

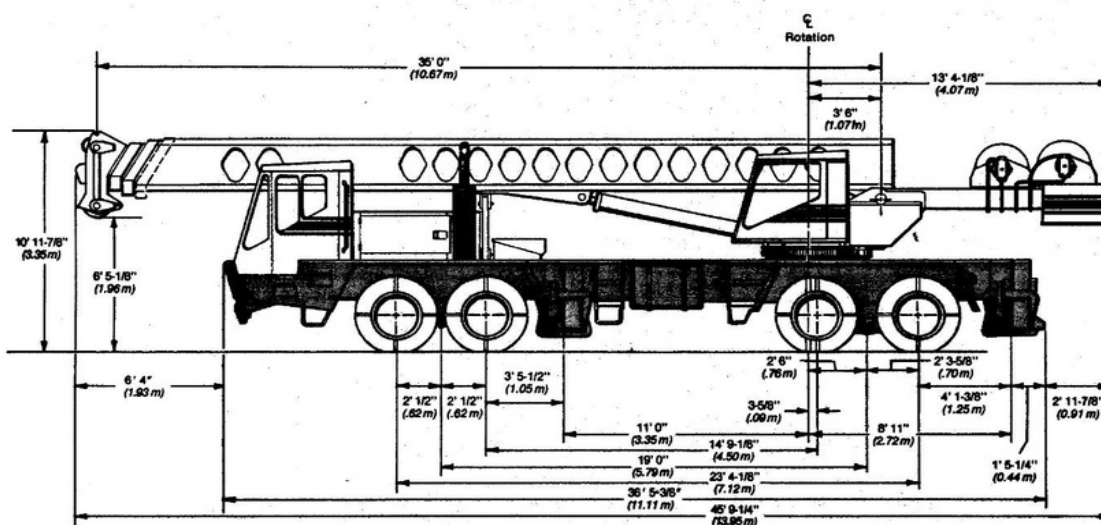
Specifications

Hydraulic Truck Crane

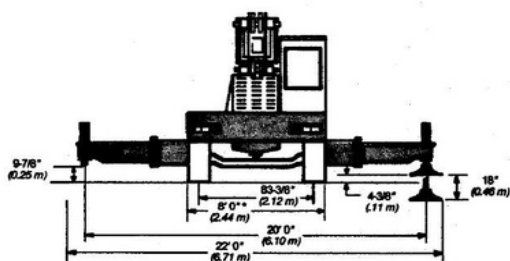
GENERAL INFORMATION ONLY

HTC-850

50-Ton (45.36 metric ton)



Not to Scale



Not to Scale

General dimensions	feet	meters
Tailswing of counterweight	13' 8-5/8"	4.18
Ground clearance — Standard tires	8-1/2"	.22
Ground clearance — Optional tires	9"	.23
Turning radius — Standard tires	49' 0"	14.93
Turning radius — (wall to wall) (outside front bumper)	55' 7"	16.94

Upperstructure



■ Boom

Link-Belt patented design. 35' 0" — 85' 0" (10.67 m — 25.91 m) three-section boom with two power sections. 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.

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.

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



Boom head — **Standard;** Four 16-3/8" (0.42 m) root diameter head sheaves with five 16-3/8" (0.42 m) root diameter head sheaves available 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 16-3/8" (0.42 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 — 33' 0" (10.06 m) stowable one-piece lattice type.



■ Jib

Optional — 25' 0" (7.62 m) stowable A-frame. Can be offset 5°, 17.5°, and 30°. Attaches to fly 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. 9,000 lb. (4 082 kg) counterweight with single-winch system. 8,050 lb. (3 651 kg) counterweight with two-winch system. Optional counterweight removal system is available.

■ Hydraulic System

Main pump — Three-section gear-type pump. Combined pump capacity of 185 gpm (700 lpm). Powered by carrier engine (1:1 ratio) with pump disconnect. Pump disconnect is a jaw-type clutch engaged/disengaged from carrier cab. Maximum system operating pressure is 2,900 p.s.i. (203 kg/cm²). Hydraulic oil cooler is standard.

