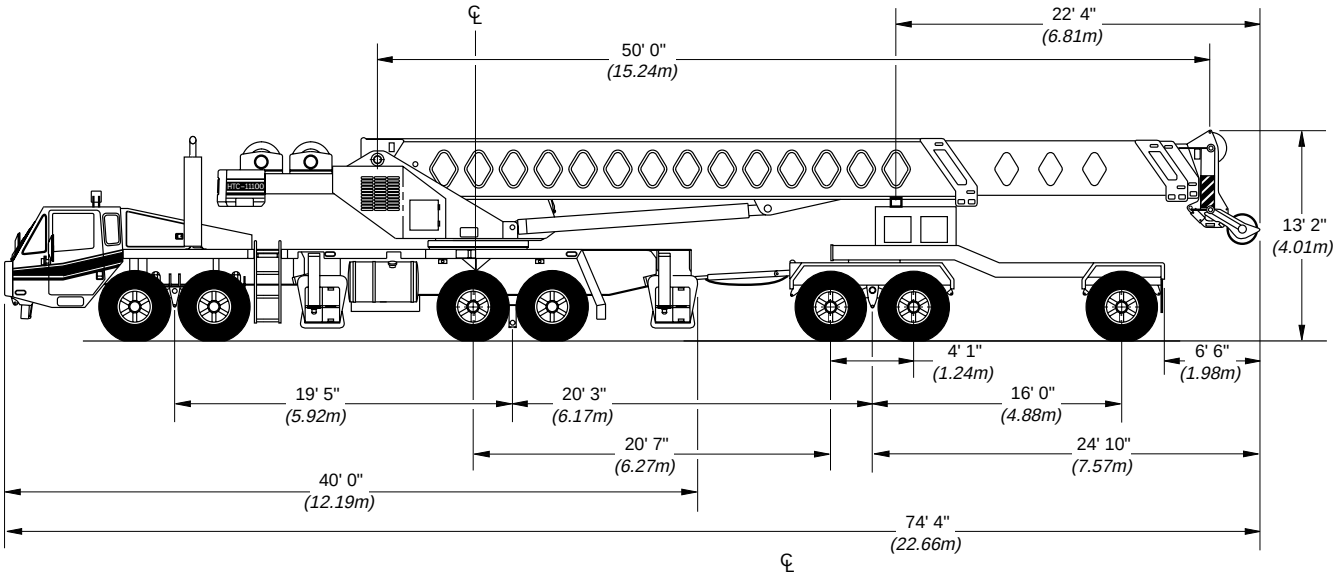
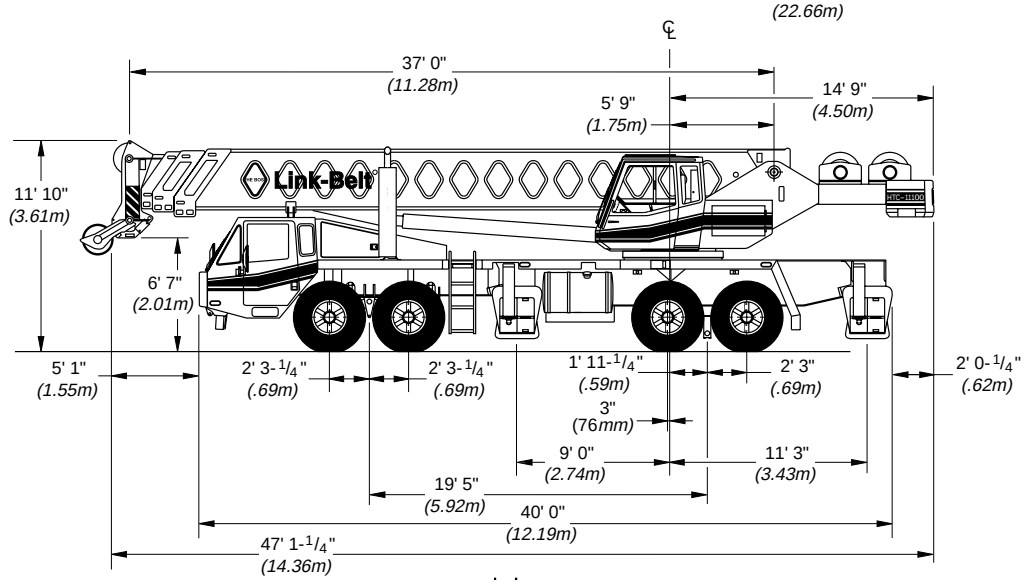
Link-Belt
CONSTRUCTION EQUIPMENT

