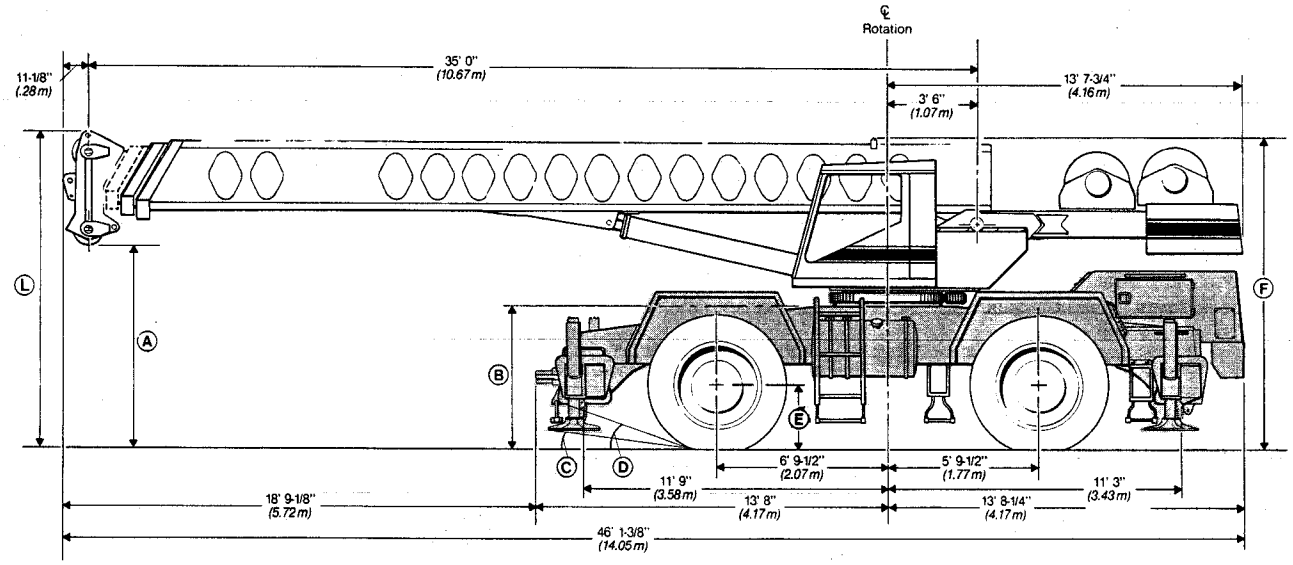
Specifications

Hydraulic Rough Terrain Crane

GENERAL INFORMATION ONLY

HSP-8050

50 Ton (45.36 metric ton)



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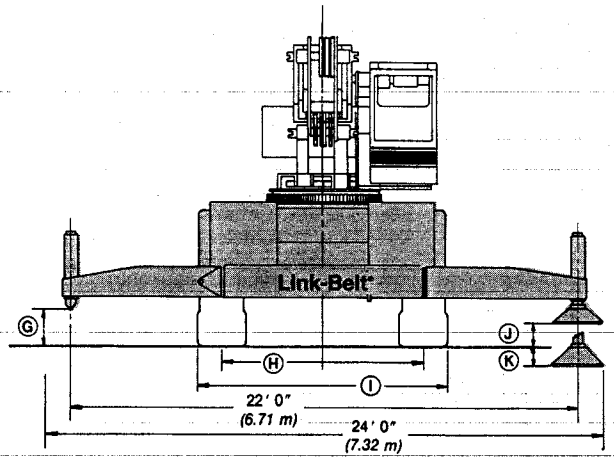


Not to Scale

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 × 25(24-PR)		29.5 × 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
L	12' 6-3/4"	3.83	12' 8-1/4"	3.86

Litho in U S A 11 89

#5120 (supersedes #5056)

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 deareation.

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.

