowed load, actual load and percent of allowed load. Presetable

alarms for maximum and minimum boom angles, max. tip height, max. boom length, swing left/right positions. The user friendly display is totally graphically oriented which eliminates multiple language problems. Operator defined area alarm is also provided.

ULTRA-CAB™



Operator's cab is molded from a laminated fibrous composite material offering superior advantages over steel including sound levels one-half as loud as conventional cabs, eliminates corrosion, and adds

dimensional stability. Operator's control center includes a cloth upholstered six-way adjustable seat, responsive joystick-type hydraulic control levers, and comprehensive instrumentation.

Job-To-Job Transportability

The HTC-11100 offers superior roadability complete with 182 ft. (55.47 m) of maximum on-board tip height. Transportability is enhanced with standard counterweight removal system and by an available 3-axle boom trailer designed and built by Link-Belt.

Power Train

A Detroit Diesel Series 60 12.7 Liter, 430 horsepower (321 kW) engine with integral electronic controls develops 1,450 ft. lbs. (1 966 J) of torque and is coupled to a Fuller Roadranger 11-speed forward, 3-speed reverse transmission. Cruise control, engine brake and fan clutch are standard.

Gear Motor Hydraulic Hoist System

Standard load hoist system consists of a 2M main winch with two-speed motor and automatic brake for power up/down mode of operation. Precise, smooth load control with minimal rpm. Two-speed 2M auxiliary winch is available.

Multi-Function Control

One three-section and one two-section gear type pump hydraulic circuit allows smooth, simultaneous function of winch, boom hoist, and swing.

State-Of-The-Art Oil Technology

The HTC-11100 features improved seals on boom hoist, boom extend/retract, and outrigger jack cylinders. This new 'redundant' oil seal technology incorporates three rod sealing surfaces versus one or two found on competitive models. When incorporated with the full o-ring face seal technology used throughout the machine, this leads to an environmentally dry system.

Serviceability

Wide opening engine doors provide excellent engine accessibility. Hydraulic fittings and connections are staggered where necessary for easy servicing.

CARRIER

Carrier Cab

Manufactured of the same laminated composite material as the upper cab, this cab features dash mounted comprehensive instrumentation with lighted gauges, roll up/down door window, fully adjustable air ride fabric seat, suspended pedals, and rear view mirrors.

Wide Stance Carrier

An 11' 0" (3.35 m) wide based carrier with 233" (5.92 m) wheelbase provides 'big feet' for a sturdy, stable lifting base. This Link-Belt 8x4 carrier also features aluminum 'diamond plate' fenders, quick disconnect aluminum pontoons, a self-storing fifth outrigger aluminum pontoon, and side clearance lights/turn indicators.

ATTACHMENT

Patented Boom Design

The HTC-11100 is equipped with Link-Belt's exclusive 'BOSS' boom design that provides superior strength to weight ratio and 100,000 psi (689.5 MPa) steel angle chords and diamond shaped embossments for lateral stiffness.

The boom telescope sections are supported by wear shoes both vertically and horizontally. Side wear shoes are adjustable with allen-head bolts.



Boom/Attachment Flexibility

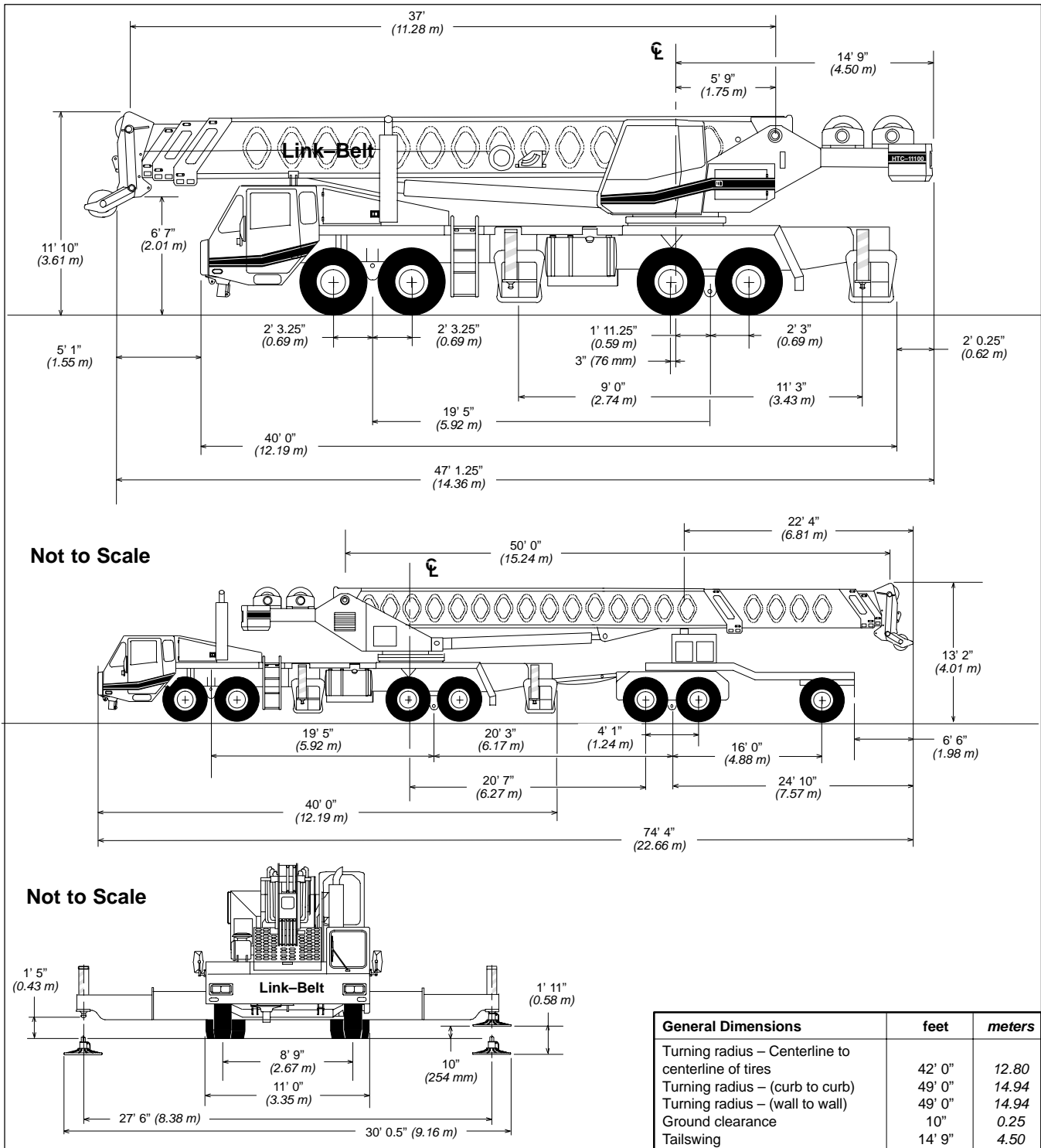
- Standard — 37' 0" – 115' 0" (11.28 – 35.05 m) 4-section boom with two power sections and a power pinned fourth section.
- Standard — 33' 0" (10.06 m) stowable one-piece lattice fly.
- Optional — 37' 0" – 115' 0" (11.28 – 35.05 m) 4-section full power boom.
- Optional — 27' 0" (8.23 m) stowable A-frame jib. Can be offset 5°, 17.5°, or 30°.
- Optional — 88' 0" (26.82 m) pendant supported lattice jib. Lattice sections provide alternate jib lengths of 43' (13.11 m), 58' (17.68 m) and 73' (22.25 m). Can be offset 5°, 17.5°, 30° or 45°.
- Optional — 103' 0" (31.39 m) pendant supported lattice jib.

