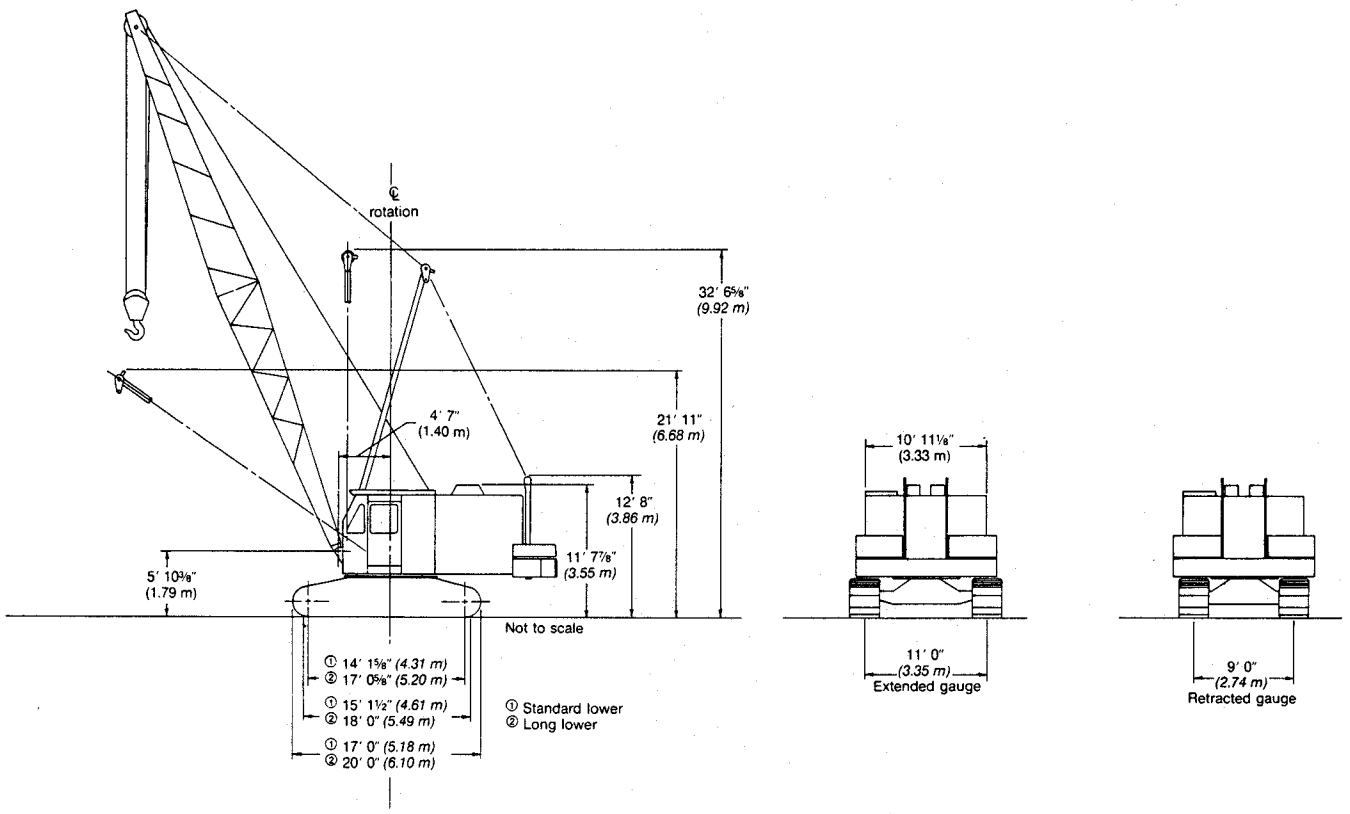
General Specifications

Link-Belt® 80-ton *(72.56 metric ton)*
Wire rope crawler crane/excavator

LS-318

GENERAL INFORMATION ONLY



General dimensions	Feet	*meters*
Basic boom length angle and tubular	50′ 0″	*15.24*
Overall width with side frames extended:	—	—
32″ *(0.81 m)* track shoes	13′ 8″	*4.16*
36″ *(0.91 m)* track shoes	14′ 0″	*4.27*
44″ *(1.12 m)* track shoes (not extended)	14′ 8″	*4.47*
Overall width with side frames retracted:	—	—
32″ *(0.81 m)* track shoes	11′ 8″	*3.56*
36″ *(0.91 m)* track shoes	12′ 0″	*3.66*
Minimum ground clearance	1′ 1⅞″	*0.35*
Clearance under counterweight "A"	3′ 9 9/16″	*1.16*
Clearance under counterweight "AB"	3′ 9 9/16″	*1.16*
Overall width of counterweight	13′ 6″	*4.11*

