

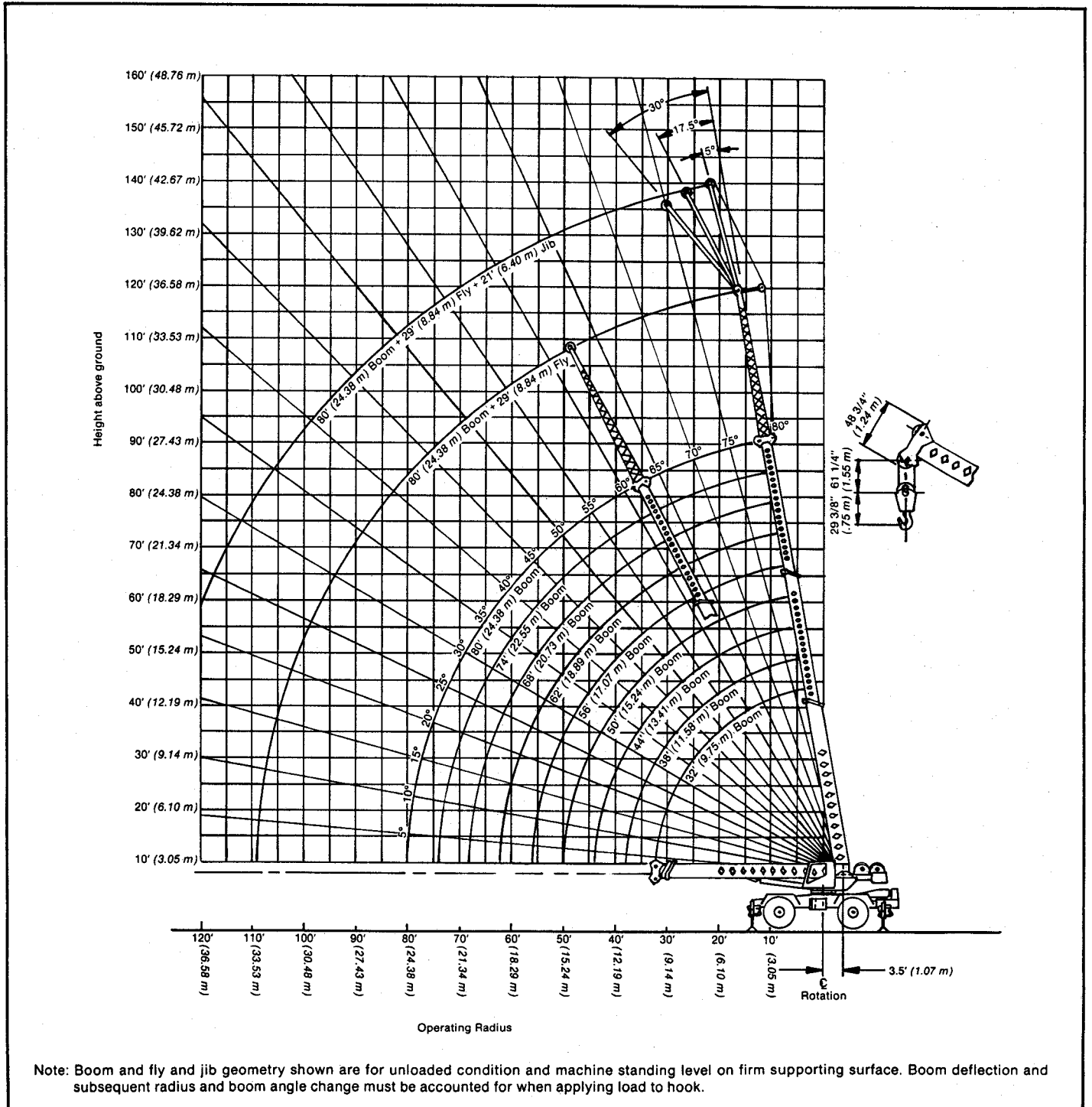
Lifting Capacities

Hydraulic Rough Terrain Crane

GENERAL INFORMATION ONLY

HSP-8030 30-ton (27.22 metric ton)

