

Link-Belt Speeder DIVISION OF FMC CORPORATION



SELF-PROPELLED CRANE

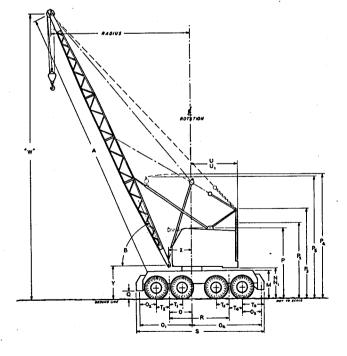
Dimensions - Working ranges -Specifications — Lifting capacities



DIMENSIONS AND WORKING RANGES

Rubber Tired Mounting — 8 x 4, 11' 1"	Wide	
Basic angle boom length	Α	40′ 0″
Basic tubular boom length	Α	40′ 0″
Boom angle	В	-
Over-all height, top of roller path mounting plate	M-	4' 7"
Ground clearance under counterweight "A"	N	5′ 2″
Ground clearance under counterweight "AB"	Nı	5′ 1″
Centerline rotation to center rear axle bogie pivot	0	4' 0"
Centerline rotation to center rear outrigger	O _i	9′ 3″
Center rear rear axle to center rear outrigger	O ₂	3′ 1″
Center front front axle to center front outrigger	O ₃	3′ 3″
Centerline rotation to center front outrigger	0,	11' 11"
Over-all cab height	P	12' 2"
Over-all height, retractable gantry lowered	P ₂	13′ 1″
Over-all height, retractable gantry raised	P ₃	16′ 4″
Height over vertical boom live mast	P₄	27' 6"
Height over boom live mast—with mast in position		-
30° above horizontal	P ₅	18′ 7″
Ground clearance under outrigger box	Q	131/4"
Wheelbase (126")	R	10' 6"
Over-all length over outrigger boxes	S	22' 6"
Center rear axles to center rear axle bogie pivot	T1 & T2	2′ 3″
Center front axles to center front axle bogie pivot	T; & T₄	2′ 3″
Center front front axle to front outrigger	T₅	3′ 11″
Tailswing of counterweight "A"	υ	11′ 5″
Tailswing of counterweight "AB"	Uı	11′ 10″
Radius of boom hinge pin — angle boom	Х	3′ 2″
Radius of boom hinge pin — tubular boom	Х	4′ 1″
Height of boom hinge pin — angle boom	Y	6′ 10″
Height of boom hinge pin — tubular boom	Υ	5′ 5″
Over-all cab width (without ladder to roof)		8′0″
Over-all width — outriggers retracted, floats removed	_	11′ 1″
Over-all width — outriggers extended (C/L of jacks)	_	18′ 5″
Minimum ground clearance		1′ 1″
Gradeability, low low gear (based on peak engine torque)	_	24.21%

GENERAL INFORMATION ONLY





GENERAL SPECIFICATIONS

CARRIER

TYPE — Self-propelled type, 8 x 4, Link-Belt Speeder.

FRAME — Box section, wide flange beam main members; all-welded, stress relieved.

ROLLER PATH — Machined, double-flanged hook roller path — with integral internal ring (swing) gear — is welded to carrier frame.

CENTERPIN — Cast steel, welded to carrier frame.

FRONT AXLES — Front and rear front axles; Shuler FTCA-34-L (FE-15H) tandem, single wheels. Hendrickson rubbermounted equalizing beams with torque rods. 104" track.

REAR AXLES — Front and rear rear axles; Clark Planetary #BD-57000, ratio 8.67:1, dual wheels, 100⁵/₈" track. Hendrickson bronze bushed equalizing beams and rubbermounted torque rods.

WHEELS AND RIMS — Front; cast spoke. Rear; integral with planetary hubs. 9:00V — 24" rims.

TIRES — Standard; 14:00 x 24-L (20-ply rating) military type non-directional tread. Single tires on front axles; dual tires on rear axles.

BRAKES -

Service — Eight-wheel hydraulic brakes, Speed-o-Matic operated.

Size and Area -

Rear wheels — 16¹/₂" x 7"; total effective lining area, 920 sq. in.

Front wheels — 17¹/₄" x 4"; total effective lining area, 496 sq. in.

Digging — Eight-wheel service brakes.

Parking — Bendix internal expanding, 2-shoe type; spring applied and hydraulically released. Mounted on 2-speed transmission case.

Emergency — Parking brake can be used.

STEERING — Power hydraulic; double-acting cylinder, operated from Speed-o-Matic power hydraulic system.

TURNING RADIUS — 33' 0" to centerline of tire; 36' 0" over front corner.

TRANSMISSIONS —

Main — Link-Belt Speeder; 2-speed hydraulic shift. Gear ratios 1.00 to 1.00 and .296 to 1.00.

Overdrive — Link-Belt Speeder; gear ratio .483 to 1.00.

UNIVERSALS — Mechanics Universal or Rockwell Std.

DRIVING METHOD — Power is transmitted from the revolving crane upper to the carrier drive train through vertical travel shaft into a set of bevel gears with an overdrive ratio which, in turn, drives the main 2-speed transmission.

TRAVEL SPEEDS — All speeds shown are based on engine full load r.p.m. except low speed which is based on engine peak torque r.p.m.

Low — .78 m.p.h.

Third — 4.10 m.p.h.

Second — 2.80 m.p.h.

Fourth -- 9.10 m.p.h.

GENERAL INFORMATION ONLY

OUTRIGGERS — Removable bolt-on outrigger boxes front and rear. Two alloy steel sliding beams per box.

Standard — Four ground controlled power hydraulic beams and jacks.

Optional — Manual sliding beams and screw jacks.

FLOATS — Low profile, steel, 26" square base.

FENDERS — Standard; removable.

UPPER

UPPER FRAME — All-welded, stress relieved, precision machined. Machinery side housings bolted to upper frame.

TURNTABLE ROLLERS — Eight adjustable, heat-treated, conical, hook-type steel rollers mounted on anti-friction bearings. Two equalized pairs mounted both front and rear.

TRANSMISSION — Link-Belt triple-width roller chain enclosed in oil-tight chain case with integral oil sump. Pump-driven oil stream lubrication. Engine pinion and chain wheel have machine-cut teeth.

REDUCTION SHAFT — Two piece shaft joined by an involute splined coupling and mounted on anti-friction bearings.

Drive Pinions — Two; heat treated, machine-cut teeth, involute splined to reduction shaft. Pinions mounted outside side housings.

CLUTCHES — Speed-o-Matic power hydraulic actuated for swing, hoist and power load lowering on front and rear main operating drums, boomhoist and lowering, and third operating drum. Internal expanding 2-shoe type, aluminum alloy shoes; 20" diameter, 5" face width. Optional third drum clutch; 171/4" diameter, 4" face width. Note: Power load lowering clutches on front and rear main operating drums not available when machine is equipped with optional 2-speed gear-driven drums. Power load lowering clutch on rear main operating drum not available when drum is equipped with optional 2-shoe auxiliary drum brake.

Clutch Spiders — Involute splined to horizontal shafts.

DRUMS — Front and rear main operating, and optional third drums.

Shafts — Mounted in line bores on anti-friction bearings. Front and rear main operating drum shafts only — extended to accommodate power load lowering clutches. Special front and rear main operating drum shafts — required to accommodate optional 2-speed, gear-driven mechanisms or planetary drive units on either drum shaft.

Spur Gears — Machine-cut teeth; mounted on antifriction bearings on shaft.

Clutch Drums — Bolted to spur gears.

Brakes — Two-piece, external contracting band, mechanically foot pedal operated.

Front and rear drums — 27" diameter, 4" face width. Optional third drum — 18" diameter, 3" face width.

Brake Drums — involute splined to drum shafts.

Drum Laggings — Two-piece, removable; bolted to brake drum and on shaft.