Reservoir — Link-Belt, 145 gallon (548.83 L) capacity. Diffusers for deaeration.

GENERAL INFORMATION ONLY

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 smooth drums.

■ 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, tachometer and engine monitoring system.

GENERAL INFORMATION ONLY

Carrier

■ Type

Link-Belt 8' 0" (2.44 m) wide, 228" (5.79 m) wheelbase.
Standard — 8 x 4 drive

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

Standard — Power hydraulic, double box, dual beam outriggers, front and rear. Vertical jack cylinders, each equipped with integral holding valve. Beams extend to 20' 0" (6.10 m) centerline-to-centerline and retract to within 8' 0" (2.44 m) overall width. Equipped with stowable, lightweight 24" (61 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" (.51 m) square lightweight float. Provides 360° lifting capacities.

■ Axles

Front- Tandem, 83.31" (2.12 m) track.

Rear- Tandem, 71.8" (1.82 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 — 16.5 x 22.5 (16 PR) transport type tubeless.

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

Optional Front — 18.00 x 22.5 (16-PR) transport type tubeless.

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 16-1/2" x 6" (.42 m x .15 m) shoe diameter.

Rear — Cam-type 16-1/2" x 7" (.42 m x .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 pressure drops below 60 p.s.i. (4.14 Bars) in both systems.

■ Steering

Sheppard Steering, rack-and-pinion ign. Provides wall-to-wall turning radius of 55' 7" (16.94 m).

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

Universals — Rockwell; easy service type.

■ Transmission

Standard — Fuller Roadranger RTO-6613; 13 speeds forward, 3 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, mud flaps, and skid-resistant finish on carrier deck.

■ Additional Equipment - Optional

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

Link-Belt CONSTRUCTION EQUIPMENT

Travel Speeds and Gradeability [Ⓢ]

Engine	Maximum Speed		Maximum Gradeability at peak engine torque
	Mph	Km/h	
Cummins 6CTA 8.3	50.43	81.16	44.1%

Ⓢ 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.

Engine	Cummins 6CTA 8.3
Cylinders / cycle	6 / 4
Bore	4.5" (0.11 m)
Stroke	5.32" (0.14 m)
Displacement	504.5 cu. in. (8 267 cm ³)
Gross engine power	234 h.p. @ 2200 rpm
Peak torque	640 ft. lbs. (867.72 J)
Electric system	12 volt negative ground
Fuel capacity	100 gallons (378.5 L)
Alternator	80 amps
Crankcase capacity	23.7 quarts (22.43 L)
Air compressor	13.2 c.f.m. (0.37 m ³ /min)

GENERAL INFORMATION ONLY

Axle Loads

Base machine includes 35'-85' (10.67m- 25.91m) three-section boom with four-sheave head machinery, main winch with two-speed hoisting and power up/down, 600' (182.88 m) 3/4" (19mm) wire rope, 8x4, 8' (2.44m) carrier with Cummins 6CTA 8.3 diesel engine, front bumper outrigger, Powerdranger transmission, full fuel and hydraulics.	G.V.W. [Ⓢ]		Upper facing front				Upper facing rear			
			Front axle		Rear axle		Front axle		Rear axle	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
	62,248	28 230	31,633	14 345	30,615	13 885	14,672	6 653	47,576	21 577
35'-110' (10.67m - 33.53m) 4-section boom	1,952	885	1,655	750	297	135	-1,141	-517	3,093	1 403
Counterweight for single winch	9,000	4 082	-4,416	-2 003	13,416	6 084	6,785	3 077	2,215	1 005
Counterweight for two winches	8,050	3 651	-3,950	-1 791	12,000	5 442	6,069	2 752	1,981	899
Freefall main winch with 600' (182.88 m) rope	442	200	-128	-58	570	259	243	110	199	90
Power up/down aux. winch with 465' (141.73 m) rope	1,758	797	-529	-240	2,287	1 037	991	450	767	348
Freefall aux. winch with 465' (141.73 m) rope	2,200	998	-591	-268	2,791	1 266	1,170	530	1,030	467
33' (10.06 m) lattice fly, stowed	1,040	472	918	416	122	55	-644	-292	1,684	764
25' (7.62 m) A-frame jib, stowed	1,128	512	759	344	369	167	-462	-210	1,590	721
Hook block at bumper	1,070	485	1,657	751	-587	-266	—	—	—	—
Headache ball at bumper	325	147	537	244	-212	-96	—	—	—	—
Auxiliary lifting sheave	150	68	284	129	-134	-61	-245	-111	395	179
Fly and jib stowage brackets	230	104	188	85	42	19	-127	-58	357	162
18.0 X 22.5 front tires and rims	136	62	136	62	—	—	—	—	—	—
12.0 X 20.0 rear tires with rims and wheels	413	187	—	—	413	187	—	—	—	—
Counterweight removal system	120	54	-55	-25	175	79	86	39	34	15

