

**Link-Belt®**

LS-338

# Wire Rope Crawler Crane/Excavator

100-ton (90.7 metric ton)

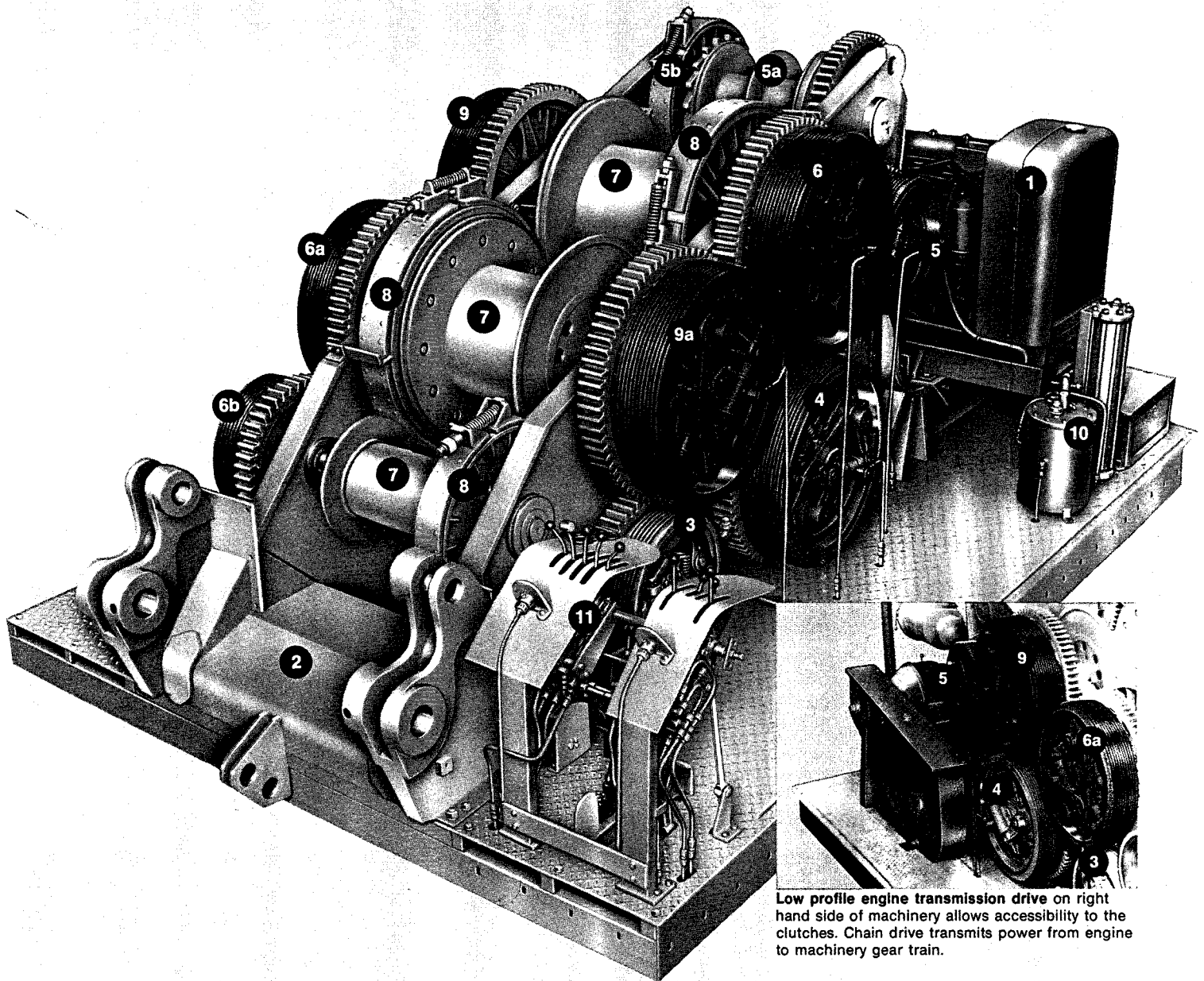
GENERAL INFORMATION ONLY



# Exclusive FMC Full-Function revolving upperstructure design

Permits independent swing, travel, boomhoist and hoist

GENERAL INFORMATION ONLY



Low profile engine transmission drive on right hand side of machinery allows accessibility to the clutches. Chain drive transmits power from engine to machinery gear train.

- 1 Engine:** Diesel with torque converter.
- 1a Auxiliary output shaft governor control** (optional) for lifting crane service, allows increase of hoist line speed up to 150% when line pull is less than maximum. (See page #3.)
- 2 Frame:** Fixture welded and stress relieved for strength and durability; line bore accuracy for proper shaft and gear alignment. Results in less component wear and lower maintenance costs.
- 3 Travel:** Independent. Two-shoe clutches transmit travel power smoothly into the track sprockets.
- 4 Swing:** Independent. Extraordinary size 2-shoe clutches transmit swing power smoothly into the vertical swing shaft and pinion.
- 5 Boomhoist:** Independent. Gear driven with 2-shoe clutches for boom raising and lowering of the boom.
- 5a Boomhoist rope drums:** One-piece, dual drum with integral ratchet wheel splined to shaft. Manually controlled pawl may be engaged to lock ratchet wheel and drum in lowering direction.
- 5b Boomhoist rope drum brake:** Automatically spring applied, power hydraulically released.
- 6 6a, 6b Hoist clutches:** Two-shoe, rear drum (6), front drum (6a) and optional third drum (6b).
- 7 Rope drum laggings:** Rear, front and optional third drum bolted to brake drum. Grooved laggings available for duty cycle application on main drums.
- 8 Drum brakes:** Mechanically operated by foot pedals. Drum brakes separated from clutches (item 6, 6a, and 6b) to eliminate heat transfer, resulting in cooler brakes and clutches for longer component life of both. Brake drums splined to drum shafts.
- 9 9a Power load lowering clutches:** (Optional) independent front and rear drum 2-shoe clutches for powering down light loads and controlled lowering of heavier loads.
- 10 Power package for power hydraulic controls:** Vane-type pump, belt driven from engine, piston-type accumulator and sump tank; normal system operating pressure, 900 (6,205.50 kPa) to 1050 (7,239.75 kPa) p.s.i.
- 11 Control console:** Exclusive Speed-o-Matic® power hydraulic controls; time-tested and proven throughout the world.

## Exclusive Speed-o-Matic® power hydraulic control system

*For superb control of all machine functions*

**GENERAL INFORMATION ONLY**

The model LS-338 Link-Belt® crawler crane was designed for stability and strength with less overall weight. The revolving upperstructure machinery design is FMC's unique Full-Function design. This exclusive machinery design permits independent or simultaneous performance of swing, travel, booming and load hoisting or lowering. Increases on-the-job machine and load handling capability.

For superb control of all the machine functions, the LS-338 Link-Belt crawler crane incorporates the exclusive Speed-o-Matic® power hydraulic control system. This system is unaffected by day-to-day atmospheric variations and does not require priming or bleeding. Oil under pressure from the belt-driven, vane-type pump or from the pressure accumulator storage tank does the work. Normal system operating pressure is 900 (6,205.50 kPa) — 1050 (7,239.75 kPa) p.s.i. The accumulator is pre-charged to 650 (4,481.75 kPa) p.s.i.

Short throw levers in **operator's control console** actuate variable pressure control valves which direct oil under pressure to each 2-shoe clutch for prompt, positive response. Speed-o-Matic® power hydraulics . . . the exclusive control system that permits the use of 2-shoe clutches for all machine functions.

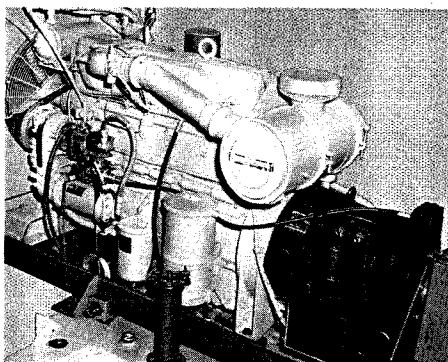
The power hydraulic, 2-shoe clutch is self-compensating over a wide range of lining wear and heat expansion and is separated from the rope drum brake to eliminate heat transfer for longer clutch and brake lining life.

The diesel engine with single stage **torque converter** is standard. Three stage converter, optional.

The torque converter drive gives the operator flexibility of operation, plus allows for smooth acceleration and deceleration of swing, travel, hoist, and boom. With hoist clutch engaged and



Operator control console



Torque converter

the torque converter drive it is possible to (1) hoist the load (2) partially retard engine throttle and "hold" the load, or (3) further retard the throttle and lower the load against the converter.

With the torque converter it is possible to develop greater torque (boomhoist and load line pull) at decreased engine r.p.m. This results in optimum control of swing, delicate lifts and long boom/jib lift-off.

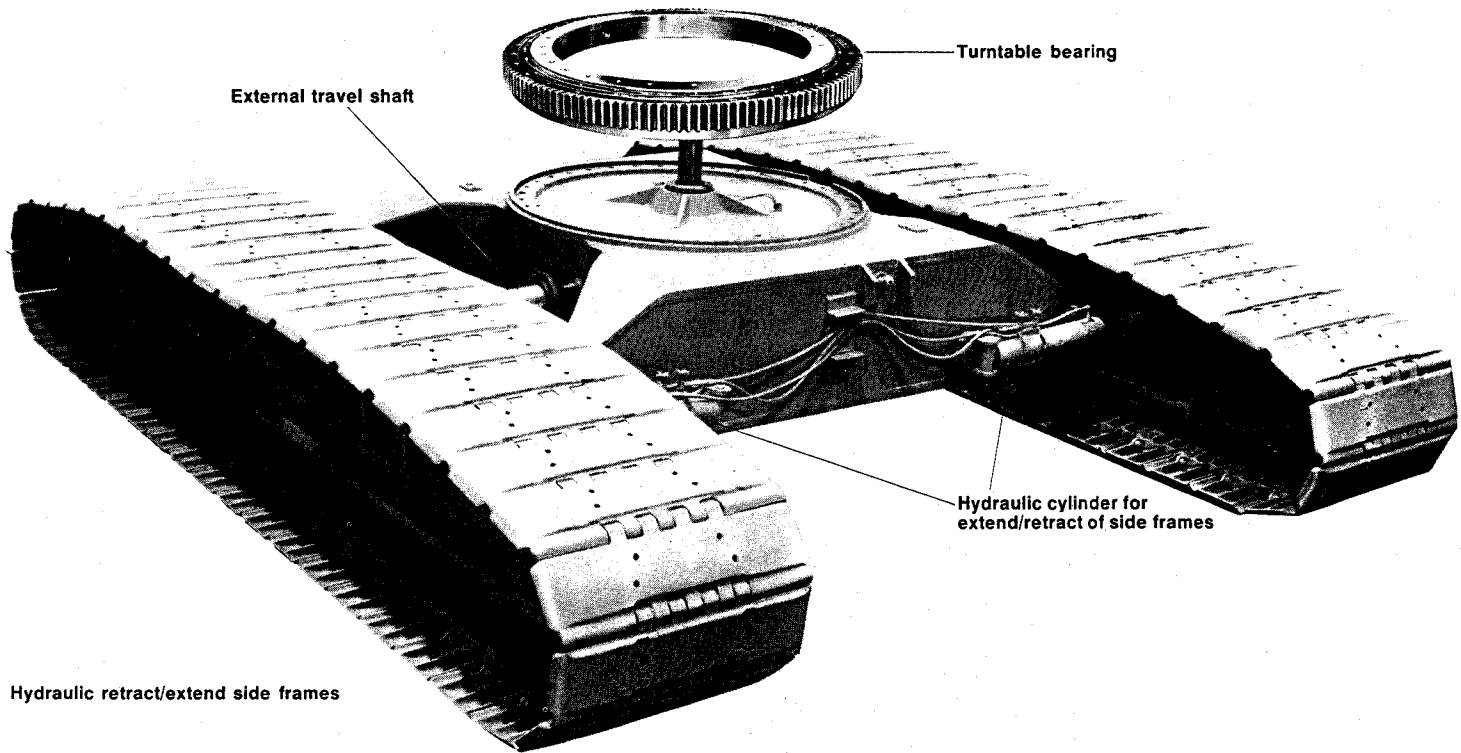
The torque converter auxiliary output shaft governor manual control is

optional. When hoisting loads requiring less than maximum hoist line pull, the operator engages a manual control located to his right. This opens up the converter governor, which in turn opens up the diesel engine governor. This will increase the engine r.p.m. to its maximum setting, speeding up the machinery gear train for greater hoist line speed. This arrangement allows up to 150% increase in hoist line speed for greater machine productivity. In addition, combined with the optional high speed planetary driven rope drum (see page #7) the total result is up to a maximum of 255% higher than standard hoist line speed, with line pull up to approximately 8000# (3,629 kg).

# LS-338 features removable crawler side frames for fast stripdown

FMC patented wedgepack design secures frames to cross axles

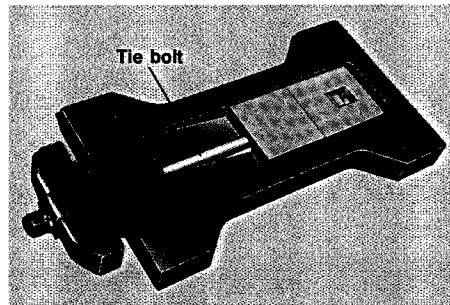
GENERAL INFORMATION ONLY



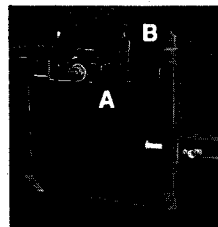
Hydraulic retract/extend side frames

The LS-338 lower and side frames are all welded and stress relieved to provide a more durable working base. The lower frame is then machined and line bored for mounting of the center horizontal travel shaft. The **external horizontal travel shaft** is spline connected to both the center travel shaft located in the lower frame and the drive chain sprocket hub located in the side frame. When removing side frames, external travel shafts are stored in the drive sprocket hub. The drive chains remain intact.

The side frames are positioned to the lower frame cross axles by a dowel fixed in the bottom of each side frame window. The dowel fits in circular recess on underneath side of cross axle. A **wedgepack (A)** is then placed above each cross axle inside the window of the side frame. By means of a **tie bolt**, the wedge is drawn up the inclined plane, locking each side frame to its respective



Wedgepack (A)



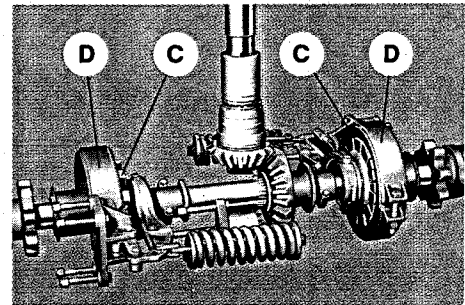
Wedgepack in position

cross axle. End plate **(B)** secures **wedgepack in position**. An FMC patented feature.

For fast stripdown (or assembly) **side frames can be hydraulically**

**extended or retracted**, with hydraulic power from the power hydraulic steer system.

Track shoes and rollers are heat treated to minimize track wear. Chain/track sprocket, track idler roller, and track rollers are mounted on bronze bushings.



Power hydraulic steer

**Power hydraulic steer** is standard. Jaw clutches **(C)** are operator engaged through power hydraulics. When jaw clutches are fully engaged, or preloaded, spring applied brakes **(D)** are automatically released. Jaw clutches **(C)** are engaged independently for steer by either of two operator steer control levers. They are simultaneously engaged for straightline travel by the two steer levers. Brakes **(D)** also serve as holding brakes while working.

The crane upper is mounted to the crawler lower by a **turntable bearing** which provides extremely smooth swinging.

# Angle boom to 80' (24.38m) for dragline/ clamshell/magnet/grapple operation

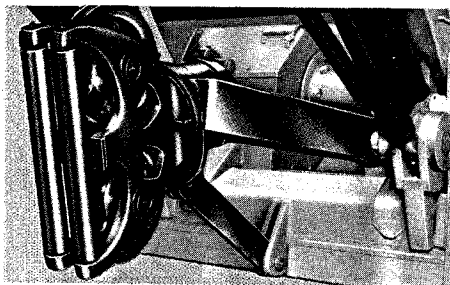
150' (45.72m) boom plus 40' (12.19m) jib for lifting crane service

## GENERAL INFORMATION ONLY

The LS-338 with extraordinary size swing clutches (Item 4, page 2), plus the strength and size of all the machinery components is ideal for excavator and duty cycle service.

The angle boom is bolt-connected with quality-built box lattice construction, with alloy chord angles. Basic boom is 2-piece, 50' (15.24m) in length. Boom extensions of 10' (3.05m), 15' (4.57m), 20' (6.10m), and 30' (9.14m) are available.

The **full-revolving fairlead** rotates to insure rope support in all positions. All



Full revolving fairlead

moving parts are mounted on anti-friction bearings. Increases inhaul rope life; permits greater economy.

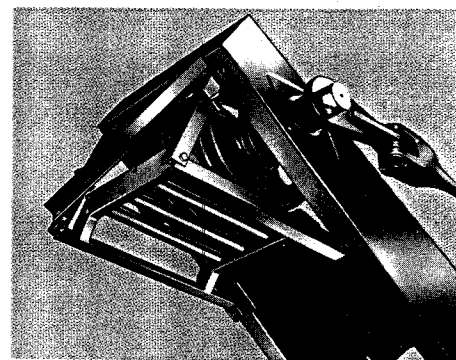
Four sheaves are available for lifting crane operation.

Dual, rail-type **boom stops**, each with spring loaded bumpers, are standard.

