



50 TON

Hydraulic Rough-Terrain Crane



Boom Lengths: 35' to 110'
Jib Lengths: 33' to 58'



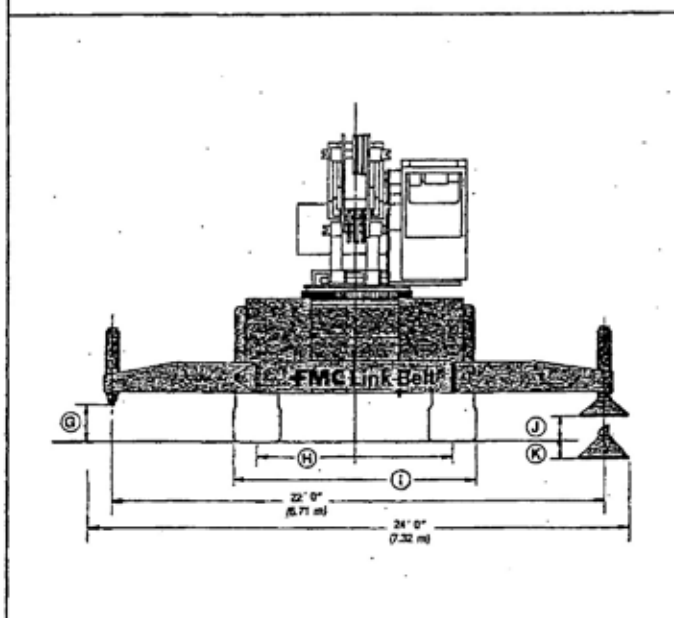
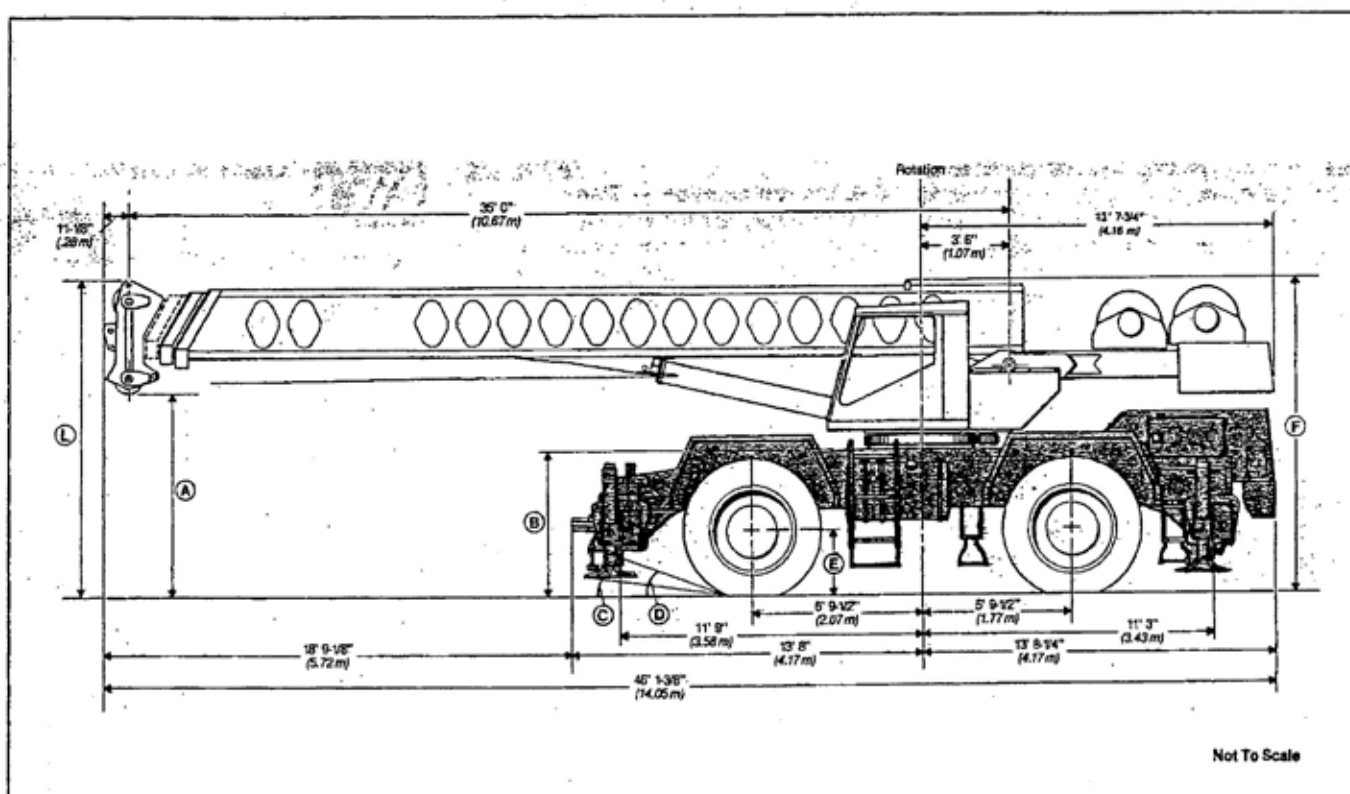
Notes:





General Specifications

Link-Belt®

Eighty Series Hydraulic Rough Terrain Crane**HSP-8050** 50-ton (45.36 metric ton)

General dimensions	Feet	meters
Turning radius (4-wheel steer) ϕ TIRE	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"	3.76
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





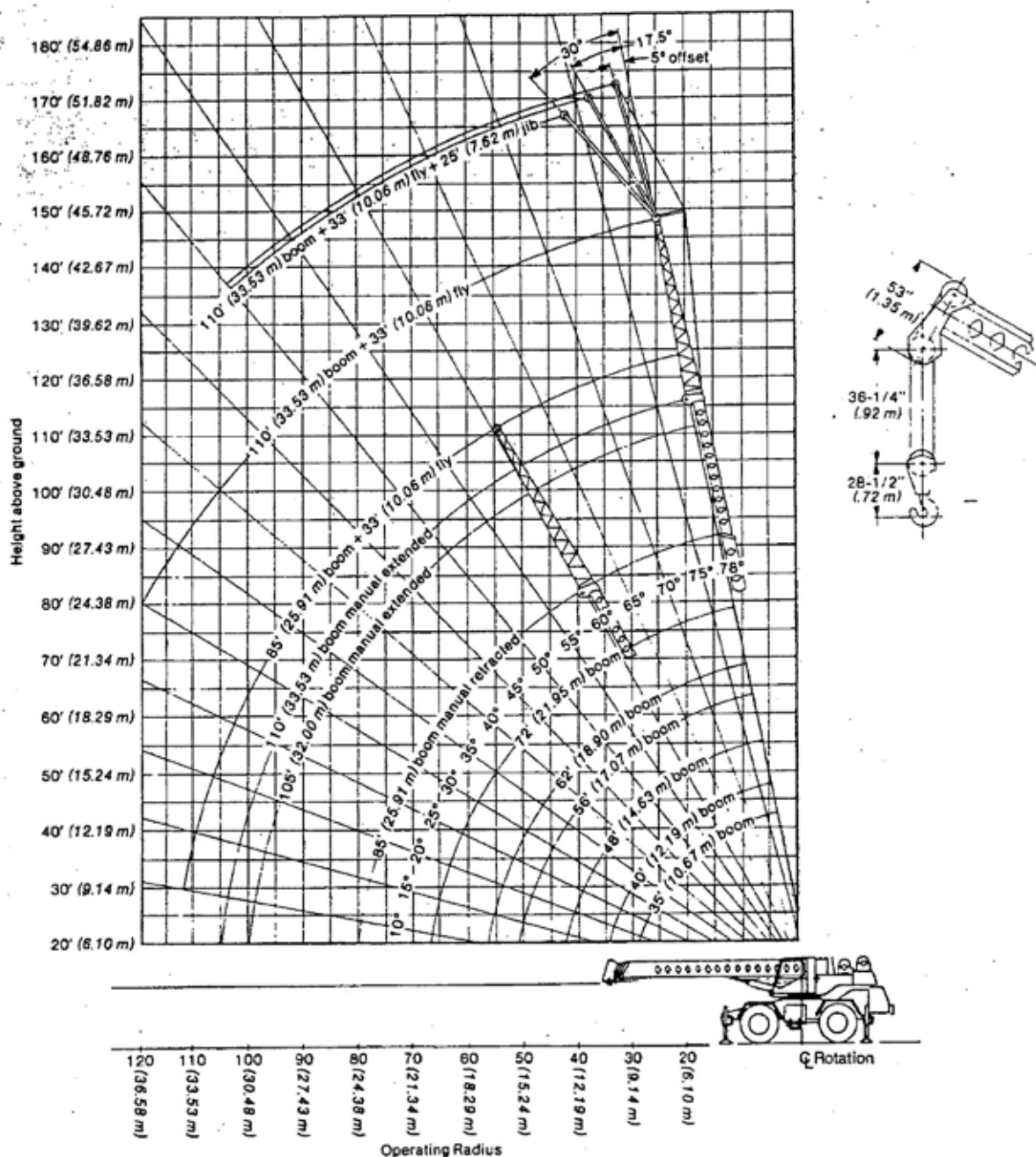
Lifting Capacities

Hydraulic Rough Terrain Crane

PCSA Class 10-213

HSP-8050 50-ton (45.36 metric ton)