3-Section Boom



HSP - 8030 Lifting Capacities

32' - 80' (9.75 - 24.38 m) 3-section boom

GENERAL INFORMATION ONLY to Operating Instructions page 4

Capacities On Outriggers- ①3 - Section Boom

Load Radius	32' (9.75 m)		38' (11.58 m)		44' (13.41 m)		50' (15.24 m)		56' (17.07 m)		62' (18.89 m)		68' (20.73 m)		74' (22.55 m)		80' (24.38 m)	
	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°
10' 3.05m	60,000 27 216	60,000 27 216	53,700 24 358	53,700 24 358	52,900 23 995	52,900 23 995	52,400 23 769	52,400 23 769	50,100 22 725	50,100 22 725	40,100 18 189	40,100 18 189						
12' 3.66m	60,000 27 216	58,500 26 535	53,700 24 358	53,700 24 358	52,900 23 995	52,900 23 995	52,400 23 769	52,400 23 769	44,900 20 367	44,900 20 367	36,600 16 602	36,600 16 602	32,700 14 833	32,700 14 833				
15' 4.57m	53,400 24 222	50,100 22 725	52,700 23 905	50,100 22 725	51,300 23 270	50,100 22 725	42,500 20 639	45,500 20 639	38,700 17 554	38,700 17 554	32,200 14 606	32,200 14 606	29,000 13 154	29,000 13 154	26,500 12 020	26,500 12 020	21,500 9 752	21,500 9 752
20' 6.10m	38,700 17 554	36,800 16 692	38,700 17 554	36,800 16 692	38,700 17 554	36,800 16 692	36,600 16 602	36,600 16 602	31,300 14 198	31,300 14 198	26,900 12 202	26,900 12 202	24,100 10 932	24,100 10 932	22,100 10 024	22,100 10 024	20,300 9 208	20,300 9 208
25' 7.62m	29,900 13 563	26,900 12 202	29,900 13 563	26,900 12 202	29,900 13 563	26,900 12 202	29,900 13 563	26,900 12 202	26,100 11 839	26,100 11 839	22,900 10 387	22,900 10 387	20,500 9 299	20,500 9 299	18,800 8 528	18,800 8 528	17,300 7 847	17,300 7 847
30' 9.14m			24,200 10 977	19,200 8 709	24,200 10 977	19,200 8 709	24,200 10 977	19,200 8 709	22,200 10 070	19,200 8 709	19,800 8 981	19,200 8 709	17,800 8 074	17,800 8 074	16,200 7 348	16,200 7 348	15,000 6 804	15,000 6 804
35' 10.67m					20,100 9 117	14,600 6 623	20,100 9 117	14,600 6 623	19,300 8 754	14,600 6 623	17,100 7 756	14,600 6 623	15,600 7 076	14,600 6 623	14,200 6 441	14,200 6 441	13,100 5 942	13,100 5 942
40' 12.19m							16,000 7 258	11,500 5 216	16,000 7 258	11,500 5 216	15,000 6 804	11,500 5 216	13,900 6 305	11,500 5 216	12,600 5 715	11,500 5 216	11,600 5 262	11,500 5 216
45' 13.72m							12,800 5 806	9,200 4 173	12,800 5 806	9,200 4 173	12,800 5 806	9,200 4 173	12,500 5 670	9,200 4 173	11,300 5 126	9,200 4 173	10,400 4 717	9,200 4 173
50' 15.24m									10,700 4 853	7,600 3 447	10,700 4 853	7,600 3 447	10,700 4 853	7,600 3 447	10,200 4 627	7,600 3 447	9,300 4 218	7,600 3 447
55' 16.76m											9,000 4 082	6,300 2 858	9,000 4 082	6,300 2 858	9,000 4 082	6,300 2 858	8,400 3 810	6,300 2 858
60' 18.29m													7,700 3 493	5,300 2 404	7,700 3 493	5,300 2 404	6,600 2 994	5,300 2 404
65' 19.81m															6,600 2 994	4,500 2 041	6,600 2 994	4,500 2 041
70' 21.34m															5,600 2 540	3,700 1 678	5,600 2 540	3,700 1 678
75' 22.86m																	4,900 2 223	3,100 1 406

