



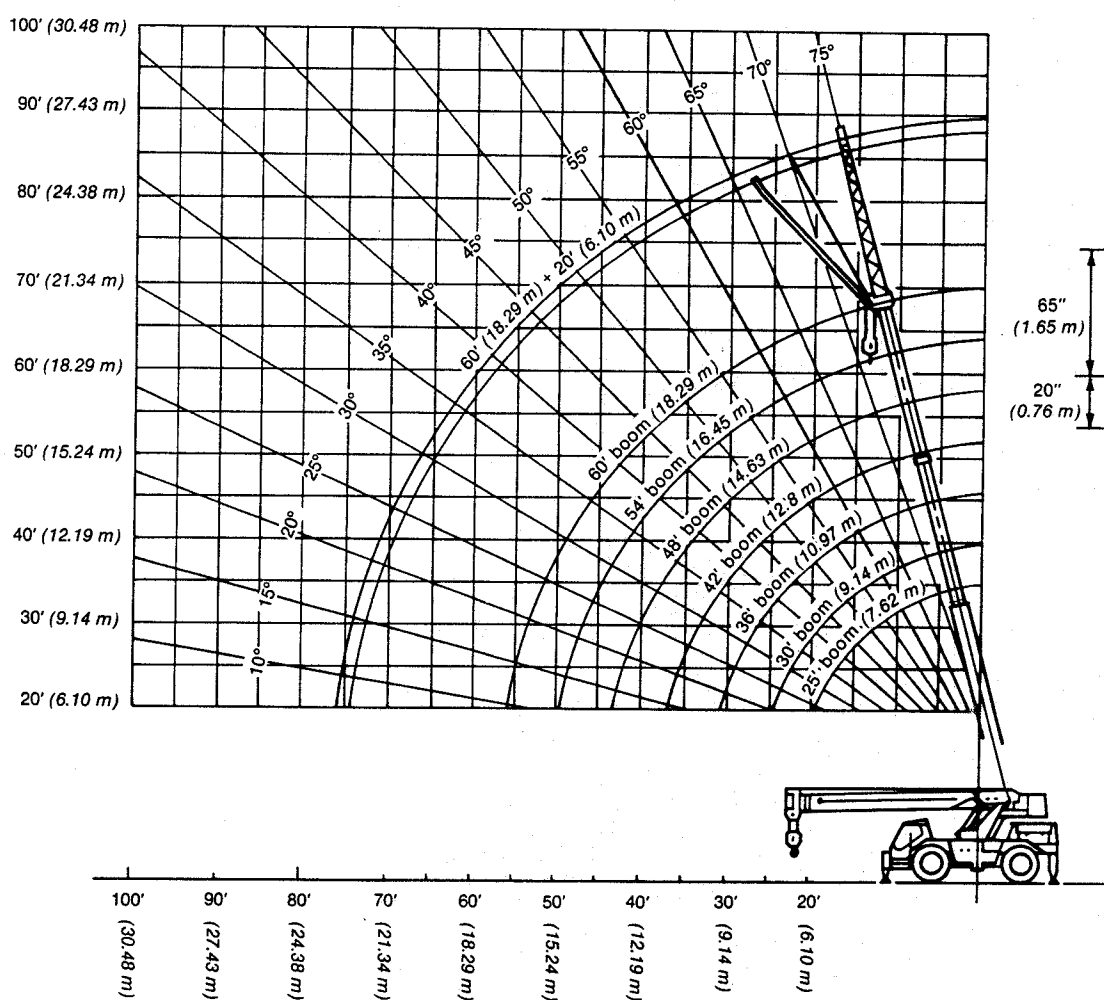
# Lifting Capacities

Link-Belt®

PCSA Class 12-64

**GENERAL INFORMATION ONLY**

Hydraulic Cab Down Crane

**HCD-80B 15-ton (13.64 metric ton)**

NOTE: Boom and fly geometry shown are for unloaded condition and machine standing level on firm supporting surface. Boom deflection, subsequent radius and boom angle change must be accounted for when applying load to hook.