4-Section Boom



SP-8050 Lifting Capacities

Refer to Operating Instructions page 4

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

Capacities On Outriggers① Manual Section Retracted														77' (23.47 m) boom plus 33' (10.06 m) fly			85' (25.91 m) boom plus 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)		Boom angle	33' (10.06 m) fly		Boom angle	33' (10.06 m) fly	
	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°		Front	360°		Front	360°
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	68,100 30 890	68,100 30 890							See Note ②			See Note ②		
12' 3.66 m	98,300 44 589	98,300 44 589	72,100 32 705	72,100 32 705	70,800 32 115	70,800 32 115	68,100 30 890	68,100 30 890	67,600 30 663	67,600 30 663										
15' 4.57 m	84,000 38 102	84,000 38 102	71,500 32 432	71,500 32 432	70,800 32 114	70,800 32 114	68,100 30 890	68,100 30 890	59,400 26 944	59,400 26 944	51,800 23 496	51,800 23 496								
20' 6.10 m	64,300 29 166	64,300 29 166	64,300 29 166	64,300 29 166	64,300 29 166	64,300 29 166	57,200 25 946	57,200 25 946	48,900 22 180	48,900 22 180	43,200 19 596	43,200 19 596	36,600 16 602	36,600 16 602						
25' 7.62 m	49,800 22 589	49,800 22 589	49,800 22 589	49,800 22 589	49,800 22 589	49,800 22 589	48,100 21 818	48,100 21 818	41,300 18 734	41,300 18 734	36,800 16 692	36,800 16 692	30,500 13 635	30,500 13 635	76°	22,200 10 070	22,200 10 070	77°	18,500 8 392	18,500 8 392
30' 9.14 m			40,300 18 279	36,800 16 692	40,300 18 279	36,800 16 692	40,300 18 279	36,800 16 692	35,500 16 103	35,500 16 103	31,800 14 424	31,800 14 424	25,800 11 703	25,800 11 703	74°	22,200 10 070	22,200 10 070	75°	17,500 7 938	17,500 7 938
35' 10.67 m					32,400 14 696	27,500 12 474	32,400 14 696	27,500 12 474	32,400 14 696	27,500 12 474	27,800 12 802	27,500 12 474	22,200 10 069	22,200 10 069	71°	20,200 10 070	20,000 10 070	72°	15,500 7 031	15,500 7 031
40' 12.19 m					25,200 11 430	21,300 9 661	25,300 11 476	21,300 9 661	25,400 11 521	21,300 9 661	24,500 11 113	21,300 9 661	19,400 8 800	19,400 8 800	68°	18,900 8 573	18,900 8 573	70°	13,900 6 305	13,900 6 305
45' 13.72 m							20,400 9 253	17,100 7 757	20,400 9 253	17,100 7 757	20,400 9 253	17,100 7 757	17,100 7 757	17,100 7 757	66°	17,300 7 847	17,300 7 847	67°	12,400 5 625	12,400 5 625
50' 15.24 m							16,600 7 529	13,900 6 305	16,600 7 529	13,900 6 305	16,600 7 529	13,900 6 305	15,400 6 985	13,900 6 305	63°	15,400 6 985	15,400 6 985	64°	10,900 4 944	10,900 4 944
55' 16.76 m								13,900 6 305	13,900 6 305	13,900 6 305	13,800 6 260	11,500 5 216	13,800 6 260	11,500 5 216	60°	14,300 6 486	13,800 6 214	62°	9,800 4 355	9,800 4 355
60' 18.29 m											11,700 5 307	9,800 4 354	11,700 5 307	9,800 4 354	58°	13,200 5 988	11,600 5 261	59°	8,600 3 901	8,600 3 901
65' 19.81 m											9,900 4 490	7,900 3 583	9,900 4 490	7,900 3 583	53°	11,900 5 397	9,900 4 490	56°	7,700 3 493	7,700 3 493
70' 21.34 m													8,400 3 810	6,700 3 039	50°	10,400 4 717	8,600 3 901	53°	6,900 3 130	6,900 3 130
75' 24.38 m													6,000 2 721	4,500 2 041	42°	8,000 3 628	6,500 2 948	46°	5,600 2 540	5,600 2 540
80' 27.43 m															33°	6,200 2 812	4,900 2 044	39°	4,600 2 067	4,400 1 996
100' 30.48 m															21°	4,600 2 086	3,400 1 542	30°	3,900 1 769	3,400 1 542
110' 33.53 m																		17°	3,400 1 542	2,500 1 133

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"	

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.