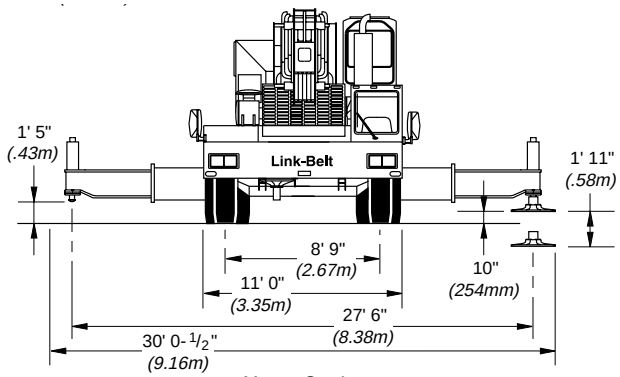
Specifications

Hydraulic Truck Crane

HTC-11100 100-ton *(91 metric ton)*







Not to Scale

General Dimensions	feet	*meters*
Turning radius (centerline to centerline of tires)	42' 0"	*12.80*
Turning radius (curb to curb)	49' 0"	*14.94*
Turning radius (wall to wall)	49' 0"	*14.94*
Ground clearance	10"	*.25*
Tailswing	14' 9"	*4.50*

Litho in U.S.A 5/97

#5241 (supersedes # 5166)

Upperstructure

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.

Microguard 434, Rated Capacity Limiter - Standard; Graphic, audio-visual warning system built into corner post with anti-two block and function limiters. Operating data available includes boom length, boom angle, head height, radius of load, machine configuration, allowed load, actual load and percent of allowed load. Presettable alarms for maximum and minimum boom angles, max. tip height, max. boom length, swing left/right positions. Operator defined area alarm is also provided.

Optional; Load rating bar graph for quick operator reference.

Boom - 37' 0" - 115' 0" *(11.28-35.05 m)* four-section boom includes base section, two power sections and a power pinned fourth section.

Optional: 37' 0" - 115' 0" *(11.28-35.05 m)* 4-section full power boom. Includes base and three full power sections.

Boom head - Six 17-1/4" *(0.44 m)* root diameter nylon head sheaves. Rope dead end lugs provided on each side of boom head. Easily removable wire rope guards are standard.

Auxiliary lifting sheave - *Optional;* Single 17-1/4" *(0.44 m)* root dia. sheave w/removable wire rope guard, mounted to boom. For use with one or two parts of line off optional auxiliary winch. Does not affect erection of fly or use of main head sheaves for multiple reeving.

Boom elevation - One Link-Belt designed hydraulic cylinder with holding valve and bushings in each end. Hand control for controlling boom elevation from -3° to + 80°.

Fly

Standard - 33' 0" *(10.06 m)* stowable one-piece lattice fly.

Jib

Optional: 27' 0" *(8.23 m)* stowable A-frame. 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)*. All can be offset 5°, 17.5°, 30° or 45°.

Optional: 103' 0" *(31.39 m)* pendant supported lattice jib.

