

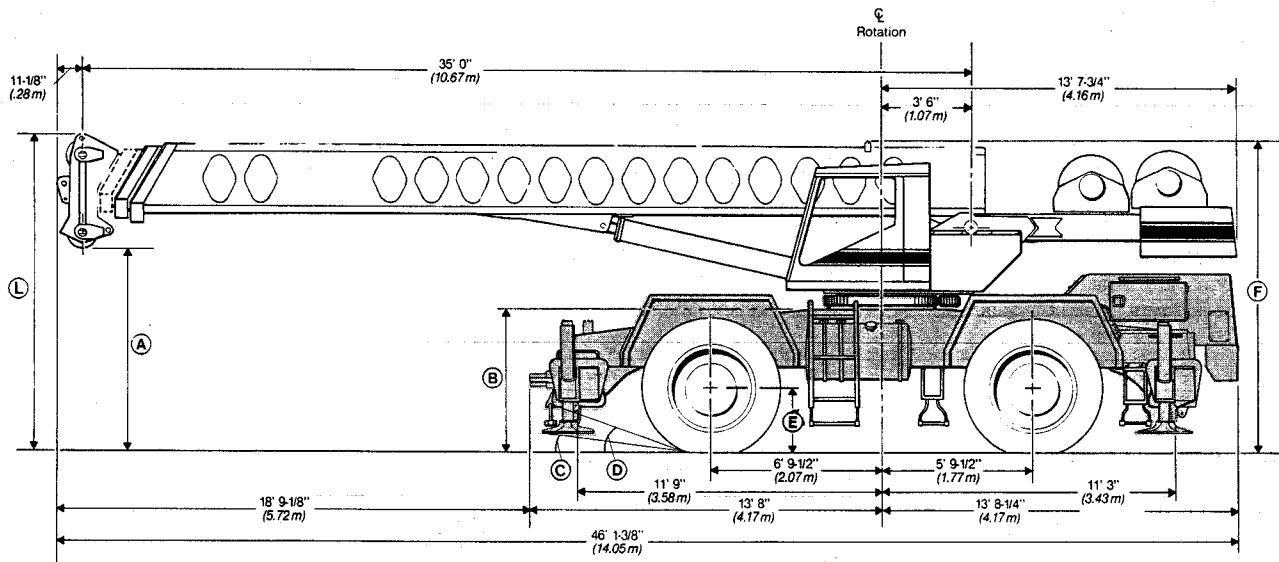
Specifications

Hydraulic Rough Terrain Crane

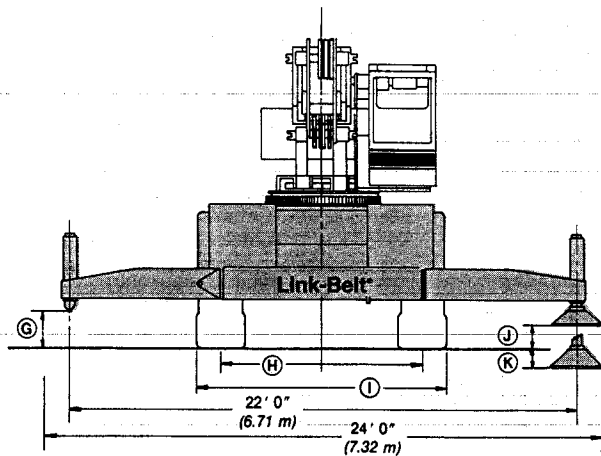
GENERAL INFORMATION ONLY

HSP-8050

50 Ton (45.36 metric ton)



Not to Scale



Not to Scale

General dimensions	feet	meters
Turning radius (4-wheel steer)	25'	7.62
Tailswing of counterweight	13' 8-5/8"	4.18

