Link-Belt Speeder
DIVISION OF FMC CORPORATION

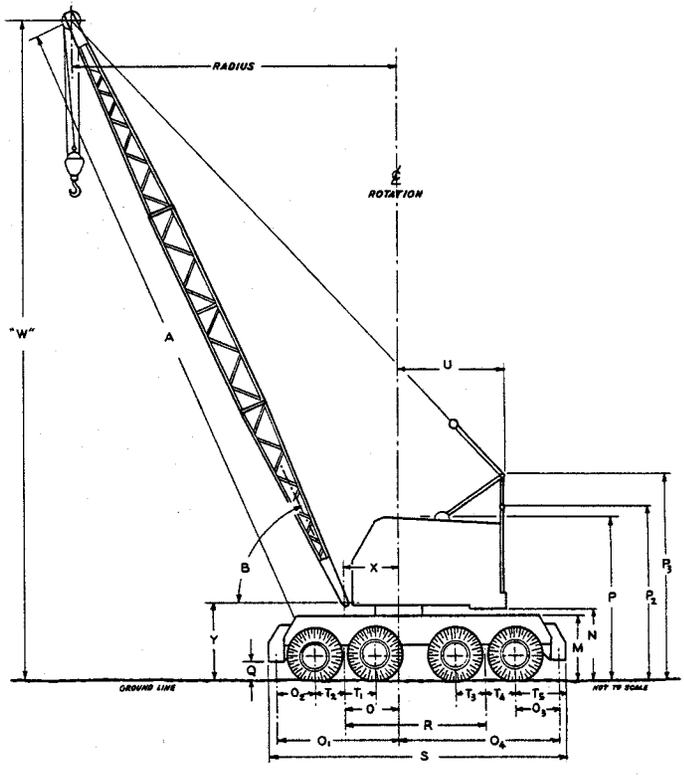
UC-78B FLYSHEET

SELF-PROPELLED CRANE

Dimensions — Working ranges —
Specifications — Lifting capacities

DIMENSIONS AND WORKING RANGES

Rubber Tired Mounting — 8 x 4, 10′ 11½″ Wide		
Basic angle boom length	A	35′ 0″
Boom angle	B	—
Over-all height, top of roller path mounting plate	M	4′ 2″
Ground clearance under counterweight	N	4′ 6″
Centerline rotation to center rear axle bogie pivot	O	4′ 0″
Centerline rotation to center rear outrigger	O_1	9′ 4″
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	O_4	12′ 0″
Over-all cab height	P	11′ 6″
Over-all height, retractable gantry lowered	P_2	12′ 8″
Over-all height, retractable gantry raised	P_3	15′ 5″
Ground clearance under outrigger box	Q	8⅜″
Wheelbase (126″)	R	10′ 6″
Over-all length over outrigger boxes	S	22′ 6″
Center rear axles to center rear axle bogie pivot	T_1 & T_2	2′ 3″
Center front axles to center front axle bogie pivot	T_3 & T_4	2′ 3″
Center front front axle to front outrigger box	T_5	3′ 10″
Tailswing of counterweight	U	10′ 7″
Radius of boom hinge pin — angle boom	X	3′ 1″
Height of boom hinge pin — angle boom	Y	6′ 5″
Over-all cab width (without ladder to roof)	—	7′ 10″
Over-all width outriggers retracted, floats removed	—	10′ 11½″
Over-all width outriggers extended (C/L of jacks)	—	15′ 0″
Minimum ground clearance	—	0′ 8″
Gradeability, low low gear (based on peak engine torque)	—	24.65%



GENERAL INFORMATION ONL

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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 FTKA-34L (FE-15H) tandem, single wheels. Hendrickson rubber-mounted equalizing beams and torque rods. 104″ track.

REAR AXLES — Front and rear rear axles; Clark Planetary BD45-60, ratio 9.14 to 1, dual wheels, 98½″ track. Hendrickson bronze bushed equalizing beams and rubber-mounted torque rods.

WHEELS AND RIMS — Front; cast spoke. Rear; integral with planetary hubs. 8:00V x 20″ diameter rims.

TIRES — Standard; 12:00 x 20-H (16-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 — 16½″ x 7″; total effective lining area, 910 sq. in.

Front wheels — 17¼″ 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 may 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	— .54 m.p.h.	**Third**	— 3.45 m.p.h.
Second	— 2.14 m.p.h.	**Fourth**	— 7.30 m.p.h.

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

Standard — Manual sliding beams and screw jacks.

Optional — Power hydraulic outrigger beams and jacks with floats; includes individual ground controls for beams and 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, boom hoist and lowering, and optional third operating drum. Internal expanding 2-shoe type, aluminum alloy shoes; 18″ diameter, 4½″ face width. Optional third drum clutch — 17¼″ diameter, 4″ face width. Note: Power load lowering clutches on front and rear main operating drums not available when machine is equipped with optional two-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 two-speed, gear-driven mechanisms or planetary drive units on either drum shaft.

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

Clutch Drums — Bolted to spur gears.

