

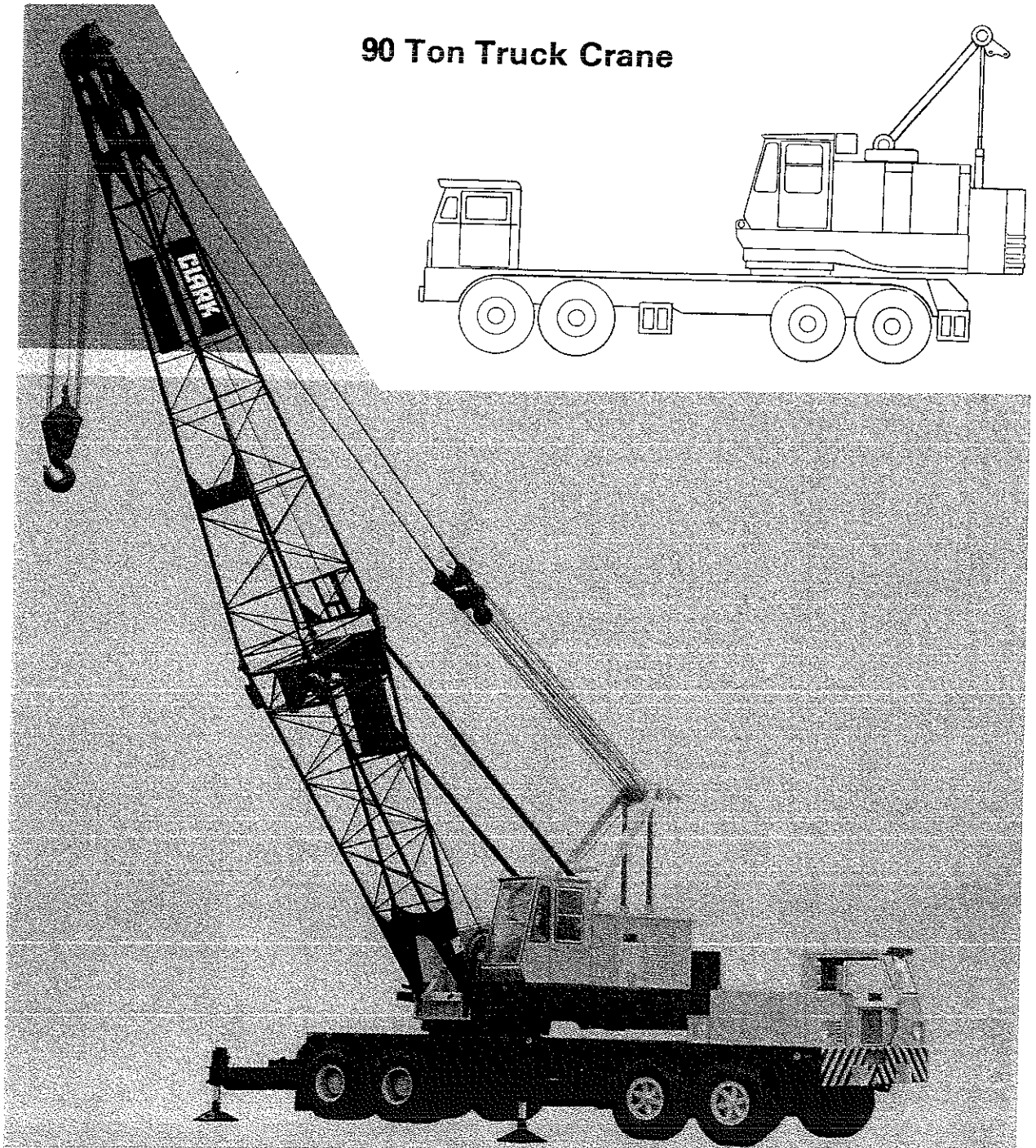
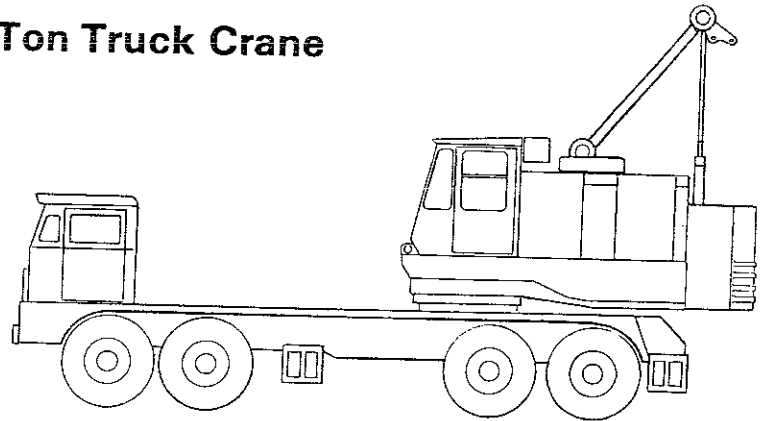
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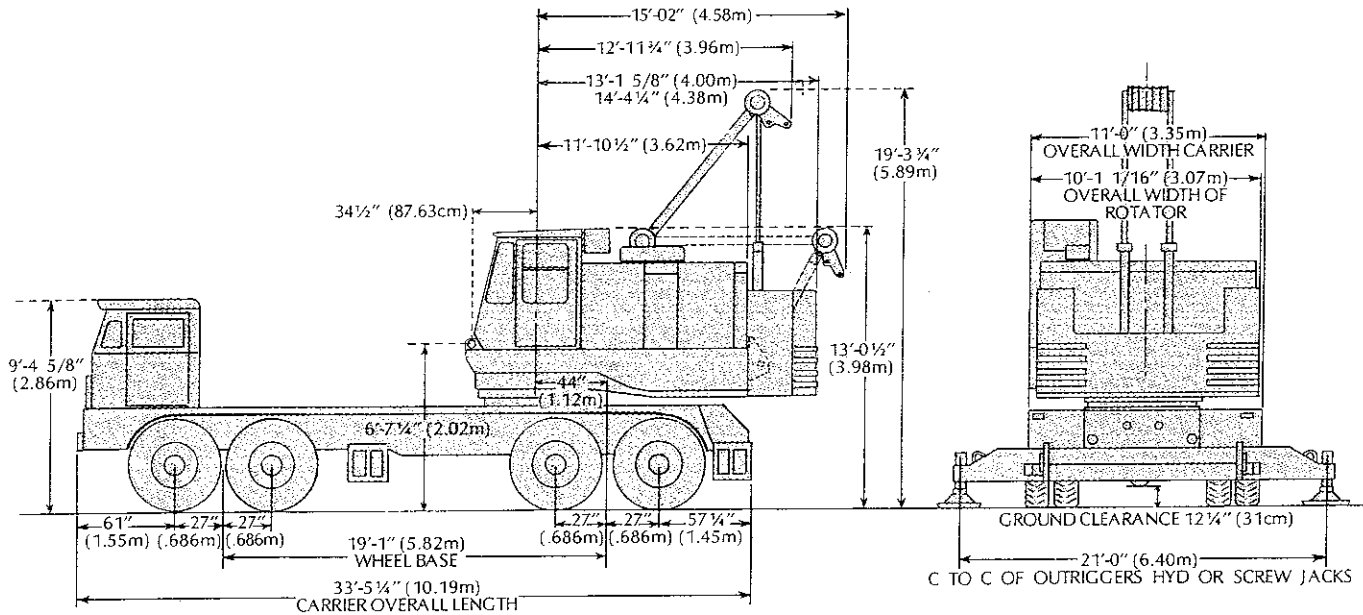
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Specification