Dimensions affected by tires

Tires	26.5 x 25(24-PR)		29.5 x 25 (22-PR)	
	feet	meters	feet	meters
A	7' 9-1/4"	2.37	7' 10-3/4"	2.41
B	5' 9-1/2"	1.77	5' 11"	1.80
C	9°	—	10 97°	—
D	22°	—	24 5°	—
E	2' 6-3/8"	.77	2' 8"	.81
F	12' 2-1/2"	3.72	12' 4"	3.70
G	1' 7-3/4"	.50	1' 9-5/16"	0.54
H	8' 6-1/2"	2.60	8' 2-1/2"	2.50
I	10' 10"	3.30	10' 9-1/2"	3.28
J	9-3/4"	.25	11-5/16"	.29
K	10"	.25	7-9/32"	.18
L	12' 6-3/4"	3.83	12' 8-1/4"	3.80

Upperstructure

■ Boom

Patented design. Boom side plates have diamond shaped impressions for superior strength to weight ratio and 100,000 psi (689.5 MPa) steel angle chord for lateral stiffness. Boom sections are supported by wear shoes both vertically and horizontally. Anti two block, electronic boom length / angle indicator and function kickout.

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.

Standard boom — 35' 0"-85' 0" (10.67m-25.91 m) 3-section full power boom.

Optional boom — 35' 0"-110' 0" (10.67 m-33.53 m) 4-section boom includes base section, two power sections, and manual fourth section. Fourth section is power pinned by manually activating a cylinder locking system.

Boom head — **Standard;** Four 16-3/8" (0.42 m) root diameter head sheaves with five 16-3/8" (0.42 m) available to handle up to 10 parts of wire rope. Two easily removable wire rope guards; rope dead end lugs provided on each side of boom head.

Auxiliary lifting sheave — *Optional;* Single 16-3/8" (0.42 m) root diameter head sheave with removable wire rope guard, mounted to boom, for use with one or two parts of line off the optional auxiliary winch. Does not affect erection of fly or jib, or use of main head sheave for multiple reeving.

Boom elevation — Two hydraulic cylinders with holding valves. Self aligning steel bushings. Hand and optional foot controls for controlling the 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 which can be offset 5°, 17.5°, and 30°. Attaches to fly only.

■ Cab and Controls

Environmental cab; isolated from sound and vibration by a neoprene seal. All 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" (0.91 m) width. 6-way adjustable operator's seat. 4-way adjustable tilt/telescoping steering wheel. Control levers for swing, boom telescope, winch and boom hoist with foot control swing brake. Outrigger controls, sight level bubble. Optional foot control for boom hoist.

■ Cab instrumentation

Dash mounted gauges for hydraulic oil temperature, converter temperature, oil pressure, water temperature, fuel and voltmeter.

■ Swing

Bi-directional hydraulic swing motor mounted to a 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 and a two position travel lock operated from the operator's cab.

■ Counterweight

Pinned to upperstructure frame.

■ Hydraulic System

Main pump — Triple gear-type pump. Combined pump capacity 161 gpm (609.4 lpm). Powered by torque converter through a pump disconnect. Pump disconnect is a jaw-type clutch engaged/disengaged from carrier. Maximum system pressure at 2900 p.s.i. (199.94 Bars).

Steering/outrigger pump — Single gear-type pump, 28 gpm (106 lpm) maximum. Powered by torque converter through a straight mechanical drive. Pump operates at 2,700 p.s.i. (186.25 bars).

■ Reservoir

140 gallon (530.0 L) capacity. Diffusers for deaeration.

Filtration — One six-micron filter located inside the hydraulic reservoir. Accessible for easy replacement.

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 free fall. Available on main winch only.

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

■ Additional Equipment - Standard

Rear view mirrors, seat belt, fire extinguisher, backup alarm, travel lights and sound suppressed cab.

■ Additional Upperstructure Equipment - Optional

Propane heater, diesel heater, air conditioning, drum rotation indicators, 60-ton (54.43 metric ton) hook block, 8-1/2 ton (7.71 metric ton) hook ball and swivel, rear steer indicator, boom mounted working light, engine monitoring system, top hatch wiper, windshield washer, hand throttle, lifting lugs, tachometer, amber rotating beacon, cab spotlight and boomhoist foot control.