Carrier

Type

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

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

4×4×4 — (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 100,00 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 — 26.5×25 (24-PR) Earthmover type

Optional — 29.5×25 (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	26.5×25	21	*33.79*	168%	79,145	*35 900*	55%	45,499	*20 638*
	*29.5×25	21	*33.79*	147%	76,177	*34 554*	52%	43,793	*19 865*
Cummins 6CT 8.3*	26.5×25	21	*33.79*	254%	85,551	*38 806*	62%	49,304	*22 364*
	*29.5×25	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 cm³)*	504 cu. in. *(8 259 cm³)*
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 m³/min)*	13.2 c.f.m. *(0.37 m³/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, 4×4×4 carrier with GM 6V-53N engine, 26.5×25 tires, full fuel, rear counterweight, 4-sheave head machinery.	GVW ⓪		Upper facing front				Upper facing rear			
			Front axle		Rear axle		Front axle		Rear axle	
	lbs.	*kg*	lbs.	*kg*	lbs.	*kg*	lbs.	*kg*	lbs.	*kg*
	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 × 25 tires	160	*72*	80	*36*	80	*36*	—	—	—	—

⓪ Adjust gross vehicle weight and axle loading according to components weight.
Note: All weights are ± 3%.

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

Link-Belt Construction Equipment Company Lexington, Kentucky
A unit of Sumitomo Construction Machinery Co., Ltd.