Specifications

Telescopic Boom Truck Crane

HTC-11100

100-ton (90.72 metric tons)



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

- 37' – 115' (11.28 – 35.05 m) four-section boom includes base section, two power sections and a power-pinned fourth section.
- Mechanical Boom Angle Indicator

Optional

- 37' – 115' (11.28 – 35.05 m) four-section, full power boom. Includes base section and three power sections.
- Mechanical Boom Angle Indicator

Boom Head

- Six 17.25" (0.44 m) root diameter nylon sheaves.
- Rope dead end lugs provided on each side of boom head.
- Easily removable wire rope guards
- 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 +80°.

Optional

- 100-ton (90.78 mt) quick reeve hook block
- 8.5-ton (7.71 mt) hook ball.
- Boom floodlight.

■ Fly

Standard

- 33' (10.06 m) offsettable stowable one-piece lattice type

■ Jib

Optional

- 27' (8.23 m) offsettable stowable "A"-frame. Can be offset 5°, 15° or 30°.
- 88' (26.82 m) pendant supported lattice jib.
- Lattice sections provide alternate jib lengths of 43' (13.11 m), 58' (17.68 m) and 73' (22.25 m). All can be offset 5°, 17.5°, 30° or 45°.
- 103' (31.39 m) pendant supported lattice jib.

■ Cab and Controls

Environmental Ultra-Cab™

- LFC-2000 construction process featuring laminated fibrous composite material.
- Isolated from sound with acoustical fabric insulation.
- Six-way adjustable operator's seat with seat belt.
- 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.
- Hand-held outrigger controls and sight level bubble located in operator's cab.
- Circulating fan
- Audible swing alarm
- Fire extinguisher
- Defroster fan
- Electric windshield wiper
- Windshield washer
- Top hatch window wiper
- Cab mounted work lights
- Mirrors
- Dome light
- Cup holder
- Sun screen
- Hand throttle
- Horn

Optional

- Amber strobe light
- Amber rotating beacon
- Diesel or hydraulic heater
- Air conditioning

Controls

Hydraulic controls (joystick type) for:

- Swing
- Optional auxiliary winch
- Drum rotation indicators
- 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
- Check engine and stop engine 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

Presetable 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 lights; green, yellow and red.

- **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 1.8 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.
- **Travel Swing lock** – Standard; two position travel swing lock (pin device) operated from the operator's cab.
- **Counterweight** – Pinned to upper structure frame with standard counterweight removal system. 8,500 lb. (3 856 kg) with single winch system. 6,500 lb. (2 948 kg) with two winch system.

Optional

- 360° swing lock. Meets New York City requirements.

■ Hydraulic System

Main Pump

- One gear pump with three sections.
- One gear pump with two sections.
- Combined pump capacity of 265 gpm (1 003 lpm).
- A pressure compensated piston pump with a total capacity of 8.5 gpm (32 lpm) supplies pressure for control functions.
- Powered by engine carrier with pump disconnect.
- Spline type pump disconnect engaged / disengaged from carrier cab.
- Maximum system operating pressure is 3,250 psi (22 850 kPa).
- O-ring face seals technology used throughout with hydraulic oil cooler standard.

Steer Pump

- Single gear type pump, 21 gpm (79 lpm) supplies oil to the steering and fifth outrigger functions.

Reservoir

- 250 gallon (946.3 L) capacity. One diffuser for deaeration.

Filtration

- One 6-micron filter located inside hydraulic reservoir.
- Accessible for easy replacement

Control valves

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

Load Hoist System

Standard

- 2M main winch with 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.

- Winch circuit control provides balanced oil flow to both winches for smooth, simultaneous operation.
- Pressure compensated winch circuit provides balanced oil flow to both winches for smooth, simultaneous operation.
- Rotation resistant wire rope.
- Drum Rotation Indicators.

- Maximum line speed of 506 f.p.m. (154 m/min) on 18" (0.46 m) root diameter grooved drum.

Optional

- 2M auxiliary winch with two-speed motor, automatic brake, and winch function lock-out. Power up/down modes.

Line Pulls and Speeds

- Maximum available line pull 18,650 lbs. (8 460 kg).

Carrier

Type

- 11' (3.35 m) wide, 233 in. (5.92 m) wheel-base.
- 8 x 4 drive – standard
- Towing shackles

Frame

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

Optional

- Pintle hook
- Electric and air connections for trailers

Axles

Front

- Tandem, 105" (2.67 m) track

Rear

- Tandem, 100.65" (2.56 m) track. 7.17 to 1.0 ratio with interaxle differential with lockout

Suspension

Front axle

- Spring suspension with torque rods

Rear axle

- Solid mount 54" (1.37 m) bogie beam type.

Wheels

Standard

- Front/Rear – Cast, six-spoke

Tires

- 14.00R20 (22PR) radials

Brakes

Service

- Full air brakes on all wheel ends with automatic slack adjusters. Dual circuit with modulated emergency brakes.
 - Front – S-Cam type, 16.5 x 6 (0.42 x 0.15 m) shoe diameter.
 - Rear – S-Cam type, 16.5 x 7 (0.42 x 0.18 m) shoe diameter.

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 45 psi (310 kPa) in both systems.

Steering

- Sheppard rack and pinion design

Transmission

Standard

- Fuller Roadranger RTO 14909ALL; 11 speeds forward, 3 reverse.

Electrical

- Four 12-volt batteries
- 130-amp alternator
- 3,000 cold cranking amps available

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

- Integral double box, power hydraulic dual beam outriggers, front and rear
- Upper and ground controlled
- Four hydraulic, telescoping beam and jack outriggers. Vertical jack cylinders equipped with integral holding valve.
- Beams extend to 27' 6" (8.38 m) center-line-to-centerline.
- Equipped with stowable, lightweight 30-1/2". (0.77 m) diameter aluminum floats.
- Standard fifth outrigger, 24" (0.61 m) self storing steel pad is operable from ground.

Carrier Cab

- One-man cab of LFC-2000 laminated fibrous composite material. Acoustical insulation with cloth covering.