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

Note: All weights are ± 3%.

Maximum Front Axle Load Table

Tire	Maximum Axle Load @ 50 mph (80.45 km/h)*
16.5 X 22.5 H	39,500 lbs. (17 917 kg)
18.0 X 22.5 H	40,000 lbs. (18 142 kg)

* For speeds exceeding 50 mph (80.45 km/h) see Operator's Manual.

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Link-Belt Construction Equipment Company Lexington, Kentucky

A unit of Sumitomo Construction Machinery Co., Ltd.

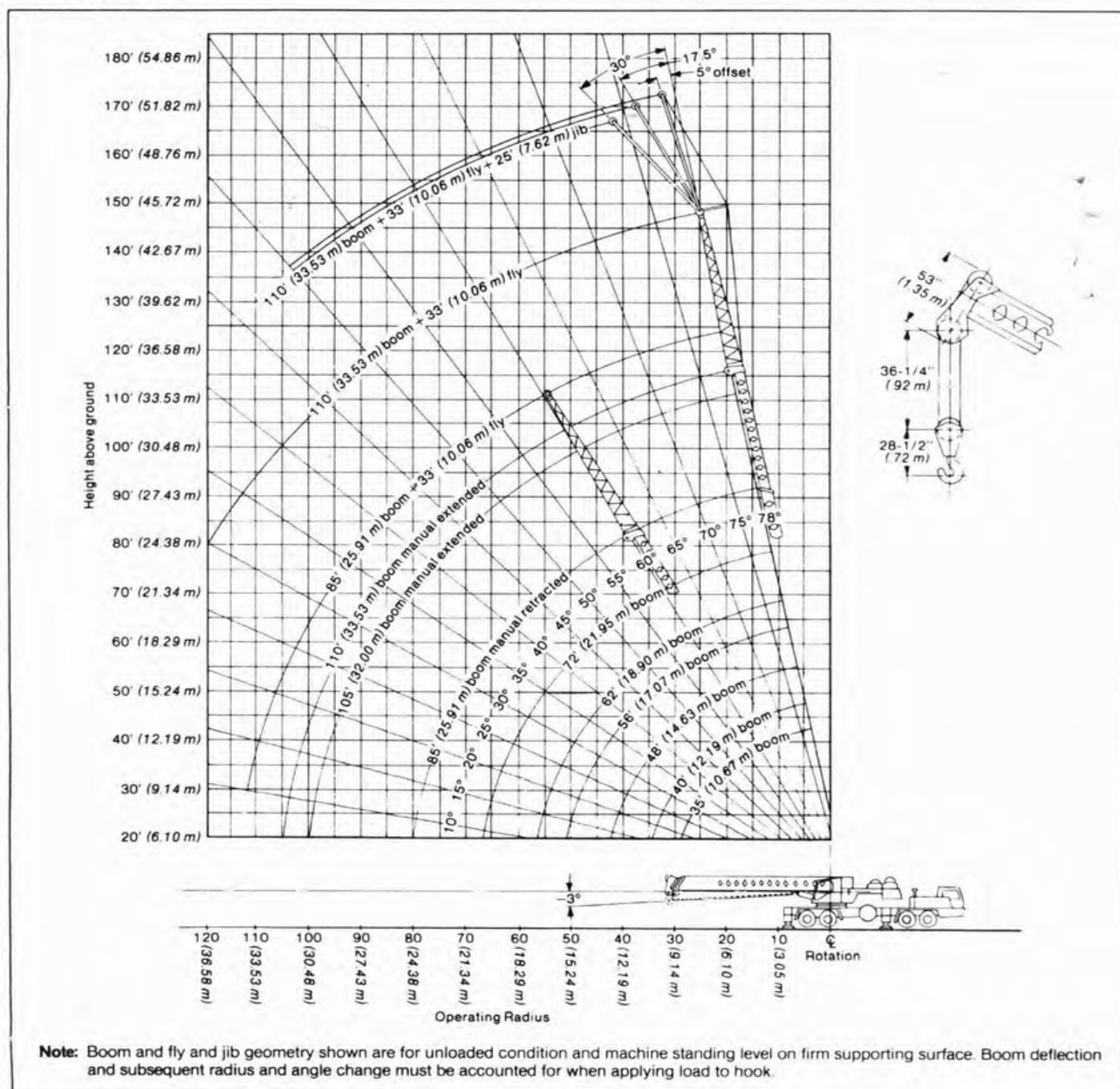
Lifting Capacities

Hydraulic Crane

PCSA Class 10-154

HTC-850 50-ton (45.36 metric ton)

4-section boom



Litho in U.S.A. 4/86

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

#6070

HTC-850 Lifting Capacities

8' (2.44m) carrier

35'-110' (10.67-33.53m) 4- section boom

Refer to Operating Instructions page 4

Capacities On Outriggers ^① Manual Section Retracted															77' (23.47 m) boom With 33' (10.06 m) Fly			85' (25.91 m) boom With 33' (10.06 m) Fly		
Load radius	35' (10.67 m)		40' (12.19 m)		48' (14.63 m)		56' (17.07 m)		62' (18.90 m)		72' (21.95 m)		85' (25.91 m)		110' (33.52 m) ^②			118' (35.96 m) ^②		
	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Angle	Side	Rear	Angle	Side	Rear
10' 3.05 m	100,000 45,360	100,000 45,360	72,100 32,705	72,100 32,705	70,800 32,115	70,800 32,115	68,000 30,845	68,000 30,845							See Note ①			See Note ①		
12' 3.66 m	92,200 41,822	92,200 41,822	71,800 32,568	71,800 32,568	70,800 32,115	70,800 32,115	68,000 30,845	68,000 30,845	67,200 30,482	67,200 30,482										