**HCD-80B Lifting Capacities****GENERAL INFORMATION ONLY**

Refer to Operating Instructions

25' - 60' (7.62 m - 18.29m) 3-section boom

Capacities <sup>①</sup> On Outriggers - 3-Section Boom															60' (18.29m) boom plus 20' (6.10m) fly <sup>②</sup>	
Load radius	25.25' (7.69m)		30' (9.14m)		36' (10.97m)		42' (12.8m)		48' (14.63m)		54' (16.45m)		60' (18.29m)		Boom angle	360°
	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°		
10' 3.05 m	—	30,000 13 608	—	30,000 13 608	—	30,000 13 608	—	30,000 13 608	—	30,000 13 608	—	30,000 13 608	—	30,000 13 608		
12' 3.66 m	30,000 13 608	30,000 13 608	30,000 13 608	30,000 13 608	30,000 13 608	30,000 13 608	30,000 13 608	30,000 13 608	30,000 13 608	30,000 13 608	30,000 13 608	30,000 13 608	30,000 13 608	30,000 13 608		
15' 4.57 m	30,000 13 608	28,000 12 700	30,000 13 608	28,000 12 700	30,000 13 608	28,000 12 700	30,000 13 608	28,000 12 700	30,000 13 608	28,000 12 700	27,600 12 520	27,600 12 520	27,600 12 520	27,600 12 520		
20' 6.10 m	22,900 10 387	20,300 9 208	22,900 10 387	20,300 9 208	22,900 10 387	20,300 9 208	22,600 10 251	20,300 9 208	22,500 10 206	20,300 9 208	21,900 9 933	20,300 9 208	21,500 9 752	20,300 9 208	75°	11,500 5 216
25' 7.62 m			17,800 8 074	13,900 6 305	17,800 8 074	13,900 6 305	17,800 8 074	13,900 6 305	17,800 8 074	13,900 6 305	17,800 8 074	13,900 6 305	17,800 8 074	13,900 6 305	71°	11,500 5 216
30' 9.14 m					14,700 6 667	10,300 4 672	14,700 6 667	10,300 4 672	14,700 6 667	10,300 4 672	14,700 6 667	10,300 4 672	14,700 6 667	10,300 4 672	67°	9,000 4 082
35' 10.67 m							12,300 5 579	8,000 3 628	12,300 5 579	8,000 3 628	12,300 5 579	8,000 3 628	12,300 5 579	8,000 3 628	63°	7,100 3 220
40' 12.19 m									10,500 4 762	6,400 2 903	10,500 4 762	6,400 2 903	10,500 4 762	6,400 2 903	59°	5,700 2 585
45' 13.72 m											9,100 4 127	5,300 2 404	9,100 4 127	5,300 2 404	55°	4,600 2 086
50' 15.24 m													7,800 3 538	4,300 1 950	50°	3,900 1 769
55' 16.76 m													6,700 3 039	3,600 1 632	45°	3,200 1 451
60' 18.29 m															39°	2,700 1 225
65' 19.81 m															33°	2,300 1 043

① Boom sections must be extended equal distance.

② Capacities are determined by boom angle only.

**Capacities<sup>①</sup> On Tires<sup>②</sup> - 3-Section Boom**

Load Radius	14.00 x 24 (20 PR.)			17.50 x 25 (20 PR.)		
	Pick & Carry <sup>①</sup>	Stationary		Pick & Carry <sup>①</sup>	Stationary	
		Over Front	360°		Over Front	360°
10' 3.05 m	—	20,400 9 253	—	—	20,500 9 298	—
12' 3.66 m	21,000 9 526	16,700 7 575	24,600 11 158	20,900 9 480	17,200 7 801	24,400 11 067
15' 4.57 m	17,300 7 847	11,600 5 261	20,100 9 117	17,000 7 711	12,300 5 579	20,000 9 072
20' 6.10 m	12,900 5 851	6,600 2 993	12,900 5 851	12,900 5 851	7,000 3 175	13,200 5 987
25' 7.62 m	9,000 4 082	4,500 2 041	9,000 4 082	9,200 4 173	4,800 2 177	9,200 4 173
30' 9.14 m	6,700 3 039	3,200 1 451	6,700 3 039	6,900 3 129	3,500 1 587	6,900 3 129
35' 10.67 m	5,200 2 358	2,300 1 043	5,200 2 358	5,300 2 404	2,500 1 134	5,300 2 404
40' 12.19 m	4,100 1 859	1,700 771	4,100 1 859	4,200 1 905	1,800 816	4,200 1 905
45' 13.72 m	3,300 1 496	1,100 498	3,300 1 496	3,400 1 542	1,300 589	3,400 1 542
50' 15.24 m	2,600 1 179	—	2,600 1 179	2,700 1 224	—	2,700 1 224
55' 16.76 m	2,000 907	—	2,000 907	2,000 9 072	—	2,000 907

① Off main boom head only; boom sections must be equally extended.