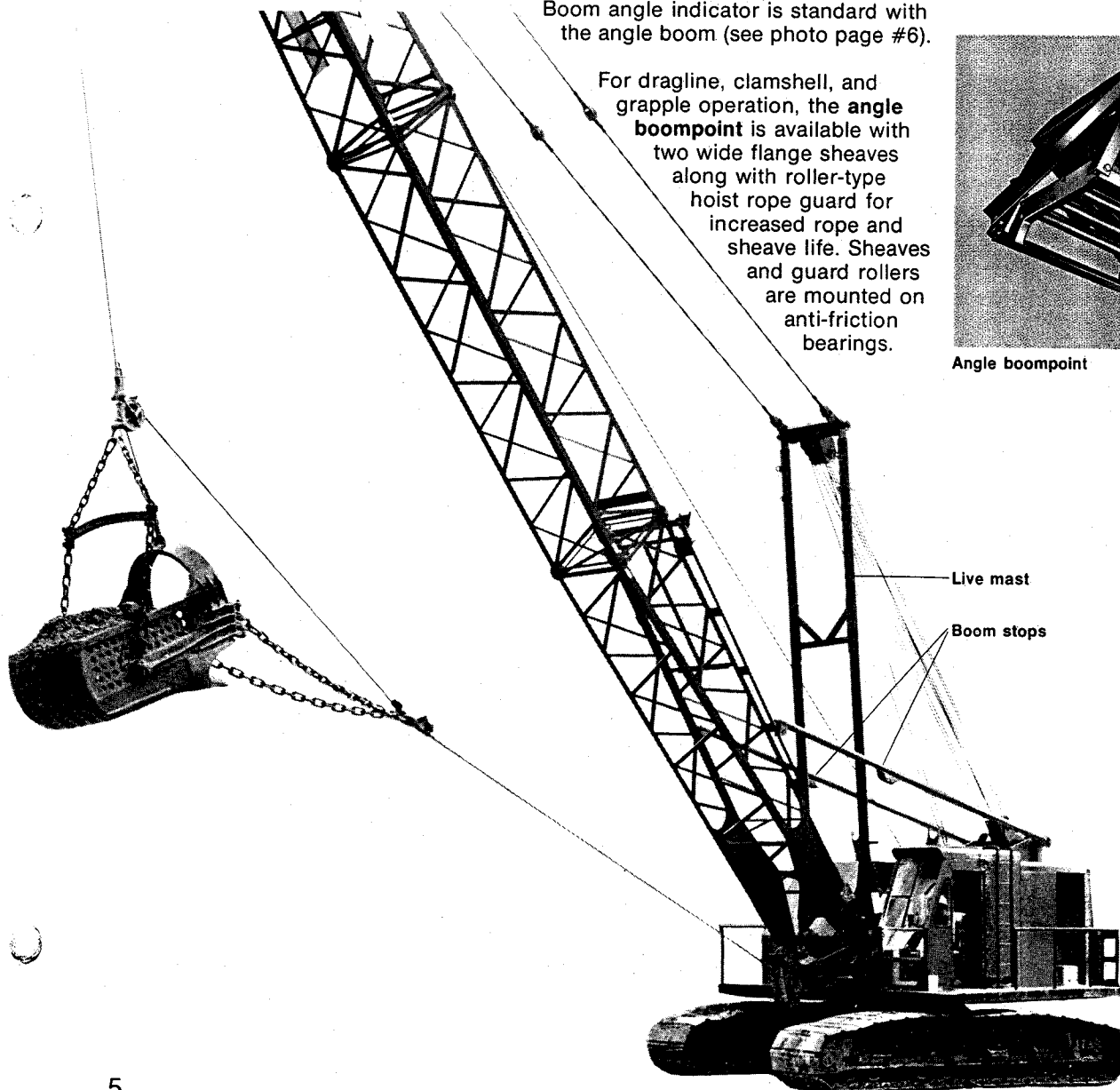
As a lifting crane, the LS-338 with **live mast** handles up to 150' (45.72m) of angle boom plus 40' (12.19m) angle jib. The live mast is required for angle booms exceeding 100' (30.48m) and for boom exceeding 50' (15.24m) when equipped with jib. The basic angle jib is 2-piece, 20' (6.10m) in length, with 10' (3.05m) and 15' (4.57m) jib extensions available.

Boom angle indicator is standard with the angle boom (see photo page #6).

For dragline, clamshell, and grapple operation, the **angle boompoint** is available with two wide flange sheaves along with roller-type hoist rope guard for increased rope and sheave life. Sheaves and guard rollers are mounted on anti-friction bearings.



Angle boompoint



Live mast

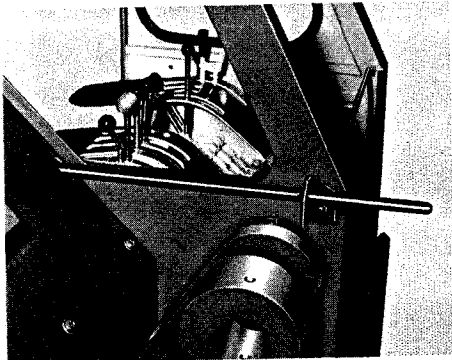
Boom stops

# Tubular boom and jib for crane/ dragline/clamshell/grapple operation

**GENERAL INFORMATION ONLY**

Up to 200' (60.96m) boom or 180' (54.86m) boom + 60' (18.29m) jib for crane service

The LS-338 crawler crane can be equipped with a tubular boom and jib. The basic boom is 50' (15.24m), 2-piece pin-connected with 10' (3.05m), 20' (6.10m), 30' (9.14m), and 40' (12.19m) extensions available up to a maximum length of 200' (60.96m) for lifting crane service. Also available is a 2-piece, 30' (9.14m) jib, pin-connected with 10' (3.05m) and 15' (4.57m) extensions available for a maximum jib length of 60' (18.29m).

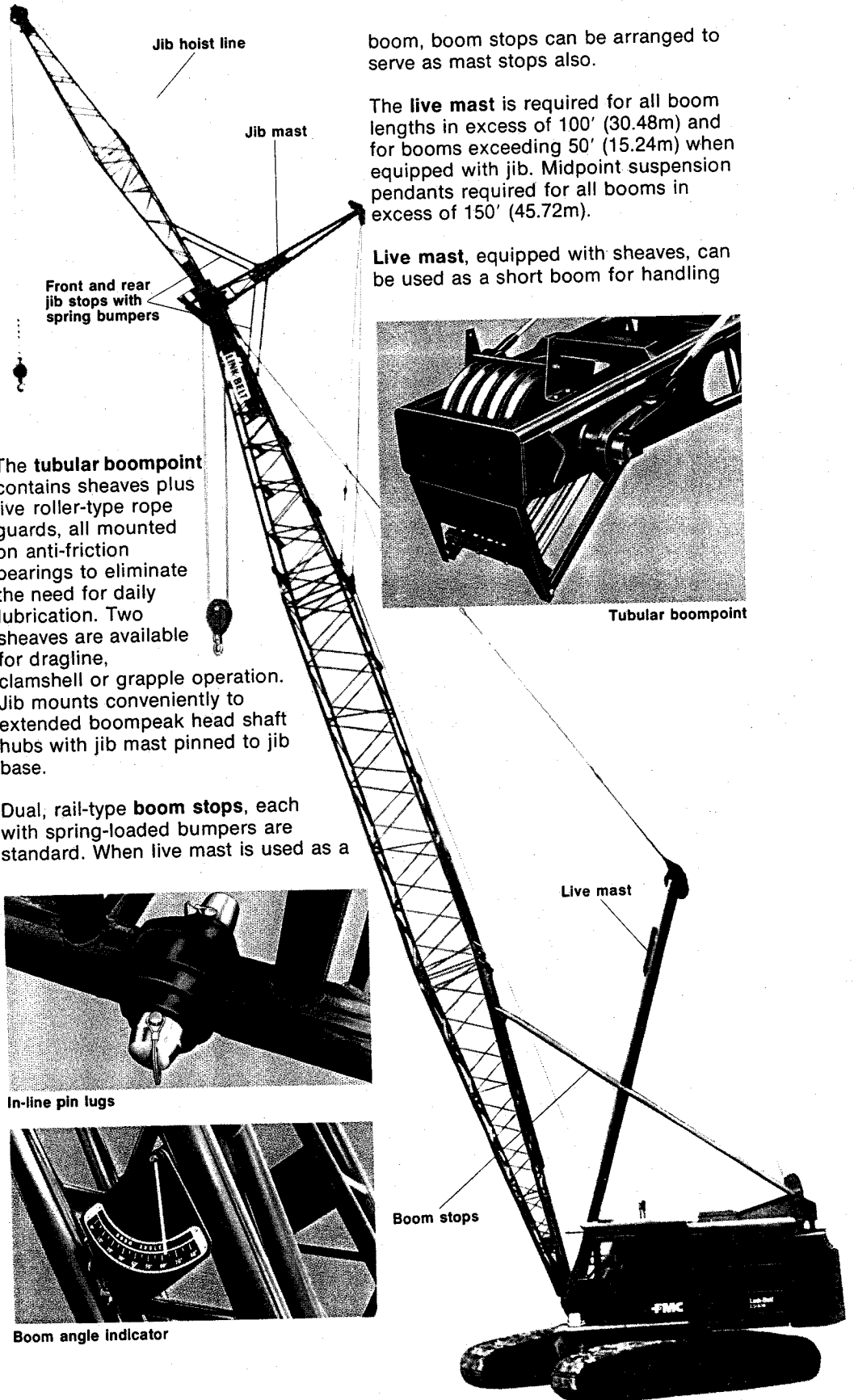


Boomhoist limiting device

The **boomhoist limiting device** improves close-radius operation. When an attempt is made to raise the boom closer than minimum radius, this mechanism acts to disengage the boom raising clutch and simultaneously engage the boomhoist brake.

The method of welding the **in-line pin lugs** to the round chord tube minimizes stress concentration and is an exclusive development of FMC engineering/manufacturing technology. The extended hub on the female connection serves as an anchor for the jib backstays or for pendant lines when assembling the boom. The tapered end pin is held in place with two latch pins.

The standard **boom angle indicator** serves as a handy guide to the operator. It is mounted on the side of the boom nearest the operator for his ready reference.



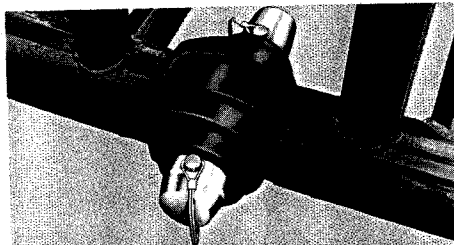
boom, boom stops can be arranged to serve as mast stops also.

The **live mast** is required for all boom lengths in excess of 100' (30.48m) and for booms exceeding 50' (15.24m) when equipped with jib. Midpoint suspension pendants required for all booms in excess of 150' (45.72m).

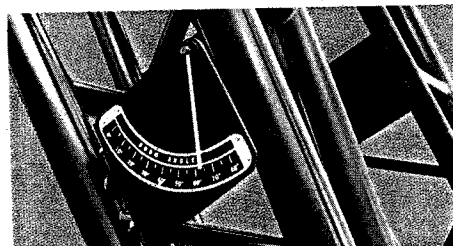
**Live mast**, equipped with sheaves, can be used as a short boom for handling

The **tubular boompoint** contains sheaves plus five roller-type rope guards, all mounted on anti-friction bearings to eliminate the need for daily lubrication. Two sheaves are available for dragline, clamshell or grapple operation. Jib mounts conveniently to extended boompeak head shaft hubs with jib mast pinned to jib base.

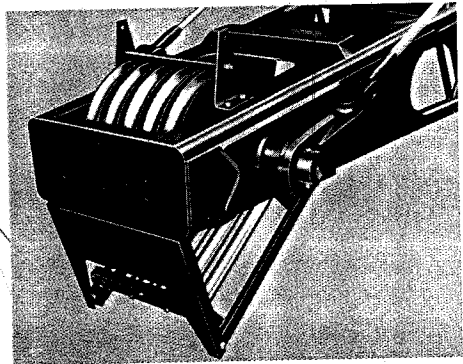
Dual, rail-type **boom stops**, each with spring-loaded bumpers are standard. When live mast is used as a



In-line pin lugs



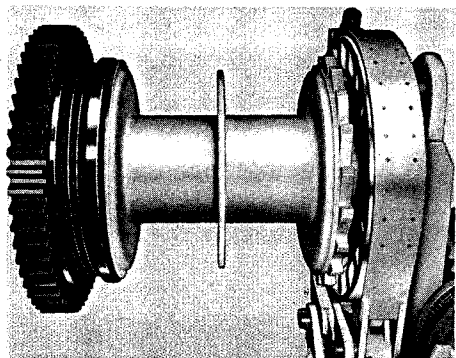
Boom angle indicator



Tubular boompoint

side frames, boom sections and counterweight when dismantling or assembling the machine.

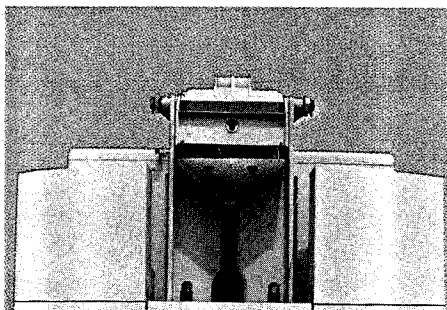
The **counterweight** is quickly raised or lowered with rope mechanism (optional). The **rope drum** is splined to the boom hoist drum shaft. The counterweight is lowered with the boomhoist brake and raised with the boomhoist clutch. Permits fast, 1-piece raising or lowering of the counterweight.



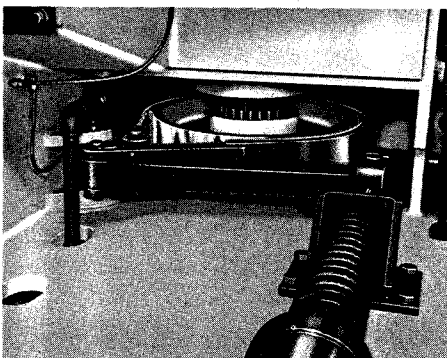
Counterweight raising/lowering rope drum

The **swing brake** is spring applied or power hydraulically released (under control of the operator). Acts to hold upper and boom at any swing position or it can be partially engaged for a slight drag to control side drift when making precision lifts. Swing brake is controlled from operator's position through variable pressure control valve. The LS-338 features a mechanical swing lock as standard equipment.

For high-speed hoisting, an exclusive **independent planetary hoist** arrangement (optional) can be mounted

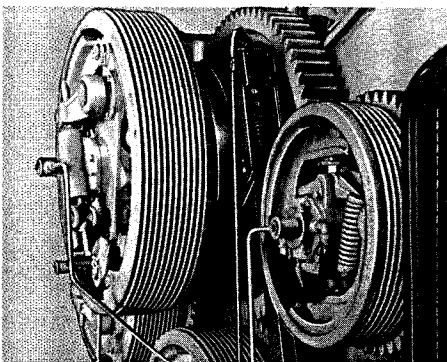


Counterweight raising/lowering



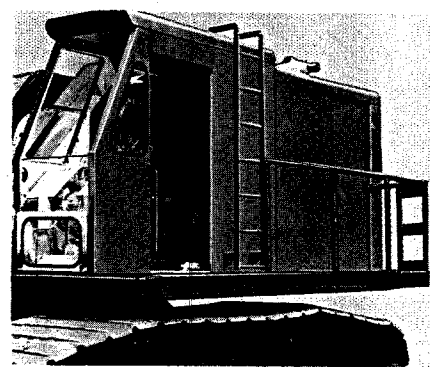
Swing brake

between the drum gear and clutch drum. The planetary arrangement can provide up to 70% increased hoisting speed. Engaging the 2-shoe clutch provides standard hoist rope speed; planetary brake is controlled by push button on hoist control lever.

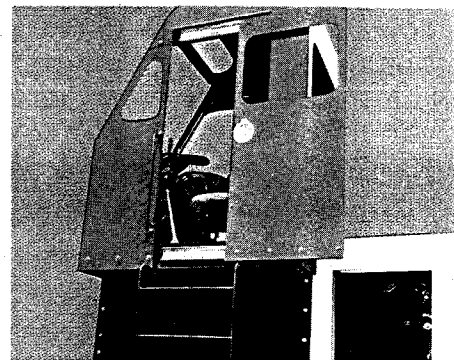


Independent planetary hoist

**Catwalk and railing** along operator's side, or both sides, of cab are available (optional).



Catwalk and railing



Elevated operator's cab

**Elevated operator's cab** is available. This option puts the operator up where he can see his work on specialized loading jobs. The result is greater speed of operation with improved visibility.

The flexibility of the machine design results in the availability of options, all designed to maximize the usefulness and productivity of the machine, unmatched by competitive crawler cranes.

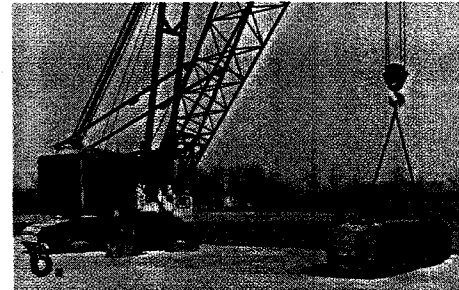
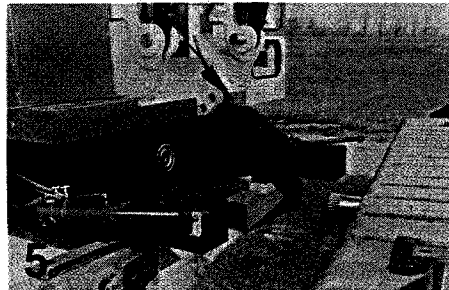
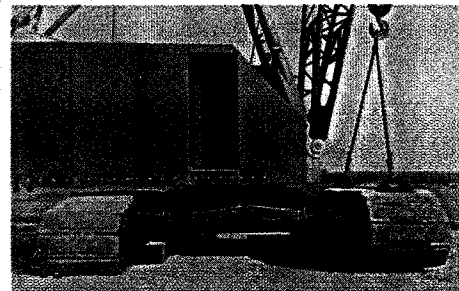
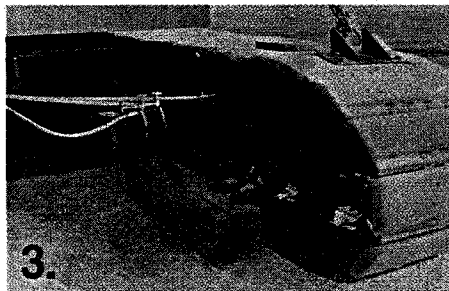
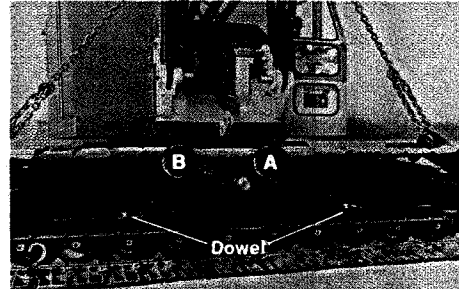
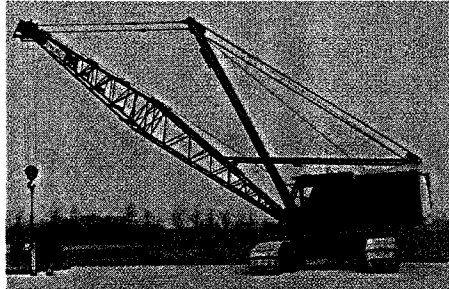
**GENERAL INFORMATION ONLY**

## The LS-338 crawler crane features

*self-erecting/stripdown of side frames and boom  
self-installation/removal of counterweight*

The LS-338 crawler lifting crane is designed for fast, on-the-job self-erection or self-stripdown of boom, counterweight and side frames. No need for auxiliary crane equipment. The basic procedure in brief is as follows: (Exact details on LS-338 self-stripdown are available upon request.)

1. Counterweight is lowered to the ground with rope mechanism. (See page 7.) Machine handles counterweight.
2. Remove plate (not shown) from end of external horizontal travel shaft (A). Pull shaft (A) from the splined coupling (B) in lower frame and store in the hub of the chain sprocket.  
Loosen wedgepack (A) tie bolt, (see page 4) remove end plate (B) and remove wedgepack (A).
3. Raise and block under lower frame, and connect front and rear hydraulic cylinder rod end into side frame anchor (only front cylinder visible). Hoist chains anchored to track shoes.
4. With hydraulic power from the power hydraulic steer system, the side frame is extended.
5. Cylinder rod ends are freed from the cross axles. External travel shaft remains with side frame.
6. The LS-338 handles the side frame.



### The LS-338 features

\* FMC exclusive Full-Function gear train design.

**Benefit** – Permits independent crane functions for greater job flexibility.

\* FMC exclusive Speed-o-Matic® power hydraulic control system.

**Benefit** – Dependable, proven, and eliminates daily maintenance.

\* FMC patented cross axle to side frame wedgepack design.

**Benefit** – Permits faster stripdown/assembly of side frames.

\* FMC exclusive, independent planetary high-speed hoisting/lowering of loads.

**Benefit** – Greatly increases machine productivity.

\* Power hydraulic 2-shoe clutches, all mounted outside of side frames.

**Benefit** – Service accessibility, smooth acceleration/deceleration of swing, hoist and boomhoist.

\* Power boom raising and lowering.

**Benefit** – More precise boom control.

\* Main frames fixture welded, stress relieved, line bore accuracy.