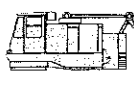

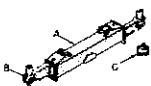

90 Ton Truck Crane



CLEARANCE AND DIMENSIONS



WEIGHTS OF COMPONENT PARTS

<p>CARRIER T-1</p>  <p>Total Weight of Carrier with Standard Diesel Engine and Hydraulic Outriggers</p> <p>57,955lbs.* (26,288kg.)</p>	<p>ROTATOR R-1</p>  <p>Total Weight of Rotating Assembly With Standard Diesel Engine with Torque Converter and 30,930 lbs (14,030kg) Counterweight.</p> <p>60,760lbs.* (27,560kg.)</p>	<p>CRANE ATTACHMENT A-2</p>  <p>Total Weight of Crane Attachment with 50' (15.2m) pin connected tubular boom 60 1/4" (153.0cm) x 65 1/4" (165.7cm) (5 point sheaves) with rope guards, 12 part boom hoist crossover and swaged type pendants for basic boom; 16" (40.6cm) rear drum (smooth laggings); swing snubber; boom angle indicator; telescopic boom-stop with air shutoff and necessary wire ropes. Meets or exceeds OSHA, and B-30.5</p> <p>8,810 lbs.* (3,996kg.)</p>	<p>MISCELLANEOUS</p> <p>Hook Block 1,625lbs. (737kg.) Boom Stop 610lbs. (277kg.) Ball & Hook 8 1/2 Ton (7.72 Ton) . . . 340lbs. (154kg.)</p> <p>Crossover and Basic Pendants— 12 Part Line 950lbs. (431kg.) Mid-Point Suspension 160'(48.77m) thru 180' (54.86m) Boom 565lbs. (256kg.) 190' (57.9m) thru 200' (60.96m) Boom 660lbs. (299kg.)</p>																					
<p>OUTRIGGER BOXES, BEAMS AND FLOATS</p>  <p>HYDRAULIC OUTRIGGERS: A-Outrigger Box (2) . . . 2,820lbs. (1,279kg.) Ea B-Outrigger Beams (4) . . . 1,800lbs. (816kg.) Ea C-Floats (4) 110lbs. (50kg.) Ea.</p> <p>BUMPER CWT. 13,415lbs. (6,085kg.)</p>	<p>For Third Drum (Subtract) . . . 150lbs. (68kg.)</p> <p>GANTRIES: Telescopic Back-Hitch Gantry 2,445 lbs (1,109kg.)</p> <p>Basic Gantry 825lbs (374kg.)</p> <p>Note: Weight of Basic Gantry is Included In Rotating Assembly</p> <p>20,430 lbs. (9,267kg.)</p> <p>COMPLETE ROTATING REAR CWT. 30,930lbs. (14,030kg.)</p> <p>10,500lbs. (4,763kg.)</p>	<p>BOOM AND BOOM EXTENSIONS</p> <p>30' (9.14m) Point Section . . . 2,710lbs. (1,229kg.) 20' (6.10m) Base Section . . . 2,175lbs. (987kg.) 10' (3.05m) Extension 815lbs. (370kg.) 20' (6.10m) Extension 1,285lbs. (583kg.) 30' (9.14m) Extension 1,655lbs. (751kg.) 40' (12.19m) Extension 2,205lbs. (1,000kg.)</p> <p>*Main Sheave and Guidesheaves Included in Point Section Weight All Extension weights, Include Pendants.</p> <p>JIB</p>  <p>20' (6.10m) Basic Jib Assembly. 1,790lbs. (807kg.) 10' (3.05m) Jib Extension 420lbs. (191kg.) 20' (6.10m) Jib Extension 690lbs. (313kg.) Maximum Jib Length 60ft. (18.29m)</p>			<table border="1"> <thead> <tr> <th>Operating Wire Ropes</th> <th>Basic Weight</th> <th>For Each Additional 10 ft. of boom—Add</th> </tr> </thead> <tbody> <tr> <td>Crane (Main Hoist)</td> <td>1020lbs. (463kg.)</td> <td>—</td> </tr> <tr> <td>Crane (Aux. Hoist)</td> <td>540lbs. (245kg.)</td> <td>20lbs. (9.1kg.)</td> </tr> <tr> <td>Dragline</td> <td>210lbs. (95kg.)</td> <td>25lbs. (11kg.)</td> </tr> <tr> <td>Clamshell</td> <td>190lbs. (86kg.)</td> <td>20lbs. (9.1kg.)</td> </tr> <tr> <td>Boom Hoist</td> <td>490lbs. (222kg.)</td> <td>—</td> </tr> </tbody> </table>	Operating Wire Ropes	Basic Weight	For Each Additional 10 ft. of boom—Add	Crane (Main Hoist)	1020lbs. (463kg.)	—	Crane (Aux. Hoist)	540lbs. (245kg.)	20lbs. (9.1kg.)	Dragline	210lbs. (95kg.)	25lbs. (11kg.)	Clamshell	190lbs. (86kg.)	20lbs. (9.1kg.)	Boom Hoist	490lbs. (222kg.)	—	<p>A-3 Dragline Attachment (Less Bucket) Tubular Boom 6,145lbs. (2,787kg.) Deck Mounted Fairlead. 745lbs. (338kg.) Additional Rotating Parts . . . 660lbs. (299kg.) Total Attachment Wt. 7,550lbs. (3,425kg.)</p> <p>A-4 Clamshell Attachment (Less Bucket) Tubular Boom 6,265lbs. (2,842kg.) Tagline Winder 355lbs. (161kg.) Additional Rotating Parts . . . 660lbs. (299kg.) Total Attachment Wt. 7,280lbs. (3,302kg.)</p>
Operating Wire Ropes	Basic Weight	For Each Additional 10 ft. of boom—Add																						
Crane (Main Hoist)	1020lbs. (463kg.)	—																						
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Clamshell	190lbs. (86kg.)	20lbs. (9.1kg.)																						
Boom Hoist	490lbs. (222kg.)	—																						

*Per Current Price List Description



TOTAL WEIGHT OF T-1, R-1 & A-2 = 127,525lbs. (57,845kg.)
 TOTAL WEIGHT OF T-1 & R-1 = 118,715lbs. (53,849kg.)