Cab and Controls

Environmental **ULTRA-CAB™** of LFC•2000 construction process featuring laminated fibrous composite material; isolated from sound with acoustical fabric insulation, all tinted/tempered safety glass windows. Sliding rear and right side windows and swing-up roof window for maximum visibility and ventilation. Slide-by-door opens to 36" *(0.91 m)* width. 6-way adjustable seat for maximum operator comfort. Hydraulic control levers (joystick type) for swing, winches and boomhoist. Outrigger controls located in overhead control console; sight level bubble also provided in upper cab. Foot controls for boom telescope, swing brake, and engine throttle. Hand throttle with lock on side console.

Cab instrumentation - Corner post mounted gauges for hydraulic oil temperature, fuel, water temperature, voltmeter, tachometer and oil pressure. Audio/visual warning system. Check engine and stop engine indicator lights.

Swing

Bi-directional hydraulic swing motor mounted to a two-stage 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 upperstructure frame with standard counterweight removal system. 8,500 lbs. *(3 856 kg)* with single winch system. 6,500 lbs. *(2 948 kg)* with two winch system.

Hydraulic System

Main pumps - One three-section and one two-section gear type pumps. 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 carrier engine with pump disconnect. Spline-type pump disconnect engaged/disengaged from carrier cab. Max. system operating pressure is 3,250 psi *(228.5 kg/cm²)*. Hydraulic oil cooler standard.

Steer Pump - One gear type pump with a total capacity of 21 gpm *(79 lpm)* supplies oil to the steering and fifth outrigger functions.

Reservoir - 250 gallon *(946.3 L)* capacity. Diffusers for deaeration.

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

Control valves - 8 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.

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

Line pulls and speeds - Maximum available line pull 18,650 lbs. *(8 460 kg)* and maximum line speed of 506 fpm *(154 m/min)* on 18" *(0.46 m)* root dia. grooved drum.

Additional Equipment - Standard

Fire extinguisher, seat belt, horn, dome light, mirrors, electric windshield wiper/washer, defroster fan, sun screen, cup holder, backup alarm, audible swing alarm, cab-mounted work lights, top hatch window wiper, and electronic drum rotation indicators.

Additional Upperstructure Equipment - *Optional*

360° swing lock (meets New York City requirements), diesel or hydraulic heater, air conditioning, 100-ton *(90.78t)* hook block, 8-1/2-ton *(7.71t)* hook and ball, tachometer, rotating beacon and boom floodlight.

Carrier

Type

11' 0" *(3.35 m)* wide, 233" *(5.92 m)* wheelbase.

Standard - 8 x 4 drive.

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

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

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" *(.42 x .15 m)* shoe dia.

Rear - S-cam type, 16.5" x 7" *(.42 x .18 m)* shoe dia.

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

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

Electrical

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

Lights - Four dual beam sealed headlights, front, side, and rear directional signals, stop and tail lights, rear and side clearance lights, license plate light and hazard warning lights.

Outriggers

Integral double box, power hydraulic dual beam outriggers, front and rear. Upper and ground controlled. Beams extend to 27' 6" *(8.38 m)* centerline-to-centerline. Equipped with stowable, aluminum 30-1/2" *(.77 m)* dia. floats.

Bumper outrigger - A front center vertical jack mounted under bumper with 24" *(.61 m)* diameter aluminum float. Ground controlled.

Carrier Cab

One-man cab of LFC•2000 construction process featuring laminated fibrous composite material; acoustical insulation with cloth covering. Equipped with electric windshield wiper and washer, horn, air ride seat with seat belt, dome light, ashtray, defroster, 36,000 BTU capacity heater, door and windows locks, fire extinguisher, LH/RH rear view mirrors, tilt steering wheel, sliding RH and rear tinted windows, and roll up/down LH tinted window.

Cab instrumentation - Standard; illuminated instrument panel, speedometer, odometer, tachometer, voltmeter, hourmeter, fuel gauge, oil pressure gauge, water temperature gauge, front and rear air pressure gauges, audio/visual warning system, automotive type ignition, turn signal indicator, high beam light switch, fuses, and check engine and stop engine indicator lights.