General dimensions	Feet	*meters*
Overall width less crawler side frames,	—	—
counterweight and catwalk	12′ 0″	*3.66*
Overall width for transport,	—	—
less side frames and catwalks;	—	—
axles in line with upper	11′ 0″	*3.35*
Width of cab less catwalks	10′ 11⅛″	*3.33*
Width of cab with catwalks both sides	15′ 0″	*4.57*
Tailswing of counterweight "A"	15′ 1½″	*4.61*
Tailswing of counterweight "AB"	15′ 1½″	*4.61*
Overall height for transport:	—	—
Basic machine less crawler side frames	11′ 6″	*3.50*
Basic revolving upperstructure only	9′ 0″	*2.74*

Machine working weights — approximate

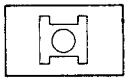
Based on standard machine including GM 6-71N diesel engine with friction clutch, turntable bearing, independent boom hoist, independent swing and travel, swing brake, drum rotation indicators, 11′ 0″ *(3.35 m)* gauge with removable and retractable side frames and 32″ *(0.81 m)* wide track shoes, plus the following:	Crawler mounting							
	17′ 0″ *(5.18 m)* overall length				20′ 0″ *(6.10 m)* overall length			
	Counterweight "A"		Counterweight "AB"		Counterweight "A"		Counterweight "AB"	
	Pounds	*kg*	Pounds	*kg*	Pounds	*kg*	Pounds	*kg*
Lifting crane — includes necessary drum laggings, main load hoist wire rope and one of the following booms:								
Basic 50′ *(15.24 m)* angle boom	125,600	*56 972*	132,600	*60 147*	131,620	*59 703*	138,620	*62 878*
Basic 50′ *(15.24 m)* tubular boom	124,700	*56 564*	131,700	*59 739*	130,720	*59 295*	137,720	*62 470*
Dragline — includes two dragline head sheaves, fairlead, necessary drum laggings, hoist and inhaul wire rope and one of the following booms:								
Maximum 80′ *(24.38 m)* angle boom	128,005	*58 063*	—	—	134,105	*60 830*	—	—
Maximum 80′ *(24.38 m)* tubular boom	126,425	*57 346*	—	—	132,525	*60 113*	—	—
Clamshell — includes two dragline head sheaves, necessary drum laggings, holding and closing wire ropes and one of the following booms:								
Maximum 80′ *(24.38 m)* angle boom	127,010	*57 612*	—	—	131,738	*59 756*	—	—
Maximum 80′ *(24.38 m)* tubular boom	125,415	*56 888*	—	—	131,515	*59 655*	—	—

Weight deductions for transporting — approximate

Deduct for removal of the following:	Crawler mounting			
	17′ 0″ *(5.18 m)*		20′ 0″ *(6.10 m)*	
	Pounds	*kg*	Pounds	*kg*
Crawler side frames with:				
32″ *(0.81 m)* shoes	30,260	*13 726*	34,660	*15 720*
36″ *(0.91 m)* shoes	32,500	*14 742*	37,260	*16 900*
44″ *(1.12 m)* shoes	34,360	*15 586*	39,410	*17 876*
Counterweight "A"	25,000	*11 340*	25,000	*11 340*
Counterweight "AB"	32,000	*14 515*	32,000	*14 515*
50′ *(15.24 m)* angle boom	5,968	*2 707*	5,968	*2 707*
50′ *(15.24 m)* tubular boom	5,182	*2 351*	5,182	*2 351*
Basic revolving upperstructure	44,540	*20 203*	44,540	*20 203*

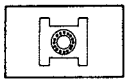
General specifications

Mounting-crawler



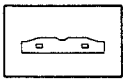
Lower frame

All-welded, stress relieved, precision machined; line bored for traction shaft. Machined surface provided for mounting turntable bearing.