THIRD DRUM — Optional; mounts forward of front main operating drum. Functions as third operating drum with design and control similar to front and rear main operating drums. On machine equipped with third drum, the following must be noted:

Dragline Operation — To avoid interference with inhaul rope, remove all cable from third drum. To prevent interference of dragline inhaul rope with third drum brake enclosure, use 10' longer inhaul rope than normal to leave minimum of 4 wraps of rope at anchor end of front (inhaul) drum.

Crane-Clamshell Operation — Quantity of third drum wire rope must be limited in some cases to avoid interference with front drum wire rope, particularly when operating booms at extended radii.

DRUM ROTATION INDICATORS — Standard for front and rear main operating drums. Mounted on front of control stand; dials are actuated by flexible shaft drives attached to drum shafts.

TWO-SPEED FRONT AND REAR MAIN OPERATING DRUMS — Gear-driven; optional for hoist only. Intermediate gears installed in side housings convert 2-shoe power load lowering clutches to high-speed hoist clutches; load hoist wire rope speed increased 90% over standard rope speed. Note: Power load lowering clutches, or optional auxiliary rear drum brake, not available with 2-speed, gear-driven drum arrangement.

PLANETARY DRIVE UNITS — Optional for front and rear main operating drums. Planetary unit mounts between spur gear and 2-shoe clutch drum on extended shaft; available for 70% increase or 40% decrease over standard wire rope speeds for load hoisting or lowering on rear drum, and for load hoisting only on front drum. Two-shoe clutches give standard wire rope speed. Planetary drive units controlled by external contracting band through push-button located on clutch control lever.

AUXILIARY TWO-SHOE REAR DRUM BRAKE — Optional. Internal expanding, 2-shoe Speed-o-Matic power hydraulic brake; 20" diameter, 5" face width. Brake spider involute splined to shaft and brake drum bolted to anchor plate on machinery side housing. Increases brake lining contact area by 212 sq. in. Pressure on mechanical brake pedal applies the standard rear drum brake and the auxiliary 2-shoe brake simultaneously. Mechanical linkage activates the control mechanism of a variable pressure valve to direct hydraulic pressure to the auxiliary brake cylinder. Note: The following items are not available for the rear drum when auxiliary brake is furnished — power load lowering clutch; 2-speed, gear-driven drum mechanism, or planetary drive unit for load lowering.

INDEPENDENT BOOMHOIST — Spur gear driven with precision boom raising or lowering through power hydraulic clutches. A wire rope drum locking pawl, manually

controlled from operator's position, is provided.

Shaft — Mounted in line bore on anti-friction bearings.

Spur Gears — Machine-cut teeth; mounted on anti-friction bearings on shaft.

Wire Rope Drum — Involute splined to shaft; boomhoist brake drum cast integral with wire rope drum.

Brake — External contracting band; 22" diameter, 3" face width. Spring applied and Speed-o-Matic power hydraulic released.

Boomhoist Limiting Device — Device designed to be mechanically adjusted to predetermined minimum boom radius. When boom is raised to this minimum radius, it contacts the limit stop which, in turn, mechanically "kicks out" boomhoist lever which disengages boomhoist clutch while the boomhoist brake is being automatically spring-applied. Boom must then be lowered before it can be raised again.

INDEPENDENT SWING AND TWO-SPEED TRAVEL — Standard.

HORIZONTAL SWING (REVERSE) SHAFT — Mounted in line bore on anti-friction bearings.

Spur Gears — Machine-cut teeth, mounted on anti-friction bearings on shaft.

Bevel Gear — Involute splined to shaft, fully enclosed and running in oil.

VERTICAL DRIVE SHAFT — For swing. Mounted on anti-friction bearings.

Spur Gear — Machine-cut teeth, involute splined to shaft, fully enclosed and running in oil.

Bevel Gear — Involute splined to shaft, fully enclosed and running in oil.

VERTICAL SWING SHAFT — Mounted on anti-friction bearings.

Spur Gear — Machine-cut teeth, involute splined to shaft, fully enclosed and running in oil.

Swing Pinion — Machine-cut teeth, involute splined to shaft; meshes with internal teeth of ring gear.

HORIZONTAL TRAVEL (REVERSE) SHAFT — Mounted in line bore on anti-friction bearings.

Spur Gears — Machine-cut teeth, mounted on anti-friction bearings on shaft.

Bevel Gear — Involute splined to shaft, fully enclosed and running in oil.

VERTICAL DRIVE SHAFT — For travel. Mounted on anti-friction bearings.

Spur Gear — For high-speed travel. Machine-cut teeth, mounted on bronze bushings, fully enclosed and running in oil.

Spur Gear — For low-speed travel. Machine-cut teeth, involute splined to shaft, fully enclosed and running in oil.

Jaw Clutch - Involute splined to shaft.

VERTICAL TRAVEL SHAFT — Two-piece, tubular steel; joined by splined sleeve. Both portions of shaft mounted on anti-friction bearings.



Spur Gear — Machine-cut teeth, involute splined to shaft, fully enclosed and running in oil.

Bevel Gear — Involute splined to shaft, fully enclosed and running in oil.

NON-INDEPENDENT SWING AND TWO-SPEED TRAVEL
— Optional.

HORIZONTAL SWING AND TRAVEL (REVERSE) SHAFT — One reverse shaft serves both non-independent swing and travel.

Spur Gears and Bevel Gear — Same as for independent swing.

VERTICAL DRIVE SHAFT — For non-independent swing and travel. Mounted on anti-friction bearings.

Spur Gear — For high-speed travel. Machine-cut teeth, mounted on bronze bushings, fully enclosed and running in oil.

Spur Gear — For low-speed travel. Machine-cut teeth, involute splined to shaft, fully enclosed and running in oil.

Jaw Clutch — Involute splined to shaft.

VERTICAL SWING SHAFT — Mounted on anti-friction bearings.

Spur Gear — Machine-cut teeth, mounted on bronze bushings; engaged by jaw clutch on vertical drive shaft. Fully enclosed and running in oil. Machined clutch jaws integral with top side of gear.

Jaw Clutch — Involute splined to shaft, mounted on top side of spur gear, fully enclosed and running in oil.

Swing Pinion — Same as for independent swing.

VERTICAL TRAVEL SHAFT — Same as for independent swing.

Spur Gear — For low-speed travel. Machine-cut teeth, mounted on bronze bushings, machined clutch jaws integral with top side of gear, fully enclosed and running in oil.

Spur Gear — For high-speed travel. Machine-cut teeth, involute splined to shaft, machined clutch jaws integral with top side of gear, fully enclosed and running in oil.

Bevel Gear — Same as for independent swing.

SWING LOCK — Double-pawl type, mounted on inside front of upper frame. Mechanically operated from crane operator's position; engages internal teeth of ring gear.

SWING BRAKE — Two-directional, external contracting

band type; spring-applied and power hydraulically released. Mounted on vertical swing shaft.

GANTRY — Retractable type, mounted at rear of upper frame and cab; supports boom suspension system, bail, and two boomhoist wire rope guide sheaves. Also used for power lowering of counterweight in conjunction with boom lowering clutch.

Bail — Pinned to gantry frame. Contains five or six sheaves on bronze bushings for standard 10-part or optional 12-part boomhoist wire rope.

COUNTERWEIGHT — Standard counterweight "A" — 13,000# for crane, dragline, clamshell and magnet capacities. Optional additional 6,200# counterweight for lifting crane service only. Counterweight "AB" — 19,200# (one piece) for lifting crane service only.

CAB — Operator's door and front window and two rear doors roll on ball bearing rollers; other machinery access doors are hinged. Full-vision operator's compartment with safety glass panels. Foot throttle, hand throttle, fire extinguisher, signal horn, roof-top access ladder, hand grab rails, skid-resistant paint on roof — standard.