Additional Equipment - Standard

Aluminum fenders, carrier mounted outrigger controls with throttle control, cruise control, desiccant type air dryer, back-up warning alarm, tow hooks, steps to upper cab, lower cab and rear carrier, mud flaps, 120V electric engine block heater and engine brake.

Additional Equipment - *Optional*

Propane engine block heater, ether injection starting package, air conditioning, towing shackles front and rear, electrical and air connections for trailers and boom dollies, and spare tire and wheel assemblies.

Carrier Speeds

			Speed	
Gear		Ratio	mph	*km/h*
High	8th	0.73	56.38	*90.72*
	7th	1.00	41.16	*66.22*
	6th	1.38	29.82	*47.97*
	5th	1.95	21.11	*33.96*
Low	4th	2.77	14.86	*23.91*
	3rd	3.79	10.86	*17.47*
	2nd	5.23	7.87	*12.66*
	1st	7.41	5.55	*8.94*
	LO	16.30	2.52	*4.05*
Deep Reduction	LL2	11.85	3.47	*5.58*
	LL1	26.08	1.58	*2.54*
Hi Rev.	Rev.	4.15	9.91	*15.94*
Lo Rev.	Rev.	15.76	2.70	*4.34*
Deep Reduction	Rev.	25.21	1.68	*2.69*
Deep Reduction @ 600 rpm	LL1	26.08	0.47	*0.75*
Deep Reduction @ 600 rpm	Rev.	25.21	0.48	*0.77*

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

Link-Belt
CONSTRUCTION EQUIPMENT

Engine Specifications

	Detroit Diesel Series 60 - 12.7 Liter
Number of cylinders	6
Bore	5.12" *(0.13 m)*
Stroke	6.30" *(0.16 m)*
Piston Displacement	778 cu. in. *(12 751 cm^3)*
Max. brake h.p. @ r.p.m.	430 *(321 kw)* @ 2,100
Governed load speed r.p.m.	2,100
Peak torque @ r.p.m.	1,450 ft. lbs. *(1 966 joules)* @ 1,200
Electrical system	12-volt charging/12-volt starting
Batteries	Four 12-volt
Air compressor	Bendix TU-FLO 1400

Axle Loads

Base machine with 37' 0" - 115' 0" *(11.28 - 35.05 m)* 4-section manual boom, 33' *(10.05 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, road ranger 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*
2-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 lb. *(3 856 kg)* counterweight	-8,500	*-3 856*	+5,025	*+2 279*	-13,525	*-6 135*
**6,500 lb. *(2 948 kg)* counterweight	-6,500	*-2 948*	+3,842	*+1 743*	-10,342	*-4 691*

*Use 8,500 lb. *(3 856 kg)* counterweight for main hoist.
**Use 6,500 lb. *(2 948 kg)* counterweight for main hoist and auxiliary hoist.

Axle Loads with Boom Trailer

Base machine with 37' 0" - 115' 0" *(11.28 - 35.05 m)* 4-section manual boom, 33' *(10.05 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, road ranger 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*
2-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 lb. *(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 lb. *(2 948 kg)* counterweight	-6,500	*-2 948*	+3,842	*+1 743*	-10,342	*-4 691*	n/a	n/a	n/a	n/a

Link-Belt Construction Equipment Company Lexington, Kentucky
A unit of Sumitomo Construction Machinery Co., Ltd.