**Benefit** – Greater strength and durability. Results in less component wear and lower maintenance cost.

\* Tubular boom with chord members 100,000 p.s.i. high-strength alloy steel.

**Benefit** – More durable boom.

## GENERAL INFORMATION ONLY

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

**FMC Corporation Crane and Excavator Division World Headquarters Cedar Rapids Iowa 52406**

Plants in: Cedar Rapids Iowa (2) • Lexington & Bowling Green Kentucky • Ontario Canada • Milan Italy • Queretaro Mexico & Nagoya Japan (under license)

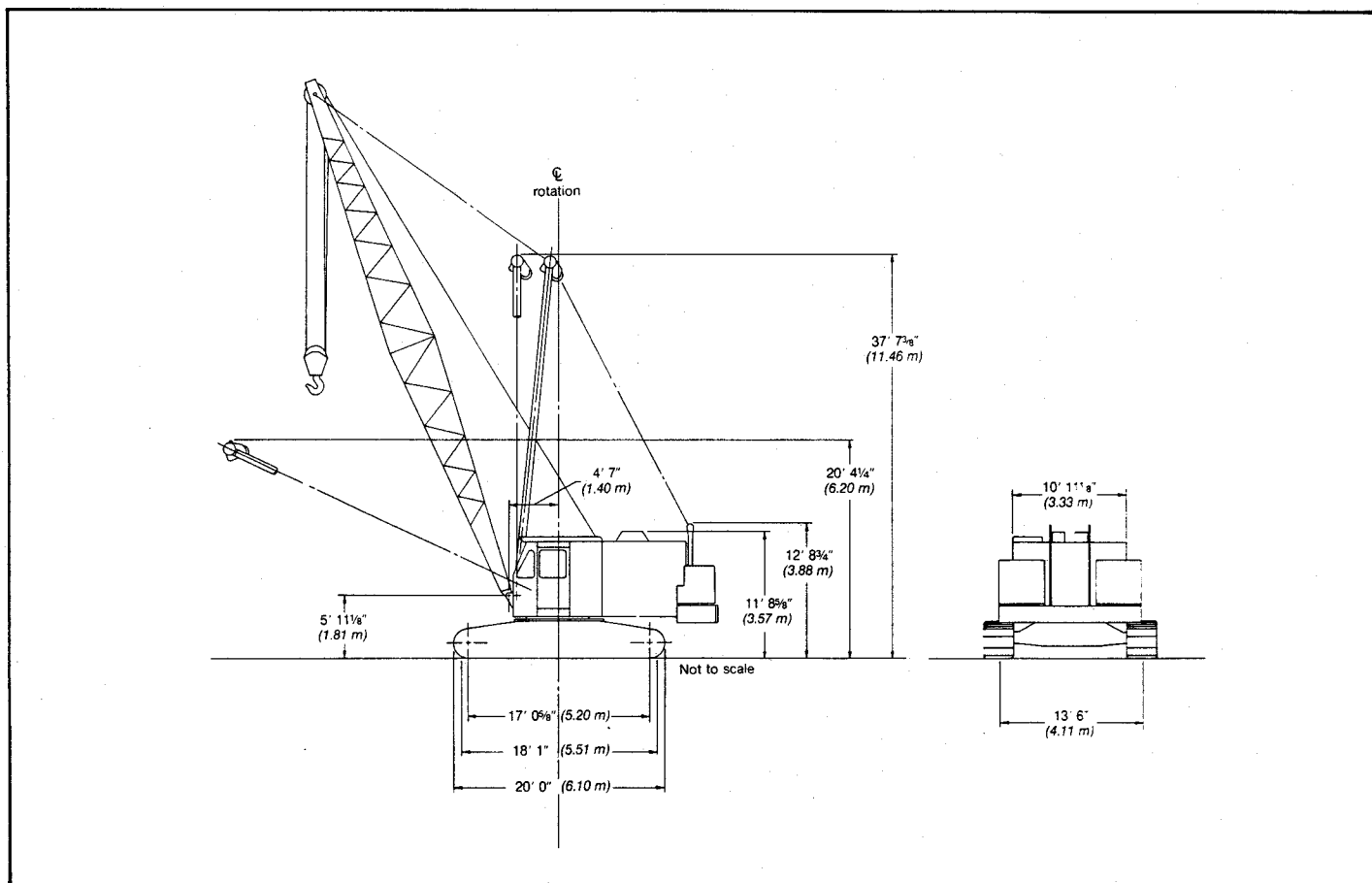


## General Specifications

Link-Belt® 100-ton (90.70 metric ton)

Wire rope crawler crane/excavator

# LS-338



General dimensions	Feet	meters
Basic boom length, angle and tubular	50' 0"	15.24
Overall width with:	—	—
38" (0.81 m) track shoes	16' 8"	5.08
44" (1.12 m) track shoes	17' 2"	5.19
Minimum ground clearance	1' 2"	0.36
Clearance under counterweight "A"	3' 10 <sup>9</sup> / <sub>16</sub> "	1.18
Clearance under counterweight "AB"	3' 10 <sup>9</sup> / <sub>16</sub> "	1.18
Clearance width less crawler side frames, counterweight and catwalks	14' 6"	4.42
Overall width of counterweight	13' 6"	4.11

General dimensions	Feet	meters
Overall width for transport less side frames and catwalks; axles in line with upper	11' 0"	3.35
Width of cab less catwalks	10' 11 <sup>8</sup> / <sub>16</sub> "	3.33
Width of cab with catwalks both sides	15' 0"	4.57
Tailswing of counterweight "A"	15' 1 <sup>1</sup> / <sub>2</sub> "	4.61
Tailswing of counterweight "AB"	15' 1 <sup>1</sup> / <sub>2</sub> "	4.61
Overall height for transport:	—	—
Basic machine less crawler side frames	11' 6"	3.50
Basic revolving upperstructure only	9' 0"	2.74

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## Machine working weights — approximate

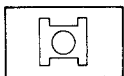
Based on standard machine including GM 6-71N diesel engine and friction clutch, turntable bearing, independent boom hoist, independent swing and travel, swing brake, drum rotation indicators and 13' 6" (4.11 m) gauge by 20' 0" (6.10 m) long crawler lower with removable side frames and 38" (0.97 m) wide track shoes plus the following:	Crawler mounting 20' 0" (6.10 m) overall length			
	Counterweight "A"		Counterweight "AB"	
	Pounds	kilograms	Pounds	kilograms
Lifting crane — includes necessary drum laggings, main load hoist wire rope and one of the following booms: Basic 50' (15.24 m) angle boom Basic 50' (15.24 m) tubular boom	141,067 140,542	63 988 63 750	168,567 168,042	76 462 76 224
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 Maximum 80' (24.38 m) tubular boom	141,372 139,872	64 126 63 446	— —	— —
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 Maximum 80' (24.38 m) tubular boom	140,372 138,862	63 673 62 988	— —	— —

## Weight deductions for transporting — approximate

Deduct for removal of the following:	Crawler mounting 20' 0" (6.10 m) overall length	
	Pounds	kilograms
Crawler side frames with: 38" (0.97 m) shoes 44" (1.12 m) shoes	— 38,160 39,410	— 17 309 17 876
Counterweight "A" Counterweight "AB"	25,000 52,500	11 340 23 814
50' (15.24 m) angle boom 50' (15.24 m) tubular boom	5,968 5,182	2 707 2 351
Basic revolving upperstructure less counterweight	45,200	20 503

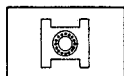
## General specifications

### Mounting — crawler



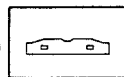
**Lower frame**

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



**Turntable bearing**

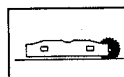
Outer race with external ring (swing) gear bolted to lower frame.



**Crawler side frames**

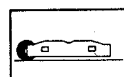
All-welded, stress relieved, precision machined. Removable; positioned on cross axles by dowels and held in place with two patented, adjustable

wedgepacks per side frame. Four optional hydraulic cylinders (two on each end of lower frame) provided to assist in side frame assembly/dissassembly; drive chains remain intact.



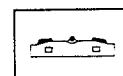
**Track drive sprockets**

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.



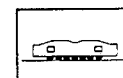
**Track idler wheels**

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



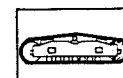
**Track carrier slide rails**

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



**Track rollers**

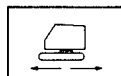
Heat treated, mounted on bronze bearings. Ten rollers per side frame.



**Tracks**

Heat treated, self-cleaning, multiple hinged track shoes joined by one-piece full floating pins. 43 shoes per side frame. *Standard: 38" (0.97 m) wide. Optional: 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** — 0.875 m.p.h. (1.41 km/h).

**Gradeability** — 30% based on machine equipped with "AB" counterweight, 50' (15.24 m) tubular boom, boom live mast, and 44" (1.12 m) shoes.

**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 steel levers are in neutral. Two 20" (0.51 m) diameter by 4" (101.60 mm) wide brake bands; effective lining area 186 square inches (1 200 cm<sup>2</sup>) per brake. Steer brakes also serve as parking/digging brakes.

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

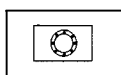
Counterweight	Track shoes		Ground contact area		Ground bearing pressure	
	Inches	meters	Square inches	cm <sup>2</sup>	P.s.i.	kPa
"A" — 25,000 lbs. (11 340 kg)	38	0.97	16,460	106 220	8.5	58.61
	44	1.12	19,060	122 998	7.4	51.02
"AB" — 52,500 lbs. (23 814 kg)	38	0.97	16,460	106 220	10.2	70.40
	44	1.12	19,060	122 998	8.9	61.37

**Revolving upperstructure**



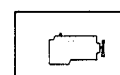
**Frame**

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.

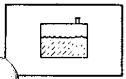


**Engines**

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.

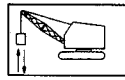
Engine specifications	GM 6-71N with friction clutch	GM 6-71N with hydraulic coupling	GM 6-71N with torque converter ①	Cummins N855-P235 with torque converter ②
Number of cylinders	6	6	6	6
Bore and stroke — inches — (mm)	4¼ x 5 108 x 127	4¼ x 5 108 x 127	4¼ x 5 108 x 127	5½ x 6 143 x 150
Piston displacement — cu. in. — (cm <sup>3</sup> )	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



### Fuel tank

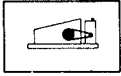
106 gallon (401.21 L) capacity; equipped with fuel sight level gauge, flame arrester, and filler pipe cap with locking eye for padlock.



### Load hoisting and lowering

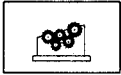
Wire rope drum gear train (front and rear main, and optional third, operating drums) powered by chain transmission from engine.

## Power train



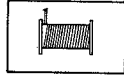
### Transmission

FMC quadruple roller chain enclosed in 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 in anti-friction bearings. Machine-cut teeth on drum gears, pinions, spur gears, and chain wheel.



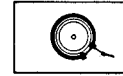
### Load hoist drums

*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 smooth 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 planetary drive units* — Optional; available for load hoist on either or both front and rear main operating drums 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.

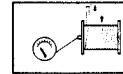


### Drum brakes

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, (0.13 m) face width; effective lining area 547 sq. in. (3 530 cm<sup>2</sup>).

*Optional third drum* — Brake 27" (0.69 m) diameter, 4" (101.60 mm) face width, effective lining area 256 sq. in. (1 652 cm<sup>2</sup>).



### 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.

## 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.

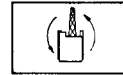


### Drum clutches

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<sup>2</sup>). Optional third drum 20" (0.51 m) diameter, 5" (0.13 m) face width; effective lining area 215 square inches (1 387 cm<sup>2</sup>).

*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.



### 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

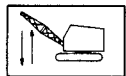
Speed-o-Matic® power hydraulic two-shoe clutches. 30" (0.76 m) diameter, 6½" (0.15 m) face width; lined shoes.

*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 sq. in. (1 039 cm<sup>2</sup>).

GENERAL INFORMATION ONLY

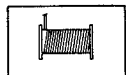
**Swing lock** — Mechanically controlled pawl engages external teeth of turntable bearing swing (ring) gear.

**Maximum swing speed** — 3.20 r.p.m.



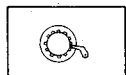
**Boom hoist/  
lowering system**

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.



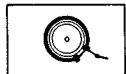
**Boomhoist drum  
locking pawl**

Operator controlled; mechanically applied and released.



**Boom hoist/  
lowering clutches**

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 cm<sup>2</sup>).

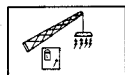
**Boomhoist limiting device** — Provided to restrict hoisting boom beyond recommended minimum radius; located on exterior right hand side of operator's cab.



**Electrical system**

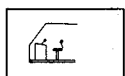
Battery, 12 volt, 225 ampere hour; either one or two batteries depending on engine. *Optional:* battery lighting system, including two sealed beam automotive type adjustable headlights located on cab front roof, one interior cab light and automotive type wiring. *Optional:* additional 50 watt sealed 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.



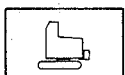
**Magnet generator/  
control package**

*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.



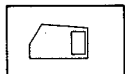
**Operator's cab**

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.



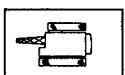
**Elevated operator's cab**

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



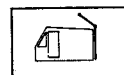
**Machinery cab**

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.



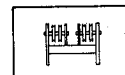
**Catwalks**

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.



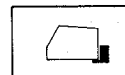
**Gantry**

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



**Gantry ball**

Mounted to gantry headshaft. Contains four 12" (0.30 m) root diameter sheaves mounted on bronze bushings for 10-part boomhoist wire rope reeving; six sheaves for 14-part boomhoist wire rope reeving with boom live mast.

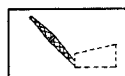


**Counterweight**

Removable; held in position by "T" bolts. *Standard:* "A" counterweight — 25,000 lbs. (11 340 kg). *Optional* "AB" counterweight — 52,500 lbs. (23 814 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.

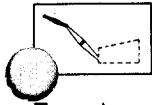
Base section — 25' (7.62 m) long; boomfeet 2¾" (69.85 mm) wide on 54½" (1.37 m) centers.

**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**

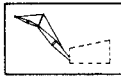
Two-piece basic jib 30' (9.14 m) long; 36" (0.91 m) wide, 30" (0.76 m) deep at connections. Alloy steel tubular chords 2 1/4" (57.15 mm) outside diameter.

*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).

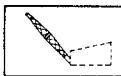
*Jib connections* — In-line pin connections.

*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' 7 5/8" (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**

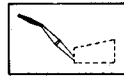
Two-piece basic boom 50' (15.24 m) long with open throat top section; 48" (1.22 m) wide, 48" (1.22 m) deep at connections. Alloy steel chord angles 4" x 4" x 3/8" (101.60 x 101.60 x 9.53 mm).

*Base section* — 25' (7.62 m) long; boomfeet 2 3/4" (77.85 mm) wide on 54 1/2" (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, 2 1/2" x 2 1/2" 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 15 7/8" (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.

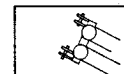
## Items applicable to both tubular or angle booms and jibs



**Boom stops**

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

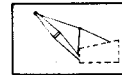
*Boom stop warning indicator* — Mounts on boom base section; visually warns operator that boom is near minimum radius and boom stops are approaching seating condition. When boom stop disengages, indicator is spring released to original position.



**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 without boom live mast; seven sheaves required for 14-part boomhoist reeving for use with 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' (19.28 m) through 140' (42.67 m) spreader cannot be used with jib.



**Boom live mast**

Welded plate/tube construction. 30' (9.14 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 60' (18.29 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 6 1/2" (0.15 m) root diameter sheaves, mounted on bronze bushings, grooved for 3/4" (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 for angle boom; five 21" (0.53 m) root diameter head sheaves for tubular boom; clamshell or dragline: two 26 1/4" (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.

**GENERAL INFORMATION ONLY**

**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 210' (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).

**Boom carrying equipment** — For carrying boom in horizontal position with live mast at approximate 15' (4.57 m) overall clearance height from ground. May be used with tubular booms 50' through 120' (15.24 through 36.58 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 7' 6" (2.29 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.

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

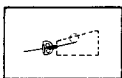
**Jib staylines** — Back staylines attached between top of jib mast and base of boom top section on tubular boom. Back staylines attached between top of jib mast and peak of jib.

## Auxiliary equipment



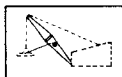
**Boom angle indicator**

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 1¼ 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 1¼ 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.

**GENERAL INFORMATION ONLY**



# Link-Belt® LS-338 Performance Specifications

## Boom live mast — lifting capacities when used as short boom ①

Boom live mast radius		Upper with or without counterweight	
Feet	meters	Pounds	kilograms
13 ②	3.96	47,000	21 319
15	4.57	47,000	21 319
20	6.10	47,000	21 319
25	7.62	30,000	13 609
28	8.53	23,000	10 433

① Boom live mast stops must be in proper working condition and operative. Use of live mast as short boom is intended for machine assembly or disassembly only. It should not be used for general crane service. 4-parts 7/8" (22 mm) diameter Type "N" wire rope are required.

② Live mast must never be operated at less than 13' (3.96 m) radius.

## Wire rope and rope drum data

Main load hoist wire rope length — for angle ① and tubular ② open throat booms using 7/8" (22 mm) diameter wire rope

Parts of line	Boom lengths															
	50' (15.24 m)		60' (18.29 m)		70' (21.34 m)		80' (24.38 m)		90' (27.43 m)		100' (30.48 m)		110' (33.53 m)		120' (36.58 m)	
	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters
1	120	36.58	140	42.67	160	48.77	180	54.86	200	60.96	220	67.06	240	73.15	260	79.25
2	180	54.86	210	64.01	240	73.15	270	82.30	300	91.44	330	100.58	360	109.73	390	118.87
3	240	73.15	280	85.34	320	97.54	360	109.73	400	121.92	440	134.11	480	146.30	520	158.50
4	300	91.44	350	106.68	400	121.92	450	137.16	500	152.40	550	167.64	600	182.88	650	198.12
5	360	109.73	420	128.02	480	146.30	540	164.59	600	182.88	660	201.17	720	219.46	780	237.74
6	420	128.02	490	149.35	560	170.69	630	192.02	700	213.36	770	234.70	840	256.03	910	277.37
7	480	146.30	560	170.69	640	195.07	720	219.46	800	243.84	880	268.22	960	292.60	1,040	316.99
8	540	164.59	630	192.02	720	219.46	810	246.89	900	274.32	990	301.75	1,080	329.18	1,170	356.62
9 ③	600	182.88	700	213.36	800	243.84	900	274.32	1,000	304.80	1,100	335.28	1,200	365.76	1,300	396.24
10 ③	660	201.17	770	234.70	880	268.22	990	301.75	1,100	335.28	1,210	368.80	1,320	402.34	1,430	435.86

Parts of line	Boom lengths															
	130' (39.62 m)		140' (42.67 m)		150' (45.72 m)		160' (48.77 m) ①		170' (51.82 m) ①		180' (54.86 m) ①		190' (57.91 m) ①		200' (60.96 m) ①	
	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters
1	280	85.34	300	91.44	320	97.54	340	103.63	360	109.73	380	115.82	400	121.92	420	128.02
2	420	128.02	450	137.16	480	146.30	510	155.45	540	164.59	570	173.74	600	182.88	630	192.02
3	560	170.69	600	182.88	640	195.07	680	207.26	720	219.46	760	231.65	800	243.84	840	256.03
4	700	213.36	750	228.60	800	243.84	850	259.08	900	274.32	950	289.56	1,000	304.80	1,050	320.04
5	840	256.03	900	274.32	960	292.61	1,020	310.90	1,080	329.18	1,140	347.47	1,200	365.76	1,260	384.05
6	980	298.70	1,050	320.04	1,120	341.38	1,190	362.71	1,260	384.05	1,330	405.38	1,400	426.72	1,470	448.06
7	1,120	341.38	1,200	365.76	1,280	390.14	1,360	414.53	1,440	438.91	1,520	463.30	1,600	487.68	1,680	512.06
8	1,260	384.05	1,350	411.48	1,440	438.91	1,530	466.34	1,620	493.78	1,710	521.21	1,800	548.64	1,890	576.07
9 ③	1,400	426.72	1,500	457.20	1,600	487.68	1,700	518.16	1,800	548.64	1,900	579.12				
10 ③	1,540	469.39	1,650	502.92	1,760	536.45	1,870	569.98	1,980	603.50						

① Open throat angle boom lengths: 50' through 150' (15.24 through 45.72 m).