15' 4.57 m	73,100 33,158	73,100 33,158	68,700 31,162	68,700 31,162	63,300 28,713	63,300 28,713	63,300 28,713	63,300 28,713	58,800 26,672	58,800 26,672	50,000 22,680	50,000 22,680								
20' 6.10 m	53,300 24,177	53,300 24,177	53,000 24,041	53,000 24,041	53,000 24,041	53,000 24,041	53,000 24,041	53,000 24,041	48,500 22,000	48,500 22,000	42,100 19,097	42,100 19,097	36,200 16,420	36,200 16,420						
25' 7.62 m	37,600 17,055	42,000 19,051	37,600 17,055	42,000 19,051	37,600 17,055	42,000 19,051	37,600 17,055	42,000 19,051	37,600 17,055	41,000 18,598	36,300 16,466	36,300 16,466	30,000 13,608	30,000 13,608	77.0	22,200 10,070	22,200 10,070	77.0	18,500 8,392	18,500 8,392
30' 9.14 m															75.0	22,200 10,070	22,200 10,070	75.0	17,500 7,938	17,500 7,938
35' 10.67 m															72.0	20,200 9,163	20,200 9,163	73.0	15,500 7,031	15,500 7,031
40' 12.19 m															69.0	17,700 8,029	18,900 8,573	71.0	13,900 6,305	13,900 6,305
45' 13.72 m															67.0	14,400 6,532	17,300 7,847	68.0	12,400 5,625	12,400 5,625
50' 15.24 m															64.0	11,900 5,398	15,000 6,804	65.0	10,900 4,944	10,900 4,944
55' 16.76 m															61.0	9,900 4,491	12,800 5,806	63.0	9,600 4,355	9,600 4,355
60' 18.29 m															57.0	8,300 3,765	10,900 4,944	60.0	8,100 3,674	8,600 3,901
65' 19.81 m															54.0	7,000 3,175	9,400 4,264	57.0	6,800 3,084	7,700 3,493
70' 21.34 m															50.0	5,900 2,676	8,100 3,674	54.0	5,700 2,586	6,900 3,130
80' 24.38 m															43.0	4,200 1,905	6,100 2,767	47.0	3,900 1,769	5,600 2,540
90' 27.43 m															34.0	2,800 1,270	4,600 2,087	40.0	2,600 1,179	4,400 1,996
100' 30.48 m															22.0	1,800 816	3,500 1,588	31.0	1,600 726	3,300 1,497