Cab Options — 4' elevated operator's cab, electric windshield wiper, heater and defroster fan, rigid catwalks for left and/or right side with overhead grab rails, and lever-type hand throttle on swing control lever.

CONTROL SYSTEM — Speed-o-Matic power hydraulics, an open system. Operating pressure is transmitted through oil to all operating 2-shoe clutch cylinders, swing brake and boomhoist drum, and brake cylinders. The system includes a pump to provide a constant flow of oil, an accumulator to maintain operating pressure, and variable pressure operator-controlled valves to regulate this pressure to each clutch cylinder.

Pump — Vickers; rated at 5 gal. per minute at 1,200 r.p.m.

Oil Filter — Link-Belt Speeder; replaceable Skinner ribbon-type filter element.

Relief Valve — Link-Belt Speeder; set to operate at 1,250 p.s.i.

Unloader Valve — Link-Belt Speeder; set to unload pump at a maximum of 1,050 p.s.i. and to load pump when pressure drops below 900 p.s.i.

Accumulator — Link-Belt Speeder; piston-type, precharged with nitrogen gas to 650 p.s.i.

Sump Tank — Link-Belt Speeder; 7-gal. capacity with filter and strainer assembly to keep oil clean.

Control Valves — Link-Belt Speeder; variable pressure type.

GENERAL INFORMATION ONLY

ENGINES — Diesel, 12-volt alternator, full-pressure lubrication, oil filter, radiator, air cleaner, hydraulic pump, and foot throttle.

	GM 4-71N	GM 4-71N	GM 6-71N	Cummins N743
	With	With	With	With
	Hydraulic Coupling (1)	Torque Convertor (2)	Torque Convertor (2)	Torque Convertor (3)
Number of cylinders Bore and stroke (inches) Piston displacement (cu. in.)	4	4	6	6
	4 ¹ / ₄ x 5	4 ¹ / ₄ x 5	4 ¹ / ₄ x 5	5½ x 6
	283.7	283.7	425.6	743
High idle speed, r.p.m. (pinion)	1,990	1,207	1,940	1,300
Engine r.p.m. @ full load speed	1,850	1,810	1,800	1,275
Net engine h.p. @ full load speed	110	117	165	67
Peak torque (ft. lbs.)	351	1,160	1,400	1,450
Peak torque r.p.m.	1,200	Convertor stall	Convertor stall	Convertor stall
Electrical System	12-volt	12-volt	12-volt	12-volt
Batteries	1 / 6 volt	1 / 12-volt	1 / 12-volt	2 / 12-volt
Transmission — No. chain wheel teeth No. engine pinion teeth	161	161	161	161
	17	28	21	26

(1) Twin Disc hydraulic coupling #SP-211-HP-1

(2) Allison single-stage torque convertor #TCDOA-525

(3) Twin Disc three-stage torque convertor #CO-10065-TC-1

CRANE BOOMS & JIBS

<u>BOOM</u> — Angle; 2-piece 40' basic length, 20' long base and open throat top section, 34" deep and 34" wide at connections. Main chord angles — base section, $3^{1}/_{2}$ " x $3^{1}/_{2}$ " x

Boomfoot — $1^5/8''$ thick on 38'' centers; 3'' diameter pin.

Boompoint Machinery — Standard, 3 sheaves; optional, 2 or 4 sheaves. Sheaves mounted on anti-friction bearings.

Boompoint Sheave Guards — Standard, rigid steel. Optional, roller-type mounted on anti-friction bearings does not permit use of center sheave(s) and not available on boom equipped with jib.

Boom Connections — Pin connections, standard; bolted, optional.

BOOM EXTENSIONS — Available in 5', 10' and 20' lengths with appropriate length pendants.

BOOM STOPS — Dual; rigid type, with spring-loaded bumper ends.

HOIST ROPE DEFLECTOR ROLLERS — To deflect main load hoist rope over top side of boom; mounted on antifriction bearings. Required when optional third drum load hoist rope passes over crane boom, and recommended for machine equipped with long boom or machine working with short boom when front drum wire rope is used as main load hoist line. One roller standard; recommended options — 2 for booms 50'-65' long, 3 for booms 70'-85' long, and 4 for booms 90'-100' long.

BOOMHOIST BRIDLE — Serves as connection between the pendants and boomhoist rope. Bridle contains 5 or 6 sheaves mounted on bronze bushings, for standard 10-part or optional 12-part boomhoist wire rope.

JIB — Angle; 20' 2-piece with 10' long upper and lower sections; 10' extensions available to make up 30' and 40' jibs. Jib is 18" deep and 23" wide at connections; chord angles — lower section, 2" x 2" x 1/4"; upper section, 2" x 2" x 3/6". Bolted connections.

Jib Mast — 10' high, mounted on jib base section;

two deflector sheaves for the jib load hoist rope (whipline) mounted on anti-friction bearings within mast. Two equalizer sheaves mounted at top of mast for jib frontstay and backstay lines.

Jib Stops — Dual, telescoping type; pinned from jib mast to jib lower section and from jib mast to boom top section.

Jib Peak Sheave — Mounted on anti-friction bearings. Jib Peak Shaft — Anchor is provided at peak of jib for 2-part jib load hoist rope, if desired.

BOOM — Hi-Lite tubular; 2-piece 40' basic length; 20' long base and open throat top sections, 44" deep and 44" wide at connections. Main chord angles — 21/4" square tube.

Boomfoot — $2^{1}/4''$ thick on 50" centers; 3" diameter pin.

Boompoint Machinery — Standard, 3 sheaves; optional, 2 or 4 sheaves. Sheaves mounted on anti-friction bearings.

Boompoint Sheave Guards — Standard, rigid steel. Optional, roller-type mounted on anti-friction bearings — does not permit use of center sheave(s) and not available on boom equipped with jib.

Boom Connections — Pin connections standard.

BOOM EXTENSIONS — Available in 10', 15' and 20' lengths with appropriate length pendants.

BOOM STOPS — Dual, telescoping type, with spring-loaded bumper ends.

HOIST ROPE DEFLECTOR ROLLERS — To deflect main load hoist rope over top side of boom; mounted on antifriction bearings. Required when optional third drum load hoist rope passes over crane boom, and recommended for machine equipped with long boom or machine working with short boom when front drum wire rope is used as main load hoist line. One roller standard; recommended options — two for booms 110'-125' long, three for booms 130'-145' long, and four for booms 150' long.

BOOMHOIST BRIDLE — Serves as connection between the pendants and boomhoist rope.



Without Boom Live Mast — Bridle contains five or six sheaves, mounted on anti-friction bearings for standard 10-part or optional 12-part boomhoist wire rope. With Boom Live Mast — Bridle contains six sheaves for standard 12-part boomhoist wire rope and two additional auxiliary sheaves to permit use of mast as short boom. All sheaves mounted on anti-friction bearings.

BOOM LIVE MAST — Hydraulic telescoping type. Boom live mast and boom midpoint suspension pendants required for Hi-Lite tubular booms over 130' long. Mounted on boomfoot adaptor; supports boomhoist bridle and boom midpoint suspension pendants.

JIB — Tubular; 20' 2-piece with 10' long upper and lower sections; 10' extensions available to make up 30', 40', or 50' jibs. Jib is 251/4" wide and 191/4" deep at connections; chord angles - upper and lower section, 11/4" round tube. Pin connections.

Jib Mast - 10' high, mounted on jib base section, two deflector sheaves for the jib load hoist rope (whipline) mounted on anti-friction bearings within mast. Two equalizer sheaves mounted at top of mast for jib frontstay and backstay lines.

Jib Stops — Dual, telescoping type; pinned from jib mast to jib lower section and from jib mast to boom top section.

Jib Peak Sheave — Mounted on anti-friction bearings. Jib Peak Shaft — Anchor is provided at peak of jib for 2-part jib load hoist rope, if desired.