Capacities On Tires

Load Radius	Max. Boom Length	Stationary		②Creep Boom Centered Over Front
		360°	Over Front	
10' 3.05m	32' 9.75m	19,100 8 664	36,400 16 511	29,300 13 290
12' 3.66m	32' 9.75m	16,200 7 348	32,600 14 787	25,700 11 658
15' 4.57m	32' 9.75m	12,700 5 761	27,500 12 474	21,000 9 526
20' 6.10m	32' 9.75m	8,300 3 765	20,900 9 480	15,700 7 122
25' 7.62m	32' 9.75m	5,300 2 404	15,600 7 076	12,100 5 489
30' 9.14m	38' 11.58m	3,500 1 588	11,200 5 080	9,600 4 355
35' 10.67m	44' 13.41m	2,400 1 089	8,500 3 856	7,800 3 548
40' 12.19m	44' 13.41m		6,700 3 039	6,400 2 903
45' 13.72m	50' 15.24m		5,300 2 404	5,300 2 404
50' 15.24m	56' 17.07m		4,300 1 950	4,300 1 950
55' 16.76m	62' 18.90m		3,500 1 588	3,500 1 588
60' 18.29m	68' 20.73m		2,800 1 270	2,800 1 270
65' 19.81m	74' 22.56m		2,300 1 043	2,300 1 043
70' 21.34m	74' 22.56m		1,800 816	1,800 816

Wire rope size and type

Wire rope application	Size and type used	Wire rope description
Main winch	5/8" (16 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	5/8" (16 mm) diameter, Type "N"	

Drum wire rope capacities

Wire rope layer	Main and auxiliary drum 10 1/2" (.27 m) root diameter smooth lagging				Main and auxiliary drum 15 1/2" (.38 m) root diameter grooved lagging			
	5/8" (16 mm) wire rope				5/8" (16 mm) wire rope			
	Rope per layer		Total wire rope		Rope per layer		Total wire rope	
	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
1	74	22.55	74	22.55	103	31.39	103	31.39
2	85	25.91	159	48.46	111	33.83	214	65.23
3	90	27.43	249	75.89	120	36.58	334	101.80
4	98	29.87	347	105.76	128	39.01	462	140.82
5	106	32.31	453	138.07	136	41.52	598	182.27
6	115	35.05	568	173.13	144	43.89	742	226.16

Footnotes:

- All capacities on outriggers are based on outriggers fully extended with boom sections extended equal distance.
- See Operating Instructions; Set-up Number 4.

Tire inflation

Tires	Ply	Pressure
20.5 x 25	24	80 p.s.i. (5.51 Bars)
18.00 x 25	20	85 p.s.i. (5.86 Bars)
23.5 x 25	20	70 p.s.i. (4.83 Bars)

HSP-8030 Lifting Capacities

32'-80' (9.75 m - 24.38 m) 3-section boom

Refer to Operating Instructions page 4

Capacities On Outriggers			
Load radius	109' (33.22 m) 80' (24.38 m) boom plus 29' (8.84 m) fly		
	Boom angle	Front	360°
See Note ②			
25' 7.62 m	77°	9,500 4 309	9,500 4 309
30' 9.14 m	75°	9,500 4 309	9,500 4 309
35' 10.67 m	73°	9,500 4 309	9,500 4 309
40' 12.19 m	70°	9,000 4 082	9,000 4 082
45' 13.72 m	67°	8,000 3 629	8,000 3 629
50' 15.24 m	64°	7,100 3 220	7,100 3 220
55' 16.76 m	61°	6,400 2 903	6,400 2 903
60' 18.29 m	58°	5,800 2 631	5,800 2 631
65' 19.81 m	55°	5,200 2 359	5,200 2 359
70' 21.34 m	51°	4,800 2 177	4,400 1 996
75' 22.86 m	48°	4,400 1 996	3,800 1 724
80' 24.38 m	44°	4,000 1 814	3,200 1 452
85' 25.91 m	39°	3,700 1 678	2,800 1 270
90' 27.43 m	34°	3,400 1 542	2,400 1 089
95' 28.95 m	29°	3,100 1 406	2,000 907
100' 30.48 m	22°	2,900 1 315	1,700 771
105' 32.00 m	9°	2,600 1 179	1,400 635

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. See operating Instruction Number 15.
- ③ See Operating Instruction Number 16.