Note: For 360 capacities, use the over side capacities with the bumper outrigger set in proper working position.

① Boom sections must be extended equal distances.

② Intermediate capacities for boom plus fly are permissible; See Operating Instructions Number 16.

Main Boom Capacities① On Tires												
Load radius		Bias Tires				Radials Tires				Crane capacities on tires depend on tire capacity, condition of tires, and tire pressures.		
		Creep② over rear only		1 mph. (1.61 kph) over rear only		Creep② over rear only		1 mph. (1.61 kph) over rear only				
Feet	meters	Pounds	Kg	Pounds	Kg	Pounds	Kg	Pounds	Kg			
10	3.05	34,800	15,785	22,000	9,979	26,800	12,156	21,600	9,798			
12	3.66	32,400	14,697	20,500	9,299	25,000	11,340	20,100	9,117			
15	4.57	29,100	13,200	18,400	8,346	22,500	10,206	18,100	8,210			
20	6.10	18,900	8,573	14,800	6,713	18,300	8,301	14,600	6,623			
25	7.62	13,200	5,988	11,900	5,398	12,800	5,806	11,700	5,307			
30	9.14	9,400	4,264	9,200	4,173	9,100	4,128	9,100	4,128			
35	10.67	6,900	3,130	6,800	3,084	6,600	2,994	6,600	2,994			

Tires	Ply rating	Creep② Inflation	1.0 m.p.h. (1.61 km/hr) Inflation
11.0 x 20.0	14	100 p.s.i. (6.90 Bars)	100 p.s.i. (6.90 Bars)
12.0 x 20.0	14	100 p.s.i. (6.90 Bars)	90 p.s.i. (6.21 Bars)
16.5 x 22.5	16	100 p.s.i. (6.90 Bars)	90 p.s.i. (6.21 Bars)
18.0 x 22.5	16	95 p.s.i. (6.55 Bars)	85 p.s.i. (5.86 Bars)

① See Operating Instruction; Set-Up Number 4

② See Operating Instruction; Set-Up Number 3

Wire rope size and type

Wire rope application	Size and type used	Wire rope description
Main winch	3/4" (19 mm) diameter, Type "N"	Type "N" - 6 x 25 (6 x 19 class) filler wire, extra improved plow steel, preformed, independent wire rope core, right lay, regular lay.
Auxiliary winch	3/4" (19 mm) diameter, Type "N"	