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

Front and rear drums — 23″ diameter, 3¾″ 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 cable, third drum wire rope and lagging must be removed.

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 — Optional; gear-driven 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; two-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 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; 19″ diameter, 3″ face width. Spring applied and Speed-o-Matic power hydraulic released.

Boom Hoist Limiting Device — Device designed to be mechanically adjusted to pre-determined minimum boom radius. When boom is raised to this minimum radius, it contacts the limit stop which in turn activates a hydraulic valve and causes hydraulic pressure to by-pass the 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 a 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 three sheaves on bronze bushings for standard 8-part boomhoist wire rope. Four or five sheaves, mounted on bronze bushings, furnished for optional 10-part or 12-part boomhoist wire rope.

COUNTERWEIGHT — Counterweight "A" — 13,200#.

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, folding 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.

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

	GM 3-71N With Hydraulic Coupling (1)	GM 3-71N With Torque Convertor (2)	GM 4-71N With Hydraulic Coupling (1)	GM 4-71N With Torque Convertor (2)
Number of cylinders	3	3	4	4
Bore and stroke (inches)	4¼" x 5"	4¼" x 5"	4¼" x 5"	4¼" x 5"
Piston displacement (cu. in.)	212.7	212.7	283.7	283.7
High idle speed, r.p.m. (pinion)	1,990	1,610	1,408	1,207
Engine r.p.m. @ full load speed	1,815	1,905	1,268	1,810
Net engine h.p. @ f.l.s.	84	85	80	127
Peak torque (ft. lbs.)	271	645	351	1,160
Peak torque r.p.m.	1,200	Convertor stall	1,200	Convertor stall
Electrical system	12-volt	12 volt	12 volt	12 volt
Batteries	2 / 6-volt	2 / 6-volt	2 / 6-volt	2 / 6-volt
Transmission —				
No. chain wheel teeth	161	161	161	161
No. engine pinion teeth	17	21	24	28

(1) Twin Disc hydraulic coupling #SP-111-HP-1
(2) Allison, single-stage torque convertor

CRANE BOOMS & JIBS

BOOM — Angle; 2-piece, 35′ basic length, 20′ long base section and 15′ open throat top section, 34″ deep and 34″ wide at connections. Main chord angles — base section 3″ x 3″ x 3/8″; top section — 3″ x 3″ x 5/16″.

Boomfoot — 1 5/8″ thick on 35″ centers; 2 3/4″ diameter pin.

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

Boompoint Sheave Guard — 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′, 15′, 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 anti-friction 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 rope is used as main load hoist line. One roller standard; recommended options — 2 for booms 45′-60′ long, 3 for booms 65′-80′ long, and 4 for booms 85′-100′ long.

BOOMHOIST BRIDLE — Serves as connection between the pendants and boomhoist rope. Bridle contains 4, 5, or 6 sheaves, mounted on bronze bushings, for standard 8-part boomhoist or optional 10- or 12-part boomhoist.

JIB — Angle; 20′ 2-piece with 10′ long upper and lower sections; 10′ extensions available to make up 30′ or 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 3/16″. Bolted connections.

Jib Mast — 10′ high, mounted on jib base section; 2 deflector sheaves for the jib load hoist rope (whipline) mounted on needle 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′ to 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", 5/8″ dia.
Jib Load Hoist — 1-part line, Type "P", 5/8″ dia.; 2-part line, Type "F", 5/8″ dia.
Jib Staylines — Type "F", 5/8″ dia.
Boom Pendants — Type "N", 1 1/8″ dia.
Dragline Inhaul — Type "D", 3/4″ dia.
Dragline Hoist — Type "F", 3/4″ dia.
Clamshell Holding (Hoist) — Type "F", 5/8″ dia.
Clamshell Closing — Type "F", 5/8″ dia.

WIRE ROPE TYPES —

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 "N" — 6 x 25 (6 x 19 class), filler wire, extra improved plow steel, preformed, independent wire rope center, right lay, regular lay.
Type "P" — 19 x 7 non-rotating, extra improved plow steel, preformed, wire rope center core.

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 of Line	BOOM LENGTH							
	35′	40′	50′	60′	70′	80′	90′	100′
1	85	95	151	135	155	175	195	215
2	125	140	170	200	230	260	290	320
3	165	185	225	265	305	345	385	425
4	205	230	280	330	380	430	480	530
5	245	275	335	395	455	515	575	635
6	285	320	390	460	530	600	670	740
7	325	365	445	525	605	685		
8	365	410	500	590	680			

JIB LOAD HOIST WIRE ROPE LENGTHS (Feet)

Jib Length	Parts of Line	BOOM LENGTH							
		35′	40′	50′	60′	70′	80′	90′	100′
20′	1	125	135	155	175	195	215	235	255
	2	185	200	230	260	290	320	350	380
30′	1	145	155	175	195	215	235	255	275
	2	215	230	260	290	320	350	380	410
40′	1	165	175	195	215	235	255	275	295
	2	245	260	290	320	350	380	410	440

DRAGLINE WIRE ROPE LENGTHS (Feet)

Wire Rope	Parts of Line	BOOM LENGTH			
		35′	40′	45′	50′
Hoist	1	85	95	105	115
Inhaul	1	46	52	58	64

CLAMSHELL WIRE ROPE LENGTHS (Feet)

Wire Rope	Parts of Line	BOOM LENGTH			
		35′	40′	45′	50′
Holding	1	95	105	115	125
Closing	1	130	140	150	160
Tagline	1	Furnished with Rud-o-Matic #648			

BOOMHOIST ROPE LENGTH (Feet) —
High Gantry; 8-part boomhoist, 240′; 10-part, 315′; 12-part, 355′.