Equipped with:

- Air-ride seat with seat belt
- Tilt steering wheel
- Door and windows locks
- Left 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
- Electric windshield wiper and washer
- Carrier-mounted outrigger controls with throttle control.
- Cruise control
- Horn
- Ashtray
- 36,000 BTU heater
- Dome light
- Travel lights
- Fire extinguisher
- Cruise control
- Defroster

Optional

- Ether injector starting package
- Air conditioning
- Spare tire and wheel assemblies
- Electrical and air connections for trailers and boom dollies
- Rotating beacon
- Amber strobe light

Cab instrumentation

- Illuminated instrument panel
- Speedometer
- Hourmeter
- Odometer
- Oil pressure gauge
- Turn signal indicator
- Water temperature gauge
- Front and rear air pressure gauges
- Audio/visual warning system
- Automotive type ignition
- High beam light switch
- Check and stop engine indicator lights
- Tachometer
- Fuel gauge
- Voltmeter

Axle	Max. Load @ 55 mph (88.50 km/hr)
Front	45,000 lbs. (20 412 kg)
Rear	76,000 lbs. (34 474 kg)

Carrier Speeds (Manual Transmission – Standard tires)

Gear	High				Low					Deep Reduction		Hi Rev.	Lo Rev.	Deep Reduction	Deep Reduction @ 700 rpm	Deep Reduction @ 70 rpm	
	8	7	6	5	4	3	2	1	Low	LL 2	LL 1	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	56.38	41.16	29.82	21.11	14.68	10.86	7.87	5.55	2.52	3.47	1.58	12.00	3.16	1.97	0.55	0.66
	km/hr.	90.72	66.22	47.97	33.96	23.91	17.47	12.66	8.94	4.05	5.58	2.54	19.31	5.09	3.17	0.88	1.06

■ Engine

Engine	Detroit Diesel Series 60 – 12.7 Liter
Cylinders	6
Bore	5.12" (130 mm)
Stroke	6.30" (160 mm)
Piston displacement	778 cu. in. (12 751 cm ³)
Maximum brake hp.	430 (321 kw) @ 2,100 rpm
Governed load speed	2,100 r.p.m.
Peak torque	1,450 ft. lbs. (1 966 J) @ 1,200 rpm
Electrical system	12-volt charging / 12-volt starting
Batteries	Four 12-volt
Air compressor	Bendix TU-FLO 1400

■ Axle Loads

Base machine with standard 37' – 115' (11.28 – 35.05 m) four-section manual boom, 33' (10.06 m) lattice fly, 2-speed rear winch with rope, Link-Belt 8x4 11' (3.35 m) wide carrier with Detroit Diesel Series 60 12.7 liter diesel engine, Roadranger transmission, full fuel and hydraulics, counterweight, counterweight removal system and aluminum fenders.	G.V.W.		Boom Over Front			
			Front Axle		Rear Axle	
	lbs.	kg.	lbs.	kg.	lbs.	kg.
	112,230	50 908	39,605	17 965	72,625	32 943
Add						
Hookblock in storage compartment	1,700	771	2,249	1 020	-549	-249
Headache ball on boom head	325	147	514	233	-189	-86
Full power boom	2,450	1 111	1,356	615	1,094	496
Auxiliary lifting sheave	182	83	330	150	-148	-67
A-frame jib (manual boom only)	1,345	610	840	381	505	229
Two-winch power up/down	673	305	126	57	547	248
Remove						
Lattice fly	-1,575	-714	-1,433	-650	-142	-64
A-frame jib (manual boom only)	-1,345	-610	-840	-381	-505	-229
Rear outrigger beams/jacks	-5,193	-2 356	+2,491	+1 130	-7,684	-3 485
Front outrigger beams/jacks	-5,193	-2 356	-2,925	-1 327	-2,268	-1 029
* 8,500 lbs. (3 856 kg) counterweight	-8,500	-3 856	+5,025	+2 279	-13,525	-6 135
** 6,500 lbs. (2 948 kg) counterweight	-6,500	-2 948	+3,842	+1 743	-10,342	-4 691

* – Use 8,500 lbs (3 856 kg) counterweight for main hoist.

** – Use 6,500 lbs (2 948 kg) counterweight for main hoist.

■ Axle Loads with Boom Trailer

Base machine with standard 37' – 115' (11.28 – 35.05 m) four-section manual boom, 33' (10.06 m) lattice fly, 2-speed rear winch with rope, Link-Belt 8x4 11' (3.35 m) wide carrier with Detroit Diesel Series 60 12.7 liter diesel engine, Roadranger transmission, full fuel and hydraulics, counterweight, counterweight removal system and aluminum fenders.	G.V.W.		Boom Over Rear				Boom Trailer			
			Front Axle		Rear Axle		Tandem Axle		Rear Axle	
	lbs.	kg.	lbs.	kg.	lbs.	kg.	lbs.	kg.	lbs.	kg.
	121,415	55 074	34,735	15 756	51,339	23 287	28,727	13 031	6,614	3 000
Add										
Hookblock on boom head	1,700	771	-453	-205	-691	-313	2,429	1 102	415	188
Headache ball in storage compartment	325	147	430	195	-105	-48	n/a	n/a	n/a	n/a
Full power boom	2,450	1 111	505	229	770	349	1,004	455	171	78
Auxiliary lifting sheave	182	83	-51	-23	-79	-36	267	121	46	21
A-frame jib (manual boom only)	1,345	610	253	115	386	175	604	274	103	47
Two-winch power up/down	673	305	8	4	665	301	n/a	n/a	n/a	n/a
Remove										
Lattice fly	-1,575	-714	-182	-83	-278	-126	-953	-432	-163	-74
A-frame jib (manual boom only)	-1,345	-610	-253	-115	-386	-175	-604	-274	-103	-47
Rear outrigger beams/jacks	-5,193	-2 356	+2,491	+1 130	-7,684	-3 485	n/a	n/a	n/a	n/a
Front outrigger beams/jacks	-5,193	-2 356	-2,925	-1 327	-2,268	-1 029	n/a	n/a	n/a	n/a
* 8,500 lbs. (3 856 kg) counterweight	-8,500	-3 856	+5,025	+2 279	-13,525	-6 135	n/a	n/a	n/a	n/a
** 6,500 lbs. (2 948 kg) counterweight	-6,500	-2 948	+3,842	+1 743	-10,342	-4 691	n/a	n/a	n/a	n/a