GENERAL INFORMATION ONLY

Carrier

Type

10' 10" (3.30 m) wide, 151" (3.84 m) wheelbase.

4 x 4 x 4 — (4-wheel steer, 4-wheel drive)
Standard; for rough terrain with limited turning area.

4 x 4 x 4 — (4-wheel steer, 4-wheel drive)
Optional; no spin differential on front axle; for rough terrain with limited turning area.

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, Standard — heavy duty planetary drive/steer type.

Rear, Standard — heavy duty planetary drive/steer type.

Front, Optional — heavy duty no-spin high traction differential, planetary drive/steer type.

Suspension

Front axle - Rigid mounted to frame.

Rear axle - Pin-mounted on bronze bushings, automatic hydraulic rear axle oscillation lock-out cylinders engage when upperstructure rotates past 2-1/2° of centerline.

Tires

Front and rear
Standard — 26.5 x 25 (24-PR)
 Earthmover type

Optional — 29.5 x 25 (22-PR)
 Earthmover type

Brakes

Service — Air over hydraulic, drum-type brakes at each wheel end. Drum diameter 20-1/4" (0.51 m). Shoe width 4" (101.6 mm).

Parking/emergency — Disc caliper type spring applied, air released, fade resistant; cab controlled, mounted on front axle.

Steering

Hydraulic two wheel, four wheel and "crab" steering.

Transmission

3-speed, 2-range power shift transmission. Six speeds available forward and 2 reverse. Front axle disconnect for two or four-wheel drive.

Outriggers

Four hydraulic, beam and jack outriggers. Vertical jack cylinders equipped with integral holding valve. Beams extend to 22' 0" (6.71 m) centerline-to-centerline and retract to within 10' 10" (3.30 m) overall width with floats stored. Equipped with stowable, lightweight 24" (0.61 m) diameter floats. Controls and sight level bubble located in upperstructure cab.

Additional Equipment - Standard

Cab steps, 2 front carrier steps, skid resistant finish on carrier deck, storage compartment and fenders.

Additional Equipment - Optional

Towing shackles, ether injection, no-spin differential on front axle, spare tires and rims, pintle hook, jack cylinder hose covers, propane fired engine block heater, air dryer and emergency steering system.

Travel Speeds and Gradeability

Engine	Tires	Maximum Speed		Gradeability at stall	Maximum tractive effort at stall		Gradeability at 1.0 mph (1.61 km/h)	Maximum tractive effort at 1.0 mph (1.61 km/h)	
		mph	km/h		pounds	kg		pounds	kg
GM 6V-53N	26.5 x 25	21	33.79	168%	79,145	35 900	55%	45,499	20 638
	*29.5 x 25	21	33.79	147%	76,177	34 554	52%	43,793	19 865
Cummins 6CT 8.3*	26.5 x 25	21	33.79	254%	85,551	38 806	62%	49,304	22 364
	*29.5 x 25	21	33.79	200%	82,343	37 351	59%	47,455	21 526

* Optional Equipment

Engine	GM 6V-53N	Cummins 6CT 8.3*
Cylinders - cycle	6 - 2	6 - 4
Bore	3-7/18" (98.43 mm)	4.49" (114.05 mm)
Stroke	4-1/2" (114.30 mm)	5.32" (135.13 mm)
Displacement	318 cu. in. (5 211 cm ³)	504 cu. in. (8 259 cm ³)
Compression ratio	21:1	17.3 : 1
Maximum brake h.p.	205 at 2700 r.p.m.	215 at 2700 rpm
Idle speed	500 r.p.m.	600 r.p.m.
Peak torque	445 lbs.	567 ft. lbs. at 1500 rpm
Electrical system	12 volt negative ground	12 volt negative ground
Fuel capacity	100 gallons (378.5 L)	100 gallons (378.5 L)
Alternator	80 amp Delco	80 amp Delco
Crankcase capacity	18.4 quarts (17.41 L)	18.9 quarts (17.89 L)
Air compressor	12 c.f.m. (0.34 m ³ /min)	13.2 c.f.m. (0.37 m ³ /min)