AUXILIARY EQUIPMENT

FAIRLEADER — Full-revolving type with barrel, sheaves, and guide rollers mounted on anti-friction bearings. (Standard with dragline attachment.)

TAGLINE WINDER - Optional, Rud-O-Matic Model 648; spring-wound drum type mounted on crane boom. Cable pull off drum -60'-75' from neutral.

BOOM ANGLE INDICATOR — Mounted on boom near base - standard.

WIRE ROPE

APPLICATION - TYPE AND SIZE USED

Boomhoist - Type "N", 5/8" dia.

Main Load Hoist — Type "N", 3/4" dia.

Jib Load Hoist — 1-part line, Type "K", 5/8" dia.; 2part line, Type "N", 5/8" dia.

Jib Staylines — Type "A", 5/8" dia.; Type "F", 5/8"

Boom Pendants — Type "N", 11/4" dia. Dragline Inhaul — Type "D", 7/8" dia. Dragline Hoist — Type "N", 3/4" dia.

Clamshell Holding (Hoist) — Type "N", 5/8" dia.

Clamshell Closing — Type "N", 5/8" dia.

Midpoint Boom Suspension Pendants — (With Live Boom Mast) — Type "C", 1" dia.

WIRE ROPE TYPES -

Type "A" — 6 x 25 (6 x 19 Class), filler wire, improved plow steel, preformed, fiber center, right lay, regular

Type "C" - 6 x 25 (6 x 19 Class), filler wire, improved plow steel, preformed, independent wire rope center, right lay, regular lay.

Type "D" — 6 x 25 (6 x 19 Class), filler wire, improved plow steel, preformed, independent wire rope center, right lay, lang lay.

Type "F" - 6 x 25 (6 x 19 Class), filler wire, improved plow steel, preformed, independent wire rope center, right lay, regular lay.

Type "K" - 19 x 7 non-rotating, improved plow steel, preformed, wire rope center core.

Type "N" — 6 x 25 (6 x 19 Class), filler wire, extra improved plow steel, preformed, independent wire rope center, right lay, regular lay.

JIB MAST STAYLINES -

Frontstay Pendants - Attached from jib peak to top of jib mast.

Backstay Pendants - Attached from top of jib mast to base of boom top section.

MAIN LOAD HOIST WIRE ROPE LENGTHS (Feet)

	Parts						BOOM I	ENGTH.					
0	f Line	40'	50'	60'	70′	80'	90'	100′	110'	120'	130′	140'	150'
	1	95	115	135	155	175	195	215	235	255	275	295	315
	2	140	170	200	230	260	290	320	350	380	410	440	470
	3	185	225	265	305	345	385	425	465	505	545	585	625
	4	230	280	330	380	430	480	530	580	630	680	730	780
	5	275	335	395	455	515	575	635	695	755	815		
ļ	6	320	390	460	530	600	670	740	810	880	950		
1	7	365	445	525	605	685	765	845				•	
	8	410	500	590	680	770	860	950					

BOOMHOIST WIRE ROPE LENGTHS (Feet)

	0 1.000	<i>,</i>	
Parts of line	Angle Boom	Tubular Boom	Tubular Boom & Mast
8	255'	_	
10	310'	310'	
12	360'	360'	390'

JIB LOAD HOIST WIRE ROPE LENGTHS (Feet)

	Parts	l	-		BOOM	LENGT	TH (Ang	le or T	ubular)			
	of Line	40'	50'	60′	70′	80'	90'	100′	110'*	120'*	130'*	140'*
20' Jib Tubular or Angle	1	135	155	175	195	215	235	255	275	295	315	335
(except as noted)	2	200	230	260	290	320	350	380	410	440	470	500
30' Jib Tubular or Angle	1	155	175	195	215	235	255	275	295	315	335	355
(except as noted)	2	230	260	290	320	350	380	410	440	470	500	530
40' Jib Tubular or Angle	1	175	195	215	235	255	275	295	315	335	355	375
(except as noted)	2	260	290	320	350	380	410	440	470	500	530	560
50' Jib Tubular or Angle	1	195	215	235	255	275	295	315	335	355	375	395
(except as noted)	2	290	320	350	380	410	440	470	500	530	560	590

*Tubular boom and jib only

CLAMSHELL WIRE ROPE LENGTHS (Feet)

	Parts of		1	воом	LENGTH	ł
	Line	40'	45'	50'	55'	60'
Holding	1	105	115	125	135	145
Closing	1	140	150	160	170	180
Tagline		Furn	ished w	ith Rud-	O-Matic	#648

DRAGLINE WIRE ROPE LENGTHS (Feet)

	Parts of			воом і	ENGTH	1
	Line	40'	45'	50'	55′	60'
Hoist	1	95	105	115	125	135
Inhaul	1	52	58	64	70	76

DRUM WIRE ROPE CAPACITIES, LINE SPEED AND PULL — (Available line pull, not based on wire rope strength).

	FRONT DRUM											
	Wire	La	gging		Line Spe	ed & Pu		Drum Capacity				
	Rope	Root			er Rope		ım Rope	1st	Full			
Attachment	Dia.	Dia.	Type	F.P.M.	Pull	F.P.M.	Pull	Layer	Drum			
				146	23,000#	240	14,000#					
	3/4"	131/4"	Smooth	292	11,100#	480	6,700#	54'	481'			
Crane		1		248	12,700#	408	7,700#					
				167	20,100#	246	13,700#					
1	3/4"	151/4"	Grooved	334	9,700#	492	6,600#	58'	451'			
		l		284	11,100#	418	7,600#	1				
				167	20,100#	246	13,700#					
Clamshell	3/4"	151/4"	Grooved	334	9,700#	492	6,600#	58'	451'			
	. 1		1	284	11,100#	418	7,600#		i			
				148	22,700#	240	13,500#					
	7/8"	131/4"	Grooved	296	11,000#	480	6,500#	44'	343'			
Dragline				251	12,600#	408	7,500#					
				169	20,000#	242	13,900#					
	7/8"	151/4"	Grooved	338	9,700#	484	6,700#	50'	304'			
				287	11,100#	411	7,700#	1				

	Wire	La	Lagging		Line Speed & Pull					
	Rope	Root		1st Lay	er Rope	Full Dr	ım Rope	1st	Ful	
Attachment	Dia.	Dia.	Туре	F.P.M.	Pull	F.P.M.	Pull	Layer	Dru	
				148	22,545#	255	13,226#			
	5/8"	131/4"	Smooth	296	10,944#	510	6,420#	66'	769	
Crane				252	12,525#	434	7,348#			
				149	22,445#	245	13,627#			
	3/4"	131/4"	Grooved	298	10,895#	596	5,289#	43'	439	
				253	12,469#	430	6,927#			
				167	19,600#	246	13,300#			
Clamshell	3/4"	151/4"	Grooved	334	9,500#	492	6,400#	58'	451	
				284	10,800#	418	7,300#			
				167	19,600#	246	13,300#			
Dragline	3/4"	151/4"	Grooved	334	9,500#	492	6,400#	58′	451	
			İ	284	10,800#	418	7,300#			

REAR DRUM

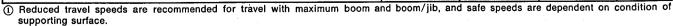
NOTE: First line in each category — Standard drum Second line in each category — High-speed, gear-driven drum Third line in each category — High-speed, planetary-driven drum NOTE: First line in each category — Standard drum
Second line in each category — High-speed, gear-driven drum
Third line in each category — High-speed,
planetary-driven drum

			THII	RD DRUM	ſ						
Wire Lagging Line Speed & Pull Drum Capac											
Rope	Root		1st Lay	er Rope	Full Drum Rope		1st	Full			
Dia.		Туре	F.P.M.	Pull	F.P.M.	Pull	Layer	Drum			
5//	9"	Grooved	120	10,000#	197	6,000#	35'	297'			
5/8"	11"	Grooved	145	8,200#	191	6,200#	43'	209'			

