

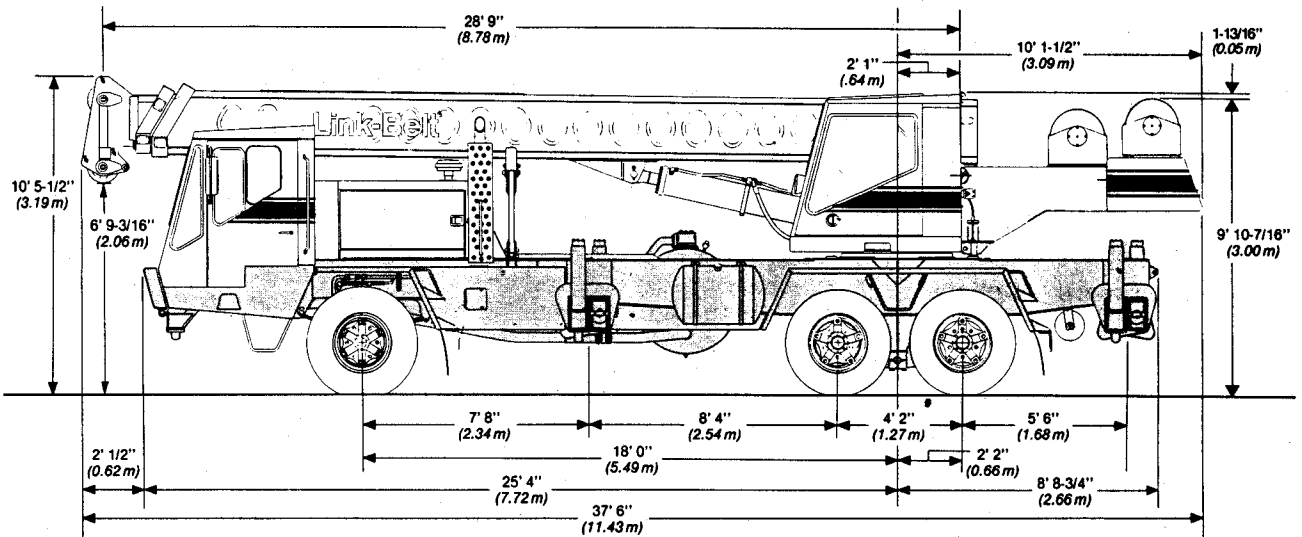
# Specifications

Hydraulic Truck Crane

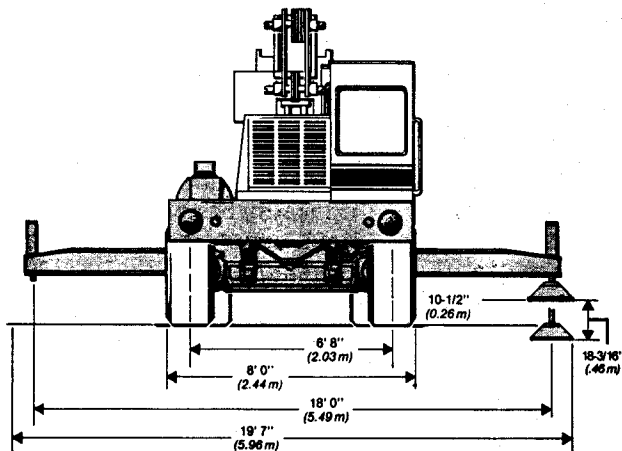
GENERAL INFORMATION ONLY

## HTC-822S

22 Ton (20.00 metric ton)



Not to Scale



Not to Scale

General dimensions	feet	meters
Tailswing of counterweight	10' 7"	3.22
Ground clearance — Standard tires	9.0"	.23
Ground clearance — Optional tires	9.6"	.24
Turning radius C/L of tire — Std. tires	46' 11"	14.30
Turning radius — wall to wall (outside front bumper)	50' 7"	15.42

## Upperstructure



### Boom

Link-Belt patented design. 38' 0" - 120' 6" (11.58 m - 36.73 m) four-section boom consisting of a base section, two power sections and manual fourth section. The fourth section is power pinned by activating a cylinder locking system. Boom side plates have diamond shaped impressions for superior strength to weight ratio and are offset welded to carefully machined 100,000 p.s.i. (689.5 MPa) steel angle chords for maximum integrity and strength. Boom telescope sections are supported by wear shoes both vertically and horizontally.