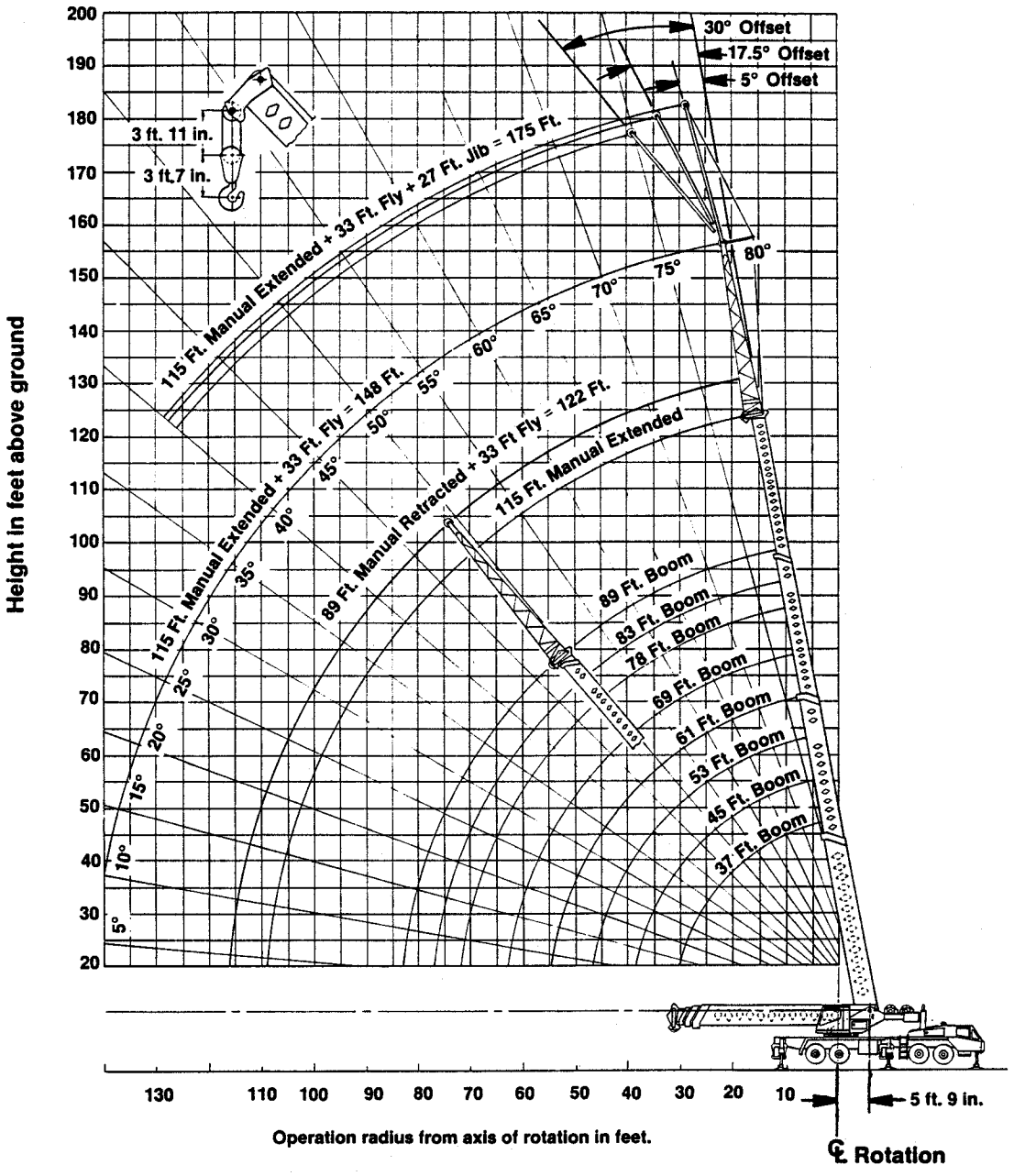
Link-Belt
CONSTRUCTION EQUIPMENT

Lifting Capacities

Hydraulic Truck Crane

HTC-11100 100-ton *(90.78 metric ton)*

4-Section Boom—manual



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

CAUTION: This material is supplied for reference only. Operator MUST refer to in-cab capacity plate to determine allowable machine lifting capacities and operating precedures.

