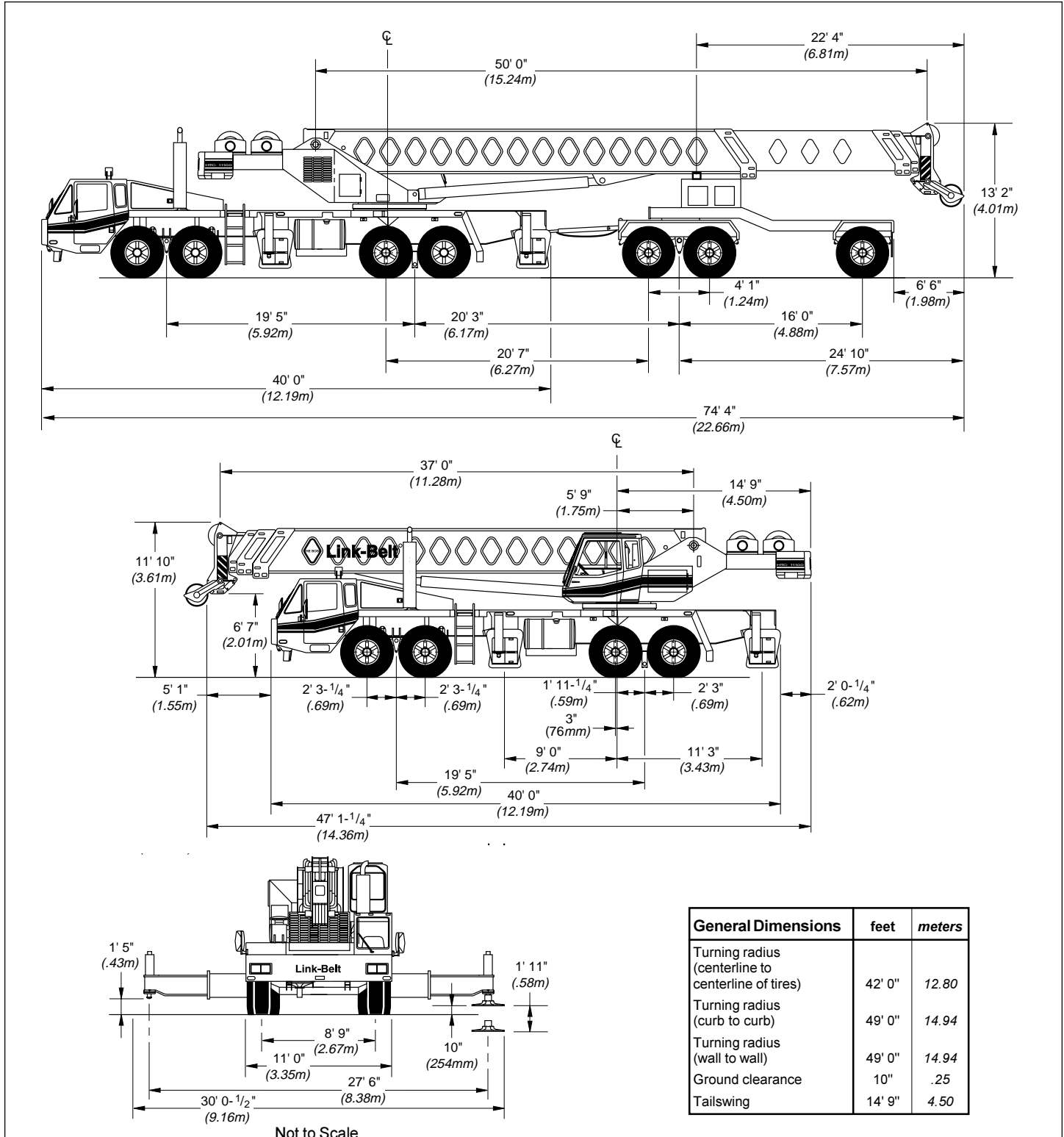


# Specifications

Hydraulic Truck Crane

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



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

# 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/cm<sup>2</sup>). 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)

## 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 <sup>3</sup> )
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.
	112,230	50 908	39,605	17 965	72,625	32 943
<b>Add</b>						
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
<b>Remove</b>						
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.
	121,415	55 074	34,735	15 756	51,339	23 287	28,727	13 031	6,614	3 000
<b>Add</b>										
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
<b>Remove</b>										
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

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