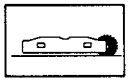
Turntable bearing

Outer race with external ring (swing) gear bolted to lower frame.



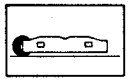
Crawler side frames

All-welded, stress relieved, precision machined. Removable and retractable side frames; positioned on cross axles by dowels and held in place with two patented, adjustable wedgepacks per side frame. Two optional hydraulic cylinders (one on each end of lower frame) provided to extend or retract side frames when equipped with 32″ *(0.81 m)* or 36″ *(0.91 m)* track shoes. **Note:** Side frames with 44″ *(1.12 m)* shoes cannot be retracted.



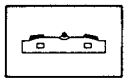
Track drive sprockets

Cast steel, heat treated, involute splined to shafts which are mounted on bronze bushings. One-piece track/chain drive sprockets mounted on bronze bushings; one per side frame.



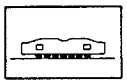
Track idler wheels

Cast steel, heat treated; mounted on bronze bushings. One track idler wheel per side frame.



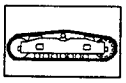
Track carrier slide rails

Tracks slide on rails; four rails on top of each side frame.



Track rollers

Heat treated, mounted on bronze bushings, eight rollers per side frame on 17′ *(5.18 m)* long lower; ten rollers per side frame on 20′ *(6.10 m)* long lower.



Tracks

Heated treated, self-cleaning, multiple hinged track shoes joined by one-piece full floating pins. 37 shoes per side frame on 17′ *(5.18 m)* long lower; 43 shoes per side frame on 20′ *(6.10 m)* long lower. *Standard:* 32″ *(0.81 m)* wide. *Optional:* 36″ *(0.91 m)* or 44″ *(1.12 m)* wide.

Track/chain adjustment — Track drive chains adjusted by shimming axles of chain drive sprockets. Track adjusted with threaded adjusting bolts attached to track idler (wheel) axles.

Independent travel

Standard. Three-piece traction shaft, joined with involute splined couplings; inner traction shaft mounted on bronze bushings in precision bored lower frame. Outer traction shaft engages splines in chain drive sprockets which are mounted on bronze bushings in side frames. Powered by bevel gear drive enclosed in oil within lower frame.

Travel speed — 0.883 m.p.h. *(1.42 km/h).*

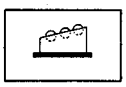
Gradeability — 37% based on machine equipped with 17′ *(5.18 m)* lower, "AB" counterweight, 50′ *(15.24 m)* tubular boom, boom live mast, and 44″ *(1.12 m)* shoes. 36% for machine equipped with 20′ *(6.10 m) lower.*

Steering — Power hydraulic. Travel/steer jaw clutches hydraulically engaged, spring released. Spring-applied, hydraulically released travel/steer/digging/parking external contracting band brakes simultaneously released by interconnecting mechanical linkage. Brakes automatically set when steer lever is in neutral. Two 20″ *(0.51 m)* diameter by 4″ *(101.60 mm)* wide brakes bands; effective lining area 186 square inches *(1 200 cm²)* per brake. Steer brakes also serve as parking/digging brakes. parking brakes.

Ground contact area and ground bearing pressure (based on machine equipped with boom live mast and 50′ *(15.24 m)* tubular boom)

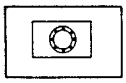
Crawler lower	Counterweight	Track shoes		Ground contact area		Ground bearing pressure	
		Inches	*meters*	Square inches	*cm²*	P.s.i.	*kPa*
17′ 0″ *(5.18 m)*	"A" 25,000 lbs. *(11 340 kg)*	32	*0.81*	11,590	*74 793*	10.98	*75.71*
		36	*0.91*	13,070	*84 343*	9.91	*68.33*
		44	*1.12*	15,980	*103 122*	8.22	*56.68*
	"AB" 32,000 lbs. *(14 515 kg)*	32	*0.81*	11,590	*74 793*	11.59	*79.91*
		36	*0.91*	13,070	*84 343*	10.44	*71.98*
		44	*1.12*	15,980	*103 122*	8.66	*59.71*
20′ 0″ *(6.10 m)*	"A" 25,000 lbs. *(11 340 kg)*	32	*0.81*	13,820	*89 183*	9.65	*66.54*
		36	*0.91*	15,600	*100 670*	8.71	*60.06*
		44	*1.12*	19,060	*122 998*	7.24	*49.92*
	"AB" 32,000 lbs. *(14 515 kg)*	32	*0.81*	13,820	*89 183*	10.15	*69.98*
		36	*0.91*	15,600	*100 670*	9.16	*63.16*
		44	*1.12*	19,060	*122 998*	7.61	*52.47*