WORKING WEIGHTS (Approximate in pounds)

	HYDRAULIC OUTRIGGERS
LIFTING CRANE	127,525lbs. (57,845kg.)
CLAMSHELL (Less Bucket)	126,080lbs. (57,190kg.)
DRAGLINE (Less Bucket)	126,350lbs. (57,312kg.)

AXLE LOADING AND WEIGHTS

EQUIPPED AS FOLLOWS: Truck: Cummings NTC-290 with Jacob brakes, hydraulic outriggers, boom rest and 14:00" x 20" (35.6cmx50.8cm) 20 ply tires. UPPER: Cummins N-855-P-160 power plant with 3 stage converter; includes 50 ft. (15.24M tubular boom; full width front drum with power load lowering; rear drum with power load lowering; boom stops, cables and Sprague clutch. Does not include hook block or ball hook.

WEIGHT COMBINATIONS	BOOM POSITION	WITH HYDRAULIC OUTRIGGERS & FLOATS		
		FRONT	REAR	TOTAL
COMPLETE MACHINE (CRANE)	F	21,225lbs. (9,627kg.)	106,300lbs. (48,218kg.)	127,525lbs. (57,845kg.)
	R	53,775lbs. (24,392kg.)	73,750lbs. (33,453kg.)	127,525lbs. (57,845kg.)
MACHINE LESS COUNTERWEIGHT	F	35,320lbs. (16,021kg.)	61,275lbs. (27,794kg.)	96,595lbs. (43,815kg.)
	R	27,795lbs. (12,608kg.)	68,800lbs. (31,207kg.)	96,595lbs. (43,815kg.)
MACHINE LESS COUNTERWEIGHT, BOXES, BEAMS & FLOATS	F	32,640lbs. (14,806kg.)	50,675lbs. (22,986kg.)	83,315lbs. (37,792kg.)
	R	25,115lbs. (11,392kg.)	58,200lbs. (26,400kg.)	83,315lbs. (37,792kg.)
MACHINE LESS COUNTERWEIGHT, BOXES, BEAMS, FLOATS & POINT SECTION	F	23,985lbs. (10,880kg.)	56,290lbs. (25,533kg.)	80,275lbs. (36,413kg.)
	R	32,605lbs. (14,790kg.)	47,670lbs. (21,623kg.)	80,275lbs. (36,413kg.)
MACHINE LESS COUNTERWEIGHT, BOXES, BEAMS, FLOATS & COMPLETE BOOM	F	19,760lbs. (8,963kg.)	55,055lbs. (24,973kg.)	74,815lbs. (33,936kg.)
	R	34,730lbs. (15,753kg.)	40,085lbs. (18,183kg.)	74,815lbs. (33,936kg.)

F— DENOTES BOOM EXTENDED FORWARD

R— DENOTES BOOM EXTENDED REARWARD

NOTE: Any deviation from the equipment listed above will affect the weights shown proportionately and compensation must be made accordingly.

POWER PLANT DATA (CARRIER)

	MAKE	MODEL	FUEL	CYL.	BORE & STROKE	RATED H.P.
TRUCK CARRIER	Cummins	NTC-290	Diesel	6	5 1/2" (140mm) x 6" (152mm)	290 @ 2,100
	GM	8V-71	Diesel	8	4 1/2" (108mm) x 5" (127mm)	318 @ 2,100

PERFORMANCE DATA (CARRIER)

Number of Travel Speeds Standard— 15 Forward and 3 Reverse
Turning Radius — 49Ft. (On Center Outside Front Tire)

ENGINE MAKE & MODEL	CARRIER EQUIPPED WITH 5 SPEED MAIN & 4 SPEED AUXILIARY TRANS.			
	LOW RANGE*		HIGH RANGE**	
	GRADE	SPEED	GRADE	SPEED
Cummins NTC-290	40.0	1.4MPH (2.25KmPH)	1.0	44.7MPH (71.92KmPH)
GM 8V-71	40.0	1.3MPH (2.09KmPH)	1.3	44.7MPH (71.92KmPH)

NOTE: The above is based on a machine equipped with a 5 speed Fuller main transmission and a Spicer (4) speed auxiliary transmission and 14.00" x 20" (35.6cm x 50.8cm) tires.

Maximum engine torque & machine weighing 127,525 lbs. (57,845kg.)
Maximum engine speed & machine weighing 74,815 lbs. (33,936kg.) } These weights apply to a standard equipped machine.

DESCRIPTIVE DATA (CARRIER)

Basic, Standard and Optional Components

FRAME: Carrier frame of heavy-duty, all welded construction. Two main members, each of deep box section, are joined together by bumper and box section cross members. 100,000 P.S.I. (7,030kg/cm²) steel is used in higher stressed members of frame. Tow hooks, front and rear.

SWING CIRCLE: A large diameter, single row, antifriction bearing assembly with integral swing gear. Bearing is well sealed with close fitting races, eliminating rocking motion of rotating assembly on carrier.

OUTRIGGER BOXES: The two outrigger boxes are fabricated from steel plates. Boxes are of the pin-on design for ease of removal.

OUTRIGGER BEAMS: four, box section extensible beams mounted two in each outrigger box are fabricated of 100,000 P.S.I. (7,030kg/cm²) steel.

HYDRAULIC OUTRIGGERS: Independent control valves for extending each beam and for lowering each hydraulic jack with T-1 steel floats provide precise leveling of truck. Control valve station on carrier at ground level.

REMOTE CONTROLLED CARRIER: Controls provided in cab of rotating assembly that can start, steer, brake, clutch, shift transmission (low and reverse) and control throttle is available.

FRONT TANDEM SUSPENSION: Front tandem axles are suspended by two alloy steel underslung equalizers, direct-connected to chassis frame. Two radius rods on each axle maintain proper positioning of axles.

FRONT AXLES: Two tubular-high clearance type, rating 27,400# (12,429kg.) each. Wheels are mounted on roller bearings.

REAR AXLES: Planetary drive with inter-axle differential. No spin differential is available.

REAR TANDEM SUSPENSION: Rear tandem axles are suspended by two alloy steel underslung equalizers, direct-connected to chassis frame. One torque rod on each axle maintains proper positioning of axles.

WHEELS: Heavy-duty 20" (50.8cm) x 10.0" (25.4cm) rims, four singles in front, four duals in rear, making a total of twelve wheels.

TIRES: Twelve 14.00" (35.6cm) x 20" (50.8cm) 20 ply rating.

FUEL CAPACITY: 85 Gal. (322 Liters)

FENDERS: Fenders are of the combination fender-deck design, providing a flat full width-full length walkway.