HTC-850 Lifting Capacities

8' (2.44 m) carrier

35'-110' (10.67-33.53 m) 4-section boom

Refer to Operating Instructions page 4

Capacities On Outriggers Manual Section Extended									
Load radius	105' (32.00 m) ①			110' (33.53 m) ①			110' (33.53 m) Boom With 33' (10.06 m) Fly		
	Angle	Side	Rear	Angle	Side	Rear	Angle	Side	Rear
	See Note ①			See Note ①			See Note ②		
25' 7.62 m	77°	20,200 9163	20,200 9163	77°	19,000 8618	19,000 8618			
30' 9.14 m	74°	20,200 9163	20,200 9163	75°	18,500 8392	18,500 8392			
35' 10.67 m	72°	19,500 8845	19,500 8845	73°	17,900 8119	17,900 8119	77°	9,400 4264	9,400 4264
40' 12.19 m	69°	17,200 7802	18,000 8165	70°	16,000 7258	16,000 7258	75°	9,400 4264	9,400 4264
45' 13.72 m	66°	14,000 6350	16,200 7348	67°	13,900 6305	14,100 6396	73°	9,000 4082	9,000 4082
50' 15.24 m	63°	11,400 5171	14,600 6623	64°	11,300 5126	12,500 5670	71°	8,400 3810	8,400 3810
55' 16.76 m	60°	9,400 4264	12,400 5625	61°	9,400 4264	11,100 5035	69°	8,000 3629	8,000 3629
60' 18.29 m	56°	7,900 3583	10,500 4763	58°	7,800 3538	10,000 4536	67°	7,300 3311	7,300 3311
65' 19.81 m	53°	6,600 2994	9,000 4082	55°	6,500 2948	8,900 4037	65°	6,500 2948	6,500 2948
70' 21.34 m	49°	5,500 2495	7,800 3538	51°	5,400 2449	7,700 3493	62°	5,700 2586	5,700 2586
80' 24.38 m	40°	3,700 1678	5,800 2631	44°	3,600 1633	5,700 2586	57°	4,500 2041	4,600 2087
90' 27.43 m	30°	2,400 1089	4,300 1950	35°	2,300 1043	4,200 1905	52°	3,200 1452	3,600 1633
100' 30.48 m							47°	2,200 998	2,800 1270
110' 33.53 m							40°		2,100 953

Note: For 360° capacities, use the over side capacities with the bumper outrigger set in proper working position.

- ① Capacities for boom with manual section extended can be extended or retracted, but are based on boom angle only. See Operating Instructions Number 15.
 ② Capacities for boom plus fly can be extended or retracted, but are based on boom angle only. See Operating Instructions Number 17.
 ③ Capacities are shown for 4-section boom with manual extended and with boom retracted to 105' (32.00 m)

Jib Capacities			
33' (10.06 m) fly plus 25' (7.62 m) jib			
Boom angle	Jib Offset		
	5°	17.5°	30°
78°	5,100 2313	5,100 2313	4,200 1905
75°	5,100 2313	5,100 2313	4,000 1814
70°	5,100 2313	4,900 2223	3,600 1633
65°	4,500 2041	4,100 1860	3,400 1542
60°	2,900 1315	2,600 1179	2,400 1089
55°	1,800 816	1,600 726	1,500 680

Capacity Deductions for Auxiliary Load Handling Equipment	
Aux. Head	200 lb. (91 kg)
Jib Stowed	600 lb. (272 kg)
Fly Stowed	700 lb. (318 kg)
Fly Erected	1700 lb. (771 kg)
Fly & Jib Stowed	1300 lb. (590 kg)
Fly & Jib Erected	4300 lb. (1951 kg)
Picking From 33 Ft. (10.66 m) Fly With	
Jib Erected	2000 lb. (907 kg)
Jib Stowed	600 lb. (272 kg)

Drum wire rope capacities

Wire rope layer	Main and auxiliary drum 17" (0.43 m) root diameter smooth and grooved lagging			
	3/4" (19 mm) wire rope			
	Rope per layer		Total wire rope	
	Feet	meters	Feet	meters
1	97	29.57	97	29.57
2	111	33.83	208	63.40
3	114	34.75	322	98.15
4	122	37.19	444	135.33
5	130	39.62	574	174.96
6	139	42.37	713	217.32
7	140	42.67	853	259.99