Litho in U.S.A. 8/88

HTC-11100
maximum allowable lifting capacities

Rated Lifting Capacities in Pounds
On Outriggers-Fully Extended
With Fifth Front Outrigger Extended

Carrier Mounted Hydraulic Crane
27.5 Ft. Outrigger Spread, 11 Ft. Wide Carrier

37 Ft. to 89 Ft. Boom with Manual Section Retracted

37 Ft.				45 Ft.			53 Ft.			61 Ft.			69 Ft.			78 Ft.			83 Ft.		
Load Rad. in Feet	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear
10	70.0	200,000	200,000	73.5	105,000	105,000	76.5	103,600	103,600	78.5	102,700	102,700	80.0	102,100	102,100						
12	66.5	161,500	161,500	71.0	105,000	105,000	74.0	103,600	103,600	76.5	102,700	102,700	78.0	99,400	99,400	80.0	92,300	92,300			
15	61.0	137,800	137,800	67.0	105,000	105,000	70.5	103,600	103,600	73.5	100,000	100,000	75.5	87,900	87,900	77.5	83,400	83,400	78.5	76,800	76,800
20	51.0	101,300	101,300	59.5	101,300	101,300	64.5	98,900	98,900	68.5	85,000	85,000	71.5	69,600	69,600	74.0	67,800	67,800	75.0	66,100	66,100
25	39.0	78,600	78,600	51.0	78,600	78,600	58.5	78,600	78,600	63.0	69,900	69,900	67.0	57,200	57,200	70.0	55,800	55,800	71.5	54,400	54,400
30	20.5	60,000	60,000	41.5	60,000	60,000	51.5	60,000	60,000	57.5	59,100	59,100	62.0	48,400	48,400	66.0	47,100	47,100	67.5	45,800	45,800
35				29.5	44,900	44,900	43.5	44,900	44,900	51.5	44,900	44,900	57.0	41,300	41,300	61.5	39,700	39,700	64.0	38,100	38,100
40	(See Note 16)						34.0	35,000	35,000	45.0	35,000	35,000	52.0	35,000	35,000	57.5	35,000	35,000	60.0	35,000	35,000
45							20.5	27,800	27,800	37.0	27,800	27,800	46.0	27,800	27,800	52.5	27,800	27,800	55.5	27,800	27,800
50										27.5	22,700	22,700	39.0	22,700	22,700	47.5	22,700	22,700	51.0	22,700	22,700
60													21.0	15,500	15,500	35.5	15,500	15,500	40.5	15,500	15,500
70																17.0	10,600	10,700	27.0	10,600	10,700
80																					
90																					
100																					
130																					
Minimum Boom Angle (Deg.) For Indicated Length With No Load. See Note 20.																					

WARNING AND OPERATING INSTRUCTIONS

READ AND UNDERSTAND THESE OPERATING INSTRUCTIONS AND THE CHART VALUES BEFORE OPERATING CRANE. OPERATION WHICH DOES NOT FOLLOW THESE INSTRUCTIONS MAY RESULT IN AN ACCIDENT.

GENERAL:

1. Rated lifting capacities in pounds as shown on lift chart pertain to this machine as originally manufactured and normally equipped. Modifications to the machine 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 machine must be in compliance with the information in the operator's, parts and safety manuals supplied with this machine. If these manuals are missing, order replacements through the distributor.
3. The operator and other personnel associated with this machine 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 machine standing level on firm supporting surface.

SET UP:

1. The machine 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 floats or tires to spread the load to a larger bearing surface.
2. When making lifts on outriggers, outrigger beams and front bumper jack cylinder must be fully extended with tires free of supporting surface.
3. When making lifts on rubber, tires must be inflated to the recommended pressure. (See note 23).
4. Boom sections must be fully retracted on tires before swinging to over side or over front position as defined on working area plate.
5. When installing or removing counterweight, use fully retracted boom only. Do not swing counterweight beyond a 30 ft. radius; machine must be on outriggers during this operation.
6. For required parts of line, see wire rope strength plate.