② Refer to tire inflation chart.

③ Limited to 1.0 m.p.h. (1.609 km/hr) travel speed, and swing lock must be engaged.

**Tire Inflation**

Tires	PR	Stationary	'Pick & Carry'
14.00 x 24	20	115 p.s.i. (7.93 Bars)	115 p.s.i. (7.93 Bars)
17.50 x 25	20	95 p.s.i. (6.55 Bars)	95 p.s.i. (6.55 Bars)

**Jib Capacities\***

60' (18.29 m) boom + 20' (6.10 m) jib			
Boom angle	Jib Offset		
	0°	15°	30°
75°	10,000 4 536	6,500 2 948	4,500 2 041
70°	9,000 4 082	6,000 2 722	4,100 1 860
65°	7,400 3 357	5,400 2 449	3,900 1 769
60°	5,800 2 631	4,900 2 223	3,700 1 678
55°	4,800 2 177	4,100 1 860	3,500 1 588
50°	4,000 1 814	3,600 1 633	3,300 1 497
45°	3,300 1 497	3,100 1 406	3,000 1 361
40°	2,900 1 315	2,700 1 225	2,600 1 179
35°	2,500 1 134	2,400 1 089	2,400 1 089
30°	2,200 998	2,200 998	2,200 998

\* Jib capacities are based on structural strength.



## HCD-80B Wire Rope/Drum Data

## GENERAL INFORMATION ONLY

## Wire rope size and type

Wire rope application	Size and type used	Wire rope description
Main winch	9/16" (14 mm) diameter, Type "C"	Type "C" - 6 x 29 (6 x 37 class) filler wire, extra improved plow steel, preformed, independent wire rope core, right lay, regular lay.

## Drum wire rope capacities

Wire rope layer	Main drum 13-9/16" (345 mm) root diameter grooved lagging			
	9/16" (14 mm) wire rope			
	Rope per layer		Total wire rope	
	Feet	meters	Feet	meters
1	85	25.90	85	25.90
2	91	27.74	176	53.64
3	97	29.56	273	83.21
4	103	31.40	376	114.61
*5	109	33.22	485	147.83

\*For storage purposes only - not a working layer

## Line speeds and pulls

Layer	Speed	Main Winch - 13-9/16" (345 mm) drum					
		Line speeds		Line pulls @ stall			
		F.p.m.	m/min.	Available*		Permissible	
				Lbs.	kgs.	Lbs.	kgs.
1st	Low High	148 331	45 101	8774	3980	7978	3618
2nd	Low High	159 354	48 108	8139	3692	7399	3356
3rd	Low High	169 377	52 115	7590	3443	6900	3130
4th	Low High	178 397	54 121	7110	3225	6464	2932
5th	Low High	188 420	57 128	6693	3036	6085	2760

\*Developed by machinery with first layer of wire rope, but not based on wire rope strength.

HCD-80B Hydraulic Circuit  
Pressure Settings

Function	Pressure
Wire Rope Hoist Outriggers	3000 PSI (206.89 Bars)
Boom Telescope Boom Hoist	3280 PSI (226.20 Bars)
Swing Steering	2000 PSI (137.93 Bars)

**HCD-80B Warning & Operating Instructions****GENERAL INFORMATION ONLY****General:**

1. These capacities apply only to the machine as originally manufactured and normally equipped by FMC Corporation, Construction Equipment Group.
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 manual supplied with the 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. All capacities are in pounds with metric equivalent in *italic*.

**Set-Up:**

1. Capacities included in this chart are the maximum allowable crane capacities, and are based on machine standing level on firm supporting surface under ideal job conditions.
2. When making lifts on outriggers, machine must be level and supported on fully extended outriggers with tires free of supporting surface.
3. The front and rear outriggers must be in proper working position before swinging over side.
4. Capacities on tires depend on tire type, condition of tires, and tire pressure. On tire picks require lifting from main boom head only on a smooth and level surface at 1.0 m.p.h. (1.60 km/h). Boom sections must be extended equally with swing lock engaged.