* Optional Equipment

GENERAL INFORMATION ONLY

Axle Loads

Base machine with standard 35'-85' (10.67 m-25.91 m) 3-section boom, main winch with 2-speed hoisting and power up/down, 600' (182.88 m) 3/4" (19 mm) wire rope, 4 x 4 x 4 carrier with GM 6V-53N engine, 26.5 x 25 tires, full fuel, rear counterweight, 4-sheave head machinery.	GVW [ⓐ]		Upper facing front				Upper facing rear			
			Front axle		Rear axle		Front axle		Rear axle	
		lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.
	77,988	34 044	34,690	15 732	40,378	18 312	28,292	12 831	46,776	21 214
35'-110' (10.67 m-33.52 m) 4-section boom	1,952	885	1,808	820	-1,057	-479	-1,212	-550	3,164	1 435
33' (10.06 m) lattice fly stowed	1,040	472	1,660	753	-620	-281	-703	-319	1,743	790
25' (7.62 m) A-frame jib stowed	1,128	512	1,438	652	-310	-141	-402	-182	1,530	694
Hook block at bumper	1,070	485	1,730	785	-660	-293	—	—	—	—
Headache ball at bumper	325	147	525	238	-200	-91	—	—	—	—
Auxiliary lifting sheave	150	68	468	212	-318	-144	-330	-150	480	218
Fly and jib stowage brackets	230	104	343	156	-113	-51	-132	-60	362	164
29.5 x 25 tires	160	72	80	36	80	36	—	—	—	—

[ⓐ] Adjust gross vehicle weight and axle loading according to components weight.
Note: All weights are $\pm 3\%$.

Tire	Max. Axle Load @ 20 mph (32.7 km/hr)
26.50 x 25 (24-PR)	44,200 lbs. (20 047 kg)
29.50 x 25 (22-PR)	49,500 lbs. (22 451 kg)

GENERAL INFORMATION ONLY

• 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.