OPERATION:

1. Rated lifting capacities at rated radius shall not be exceeded. Do not tip the machine 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 content 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°. Fly, jib, or fly-jib combinations are all prohibited for both clam and magnet operation.
2. The crane capacities shown on outriggers do not exceed 85% of the tipping loads and crane capacities shown on tires do not exceed 75% of the tipping loads as determined by SAE Crane Stability Test Code J-765a.
3. The crane capacities above the bold lines are based on structural strength or hydraulic limitations.
4. Rated lifting capacities include the weight of hook block, slings, bucket, magnet and auxiliary lifting devices. Their weights must be subtracted from the listed rated load to obtain the net load to be lifted. See also deductions for auxiliary head, fly and jib.
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 where capacities are not listed. At these positions, the machine can overturn without any load on the hook.
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 load rating chart.
9. When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or boom length shall be used.
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 machine lifts, traveling with loads, electrical wires, etc. Side load on boom, fly or jib is extremely dangerous.
11. When making lifts with auxiliary head machinery, the effective length of the boom increases by 2 feet.
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 strength plate) is considered excessive and must be accounted for. Use working range plate to estimate the extra feet of rope then deduct 1 lb. for each 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.
16. The 37 foot boom length capacities are based on boom fully retracted. If boom is not fully retracted, do not exceed ratings shown for the 45 foot boom length.
17. For boom lengths less than 115 feet with manual extended, the rated loads are determined by boom angle only in the column headed by 115 feet. For

Counterweight:
5,800 Lbs. — 2 drum machine
7,800 Lbs. — 1 drum machine

				Manual Extended			33 Ft. Fly With Manual Retracted			33 Ft. Fly With Manual Extended			
89 Ft.				115 Ft.			122 Ft.			148 Ft.			
Load Rad. in Feet	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Load Rad. in Feet
10				(See Note 17)			(See Note 18)			(See Note 19)			10
12													12
15	79.5	56,200	56,200										15
20	76.5	55,000	55,000	80.0	47,400	47,400	78.0	33,600	33,600				20
25	73.0	53,000	53,000	77.5	43,000	43,000	75.5	31,300	31,300				25
30	69.5	44,500	44,500	75.0	36,100	36,100	73.5	29,100	29,100	80.0	28,000	28,000	30
35	66.0	36,500	36,500	72.5	32,500	32,500	71.0	25,700	25,700	77.0	26,000	26,000	35
40	62.5	32,500	32,500	70.0	27,100	27,100	68.0	23,000	23,000	75.5	24,000	24,000	40
45	58.5	27,800	27,800	67.0	25,300	25,300	65.5	20,700	20,700	73.5	22,000	22,000	45
50	54.5	22,700	22,700	64.5	21,100	21,100	60.0	17,100	17,100	71.0	19,700	19,700	50
60	45.5	15,500	15,500	58.5	18,000	18,000	54.5	13,800	13,800	67.0	15,800	15,800	60
70	34.5	10,600	10,700	52.0	13,200	13,200	48.0	10,100	10,200	62.5	13,500	13,500	70
80	18.5	7,100	7,300	45.0	9,600	9,700	40.5	7,400	7,600	58.0	11,400	11,400	80
90				36.5	6,900	7,100	32.0	5,300	5,500	53.0	8,500	8,500	90
100				26.0	4,800	5,000	20.0	3,700	3,900	47.5	6,400	6,500	100
110										41.5	4,700	4,900	110
120										34.5	3,300	3,500	120
130										26.0	2,200	2,400	130
		0°			20°			20°			26°		

Jib Capacities
27 Ft. Jib and 33 Ft. Fly Combination
(See Note 21)

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

Hydraulic Circuit Pressure Settings

Function	Pressure
Winch	3250 PSI
Outriggers Retract	3000 PSI
Outriggers Extend	2000 PSI
Boom Hoist	3250 PSI
Boom Telescope	3000 PSI
Swing	1200 PSI
Hydraulic Controls	2000 PSI
Steering	1750 PSI
Free Fall Clutch	1500 PSI

angles not shown, use the next lower boom angle to determine allowable capacity.