*Optional* — 35' 0" - 110' 0" (10.67 m - 33.53 m) four-section boom includes base, two power sections, and manual fourth section. Manual section is power extended by manually activating a simple cylinder locking system.

**Load Moment Indicator** — Audio-visual warning system with anti-two block and function kickouts. Constant display of boom length and angle, tip height, radius of load, machine configuration, allowed load, actual load and % of allowed load. Presettable alarms for maximum and minimum boom angles, maximum tip height and maximum boom length.

**Boom head** — **Standard;** Five 17-1/4" (0.44 m) root diameter head sheaves to handle up to 10 parts of 3/4" (19 mm) wire rope. Two removable wire rope guards and rope dead end lugs are provided on each side of the boom head.

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

**Boom elevation** — Two Link-Belt designed double-acting hydraulic boom hoist cylinders with integral holding valves. Hand or optional foot controls for boom elevation from -3° to 78°.

### Fly

*Optional* — 34' 6" (10.52 m) stowable one-piece lattice type.

*Optional* — 33' 0" (10.06 m) stowable one-piece lattice type. For 110' 0" (33.53 m) boom only.

### Jib

*Optional* — 30' 0" (9.14 m) stowable A-frame. Can be offset 5°, 17.5°, and 30°. Attaches to fly only.

*Optional* — 25' 0" (7.62 m) stowable A-frame. Can be offset 5°, 17.5°, and 30°. Attaches to fly only. For 110' 0" (33.53 m) boom only.

### Cab and Controls

Environmental cab; isolated from sound and vibration by rubber mounts. All tinted and tempered safety glass windows. For maximum visibility and ventilation, sliding right side and rear window and swing up roof window supported with two gas cylinders. Slide-by-door opens to 3' 0" (0.91 m) width. Six-way adjustable operator's seat. Control levers for swing, boom telescope, winch and boom hoist, with foot control for swing brake and optional boom hoist. Outrigger controls, sight level bubble.

**Cab instrumentation** — Dash-mounted gauges for hydraulic oil temperature, fuel, water temperature, and oil pressure.

### Swing

Bi-directional hydraulic swing motor mounted to a two-stage planetary reducer for 360° continuous smooth swing at 2.45 r.p.m.

**Swing brake** — **Standard;** Foot operated, spring released disc brake mounted on the speed reducer.

**Swing lock** — **Standard;** 360° position pin-type controlled from the operator's cab. Two position house lock for travel and pick and carry modes.

**Counterweight** — Pinned to upperstructure frame. 10,000 lb. (4 536 kg) counterweight with single-winch system. 9,050 lb. (4 105 kg) counterweight with two-winch system. Optional counterweight removal system is available.

### Hydraulic System

**Main pump** — Four-section gear-type pump. Combined pump capacity of 193 gpm (730.5 lpm). Powered by carrier engine with manual pump disconnect which is operated from carrier cab. Maximum system pressure 2,900 p.s.i. (200.0 Bars). Hydraulic oil cooler is standard.

**Reservoir** — Link-Belt, 140 gallon (530.0 L) capacity. Diffusers for deaeration.

**Filtration** — One six-micron filter located inside the hydraulic reservoir.

**Control valves** — Six separate control valves allow simultaneous operation of all crane functions.

### Load Hoist System

**Standard** — Model 2M main winch with two-speed motor and automatic brake; power up/power down mode of operation. Bi-directional gear type hydraulic motor.

*Optional* — Model 2M auxiliary winch with two-speed motor and automatic brake, power up/power down mode of operation. Bi-directional, gear-type hydraulic motor.

*Optional* — Model 3M winch with power up/power down, two-speed motor and exclusive controlled true gravity freefall. Available on main or both winches.

**Line pulls and speeds** — Maximum line pull is 15,870 lbs. (7 199 kg) and maximum line speed is 548 f.p.m. (167.03 m/min) on 17" (0.43 m) root diameter drums.

### Additional Upperstructure Equipment - Optional

Boom hoist foot control, drum rotation indicators, propane heater, diesel heater, 60-ton (54.43 metric ton) hook block, 8-1/2 ton (7.72 metric ton) ball and swivel, roof window windshield wiper, flood lights lifting lug package, hand throttle, air conditioning, windshield washer, amber rotating beacon, cab mounted spotlight and tachometer engine monitoring system.

**GENERAL INFORMATION ONLY**

**Carrier**

■ **Type**

Link-Belt 8 x 4 drive, 10' 1-1/2" (3.09 m) wide, 230-1/2" (5.85 m) wheelbase.