Revolving upperstructure



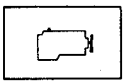
Frame

All-welded, stress relieved, precision machined; machinery side housings welded integral with frame.



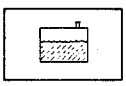
Turntable bearing

Inner race of bearing bolted to machined surface on under side of frame.



Engines

Full pressure lubrication, oil filter, oil cooler, air cleaner, fuel filter, hour meter, and hand throttle. Optional hand throttle (lever type on swing control lever) and foot throttle available. Manual control shutdown for GM engine, electrical shutdown for Cummins engine.



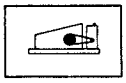
Fuel tank

106 gallon *(401.21 L)* capacity; equipped with fuel sight level gauge, flame arrester, and filler pipe cap with locking eye for padlock.

Engine specifications	GM 6-71N with friction clutch	GM 6-71N with hydraulic coupling	GM 6-71N with torque converter ①	Cummins N855-P235 with torque converter ②
Number of cylinders	6	6	6	6
Bore and stroke — inches — *(mm)*	4¼ x 5 108 x 127	4¼ x 5 108 x 127	4¼ x 5 108 x 127	5½ x 6 143 x 150
Piston displacement — cu. in. — *(cm^3)*	425.6 6 975.58	425.6 6 975.58	425.6 6 975.58	855 14 013
High idle speed — r.p.m. Engine r.p.m. at full load speed	2,065 1,915	2,065 1,915	2,250 2,100	2,350 2,100
Net engine h.p. at full load speed	171 *(127 515 W)*	171 *(127 515 W)*	208 *(155 106 W)*	208 *(155 106 W)*
Peak torque — ft. lbs. — *joules* Peak torque — r.p.m.	532 *721.39* 1,200	532 *721.39* 1,200	572 *775.63* 1,400	572 *775.63* 1,500
Electrical system Batteries	12-volt 1 — 12-volt	12-volt 1 — 12-volt	12-volt 1 — 12-volt	12-volt 2 — 12-volt
Clutch or power take-off	Friction clutch #SP211-HP1	Hydraulic coupling Twin Disc #SP211-HP1	Disconnect between engine and converter	Disconnect between engine and converter
Transmission — Number chain wheel teeth Number engine pinion teeth	— 93 18	— 93 18	— 93 26	— 93 28

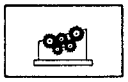
①Allison TCDOA 475 single stage converter
②Twin Disc three stage converter

Power train



Transmission

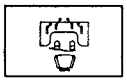
FMC quadruple roller chain enclosed in oil tight chain case and running in oil.



Machinery gear train

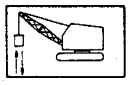
"Full-Function" design, two-directional power available to all operating shafts; shafts mounted on anti-friction bearings in precision bored machinery side housings. All load hoist, swing, and boomhoist functions independent of one another. Components such as gears, pinions, chain wheels, brake drums and clutch spiders involute splined to shafts. Drum gear/clutch drum assemblies bolted together and mounted on shafts on anti-friction bearings. Machine-cut teeth on drum gears, pinions, spur gears, and chain wheel.

Principal operating functions



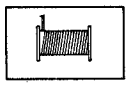
Control system

Speed-o-Matic® power hydraulic control system requiring no bleeding. Variable operating pressure transmitted to all two-shoe clutch cylinders as required. System includes constant displacement, engine driven, vane type hydraulic pump to provide flow of oil; accumulator to maintain system operating pressure, unloader valve to control pressure in accumulator, relief valve to limit maximum pressure buildup in system, full-flow filter with 40 micron disposable filter element, and variable pressure control valves to control drum clutches and other operating cylinders.