SERVICE BRAKES: Air brakes on all wheels. Front brake shoes are 17¼" (44.0cm) diameter x 4" (10.2cm) wide. Rear brake shoes are 16½" (41.9cm.) diameter x 7" (17.8cm.) wide. The carrier engine is equipped with a Jacobs engine brake as standard equipment.

SAFETY BRAKES: Spring set, air released brake cylinders on rear axles lock brakes in case of air loss or for parking. An auxiliary air reservoir and controls allow brakes to be released and reapplied several times after loss of regular air supply.

OPERATING BRAKE: A hand-operated air valve applies the service brakes when required for holding the machine when operating.

STEERING: Hydraulic steering with Ross roller mounted cam and twin lever type steering gear powered by engine driven pump, double acting cylinder and hydraulic control valve built into draglink.

MAIN TRANSMISSION: Fuller with five speeds forward and one reverse.

AUXILIARY TRANSMISSION: Spicer with four speeds giving 20 speeds forward and three reverse.

CLUTCH: Lipe Rollway 14" (35.6cm.) 2-DLB.

CAB: One-man type, with visor type top. All steel construction, amply ventilated for summer or winter. Adjustable seat. Instrument cluster contains speedometer, odometer, ammeter, oil pressure gauge, water temperature gauge, fuel gauge and pilot light. Instrument panel contains air gauge, light switches, ignition and starter switch.

BUMPER COUNTERWEIGHT: One piece, required when using long boom or boom and jib combination. See "boom and jib data."

MISCELLANEOUS ACCESSORIES: Inflating hose and tire pressure gauge, boom rest, rear view mirrors, two beam headlights, stop and tail light, front, middle and rear marker lights and parking lights, electric directional signals, spare wheel with or without tire, air or electric windshield wipers, air and electric dual horns, fender flaps, heater and defrosters.

POWER PLANT DATA (ROTATOR)

ROTATING ASSEMBLY		
MAKE	CUMMINS	G.M.
MODEL	N855-P160	4081
FUEL	Diesel	Diesel
CYL.	6	4
BORE & STROKE	5-1/2" (140mm) x 6" (152mm)	4 1/4" (108mm) x 5" (127mm)
GROSS RATED HP	160 @ 1800	150 @ 2300
TORQUE CONV. HP @ GOVERNED R.P.M.	135 @ 1800	130 @ 1800

LINE PULL	LINE SPEED*	
	1st Layer on Drum 16" (40.6cm) Pitch Dia.	6th Layer On Drum 23 1/2" (59.7cm) Pitch Dia.
16,800lbs. (7,620kg)	177fpm (54mpm)	175fpm (53mpm)
13,500lbs. (6,124kg)	205fpm (62mpm)	220fpm (67mpm)
10,000lbs. (4,536kg)	237fpm (72mpm)	265fpm (81mpm)
6,000lbs. (2,722kg)	279fpm (85mpm)	367fpm (112mpm)
2,000lbs. (907kg)	323fpm (98mpm)	456fpm (139mpm)

* - Third Drum Speeds Are Approximately 88% of the speeds indicated in the Chart.

CLUTCH AND BRAKE DATA

FUNCTION	CLUTCHES				BRAKES			
	Type	Width	Diameter	Area	Type	Width	Diameter	Area
Main Hoist	Band	5" (12.7cm)	24" (61.0cm)	337 Sq. In. (2,174 Sq. cm)	Band	4 1/2" (11.4cm)	30" (76.2cm)	338 Sq. In. (2,181 Sq. cm)
Auxiliary Hoist	Band	5" (12.7cm)	24" (61.0cm)	337 Sq. In. (2,174 Sq. cm)	Band	4 1/2" (11.4cm)	30" (76.2cm)	338 Sq. In. (2,181 Sq. cm)
3rd Drum Hoist	Band	5" (12.7cm)	24" (61.0cm)	337 Sq. In. (2,174 Sq. cm)	Band	4 1/2" (11.4cm)	30" (76.2cm)	338 Sq. In. (2,181 Sq. cm)
Boom Hoist	Band	5" (12.7cm)	24" (61.0cm)	337 Sq. In. (2,174 Sq. cm)	Band	4 1/2" (11.4cm)	30" (76.2cm)	338 Sq. In. (2,181 Sq. cm)
Swing	2 Shoe	4 1/2" (11.4cm)	24" (61.0cm)	290 Sq. In. (1,871 Sq. cm)	Band	4 1/2" (11.4cm)	30" (76.2cm)	338 Sq. In. (2,181 Sq. cm)
Boom Lowering	Band	4 1/2" (11.4cm)	20" (50.8cm)	248 Sq. In. (1,600 Sq. cm)				
Load Lowering	Band	4 1/2" (11.4cm)	20" (50.8cm)	248 Sq. In. (1,600 Sq. cm)	Band	4" (10.2cm)	26" (66.0cm)	240 Sq. In. (1,548 Sq. cm)
*Front Drum	Band	5" (12.7cm)	24" (61.0cm)	337 Sq. In. (2,174 Sq. cm)	Band	4 1/2" (11.4cm)	30" (76.2cm)	338 Sq. In. (2,181 Sq. cm)

Full width front drum with planetary load lowering.

LAGGING DATA

Lagging Location	Usage	Lagging P.D.	Lagging Width	Type of Lagging	Eff. Capy. 1st Layer	Maximum Capy. & Layers	Wire Rope Size
L.H. Front	Third Drum	14" (35.6cm)	11" (27.9cm)	Smooth	45' (13.7m)	464' (141.4m) In 7	3/4" (19.1mm)
R.H. Front	Crane Auxiliary Hoist	16" (40.6cm)	14-1/2" (36.8cm)	Smooth	71' (21.6m)	569' (173.4m) In 6	3/4" (19.1mm)
R.H. Front	Dragline Drag	16-1/8" (41.0cm)	14-1/2" (36.8cm)	Grooved	49' (14.9m)	—	7/8" (22.2mm)
L.H. Rear	Dragline Hoist	16" (40.6cm)	14-1/2" (36.8cm)	Grooved	48' (14.6m)	—	3/4" (19.1mm)
L.H. Rear	Main Hoist	16" (40.6cm)	14-1/2" (36.8cm)	Smooth	71' (21.6m)	569' (173.4m) In 6	3/4" (19.1mm)
L.H. Rear	Clamshell Closing	16" (40.6cm)	14-1/2" (36.8cm)	Grooved	48' (14.6m)	—	3/4" (19.1mm)
R.H. Front	Clamshell Holding	16" (40.6cm)	14-1/2" (36.8cm)	Grooved	48' (14.6m)	—	3/4" (19.1mm)
R.H. Rear	Boom Hoist	12" (30.5cm)	8-1/2" (21.6cm)	Smooth	28' (8.5m)	372' (113.4m) In 8	3/4" (19.1mm)
Full Width Front Drum	Main or Aux. Hoist	16" (40.6cm)	24-1/8" (61.3cm)	Smooth	123' (37.5m)	959' (292.3m) In 6	3/4" (19.1mm)

MISCELLANEOUS DATA (ROTATOR)

Swing Speed	3.4 RPM	Fuel Capacity 210 Gallons (795 Liters)
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DESCRIPTIVE DATA (ROTATING ASSEMBLY)

Basic Standard and Optional Components

ROTATING BASE: Fabricated with integral machinery frames. Fuel tank built in rear.