FMC

Lifting Capacities

PCSA Class 10-213

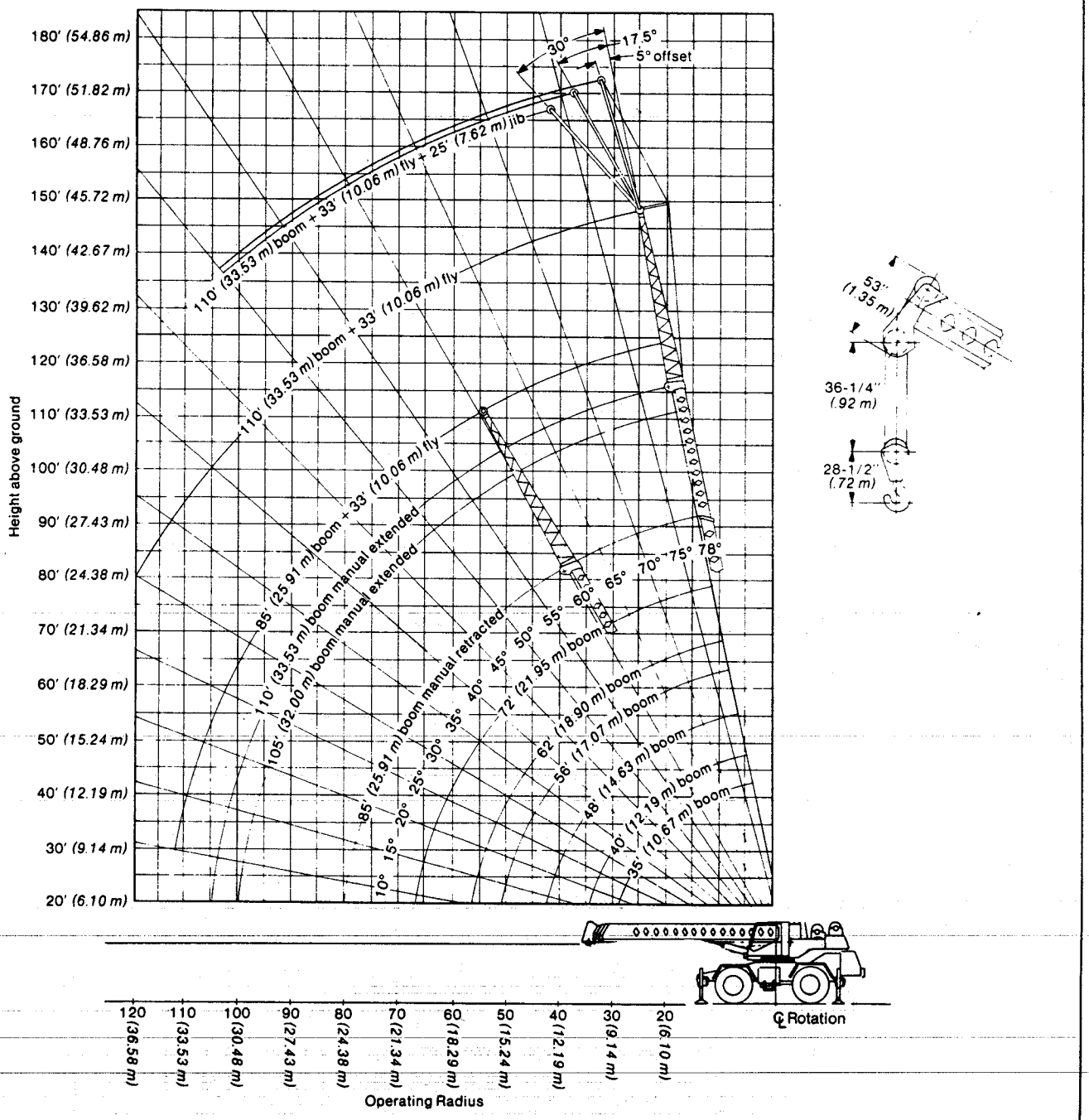
GENERAL INFORMATION ONLY

Link-Belt®

Eighty Series Hydraulic Rough Terrain Crane

HSP-8050 50-ton *(45.36 metric ton)*

4-Section Boom



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

HSP-8050 Lifting Capacities

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

Refer to **Operating Instructions** page 4

Capacities On Outriggers① **Manual Section Retracted**

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)*	
	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°
10' *3.05 m*	100,000 *45360*	100,000 *45360*	72,100 *32705*	72,100 *32705*	70,800 *32115*	70,800 *32115*	68,100 *30890*	68,100 *30890*						
12' *3.66 m*	98,300 *44589*	98,300 *44589*	72,100 *32705*	72,100 *32705*	70,800 *32115*	70,800 *32115*	68,100 *30890*	68,100 *30890*	67,600 *30663*	67,600 *30663*				
15' *4.57 m*	84,000 *38102*	84,000 *38102*	71,500 *32432*	71,500 *32432*	70,800 *32114*	70,800 *32114*	68,100 *30890*	68,100 *30890*	59,400 *26944*	59,400 *26944*	51,800 *23496*	51,800 *23496*		
20' *6.10 m*	64,300 *29166*	64,300 *29166*	64,300 *29166*	64,300 *29166*	64,300 *29166*	64,300 *29166*	57,200 *25946*	57,200 *25946*	48,900 *22180*	48,900 *22180*	43,200 *19596*	43,200 *19596*	36,600 *16602*	36,600 *16602*
25' *7.62 m*	49,800 *22589*	49,800 *22589*	49,800 *22589*	49,800 *22589*	49,800 *22589*	49,800 *22589*	48,100 *21818*	48,100 *21818*	41,300 *18734*	41,300 *18734*	36,800 *16692*	36,800 *16692*	30,500 *13835*	30,500 *13835*
30' *9.14 m*			40,300 *18279*	36,800 *16692*	40,300 *18279*	36,800 *16692*	40,300 *18279*	36,800 *16692*	35,500 *16103*	35,500 *16103*	31,800 *14424*	31,800 *14424*	25,800 *11703*	25,800 *11703*
35' *10.67 m*					32,400 *14696*	27,500 *12474*	32,400 *14696*	27,500 *12474*	32,400 *14696*	27,500 *12474*	27,800 *12602*	27,500 *12474*	22,200 *10069*	22,200 *10069*
40' *12.19 m*					25,200 *11430*	21,300 *9661*	25,300 *11476*	21,300 *9661*	25,400 *11521*	21,300 *9661*	24,500 *11113*	21,300 *9661*	19,400 *8800*	19,400 *8800*
45' *13.72 m*							20,400 *9253*	17,100 *7757*	20,400 *9253*	17,100 *7757*	20,400 *9253*	17,100 *7757*	17,100 *7757*	17,100 *7757*
50' *15.24 m*							16,600 *7529*	13,900 *6305*	16,600 *7529*	13,900 *6305*	16,600 *7529*	13,900 *6305*	15,400 *6985*	13,900 *6305*
55' *16.76 m*									13,900 *6305*	11,500 *5216*	13,900 *6305*	11,500 *5216*	13,800 *6260*	11,500 *5216*
60' *18.29 m*											11,700 *5307*	9,600 *4354*	11,700 *5307*	9,600 *4354*
65' *19.81 m*											9,900 *4490*	7,900 *3583*	9,900 *4490*	7,900 *3583*
70' *21.34 m*													8,400 *3810*	6,700 *3039*
80' *24.38 m*													6,000 *2721*	4,500 *2041*
90' *27.43 m*														
100' *30.48 m*														
110' *33.53 m*														