Load hoisting and lowering

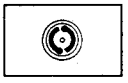
Wire rope drum gear train (front and rear main, and optional third, operating drums) powered by chain transmission from engine.



Load hoist drums

Front and rear main operating drums — Two-piece, removable, smooth or grooved laggings bolted to adapter which is splined to drum shaft. Extended length shafts permit installation of optional power load lowering clutches; special length shaft required for, and furnished with, optional planetary drive units for either or both drums.
— Lifting crane operation: 20" *(0.51 m)* front and rear grooved drum laggings.
— Clamshell or magnet application: 20" *(0.51 m)* front and rear grooved drum laggings.
— Dragline application: 18" *(0.46 m)* front and 20" *(0.51 m)* rear grooved drum laggings.

Third operating drum — Optional; mounts forward of front main operating drum. Two-piece 13¼" *(0.34 m)* root diameter smooth drum lagging bolted to brake drum. Brake drum splined to shaft.



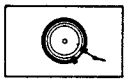
Drum clutches

Speed-o-Matic® power hydraulic two-shoe clutches; internal expanding, lined shoes. Clutch spiders splined to shafts; clutch drums bolted to drum spur gears and mounted on shafts on anti-friction bearings.

Load hoist clutches — Speed-o-Matic® power hydraulic two-shoe clutches. Front and rear main operating drums 30" *(0.76 m)* diameter, 6½" *(0.16 m)* face width; effective lining area 418 square inches *(2 697 cm^2)*. Optional third drum 20" *(0.51 m)* diameter, 5" *(0.13 m)* face width; effective lining area 215 square inches *(1 387 cm^2)*.

Load lowering clutches — Optional; Speed-o-Matic® power hydraulic two-shoe clutches. Front and/or rear main operating drums 23" *(0.58 m)* diameter, 6" *(0.15 m)* wide.

Drum planetary drive units — Optional; available for load hoist on either or both front and rear main operating drum to allow 70% increase of standard load hoist line speed. Planetary units mount on extended drum shafts between drum spur gears and two-shoe clutch drums. Two-shoe clutches control standard line speeds. Planetary drive units controlled by external contracting band brakes through push button located on clutch control levers.

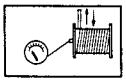


Drum brakes

Two-piece, external contracting band; brake drum involute splined to shaft. Mechanically foot pedal operated; foot pedal equipped with latch to permit locking brake in applied position.

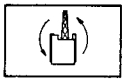
Front and rear main drums — Brakes 38" *(0.96 m)* diameter, 5½" *(0.13 m)* face width; lining area 547 sq. in. *(3 530 cm²)*.

Optional third drum — Brake 27" *(0.69 m)* diameter, 4" *(101.60 mm)* face width, lining area 256 sq. in *(1 652 cm²)*.



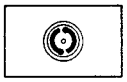
Drum rotation indicators

Standard for front and rear main operating drums. Two rotating dials mounted on control stand; dials actuated by flexible shaft drive from front or rear main operating drum.



Swing system

Spur gear driven; single bevel gears (enclosed and running in oil) on horizontal and vertical swing shafts. Swing pinion involute splined to vertical swing shaft, meshes with external teeth of swing gear.



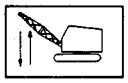
Swing clutches

Speed-o-Matic® power hydraulic two-shoe clutches; lined shoes. 30" *(0.76 m)* diameter, 6½" *(0.15 m)* face width.

Swing brake — External contracting band; spring applied, hydraulically released by operator controlled lever. Brake drum involute splined to vertical swing shaft. Brake 18" *(0.46 m)* diameter, 4" *(101.60 mm)* face width; effective lining area 161 square inches *(1 039 cm²)*.

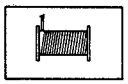
Swing lock — Mechanically controlled pawl engages external teeth of turntable bearing swing (ring) gear.

Maximum swing speed — 3.20 r.p.m.



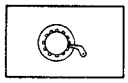
Boom hoist/ lowering system

Independent, spur gear driven. Precision control boom hoisting and lowering through power hydraulic two-shoe clutches.



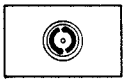
Boomhoist drum

Dual laggings splined to shaft. 11¼" *(0.28 m)* root diameter grooved.