SHAFTING: All shafting heat treated alloy steel ground to size. Involute splines used extensively.

VERTICAL SWING SHAFT: The vertical swing shaft and pinion is one piece, mounted on anti-friction bearings.

HORIZONTAL SWING SHAFT: This shaft is mounted on anti-friction bearings, geared to the front and rear drum shafts. It supplies power to the vertical swing shaft through a bevel pinion.

SWING BRAKE: A swing brake operates on the outside of the front swing clutch housing for use as a lock brake.

SWING BRAKE WITH SNUBBER: Same as swing brake except an additional control valve on swing lever provided for momentarily holding while setting loads.

JACK SHAFT: This shaft is mounted on ball bearings, and supplies power through a pinion gear to the power lowering shaft. Lube oil pump is belt driven from right hand end of jack shaft.

FRONT DRUM SHAFT: Supported by self-aligning anti-friction bearings and ball bearings. Mounted on the right hand end of this shaft is a swing clutch geared to the horizontal swing shaft. The right hand drum is a split lagging design, either smooth or grooved. All drums are mounted on ball bearings. Refer to "lagging data" table for specifications.

REAR DRUM SHAFT: Supported by self-aligning anti-friction and ball bearings. Mounted on the right hand end of this shaft is a swing clutch geared to the horizontal swing shaft. The right hand or boom hoist drum is solid-type design. The left hand drum is a split lagging design, either smooth or grooved. All drums are mounted on ball bearings. Refer to "lagging data" table for specifications.

HOIST BRAKES: Are external contracting friction band type, mechanically operated by pedals mounted on anti-friction bearings for maximum ease of operation. Hoist brakes have a foot-controlled lock.

CLUTCHES: All clutches are air actuated. All clutches are of the internal expanding friction band type with the exception of the swing clutches which are of the internal two shoe design.

BOOM HOIST: The boom hoist located on the rear drum shaft is of the spur gear and chain design with power up and power down control. Hoisting control is through and air actuated clutch with a spring set, air released holding brake. The brake automatically releases when hoisting or lowering. The lowering is controlled through an air actuated clutch mounted on the power lowering shaft and chain connected to the boom hoist drum. Lowering speed is reduced considerably resulting in a very smooth, precision, lowering operation. A ratchet and pawl device is supplied for added safety.

BOOMS AND JIBS: Extensible type with tubular chords—refer to boom and jib data.

BOOM STOP: Telescopic with or without automatic air cut-off of boom hoist clutch.

FAIRLEAD: Deck mounted, full revolving.

BOOM SUSPENSION: Crossover with 12 parts of line and 12 parts with mid-point suspension depending on boom length.

THIRD DRUM: One piece high capacity lagging running on ball bearings, located at left hand side of front drum shaft. Actuated by air operated clutch and brake. Refer to "lagging data" table for specifications.

FULL WIDTH FRONT DRUM: High capacity drum located on the front shaft, mounted on ball bearings and equipped with planetary controlled load lowering. Refer to "lagging data" table for specifications. (Third drum not available with this equipment.)

POWER LOWERING SHAFT: This shaft is located behind the rear hoist drum shaft and accommodates the power boom lowering and power load lowering.

POWER LOAD LOWERING: The power load lowering, air actuated clutch is chain connected to the left hand rear main hoist drum. The load lowering speed is reduced considerably, resulting in a very smooth precision, lowering operation.

COUNTERWEIGHT: Two piece counterweight mounted at rear of rotating frame. Readily removable for weight reduction of machine for transporting.

COUNTERWEIGHT REMOVAL EQUIPMENT: Includes sheaves in base section of boom, lifting slings, and boom stop. Hoist cable over sheaves in boom base is used to load or unload counterweight from auxiliary truck. Gantry power up and down feature is used to position counterweight with slings provided.

GANTRY: The gantry consists of a basic low gantry to which is attached a high gantry having telescopic back legs with three set positions. Gantry can be (1) pinned in low position at cab height for traveling with low clearance, (2) pinned in mid-position for traveling with boom suspended over rear of carrier, and (3), raised to full height for machine operation.

CONTROLS: All controls are air except hoist brakes which are mechanical.

OPERATOR'S CAB: Machine equipped with environmental operator's cab lined with sound barrier and deadening material, cuts noise level by an estimated 50 percent. Cab can be heated or air conditioned. Controls are grouped for maximum operator convenience, comfort and efficiency. Side and front windows slide up and down for ventilation. Numerous hatches and doors are provided for access to machinery and power plant. Hoist drums are not covered.

GEARING AND CHAIN DRIVES: All gearing, except rotating pinion and gear, is fully enclosed, running in oil with pump circulation for positive lubrication. The four chain sprockets for boom hoist and load lowering device require hand lubrication. Power take-off chain drive is fully enclosed, running in an oil bath.

MISCELLANEOUS ACCESSORIES: Ball and hook, hook block, electric signal horn, running board (short hook on type).

POWER TAKE-OFF: Disconnect clutch, precision roller chain.

**MAXIMUM LENGTH BOOM OR BOOM AND JIB COMBINATION THAT CAN BE HANDLED
HORIZONTALLY WITH OR WITHOUT BUMPER COUNTERWEIGHT AS INDICATED**