Jib Capacities③			
29' (8.84 m) fly plus 21' (6.40 m) jib			
Boom angle	Jib Offset		
	5°	17.5°	30°
80°	5,500 2 494	5,400 2 449	4,100 1 860
75°	5,500 2 494	4,800 2 177	3,700 1 678
70°	5,300 2 404	4,400 1 996	3,500 1 588
65°	4,300 1 950	3,800 1 724	3,300 1 497
60°	3,600 1 632	3,200 1 452	2,900 1 315
55°	2,700 1 225	2,500 1 134	2,300 1 043
50°	2,000 907	1,900 862	1,800 816
45°	1,600 726	1,500 680	1,400 635
40°	1,200 544	1,100 499	1,100 499

Hydraulic circuit pressure settings	
Function	Pressure
Boom hoist	2,900 p.s.i. (200.0 Bars)
Wire rope hoist	2,500 p.s.i. (172.41 Bars)
Swing	1,500 p.s.i. (103.42 Bars) at port relief
Innermid telescope	2,500 p.s.i. (172.41 Bars)
Outermid telescope	2,500 p.s.i. (172.41 Bars)
Steering	2,100 p.s.i. (144.79 Bars)
Outriggers	2,500 p.s.i. (172.41 Bars)
Winch brake and clutch	1,500 p.s.i. (103.41 Bars)

Line speeds and pulls

Layer	Speed	Main or auxiliary winch-10 5/8" (.27) drum				Main or auxiliary winch-15 1/8" (.38 m) drum			
		Line speeds		Line pulls		Line speeds		Line pulls	
		F.p.m.	m/min.	Lbs.	kgs.	F.p.m.	m/min.	Lbs.	kgs.
1st	Low	133	40.54	11,700	5 307	186	56.69	9,260	4 200
	High	266	81.08	6,480	2 939	372	113.38	4,630	2 100
2nd	Low	148	45.11	11,670	5 207	201	61.26	8,570	3 887
	High	296	90.22	5 840	2 649	402	122.52	4,290	1 945
3rd	Low	163	49.68	10,610	4 812	216	65.83	7,980	3 619
	High	325	99.06	5,310	2 408	432	131.67	3 990	1 809
4th	Low	177	53.94	9,730	4 413	231	70.40	7,470	3 388
	High	355	108.20	4,860	2 204	462	140.81	3,730	1 691
5th	Low	192	58.52	8,980	4 073	246	74.98	7,020	3 184
	High	384	117.04	4,490	2 036	492	149.96	3,510	1 592
6th	Low	207	63.09	8,340	3 783	261	79.55	6,620	3 003
	High	413	125.88	4,170	1 891	522	159.11	3,310	1 501

Deductions For Auxiliary Load Handling Equipment	
Picking From Main Boom With	
Aux. Head	200 Lbs.
Jib Stowed	600 Lbs.
Fly Stowed	600 Lbs.
Fly Erected	1500 Lbs.
Fly & Jib Stowed	1200 Lbs.
Fly & Jib Erected	4200 Lbs.
Picking From 29 Ft. Fly With	
Jib Erected	1300 Lbs.
Jib Stowed	600 Lbs.

HSP-8030 Operating Instructions

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 this machine standing on firm supporting surface.
5. All capacities are in pounds with metric equivalent in *italics*.

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 air pressure. On tire picks require lifting from main boom head only on a smooth and level surface. Boom sections must be extended equally. Pick and carry operations (creep) are restricted to a maximum speed of 1.0 m.p.h. (1.61 km/h) and not exceeding 200' (60.96 m) in a 30 minute period, the boom must be centered over front 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 air pressure.

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 of 6,000 lbs. (2722 kg) or 80% of rated

lifting capacity, whichever is less. For magnet operation, weight of magnet and load is restricted to a maximum of 6,000 lbs. (2722 kg) or 80% of rated lifting capacity, whichever is less. For clamshell and magnet operation, maximum boom length is restricted to 50' (15.24 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 operations.

2. The crane capacities shown on outriggers do not exceed 85% of the tipping loads and crane capacities 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 weight 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 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 variations 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 load, 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 boom 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. For definition of working area, see working area diagram. The least stable rated working area on outriggers is over the rear. The least stable rated working area on tires 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 0.72 lb. (0.33 kg) for each foot of wire rope before attempting to lift a load.
15. For boom lengths with fly less than 109' (33.22 m), the rated loads are determined by boom angle only in the column headed by 109' (33.22 m). For angles not shown, use the next lower boom angle to determine allowable capacity.
16. The 21' (6.4 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 are for 360° operation. **Warning:** Do not lower 21' (6.4 m) jib in working position below 55° unless boom is fully retracted.
17. The 32' (9.75 m) boom length capacities are based on boom fully retracted. If not fully retracted, do not exceed ratings for the 38' (11.58 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. The loaded boom angle combined with the boom length give only an approximation of the operating radius.
3. Working Area: Area measured in a circular arc about the centerline 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.

HSP-8030 Working Areas