77' *(23.47 m)* boom plus 33' *(10.06 m)* fly			85' *(25.91 m)* boom plus 33' *(10.06 m)* fly		
Boom angle	Front	360°	Boom angle	Front	360°
See Note ②			See Note ②		
76°	22,200 *10070*	22,200 *10070*	77°	18,500 *8392*	18,500 *8392*
74°	22,200 *10070*	22,200 *10070*	75°	17,500 *7938*	17,500 *7938*
71°	20,200 *10070*	20,000 *10070*	72°	15,500 *7031*	15,500 *7031*
68°	18,900 *8573*	18,900 *8573*	70°	13,900 *6305*	13,900 *6305*
66°	17,300 *7847*	17,300 *7847*	67°	12,400 *5625*	12,400 *5625*
63°	15,400 *6985*	15,400 *6985*	64°	10,900 *4944*	10,900 *4944*
60°	14,300 *6486*	13,600 *6214*	62°	9,600 *4355*	9,600 *4355*
56°	13,200 *5988*	11,600 *5261*	59°	8,600 *3901*	8,600 *3901*
53°	11,900 *5397*	9,900 *4490*	56°	7,700 *3493*	7,700 *3493*
50°	10,400 *4717*	8,600 *3901*	53°	6,900 *3130*	6,900 *3130*
42°	8,000 *3628*	6,500 *2948*	46°	5,600 *2540*	5,600 *2540*
33°	6,200 *2812*	4,900 *2044*	39°	4,600 *2087*	4,400 *1996*
21°	4,600 *2086*	3,400 *1542*	30°	3,900 *1769*	3,400 *1542*
			17°	3,400 *1542*	2,500 *1133*

Wire rope application	Size and type used	Wire rope description
Main winch Auxiliary winch	3/4" *(19 mm)* diameter, Type "N" 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.

GENERAL INFORMATION ONLY

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 & Carry③	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*
55' *16.76 m*	62' *18.90 m*	4,200 *1 904*	— —	4,200 *1 904*
60' *18.29 m*	72' *21.95 m*	3,200 *1 451*	— —	3,200 *1 451*