**Operation:**

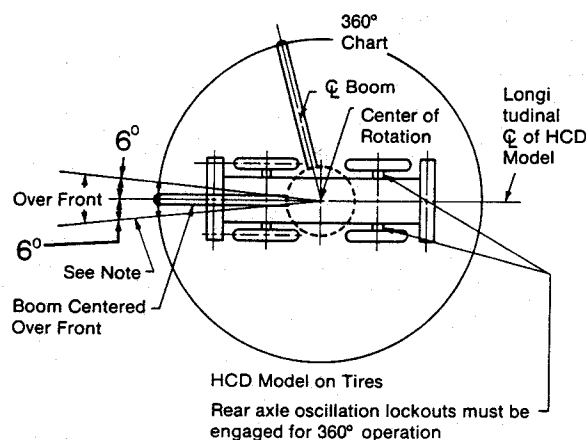
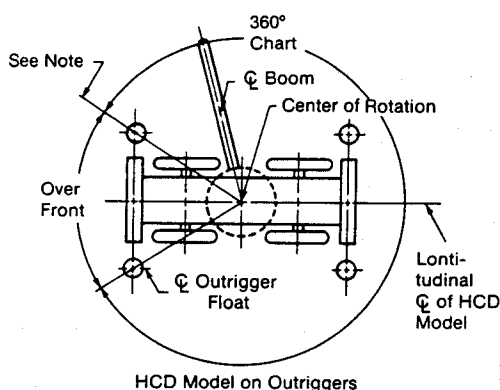
1. For the clamshell and concrete bucket operation weight of bucket and material must not exceed 80% of rated lifting

- capacity. Fly or jib is not to be used for clamshell operation.
2. Crane capacities do not exceed 85% of minimum tipping loads.
3. Those capacities above the heavy line indicate capacities based on factors other than those which would cause a tipping condition.
4. Do not operate machine with boom or boom plus fly lengths at or beyond radii where no capacities are shown. Machine may overturn without any load on the hook.
5. To determine capacities in-between those shown on charts, refer to the rated lifting capacity of the next longer and next shorter booms for the same radius. The lesser of the two capacities will apply.
6. When making lifts at a load radius not shown on charts, use next longer radius to determine allowable capacity.
7. Crane capacities are based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, inflation of tires, and operating speeds. Operator must reduce load ratings to take such conditions into account. Deduction from rated capacities must be made for weight of hook block, weighted ball/hook, sling, spreader bar, fly, or other suspended gear.
8. The following deductions from rated main boom capacities must be made if machine is equipped with the following:
  - a. 20' (6.10 m) one-piece fly stowed on boom - 500 lbs. (226.8 kg).
  - b. 20' (6.10 m) one-piece fly in working position - 1300 lbs (589.7 kg).
  - c. 20' (6.10 m) one-piece jib stowed on boom - 500 lbs (226.8 kg).
  - d. 20' (6.10 m) one-piece jib in working position - 1300 lbs. (589.7 kg).

10. Extension or retraction of the boom with loads within the limits of the applicable rating chart may be attempted. The ability to telescope load is limited by hydraulic pressure, boom angle, boom length, boom lubrication, etc.
11. Do not move load to radii or boom lengths greater than those specified on applicable chart.
12. Deduction must be made for excessive reeving. Any reeving over minimum required is considered excessive.
13. For boom lengths with fly less than 80' (24.38 m), the rated loads are determined by boom angle only.
14. The 20' (6.10 m) jib capacities are based on main boom angle regardless of main boom length. Capacity values are for 360° operation.
15. The 25'4" (7.69 m) boom length capacities are based on boom fully retracted. If not fully retracted, do not exceed ratings for the 30' (9.14 m) boom length.

**Definitions:**

1. Operating 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 rated load at the rated radius.
3. Working Area: Areas 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 lift cable.
5. Side Load: Horizontal force applied to the lifted load either on the ground or in the air.

**HCD-80B Working Areas**

Note: These lines determine the limiting position of any load for operation within working areas indicated.

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

**FMC Corporation Construction Equipment Group Lexington Kentucky 40512**

Link-Belt • cranes/excavators manufactured in Cedar Rapids Iowa • Lexington & Bowling Green Kentucky • Ontario Canada • Milan Italy • Queretaro Mexico & Nagoya Japan (under license)