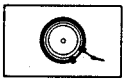
Boomhoist drum locking pawl

Operator controlled; mechanically applied and released.



Boom hoist/ lowering clutch

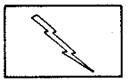
Speed-o-Matic® power hydraulic two-shoe clutches; one each for boom hoisting and boom lowering; 20" *(0.51 m)* diameter, 5" *(0.13 m)* face width.



Boom hoist brake

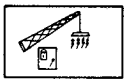
One external contracting band brake; spring applied, hydraulically released. Brake drum involute splined to shaft. Brake 28" *(0.71 m)* diameter, 4½" *(0.12 m)* face width; effective lining area 321 sq. in. *(2 071 cm²)*.

Boomhoist limiting device — Provided to restrict hoisting boom beyond recommended minimum radius; located on exterior right hand side of operator's cab.



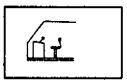
Electrical system

Battery, 12 volt, 225 ampere hour; either one or two batteries depending on engine. *Optional:* battery lighting system, including two sealed beam automotive type adjustable headlights located on cab front roof, one interior cab light and automotive type wiring. *Optional:* additional 50 watt sealed beam automotive type headlight mounted on boom (three maximum quantity recommended). *Optional:* Onan independent light plant with single cylinder, four cycle, air cooled diesel engine with remote electrical starting, 3,000 watt, 120-volt, three-wire, single phase, 60 cycles A.C.; including wiring in conduit, three interior cab lights, trouble lamp with cord, two 300 watt adjustable flood lights on cab front roof and necessary cab extensions. *Optional:* additional 300 watt floodlights available for mounting on cab and boom. **Note:** Independent light plant cannot be furnished in conjunction with magnet generator package.



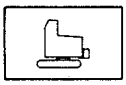
Magnet generator/ control package

Optional. 27.5 kw magnet generator, belt driven off engine power take-off shaft, for use with 230-volt magnets rated at 81 to 115 operating amperes; rheostat, controller, magnet lift control button on rear drum lever, drop control button on swing lever, and Rud-o-Matic #1848 combination tagline/magnet cable take-up reel.



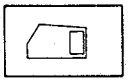
Operator's cab

Full-vision, equipped with safety glass panels. Operator's door is hinged; front window slides on ball bearing rollers. Standard equipment includes dry chemical fire extinguisher, machinery guards. *Optional:* electric windshield wiper, cab heater, defroster fan, Lexan window panels, and sound reduction material.



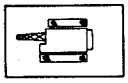
Elevated operator's cab

Optional. 5' 6" *(1.67 m)* higher than standard operator's cab. Catwalk is required along operator's side.



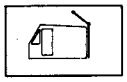
Machinery cab

Equipped with warning horn, sliding doors (two at rear, one at each rear side, and one at right front side) for machinery access, roof-top access ladder, and skid-resistant finish on roof.



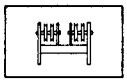
Catwalks

Optional for operator's side or both sides of standard cab. Required for operator's side of elevated cab. Channel and floor plate construction with hand railings.



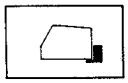
Gantry

Fixed low, mounted to revolving upperstructure frame to support boom suspension system.



Gantry bail

Mounted to gantry headshaft. Contains four 12" *(0.30 m)* root diameter sheaves mounted on bronze bushings for 10-part boomhoist wire rope reeving.

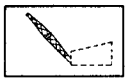


Counterweight

Removable; held in position by "T" bolts. *Standard:* "A" counterweight — 25,000 lbs. *(11 340 kg). Optional* "AB" counterweight — 32,000 lbs. *(14 515 kg)* available for lifting crane service only; three-piece allowing for reduction to weight "A". (Refer to counterweight requirement instructions with lifting capacity chart).

Counterweight removal device – Optional. Counterweight can be raised or lowered with rope mechanism. Rope drum splined to boomhoist drum shaft. Counterweight is lowered with boomhoist brake and raised with boom hoist clutch.

Booms and jibs



Tubular boom

Two-piece basic boom 50' *(15.24 m)* long with open throat top section; 60" *(1.52 m)* wide, 54" *(1.37 m)* deep at connections. Alloy steel round tubular chords 3⅝" *(92.08 mm)* outside diameter.