Lifting Capacities

PCSA Class 10-366

Hydraulic Truck Crane

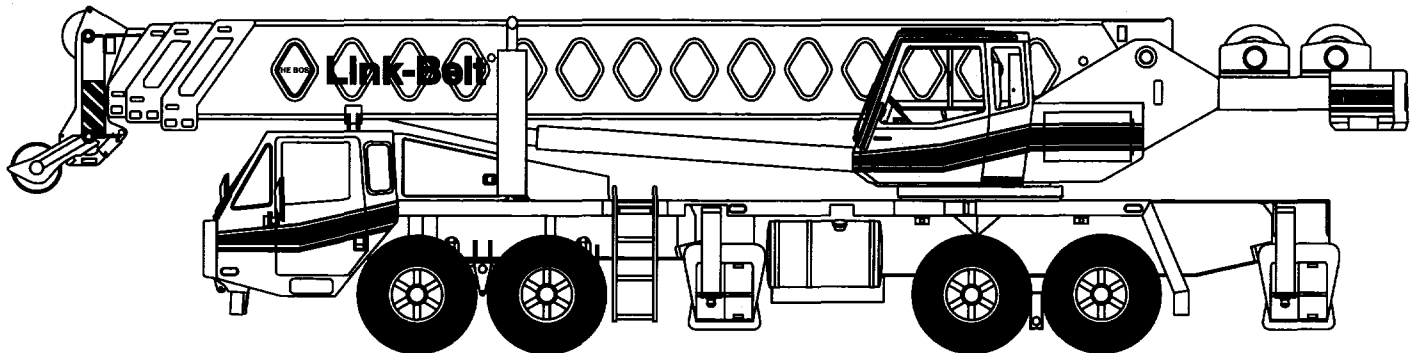
HTC-11100 100-ton (90.78 metric ton)

4-Section Boom - Full Power

Boom, fly, and jib capacities for this machine are listed by the following sections and are for fully extended outriggers only.

Fully Extended Outriggers

- Working Range Diagrams
- 37' 0" to 115' 0" main boom capacities
- 33' 0" one-piece lattice fly capacities
- 60' 0" offsettable fly/jib combination capacities
- 43' 0" offsettable lattice jib capacities
- 58' 0" offsettable lattice jib capacities
- 73' 0" offsettable lattice jib capacities
- 88' 0" offsettable lattice jib capacities
- 103' 0" offsettable lattice jib capacities



CAUTION: This material is supplied for reference only. Operator must refer to in-cab crane rating manual to determine allowable machine lifting capacities and operating procedures.

OPERATING INSTRUCTIONS

GENERAL:

1. Rated lifting capacities as shown on lift charts pertain to this crane as originally manufactured and normally equipped by Link-Belt Construction Equipment Company (LBCE). Modifications to the crane or use of optional equipment other than that specified can result in a reduction in 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 the manuals are missing, order replacements through the distributor.
3. The operator and other personnel associated with this crane shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) safety standards for cranes.
4. The maximum allowable 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 fully extended. The front bumper outrigger must be properly extended.
3. When making lifts on tires, they must be inflated to the recommended pressure. (See Operation note 19 and Tire Inflation.)
4. Boom sections must be fully retracted when on tires, before swinging to over side or over front position as defined on Working Area Diagram.
5. When installing or removing counterweight, use fully retracted boom only. Do not swing counterweight beyond a 30 ft. radius; crane must be on outriggers during this operation.
6. For required parts of line, see Wire Rope Capacity, Winch Performance and Operator's Manual.

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 8,000 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 8,000 pounds or 80% of rated lifting capacity, whichever is less. For clamshell and magnet operation, maximum boom length is restricted to 61 feet and the boom angle is restricted to a minimum of 35 degrees. Fly, jib, or fly-jib combinations are prohibited for both clam and magnet operation.
2. The crane capacities shown on outriggers do not exceed 85% of the tip load. The crane capacities shown on tires do not exceed 75% of the tip load. Tipping loads are determined by SAE crane stability test code J-765a.
3. The crane 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 crane capacities below the bold lines are based on stability ratings.
4. Rated lifting capacities include the weight of the hook block, 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. 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 any radii or boom lengths (minimum or maximum) where capacities are not listed. At these positions, the crane can tip or cause boom failure.

Operating Instructions (con't)

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 and/or radius 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, two crane lifts, traveling with loads, electrical wires, etc. Side load on boom, fly or jib is dangerous and shall be avoided.
11. When making lifts with auxiliary head machinery, the effective length of the boom increases by 2 ft.
12. Power sections of boom must be extended equally.
13. The least stable rated working area on outriggers is over the side.
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 load radius is for reference only.
16. The 37 ft. boom length capacities are based on fully retracted boom. If the boom is not fully retracted, do not exceed capacities shown for the 45 ft. boom length.
17. For fly capacities with main boom less than 115 ft., the rated loads are determined by boom angle only by using the 115 ft. boom and fly chart. For angles not shown, use the next lower boom angle to determine allowable capacity. Lifting from fly tip with 27 ft. jib stored under it is prohibited.
18. The 60' fly/jib capacities are based on main boom angle regardless of main boom length. For angles not shown, use next lower boom angle to determine allowable capacity. Capacity values are for 360 degrees on outriggers operation.
19. Crane capacities on tires depend on tire capacity, condition of tires, and tire air pressure. On tire picks require lifting from main boom head only on a smooth and level surface. Lifts with fly, jib or fly/jib combination erected are prohibited on tires. The boom sections must be extended equally at all times. For Stationary operations, maximum boom length is restricted to 69 ft. For Pick and Carry operations, maximum boom length is restricted to 53 ft. and maximum permissible speed is 2.5 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.

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 after lifting the 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: 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.

WINCH PERFORMANCE

Winch Line Pulls			Drum Rope Capacity (Ft.)	
Wire Rope Layer	Two Speed Winch		Layer	Total
	Low Speed	High Speed		
	Available Lbs.*	Available Lbs.		
1	18,155	9,708	182	182
2	16,811	8,989	196	378
3	15,651	8,369	211	589
4	14,641	7,829	225	814
5	13,754	7,355	240	1,054
6	12,968	6,934	254	1,308

*Maximum lifting capacity: Type RB Rope=12,920 Type N Rope=16,800

WIRE ROPE CAPACITY

Maximum Lifting Capacities Based On Wire Rope Strength			
Parts of Line	3/4"		Notes
	Type N	TYPE RB	
1	16,800	12,920*	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 consult Parts Manual for wire rope size and type requirements. *Use of swivel end with 1 part of line is not recommended.
2	33,600	25,840	
3	50,400	38,760	
4	67,200	51,680	
5	84,000	64,600	
6	100,800	77,520	
7	117,600	90,440	
8	134,400	103,360	
9	151,200	116,280	
10	168,000	129,200	
11	184,800	142,120	
12	201,600	155,040	

LBCE	DESCRIPTION
TYPE N	8 X 25 (8 X 19 Class) - Filler Wire - Extra Improved Plow Steel - Preformed Right Lay - I.W.R.C. - Right Lay Regular Lay
TYPE RB	18 X 19 Rotation Resistant - Extra, Extra Improved Plow Steel - Preformed Right Lay - Regular Lay Swaged

CAPACITY DEDUCTIONS FOR AUXILIARY LOAD HANDLING EQUIPMENT

Load Handling Equipment	Weight (Lbs.)
Auxiliary Head	200
100 Ton 6 Sheave Hook Block (See Hook Block For Actual Weight)	1,450
80 Ton 5 Sheave Hook Block (See Hook Block For Actual Weight)	1,250
8.5 Ton Hook Ball (See Hook Ball For Actual Weight)	360