② Open throat tubular boom lengths: 50' through 200' (15.24 through 60.96 m).

③ For tubular boom only.

**GENERAL INFORMATION ONLY**



# LS-338 performance specifications

GENERAL INFORMATION ONLY

## Wire rope and rope drum data — (continued)

### Jib load hoist rope lengths (whipline) — using 7/8" (22 mm) diameter wire rope

Jib length	Parts of line	Boom lengths															
		50' (15.24 m)		60' (18.29 m)		70' (21.33 m)		80' (24.38 m)		90' (27.43 m)		100' (30.48 m)		110' (33.53 m)		120' (36.58 m)	
		Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters
20' (6.10 m)	1	160	48.77	180	54.86	200	60.96	220	67.06	240	73.15	260	79.25	280	85.34	300	91.44
	2	235	71.63	265	80.77	295	89.92	325	99.06	355	108.20	385	117.35	415	126.49	445	135.64
30' (9.14 m)	1	180	54.86	200	60.96	220	67.06	240	73.15	260	79.25	280	85.34	300	91.44	320	97.54
	2	265	80.77	295	89.91	325	99.06	355	108.20	385	117.35	415	126.49	445	135.64	475	144.78
40' (12.19 m)	1	200	60.96	220	67.06	240	73.15	260	79.25	280	85.34	300	91.44	320	97.54	340	103.63
	2	295	89.92	325	99.06	355	108.20	385	117.35	415	126.49	445	135.64	475	144.78	505	153.92
50' (15.24 m)	1	220	67.06	240	73.15	260	79.25	280	85.34	300	91.44	320	97.54	340	103.63	360	109.73
	2	325	99.06	355	108.20	385	117.35	415	126.49	445	135.64	475	144.78	505	153.92	535	163.07
60' (18.29 m)	1	240	73.15	260	79.25	280	85.34	300	91.44	320	97.54	340	103.63	360	109.73	380	115.82
	2	355	108.20	385	117.35	415	126.49	445	135.64	475	144.78	505	153.92	535	163.07	565	172.21

Jib length	Parts of line	Boom lengths													
		130' (39.62 m)		140' (42.67 m)		150' (45.72 m)		160' (48.77 m)ⓐ		170' (51.82 m)ⓐ		180' (54.86 m)ⓐ		190' (57.91 m)ⓐ	
		Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters
20' (6.10 m)	1	320	97.54	340	103.63	360	109.73	Not applicable							
	2	475	144.78	505	153.92	535	163.07	Not applicable							
30' (9.14 m)	1	340	103.63	360	109.73	380	115.82	400	121.92	420	128.02	440	134.11	460	140.21
	2	505	153.92	535	163.07	565	172.21	595	181.36	625	190.50	655	199.64	685	208.79
40' (12.19 m)	1	360	109.73	380	115.82	400	121.92	420	128.02	440	134.11	460	140.21	480	146.30
	2	535	163.07	565	172.21	595	181.36	625	190.50	655	199.64	685	208.79	715	217.93
50' (15.24 m)	1	380	115.82	400	121.92	420	128.02	440	134.11	460	140.21	480	146.30	500	152.40
	2	565	172.21	595	181.36	625	190.50	655	199.64	685	208.79	715	217.93	745	227.08
60' (18.29 m)	1	400	121.92	420	128.02	440	134.11	460	140.21	480	146.30	500	152.40	520	158.50
	2	595	181.36	625	190.50	655	199.64	685	208.79	715	217.93	745	227.08	775	236.22

ⓐ Angle boom only

ⓑ Tubular boom only

ⓒ Maximum angle boom length on which jib can be mounted is 150' (45.72 m); 160' through 190' (48.77 through 57.91 m) boom lengths apply only to tubular boom.

## Drum wire rope capacities

Wire rope layer	Front or rear drum — 20' (0.51 m) root diameter smooth lagging								Boomhoist drum — 11 1/4" (0.29 m) root diameter smooth lagging			
	7/8" (22 mm) wire rope				1" (26 mm) wire rope				3/4" (19 mm) wire rope			
	Rope per layer		Total wire rope		Rope per layer		Total wire rope		Rope per layer		Total wire rope	
	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters
1	119	36.27	119	36.27	105	32.00	105	32.00	35	10.67	35	10.67
2	135	41.15	254	77.42	121	36.88	226	68.88	42	12.80	77	23.47
3	145	44.20	399	121.62	131	39.93	357	108.81	47	14.33	124	37.80
4	156	47.55	555	169.16	142	43.28	499	152.10	52	15.85	176	53.64
5	166	50.60	721	219.76	152	46.33	651	198.42	56	17.07	232	70.71
6	177	53.95	898	273.71	162	49.38	813	247.80	62	18.90	294	89.61
7	187	57.00	1,085	330.17	173	52.73	986	300.53				
8	198	60.35	1,283	391.06								

Wire rope layer	Front or rear drum — 20' (0.51 m) root diameter grooved lagging				Front drum (inhaul) — 18" (0.46 m) root diameter grooved lagging				Third drum — 13 1/4" (0.34 m) root diameter smooth lagging			
	7/8" (22 mm) wire rope				1" (26 mm) wire rope				7/8" (22 mm) wire rope			
	Rope per layer		Total wire rope		Rope per layer		Total wire rope		Rope per layer		Total wire rope	
	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters
1	108	32.92	108	32.92	88	26.82	88	26.82	81	24.69	81	24.69
2	135	41.15	243	74.07	110	33.53	198	60.35	95	28.96	176	53.64
3	145	44.20	388	118.26	120	36.58	318	96.93	105	32.00	281	85.65
4	156	47.55	544	165.81	131	39.93	449	136.86				
5	166	50.60	710	216.41	141	42.98	590	179.83				
6	177	53.95	887	270.36	152	46.33	742	226.16				
7	187	57.00	1,074	327.36	162	49.38	904	275.54				
8	198	60.35	1,272	387.71	173	52.73	1,077	328.27				

# LS-338 performance specifications

GENERAL INFORMATION ONLY

## Wire rope and rope drum data — (continued)

### Clamshell or dragline wire rope lengths using one part of line

Attachment	Function	Boom lengths											
		50' (15.24 m)		60' (18.29 m)		65' (19.81 m)		70' (21.34 m)		75' (22.86 m)		80' (24.38 m)	
		Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters
Clamshell	Holding	130	39.62	150	45.72	160	48.77	170	51.82	180	54.86	190	57.91
		180	54.86	200	60.96	210	64.01	220	67.06	230	70.10	240	73.15
Dragline	Hoist	130	39.62	150	45.72	160	48.77	170	51.82	180	54.86	190	57.91
		75	22.86	85	25.90	90	27.43	95	28.96	100	30.48	105	32.00

Boom hoist wire rope lengths — with boom live mast: 640' (195.07 m)  
 — without boom live mast: 350' (106.68 m)

### Rope size and type

Wire rope application	Size and type used
Boomhoist	¾" (19 mm) diameter, Type "W"
Main load hoist	¾" (22 mm) diameter, Type "N"
Jib load hoist (1-part)	¾" (22 mm) diameter, Type "P"
Jib load hoist (2-part)	¾" (22 mm) diameter, Type "N"
Third drum	¾" (22 mm) diameter, Type "N"
Clamshell holding (hoist) or closing	¾" (22 mm) diameter, Type "M"
Dragline hoist	¾" (22 mm) diameter, Type "D"
Dragline inhaul	1" (26 mm) diameter, Type "T"
Boom pendants	
— for boom with live mast	1¼" (32 mm) diameter, Type "N"
— for boom without live mast	1" (26 mm) diameter, Type "N"
Boom midpoint suspension pendants	¾" (22 mm) diameter, Type "N"
Jib frontstay line	¾" (19 mm) diameter, Type "N"
Jib backstay line	¾" (19 mm) diameter, Type "N"

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 "M" — 6 x 25 (6 x 19 class), filler wire, extra improved plow steel, preformed, independent wire rope center, right lay, lang 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" — 13 x 7 non-rotating, extra improved plow steel, preformed, wire strand core.
Type "T" — 6 x 30 flattened strand, extra improved plow steel, preformed, independent wire rope center, right lay, lang lay.
Type "W" — 6 x 26 (6 x 19 class), extra improved plow steel, preformed independent wire rope center, right lay, alternate lay.

Available line speed and line pull<sup>①</sup> — based on Cummins N855-P235<sup>②</sup> ③ diesel engine with three stage twin disc torque converter developing maximum net horsepower as defined by P.C.S.A. Standard No. 1.

Attachment	Front or rear drum								Third drum					
	Root diameter	Wire rope diameter		Line speed — first layer		Line pull — first layer		Root diameter	Wire rope diameter		Line speed — first layer		Line pull — first layer	
		Inches	mm	Fp.m.	m/min	Pounds	kilograms		Inches	mm	Fp.m.	m/min	Pounds	kilograms
Crane, clamshell, or dragline hoist	20" (0.51 m)	¾"	22	166	50.60	27,300	12 383	13¼" (0.34 m)	¾"	22	168	51.21	25,300	11 476
Dragline inhaul	18" (0.46 m)	1"	26	167	50.90	27,100	12 293							

Permissible line speed and pull<sup>①</sup> — based on Type "N" wire rope strength, single part line.

Attachment	Front or rear drum								Third drum					
	Root diameter	Wire rope diameter		Line speed — first layer		Line pull — first layer		Root diameter	Wire rope diameter		Line speed — first layer		Line pull — first layer	
		Inches	mm	Fp.m.	m/min	Pounds	kilograms		Inches	mm	Fp.m.	m/min	Pounds	kilograms
Crane, clamshell, or dragline hoist	20" (0.51 m)	¾"	22	166	50.60	22,700	10 297	13¼" (0.34 m)	¾"	22	168	51.21	22,700	10 297
Dragline inhaul	18" (0.46 m)	1"	26	167	50.90	27,100*	12 293*							

\*Limited by engine capabilities

① Maximum permissible load on single part of line: 22,700 lbs. (10 297 kg) for ¾" (22 mm) diameter Type "N" wire rope; 14,800 lbs. (6 713 kg) for ¾" (22 mm) Type "P" wire rope; 29,600 lbs. (13 427 kg) for 1" (26 mm) diameter Type "N" wire rope.

② Cummins N855-P235 engine not recommended for duty cycle purposes.

③ Data applicable only to Cummins N855-P235 engine package. If required, similar data for other engine packages available from Sales Office.

## LS-338 performance specifications

**Load hoisting performance** ① — line speeds are maximum for full throttle operation (2,100 r.p.m. full load speed) with Cummins N855-P235 diesel engine equipped with three stage twin disc torque converter with optional tail shaft governor override.

Single line load ②		Front or rear drum — 20" (0.51 m) root diameter smooth or grooved laggings using 7/8" (22 mm) diameter wire rope											
		Line speed											
		First layer rope				Fourth layer rope				Eighth layer rope			
		Standard		High speed ③		Standard		High speed ③		Standard		High speed ③	
Pounds	kilograms	F.p.m.	m/min	F.p.m.	m/min	F.p.m.	m/min	F.p.m.	m/min	F.p.m.	m/min	F.p.m.	m/min
5,000	2 268	267	81.38	428	130.45	329	100.28	516	157.28	407	124.05	618	188.37
10,000	4 536	248	75.59	360	109.73	297	90.53	403	122.83	353	107.59	431	131.37
15,000	6 804	226	68.88	284	86.56	261	79.55	292	89.00	291	88.70	286	87.17
20,000	9 072	202	61.57	219	66.75	222	67.67	213	64.92	232	70.71	199	60.66
25,000	11 340	178	54.25	170	51.82	185	56.39	160	48.77	185	56.39	140	42.67
30,000	13 608	154	46.94	135	41.15	155	47.24	121	36.88	149	45.42	95	28.96

Single line load ②		Third drum — 13 1/4" (0.34 m) root diameter smooth lagging using 7/8" (22 mm) diameter wire rope					
		Line speed					
		First layer rope		Second layer rope		Third layer rope	
		Pounds	kilograms	F.p.m.	m/min	F.p.m.	m/min
5,000	2 268	269	81.99	300	91.44	330	100.58
10,000	4 536	248	75.59	272	82.91	295	89.92
15,000	6 804	224	68.28	241	73.46	255	77.72
20,000	9 072	198	60.35	207	63.09		

### GENERAL INFORMATION ONLY

- ① Data applicable only to Cummins N855-P235 engine package. If required, similar data for other engine packages available from Sales Office.
- ② Maximum permissible load on single part of line: 22,700 lbs. (10 297 kg) for 7/8" (22 mm) diameter Type "N" wire rope; 14,800 lbs. (6 713 kg) for 7/8" (22 mm) Type "P" wire rope; 29,600 lbs. (13 427 kg) for 1" (26 mm) diameter Type "N" wire rope.
- ③ Machine equipped with optional high speed planetary drum drive units.

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



**FMC Corporation Cable Crane and Excavator Division Cedar Rapids Iowa 52406**

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

# Link-Belt® LS-338 capacities

PCSA Class 12-412

## — Lifting crane/dragline/clamshell/magnet/wood grapple

**Boom** — tubular: 60" (1.52 m) wide, 54" (1.37 m) deep with open throat top section; with or without boom live mast, and with boom midpoint suspension pendants as required.

**Jib** — tubular: 30" x 36" (0.76 m x 0.91 m).

**Counterweights** — Refer to charts below.

**Mounting** — crawler: 13' 6" (4.11 m) gauge, 20' 0" (6.10 m) overall length.

Counterweights			
"A"		"AB"	
Pounds	kilograms	Pounds	kilograms
25,000	11 340	52,500	23 814

Maximum tubular boom or boom + jib machine can lift off ground ① unassisted, without load.

Standard machine equipped with appropriate counterweights	Counterweight "A"				Counterweight "AB" ②			
	Boom		Boom + jib		Boom		Boom + jib	
	Feet	meters	Feet	meters	Feet	meters	Feet	meters
Over ends	180	54.66	140 + 60	42.67 + 18.29	200	60.96	180 + 60	54.86 + 18.29
Over sides	160	48.77	130 + 60	39.62 + 18.29	200	60.96	170 + 60	51.82 + 18.29

① With boom live mast and 1¼" (32 mm) diameter pendants, and hook blocks on ground.

Maximum tubular boom or boom + jib machine can lift off ground ① unassisted and travel with, without load. Based on boom horizontal ② and minimum travel speed on firm, level supporting surface.

Standard machine equipped with appropriate counterweights	Counterweight "A"				Counterweight "AB" ②			
	Boom		Boom + jib		Boom		Boom + jib	
	Feet	meters	Feet	meters	Feet	meters	Feet	meters
Over ends	140	42.67	100 + 60	30.48 + 18.29	170	51.82	130 + 60	39.62 + 18.29
Over sides	120	36.58	90 + 60	27.43 + 18.29	150	45.72	120 + 60	36.58 + 18.29

① With boom live mast and 1¼" (32 mm) diameter pendants, and hook blocks on ground.

② Hook block carried at boom and jib points. Based on 100-ton (90.76 metric ton), 5-sheave, 2,425 lbs. (1 100 kg) hook block and 15-ton (13.6 metric ton), single sheave, 435 lbs. (197 kg) ball with swivel hook.

Caution: This material is supplied for reference only. Operator must refer to in-cab capacity plate to determine allowable machine lifting capacities and operating procedures.

**GENERAL INFORMATION ONLY**

# LS-338 lifting crane capacities

Refer to Notes page 3.

Counterweights — Refer to charts page 1.

Mounting — crawler; 11' 0" (3.35 m) extended gauge, 20' 0" (6.10 m) overall length.

Boom — tubular; 60" (1.52 m) wide, 54" (1.37 m) deep with open throat top section; with or without boom live mast and with boom midpoint suspension pendants as required.

Boom				Side Frames Extended				Side Frames Extended			
Length	Radius	Angle	Boom point height	With boom live mast and 1 1/4" (32 mm) diameter boom pendants.		Without boom live mast and with 1 1/2" (38 mm) diameter boom pendants.		Counterweight "A" Only		Counterweight "A" Only	
				Lbs.	kg	Lbs.	kg	Lbs.	kg	Lbs.	kg
120' (36.58 m)	25	7.62	124' 2"	37.85	55.1	24.9	78.8	35.7	124' 2"	37.85	55.1
	30	9.14	123' 2"	37.54	42.0	19.0	60.6	27.4	123' 2"	37.54	42.0
	40	12.19	120' 7"	36.75	27.7	12.5	40.7	13.6	120' 7"	36.75	27.7
	50	15.24	116' 11"	35.64	20.2	9.1	30.0	10.6	116' 11"	35.64	20.2
	60	18.29	112' 4"	34.24	15.4	6.9	23.4	8.5	112' 4"	34.24	15.4
	70	21.34	106' 7"	32.49	12.1	5.4	18.9	6.5	106' 7"	32.49	12.1
	80	24.38	90' 2"	27.48	8.0	3.6	13.1	5.9	90' 2"	27.48	8.0
	90	27.43	78' 8"	23.98	6.6	2.9	11.1	5.0	78' 8"	23.98	6.6
	100	30.48	63' 3"	19.28	5.4	2.4	9.5	4.3	63' 3"	19.28	5.4
	110	33.53	48' 3"	15.28	4.5	2.0	8.2	3.7	48' 3"	15.28	4.5
	120	36.58	15.9	11.81	4.5	2.0	8.2	3.7	15.9	11.81	4.5
	140' (42.67 m)	30	9.14	143' 7"	43.76	41.7	18.9	60.3	27.3	143' 7"	43.76
40		12.19	141' 4"	43.08	27.3	12.3	40.3	18.2	141' 4"	43.08	27.3
50		15.24	138' 4"	42.16	19.8	8.9	29.7	13.4	138' 4"	42.16	19.8
60		18.29	134' 5"	40.97	15.0	6.8	23.1	10.4	134' 5"	40.97	15.0
70		21.34	129' 8"	39.52	11.8	5.3	18.5	8.3	129' 8"	39.52	11.8
80		24.38	123' 10"	37.74	9.4	4.2	15.3	6.9	123' 10"	37.74	9.4
90		27.43	116' 10"	35.61	7.6	3.4	12.8	5.8	116' 10"	35.61	7.6
100		30.48	108' 4"	33.02	6.2	2.8	10.8	4.8	108' 4"	33.02	6.2
110		33.53	98' 1"	29.89	5.0	2.2	9.2	4.1	98' 1"	29.89	5.0
120		36.58	85' 2"	25.96	4.1	1.8	7.9	3.5	85' 2"	25.96	4.1
130		39.62	68' 2"	20.78	3.3	1.4	6.8	3.0	68' 2"	20.78	3.3
140		42.67	14.7	12.62	2.6	1.1	5.8	2.6	14.7	12.62	2.6
150' (45.72 m)	30	9.14	153' 9"	46.86	41.6	18.8	60.1	27.2	153' 9"	46.86	41.6
	40	12.19	151' 8"	46.23	27.2	12.3	40.2	18.2	151' 8"	46.23	27.2
	50	15.24	148' 10"	45.36	19.6	8.8	29.5	13.3	148' 10"	45.36	19.6
	60	18.29	145' 4"	44.30	14.8	6.7	22.9	10.3	145' 4"	44.30	14.8
	70	21.34	140' 10"	42.92	11.6	5.2	18.4	8.3	140' 10"	42.92	11.6
	80	24.38	135' 7"	41.32	9.2	4.1	15.1	6.8	135' 7"	41.32	9.2
	90	27.43	129' 3"	39.40	7.4	3.3	12.6	5.7	129' 3"	39.40	7.4
	100	30.48	121' 8"	37.09	6.0	2.7	10.6	4.8	121' 8"	37.09	6.0
	110	33.53	112' 8"	34.34	4.8	2.1	9.0	4.0	112' 8"	34.34	4.8
	120	36.58	99' 7"	31.01	3.9	1.7	7.7	3.4	99' 7"	31.01	3.9
	130	39.62	88' 2"	26.87	3.1	1.4	6.6	2.9	88' 2"	26.87	3.1
	140	42.67	25.5	21.46	2.4	1.0	5.7	2.5	25.5	21.46	2.4
150	45.72	14.2	13.03	1.9	0.8	4.8	2.1	14.2	13.03	1.9	
170' (51.82 m)	35	10.67	173' 2"	52.78	32.7	14.8	48.0	21.7	173' 2"	52.78	32.7
	40	12.19	172' 2"	52.48	26.8	12.1	39.8	18.0	172' 2"	52.48	26.8
	50	15.24	169' 9"	51.74	19.2	8.7	29.2	13.2	169' 9"	51.74	19.2
	60	18.29	166' 8"	50.80	14.4	6.5	22.5	10.2	166' 8"	50.80	14.4
	70	21.34	162' 10"	49.63	11.1	5.0	18.0	8.1	162' 10"	49.63	11.1
	80	24.38	158' 3"	48.23	8.8	3.9	14.7	6.6	158' 3"	48.23	8.8
	90	27.43	152' 10"	46.58	6.9	3.1	12.2	5.5	152' 10"	46.58	6.9
	100	30.48	136' 8"	44.71	5.5	2.4	10.2	4.6	136' 8"	44.71	5.5