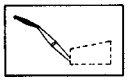
Base section — 25' *(7.62 m)* long; boomfeet 2¾" *(69.85 mm)* wide on 54½" *(1.37 m)* centers.

Boom extensions — Available in 10', 20', 30' and 40' *(3.05, 6.10, 9.14 and 12.19 m)* lengths with appropriate length pendants.

Boom connections — In-line pin connections.

Boom top section — 25' *(7.62 m)* long.

Boom midpoint suspension pendants — Required for tubular boom lengths exceeding 150' *(45.72 m).*



Tubular jib

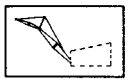
Two-piece basic jib 30' *(9.14 m)* long; 36" *(0.91 m)* wide, 30" *(0.76 m)* deep at connections. Alloy steel tubular chords 2¼" *(57.15 mm)* outside diameter.

Base section — 15' *(4.57 m)* long; mounted to boom headshaft hubs.

Jib extensions — Available in 10', 15', 20' and 30' *(3.05, 4.57, 6.10 and 9.14 m)* lengths; maximum jib length permitted — 60' *(18.29 m).*

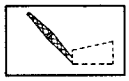
Jib connections — In-line pin connections.

Jib tip section — 15' *(4.57 m)* long; single peak sheave 21" *(0.53 m)* root diameter mounted on anti-friction bearings.



Jib mast

12' 7⅝" *(3.85 m)* high, mounted on jib base section. One deflector sheave, mounted on anti-friction bearings, mounted within mast to guide jib load hoist line. Jib frontstay line and jib backstay line pin at top of jib mast.



Angle boom

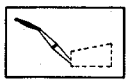
Two-piece basic boom 50' *(15.24 m)* long with open throat top section; 48" *(1.22 m)* wide, 48" *(1.22 m)* deep at connections. Alloy steel chord angles 4" x 4" x ⅜" *(101.60 x 101.60 x 9.53 mm).*

Base section — 25' *(7.62 m)* long; boomfeet 2¾" *(77.85 mm)* wide on 54½" *(0.86 m)* centers.

Boom extensions — Bolted connections available in 5', 10', 15', 20' and 30' *(1.52, 3.05, 4.57, 6.10 and 9.14 m)* lengths with appropriate length pendants. Pin connections available in 10', 20' and 30' *(3.05, 6.10 and 9.14 m)* lengths with appropriate length pendants.

Boom connections — Bolted or pin connected.

Boom top section — 25' *(7.62 m)* long.



Angle jib

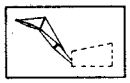
Two-piece basic jib 20' *(6.10 m)* long; 24" *(0.61 m)* wide, 20" *(0.51 m)* deep at connections. Alloy steel main chord angles, 2½" x 2½" x 5/16" *(63.50 x 63.50 x 7.95 mm).*

Base section — 10' *(3.05 m)* long; mounted to bracket welded on end boom top section.

Jib extensions — Available in 10' and 15' *(3.05 and 4.57 m)* lengths; maximum jib length permitted — 40' *(12.19 m).*

Jib connections — Bolted.

Jib tip section — 10' *(3.05 m)* long; single peak sheave 15⅞" *(4.57 m)* root diameter mounted on anti-friction bearings.



Jib mast

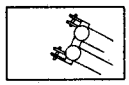
10' *(3.05 m)* high, mounted on jib base section. One deflector sheave mounted on anti-friction bearings, mounted within mast to guide jib load hoist line. Two equalizer sheaves mounted on top of mast — one for jib frontstay line, one for jib backstay line.

Items applicable to both tubular or angle booms and jibs

Boom stops

Dual rail, retractable tubular type; spring-loaded bumper ends.

Boom stop warning indicator — Mounts on boom base section; visually warns operator that boom is near minimum radius and boom stops are approaching seating condition. When boom stop disengages, indicator is spring released to original position.

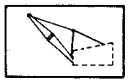


Boomhoist bridle

Serves as connection between boom pendants and boomhoist reeving. Bridle contains five 12" *(0.30 m)* root diameter sheaves, mounted on bronze bushings, for ten-part boomhoist reeving for use with or without boom live mast.