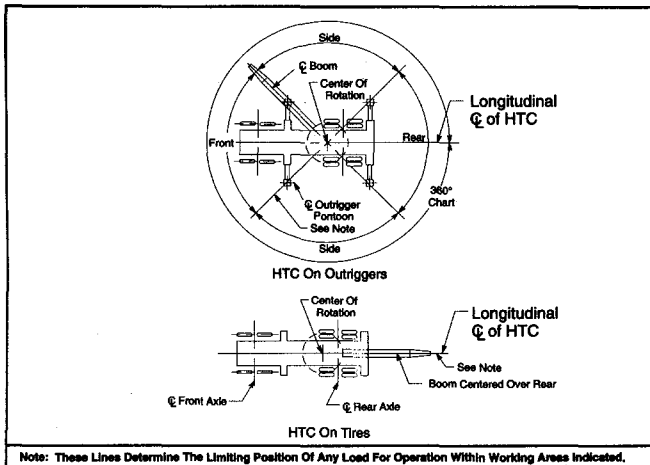
Lifting From Main Boom With:	Weight (Lbs.)
Auxiliary Head on Main Boom	200
33 ft. Fly Stowed on Boom Base	400
27 ft. Jib Stowed on Boom Base	400
60 ft. Fly/Jib Stowed on Boom Base	800
33 ft. Fly Erected	4,000
60 ft. Fly/Jib Erected	10,000
43 ft. Tubular Jib Erected	12,000
58 ft. Tubular Jib Erected	18,000
73 ft. Tubular Jib Erected	25,000
88 ft. Tubular Jib Erected	35,000
103 ft. Tubular Jib Erected	48,000

Lifting From 33 Ft. Fly With:	Weight (Lbs.)
Auxiliary Head on Main Boom	200
27 ft. Jib Stowed on Boom Base	400
27 ft. Jib Erected	4,000

Lifting From Tubular Jib With:	Weight (Lbs.)
Auxiliary Head on Main Boom	200
33 ft. Fly Stowed on Boom Base	400
27 ft. Jib Stowed on Boom Base	400
60 ft. Fly/Jib Stowed on Boom Base	800

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

WORKING AREAS



HYDRAULIC CIRCUIT PRESSURE SETTINGS

Function	Pressure (PSI)
Winch	3250
Outriggers Retract	3000
Outriggers Extend	2000
Boom Hoist	3250
Boom Telescope	3000
Swing	1200
Hydraulic Controls	2000
Steering	1750

TIRE INFLATION

Tire Size	Operation	Tire Pressure (PSI)
14 R X 20, 22 Ply	2.5 MPH	120
	Stationary	120

PONTOON LOADINGS

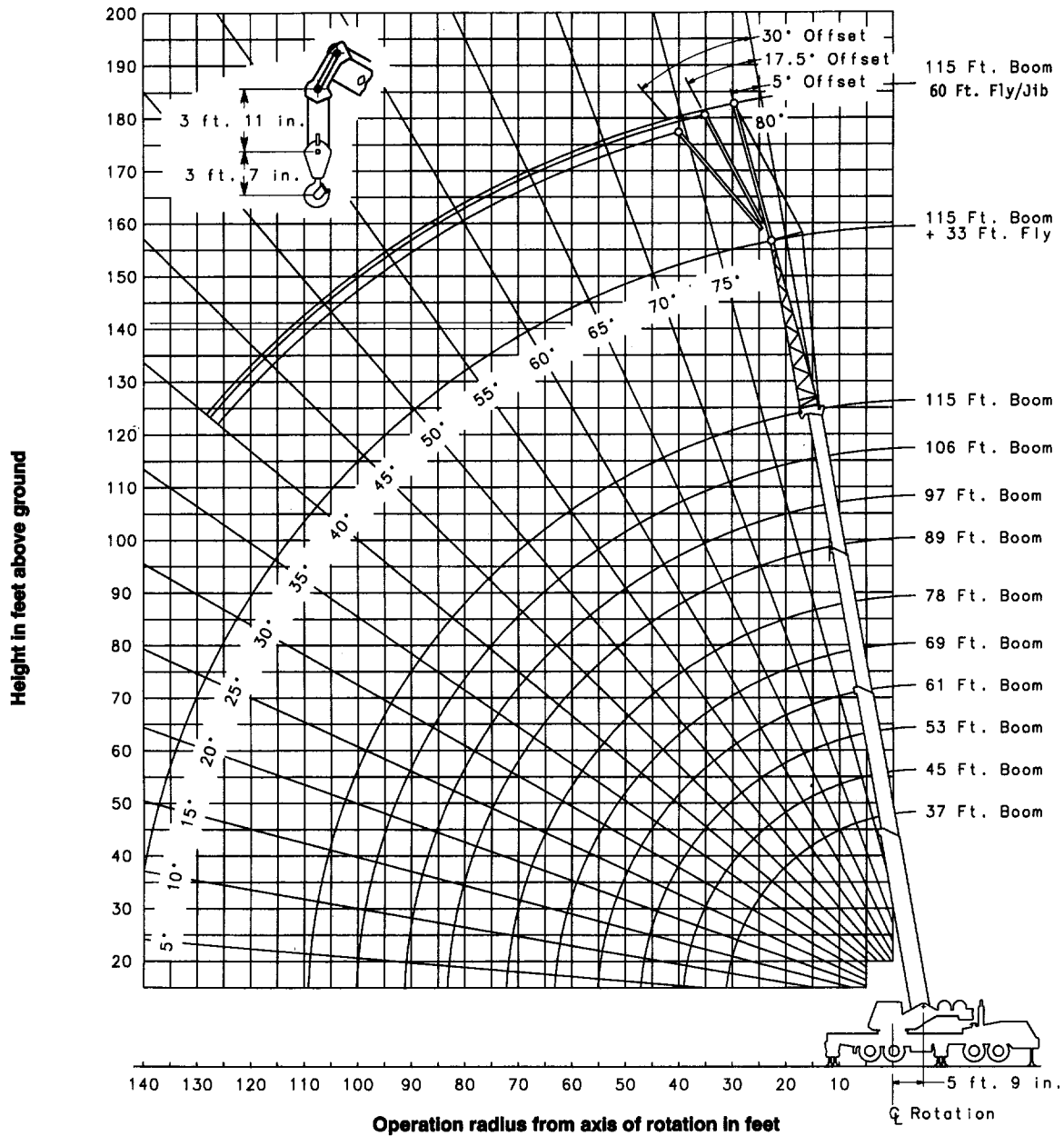
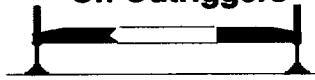
Maximum Pontoon Load:	Maximum Pontoon Ground Bearing Pressure:
120,500 Lbs.	165 PSI

OUTRIGGER SPREAD

Position	Distance
Fully Extended	330" - (27' - 6")

Working Range - Full Power Boom with 60' (18.28 m) Fly/Jib Combination

**Working Range Diagram
On Outriggers**



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 Shown. Loss Of Stability Will Occur Causing A Tipping Condition.