Line Speeds and Pulls

Layer	Speed	Main or auxiliary winch -17" (0.43 m) drum			
		Line Speeds		Available Line Pulls	
		F.p.m.	m/min.	Lbs.	kgs.
First	Low	172	52.43	15,870	7199
	High	364	110.95	7,520	3411
Second	Low	187	57.00	14,630	6636
	High	394	120.09	6,930	3143
Third	Low	201	61.26	13,580	6160
	High	425	129.54	6,430	2917
Fourth	Low	216	65.84	12,660	5743
	High	456	138.99	6,000	2722
Fifth	Low	230	70.10	11,860	5380
	High	487	148.44	5,620	2549
Sixth	Low	245	74.68	11,160	5062
	High	517	157.58	5,280	2395
Seventh	Low	260	79.25	10,530	4776
	High	548	167.03	4,990	2264

Hydraulic Circuit Pressure Settings		
Circuit	Function	Pressure
Main	Boom hoist	2,900 p.s.i. (200.0 Bars)
	Wire rope hoist	2,750 p.s.i. (189.66 Bars)
Secondary	Swing	1,500 p.s.i. (103.45 Bars) at port relief
	Inner-mid telescope	2,500 p.s.i. (172.41 Bars)
	Outer-mid telescope	2,500 p.s.i. (172.41 Bars)
	Outriggers	2,500 p.s.i. (172.41 Bars)
Charge Pump	Winch brake and clutch	1,500 p.s.i. (103.45 Bars)

Link-Belt
CONSTRUCTION EQUIPMENT

Warning and Operating Instructions

HTC-850

General:

1. Rated lifting capacities in pounds as shown on lift chart pertain to this machine as originally manufactured and normally equipped by Link-Belt Construction Equipment Company. 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.
5. All capacities are in pounds with metric equivalent in *italic*.

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 must be fully extended with tires free of supporting surface.
3. Crane Capacities on tires depend on tire capacity, condition of tires, and tire pressure. On-tire picks require lifting from main boom head only on a smooth and level surface. Boom sections must be extended equally. Two conditions are available for pick and carry operations. The first condition is creep. Creep is motion for less than 200' (60.9 m) in a 30 minute period and not exceeding 1 m.p.h. (1.61 km/hr). The second condition is 1 m.p.h. (1.61 km/hr) maximum speed. For each condition, creep and 1 m.p.h. (1.61 km/hr), the boom must be centered over rear with swinglock engaged and the load must be restrained from swinging. Lifts with manual extended, fly or fly-jib combination erected are prohibited on tires.
4. When making lifts on rubber, tires must be inflated to the recommended pressure.
5. Over the front working area, as on the working area diagram, is restricted to a 35' (10.67 m) boom length, unless machine is equipped with a front bumper outrigger and the front bumper outrigger is set in proper working position.
6. Outriggers must be set before swinging boom to over side position as shown on working area diagram.
7. When installing or removing counterweight, use fully retracted boom only. Do not swing counterweight beyond a 25' (7.62 m) radius. Machine must be on outriggers during this operation.

Operation:

1. Rated lifting capacities at rated radius shall not be exceeded. Do not tip machine to determine allowable load. For concrete bucket operation, weight of bucket and load shall not exceed 80% of rated lifting capacity. For clamshell bucket operation, weight of bucket and bucket content is restricted to a maximum weight of 7,000 pounds (3175 kg) or 80% of rated lifting capacity which ever is less. For magnet operation weight of magnet and load is restricted to a maximum weight of 7,000 pounds (3175 kg) or 80% of rated lifting capacity which ever is less. For clamshell and magnet operation maximum boom length is restricted to 56 feet (17.07 m) and the boom angle is restricted to a minimum of 35°. Manual extended, fly 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 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' (0.61 m). Effective length of boom is length shown on boom length indicator plus 2' (0.61 m).
12. Power sections 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. (0.45 kg) for each foot of wire rope before attempting to lift a load.