			BOOM	HOIST DE	RUM						
Wire Lagging Line Speed & Pull Drum Capaci											
Rope	Root		1st Lay	er Rope	um Rope	1st	Full				
Dia.	Dia.	Type	F.P.M.	Pull	F.P.M.	Pull	Layer	Drum			
5/8"	9"	Smooth	120	27,100#	260	12,500#	22'	342'			

MAXIMUM BOOM AND BOOM/JIB MACHINE CAN PICK, OR TRAVEL WITH, UNASSISTED — WITHOUT LOAD

Std. Upper Machinery Mounted on Std. Link-Belt Speeder 8 x 4 Drive	34" Angle	Boom ②	Hi-Lite Tubular Boom ②		
Self-propelled Carrier	Ctwt. "A"	Ctwt. "AB"	Ctwt. "A"	Ctwt. "AB"	
Maximum boom machine can pick clear of ground over rear and travel ① with —	100′	100′	90'	. 110′	
Maximum boom plus jib machine can pick clear of ground over rear and travel ① with —	80' + 40'	90' + 30'	80' + 30'	90′ + 30′	
Maximum boom machine can pick clear of ground on outriggers — over rear over side	100′ 100′	100′ 100′	150' 140'	150′ 150′	
Maximum boom plus jib machine can pick clear of ground on outriggers — over rear over side	100' + 40' 100' + 40'	100' + 40' 100' + 40'	120' + 50' 120' + 40'	140′ + 40′ 140′ + 30′	



Boom with open throat top section.





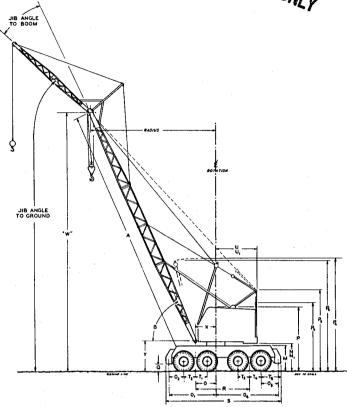
JIB CAPACITIES - Pounds

Jib Angle	Angle	or Tubular	Jib	Tubular Jib Only
To Ground	20'	30'	40' ^(A)	50′ ^(B)
80°	12,000	10,000	8,000	6,000
65°	10,000	8,000	6,000	4,000
50°	8,000	6,000	4,000	3,000
35°	7,500	5,500	3,500	2,000
20°	7,500	5,500	3,500	2,000

- 1. Capacities shown are in pounds and are based on a Link-Belt Speeder angle jib 223/4" wide by 18" deep at connections or Link-Belt Speeder tubular jib 24" wide by 24" deep at connections. Either jib must be used with its 10'0" high jib mast in proper working position.
 - (A) 40' tubular jib at 30° off centerline of boom not recommended for booms over 130' long.
 - (B) 50' tubular jib at 30° off centerline of boom not recommended and 50' tubular jib at 15° off centerline of boom not recommended for booms over 130'.
- 2. To determine jib angle to ground, deduct jib angle to boom from the boom angle to ground.
- The jib angle to boom must not exceed 30°
- Jib backstay line for either angle or tubular jib is anchored at base of boom top section.
- Determining jib capacities
 - a. Add length of boom plus length of jib used.
 - b. Determine jib load radius.
 - c. Refer to lifting crane capacity table and select boom length that corresponds to the total length of boom and jib in (5-a) and the radius in (5-b).
 - 1. Jib capacity is equal to the equivalent crane lifting capacity unless restricted by the maximum jib capacities shown in the
 - d. If total length of boom and jib exceeds the longest boom lengths shown on the crane lifting capacity tables, deduct the following from the capacity shown for the longest boom length for the radius required in (5-b).
 - 200# for tubular jib or 300# for angle jib.
 - 1. Jib capacity is the resulting net figure unless restricted by the maximum jib capacities shown on the above chart.
- 6. Determining crane lifting capacities with jib mounted on boom.
 - a. When operating off the main boom peak sheaves with a jib on the boom, the following reductions from the crane lifting capacity table must be made:
 - 1. Angle or tubular jibs 20' long, deduct 1,600#.
 - 2. Angle or tubular jibs 30' long, deduct 1,900#.
 3. Angle or tubular jibs 40' long, deduct 2,200#.

 - 4. Tubular jib only 50' long, deduct 2,500#.

GENERAL INFORMATION ONLY



We are constantly improving our products and therefore reserve the right to change designs and specifications. For certified dimensions, consult factory.



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Link-Belt Speeder

DIVISION OF FMC CORPORATION



Link-Belt® UC-108B lifting crane capacities

PCSA Class 10-255 Refer to **Notes** page 3

Boom—<u>tubular</u>; 42" x 42" (1.06 x 1.06 m) with open throat top section, retractable high gantry in raised position, 1½" (32 mm) diameter boom pendants; boom live mast and boom midpoint suspension pendants as required.

Carrier—FMC 8 x 4 drive, 126" (3.20 m) wheelbase, 11' 1" (3.38 m) wide.)

Counterweights—Upper counterweight 'A' 13,000 lbs. (5 897 kg) or "AB" 19,200 lbs. (8 709 kg).