20,430lbs. [9,267kg] Counterweight			
Over Rear With OR.		Over Side With OR.	
L/B CWT.	W/B CWT.	L/B CWT.	W/B CWT.
200' (61.0m)	200' (61.0m)	190' (57.9m)	200' (61.0m)
170' (51.8m) + 20' (6.1m)	200' (61.0m) + 20' (6.1m)	170' (51.8m) + 20' (6.1m)	170' (51.8m) + 20' (6.1m)
170' (51.8m) + 30' (9.1m)	190' (57.9m) + 30' (9.1m)	160' (48.8m) + 30' (9.1m)	170' (51.8m) + 30' (9.1m)
160' (48.8m) + 40' (12.2m)	190' (57.9m) + 40' (12.2m)	160' (48.8m) + 40' (12.2m)	160' (48.8m) + 40' (12.2m)
160' (48.8m) + 50' (15.2m)	180' (54.9m) + 50' (15.2m)	150' (45.7m) + 50' (15.2m)	160' (48.8m) + 50' (15.2m)
150' (45.7m) + 60' (18.3m)	180' (54.9m) + 60' (18.3m)	150' (45.7m) + 60' (18.3m)	150' (45.7m) + 60' (18.3m)
Over Rear Less OR.		Over Side Less OR.	
L/B CWT.	W/B CWT.	L/B CWT.	W/B CWT.
150' (45.7m)	170' (51.8m)	130' (39.6m)	140' (42.7m)
120' (36.6m) + 20' (6.1m)	150' (45.7m) + 20' (6.1m)	100' (30.5m) + 20' (6.1m)	110' (33.5m) + 20' (6.1m)
120' (36.6m) + 30' (9.1m)	140' (42.7m) + 30' (9.1m)	100' (30.5m) + 30' (9.1m)	100' (30.5m) + 30' (9.1m)
110' (33.5m) + 40' (12.2m)	140' (42.7m) + 40' (12.2m)	100' (30.5m) + 40' (12.2m)	100' (30.5m) + 40' (12.2m)
110' (33.5m) + 50' (15.2m)	130' (39.6m) + 50' (15.2m)	90' (27.4m) + 50' (15.2m)	100' (30.5m) + 50' (15.2m)
100' (30.5m) + 60' (18.3m)	130' (39.6m) + 60' (18.3m)	90' (27.4m) + 60' (18.3m)	90' (27.4m) + 60' (18.3m)
With 30,930lbs. [14,030kg] Counterweight			
Over Rear With OR.		Over Side With OR.	
L/B CWT.	W/B CWT.	L/B CWT.	W/B CWT.
200' (61.0m)	200' (61.0m)	200' (61.0m)	200' (61.0m)
190' (57.9m) + 20' (6.1m)	200' (61.0m) + 20' (6.1m)	180' (54.9m) + 20' (6.1m)	190' (57.9m) + 20' (6.1m)
180' (54.9m) + 30' (9.1m)	200' (61.0m) + 30' (9.1m)	180' (54.9m) + 30' (9.1m)	180' (54.9m) + 30' (9.1m)
180' (54.9m) + 40' (12.2m)	200' (61.0m) + 40' (12.2m)	170' (51.8m) + 40' (12.2m)	180' (54.9m) + 40' (12.2m)
170' (51.8m) + 50' (15.2m)	200' (61.0m) + 50' (15.2m)	170' (51.8m) + 50' (15.2m)	180' (54.9m) + 50' (15.2m)
170' (51.8m) + 60' (18.3m)	190' (57.9m) + 60' (18.3m)	160' (48.8m) + 60' (18.3m)	170' (51.8m) + 60' (18.3m)

OR. - Outriggers
L/B CWT. - Less Bumper Counterweight
W/B CWT - With Bumper Counterweight

BOOM AND JIB DATA

Boom, Tubular Pin Connected		Jib, Tubular Pin Connected	
Type Service	Crane - Drag - Clamshell	Basic Length	20' [2 1/2"] (64.8cm) x 3 1/2" (87.6cm sec)
Suspension	Cross Over and Pendants	Max. Length	60' (18.3m)
Gantry	High Back Hitch (Telescoping Type)	Chord Size	2 1/2" (64mm) O.D.
Quan. Sheaves at Point Shaft	5	Chord Material	100,000 P.S.I. (7,030kg/cm ²) Yield
Convertibility	Crane - Dragline - Clamshell	Quan. Sheaves at Point	One (1)
Dia. Point Sheaves	1 1/2" (40.0cm) P.D. - 3/4" (19.1mm) Cable	P.D. Point Sheave	1 1/2" (40cm) P.D. [3/4" (19.1mm) Cable]
Basic Boom Length	50' (15.2m)	Capacity —	20'-0" (6.1m) 13 Ton (11.8 Ton)
Type Chords	3 1/4" (83mm) O.D. 100,000 P.S.I. (7,030kg/cm ²) Steel	30'-0" (9.1m)	10 Ton (9.1 Ton)
Extensions	10' (3.05m), 20' (6.1m), 30' (9.1m) and 40' (12.2m) straight 60 1/4" (153cm) x 65 1/4" (166cm) sec.	40'-0" (12.2m)	7 Ton (6.4 Ton)
Max. Boom Length	Crane 200' (61.0m) Drag. & Clam 60' (18.3m)	50'-0" (15.2m)	5 Ton (4.5 Ton)
		60'-0" (18.3m)	4 Ton (3.6 Ton)