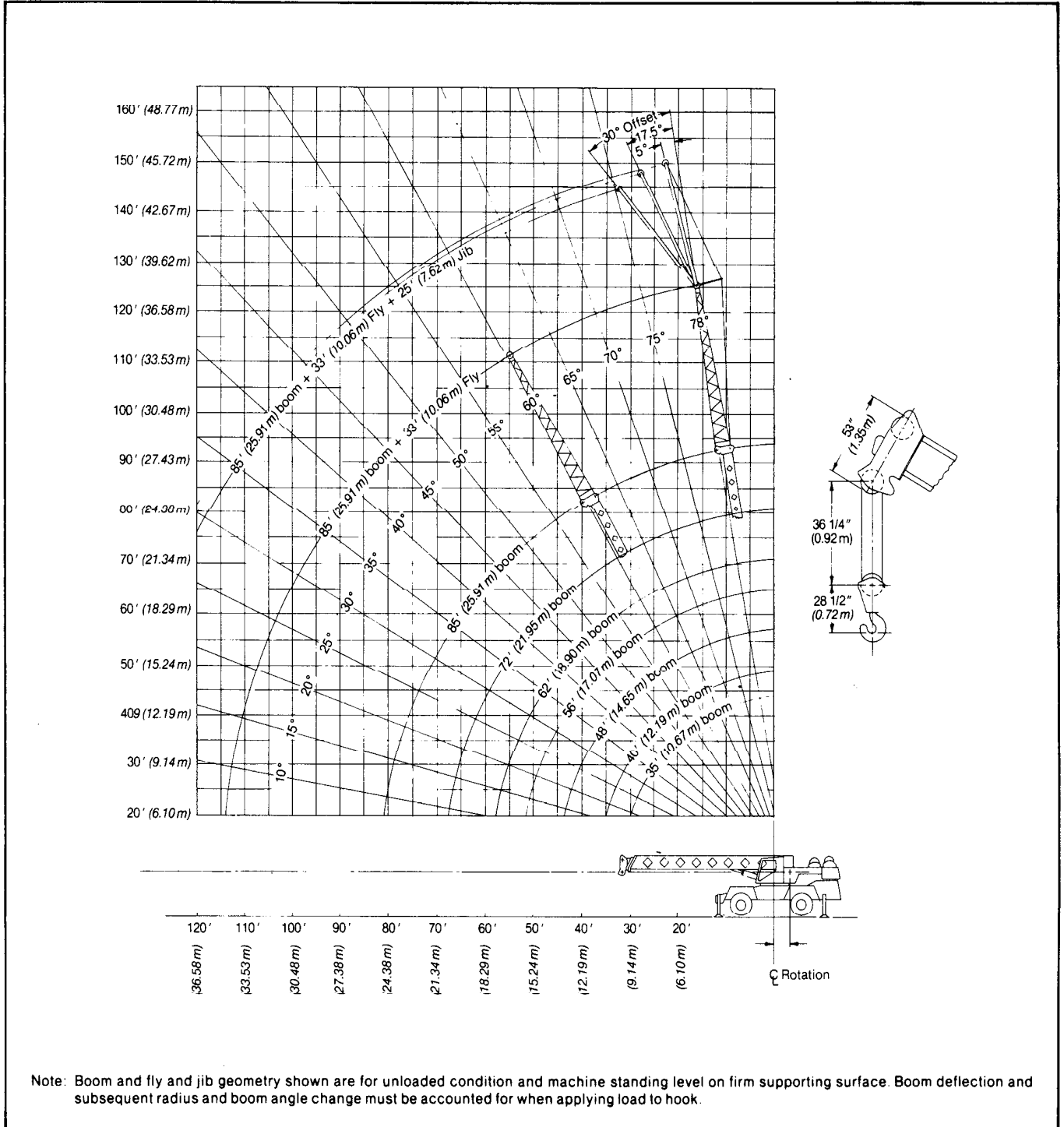
Lifting Capacities

Hydraulic Rough Terrain Crane

PCSA Class 12-221

HSP-8050 50-ton (45.36 metric ton)