Not applicable

(Continued)

Boom				Side Frames Extended				Side Frames Extended				
Length	Radius	Angle	Boom point height	With boom live mast and 1 1/4" (32 mm) diameter boom pendants.		Without boom live mast and with 1 1/2" (38 mm) diameter boom pendants.		Counterweight "A" Only		Counterweight "A" Only		
				Lbs.	kg	Lbs.	kg	Lbs.	kg	Lbs.	kg	
50' (15.24 m)	12	3.66	55' 4"	16.86	200.0	90.7	200.0	90.7	200.0	90.7	90.7	
	13	3.96	55' 3"	16.84	175.8	79.7	200.0	90.7	200.0	90.7	77.9	
	14	4.27	79.1	16.79	149.8	67.9	200.0	73.8	113.0	51.2	51.2	
	15	4.57	78.0	54' 10"	16.71	130.4	59.1	183.7	83.3	127.6	57.8	
	16	4.88	76.8	54' 7"	16.64	115.3	52.3	162.7	73.8	113.0	51.2	
	17	5.18	75.6	54' 3"	16.56	103.3	46.8	145.9	66.1	101.2	45.9	
	18	5.49	74.4	54' 1"	16.48	93.5	42.4	132.2	59.7	91.6	41.5	
	19	5.79	73.2	53' 9"	16.38	85.4	38.7	120.8	54.9	83.7	37.9	
	20	6.10	72.0	53' 5"	16.28	78.4	35.5	111.1	50.3	77.0	34.9	
	30	9.14	59.4	48' 11"	14.91	42.5	19.2	60.9	27.6	42.0	19.0	
	40	12.19	44.9	41' 3"	12.57	28.3	12.8	41.2	18.6	23.2	12.7	
	50	15.24	24.7	26' 10"	8.18	20.8	9.4	30.6	13.8	20.9	9.4	
70' (21.34 m)	16	4.98	80.6	22.84	115.7	52.4	163.2	74.0	112.8	51.1	51.1	
	17	5.18	79.8	74' 10"	103.7	47.0	146.3	66.3	101.0	45.8	45.8	
	18	5.49	78.9	74' 8"	22.76	93.8	42.5	132.6	60.1	91.4	41.4	
	19	5.79	78.1	74' 5"	22.68	85.6	38.8	121.1	54.9	83.4	37.8	
	20	6.10	77.3	74' 2"	22.61	78.7	35.6	111.4	50.5	76.7	34.7	
	30	9.14	68.7	71' 2"	21.69	42.6	19.3	61.0	27.6	41.6	18.8	
	40	12.19	59.6	66' 3"	20.19	28.4	12.8	41.0	18.6	27.8	12.6	
	50	15.24	49.5	59' 2"	18.04	20.8	9.4	30.7	13.9	20.4	9.2	
	60	18.29	37.7	42' 8"	13.01	16.1	7.3	24.0	10.8	15.9	7.2	
	70	21.34	20.8	30' 10"	9.40	12.8	5.8	19.5	8.8	12.7	5.7	
	90' (27.43 m)	19	5.79	80.8	28.88	85.6	38.8	121.1	54.9	91.1	41.3	41.3
		20	6.10	80.1	28.83	78.6	35.6	111.4	50.5	83.1	37.6	37.6
30		9.14	73.6	92' 3"	28.12	42.4	19.2	60.9	27.6	41.2	18.6	
40		12.19	66.8	88' 8"	27.03	28.2	12.7	41.1	18.6	27.3	12.3	
50		15.24	59.7	83' 8"	25.50	20.6	9.3	30.5	13.8	20.0	9.0	
60		18.29	52.0	78' 10"	23.42	15.9	7.2	23.9	10.8	15.4	6.9	
70		21.34	43.4	67' 9"	20.65	12.6	5.7	19.3	8.7	12.2	5.5	
80		24.38	33.1	55' 1"	16.79	10.2	4.6	16.0	7.2	10.0	4.5	
90		27.43	18.4	34' 3"	10.44	8.4	3.8	13.5	6.1	8.2	3.7	
100' (30.48 m)		20	6.10	104' 9"	31.93	78.5	35.6	111.4	50.5	76.2	34.5	34.5
		30	9.14	75.3	102' 8"	31.29	42.3	19.1	60.8	27.5	41.0	18.5
		40	12.19	69.3	99' 5"	30.30	28.0	12.7	41.0	18.5	27.1	12.2
	50	15.24	63.0	95' 1"	28.98	20.5	9.2	30.3	13.7	19.8	8.9	
	60	18.29	56.3	89' 2"	27.18	15.7	7.1	23.7	20.7	15.1	6.8	
	70	21.34	49.1	81' 7"	24.87	12.5	5.6	19.2	8.7	12.0	5.4	
	80	24.38	41.0	71' 7"	21.82	10.1	4.5	15.9	7.2	9.7	4.4	
	90	27.43	31.3	57' 11"	17.65	8.3	3.7	13.4	6.0	8.0	3.6	
	100	30.48	17.4	35' 10"	10.92	6.9	3.1	11.4	5.1	6.6	2.9	

Measured vertically from center of boom head sheave to ground. Capacities shown in thousands of pounds and kilograms (kips).

GENERAL INFORMATION ONLY

# LS-338 lifting crane capacities

Refer to Notes below.

**Boom** — tubular, 60" (1.52 m) wide, 54" (1.37 m) deep with open throat top section; with or without boom live mast and with boom midpoint suspension pendants as required.

**Mounting** — crawler, 11' 0" (3.35 m) extended gauge, 20' 0" (6.10 m) overall length.

## 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 75% of minimum tipping loads unless marked with an asterisk (\*).
- Asterisk indicates capacities are 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, 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.
- Lifting capacities shown are based on machine equipped as follows:
  - Boom live mast and 1 1/4" (32 mm) diameter pendants for all boom lengths.
  - Without boom live mast but with 1 1/2" (38 mm) diameter pendants — for booms up to and including 100' (30.48 m) long.
  - 1 1/4" (32 mm) diameter pendants must not be used unless machine is equipped with a boom live mast.
- When LS-338 is equipped with boom live mast and 1 1/4" (32 mm) diameter pendants instead of 1 1/2" (38 mm) diameter pendants, reduce all lifting capacities shown 400 lbs. (181 kg).
- For lifting 200,000 lbs. (990 720 kg) with 1/4" (22 mm) diameter rope, 10 parts of 1/4" (22 mm) Type "N" hoist rope are required. Check parts of line required for all capacities.
- Least stable position is over the side.
- These capacities apply only to the machine as originally manufactured and normally equipped by FMC Corporation, Construction Equipment Group.
- Boom live mast is required for all main boom lengths exceeding 100' (30.48 m) and for boom exceeding 50' (15.24 m) when equipped with jib.
- Boom midpoint suspension pendants are required for all tubular boom lengths exceeding 150' (45.72 m).
- When using boom live mast as a short boom, maximum lifting capacity of the boom live mast is 47,000 lbs. (21 318 kg) at 13' (3.96 m) minimum radius, 23,000 lbs. (10 434 kg) at 28' 10" (8.53 m) maximum radius.
  - For lifting 47,000 lbs. (21 318 kg) on boom live mast with 3/4" (19 mm) diameter wire rope, 4 parts of 3/4" (19 mm) diameter Type "N" wire rope are required.
- Note: Use of live mast as a short boom is intended for machine assembly or disassembly only. It should not be used for general crane service.
- Main boom length, without jib, must not exceed 200' (60.96 m).
- Jib must not be mounted on boom longer than 190' (57.91 m). Maximum jib length permitted on 190' (47.91 m) main boom is 30' (9.14 m).
- Maximum boom/jib combination permitted — 180' (54.86 m) boom plus 60' (18.29 m) jib. Maximum jib length permitted — 60' (18.29 m).
- When handling loads on main load hoist line with jib mounted on boom, reduce rated boom lifting capacities as follows:
  - 30' (9.14 m) jib — 2,200 lbs. (998 kg)
  - 40' (12.19 m) jib — 2,540 lbs. (1 152 kg)
  - 50' (15.24 m) jib — 2,870 lbs. (1 302 kg)
  - 60' (18.29 m) jib — 3,200 lbs. (2 452 kg)

Length		Radius		Angle		Boom point height		Side Frames Extended				
		Fl.	m	Deg.	Fl.	m	With boom live mast and 1 1/4" (32 mm) diameter boom pendants.	Counter-weight "A"	Counter-weight "AB"	Without boom live mast and with 1 1/2" (38 mm) diameter boom pendants.	Counterweight "A" Only	
		Fl.	m	Deg.	Fl.	m	Lbs.	kg	Lbs.	kg	Lbs.	kg
170' (51.82 m)	40	33.53	51.7	139° 3'	42.44	4.4	19	8.6	39	17.7	42.44	19.2
	50	36.58	47.2	130° 9'	39.85	3.4	15	7.3	33	15.0	39.85	17.9
	60	39.62	42.5	120° 8'	36.78	2.7	12	6.2	28	12.7	36.78	16.7
	70	42.67	37.2	108° 8'	33.12	2.0	9	5.3	24	11.0	33.12	15.0
	80	45.72	31.2	94° 0'	28.65	1.4	6	4.5	20	9.1	28.65	12.7
	90	48.77	23.9	74° 9'	22.78	3.8	17	3.8	17	7.7	22.78	10.3
	100	51.82	13.3	45° 2'	13.77	3.1	14	3.1	14	6.3	13.77	6.1
	110	54.86	8.0	173° 6'	52.88	42.4*	19.2	8.6	39	17.7	42.4*	19.2
	120	57.91	7.3	172° 7'	52.60	39.5	17.9	8.8	40	18.1	39.5	17.9
	130	60.96	7.2	190° 4'	58.01	28.8	13.0	12.7	58.01	26.3	28.8	13.0
190' (57.91 m)	40	18.29	73.0	187° 8'	57.20	22.1	10.0	4.5	20	9.1	57.20	25.9
	50	21.34	68.9	184° 3'	56.16	17.6	7.9	6.4	29	13.2	56.16	25.5
	60	24.38	66.6	180° 3'	54.94	14.3	6.4	2.9	37	16.8	54.94	24.9
	70	27.43	63.3	175° 8'	53.54	11.8	5.3	2.2	45	20.4	53.54	24.3
	80	30.48	59.9	170° 3'	51.89	9.8	4.4	1.7	53	24.0	51.89	23.6
	90	33.53	56.3	164° 0'	49.99	8.2	3.7	1.5	61	27.7	49.99	22.8
	100	36.58	52.6	156° 10'	47.80	6.9	3.1	1.3	69	31.3	47.80	22.0
	110	39.62	48.7	149° 8'	45.31	5.8	2.6	1.1	77	34.9	45.31	21.2
	120	42.67	44.5	139° 2'	45.42	4.9	2.2	1.0	85	38.5	45.42	20.4
	130	45.72	40.1	128° 2'	39.07	4.1	1.8	0.9	93	42.1	39.07	19.6
200' (60.96 m)	40	51.82	29.5	99° 4'	30.28	2.2	0.9	0.7	101	45.7	30.28	18.8
	50	54.86	22.6	78° 10'	24.03	2.2	0.9	0.7	109	49.3	24.03	18.0
	60	57.91	12.6	47° 4'	14.43	1.7	0.7	0.6	117	52.9	14.43	17.2
	70	60.96	7.9	202° 9'	61.80	36.0*	16.3	7.4	125	56.5	61.80	16.3
	80	63.53	7.9	200° 8'	61.16	28.6	12.9	5.8	133	60.1	61.16	15.5
	90	66.09	7.3	198° 1'	60.37	21.9	9.9	4.5	141	63.7	60.37	14.7
	100	68.65	7.0	195° 0'	59.44	17.4	7.8	3.5	149	67.3	59.44	13.9
	110	71.21	67.8	191° 2'	58.27	14.1	6.3	2.8	157	70.9	58.27	13.1
	120	73.77	64.7	186° 8'	56.92	11.8	5.2	2.2	165	74.5	56.92	12.3
	130	76.33	61.5	181° 8'	55.37	9.6	4.3	1.8	173	78.1	55.37	11.5
200' (60.96 m)	40	33.53	56.2	175° 10'	53.59	8.0	3.6	3.0	181	81.7	53.59	10.7
	50	36.58	54.8	169° 3'	51.59	6.7	3.0	2.5	189	85.3	51.59	10.0
	60	39.62	51.2	161° 6'	49.28	5.6	2.5	2.1	197	88.9	49.28	9.3
	70	42.67	47.4	153° 1'	46.66	4.7	2.1	1.7	205	92.5	46.66	8.6
	80	45.72	43.4	143° 3'	43.66	3.9	1.7	1.4	213	96.1	43.66	7.9
	90	48.77	39.0	131° 9'	40.16	3.2	1.4	1.1	221	99.7	40.16	7.2
	100	51.82	34.2	118° 0'	36.07	2.6	1.1	0.9	229	103.3	36.07	6.5
	110	54.86	28.7	102° 0'	31.09	2.0	0.9	0.6	237	106.9	31.09	5.8
	120	57.91	22.0	80° 10'	24.64	1.5	0.6	0.4	245	110.5	24.64	5.1
	130	60.96	12.3	48° 6'	14.78	1.1	0.4	0.3	253	114.1	14.78	4.4

Not applicable

Not applicable

Measured vertically from center of boom head sheave to ground. Capacities shown in thousands of pounds and kilograms (Kips).

GENERAL INFORMATION ONLY

## LS-338 boom/jib working ranges

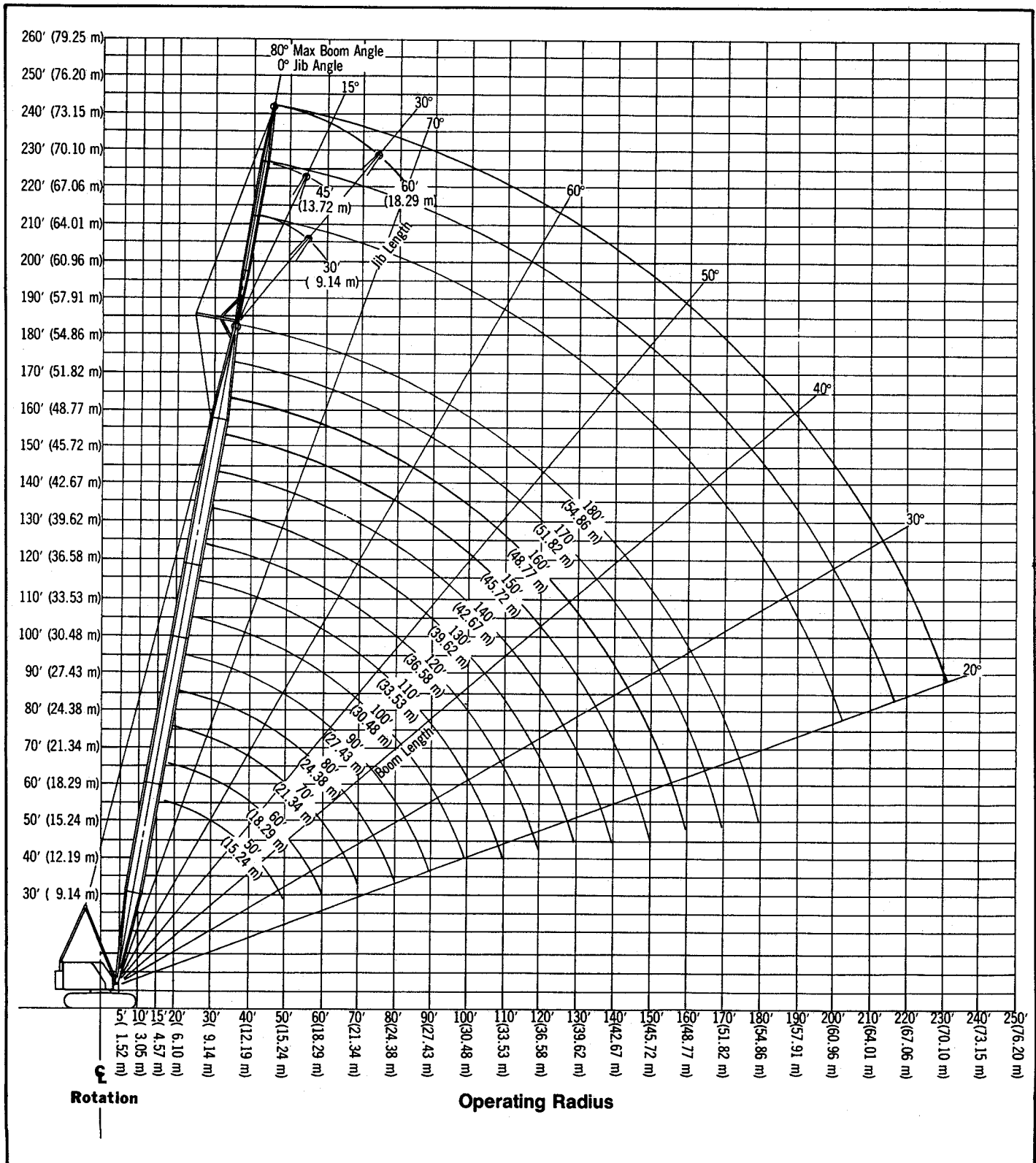
**Boom** — tubular: 60" (1.52 m) wide, 54" (1.37 m) deep with open throat top section; with or without boom live mast, and with boom midpoint suspension pendants as required.