Capacities On Tires

Load Radius	Max. boom length	Pick & Carry ^③	Stationary	
		Over Front	360°	Over Front
10' 3.05 m	35' 10.67 m	58,000 26 309	42,100 19 097	57,300 25 991
12' 3.66 m	35' 10.67 m	50,600 22 952	33,700 15 286	50,500 22 907
15' 4.57 m	35' 10.67 m	42,100 19 097	23,100 10 478	42,700 19 369
20' 6.10 m	35' 10.67 m	32,200 14 606	14,000 6 350	32,700 14 833
25' 7.62 m	35' 10.67 m	22,400 10 160	9,100 4 127	22,600 10 251
30' 9.14 m	40' 12.19 m	15,900 7 212	6,000 2 721	15,900 7 212
35' 10.67 m	40' 12.19 m	11,900 5 398	3,800 1 723	11,900 5 398
40' 12.19 m	48' 14.63 m	9,100 4 127	—	9,100 4 127
45' 13.72 m	56' 17.07 m	7,000 3 175	—	7,000 3 175
50' 15.24 m	56' 17.07 m	5,400 2 449	—	5,400 2 449



**HSP-8050 Lifting Capacities**

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

Refer to Operating Instructions page 4

Capacities ^① On Outriggers Manual Section Extended									
Load radius	105' (32.00 m)			110' (33.53 m)			110' (33.53 m) boom plus 33' (10.06 m) fly		
	Boom angle	Front	360°	Boom angle	Front	360°	Boom angle	Front	360°
	See Note ②			See Note ②			See Note ③		
25' 7.62 m	76°	20,200 9 163	20,200 9 163	77°	19,000 8 618	19,000 9 027			
30' 9.14 m	73°	20,200 9 163	20,200 9 163	74°	18,500 8 392	18,500 8 392			
35' 10.67 m	71°	20,200 9 163	20,200 9 163	72°	17,600 8 121	17,600 8 121			
40' 12.19 m	68°	18,200 8 256	18,200 8 256	69°	15,500 7 030	15,500 7 030	76°	9,400 4 264	9,400 4 264
45' 13.72 m	65°	16,400 7 439	16,400 7 439	66°	13,700 6 214	13,700 6 214	74°	9,400 4 264	9,400 4 264
50' 15.24 m	62°	15,000 6 804	15,000 6 804	63°	12,100 5 488	12,100 5 488	72°	9,000 4 082	9,000 4 082
55' 16.76 m	59°	13,800 6 260	13,100 5 942	60°	10,700 4 853	10,700 4 853	70°	8,400 3 810	8,000 3 629
60' 18.29 m	55°	12,700 5 760	11,100 5 034	57°	9,700 4 400	9,700 4 400	68°	7,300 3 311	7,300 3 311
65' 19.81 m	52°	11,500 5 216	9,500 4 306	54°	8,700 3 946	8,700 3 946	64°	6,500 2 948	6,500 2 948
70' 21.34 m	48°	9,900 4 490	8,200 3 719	50°	7,800 3 557	7,800 3 557	61°	5,700 2 586	5,700 2 586
80' 24.38 m	39°	7,500 3 401	6,100 2 767	43°	6,400 2 903	6,000 2 721	56°	4,600 2 087	4,600 2 087
90' 27.43 m	29°	5,800 2 631	4,500 2 040	34°	5,500 2 495	4,400 1 995	51°	3,600 1 633	3,600 1 633
100' 30.48 m	12°	4,400 1 996	3,200 1 451	22°	4,300 1 950	3,200 1 451	46°	2,800 1 270	2,800 1 270
110' 33.53 m							39°	2,100 953	2,100 953
120' 36.58 m							32°	1,500 680	1,500 680

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 with manual section extended must be based on boom angle only. See Operating Instructions Number 13.

③ Calculating capacities for extended or retracted boom with manual section extended plus fly must be based on boom angle only. See Operating Instructions Number 15.

Jib Capacities			
33' (8.84 m) fly plus 25' (7.62 m) jib			
Boom angle	Jib Offset		
	5'	17.5'	30'
78°	5,100 2 313	5,100 2 313	4,200 1 905
75°	5,100 2 313	5,100 2 313	4,000 1 814
70°	5,100 2 313	4,900 2 223	3,600 1 633
65°	4,500 2 041	4,100 1 860	3,400 1 542
60°	3,700 1 678	3,300 1 497	2,800 1 270
55°	3,000 1 361	2,700 1 225	2,400 1 089
50°	2,500 1 134	2,300 1 043	2,000 907

HSP-8050 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
	Innermid telescope Steering	2,500 p.s.i. (172.41 Bars)
	Outermid 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)

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

Tire Inflation

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