3-Section Boom



HSP-8050 Lifting Capacities

Refer to Operating Instructions page 4

35'-85' (10.67-25.91 m) 3-section boom

Capacities On Outriggers ^①															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)		118' (35.96 m) ^②			
	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	Angle	360°	Front	
10' 3.05 m	100,000 45,360	100,000 45,360	72,100 32,705	72,100 32,705	70,500 31,979	70,500 31,979	69,700 31,616	69,700 31,616										
12' 3.66 m	100,000 45,360	100,000 45,360	72,100 32,705	72,100 32,705	70,500 31,979	70,500 31,979	69,700 31,616	69,700 31,616	69,700 31,616	69,700 31,616								
15' 4.57 m	86,500 39,236	86,500 39,236	72,100 32,705	72,100 32,705	70,500 31,979	70,500 31,979	69,700 31,616	69,700 31,616	65,500 29,711	65,500 29,711	59,900 27,171	59,900 27,171						
20' 6.10 m	65,400 29,665	65,400 29,665	65,400 29,665	65,400 29,665	65,400 29,665	65,400 29,665	65,400 29,665	65,400 29,665	53,500 24,268	53,500 24,268	48,800 22,136	48,800 22,136	38,700 17,554	38,700 17,554				
25' 7.62 m	50,800 23,043	50,800 23,043	50,800 23,043	50,800 23,043	50,800 23,043	50,800 23,043	50,800 23,043	50,800 23,043	44,900 20,367	44,900 20,367	41,100 18,643	41,100 18,643	34,600 15,695	34,600 15,695	77.0°	20,000 9,072	20,000 9,072	
30' 9.14 m			37,100 16,829	41,300 18,734	37,100 16,829	41,300 18,734	37,100 16,829	41,300 18,734	37,100 16,829	38,600 17,509	35,500 16,103	35,500 16,103	29,700 13,472	29,700 13,472	75.0°	19,000 8,618	19,000 8,618	
35' 10.67 m					28,200 12,792	33,000 14,969	28,200 12,792	33,000 14,969	28,200 12,792	33,000 14,969	28,200 12,792	28,200 12,792	31,100 14,107	25,500 11,567	72.0°	17,000 7,711	17,000 7,711	
40' 12.19 m					22,100 10,025	26,000 11,794	22,100 10,025	26,000 11,794	22,100 10,025	26,000 11,794	22,100 10,025	26,000 11,794	22,100 10,025	22,200 10,070	70.0°	15,400 6,985	15,400 6,985	
45' 13.72 m							18,000 8,165	21,300 9,602	18,000 8,165	21,300 9,602	18,000 8,165	21,300 9,602	18,000 8,165	19,800 8,891	67.0°	14,000 6,350	14,000 6,350	
50' 15.24 m							14,800 6,713	17,600 7,983	14,800 6,713	17,600 7,983	14,800 6,713	17,600 7,983	14,800 6,713	17,400 7,983	64.0°	13,000 5,897	13,000 5,897	
55' 16.76 m									12,500 5,670	14,900 6,759	12,500 5,670	14,900 6,759	12,500 5,670	14,900 6,759	62.0°	11,700 5,307	11,700 5,307	
60' 18.29 m											10,700 4,854	12,900 5,851	10,700 4,854	12,900 5,851	59.0°	10,700 4,854	10,700 4,854	
65' 19.81 m											9,100 4,128	11,000 4,990	9,100 4,128	11,000 4,990	56.0°	9,800 4,445	9,800 4,445	
70' 21.34 m													7,900 3,583	9,700 4,400	53.0°	9,000 4,082	9,000 4,082	
80' 24.38 m													5,800 2,631	7,300 3,311	46.0°	7,100 3,221	7,700 3,493	
90' 27.43 m															39.0°	4,300 2,495	5,500 2,994	
100' 30.48 m															30.0°	4,300 1,950	5,500 2,495	
110' 33.53 m															17.0°	3,300 1,497	4,400 1,996	

- ① All capacities on outriggers are based on outriggers fully extended with boom sections extended equal distance.
- ② Capacities for boom plus fly can be extended or retracted, but are based on boom angle only. See Operating Instructions Number 15.

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
Auxiliary winch	3/4" (19 mm) diameter, Type "N"	improved plow steel, preformed, independent wire rope core, right lay, regular lay

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

Footnotes:

- ① All capacities on outriggers are based on outriggers fully extended with boom sections extended equal distance.
- ② Calculating capacities for extended or retracted boom plus fly must be based on boom angle only for boom lengths other than those listed. See Operating Instructions Number 14.
- ③ See Operating Instructions, set-up Number 4.

HSP-8050 Lifting Capacities

Refer to Operating Instructions page 4

35'-85' (10.67-25.91 m) 3-section boom

Capacities On Tires – 26.5 x 25-24 Ply									
Load Radius		Maximum Boom Length		Creep [ⓐ]		Stationary			
				Boom Centered Over Front		360°		Over Front	
Feet	Meters	Feet	Meters	Pounds	Kg	Pounds	Kg	Pounds	Kg
10'	3.05m	35'	10.67m	58,900	26,717	42,800	19,414	58,900	26,717
12'	3.66m	35'	10.67m	52,000	23,587	36,300	16,466	52,000	23,587
15'	4.57m	35'	10.67m	43,500	19,732	28,400	12,882	44,200	20,049
20'	6.10m	35'	10.67m	33,600	15,241	17,700	8,029	34,500	15,649
25'	7.62m	35'	10.67m	24,600	11,159	12,000	5,443	24,600	11,159
30'	9.14m	40'	12.19m	17,800	8,074	8,500	3,856	17,800	8,074
35'	10.67m	40'	12.19m	13,700	6,214	6,200	2,812	13,700	6,214
40'	12.19m	48'	14.63m	10,900	4,944	4,600	2,087	10,900	4,944
45'	13.72m	56'	17.07m	8,800	3,992	3,400	1,542	8,800	3,992
50'	15.24m	56'	17.07m	7,200	3,266	2,500	1,134	7,200	3,266
55'	16.74m	62'	18.90m	5,900	2,676	1,800	816	5,900	2,676
60'	18.29m	72'	21.95m	4,900	2,223	1,100	499	4,900	2,223
65'	19.81m	72'	21.95m	4,000	1,814			4,000	1,814
70'	21.34m	85'	25.91m	3,300	1,497			3,300	1,497