**Jib** — tubular: 30" x 36" (0.76 m x 0.91 m).

**Counterweights** — 52,500 lbs. (23 814 kg) "AB" only.

**Mounting** — crawler: 13' 6" (4.11 m) gauge, 20' 0" (6.10 m) overall length.

**GENERAL INFORMATION ONLY**



## LS-338 dragline/clamshell/magnet/wood grapple capacities

Refer to Notes page 6.

**Boom** — tubular; 60" (1.53 m) wide, 54" (1.37 m) deep with **open throat** top section; with or without boom live mast and with boom midpoint suspension pendants as required.

**Mounting** — crawler; 11' 0" (3.35 m) extended gauge, 20' 0" (6.10 m) overall length.

**Counterweights** — Refer to charts page 1.

Boom		Side frames extended															
		With boom live mast and 1 1/4" (32 mm) diameter boom pendants.				Without boom live mast and with 1 1/2" (32 mm) diameter boom pendants											
Length	Radius Feet	Radius meters	Angle Degree	Boom point height <sup>Ⓞ</sup> Feet	Boom point height <sup>Ⓞ</sup> meters	Dragline		Clamshell & magnet		Wood grapple		Dragline		Clamshell & magnet		Wood grapple	
						Counterweight "A" Only Lbs.	kg	Counterweight "A" Only Lbs.	kg	Counterweight "A" Only Lbs.	kg	Counterweight "A" Only Lbs.	kg	Counterweight "A" Only Lbs.	kg	Counterweight "A" Only Lbs.	kg
50' (15.24 m)	12	3.66	81.5	55' 4"	16.86			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	13	3.96	80.3	55' 3"	16.84			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	14	4.27	79.1	55' 10"	16.71			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	15	4.57	78.0	55' 1"	16.71			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	16	4.88	76.8	54' 7"	16.64			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	17	5.18	75.6	54' 4"	16.56			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	18	5.49	74.4	54' 1"	16.48			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	19	5.79	73.2	53' 9"	16.38			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	20	6.10	72.0	53' 5"	16.28			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	30	9.14	59.4	48' 11"	14.91			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
40	12.19	44.9	41' 3"	12.57			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7	
48	14.63	30.0	30' 11"	9.42			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7	
50	15.24	24.7	28' 10"	8.18			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7	
70' (21.34 m)	16	4.88	80.6	74' 11"	22.84			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	17	5.18	78.8	74' 10"	22.81			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	18	5.49	78.9	74' 8"	22.76			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	19	5.79	78.1	74' 5"	22.68			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	20	6.10	77.3	74' 2"	22.61			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	30	9.14	68.7	71' 2"	21.69			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	40	12.19	59.6	68' 3"	20.19			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	50	15.24	49.5	49' 2"	18.04			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	60	18.29	37.7	42' 8"	13.01			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	65	19.81	30.3	41' 3"	12.57			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
70	21.34	20.8	30' 10"	9.40			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7	
80' (24.38 m)	17	5.18	81.1	84' 11"	25.88			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	18	5.49	80.3	84' 9"	25.83			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	19	5.79	79.6	84' 8"	25.81			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	20	6.10	78.9	84' 5"	25.73			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	30	9.14	71.5	81' 9"	24.92			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	40	12.19	63.7	77' 8"	23.67			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	50	15.24	55.4	71' 9"	21.87			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	70	21.34	35.1	51' 11"	15.83			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	74	22.56	30.0	45' 11"	14.00			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	75	22.86	28.3	43' 9"	13.34			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
80	24.38	19.5	32' 8"	9.96			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7	
90'	19	5.79	80.8	94' 9"	28.88			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	20	6.10	80.1	94' 7"	28.83			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	30	9.14	73.6	92' 3"	28.12			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	40	12.19	66.8	88' 8"	27.03			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	50	15.24	58.7	83' 8"	25.50			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	70	21.34	43.4	67' 9"	20.65			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	80	24.38	33.1	55' 1"	16.79			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	82	24.99	30.0	50' 11"	15.52			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7
	90	27.43	18.4	34' 3"	10.44			19.2	8.7	19.2	8.7			19.2	8.7	19.2	8.7

Ⓞ Measured vertically from center of boom head sheave to ground. Capacities shown in thousands of pounds and kilograms (kips).

GENERAL INFORMATION ONLY



## LS-338 dragline/clamshell/magnet/wood grapple capacities

Refer to **Notes** below

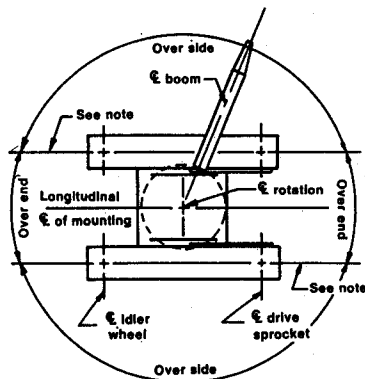
### Notes — dragline/clamshell/magnet capacities

1. Capacities shown are maximum recommended by PCSA Standard #1, and should be considered as applicable for ideal job conditions. Allowances must be made for soft or uneven supporting surface, rapid cycle operation, bucket suction, or other unfavorable conditions which may require smaller buckets or magnet for most efficient operation. Weights of buckets, magnet, etc., plus load, should not exceed these capacities.
2. Dragline capacities do not exceed 75% of minimum tipping loads; clamshell and magnet capacities do not exceed 67½% of minimum tipping loads.
3. Dragline operation with boom angle less than 35° is not recommended.
4. For booms with live mast with 1½" (38 mm) diameter pendants, deduct 400 lbs. (181 kg) from capacities shown.
5. Boom length should not exceed 80' (24.38 m).
6. These capacities apply only to the machine as originally manufactured and normally equipped by FMC Corporation, Construction Equipment Group.

### Notes — Wood grapple capacities

1. 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.
2. Capacities are based on 75% of minimum tipping loads.
3. Capacities are based on freely suspended loads and make no allowance for such factors as sudden stopping of loads, supporting conditions, and operating speeds. Operator must reduce load ratings to take such conditions into account. Combined weight of grapple and load should not exceed these capacities.
4. For booms with live mast with 1½" (38 mm) diameter pendants, deduct 400 lbs. (181 kg) from capacities shown.
5. Boom length should not exceed 90' (27.43 m).
6. These capacities apply only to the machine as originally manufactured and normally equipped by FMC Corporation, Construction Equipment Group.

## LS-338 working areas



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

**GENERAL INFORMATION ONLY**

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

FMC Corporation Construction Equipment Group Bannockburn, Illinois 60015



## Link-Belt® LS-338 lifting crane capacities

PCSA Class 12-410  
Refer to Notes page 4.

**Boom** — angle: 48" (1.22 m) wide, 48" (1.22 m) deep with open throat top section; with or without boom live mast.

**Jib** — angle: 20" x 24" (0.51 m x 0.61 m).

**Counterweights** — Refer to charts below.

**Mounting** — crawler: 13' 6" (4.11 m) gauge, 20' 0" (6.10 m) overall length.

Counterweights			
"A"		"AB"	
Pounds	kilograms	Pounds	kilograms
25,000	11 340	52,500	23 814

### GENERAL INFORMATION ONLY

Maximum angle boom or boom + jib machine can lift off ground<sup>①</sup> unassisted, without load.

Standard machine equipped with appropriate counterweights	Counterweight "A"				Counterweight "AB"			
	Boom		Boom + jib		Boom		Boom + jib	
	Feet	meters	Feet	meters	Feet	meters	Feet	meters
Over ends	150	45.72	100 + 40	30.48 + 12.19	150	45.72	150 + 40	45.72 + 12.19
Over sides	150	45.72	120 + 40	36.58 + 12.19	150	45.72	150 + 40	45.72 + 12.19

①With boom live mast and 1¼" (31.75 mm) diameter pendants, and hook blocks on ground.

Maximum angle boom and boom + jib machine can lift off ground<sup>①</sup> unassisted and travel with, without load. Based on boom horizontal<sup>②</sup> and minimum travel speed on firm, level supporting surface.

Standard machine equipped with appropriate counterweights	Counterweight "A"				Counterweight "AB"			
	Boom		Boom + jib		Boom		Boom + jib	
	Feet	meters	Feet	meters	Feet	meters	Feet	meters
Over ends	130	39.62	100 + 40	30.48 + 12.19	150	45.72	130 + 40	39.62 + 12.19
Over sides	120	39.62	90 + 40	27.43 + 12.19	150	45.72	120 + 40	39.62 + 12.19

①With boom live mast and 1¼" (31.75 mm) diameter pendants, and hook blocks on ground.

②Hook blocks carried at boom and jib points. Based on 100-ton (90.76 metric ton) 5-sheave, 2,425 lbs. (1 100 kg) hook block and 15-ton (13.6 metric ton) single sheave, 435 lbs. (197 kg) ball with swivel hook.

GENERAL INFORMATION ONLY

# GENERAL INFORMATION ONLY

## LS-338 lifting crane capacities

Refer to Notes page 4.

**Booms** — angle: 48° (1.22 m) wide, 48° (1.22 m) deep with open throat top section; with or without boom live mast.

**Mounting** — crawler: 13' 6" (4.11 m) gauge, 20' 0" (6.10 m) overall length.

**Counterweights** — Refer to charts page 1.

Boom						With boom live mast and 1½" (32 mm) diameter boom pendants.				Without boom live mast and with 1½" (38 mm) diameter boom pendants.	
Length	Radius		Angle	Boom point height ①		Counterweight "A"		Counterweight "AB"		Counterweight "A" only	
	Feet	meters	Degree	Feet	meters	Pounds	kilograms	Pounds	kilograms	Pounds	kilograms
50' (15.24 m)	12	3.66	81.5	55' 4"	16.86	160,000*	72 576*	160,000*	72 576*	140,100*	63 549*
	13	3.96	80.3	55' 3"	16.84	157,100*	71 261*	157,100*	71 261*	136,300*	61 826*
	14	4.27	79.1	55' 1"	16.79	149,800	67 949	154,700*	70 172*	132,000*	59 875*
	15	4.57	78.0	54' 10"	16.71	130,400	59 149	152,300*	69 083*	127,700	57 925
	16	4.88	76.8	54' 7"	16.64	115,300	52 300	149,900*	67 995*	113,000	51 257
	17	5.18	75.6	54' 4"	16.56	103,300	46 857	145,800*	66 135*	101,200	45 904
	18	5.49	74.4	54' 1"	16.48	93,500	42 412	132,100	59 921	91,600	41 550
	19	5.79	73.2	53' 9"	16.38	85,300	38 692	120,600	54 704	83,700	37 966
	20	6.10	72.0	53' 5"	16.28	78,400	35 562	111,000	50 350	76,900	34 882
	25	7.62	65.9	51' 7"	15.72	55,400	25 129	78,900	35 789	54,500	24 721
	30	9.14	59.4	48' 11"	14.91	42,400	19 233	60,800	27 579	41,900	19 006
35	10.67	52.5	45' 7"	13.89	34,100	15 468	49,200	22 317	33,800	15 332	
40	12.19	44.9	41' 3"	12.57	28,300	12 837	41,000	18 598	28,100	12 746	
50	15.24	24.7	26' 10"	8.18	20,700	9 390	30,400	13 789	20,800	9 435	
60' (18.29 m)	14	4.27	81.0	65' 2"	19.86	138,700*	62 914*	138,700*	62 914*	123,300*	55 929*
	15	4.57	80.0	65' 1"	19.84	130,700	59 286	136,600*	61 962*	119,900*	54 387*
	16	4.88	79.0	64' 10"	19.76	115,500	52 391	134,400*	60 964*	112,800	51 166
	17	5.18	78.1	64' 8"	19.71	103,500	46 948	132,300*	60 011*	101,000	45 814
	18	5.49	77.1	64' 4"	19.61	93,600	42 457	130,200*	59 059*	91,400	41 459
	19	5.79	76.1	64' 2"	19.56	85,500	38 783	120,800	54 795	83,500	37 876
	20	6.10	75.1	63' 10"	19.46	78,500	35 608	111,100	50 395	76,700	34 791
	25	7.62	70.1	62' 4"	19.00	55,400	25 129	79,000	35 834	54,300	24 630
	30	9.14	64.9	60' 3"	18.36	42,500	19 278	60,800	27 579	41,600	18 870
	35	10.67	59.5	57' 8"	17.58	34,100	15 468	49,200	22 317	33,500	15 196
	40	12.19	53.8	54' 4"	16.56	28,200	12 792	41,000	18 598	27,800	12 610
50	15.24	40.8	45' 2"	13.77	20,700	9 390	30,500	13 835	20,500	9 299	
60	18.29	22.5	28' 11"	8.81	15,900	7 212	23,800	10 796	15,900	7 212	
70' (21.34 m)	16	4.88	80.6	74' 11"	22.84	115,600	52 436	123,400	55 974*	108,200*	49 080*
	17	5.18	79.8	74' 10"	22.81	103,600	46 993	121,500*	55 112*	100,900	45 768
	18	5.49	78.9	74' 8"	22.76	93,600	42 457	117,200*	53 162*	91,200	41 368
	19	5.79	78.1	74' 5"	22.68	85,500	38 783	115,800*	52 527*	83,300	37 785
	20	6.10	77.3	74' 2"	22.61	78,500	35 608	111,200	50 440	76,500	34 700
	25	7.62	73.0	72' 10"	22.20	55,400	25 129	78,900	35 789	54,000	24 494
	30	9.14	68.7	71' 2"	21.69	42,400	19 233	60,800	27 579	41,400	18 779
	35	10.67	64.2	69' 0"	21.03	34,000	15 422	49,100	22 272	33,200	15 060
	40	12.19	59.6	66' 3"	20.19	28,100	12 746	41,000	18 598	27,500	12 474
	50	15.24	49.5	59' 2"	18.04	20,600	9 344	30,400	13 789	20,200	9 163
	60	18.29	37.7	42' 8"	13.01	15,800	7 167	23,800	10 796	15,600	7 076
70	21.34	20.8	30' 10"	9.40	12,500	5 670	19,200	8 709	12,500	5 670	
80' (24.38 m)	17	5.18	81.1	84' 11"	25.88	103,500	46 948	109,800*	49 805*	98,800*	44 816*
	18	5.49	80.3	84' 9"	25.83	93,600	42 457	108,100*	49 034*	91,000	41 278
	19	5.79	79.6	84' 8"	25.81	85,400	38 737	106,800*	48 444*	83,100	37 694
	20	6.10	78.9	84' 5"	25.73	78,400	35 562	105,200*	47 719*	76,300	34 610
	25	7.62	75.2	83' 2"	25.35	55,300	25 084	78,900	35 789	53,700	24 358
	30	9.14	71.5	81' 9"	24.92	42,300	19 187	60,700	27 534	41,100	18 643
	35	10.67	67.7	79' 9"	24.31	33,800	15 332	49,000	22 227	32,900	14 923
	40	12.19	63.7	77' 8"	23.67	28,000	12 701	40,800	18 507	27,200	12 338
	50	15.24	55.4	71' 9"	21.87	20,400	9 253	30,200	13 699	19,900	9 027
	60	18.29	46.2	63' 8"	19.41	15,700	7 122	23,600	10 705	15,300	6 940
	70	21.34	35.1	51' 11"	15.83	12,400	5 625	19,100	8 664	12,100	5 489
80	24.38	19.5	32' 8"	9.96	10,000	4 536	15,800	7 167	9,900	4 491	
90' (27.43 m)	19	5.79	80.8	94' 9"	28.88	85,300	38 692	98,400*	44 634*	82,800	37 558
	20	6.10	80.1	94' 7"	28.83	78,300	35 517	97,200*	44 090*	76,000	34 474
	25	7.62	76.9	93' 6"	28.50	55,100	24 993	78,800	35 744	53,500	24 268
	30	9.14	73.6	92' 3"	28.12	42,100	19 097	60,500	27 443	40,800	18 507
	35	10.67	70.2	90' 6"	27.58	33,700	15 286	48,800	22 136	32,600	14 787
	40	12.19	66.8	88' 8"	27.03	27,800	12 610	40,700	18 462	26,900	12 202
	50	15.24	59.7	83' 8"	25.50	20,200	9 163	30,100	13 653	19,600	8 891
	60	18.29	52.0	76' 10"	23.42	15,500	7 031	23,400	10 614	15,000	6 804
	70	21.34	43.4	67' 9"	20.65	12,200	5 534	18,900	8 573	11,800	5 352
	80	24.38	33.1	55' 1"	16.79	9,800	4 445	15,600	7 076	9,500	4 309
	90	27.43	18.4	34' 3"	10.44	8,000	3 629	13,100	5 942	7,800	3 538

① Measured vertically from center of boom head sheave to ground.

(continued)

LS-338 lifting crane capacities

Refer to Notes page 4.