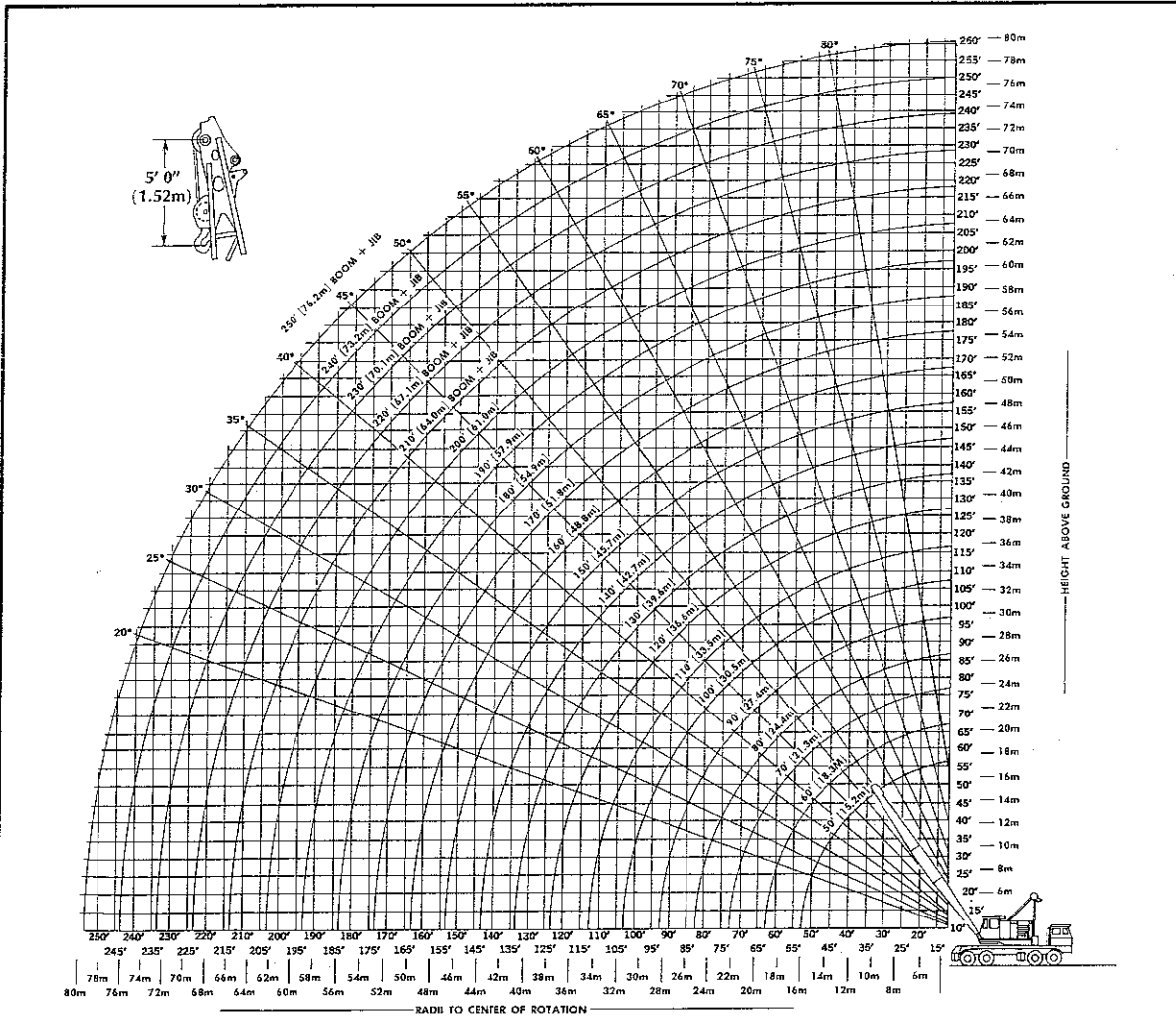
BOOM HOIST SUSPENSION DATA

*Boom Length	Reeving Required	Mid-Point Suspension Location
Up thru 150' (45.7m)	12 Part Crossover	None
160' (48.8m) thru 180' (54.9m)	12 Part w/Mid-Point Suspension	90' (27.4m) From Boom Foot Pin
190' (57.9m) & 200' (61.0m)	12 Part w/Mid-Point Suspension	100' (30.5m) From Boom Foot Pin

*Boom length determines suspension required. Jib Does not affect requirement.

Time Required to Raise Or Lower A 50' (15.2m) Boom From 20° Above Horizontal To 70° Above Horizontal With 12 Part Boom Hoist Reeving	to Raise	To Lower
		55 Sec.

CRANE WORKING RANGES

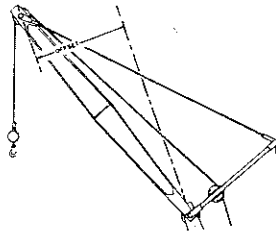


For Boom or jib specifications, descriptions, maximum lengths and applications, refer to boom and jib Data Chart.

Recommended Wire Rope Reeving For Hook Blocks

Load in Pounds	No. Part Line
Over 16,800lbs. (7,620kg)	2
Over 33,600lbs. (15,240kg)	3
Over 50,400lbs. (22,860kg)	4
Over 67,200lbs. (30,480kg)	5
Over 84,000lbs. (38,100kg)	6
Over 100,800lbs. (45,720kg)	7
Over 117,600lbs. (53,340kg)	8
Over 134,400lbs. (60,960kg)	9
Over 151,200lbs. (68,580kg)	10
Over 168,000lbs. (76,200kg)	11

Based upon 3/4" dia. wire rope with a minimum breaking strength of 58,800 lbs.

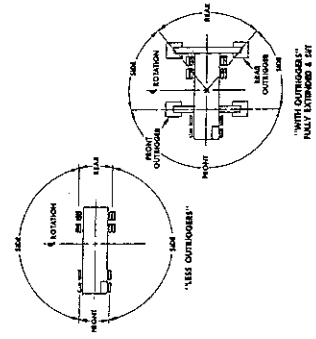


Heavy Duty jib 25 1/2" (64.8cm) x 34 1/2" (87.6cm) Sec.			
Jib Length	Rating	Offset	Effective Weight
20' (6.1m)	13 Ton (11.8 Ton)	6'-2" (1.88m)	2,055lbs. (932kg.)
30' (9.1m)	10 Ton (9.1 Ton)	11'-3" (3.43m)	2,650lbs. (1,202kg.)
40' (12.2m)	7 Ton (6.4 Ton)	16'-2" (4.93m)	3,360lbs. (1,524kg.)
50' (15.2m)	5 Ton (4.5 Ton)	21'-1" (6.43m)	4,010lbs. (1,819kg.)
60' (18.3m)	4 Ton (3.6 Ton)	26'-0" (7.93m)	4,865lbs. (2,207kg.)

Jib capacities are approximately the same as Boom capacities at any given radius, but not to exceed the rating listed above. Effective Jib weight to be subtracted from Boom capacity chart if load is raised on Boom point when Jib is assembled on Boom.

CRANE LIFTING CAPACITIES (METRIC)