Main Boom Capacities

Maximum Allowable Lifting Capacities Rated Lifting Capacities in Pounds On Outriggers See Set Up Note 2.							
37 ft. To 45 ft. Main Boom							
Load Radius In Feet	37 ft.		45 ft.		Load Radius In Feet		
	Loaded Boom Angle (Deg.)	Capacity (lbs.) 360° Rear	Capacity (lbs.) Over Rear	Loaded Boom Angle (Deg.)		Capacity (lbs.) 360° Rear	
10	70.0	200,000	200,000	73.5	105,000	105,000	10
12	66.5	161,500	161,500	71.0	105,000	105,000	12
15	61.0	137,500	137,500	66.5	105,000	105,000	15
20	51.0	101,500	101,500	59.5	101,500	101,500	20
25	39.0	78,500	78,500	51.0	78,500	78,500	25
30	20.5	60,800	60,800	41.5	60,800	60,800	30
Min. Boom Angle/Cap	0°	52,000	52,000	0°	34,500	34,500	Min. Boom Angle/Cap

53 ft. To 61 ft. Main Boom							
Load Radius In Feet	53 ft.		61 ft.		Load Radius In Feet		
	Loaded Boom Angle (Deg.)	Capacity (lbs.) 360° Rear	Capacity (lbs.) Over Rear	Loaded Boom Angle (Deg.)		Capacity (lbs.) 360° Rear	
10	76.5	103,500	103,500	78.5	102,700	102,700	10
12	74.0	103,500	103,500	76.5	102,700	102,700	12
15	70.5	103,500	103,500	73.5	100,000	100,000	15
20	64.5	101,500	101,500	68.5	85,500	85,500	20
25	58.0	78,500	78,500	63.0	77,600	77,600	25
30	51.5	60,800	60,800	57.5	60,800	60,800	30
35	43.5	46,600	46,600	51.5	46,600	46,600	35
40	34.0	36,600	36,600	44.5	36,600	36,600	40
45	20.5	28,900	28,900	37.0	28,900	28,900	45
50				27.5	23,900	23,900	50
Min. Boom Angle/Cap	0°	24,300	24,300	0°	17,700	17,700	Min. Boom Angle/Cap

Maximum Allowable Lifting Capacities Rated Lifting Capacities in Pounds On Outriggers See Set Up Note 2.							
69 ft. To 78 ft. Main Boom							
Load Radius In Feet	69 ft.		78 ft.		Load Radius In Feet		
	Loaded Boom Angle (Deg.)	Capacity (lbs.) 360° Rear	Capacity (lbs.) Over Rear	Loaded Boom Angle (Deg.)		Capacity (lbs.) 360° Rear	
10	80.0	102,100	102,100	80.0	93,000	93,000	10
12	78.0	99,400	99,400	77.5	84,500	84,500	12
15	75.5	91,500	91,500	74.0	75,500	75,500	15
20	71.5	80,900	80,900	70.0	57,500	57,500	20
25	67.0	69,400	69,400	66.0	50,300	50,300	25
30	62.0	58,300	58,300	61.5	42,600	42,600	30
35	57.0	46,600	46,600	57.5	36,600	36,600	35
40	51.5	36,600	36,600	52.5	28,900	28,900	40
45	46.0	28,900	28,900	47.5	23,900	23,900	45
50	39.0	23,900	23,900	35.5	16,700	16,700	50
60	21.0	16,700	16,700	17.0	12,000	12,000	60
Min. Boom Angle/Cap	0°	13,300	13,300	0°	9,700	9,700	Min. Boom Angle/Cap

89 ft. To 97 ft. Main Boom							
Load Radius In Feet	89 ft.		97 ft.		Load Radius In Feet		
	Loaded Boom Angle (Deg.)	Capacity (lbs.) 360° Rear	Capacity (lbs.) Over Rear	Loaded Boom Angle (Deg.)		Capacity (lbs.) 360° Rear	
15	79.5	87,000	87,000	77.5	55,000	55,000	15
20	78.0	80,000	80,000	74.5	52,500	52,500	20
25	73.0	64,500	64,500	71.5	43,500	43,500	25
30	69.5	44,500	44,500	68.5	34,500	34,500	30
35	66.0	36,500	36,500	65.0	31,000	31,000	35
40	62.0	32,500	32,500	61.5	27,500	27,500	40
45	58.5	28,900	28,900	58.0	23,900	23,900	45
50	54.5	23,900	23,900	50.5	16,700	16,700	50
60	45.5	16,700	16,700	41.5	12,000	12,000	60
70	34.5	12,000	12,000	30.5	8,500	8,500	70
80	18.5	8,500	8,500				80
Min. Boom Angle/Cap	0°	6,600	6,600	0°	5,000	5,000	Min. Boom Angle/Cap


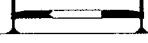
Maximum Allowable Lifting Capacities Rated Lifting Capacities in Pounds On Outriggers See Set Up Note 2.							
106 ft. To 115 ft. Main Boom							
Load Radius In Feet	106 ft.		115 ft.		Load Radius In Feet		
	Loaded Boom Angle (Deg.)	Capacity (lbs.) 360° Rear	Capacity (lbs.) Over Rear	Loaded Boom Angle (Deg.)		Capacity (lbs.) 360° Rear	
20	79.0	51,000	51,000	80.0	50,500	50,500	20
25	76.5	45,000	45,000	77.5	44,000	44,000	25
30	73.5	37,500	37,500	75.0	36,100	36,100	30
35	70.5	33,500	33,500	72.5	32,500	32,500	35
40	67.5	29,000	29,000	70.0	27,100	27,100	40
45	64.5	25,300	25,300	67.0	25,300	25,300	45
50	61.5	23,900	23,900	64.5	21,100	21,100	50
60	55.0	16,700	16,700	58.5	16,700	16,700	60
70	47.5	12,000	12,000	52.0	12,000	12,000	70
80	39.0	8,500	8,500	45.0	8,500	8,500	80
90	28.5	6,000	6,200	38.5	6,000	6,200	90
100				26.0	4,000	4,300	100
Min. Boom Angle/Cap	0°	3,400	3,400	20°			Min. Boom Angle/Cap

WARNING

Do Not Lower 115 Ft. Boom Below 20 Degrees. Boom Angles Below 20 Degrees Will Result in A Tipping Condition.