**Frame** — All-welded high strength alloy steel plate construction with box-type design and integral 100,000 p.s.i. (689.5 MPa) steel outrigger boxes.

■ **Outriggers**

Power hydraulic, double box, single beam outriggers, front and rear. Vertical jack cylinders, each with integral holding valve. Beams extend to 22' 4" (6.81 m) centerline-to-centerline and retract to within 10' 1-1/2" (3.09 m) overall width. Equipped with stowable, lightweight 30-1/2" (.77 m) diameter floats. Controls and sight level bubble located in upperstructure cab.

**Front bumper outrigger** — Standard; front center vertical jack mounted under bumper with 20" (0.51 m) square lightweight float. Provides 360° lifting capacities.

■ **Axles**

**Front** Tandem; 101" (2.57 m) track.

**Rear** Tandem; 90" (2.29 m) track, 6.83 to 1.0 ratio with interaxle differential lockout.

■ **Suspension**

**Front** Spring suspension with torque rods.

**Rear** Solid mount 54" (1.37 m) bogie beam.

■ **Wheels**

**Front** — Cast six-spoke.

**Rear** — Cast six-spoke.

■ **Tires**

**Standard Front** — 18.0 x 22.5 (16 PR) transport type tubeless.

**Standard Rear** — 11.0 x 20.0 (14 PR) transport type with tube.

**Optional Rear** — 12.00 x 20.0 (14 PR) transport type with tube.

**Optional Front** — 445/65R22.5 XZY lug type radials.

**Optional Rear** — 12R20 XZA transport type radials.

**Optional Rear** — 12R20 XZY lug type radials.

■ **Brakes**

Full air on all wheels. Air dryer is standard.

■ **Service**

**Front** — 8 x 4 Cam-type 15" x 6" (.38 m x .15 m) shoe diameter.

**Rear** — Cam-type 16-1/2" x 7" (.42 m x .18 m) shoe diameter.

**Parking and 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 pressure drops below 60 p.s.i. (4.14 Bars) in both systems.

■ **Steering**

Sheppard Steering, rack-and-pinion design. Provides wall-to-wall turning radius of 58' 5-3/4" (17.82 m).

**Clutch** — Lipe-Rollway 14" (0.36 m) diameter, spring loaded, double plate dry disc.

**Universals** — Rockwell or Spicer; easy service type.

■ **Transmission**

**Standard** — Fuller Roadranger RTO-6613; 13 speeds forward, three reverse.

■ **Electrical System**

Two 12-volt batteries; 2,230 cold cranking amps available, 80 amp alternator.

**Lights** — Four dual-beam sealed headlights, front and rear directional signals, stop and tail lights, four-way emergency flashers, back-up lights, front, rear and side clearance lights with integral reflectors and license plate light.

■ **Carrier Cab**

One-man cab. Acoustical insulation with vinyl covering. Equipped with electric windshield wiper and washer, horn, four-way adjustable seat with seat belt, dome and dash lights, cigar lighter, ashtray, 22,400 BTU capacity heater, defroster, door and window locks, fire extinguisher, LH/RH rear view mirrors, tilt/telescoping steering wheel and sliding LH/RH and rear tinted windows.

**Cab instrumentation** — Standard; illuminated instrument panel with speedometer, odometer, tachometer, voltmeter, hourmeter, front and rear air pressure gauges, low air pressure light and warning buzzer, automotive-type ignition (common with upper), engine oil pressure gauge, water temperature gauge, fuel gauge, turn signal indicator, high beam light switch, adjustable defroster vents and circuit breakers.

■ **Additional Equipment - Standard**

Front and rear fenders, air dryer, back-up warning alarm, cab steps, access ladder to rear carrier deck with hand grab rails, front/rear tow loops, and skid-resistant finish on carrier deck and mud flaps.

■ **Additional Equipment - Optional**

Engine block heater, ether injection starting package, spare tire and rim assemblies, front and rear towing shackles and engine monitoring system.