GENERAL INFORMATION ONLY

	1	В	oom				On outr				On tires			On tires over rear			
	R	adius	Angle	Boom height				"AB"	Ctw		Ctwt	"AB"	Ctwt. "A"		Ctwt.	"AB"	
Length	Feet	meters	Degrees	Feet	meters	Pounds	kg	Pounds	kg	Pounds	kg	Pounds	kg	Pounds	kg	Pounds	kg
	10 12 15	3.05 3.66 4.57	81.7 78.8 74.3	44′ 11″ 44′ –7″ 43′ 11″	13.67 13.59 13.39	90,000* 83,500* 69,400*	40 824* 37 875* 31 479*	90,000° 85,200° 72,300°	40 824° 38 646° 32 795°	59,900° 51,700° 38,700	27 170° 23 451° 17 554	62,900* 54,300* 44,900*	28 531° 24 630° 20 366°	73,400 54,400 38,900	33 294 24 675 17 645	83,700 63,500 45,500	37 966 28 803 20 638
40' (12.19 m)	20 25 30 35 40	6.10 7.62 9.14 10.67 12.19	66.7 58.7 49.8 39.7 26.5	42' 1" 39' 6" 35' 11" 30' 9" 23' 0"	12.83 12.04 10.95 9.37 7.01	53,000* 41,700* 33,600* 27,100 22,200	24 040* 18 915* 15 240* 12 292 10 069	55,300* 44,600* 36,400* 30,400* 25,500*	25 084* 20 230* 16 511* 13 789* 11 566*	25.700 18,900 14,700 11,900 9,800	11 657 8 573 6 667 5 397 4 445	30,300 22,400 17,500 14,390 11,900	13 744 10 160 7 938 6 486 5 397	26,000 19,200 15,000 12,100 10,000	11 793 8 709 6 804 5 488 4 536	30,500 22,600 17,700 14,500 12,100	13 834 10 251 8 028 6 577 5 488
50' (15.24 m)	12 15 20 25 30 35 40 50	3.66 4.57 6.10 7.62 9.14 10.67 12.19 15.24	81.0 77.5 71.6 65.4 58.9 52.0 44.3 23.7	54' 9" 54' 2" 52' 10" 50' 10" 48' 2" 44' 8" 40' 2" 25' 2"	16.69 16.51 16.10 15.49 14.68 13.61 12.24 17.67	83,100° 69,100° 52,800° 41,500° 33,500° 27,100 22,200 16,100	37 694* 31 343* 23 950* 18 824* 15 195* 12 292 10 069 7 302	84,800° 72,000° 55,100° 44,300° 36,200° 30,300° 25,500° 18,600	38 465° 32 659° 24 993° 20 094° 16 420° 13 744° 11 566 8 436	51,400° 38,700 25,600 18,800 14,700 11,800 9,800 7,000	23 315* 17 554 11 612 8 527 6 667 5 352 4 445 3 175	54,000* 44,600* 30,300 22,300 17,500 14,200 11,800 8,600	24 494° 20 230° 13 744 10 115 7 938 6 441 5 352 3 900	54,400 38,900 25,900 19,100 14,900 12,100 10,000 7,200	24 675 17 645 11 748 8 663 6 758 5 488 4 536 3 265	63,400 45,400 30,400 22,500 17,600 14,400 12,000 8,700	28 758 20 593 13 789 10 206 7 983 6 531 5 443 3 946
60' (18.29 m)	15 20 25 30 35 40 50 60	4.57 6.10 7.62 9.14 10.67 12.19 15.24 18.29	79.6 74.7 69.7 64.5 59.1 53.4 40.3 21.6	64' 5" 63' 3" 61' 8" 59' 6" 56' 10" 53' 6" 44' 1" 27' 2"	19.63 19.28 18.80 18.14 17.32 16.31 13.44 8.28	68,700* 52,500* 41,300* 33,300* 27,000 22,100 16,000 12,300	31 162* 23 814* 18 733* 15 104* 12 247 10 024 7 257 5 579	71,600° 54,700° 44,000° 36,000° 30,000° 25,400 18,500 14,300	32 477* 24 811* 19 958* 16 329* 13 608* 11 521 8 391 6 486	38.600 25.500 18.700 14.500 11,700 9.600 6,900 5,100	17 508 11 566 8 482 6 577 5 307 4 354 3 129 2 313	44,300° 30,100 22,200 17,300 14,100 11,700 8,500 6,400	20 094* 13 653 10 069 7 847 6 395 5 307 3 855 2 903	38.700 25.800 18,900 14,800 11,900 9,800 7,100 5,200	17 554 11 702 8 573 6 713 5 397 4 445 3 220 2 358	45,300 30,300 22,400 17,500 14,200 11,900 8,600 6,500	20 548 13 744 10 160 7 938 6 441 5 397 3 900 2 948
70' (21.34 m)	15 20 25 30 35 40 50 60 70	4.57 6.10 7.62 9.14 10.67 12.19 15.24 18.29 21.34	81.1 77.0 72.7 68.4 63.9 59.2 49.1 37.2 20.0	74' 6" 73' 7" 72' 3" 70' 5" 68' 3" 65' 6" 58' 3" 47' 6" 29' 0"	22.71 22.43 22.02 21.46 20.80 19.96 17.75 14.48 8.84	68,400° 52,100° 41,100° 33,100° 26,900 22,000 15,900 12,200 9,600	31 026° 23 632° 18 642° 15 014° 12 201 9 979 7 212 5 533 4 354	71,200° 54,400° 43,700° 35,800° 29,800° 25,300 18,300 14,100 11,300	32 296* 24 675* 19 822* 16 238* 13 517* 11 476 8 300 6 395 5 125	38,400 25,300 18,500 14,300 11,500 9,500 6,700 4,900 3,700	17 418 11 476 8 391 6 486 5 216 4 309 3 039 2 222 1 678	43,900° 30,000 22,000 17,100 13,900 11,500 8,300 6,200 4,800	19 913* 13 608 9 979 7 756 6 305 5 216 3 764 2 812 2 177	38,600 25,600 18,700 14,600 11,700 9,700 6,900 5,100 3,800	17 508 11 612 8 482 6 622 5 307 4 399 3 129 2 313 1 723	45,100 30,100 22,200 17,300 14,100 11,700 8,400 6,400 4,900	20 457 13 653 10 069 7 847 6 395 5 307 3 810 2 903 2 222
80' (24.38 m)	20 25 30 35 40 50 60 70 80	6.10 7.62 9.14 10.67 12.19 15.24 18.29 21.34 24.38	78.6 74.9 71.2 67.4 63.4 55.1 45.8 34.7 18.7	83' 10" 82' 8" 81' 1" 79' 2" 76' 11" 70' 11" 62' 8" 50' 9" 30' 8"	25.55 25.20 24.69 24.13 23.44 21.62 19.10 15.47 9.35	51,800* 40,800* 32,800* 26,700 21,900 15,800 12,000 9,500 7,600	23 496* 18 506* 14 878* 12 111 9 933 7 166 5 443 4 309 3 447	54,000* 43,400* 35,500* 29,500 25,100 18,200 14,000 11,100 9,100	24 494* 19 686* 16 102* 13 381* 11 385 8 255 6 350 5 034 4 127	25,100 18,300 14,200 11,300 9,300 6,500 4,700 3,500 2,600	11 385 8 300 6 441 5 125 4 218 2 948 2 131 1 587 1 179	29,800 21,800 16,900 13,700 11,300 8,100 6,000 4,600 3,500	13 517 9 888 7 665 6 214 5 125 3 674 2 721 2 086 1 587	25,400 18,500 14,400 11,500 9,500 6,700 4,900 3,600 2,700	11 521 8 391 6 531 5 216 4 309 3 039 2 222 1 632 1 224	29,900 22,000 17,100 13,900 11,500 8,200 6,200 4,700 3,600	13 562 9 979 7 756 6 305 5 216 3 719 2 812 2 131 1 632
90' (27.43 m)	20 25 30 35 40 50 60 70 80 90	6.10 7.62 9.14 10.67 12.19 15.24 18.29 21.34 24.38 27.43	79.9 76.6 73.3 70.0 66.6 59.4 51.7 43.0 32.6 17.6	94' 0" 92' 11" 91' 7" 89' 11" 87' 11" 82' 10" 75' 11" 66' 8" 53' 9" 32' 2"	28.65 28.32 27.91 27.41 26.80 25.25 23.14 20.32 16.38 9.80	51,300° 40,400° 32,400° 26,500 21,600 15,500 11,800 9,300 7,400 6,100	23 269* 18 325* 14 696* 12 020 9 797 7 030 5 352 4 218 3 356 2 766	52,200° 43,000° 35,100° 29,200° 24,800° 17,900 13,800 10,900 8,900 7,300	23 677° 19 504° 15 921° 13 245° 11 249° 8 119 6 259 4 944 4 037 3 311	24,800 18,000 13,900 11,000 9,000 6,300 4,500 3,300 2,300 1,600	11 249 8 164 6 305 4 989 4 082 2 857 2 041 1 496 1 043 725	29,400 21,500 16,600 13,400 11,000 7,800 5,800 4,400 3,300 2,500	13 335 9 752 7 529 6 078 4 989 3 538 2 630 1 995 1 496 1 134	25.100 18.200 14,100 11,300 9,200 6,400 4,600 3,400 2,500 1,700	11 385 8 255 6 395 5 125 4 173 2 903 2 086 1 542 1 134 771	29,600 21,700 16,800 13,600 11,200 8,000 5,900 4,500 3,400 2,600	13 426 9 843 7 620 6 168 5 080 3 628 2 676 2 041 1 542 1 179
100' (30.48 m)	20 25 30 35 40 50 60 70 80 90	6.10 7.62 9.14 10.67 12.19 15.24 18.29 21.34 24.38 27.43 30.48	80.9 78.0 75.1 72.1 69.0 62.7 56.1 48.9 40.7 30.9 16.7	104' 2" 103' 2" 102' 0" 100' 6" 98' 9" 94' 3" 88' 4" 80' 7" 70' 6' 56' 7" 33' 8"	31.75 31.45 31.09 30.63 30.10 28.73 26.92 24.56 21.49 17.25 10.26	47,000* 40,100* 32,100* 26,300 21,400 15,300 11,600 9,000 7,200 5,900 4,800	21 319* 18 189* 14 560* 11 929 9 707 6 940 5 261 4 082 3 265 2 676 2 177	47,000* 42,600* 34,800* 28,900* 24,500* 17,700 13,600 10,700 8,700 7,100 5,900	21 319* 19 323* 15 785* 13 109* 11 113* 8 028 6 168 4 853 3 946 3 220 2 676	111111111		29,200 21,300 16,500 13,200 10,800 7,600 5,600 4,100 3,100 2,300 1,600	13 245 9 661 7 484 5 987 4 898 3 447 2 540 1 859 1 406 1 043 725			29,400 21,400 16,600 13,400 11,000 7,800 5,700 4,200 3,200 2,400 1,700	13 335 9 707 7 529 6 078 4 989 3 538 2 585 1 905 1 451 1 088 771

① Measured from center of boom head sheave to ground — machine standing on tires.