Boom						With boom live mast and 1 1/4" (32 mm) diameter boom pendants.				Without boom live mast and with 1 1/2" (38 mm) diameter boom pendants.	
Length	Radius		Angle Degree	Boom point height ①		Counterweight "A"		Counterweight "AB"		Counterweight "A" only	
	Feet	meters		Feet	meters	Pounds	kilograms	Pounds	kilograms	Pounds	kilograms
100' (30.48 m)	20	6.10	81.1	104' 9"	31.93	78,200	35 472	87,700*	39 781*	75,800	34 383
	25	7.62	78.2	103' 10"	31.65	55,000	29 948	78,600	35 653	53,200	24 132
	30	9.14	75.3	102' 8"	31.29	41,900	19 006	60,400	27 397	40,500	18 371
	35	10.67	72.3	101' 2"	30.84	33,500	15 196	48,600	22 045	32,300	14 651
	40	12.19	69.3	99' 5"	30.30	27,600	12 519	40,500	18 371	26,600	12 066
	50	15.24	63.0	95' 1"	28.98	20,000	9 072	29,900	13 563	19,300	8 754
	60	18.29	56.3	89' 2"	27.18	15,200	6 895	23,200	10 524	14,600	6 623
	70	21.34	49.1	81' 7"	24.87	12,000	5 443	18,700	8 482	11,500	5 216
	80	24.38	41.0	71' 7"	21.82	9,600	4 355	15,400	6 985	9,200	4 173
	90	27.43	31.3	57' 11"	17.65	7,800	3 538	12,900	5 851	7,500	3 402
100	30.48	17.4	35' 10"	10.92	6,400	2 903	10,900	4 944	6,100	2 767	
110' (33.53 m)	25	7.62	79.3	114' 1"	34.77	54,800	24 857	75,500*	34 247*		
	30	9.14	76.6	112' 11"	34.42	41,700	18 915	60,200	27 307		
	35	10.67	73.9	111' 7"	34.01	33,200	15 060	48,500	22 000		
	40	12.19	71.2	110' 1"	33.55	27,300	12 383	40,300	18 280		
	50	15.24	65.6	106' 2"	32.36	19,800	8 981	29,700	13 472		
	60	18.29	59.7	100' 11"	30.53	15,000	6 804	23,000	10 433		
	70	21.34	53.5	94' 4"	28.75	11,700	5 307	18,500	8 392		
	80	24.38	46.7	85' 11"	26.19	9,400	4 264	15,200	6 895		
	90	27.43	39.1	75' 3"	22.94	7,600	3 447	12,700	5 761		
	100	30.48	29.8	60' 7"	18.46	6,200	2 812	10,700	4 854		
110	33.53	16.6	37' 4"	11.38	5,000	2 268	9,100	4 128			
120' (36.58 m)	25	7.62	80.2	124' 2"	37.85	54,600	24 767	69,500*	31 525*		
	30	9.14	77.8	123' 2"	37.54	41,500	18 824	60,000	27 216		
	35	10.67	75.3	121' 11"	37.16	33,000	14 969	48,300	21 909		
	40	12.19	72.8	120' 7"	36.75	27,100	12 293	40,100	18 189		
	50	15.24	67.8	116' 11"	35.64	19,500	8 845	29,400	13 336		
	60	18.29	62.5	112' 4"	34.24	14,800	6 713	22,800	10 342		
	70	21.34	57.0	106' 7"	32.49	11,500	5 216	18,300	8 301		
	80	24.38	51.1	99' 3"	30.25	9,100	4 128	15,000	6 804		
	90	27.43	44.6	90' 2"	27.48	7,300	3 311	12,500	5 670		
	100	30.48	37.2	78' 8"	23.98	5,900	2 676	10,500	4 763		
110	33.53	28.5	63' 3"	19.28	4,800	2 177	8,900	4 037			
120	36.58	15.9	38' 9"	11.81	3,800	1 724	7,600	3 447			
130' (39.62 m)	25	7.62	81.0	134' 4"	40.94	54,400	24 676	63,900*	28 985*		
	30	9.14	78.7	133' 5"	40.67	41,300	18 734	56,400*	25 583*		
	35	10.67	76.5	132' 4"	40.33	32,800	14 878	48,100	21 818		
	40	12.19	74.2	130' 11"	39.90	26,900	12 202	39,900	18 099		
	50	15.24	69.6	127' 9"	38.94	19,300	8 754	29,200	13 245		
	60	18.29	64.8	123' 6"	37.64	14,500	6 577	22,600	10 251		
	70	21.34	59.8	118' 3"	36.04	11,200	5 080	18,000	8 165		
	80	24.38	54.5	121' 10"	37.13	8,900	4 037	14,800	6 713		
	90	27.43	48.9	103' 11"	31.67	7,100	3 221	12,200	5 534		
	100	30.48	42.8	94' 3"	28.73	5,600	2 540	10,300	4 672		
110	33.53	35.8	81' 11"	24.97	4,500	2 041	8,700	3 946			
120	36.58	27.4	65' 9"	20.04	3,500	1 588	7,400	3 357			
130	39.62	15.3	40' 2"	12.24	2,800	1 270	6,200	2 812			
140' (42.67 m)	30	9.14	79.5	143' 7"	43.76	41,000	18 598	51,900*	23 542*		
	35	10.67	77.5	142' 7"	43.46	32,500	14 742	46,500*	21 092*		
	40	12.19	75.3	141' 4"	43.08	26,600	12 066	39,600	17 963		
	50	15.24	71.1	138' 4"	42.16	19,000	8 618	29,000	13 154		
	60	18.29	66.7	134' 5"	40.97	14,200	6 441	22,300	10 115		
	70	21.34	62.1	129' 8"	39.52	11,000	4 990	17,800	8 074		
	80	24.38	57.4	123' 10"	37.74	8,600	3 901	14,500	6 577		
	90	27.43	52.4	116' 10"	35.61	6,800	3 084	12,000	5 443		
	100	30.48	47.0	108' 4"	33.02	5,400	2 449	10,000	4 536		
	110	33.53	41.2	98' 1"	29.89	4,200	1 905	8,400	3 810		
120	36.58	34.5	85' 2"	25.96	3,300	1 497	7,100	3 221			
130	39.62	26.4	68' 2"	20.78	2,500	1 134	6,000	2 722			
140	42.67	14.7	41' 5"	12.62	1,800	816	5,100	2 313			
150' (45.72 m)	30	9.14	80.2	153' 9"	46.86	40,800	18 507	47,800*	21 682*		
	35	10.67	78.3	152' 9"	46.56	32,300	14 651	43,000*	19 505*		
	40	12.19	76.3	151' 8"	46.23	26,300	11 930	38,400*	17 418*		
	50	15.24	72.4	148' 10"	45.36	18,800	8 528	28,700	13 018		
	60	18.29	68.3	145' 4"	44.30	14,000	6 350	22,100	10 025		
	70	21.34	64.1	140' 10"	42.92	10,700	4 854	17,500	7 938		
	80	24.38	59.8	135' 7"	41.32	8,300	3 765	14,300	6 486		
	90	27.43	55.3	129' 3"	39.40	6,500	2 948	11,700	5 307		
	100	30.48	50.2	121' 8"	37.09	5,100	2 313	9,800	4 445		
	110	33.53	45.3	112' 8"	34.34	3,900	1 769	8,200	3 720		
120	36.58	39.7	101' 9"	31.01	3,000	1 361	6,900	3 130			
130	39.62	33.3	88' 2"	26.87	2,200	998	5,800	2 631			
140	42.67	25.5	70' 5"	21.46	1,500	680	4,800	2 177			
150	45.72	14.2	42' 9"	13.03	1,000	454	4,000	1 814			

Not applicable

① Measured vertically from center of boom head sheave to ground.

# LS-338 lifting crane capacities

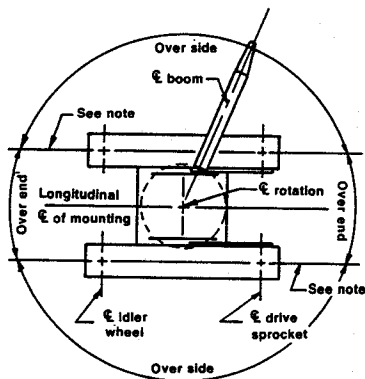
# GENERAL INFORMATION ONLY

## Notes — lifting crane capacities

1. 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.
2. Capacities are based on 75% of minimum tipping loads unless marked with an asterisk (\*).
  - a. Asterisk indicates capacities are based on factors other than those which would cause a tipping condition.
3. 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, 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.
4. Lifting capacities shown are based on machine equipped as follows:
  - a. Boom live mast and 1 1/4" (32 mm) diameter pendants for all boom lengths.
  - b. Without boom live mast but with 1 1/2" (38 mm) diameter pendants — for booms up to 100' (30.48 m) long.
  - c. 1 1/4" (32 mm) diameter pendants must not be used unless machine is equipped with a boom live mast.
5. When LS-338 is equipped with boom live mast and 1 1/2" (38 mm) diameter pendants instead of 1 1/4" (32 mm) diameter pendants, reduce all lifting capacities shown 400 lbs. (181 kg).
6. For lifting 160,000 lbs. (72 576 kg) with 7/8" (22 mm) diameter rope, eight parts of 7/8" (22 mm) Type "N" hoist rope are required. Check parts of line required for all capacities.
7. Boom live mast is required for all main boom lengths exceeding 100' (30.48 m), and for boom exceeding 50' (15.24 m) when equipped with jib.
8. When using boom live mast as a short boom, maximum lifting capacity of the boom live mast is 47,000 lbs. (21 319 kg) at 13' (3.96 m) minimum radius, 23,000 lbs. (10 434 kg) at 28' 0" (8.53 m) maximum radius.
9. Main boom length, without jib, must not exceed 150' (45.72 m).
10. Jib must not be mounted on boom longer than 150' (45.72 m).
11. When handling loads on main load hoist line with jib mounted on boom, reduce rated boom lifting capacities as follows:
  - 20' (6.10 m) jib — 2,000 lbs. (907 kg)
  - 30' (9.14 m) jib — 2,400 lbs. (1 089 kg)
  - 40' (12.19 m) jib — 2,800 lbs. (1 270 kg)
12. Least stable position is over side.
13. These capacities apply only to the machine as originally manufactured and normally equipped by FMC Corporation, Cable Crane & Excavator Division.

Note: Use of live mast as a short boom is intended for machine assembly or disassembly only. It should not be used for general crane service.

## LS-338 working areas



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

## LS-338 boom/jib working ranges

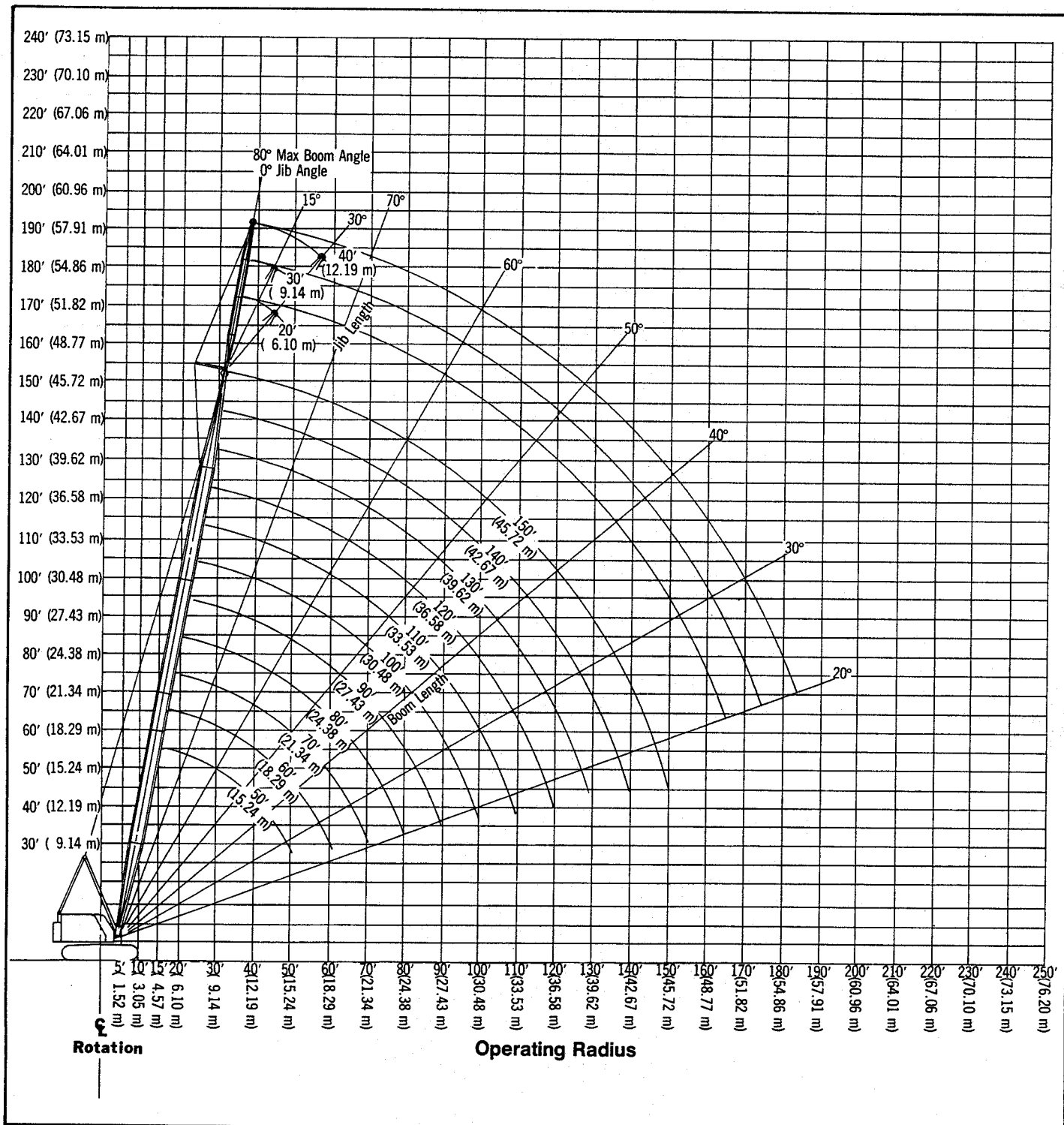
## GENERAL INFORMATION ONLY

**Boom** — angle: 48" (1.22 m) wide, 48" (1.22 m) deep with open throat top section; with or without boom live mast.

**Jib** — angle: 20" x 24" (0.51 m x 0.61 m).

**Counterweight** — 52,500 lbs. (23 814 kg) "AB" only.

**Mounting** — crawler: 13' 6" (4.11 m) gauge, 20' 0" (6.10 m) overall length.



LS-338 dragline/clamshell/magnet capacities

Refer to Notes page 7.

**Boom** — angle: 48° (1.22 m) wide, 48° (1.22 m) deep with open throat top section; with or without boom live mast.

**Mounting** — crawler: 13' 6" (4.11 m) gauge, 20' 0" (6.10 m) overall length.

**Counterweight** — 25,000 lbs. (11 340 kg) "A" only.

Length	Boom					With boom live mast and 1½" (32 mm) diameter boom pendants.				Without boom live mast and with 1½" (38 mm) diameter boom pendants.			
	Radius		Angle	Boom point height ①		Dragline		Clamshell & magnet		Dragline		Clamshell & magnet	
	Feet	meters	Degree	Feet	Meters	Pounds	kilograms	Pounds	kilograms	Pounds	kilograms	Pounds	kilograms
50' (15.24 m)	12	3.66	81.5	55' 4"	16.86			19,200	8 709			19,200	8 709
	13	3.96	80.3	55' 3"	16.84			↑	↑			↑	↑
	14	4.27	79.1	55' 1"	16.79			↑	↑			↑	↑
	15	4.57	78.0	54' 10"	16.71			↑	↑			↑	↑
	16	4.88	76.8	54' 7"	16.64			↑	↑			↑	↑
	17	5.18	75.6	54' 4"	16.56			↑	↑			↑	↑
	18	5.49	74.4	54' 1"	16.48			↑	↑			↑	↑
	19	5.79	73.2	53' 9"	16.38			↑	↑			↑	↑
	20	6.10	72.0	53' 5"	16.28			↑	↑			↑	↑
	25	7.62	65.9	51' 7"	15.72			↑	↑			↑	↑
	30	9.14	59.4	48' 11"	14.91	16,400	7 439			16,400	7 439		
35	10.67	52.5	45' 7"	13.89	↑	↑			↑	↑			
40	12.19	44.9	41' 3"	12.57			19,200	8 709			19,200	8 709	
45	13.72	36.1	35' 4"	10.77			18,600	8 437			18,700	8 482	
48	14.63	30.0	30' 11"	9.42									
50	15.24	24.7	26' 10"	8.18	16,400	7 439			16,400	7 439			
60' (18.29 m)	14	4.27	81.0	65' 2"	19.86			19,200	8 709			19,200	8 709
	15	4.57	80.0	65' 1"	19.84			↑	↑			↑	↑
	16	4.88	79.0	64' 10"	19.76			↑	↑			↑	↑
	17	5.18	78.1	64' 8"	19.71			↑	↑			↑	↑
	18	5.49	77.1	64' 4"	19.61			↑	↑			↑	↑
	19	5.79	76.1	64' 2"	19.56			↑	↑			↑	↑
	20	6.10	75.1	63' 10"	19.46			↑	↑			↑	↑
	25	7.62	70.1	62' 4"	19.00			↑	↑			↑	↑
	30	9.14	64.9	60' 3"	18.36			↑	↑			↑	↑
	35	10.67	59.5	57' 8"	17.58	16,400	7 439			16,400	7 439		
	40	12.19	53.8	54' 4"	16.56	↑	↑			↑	↑		
45	13.72	47.7	50' 3"	15.32			19,200	8 709			19,200	8 709	
50	15.24	40.8	45' 2"	13.77			18,600	8 437			18,400	8 346	
55	16.76	32.8	38' 6"	11.73			16,500	7 484			16,400	7 439	
57	17.37	30.0	35' 11"	10.95	16,400	7 439	15,600	7 076	16,400	7 439	15,600	7 076	
60	18.29	22.5	28' 11"	8.81	15,900	7 212	14,300	6 486	15,900	7 212	14,300	6 486	
70' (21.34 m)	16	4.88	80.7	74' 11"	22.84			19,200	8 709			19,200	8 709
	17	5.18	79.8	74' 10"	22.81			↑	↑			↑	↑
	18	5.49	78.9	74' 8"	22.76			↑	↑			↑	↑
	19	5.79	78.1	74' 5"	22.68			↑	↑			↑	↑
	20	6.10	77.3	74' 2"	22.61			↑	↑			↑	↑
	25	7.62	73.0	72' 10"	22.20			↑	↑			↑	↑
	30	9.14	68.7	71' 2"	21.69			↑	↑			↑	↑
	35	10.67	64.2	69' 0"	21.03			↑	↑			↑	↑
	40	12.19	59.6	66' 3"	20.19	16,400	7 439			16,400	7 439		
	45	13.72	54.7	63' 1"	19.23	↑	↑	19,200	8 709			19,200	8 709
	50	15.24	49.5	59' 2"	18.04			18,500	8 392			18,200	8 256
55	16.76	43.5	54' 6"	16.61	16,400	7 439	16,400	7 439	16,400	7 439	16,400	7 439	
60	18.29	37.7	42' 8"	13.01	15,800	7 167	14,200	6 441	15,600	7 076	14,000	6 350	
65	19.81	30.3	41' 3"	12.57	14,200	6 441	12,800	5 806	14,000	6 350	12,600	5 715	
70	21.34	20.8	30' 10"	9.40	12,500	5 670	11,300	5 126	12,500	5 670	11,200	5 080	
80' (24.38 m)	17	5.18	81.1	84' 11"	25.88			19,200	8 709			19,200	8 709
	18	5.49	80.3	84' 9"	25.83			↑	↑			↑	↑
	19	5.79	79.6	84' 8"	25.81			↑	↑			↑	↑
	20	6.10	78.9	84' 5"	25.73			↑	↑			↑	↑
	25	7.62	75.2	83' 2"	25.35			↑	↑			↑	↑
	30	9.14	71.5	81' 9"	24.92			↑	↑			↑	↑
	35	10.67	67.7	79' 9"	24.31			↑	↑			↑	↑
	40	12.19	63.7	77' 8"	23.67			↑	↑			↑	↑
	45	13.72	59.6	74' 10"	22.81	16,400	7 439	19,200	8 709	16,400	7 439	19,200	8 709
	50	15.24	55.4	71' 9"	21.87	16,400	7 439	18,400	8 346	16,400	7 439	17,900	8 119
	55	16.76	50.8	68' 0"	20.73	16,400	7 439	16,200	7 348	16,400	7 439	15,800	7 167
60	18.29	46.2	63' 8"	19.41	15,700	7 122	14,100	6 396	15,300	6 940	13,800	6 260	
65	19.81	40.9	58' 3"	17.75	14,000	6 350	12,600	5 715	13,700	6 214	12,300	5 579	
70	21.34	35.1	51' 11"	15.83	12,400	5 625	11,200	5 080	12,100	5 489	10,900	4 944	
74	22.56	30.0	45' 11"	14.00	11,400	5 171	10,300	4 672	11,200	5 080	10,100	4 581	
75	22.86	28.3	43' 9"	13.34	11,200	5 080	10,100	4 581	11,000	4 990	9,900	4 491	
80	24.38	19.5	32' 8"	9.96	10,100	4 581	9,000	4 082	9,800	4 445	8,900	4 037	

① Measured vertically from center of boom head sheave to ground.

## Notes — dragline/clamshell/magnet capacities

## GENERAL INFORMATION ONLY

- Capacities shown are maximum recommended by PCSA Standard #1, and should be considered as applicable for ideal job conditions. Allowances must be made for soft or uneven supporting surface, rapid cycle operation, bucket suction, or other unfavorable conditions which may require smaller buckets or magnet for most efficient operation. Weights of buckets, magnet, etc., plus load, should not exceed these capacities.
- Dragline capacities do not exceed 75% of minimum tipping loads; clamshell and magnet capacities do not exceed 67½% of minimum tipping loads.
- Dragline operation with boom angle less than 35° is not recommended.
- For booms with live mast with 1½" (38 mm) diameter pendants, deduct 400 lbs. (181 kg) from capacities shown.
- Boom length should not exceed 80' (24.38 m).
- These capacities apply only to the machine as originally manufactured and normally equipped by FMC Corporation, Cable Crane & Excavator Division.