33' (10.06 m) Fly and 60' (18.29 m) Fly/Jib Combination Capacities

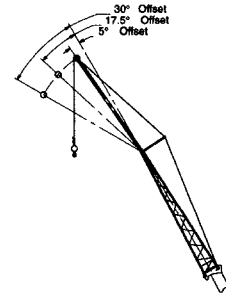
**Maximum Allowable Lifting Capacities
Rated Lifting Capacities in Pounds
On Outriggers
See Set Up Note 2.
See Operation Note 17.**

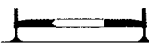
115 ft. Main Boom with 33 ft. Fly

Load Radius In Feet	Loaded Boom Angle (Deg.)	Capacity (lbs.)		Load Radius In Feet
		360°	Rear	
30	80.0	28,000	28,000	30
35	77.0	26,000	26,000	35
40	75.5	24,000	24,000	40
45	73.5	22,000	22,000	45
50	71.0	19,700	19,700	50
60	67.0	15,800	15,800	60
70	62.5	13,500	13,500	70
80	58.0	11,400	11,400	80
90	53.0	8,100	8,200	90
100	47.5	6,000	6,100	100
110	41.5	4,300	4,400	110
120	34.5	2,900	3,100	120
130	26.0	1,800	2,000	130
Min. Boom Angle/Cap	24.0			Min. Boom Angle/Cap

⚠ WARNING
Do Not Lower 115 Ft. Main Boom With 33 Ft. Fly Erected Below 24° Main Boom Angle Unless Main Boom Length is 89 Ft. Or Less. Boom Angles Below 24° With Boom Over 89 Ft. Will Result In A Tipping Condition.



**Maximum Allowable Lifting Capacities
Rated Lifting Capacities in Pounds
On Outriggers
See Set Up Note 2.
See Operation Note 18.**



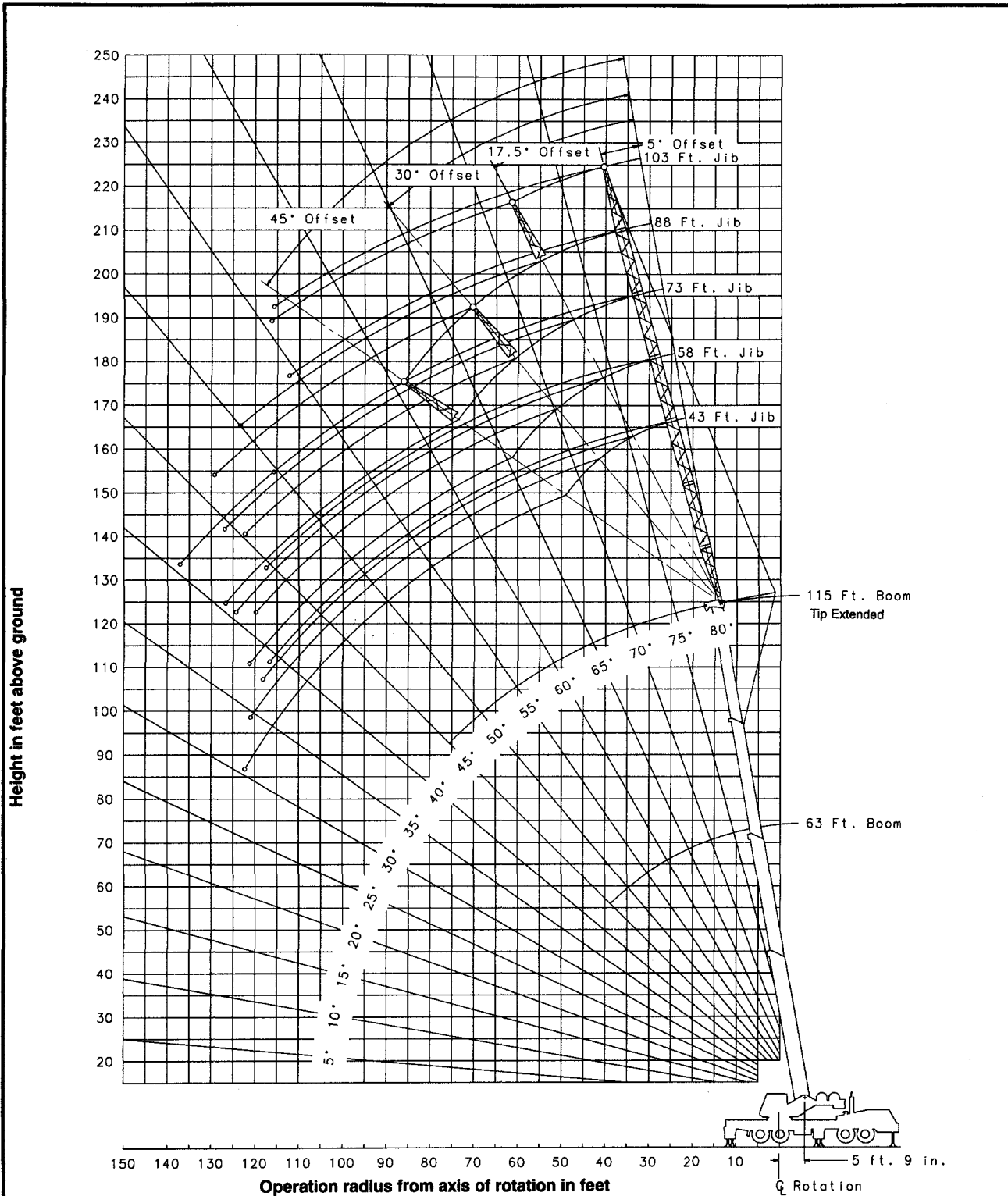
115 ft. Main Boom with 60 ft. Fly/Jib Combination

Min. Main Boom Angle (Deg.)	Jib Offset Angle			Min. Main Boom Angle (Deg.)
	5°	17.5°	30°	
80°	11,900	8,600	6,800	80°
75°	10,300	7,800	6,000	75°
70°	9,000	6,700	5,700	70°
65°	7,500	5,700	4,900	65°
60°	6,200	4,800	4,300	60°
55°	5,200	4,000	3,200	55°
50°	3,900	3,300	2,600	50°
45°	2,700	2,600	2,200	45°
40°	1,800	1,800	1,800	40°

⚠ WARNING
Do Not Lower 27 Ft. Jib In Working Position Below 40° Main Boom Angle Unless Main Boom Length is 78 Ft. Or Less. Boom Angles Below 40° With Boom Over 78 Ft. Will Result In A Tipping Condition.

NOTE: Refer To Page 4 For "Lifting Capacity Deductions" For Capacity Reductions Caused By Stowed Or Erected Auxillary Load Handling Equipment.

Working Range - Full Power Boom
with 43' (13.11 m), 58' (17.68 m), 73' (22.25 m), 88' (26.82 m) and 103' (31.39 m) Jib Lengths



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.