18. For boom lengths less than 122 feet with manual retracted with 33 foot fly erected, the rated loads are determined by boom angle only in the column headed by 122 feet. For angles not shown, use the next lower boom angle to determine the allowable capacity.
19. For boom lengths less than 148 feet with manual extended with 33 foot fly erected, the rated loads are determined by boom angle only in the column headed by 148 feet. For angles not shown, use the next lower boom angle to determine allowable capacity. Lifting from fly tip with 27 foot jib stored beneath is prohibited.
20. Do not lower main boom below 20 degrees unless main boom length is 110 feet or less. Do not lower manual retracted with 33 foot fly erected below 20 degrees unless main boom length is 83 feet or less. Do not lower manual extended with 33 foot fly erected below 26 degrees unless main boom length is 89 feet or less. Failure to follow this note will result in a tipping condition.
21. The 27 foot 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. Warning: Do not lower 27 foot jib in working position below 40 degrees unless main boom length is 78 feet or less, since loss of stability will occur causing a tipping condition. The 27 foot jib capacities are based on structural strength of the boom, fly, and jib combination.
22. The tubular jib capacities are based on main boom angle regardless of main boom length. Refer to 43 ft. to 88 ft. Jib Capacity Chart for rated hook loads and additional information when using the tubular jib.
    Warning, 43 ft. tubular jib:
    Do not lower 43 ft. tubular jib in working position below 45 degrees unless main boom length is 100 ft. or less, since loss of stability will occur causing a tipping condition.
    Warning, 58 ft. tubular jib:
    Do not lower 58 ft. tubular jib in working position below 50 degrees unless main boom length is 97 ft. or less, since loss of stability will occur causing a tipping condition.
    Warning, 73 ft. tubular jib:
    Do not lower 73 ft. tubular jib in working position below 55 degrees unless main boom length is 89 ft. or less, since loss of stability will occur causing a tipping condition.
    Warning, 88 ft. tubular jib:
    Do not lower 88 ft. tubular jib in working position below 60 degrees unless main boom length is 78 ft. or less, since loss of stability will occur causing a tipping condition.
23. 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 feet. For Pick and Carry operations, maximum boom length is restricted to 53 feet and maximum permissible speed is 2.5 MPH. The boom must be centered over the rear of machine 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 the 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 plate.
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.

Crane Capacities On Tires
(See Note 23)

Tire Pressure for 0 to 2.5 MPH, 14RX20, 22 Ply = 120 PSI.

Load Rad. In Feet	Boom Centered Over Rear	
	69 Ft. Boom Max.	53 Ft. Boom Max.
	Stationary	2.5 MPH
15	32,300	26,500
20	20,000	20,000
25	13,000	13,000
30	8,400	8,400
35	5,500	5,500
40	3,500	3,500
45	2,000	2,000

Capacity Deductions For Auxiliary Load Handling Equipment

Picking From Main Boom With:	
Aux. Head Attached	200 Lbs.
33 Ft. Fly Stowed on Base	400 Lbs.
27 Ft. Jib Stowed on Base	400 Lbs.
33 Ft. Fly & 27 Ft. Jib Stowed	800 Lbs.
33 Ft. Fly Erected	4000 Lbs.
33 Ft. Fly & 27 Ft. Jib Erected	10000 Lbs.
43 Ft. Tubular Jib Erected	12000 Lbs.
58 Ft. Tubular Jib Erected	18000 Lbs.
73 Ft. Tubular Jib Erected	25000 Lbs.
88 Ft. Tubular Jib Erected	35000 Lbs.
Picking From 33 Ft. Fly With:	
Aux. Head on Main Boom	200 Lbs.
27 Ft. Jib Stowed on Base	400 Lbs.
27 Ft. Jib Erected	4000 Lbs.
Picking From Tubular Jib With:	
Aux. Head on Main Boom	200 Lbs.
33 Ft. Fly Stowed on Base	400 Lbs.
33 Ft. Fly & 27 Ft. Jib Stowed	800 Lbs.