**Travel Speeds and Gradeability** <sup>⊙</sup>

Engine	Maximum Speed		Maximum Gradeability at peak engine torque	
	Mph	Km/h		
G.M. 8.2T	55.1	88.66	Manual - 44.2%	Auto - 46% (stall)
Cummins 6CT8.3*	49.2	79.16	Manual - 64.3%	Auto - 60% (stall)
Cat 3208T*	51.2	82.38	Manual - 57.0%	Auto - 66% (stall)

⊙ Maximum speed based on full load r.p.m. Gradeability is based on peak torque of the engine and machine equipped with standard tires and G.V.W

\* Optional equipment

Engine	G.M. 8.2T	Cummins 6CT8.3*	Cat 3208T*
Cylinders / cycle	8/4	6/4	8/4
Bore	4.25" (.11 m)	4.49" (.11 m)	4.5" (.11 m)
Stroke	4.41" (.11 m)	5.32" (.13 m)	5.0" (.13 m)
Displacement	500 cu. in. (8 193 cm <sup>3</sup> )	504.5 cu. in. (8 269 cm <sup>3</sup> )	636 cu. in. (10 422 cm <sup>3</sup> )
Gross engine power	205 @ 2,800 r.p.m.	210 @ 2,500 r.p.m.	200 @ 2,600 r.p.m.
Peak torque	430 ft. lbs. (583 J)	605 ft. lbs. (820 J)	490 ft. lbs. (664 J)
Electric system	12 volt negative ground	12 volt negative ground	12 volt negative ground
Fuel capacity	60 gal. (227 L)	60 gal. (227 L)	60 gal. (227 L)
Alternator	80 amp	80 amp	80 amp
Crankcase capacity	12 qts. (11.35 L)	23.7 qts. (22.4 L)	18 qts. (17.0 L)
Air compressor	12 c.f.m. (.34 m <sup>3</sup> /min)	12 c.f.m. (.34 m <sup>3</sup> /min)	12 c.f.m. (.34 m <sup>3</sup> /min)
Coolant capacity	10.9 gal. (41.3 L)	11.08 gal. (41.9 L)	14.0 gal. (53.0 L)

\* Optional equipment

**Axle Loads**

Base machine includes 28' 9" - 70' 3" (8.76 - 21.41 m) 3-section boom, 385' (117.35 m) of 1/2" (12.7 mm) wire rope, single-speed main winch, 6x4 carrier with GM 8.2T diesel engine, full fuel, front bumper outrigger, 15x22.5 front tires, 10x20 highway rear tires, full hydraulic oil, pontoons stored, 4,850 lb. (2 200 kg) counterweight and Roadranger transmission.	G.V.W. <sup>⊙</sup>		Upper facing front				Upper facing rear			
			Front axle <sup>⊙</sup>		Rear axle		Front axle		Rear axle	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
	46,752	21 203	14,236	6 456	32,516	14 747	8,768	3 977	37,984	17 226
24' (7.32 m) lattice fly, stowed	480	218	382	173	98	44	-382	-173	862	391
Hookblock at bumper	350	176	575	261	-187	-85	575	261	-187	-85
Headache ball at bumper	325	147	481	218	-156	-71	481	218	-156	-71
Auxiliary lifting sheave	75	34	115	52	-40	-18	-115	-52	190	86
16.5 x 22.5 opt. front tires & rims	48	22	48	22	—	—	48	22	—	—
11 x 20 opt. rear tires & rims	261	118	—	—	261	118	—	—	261	118
11R20 opt. rear tires & rims	400	181	—	—	400	181	—	—	400	181
Caterpillar 3208T engine	175	79	156	71	19	9	156	71	19	9
Cummins 6CT8.3	133	60	121	55	12	5	121	55	12	5
6 x 6 drive	786	356	602	273	184	83	602	273	184	83
Automatic transmission	-155	-70	-115	-52	-40	-18	-115	-52	-40	-18
Auxiliary winch w/300' (91.44 m) wire rope	168	76	-79	-36	247	112	79	36	89	40

⊙ Adjust gross vehicle weight & axle loading according to component weight.

Note: All weights are ± 3%.

⊙ When selecting a tire & drive combination, the front axle load with upper facing front should not exceed the limits in the table below:

**Maximum Front Axle Load Table**

Drive	Tire	Maximum Axle Load @ 50 mph (80.45 km/h) <sup>†</sup>
6 x 4	15.0 X 22.5 H	18,200 lbs. (8 255 kg)
	16.5 X 22.5 H	19,700 lbs. (8 935 kg)
6 x 6	15.0 X 22.5 H	18,200 lbs. (8 255 kg)
	16.5 X 22.5 H	19,700 lbs. (8 935 kg)

<sup>†</sup> For speeds exceeding 50 mph (80.45 km/h) see Operator's Manual.

• Link-Belt is a registered trademark.

We are constantly improving our products and therefore reserve the right to change designs and specifications.

**Link-Belt Construction Equipment Company** Lexington, Kentucky

A unit of Sumitomo Construction Machinery Co. Ltd.