(contined) Printed in U.S.A.

UC-108B lifting crane capacities

GENERAL INFORMATION ONLY

Refer to Notes page 3

	Boom				On outriggers 360° swing			On tires side or front				On tires over rear						
	Ra	dlus	Angle		loom point eight①	Ctwi			"AB"	Ctwl	. "A"	Ctwt	"AB"	Ctwt. "A" C		Ctwt.	twt. "AB"	
Length	Feet	meters	Degrees	Feet	meters	Pounds	kg	Pounds	kg	Pounds	kg	Pounds	kg	Pounds	kg	Pounds	kg	
110' (33.53 m)	25 30 35 40 50 60 70 80 90 100 110	7.62 9.14 10.67 12.19 15.24 18.29 21.34 24.38 27.43 30.48 33.53	79.1 76.4 73.7 71.0 65.4 59.5 53.3 46.4 38.7 29.4 15.9	113' 5" 112' 4" 111' 0" 109' 5" 105' 5" 100' 2" 93' 6' 85' 0" 74' 1" 59' 3" 35' 1"	34.57 34.24 33.83 33.35 32.13 30.53 28.50 25.91 22.58 18.06 10.69	39,000° 31,800° 26,100 21,200 15,100 11,400 8,800 7,000 5,600 4,600 3,700	17 690* 14 424* 11 838 9 616 6 849 5 171 3 991 3 175 2 540 2 086 1 678	39,000° 34,500° 28,600° 24,200° 17,500 13,300 10,500 8,400 6,900 5,700 4,700	17 690* 15 649* 12 972* 10 977* 7 938 6 032 4 762 3 810 3 129 2 585 2 131	111111111	1111111111	21,000 16,300 13,000 10,600 7,400 5,300 3,900 2,800 2,000 1,400	9 525 7 393 5 896 4 808 3 356 2 404 1 769 1 270 907 635			21,200 16,400 13,100 10,700 7,500 5,400 4,000 2,900 2,100 1,500	9 616 7 439 5 942 4 853 3 402 2 449 1 814 1 315 952 680	
120' (36.58 m)	30 35 40 50 60 70 80 90 100 110 120	9.14 10.67 12.19 15.24 18.29 21.34 24.38 27.43 30.48 33.53 36.58	77.6 75.1 72.6 67.6 62.3 56.8 50.8 44.4 37.0 28.2 15.2	122' 7" 121' 4" 119' 11" 116' 3" 111' 7" 105' 8" 98' 4" 89' 2" 77' 6" 61' 10" 36' 5"	37.36 36.98 36.55 35.43 34.01 32.21 29.97 27.18 23.62 18.85 11.10	31.200* 25.900 21.000 14.900 11.200 8.600 6.800 5.400 4.300 3.500 2.800	14 152* 11 748 9 525 6 758 5 080 3 900 3 084 2 449 1 950 1 587 1 270	31,200* 27,400* 23,800* 17,300 13,100 10,300 8,200 6,700 5,500 4,500 3,700	14 152* 12 428* 10 795* 7 847 5 942 4 672 3 719 3 039 2 494 2 041 1 678									
130' -/39.62 m)	30 35 40 50 60 70 80 90 100 110 120 130	9.14 10.67 12.19 15.24 18.29 21.34 24.38 27.43 30.48 33.53 36.58 39.62	78.6 76.3 74.0 69.4 64.6 59.6 54.3 48.7 42.5 35.5 27.0 14.6	132' 9" 131' 8" 130' 4" 127' 1" 122' 9" 117' 6" 110' 11" 103' 0" 93' 2" 80' 9" 64' 3" 37' 9"	40.46 40.13 39.73 38.73 37.41 35.81 31.39 28.40 24.61 19.58 11.51	28,500° 25,100° 20,800 14,700 10,900 8,400 6,600 5,200 4,100 3,300 2,500 2,000	12 927* 11 385* 9 434 6 667 4 944 3 810 2 993 2 358 1 859 1 496 1 134 907	28,500° 25,100° 22,100° 17,100 12,900 10,000 8,000 6,400 5,200 4,300 3,500 2,800	12 927* 11 385* 10 024* 7 756 5 851 4 536 3 628 2 903 2 358 1 950 1 587 1 270	And the state of t	Not an	plicable			Not as	pplicable		
140' (42.67 m)	30 35 40 50 60 70 80 90 100 110 120 130 140	9.14 10.67 12.19 15.24 18.29 21.34 24.38 27.43 30.48 3J.53 36.58 39.62 42.67	79.4 77.3 75.2 70.9 66.5 62.0 57.2 52.2 46.8 40.9 34.2 26.0 14.1	143' 0" 142' 0" 140' 9" 137' 8" 133' 9" 128' 11" 123' 1" 115' 11" 107' 5" 96' 11" 83' 11" 66' 7" 39' 0"	43.59 43.28 42.90 41.96 40.77 39.29 37.52 35.33 32.74 29.54 25.58 20.29 11.89	27,100* 24,300* 20,600 14,500 10,700 8,100 6,300 4,900 3,800 2,900 2,200 1,600 1,100	12 292* 10 022* 9 344 6 577 4 853 3 674 2 857 2 222 1 723 1 315 997 725 498	27.100° 24,300° 21,600° 16,800 12,600 9,800 7,700 6,100 4,900 3,900 3,100 2,500 1,900	12 292° 11 022° 9 797° 7 620 5 715 4 445 3 492 2 766 2 222 1 769 1 406 1 134 861	The state of the s								
150° (45.72 m)	35 40 50 60 70 80 90 100 110 120 130 140	10.67 12.f9 15.24 18.29 21.34 24.38 27.43 30.48 33.53 36.58 39.62 42.67 45.72	78.2 76.2 72.2 68.2 64.0 59.7 55.1 50.3 45.1 39.5 33.0 25.1 13.6	152' 2" 151' 1" 148' 3" 144' 7" 140' 2" 134' 9" 128' 5" 120' 9" 111' 7" 100' 7" 86' 11" 68' 10" 40' 2"	44.07 42.72 41.07 39.14 36.80 34.01 30.66 26.49 20.98	21,900* 19,900* 14,300 10,400 7,900 6,000 4,700 3,600 2,700 2,000 1,400	9 933* 9 026* 6 486 4 717 3 583 2 721 2 131 1 632 1 224 907 635 —	21,900* 19,900* 15,100* 12,400 9,500 7,500 5,900 4,700 2,900 2,200 1,700 1,200	9 933° 9 026° 6 849° 5 624 4 309 3 402 2 676 2 131 1 678 1 315 997 771 544									

 $[\]odot$ Measured from center of boom head sheave to ground — machine standing on tires.



Notes — lifting crane capacities

- The capacities included in this chart are the maximum allowable, and are based on machine standing level on firm supporting surface under ideal job conditions.
- Capacities are based on 85% of minimum tipping loads unless marked with an asterisk.
 - Asterisk (*) based on factors other than those which would cause a tipping condition.
- 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 jib, hook block, weighted ball/hook, sling, spreader bar, or other suspended gear.
- Retractable high gantry must be fixed in raised position for all capacities on this chart.