HSP-8050 Lifting Capacities

35′-110′ *(10.67-33.53 m)* 4-section boom

Refer to **Operating Instructions** page 4

Capacities① 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*	76°	9,400 *4 264*	9,400 *4 264*
40′ *12.19 m*	68°	18,200 *8 256*	18,200 *8 256*	69°	15,500 *7 030*	15,500 *7 030*	74°	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*	72°	9,000 *4 082*	9,000 *4 082*
50′ *15.24 m*	62°	15,000 *6 804*	15,000 *6 804*	63°	12,100 *5 488*	12,100 *5 488*	70°	8,400 *3 810*	8,400 *3 810*
55′ *16.76 m*	59°	13,800 *6 260*	13,100 *5 942*	60°	10,700 *4 853*	10,700 *4 853*	68°	8,000 *3 629*	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*	66°	7,300 *3 311*	7,300 *3 311*
65′ *19.81 m*	52°	11,500 *5 216*	9,500 *4 308*	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 *3 357*	7,800 *3 357*	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*③	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 *2313*	5,100 *2313*	4,200 *1 905*
75°	5,100 *2313*	5,100 *2313*	4,000 *1 814*
70°	5,100 *2313*	4,900 *2223*	3,600 *1 633*
65°	4,500 *2041*	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 High	172 364	*52.43* *110.95*	15,870 7,520	*7 199* *3 411*
Second	Low High	187 394	*57.00* *120.09*	14,630 6,930	*6 636* *3 143*
Third	Low High	201 425	*61.26* *129.54*	13,580 6,430	*6 160* *2 917*
Fourth	Low High	216 456	*65.84* *138.99*	12,660 6,000	*5 743* *2 722*
Fifth	Low High	230 487	*70.10* *148.44*	11,860 5,620	*5 380* *2 549*
Sixth	Low High	245 517	*74.68* *157.58*	11,160 5,280	*5 062* *2 395*
Seventh	Low High	260 548	*79.25* *167.03*	10,530 4,990	*4 776* *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)*

GENERAL INFORMATION ONLY

Warning and Operating Instructions HSP-8050

General:

1. Rated lifting capacities in pounds as shown on lift chart pertain to this machine as originally manufactured and normally equipped by FMC Corporation, Construction Equipment Group. 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. 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 the machine standing level on firm supporting surface under ideal job conditions. 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. Eight parts of ¾" *(19 mm)* diameter Type "N" wire rope required to lift maximum 100,000 lbs. *(45 360 kg)* rated load.
4. 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. Pick and carry operations (creep), are restricted to 1.0 m.p.h. *(1.61 km/h)* with the boom centered over front, the travel swing lock engaged and the load restrained from swinging. Lifts with the manual extended, fly or fly/jib combination erected are prohibited.
5. When making lifts on rubber, tires must be inflated to the recommended pressure and power sections must be equally extended.

Operation:

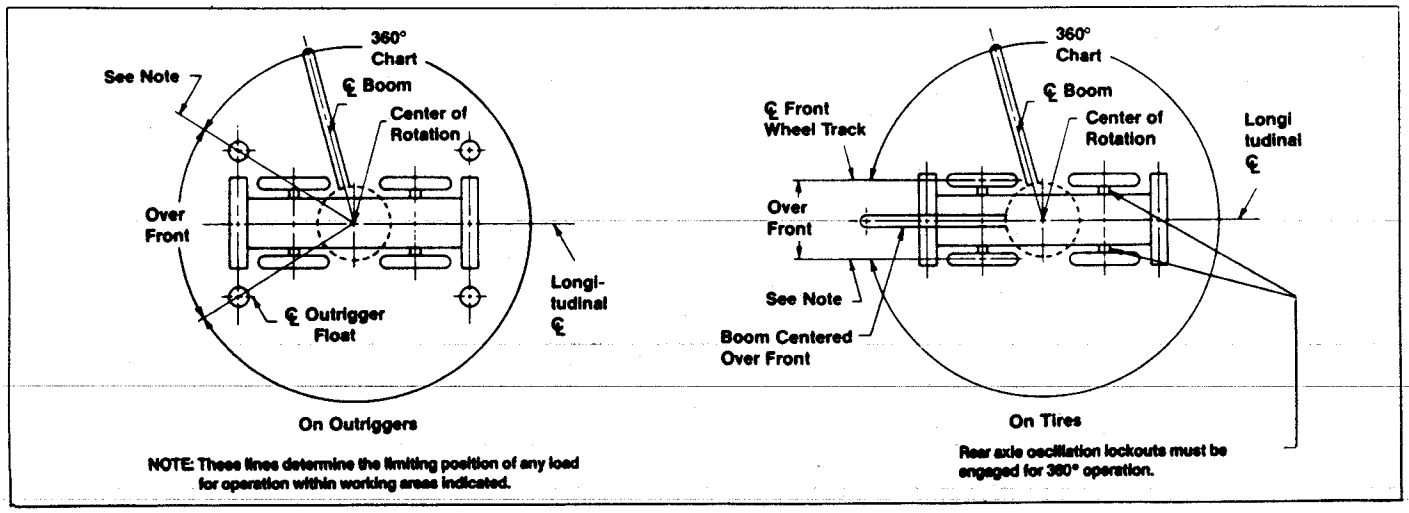
1. Rated lifting capacities at rated radius shall not be exceeded. Do not tip the machine to determine allowable loads. For clamshell and concrete bucket operation, weight of bucket and load shall not exceed 80% of rated lifting capacities. Clamshell bucket weight including bucket content is restricted to a maximum of 7,000 pounds *(3175 kg)* with a maximum boom length of 56 feet *(17.07 m)* and a minimum boom angle of 35°. Manual extended, fly or fly/jib combinations are prohibited for clam work.
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. Those capacities above the heavy bold line indicate capacities based on factors other than those which would cause a tipping condition.
3. Do not operate at boom lengths or beyond radii where no capacities are shown. Machine may overturn without any load on the hook.
4. 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.
5. When making lifts at a load radius not shown on charts, use the next longer radius to determine allowable capacity.
6. 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. Deductions from rated capacities must be made for weight of hook block, weighted ball/hook, sling, spreader bar, fly or other suspended gear.
7. Rated lifting capacities are based on correct reeving. Deduction must be made for excessive reeving. Any reeving over minimum required is considered excessive and must be taken into account. Use working range plate to estimate the extra feet of rope and then deduct 1 lb. *(.4536 kg)* for each foot of wire rope before attempting to lift a load.
8. The following deductions from rated main boom capacities must be made if the machine is equipped with the following:
   a. auxiliary lifting sheave - 200 lbs. *(91 kg.)*
   b. 33' *(10.06 m)* one-piece fly stowed on boom — 700 lbs. *(318 kg)*.
   c. 33' *(10.06 m)* one-piece fly in working position — 1,800 lbs. *(816 kg)*
   d. 33' *(10.06 m)* fly plus 25' *(7.62 m)* jib stowed on boom — 1,100 lbs. *(499 kg)*
   e. 33' *(10.06 m)* fly plus 25' *(7.62 m)* jib in working position — 4,400 lbs. *(1 996 kg)*
   f. 25' *(7.62 m)* jib in working position and picking from fly tip — 1,900 lbs. *(862 kg)*
9. Powered boom length is from 35' *(10.67 m)* to 85' *(25.91 m)*.
10. Extension or retraction of the boom with loads within the limits of the applicable rating chart may be attempted. The ability to telescope loads 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. Effective length of boom with auxiliary lifting sheave is length shown on boom length indicator plus 2' *(0.61 m)*.
13. 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 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 110' *(33.53 m)* manual extended. For angles not shown, use next lower boom angle to determine allowable capacity.
14. 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 with fly and manual retracted less than 110' *(33.53 m)*, the rated loads are determined by boom angle only in the column headed 110' *(33.53 m)* manual retracted with fly. For boom lengths with fly and manual retracted between 110' *(33.53 m)* and 118' *(35.97 m)*, the rated loads are determined by boom angle only in the column headed 118' *(35.97 m)*. For angles not shown, use the next lower boom angle to determine allowable capacity.
15. For boom lengths with fly less than 143' *(44 m)* with manual extended, the rated loads are determined by boom angle only in the column headed 143' *(44 m)*. For angles not shown, use the next lower boom angle to determine allowable capacity.
16. The 25' *(8 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 degree operation. Warning: Do not lower 25' *(8 m)* jib in working position below 50 degrees unless boom is fully retracted.
17. 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.

GENERAL INFORMATION ONLY

Working Areas HSP-8050



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