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

FRONT DRUM

Attachment	Wire Rope Dia.	Lagging		Line Speed & Pull				Drum Capacity	
				1st Layer Rope		Full Drum Rope			
		Root Dia.	Type	F.P.M.	Pull	F.P.M.	Pull	1st Layer	Full Drum
Crane	5/8"	12"	Smooth	152 304 258	16,310# 7,660# 9,060#	242 484 411	10,230# 4,800# 5,680#	57′	543′
Clamshell	3/4"	14"	Grooved	178 356 303	13,960# 6,550# 7,760#	250 500 425	9,930# 4,660# 5,520#	49′	319′
Dragline	3/4"	12"	Grooved	154 308 262	16,150# 7,580# 8,970#	244 488 415	10,170# 4,780# 5,650#	43′	354′

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.

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

REAR DRUM

Attachment	Wire Rope Dia.	Lagging		Line Speed & Pull				Drum Capacity	
				1st Layer Rope		Full Drum Rope			
		Root Dia.	Type	F.P.M.	Pull	F.P.M.	Pull	1st Layer	Full Drum
Crane	5/8"	12"	Smooth	152 304 258	15,810# 7,420# 8,780#	242 484 411	9,920# 4,660# 5,510#	57′	543′
Clamshell	3/4"	14"	Grooved	178 356 303	13,550# 6,360# 7,530#	250 500 425	9,650# 4,530# 5,360#	49′	319′
Dragline	3/4"	14"	Grooved	178 356 303	13,550# 6,360# 7,530#	250 500 425	9,650# 4,530# 5,360#	49′	319′

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.

THIRD DRUM

Wire Rope Dia.	Lagging		Line Speed & Pull				Drum Capacity	
			1st Layer Rope		Full Drum Rope			
	Root Dia.	Type	F.P.M.	Pull	F.P.M.	Pull	1st Layer	Full Drum
5/8"	9" 11"	Grooved Grooved	116 140	10,000# 8,200#	191 185	6,000# 6,200#	33′ 40′	278′ 195′

BOOMHOIST DRUM

Wire Rope Dia.	Lagging		Line Speed & Pull				Drum Capacity	
			1st Layer Rope		Full Drum Rope			
	Root Dia.	Type	F.P.M.	Pull	F.P.M.	Pull	1st Layer	Full Drum
5/8"	9"	Smooth	140	18,930#	267	9,910#	16′	215′

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

Std. Upper Machinery mounted on Std. 8 x 4 Drive Self-Propelled Carrier	34" Angle Boom② Ctwt. "A"
Maximum boom machine can pick clear of ground over rear and travel ① with—	100′
Maximum boom plus jib machine can pick clear of ground over rear and travel ① with—	80′ x 40′
Maximum boom machine can pick clear of ground on outriggers — over rear	100′
— over side	100′
Maximum boom/jib machine can pick clear of ground on outriggers — over rear	100′ x 40′
— over side	100′ x 40′

①Reduced travel speeds are recommended for travel with maximum boom and boom/jib, and safe speeds dependent on condition of supporting surface.
②Boom with open throat top section.

JIB CAPACITIES (Pounds)

Jib Angle To Ground	JIB LENGTH 20′	30′	40′
80°	12,000	10,000	8,000
65°	10,000	8,000	6,000
50°	8,000	6,000	4,000
35°	7,500	5,500	3,500
20°	7,500	5,500	3,500

1. Capacities shown are in pounds and are based on a Link-Belt Speeder angle jib 18″ deep and 23″ wide at connections, and used with 10′ 0″ high jib mast in proper working position.
2. To determine jib angle to ground, deduct jib angle to boom from the boom angle to ground.
3. Jib angle must not exceed 30°.
4. Jib backstay line (A) is anchored to base of boom top section.
5. 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 above chart.
   d. If total length of boom and jib exceeds the longest boom length listed on the crane lifting capacity table, deduct 200# from the capacity shown for the longest boom length for the radius required in (5-b).
      1. Jib capacity is the resulting figure unless restricted by the maximum jib capacities on the above chart.
6. Determining crane lifting capacities with jib on boom —
   a. When handling loads off main boompoint sheaves, with a jib mounted on the boom, the following reductions in crane capacities must be made:
      1. 20′ jib — deduct 1,600#.
      2. 30′ jib — deduct 1,900#.
      3. 40′ jib — deduct 2,200#.