Spreader bar — Arched to clear main load hoist rope; installed at inner (lower) end of boom top section pendants. Required on boom lengths exceeding 60' *(18.29 m)* without boom live mast, and boom lengths exceeding 150' *(45.72 m)* with boom live mast — with or

without jib. On boom lengths 60' *(18.29 m)* through 140' *(42.67 m)* spreader cannot be used with jib.



Boom live mast

Welded plate/tube construction. 25' *(7.62 m)* long from center of head shaft to mounting pin; mounts on front of frame near boomfeet. Supports boomhoist bridle and boom midpoint suspension pendants. Required for both tubular and angle boom lengths over 50' *(15.24 m)* when using jib, and for all boom lengths over 100' *(30.48 m)* without jib. Mast may be used for machine assembly/disassembly, but it is not intended for general crane service. **Note**: Refer to Performance Specifications for boom live mast lifting capacities.

Auxiliary load hoist sheaves — Two 6½" *(0.15 m)* root diameter sheaves, mounted on bronze bushings, grooved for ¾" *(19 mm)* diameter wire rope. For use of boom live mast as a short boom.

Live mast stops — When using mast as short boom, main boom stops must be attached to cab for live mast backstops to function properly. Live mast backstops must be manually positioned.

Boompoint machinery — Lifting crane: four 21" *(0.53 m)* root diameter head sheaves; clamshell or dragline: two 26¼" *(0.67 m)* root diameter head sheaves. All sheaves mounted on antifriction bearings.

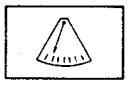
Boompoint sheave guards — Standard for crane/clamshell/dragline service. Upper sheave guard: single tubular guard bolted to top side of boom head. Lower sheave guards: tubular roller guards mounted on anti-friction bearings; five for crane service, three for clamshell/dragline service.

Deflector rollers — Deflect main or third drum hoist line off boom to avoid chafing. **Angle boom**: one roller standard on boom top section; one additional required for boom lengths 100' *(30.48 m)* through 120' *(36.58 m)*, two additional required for boom lengths beyond 120' *(36.58 m)*. **Tubular boom**: two rollers standard on boom top section; one additional required for boom lengths 100' *(30.48 m)* through 120' *(36.58 m)*; two additional required for boom lengths over 120' *(36.58 m)* through 160' *(48.77 m)*; three additional required for boom lengths beyond 160' *(48.77 m)*.

Jib mast stops — Telescoping type; pinned from jib mast to boom top section and from mast to jib base section.

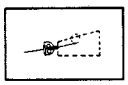
Jib staylines — Back staylines attached between top of jib mast and base of boom top section on tubular boom. Back staylines attached to boom base section on angle boom. Front staylines attached between top of jib mast and peak of jib.

Auxiliary equipment



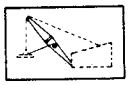
Boom angle indicator

Standard with either crane boom. Pendulum type, mounted on boom base section.



Fairlead

Optional. Full revolving type with barrel, sheaves, and guide rollers mounted on anti-friction bearings.



Tagline

Optional. Spring wound drum type mounted on crane boom. Rud-o-Matic® models:
— 1248, double barrel with 20" *(0.51 m)* reel for booms not exceeding 80' *(24.38 m)*; for use with 1¾ to 4 cubic yard *(1.34 to 3.06 m³)* clamshell buckets.
— 1248, double barrel with 30" *(0.76 m)* reel for booms not exceeding 100' *(30.48 m)*; for use with 1¾ to 2 cubic yard *(1.34 to 1.53 m³)* clamshell buckets.
— 1848, triple barrel with 30" *(0.76 m)* reel for booms not exceeding 100' *(30.48 m)*; for use with 4 to 5 cubic yard *(3.06 to 3.82 m³)* clamshell buckets.

Boom carrying equipment — For carrying boom in horizontal position with live mast at approximate 13' *(3.96 m)* overall clearance height from ground. May be used with tubular booms 50' through 120' *(15.24 through 36.28 m)* and with angle booms 50' through 110' *(15.24 through 33.53 m)*. Boom suspension system uses two links at each end at the 10' *(3.05 m)* pendant portion of basic pendants. The free ends of the links are pinned together shortening overall pendant length, lowering live mast relative to the boom. Booms cannot be used to handle loads with reduced mast height.

GENERAL INFORMATION ONLY