## LS-338 wood grapple capacities

Refer to Notes page 8.

**Boom** — angle: 48" (1.22 m) wide, 48" (1.22 m) deep with open throat top section; with or without boom live mast.

**Mounting** — crawler: 13' 6" (4.11 m) gauge, 20' 0" (6.10 m) overall length.

**Counterweight** — 25,000 lbs. (11 340 kg) "AB" only.

Length	Boom					With boom live mast and 1½" (32 mm) diameter boom pendants.		Without boom live mast and with 1½" (38 mm) diameter boom pendants.	
	Radius		Angle	Boom point height <sup>①</sup>		Pounds	kilograms	Pounds	kilograms
	Feet	meters	Degree	Feet	meters				
50' (15.24 m)	12	3.66	81.5	55' 4"	16.86	↑ 19,200 ↓	↑ 8 709 ↓	↑ 19,200 ↓	↑ 8 709 ↓
	15	4.57	78.0	54' 10"	16.71				
	20	6.10	72.0	53' 5"	16.28				
	25	7.62	65.9	51' 7"	15.72				
	30	9.14	59.4	48' 11"	14.91				
	35	10.67	52.5	45' 7"	13.89				
	40	12.19	44.9	41' 3"	12.57				
	45	13.72	36.1	35' 4"	10.77				
	48	14.63	30.0	30' 11"	9.42				
	50	15.24	24.7	26' 10"	8.18				
60' (18.29 m)	14	4.27	81.0	65' 2"	19.86	↑ 19,200 ↓	↑ 8 709 ↓	↑ 19,200 ↓	↑ 8 709 ↓
	15	4.57	80.0	65' 1"	19.84				
	20	6.10	75.1	63' 10"	19.46				
	25	7.62	70.1	62' 4"	19.00				
	30	9.14	64.9	60' 3"	18.36				
	35	10.67	59.5	57' 8"	17.58				
	40	12.19	53.8	54' 4"	16.56				
	45	13.72	57.7	50' 3"	15.32				
	50	15.24	40.8	45' 2"	13.77				
	55	16.76	32.8	38' 6"	11.73				
57	17.37	30.0	35' 11"	10.95					
60	18.29	22.5	28' 11"	8.81					
70' (21.34 m)	16	4.88	80.7	74' 11"	22.84	↑ 19,200 ↓	↑ 8 709 ↓	↑ 19,200 ↓	↑ 8 709 ↓
	20	6.10	77.3	74' 2"	22.61				
	25	7.62	73.0	72' 10"	22.20				
	30	9.14	68.7	71' 2"	21.69				
	35	10.67	64.2	69' 0"	21.03				
	40	12.19	59.6	66' 3"	20.19				
	45	13.72	54.7	63' 1"	19.23				
	50	15.24	49.5	59' 2"	18.04				
	55	16.76	43.5	54' 6"	16.61				
	60	18.29	37.7	42' 8"	13.01				
65	19.81	30.3	41' 3"	12.57					
70	21.34	20.8	30' 10"	9.40					
80' (24.38 m)	17	5.18	81.1	84' 11"	25.88	↑ 19,200 ↓	↑ 8 709 ↓	↑ 19,200 ↓	↑ 8 709 ↓
	20	6.10	78.9	84' 5"	25.73				
	25	7.62	75.2	83' 2"	25.35				
	30	9.14	71.5	81' 9"	24.92				
	35	10.67	67.7	79' 9"	24.31				
	40	12.19	63.7	77' 8"	23.67				
	45	13.72	59.6	74' 10"	22.81				
	50	15.24	55.4	71' 9"	21.87				
	55	16.76	50.8	68' 0"	20.73				
	60	18.29	46.2	63' 8"	19.41				
	65	19.81	40.9	58' 3"	17.75				
	70	21.34	35.1	51' 11"	15.83				
	74	22.56	30.0	45' 11"	14.00				
	75	22.86	28.3	43' 9"	13.34				
80	24.38	19.5	32' 8"	9.96					

① Measured vertically from center of boom head sheave to ground.

(continued)



### LS-338 wood grapple capacities

Refer to Notes below.

Length	Boom				With boom live mast and 1½" (32 mm) diameter boom pendants.		Without boom live mast and with 1½" (38 mm) diameter boom pendants.		
	Radius		Angle	Boom point height <sup>①</sup>		Pounds	kilograms	Pounds	kilograms
	Feet	meters	Degree	Feet	meters				
90' (27.43 m)	19	5.79	80.8	94' 9"	28.88	↑	8 709	↑	8 709
	20	6.10	80.1	94' 7"	28.83				
	25	7.62	76.9	93' 6"	28.50				
	30	9.14	73.6	92' 3"	28.12	↓	8 709	↓	8 709
	35	10.67	70.2	90' 6"	27.58				
	40	12.19	66.8	88' 8"	27.03				
	45	13.72	63.3	86' 3"	26.29	↓	8 709	↓	8 709
	50	15.24	59.7	83' 8"	25.50				
	55	16.76	55.9	80' 5"	24.51				
	60	18.29	52.0	76' 10"	23.42				
	65	19.81	47.8	72' 7"	22.12				
	70	21.34	43.4	67' 9"	20.65				
	75	22.86	38.5	61' 11"	18.87				
	80	24.38	33.1	55' 1"	16.79				
	82	24.99	30.0	50' 11"	15.52				
	85	25.91	26.7	46' 2"	14.07				
	90	27.43	18.4	34' 3"	10.44				

① Measured vertically from center of boom head sheave to ground.

### Notes — wood grapple 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 75% of minimum tipping loads.
- Capacities are based on freely suspended loads and make no allowances for such factors as sudden stopping of loads, supporting conditions, and operating speeds. Operator must reduce load ratings to take such conditions into account. Combined weight of grapple and load should not exceed these capacities.
- For booms with live mast with 1½" (38 mm) diameter pendants, deduct 400 lbs. (181 kg) from capacities shown.
- Boom length should not exceed 90' (27.43 m).
- These capacities apply only to the machine as originally manufactured and normally equipped by FMC Corporation, Cable Crane & Excavator Division.

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



FMC Corporation Cable Crane and Excavator Division Cedar Rapids Iowa 52406

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



Boom length	Load radius	Capacities — 360° swing												
		30' jib			40' jib			50' jib			60' jib			
		Jib angles to boom (jib offset degrees)												
		0°	15°	30°	0°	15°	30°	0°	15°	30°	0°	15°	30°	
Feet	Feet	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	
100	30	29,500*			26,700*									
	35	28,900*			26,200*									
	40	28,300*			25,600*									
	50	27,100*			24,500*									
	60	23,500*			23,300*									
	70	19,100		18,300*	19,200		15,200*							
	80	15,800		16,100	15,900		15,700*							
	90	13,300		13,500	13,700		13,800							
	100	11,300		11,700	11,400		11,700							
	110	9,700		9,800	9,900		10,100							
	120	8,400			8,500		8,700							8,600*
	130				7,400									7,700*
	140													6,900*
	150													6,000*
	110	30	29,700*			26,400*								
35		29,200*			25,900*									
40		28,600*			24,800*									
50		27,500*		26,000*	24,900*									
60		23,300		23,700	23,400									
70		18,900		19,300	19,000									
80		15,600		15,900	15,000*									
90		13,100		13,300	13,600									
100		11,100		11,300	11,500									
110		9,500		9,700	9,600									
120		8,200		8,300	8,300									
130		7,100			7,200									
140					6,300									
150														
160														
120	35	29,400*			26,600*									
	40	28,900*			26,100*									
	50	27,800*			25,100*									
	60	23,100		23,700	23,200*									
	70	18,700		19,100	18,800*									
	80	15,400		15,700	15,500*									
	90	12,800		13,200	13,400									
	100	10,900		11,100	11,400									
	110	9,300		9,500	9,700									
	120	8,000		8,100	8,100*									
	130	6,900		7,000	7,000*									
	140	5,900			6,100									
	150				5,300									
	160													
	170													
130	35	29,600*			26,800*									
	40	29,100*			26,300*									
	50	28,100*			25,400*									
	60	22,800		23,500	23,000									
	70	18,500		19,000	18,600									
	80	15,100		15,600	15,300									
	90	12,600		13,000	12,700									
	100	10,700		10,900	11,200									
	110	9,100		9,300	9,200									
	120	7,700		7,900	7,900									
	130	6,700		6,800	6,800									
	140	5,700		5,800	5,800									
	150	4,900			5,000									
	160				4,300									
	170													
180														
140	35	29,800*			26,500*									
	40	29,300*			26,000*									
	50	28,400*			25,600*									
	60	22,600		23,300	22,700									
	70	18,200		18,800	18,300									
	80	14,900		15,400	15,000									
	90	12,400		12,800	13,100									
	100	10,400		10,700	11,000									
	110	8,800		9,100	8,900									
	120	7,500		7,700	7,900									
	130	6,400		6,600	6,500									
	140	5,500		5,600	5,600									
	150	4,700		4,800	4,800									
	160	4,000			4,100									
	170				3,500									
180														
190														

LS-338 jib capacities (U.S. units)

GENERAL INFORMATION ONLY

Refer to Notes page 4.

Boom length	Load radius	Capacities — 360° swing											
		30' jib			40' jib			50' jib			60' jib		
		Jib angles to boom (jib offset degrees)											
		0°	15°	30°	0°	15°	30°	0°	15°	30°	0°	15°	30°
Feet	Feet	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
150	40	29,500*			26,700*			24,100*					
	50	28,600*	25,800*	19,800*	25,800*	23,200*		23,300*			21,100*		
	60	22,400	23,100	18,500*	22,500	21,800*	15,100*	22,600*	19,600*		20,300*	17,900*	
	70	18,000	18,600	17,300*	18,100	18,900	14,200*	18,200	17,900*	12,100*	18,300	16,400*	9,900*
	80	14,700	15,200	15,600	14,800	15,400	13,400*	14,900	15,700	11,300*	14,900	14,600*	8,700*
	90	12,200	12,600	12,900	12,300	12,800	12,700*	12,400	13,000	10,500*	12,400	12,800*	8,100*
	100	10,200	10,500	10,800	10,300	10,800	11,200	10,400	11,000	9,600*	10,400	11,000*	7,400*
	110	8,600	8,900	9,100	8,700	9,100	9,500	8,800	9,300	8,500*	8,800	9,100*	6,800*
	120	7,300	7,500	7,700	7,400	7,700	8,000	7,500	7,900	7,500*	7,500	8,100	5,800*
	130	6,200	6,400	6,600	6,300	6,600	6,800	6,400	6,700	6,500*	6,400	6,900	5,000*
	140	5,300	5,400		5,400	5,600	5,800	5,400	5,800	5,600*	5,500	5,900	4,400*
	150	4,500	4,600		4,600	4,800		4,600	4,900	5,100*	4,700	5,000	3,900*
	160	3,800			3,900	4,000		4,000	4,200				
	170	3,200			3,300			3,300	3,500				
180				2,700			2,800						
190							2,300						
200							2,300						
160	40	29,600*			26,800*			23,500*					
	50	28,800*	26,000*		26,000*	23,400*		23,300*			21,200*		
	60	22,400	22,900	18,700*	22,300	22,100*	15,200*	22,300	19,900*		20,400*	17,800*	
	70	17,800	18,400	17,600*	17,900	18,700	14,300*	18,000	18,400*	12,300*	18,000	16,300*	
	80	14,500	15,000	15,400	14,600	15,300	13,600*	14,600	15,500	11,500*	14,700	15,000*	8,800*
	90	11,900	12,400	12,800	12,000	12,600	12,900*	12,100	12,800	10,700*	12,200	13,000	8,200*
	100	10,000	10,300	10,700	10,100	10,600	11,000	10,100	10,800	9,300*	10,200	10,900	7,300*
	110	8,400	8,700	9,000	8,500	8,900	9,300	8,500	9,100	8,000*	8,600	9,200	6,300*
	120	7,000	7,300	7,600	7,100	7,500	7,800	7,200	7,700	6,900*	7,300	7,900	5,500*
	130	5,900	6,200	6,400	6,000	6,400	6,600	6,100	6,500	6,000*	6,200	6,700	4,800*
	140	5,000	5,200	5,400	5,100	5,400	5,600	5,200	5,600	5,300*	5,200	5,700	4,200*
	150	4,200	4,400		4,300	4,600		4,400	4,700	4,700*	4,400	4,800	3,600*
	160	3,500	3,600		3,600	3,800		3,700	4,000		3,700	4,100	3,200*
	170	2,900			3,000	3,200		3,100	3,300		3,100	3,400	
180	2,400			2,500			2,500	2,700		2,600	2,800		
190				2,000			2,100			2,100	2,300		
200							1,600			1,700			
210										1,300			
170	40	29,800*			26,200*			23,700*					
	50	28,700	26,200*		26,200*	22,400*		23,700*			21,400*		
	60	22,100	22,700	18,900*	22,300	22,400*	15,400*	22,300	19,900*		20,200*	17,700*	
	70	17,600	18,200	17,900*	17,700	18,500	14,500*	17,700	18,400*	12,400*	17,800	16,200*	
	80	14,200	14,800	15,300	14,300	15,100	13,800*	14,400	15,300	11,700*	14,500	14,800*	8,900*
	90	11,700	12,200	12,600	11,800	12,400	12,600*	11,900	12,700	10,100*	11,900	12,800	8,200*
	100	9,700	10,100	10,500	9,800	10,400	10,800	9,900	10,600	8,600*	10,000	10,700	7,000*
	110	8,100	8,500	8,800	8,200	8,700	9,100	8,300	8,900	7,400*	8,400	9,000	5,900*
	120	6,800	7,100	7,400	6,900	7,300	7,700	7,000	7,500	6,500*	7,000	7,700	5,100*
	130	5,700	6,000	6,200	5,800	6,200	6,500	5,900	6,300	5,600*	5,900	6,500	4,500*
	140	4,800	5,000	5,200	4,900	5,200	5,400	4,900	5,300	4,900*	5,000	5,500	4,000*
	150	4,000	4,200		4,100	4,300	4,600	4,100	4,500	4,400*	4,200	4,600	3,400*
	160	3,300	3,400		3,400	3,600		3,400	3,800	3,900*	3,500	3,900	3,100*
	170	2,700	2,800		2,800	3,000		2,800	3,100		2,900	3,200	2,700*
180	2,100			2,200	2,400		2,300	2,500		2,300	2,600		
190	1,600			1,700			1,800	2,000		1,900	2,100		
200							1,400			1,400	1,600		
210										1,100	1,300		
180	50	28,400	26,300*		26,300*	22,700*		23,800*			21,500*		
	60	21,900	22,600	19,200*	22,000	22,700*	14,700*	21,900*	19,700*		19,800*		
	70	17,300	18,000	18,100*	17,400	18,300	13,300*	17,500	17,400*	12,600*	17,600	15,600*	9,000*
	80	14,000	14,600	15,100	14,100	14,900	11,600*	14,200	15,100	11,100*	14,200	13,600*	7,700*
	90	11,500	12,000	12,400	11,600	12,200	11,600*	11,700	12,500	9,400*	11,700	11,800*	6,600*
	100	9,500	9,900	10,300	9,600	10,200	10,000*	9,700	10,400	8,200*	9,700	10,200*	5,700*
	110	7,900	8,300	8,600	8,000	8,500	8,600*	8,100	8,700	7,000*	8,100	8,900	4,900*
	120	6,600	6,900	7,200	6,700	7,100	7,500	6,700	7,300	6,000*	6,800	7,500	4,300*
	130	5,500	5,800	6,000	5,600	6,000	6,300	5,600	6,100	5,300*	5,700	6,300	3,600*
	140	4,600	4,800	5,000	4,600	5,000	5,300	4,700	5,100	4,600*	4,800	5,300	3,000*
	150	3,700	4,000	4,100	3,800	4,100	4,400	3,900	4,300	4,100*	4,000	4,400	2,500*
	160	3,000	3,200		3,100	3,400	3,600	3,200	3,500	3,600*	3,300	3,700	2,800*
	170	2,400	2,600		2,500	2,700		2,600	2,900	3,100*	2,600	3,000	2,500*
	180	1,900	2,000		2,000	2,200		2,100	2,300		2,100	2,400	2,300*
190	1,400			1,500	1,700		1,600	1,800		1,600	1,900		
200	1,000			1,100			1,100	1,300		1,200	1,400		
210							800			800	1,000		
220										500			

(continued)



# GENERAL INFORMATION ONLY

3-338 jib capacities (U.S. units)

Refer to Notes below.

Boom length	Load radius	Capacities — 360° swing												
		30' jib			40' jib			50' jib			60' jib			
		Jib angles to boom (jib offset degrees)												
		0°	15°	30°	0°	15°	30°	0°	15°	30°	0°	15°	30°	
Feet	Feet	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	
190	50	27,800*												
	60	21,700	22,400	19,400*										
	70	17,100	17,800	17,000*										
	80	13,800	14,400	14,700*										
	90	11,300	11,800	12,200										
	100	9,300	9,700	10,100										
	110	7,700	8,100	8,400										
	120	6,400	6,700	7,000										
	130	5,300	5,600	5,800	Not applicable									
	140	4,300	4,600	4,800										
	150	3,500	3,700	3,900										
	160	2,800	3,000	3,200										
	170	2,200	2,400											
	180	1,700	1,800											
	190	1,200	1,300											
	200	800												
210	400													

### Notes — tubular jib lifting capacities

Capacities are maximum allowable. Deduction from rated jib capacities be made for weight of hook, weighted ball/hook, sling, load weighing devices, or other suspended gear.

Refer to all notes on applicable lifting crane capacity chart in addition to these notes.

12' 7 5/8" high jib mast must be in proper working position.

Capacities shown are for 30', 40', 50' and 60' jib lengths only.

To determine rated jib capacities for intermediate jib lengths not shown, add capacities for next longer and shorter jib lengths shown — at the specific desired load radius and jib offset degree. One half of this sum represents rated capacity for desired jib length not shown.

6. To determine rated jib capacities for intermediate boom lengths not shown, add jib capacities for next longer and shorter boom lengths shown — for specific jib length, jib offset degree and load radius desired. One half of this sum represents rated capacity for the desired jib on the boom length not shown.

7. To determine rated jib capacities when neither the intermediate jib or boom lengths are shown, use following procedure:

a. Using next longer boom length at desired radius, read capacity for next shorter jib length at desired offset degree. At this same boom length and radius, also read capacity for next longer jib length at desired offset degree. Add the two capacity figures and divide by two.

b. Using next shorter boom length at desired radius, read capacity for next shorter jib length at desired offset degree. At this same boom length and radius, also read capacity for next longer jib length at desired offset degree. Add the two capacity figures and divide by two.

c. Rated jib capacity is equal to sum of totals found in (a.) and (b.), divided by two.

8. For single part jib load hoist line (whipline) operation, when lifting loads up to 14,800 lbs., 7/8" Type "P" wire rope is recommended. Lifting loads greater than 14,800 lbs., and up to 29,800 lbs., requires two parts of 7/8" diameter Type "N" wire rope.

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



JMC Corporation Cable Crane and Excavator Division Cedar Rapids Iowa 52406

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