ⓐ See Operating Instruction; Set-Up Number 4

Jib Capacities			
33' (10.06 m) fly + 25' (7.62 m) jib			
Boom angle	Jib Offset		
	5	17.5	30
78	5,100	5,100	4,200
	2,313	2,313	1,905
75	5,100	5,100	4,000
	2,313	2,313	1,814
70	5,100	4,900	3,600
	2,313	2,223	1,633
65	4,500	4,100	3,400
	2,041	1,860	1,542
60	3,700	3,300	2,800
	1,678	1,497	1,270
55	3,000	2,700	2,400
	1,361	1,225	1,089
50	2,500	2,300	2,000
	1,134	1,043	907

Tire Inflation

Tires	Ply	Pressure
29.5 x 25	22	60 p.s.i. (2.14 Bars)
26.5 x 25	24	75 p.s.i. (5.17 Bars)

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	2,700 p.s.i. (186.21 Bars)
	Outriggers	2,700 p.s.i. (186.21 Bars)
Charge Pump	Winch brake and clutch	1,500 p.s.i. (103.45 Bars)

Capacity Deductions for Auxiliary Load Handling Equipment	
Picking From Main Boom With	
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)

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	7,199
	High	364	110.95	7,520	3,411
Second	Low	187	57.00	14,630	6,636
	High	394	120.09	6,930	3,143
Third	Low	201	61.26	13,580	6,160
	High	425	129.54	6,430	2,917
Fourth	Low	216	65.84	12,660	5,743
	High	456	138.99	6,000	2,722
Fifth	Low	230	70.10	11,860	5,380
	High	487	148.44	5,620	2,549
Sixth	Low	245	74.68	11,160	5,062
	High	517	157.58	5,280	2,395
Seventh	Low	260	79.25	10,530	4,776
	High	548	167.03	4,990	2,264

HSP-8050

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:

- 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.
- 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.
- 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.
- The maximum allowable lifting capacities are based on machine standing level on firm supporting surface.

Set-Up:

- 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.
- When making lifts on outriggers, outrigger beams must be fully extended with tires free of supporting surface.
- 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). This operation is restricted to 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.
- When making lifts on rubber, tires must be inflated to the recommended pressure.
- Outriggers must be set before swinging boom to over side position as shown on working area diagram.
- 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.
- For required parts of line, see wire rope strength plate.

Operation:

- 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.

- 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.
- The crane capacities above the bold lines are based on structural strength or hydraulic limitations.
- 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.
- 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.
- Rated lifting capacities are for lift crane service only.
- 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.
- 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.
- 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.
- 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.
- When making lifts with auxiliary head machinery, the effective length of the boom increases by 2' (.61 m). Effective length of boom is length shown on boom length indicator plus 2' (.61 m).
- Power sections must be extended equally.
- The least stable rated working area on outriggers is over the side.
- 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. (.45 kg) for each foot of wire rope before attempting to lift a load.
- For boom lengths with fly less than 118' (35.97 m) 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.
- 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 50 degrees unless boom is fully retracted.
- 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:

- 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.
- 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. The loaded boom angle combined with the boom length gives only an approximation of the operating radius.
- Working Area: Area measured in a circular arc about the center line of rotation as shown on the working area diagram.
- Freely Suspended Load: Load hanging free with no direct external force applied except by the hoist line.
- Side Load: Horizontal side force applied to the lifted load either on the ground or in the air.

HSP-8050 Working Areas