43' (13.11 m), 58' (17.68 m), 73' (22.25 m), and 88' (26.82 m) Jib Capacities

**Maximum Allowable Lifting Capacities
Rated Lifting Capacities In Pounds
On Outriggers
See Set Up Note 2.**

115 ft. Main Boom with 43 ft. Tubular Jib

Main Boom Angle (Deg.)	5°		17.5°		30°		45°		Main Boom Angle (Deg.)
	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	
80.0	32	18,300	40	13,000	47	8,000	55	5,300	80.0
77.5	40	17,200	47	12,300	55	7,600	61	4,900	77.5
75.0	48	16,100	54	11,600	61	7,000	67	4,600	75.0
72.5	55	15,000	61	11,000	67	6,500	72	4,300	72.5
70.0	62	13,800	67	10,000	73	6,100	78	4,100	70.0
67.5	66	11,800	72	9,100	78	5,800	83	4,000	67.5
65.0	73	10,300	78	8,200	84	5,500	88	3,800	65.0
62.5	79	9,000	83	7,000	89	5,200	93	3,700	62.5
60.0	85	7,500	89	6,000	95	4,900	98	3,500	60.0
55.0	97	5,700	100	4,800	102	4,200	107	3,200	55.0
50.0	108	4,100	109	3,700	113	3,600	115	2,900	50.0
45.0	117	3,500	119	3,000	121	2,900	122	2,700	45.0

WARNING
Do Not Lower 43 Ft. Tubular Jib In Working Position Below 45° Main Boom Angle Unless Main Boom Length Is 100 Ft. Or Less, Since Loss Of Stability Will Occur Causing A Tipping Condition.

**Maximum Allowable Lifting Capacities
Rated Lifting Capacities In Pounds
On Outriggers
See Set Up Note 2.**

115 ft. Main Boom with 58 ft. Tubular Jib

Main Boom Angle (Deg.)	5°		17.5°		30°		45°		Main Boom Angle (Deg.)
	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	
80.0	38	14,100	48	10,100	58	6,100	67	3,300	80.0
77.5	45	13,000	56	9,100	65	5,600	74	3,200	77.5
75.0	53	11,800	64	8,200	72	5,100	80	3,100	75.0
72.5	60	10,800	70	7,700	79	4,500	86	3,000	72.5
70.0	67	9,500	77	7,300	85	4,000	91	2,800	70.0
67.5	74	8,100	83	6,700	91	3,800	97	2,800	67.5
65.0	81	7,000	89	6,200	97	3,700	102	2,700	65.0
62.5	87	5,900	95	5,300	103	3,600	108	2,600	62.5
60.0	93	4,800	101	4,400	108	3,400	114	2,500	60.0
55.0	106	3,700	113	3,300	119	2,900	121	2,400	55.0
50.0	117	3,000	123	2,700					50.0

WARNING
Do Not Lower 58 Ft. Tubular Jib In Working Position Below 50° Main Boom Angle Unless Main Boom Length Is 97 Ft. Or Less, Since Loss Of Stability Will Occur Causing A Tipping Condition.

**Maximum Allowable Lifting Capacities
Rated Lifting Capacities In Pounds
On Outriggers
See Set Up Note 2.**

115 ft. Main Boom with 73 ft. Tubular Jib

Main Boom Angle (Deg.)	5°		17.5°		30°		45°		Main Boom Angle (Deg.)
	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	
80.0	40	10,100	55	7,100	67	4,000	78	2,500	80.0
77.5	48	9,400	63	6,500	75	3,700	86	2,400	77.5
75.0	57	8,500	70	6,000	82	3,400	94	2,300	75.0
72.5	65	8,000	78	5,500	89	3,200	100	2,200	72.5
70.0	73	7,600	85	5,000	96	3,000	106	2,100	70.0
67.5	81	6,800	93	4,500	103	2,700	112	2,000	67.5
65.0	88	5,900	101	4,200	110	2,500	117	1,900	65.0
62.5	96	4,900	108	3,900	116	2,200	123	1,800	62.5
60.0	104	3,900	115	3,200	122	2,000	127	1,700	60.0
55.0	117	2,900	126	2,600					55.0

WARNING
Do Not Lower 73 Ft. Tubular Jib In Working Position Below 55° Main Boom Angle Unless Main Boom Length Is 89 Ft. Or Less, Since Loss Of Stability Will Occur Causing A Tipping Condition.

**Maximum Allowable Lifting Capacities
Rated Lifting Capacities In Pounds
On Outriggers
See Set Up Note 2.**

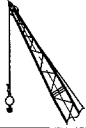
115 Main Boom with 88 ft. Tubular Jib

Main Boom Angle (Deg.)	5°		17.5°		30°		45°		Main Boom Angle (Deg.)
	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	
80.0	42	7,900	60	4,900	76	2,900	89	1,900	80.0
77.5	53	7,500	69	4,500	83	2,700	96	1,800	77.5
75.0	62	7,100	78	4,100	92	2,800	106	1,700	75.0
72.5	71	6,800	87	3,800	101	2,500	113	1,600	72.5
70.0	80	5,900	95	3,500	109	2,300	119	1,500	70.0
67.5	89	5,300	102	3,200	116	2,200	125	1,400	67.5
65.0	98	4,600	109	2,900	122	2,000	131	1,300	65.0
62.5	106	4,000	116	2,600	128	1,900	137	1,200	62.5
60.0	111	3,400	123	2,300					60.0

WARNING
Do Not Lower 88 Ft. Tubular Jib In Working Position Below 60° Main Boom Angle Unless Main Boom Length Is 78 Ft. Or Less, Since Loss Of Stability Will Occur Causing A Tipping Condition.

NOTE: Refer To Page 4 For "Lifting Capacity Deductions" For Capacity Reductions Caused By Stowed Or Erected Auxillary Load Handling Equipment.

103' (31.39 m) Jib Capacities

 <p style="text-align: center;">Maximum Allowable Lifting Capacities Rated Lifting Capacities in Pounds On Outriggers See Set Up Note 2.</p>					
115 Main Boom with 103 ft. Tubular Jib					
Main Boom Angle (Deg.)	5°		17.5°		Main Boom Angle (Deg.)
	Ref. Rad. (ft.)	360°	Ref. Rad. (ft.)	360°	
80.0	43	4,000	61	2,400	80.0
77.5	54	3,700	70	2,200	77.5
75.0	63	3,400	79	1,900	75.0
72.5	72	3,100	88	1,700	72.5
70.0	81	2,800	97	1,500	70.0
67.5	90	2,400	106	1,300	67.5
65.0	99	2,200	115	1,100	65.0
62.5	107	1,900			62.5

⚠ WARNING
Do Not Lower 103 Ft. Tubular Jib In Working Position Below 62.5° Main Boom Angle Unless Main Boom Length is 69 Ft. Or Less, Since Loss Of Stability Will Occur Causing A Tipping Condition.

TUBULAR JIB NOTES

1. All tubular jib capacities are based on a structural strength of boom and jib and do not exceed 85 percent of the tipping loads as determined by SAE Crane Stability Test code J-765a.
2. Rated loads are based on main boom angle regardless of main boom length. For angles not shown, use next lower boom angle to determine allowable capacity. **WARNING:** Lifting heavier loads than the capacities listed is extremely dangerous and is prohibited.
3. Radius shown is for reference only for fully extended 115' main boom and jib with rated load applied to the tubular jib hook.
4. When lifting from tubular jib, deduct total weight of all load handling devices reeved over main boom from tubular jib capacity.
5. **WARNING:** All tubular jib lengths can be erected over rear or over side. Do not erect jibs over front of crane.