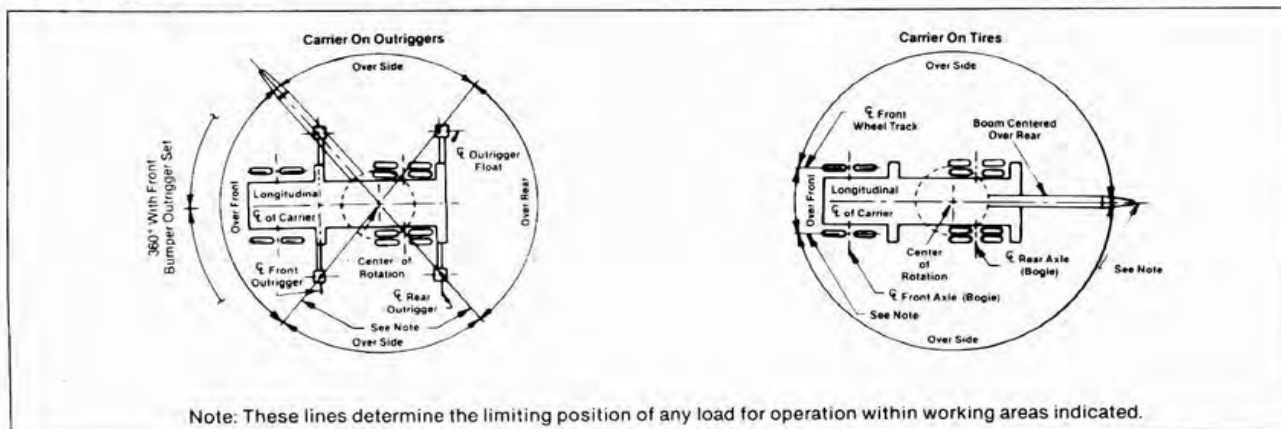
15. The rated loads for the manual extended are determined by boom angle only for boom lengths other than 105' (32.00 m) and 110' (33.53 m) as follows: For boom lengths less than 105' (32.00 m), the rated loads are determined by boom angle only in the column headed by 105' (32.00 m). For boom lengths between 105' (32.00 m) and 110' (33.53 m), the rated loads are determined by boom angle only in the column headed by 110' (33.53 m), manual extended. For angles not shown, use the next lower boom angle to determine allowable capacity.
16. The rated loads for the manual retracted with 33' (10.06 m) fly are determined by boom angle only for boom lengths other than 110' (33.53 m) and 118' (35.97 m) as follows: For boom lengths less than 110' (33.53 m) the rated loads are determined by boom angle only in the column headed by 110' (33.53 m), manual retracted with fly. For boom lengths between 110' (33.53 m) and 118' (35.97 m), the rated loads are determined by boom angle only in the column headed by 118' (35.97 m). For angles not shown, use the next lower boom angle to determine allowable capacity.
17. For boom lengths with fly less than 143' (43.59 m) with manual extended, the rated loads are determined by boom angle only in the column headed by 143' (43.59 m). For angles not shown, use the next lower boom angle to determine allowable capacity.
18. With front bumper outrigger set, use over side capacity values for 360° working area.
19. Do not lower 105' (32.00 m) boom length below 30°. Do not lower 110' (33.53 m) boom length below 35°. Do not lower 77' (23.47 m) boom with 33' (10.06 m) fly below 22°. Do not lower 85' (25.91 m) boom with 33' (10.06 m) fly below 31°. Do not lower 110' (33.53 m) boom with 33' (10.06 m) fly below 40°.
20. The 25' (7.62 m) 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 can be used to operate over rear or over side. Warning: Do not lower 25' (7.62 m) jib in working position below 55° unless boom is fully retracted.
21. The 35' (10.67 m) boom length capacities are based on boom fully retracted. If not fully retracted, do not exceed ratings for the 40' (12.19 m) boom length.

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. The boom angle, before loading, should be greater to account for deflections.
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.

Working Areas

HTC-850



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

*Link-Belt is a registered trademark.

Link-Belt Construction Equipment Company Lexington, Kentucky