- Boom live mast, fixed in extended 20' 6" (6.25 m) position, required for boom lengths exceeding 130' (39.62 m).
- Boom midpoint suspension pendants required for boom lengths exceeding 130' (39.62 m).
- When using live mast as short boom, maximum lifting capacity of the mast in the extended position is 26,000# (11 794 kg) — on outriggers over side or rear — at radii from 9' 5" (2.87 m) minimum to 20' (6.10 m) maximum.
- For lifting 90,000# (40 824 kg), 6-part load hoist line (%" — 19 mm, Type "N" wire rope) is required. Check parts of line required for all capacities.
- Least stable rated condition is over the side.
- Main boom lengths without jib, must not exceed 150' (45.72 m). Maximum jib length permitted — 50' (15.24 m); maximum boom/jib combination permitted — 150' (45.72 m) boom plus 50' (15.24 m) jib.

- 11. Determining lifting crane capacities with jib mounted on boom:
 - with his motined on booth.

 a. When handling load off main boom peak sheaves, the following reductions in rated lifting crane capacities must be made to compensate for jib weight:

 20' (6.10 m) jib 1,600# (726 kg)

 30' (9.14 m) jib 1,900# (862 kg)

 40' (12.19 m) jib 2,200# (998 kg)

 50' (15.24 m) jib 2,500#
- To determine capacities for intermediate boom lengths not shown on this chart, use the capacity for the next longer boom length shown — for actual angle or radius at which boom/load are being worked.
- These capacities apply only to the machine as originally manufactured and normally equipped by FMC Corporation, Construction Equipment Group.

UC-108B jib capacities

Boom—tubular; 42" x 42" (1.06 x 1.06 m) with open throat top section, retractable high gantry in raised position, 1¼" (32 mm) diameter boom pendants; boom live mast and boom midpoint suspension pendants as required.

Jib-tubular; 24" x 18" (0.61 x 0.46 m).

Counterweight—Upper ctwt. "AB" 19,200# (8 709 kg).

GENERAL INFORMATION ONLY

Jib angle to ground				Jib le	engths													
	20' (6	.10 m)	30' (9	.14 m)	40' (1	(2.19)	50' (15.24 m)											
	Lbs.	kg	Lbs.	kg	Lbs.	kg	Lbs.	kg										
80°	12,000	5 443	10,000	4 536	8,000	3 629	6,000	2 722										
65°	10,000	4 536	8,000	3 629	6,000	2 722	4,000	1 814										
50°	8,000	3 629	6,000	2 722	4,000	1 814	3,000	1 361										
35°	7,500	3 402	5,500	2 495	3,500	1 588	2,000	907										
20°	7,500	3 402	5,500	2 495	3,500	1 588	2,000	907										

^{*40&#}x27; (12.19 m) jib at 30° off centerline of boom not recommended for booms over 130' (39.62 m).
**50' (15.24 m) jib at 30° off centerline of boom not recommended, and 50' (15.24 m) jib at 15° off centerline of boom not recommended for booms over 130' (39.62 m).

Notes — tubular jib capacities

- Capacities shown are maximum allowable.
- 2. Use jib with 10' 0" (3.05 m) high jib mast in proper working position.
- To determine jib angle to ground, deduct jib angle to boom from the boom angle to ground.
- Jib backstay line is anchored to boom top section.
- Jib angle to boom must not exceed 30°.
- 6. Determining machine jib capacities:
 - Add length of boom plus length of jib being used.
 - b. Determine jib load radius.

- Refer to lifting crane capacity chart and select boom length that corresponds to combined boom/ jib length (6-a) and radius (6-b).
- d. Jib capacity is equal to the lifting crane capcaity for the boom length (6-c) and radius (6-c)—unless restricted by the maximum jib capacities shown in above chart.
- e. If total boom/jib length (6-c)
 exceeds the longest boom length
 listed in lifting crane capacity
 chart, deduct 200# (91 kg) from
 the longest boom length shown for
 the required radius (6-b).
- Jib capacity is the resulting figure unless restricted by the maximum jib capacities shown in above chart.
- Refer also to Notes—lifting crane capacities.

UC-108B dragline/clamshell/magnet capacities

Refer to Notes below.

m-tubular; 42" x 42" (1.06 x 1.06 m) open throat top section, retractable high gantry in raised position and 11/4" (32 mm) diameter boom pendants.

Carrier—FMC 8 x 4 drive, 126" (3.20 m) wheelbase, 11' 1" (3.38 m) wide.

Counterweight—Upper counterweight 'A' 13,000# (5 897 kg).

		Booi	Dra	gline	Clamshell/Magnet					
Length	Ra	dius	Angle	Boom poi	nt height [©]					
	Feet	meters	Degree	Feet	meters	Pounds	kilograms	Pounds	kilograms	
	10	3.05	81.7	44' 11"	13.67			13,600	6 168	
	12	3.66	78.8	44' 7"	13.59			4	1 4	
	15	4.57	74.3	43' 11"	13.39				1 1	
40′	20	6.10	66.7	42' 1"	12.83			4	Y	
(12.19 m)	25	7.62	58.7	39' 6"	12.04	11,800	5 352	13,600	6 168	
(,	30	9.14	49.9	35′ 11″	10.95	11,800	5 352	11,700	5 307	
	35	10.67	39.7	30′ 9″	9.37	10,700	4 853	9,500	4 309	
	40	12.19	26.5	23' 0"	7.01			7,800	3 538	
	12	3.66	81.0	54′ 9″	16.69			13,600	6 168	
	15	4.57	77.5	54' 2"	16.51			•	A	
	20	6.10	71.6	52' 10"	16.10			¥	1	
50′	25	7.62	65.4	50' 10"	15.49			13,600	6 168	
(15.24 m)	30	9.14	58.9	48' 2"	14.68	11,800	5 352	11,700	5 307	
` ′	35	10.67	52.0	44' 8"	13.61	10,600	4 808	9,400	4 263	
	40	12.19	44.3	40' 2"	12.24	8,800	3 991	7,800	3 538	
	50	15.24	23.7	25' 2"	7.67	<u> </u>		5,600	2 540	
	15	4.57	79.6	64′ 5″	19.63			13,600	6 168	
	20	6.10	74.7	63' 3"	19.28		:	13,600	6 168	
	25	7.62	69.7	61' 8"	18.80			13,600	6 168	
60'	30	9.14	64.5	59′ 6″	18.14			11,600	5 261	
(18.29 m)	35	10.67	59.1	56' 10"	17.32	10,500	4 762	9,300	4 218	
,	40	12.19	53.4	53′ 6″	16.31	8,600	3 900	7,600	3 447	
	50	15.24	40.3	44′ 1″	13.44	6,200	2 812	5,500	2 494	
	60	18.29	21.6	27' 2"	8.28	ļ		4.000	1 814	

reasured from center of boom head sheave to ground — machine standing on tires.

GENERAL INFORMATION ONLY

Notes — dragline/clamshell/magnet capacities

- Capacities shown are maximum allowable, based on 360° swing, with machine standing level on firm supporting surface under ideal job conditions.
- Capacities are not more than 75% of minimum tipping loads for dragline; 68% for clamshell/magnet.
- Capacities are maximum recommended by Commercial Standard CS90-58 and PCSA Standard #1. User must make
- allowances for soft or uneven supporting surfaces, rapid cycle operations, bucket suction or other unfavorable conditions which may require smaller buckets or magnets for most efficient operation.
- Weight of bucket or magnet, plus load, should not exceed these capacities.
- Dragline operation with boom angle
- less than 35° is not recommended. Boom length for dragline/clamshell/ magnet operation should not exceed 60' (18.29 m).
- Use of ctwt. "AB" is not recommended for dragline, clamshell, or magnet service.
- Refer also to Notes lifting crane capacities.
- These capacities apply only to the machine as originally manufactured and normally equipped by FMC Corporation, Construction Equipment Group.

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



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