81.6 Tons Class 4.6-224		Maximum Counterweight: Outriggers Extended and set. On rubber tires. 14,030 kg. 9,265 kg.																							
Boom		Outriggers Extended And Set				On Tires				Outriggers Extended And Set				On Tires				Outriggers Extended And Set				On Tires			
Length	Radius	Height	Angle	Boom		Outriggers Extended And Set		On Tires		Outriggers Extended And Set		On Tires		Outriggers Extended And Set		On Tires		Outriggers Extended And Set		On Tires		Outriggers Extended And Set		On Tires	
				Length	Radius	Radius	Height	Angle	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side
15.24	4.6	16.8	75.9	8	37.4	75.8	13,225	15,936	13,225	15,936	13,225	15,936	13,225	15,936	13,225	15,936	13,225	15,936	13,225	15,936	13,225	15,936	13,225	15,936	
	6	15.4	70.4	10	36.9	71.3	22,225	24,560	22,225	24,560	22,225	24,560	22,225	24,560	22,225	24,560	22,225	24,560	22,225	24,560	22,225	24,560	22,225	24,560	
	8	15.5	62.1	12	36.2	69.0	4,825	6,125	4,825	6,125	4,825	6,125	4,825	6,125	4,825	6,125	4,825	6,125	4,825	6,125	4,825	6,125	4,825	6,125	
	10	17.2	43.2	14	35.3	55.6	14,575	17,000	14,575	17,000	14,575	17,000	14,575	17,000	14,575	17,000	14,575	17,000	14,575	17,000	14,575	17,000	14,575	17,000	
	12	17.1	30.6	16	33.3	42.7	2,725	3,425	2,725	3,425	2,725	3,425	2,725	3,425	2,725	3,425	2,725	3,425	2,725	3,425	2,725	3,425	2,725	3,425	
	14	15.7	22.1	18	29.5	34.7	7,650	9,275	7,650	9,275	7,650	9,275	7,650	9,275	7,650	9,275	7,650	9,275	7,650	9,275	7,650	9,275	7,650	9,275	
	16	19.9	16.3	20	26.6	31.1	6,450	7,825	6,450	7,825	6,450	7,825	6,450	7,825	6,450	7,825	6,450	7,825	6,450	7,825	6,450	7,825	6,450	7,825	
	18	17.9	11.1	22	22.8	26.6	5,275	6,325	5,275	6,325	5,275	6,325	5,275	6,325	5,275	6,325	5,275	6,325	5,275	6,325	5,275	6,325	5,275	6,325	
	20	16.5	7.5	24	19.8	23.4	4,350	5,225	4,350	5,225	4,350	5,225	4,350	5,225	4,350	5,225	4,350	5,225	4,350	5,225	4,350	5,225	4,350	5,225	
	22	12.3	34.2	26	17.2	16.2	13,275	15,775	13,275	15,775	13,275	15,775	13,275	15,775	13,275	15,775	13,275	15,775	13,275	15,775	13,275	15,775	13,275	15,775	
	24	8.4	20.6	28	14.0	12.2	9,600	11,700	9,600	11,700	9,600	11,700	9,600	11,700	9,600	11,700	9,600	11,700	9,600	11,700	9,600	11,700	9,600	11,700	
	26	6.4	15.1	30	11.2	8.6	7,850	9,600	7,850	9,600	7,850	9,600	7,850	9,600	7,850	9,600	7,850	9,600	7,850	9,600	7,850	9,600	7,850	9,600	
	28	5.1	11.1	32	8.6	6.1	6,850	8,325	6,850	8,325	6,850	8,325	6,850	8,325	6,850	8,325	6,850	8,325	6,850	8,325	6,850	8,325	6,850	8,325	
	30	4.4	8.4	34	6.6	4.6	5,850	7,125	5,850	7,125	5,850	7,125	5,850	7,125	5,850	7,125	5,850	7,125	5,850	7,125	5,850	7,125	5,850	7,125	
	32	3.7	6.1	36	5.1	3.6	4,850	5,825	4,850	5,825	4,850	5,825	4,850	5,825	4,850	5,825	4,850	5,825	4,850	5,825	4,850	5,825	4,850	5,825	
	34	3.1	4.6	38	4.1	3.0	3,850	4,625	3,850	4,625	3,850	4,625	3,850	4,625	3,850	4,625	3,850	4,625	3,850	4,625	3,850	4,625	3,850	4,625	
	36	2.6	3.6	40	3.4	2.6	2,850	3,425	2,850	3,425	2,850	3,425	2,850	3,425	2,850	3,425	2,850	3,425	2,850	3,425	2,850	3,425	2,850	3,425	
	38	2.1	2.8	42	2.8	2.1	1,850	2,225	1,850	2,225	1,850	2,225	1,850	2,225	1,850	2,225	1,850	2,225	1,850	2,225	1,850	2,225	1,850	2,225	
	40	1.7	2.1	44	2.1	1.7	850	1,025	850	1,025	850	1,025	850	1,025	850	1,025	850	1,025	850	1,025	850	1,025	850	1,025	
	42	1.4	1.6	46	1.6	1.4	350	425	350	425	350	425	350	425	350	425	350	425	350	425	350	425	350	425	
	44	1.1	1.1	48	1.1	1.1	150	185	150	185	150	185	150	185	150	185	150	185	150	185	150	185	150	185	
	46	0.8	0.8	50	0.8	0.8	50	60	50	60	50	60	50	60	50	60	50	60	50	60	50	60	50	60	
	48	0.6	0.6	52	0.6	0.6	20	25	20	25	20	25	20	25	20	25	20	25	20	25	20	25	20	25	
	50	0.5	0.5	54	0.5	0.5	10	12	10	12	10	12	10	12	10	12	10	12	10	12	10	12	10	12	
	52	0.4	0.4	56	0.4	0.4	5	6	5	6	5	6	5	6	5	6	5	6	5	6	5	6	5	6	
	54	0.3	0.3	58	0.3	0.3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	56	0.2	0.2	60	0.2	0.2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	58	0.1	0.1	62	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	60	0.1	0.1	64	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



NOTE: ...
 All capacities are in kilograms.
 All lengths, heights, and radii are in meters.
 Capacities per SAE Code J165
 Class Designation per U.S. Department of Commerce Standard.

CRANE LIFTING CAPACITIES

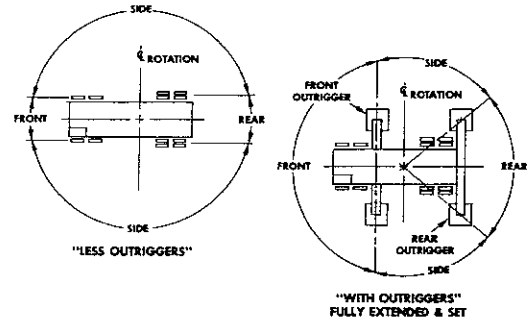
90 Ton Class 15-484														
Boom				Outriggers Extended and Set ±Side/Rear	On Tires		Boom				Outriggers Extended And Set ±Side/Rear	On Tires		
Length	Radius	Height	Angle		±Side	Rear	Length	Radius	Height	Angle		±Side	Rear	
50'	15'	55.1'	76.0	*180,000	65,175	74,950	120'	25'	124.6'	79.4	*89,800	31,250	37,275	
	20'	53.6'	70.0	*130,000	43,375	50,950		30'	123.5'	76.9	*74,000	24,225	29,275	
	25'	51.4'	63.7	102,000	32,100	38,200		35'	122.2'	74.5	58,650	19,500	23,825	
	30'	48.6'	57.2	75,000	25,175	30,300		40'	120.7'	72.0	47,875	16,100	19,875	
	35'	44.9'	50.0	59,000	20,525	24,925		45'	119.0'	69.5	40,250	13,525	16,900	
	40'	40.1'	42.1	48,400	17,175	21,025		50'	117.0'	66.9	34,525	11,500	14,550	
	45'	33.5'	32.6	40,900	14,650	18,075		60'	112.1'	61.6	26,575	8,575	11,100	
50'	23.3'	19.5	* 34,825	12,675	15,750	70'		106.1'	56.0	21,275	6,525	8,700		
60'	15'	65.4'	78.3	*170,000	65,025	74,775		80'	98.5'	50.0	17,525	5,025	6,925	
	20'	61.4'	73.4	*129,000	43,225	50,775		90'	89.1'	43.3	14,700	3,875	5,550	
	25'	62.4'	68.4	101,975	31,925	38,025		100'	77.1'	36.0	12,525	2,950	4,475	
	30'	60.1'	63.1	74,975	25,025	30,125		110'	60.7'	26.8	10,775	2,225	3,600	
	35'	57.3'	57.6	58,975	20,375	24,750		120'	32.7'	12.6	9,350	1,550	2,875	
	40'	53.7'	51.8	48,350	17,025	20,850		130'	30'	133.8'	78.0	*63,750	24,050	29,075
	45'	49.3'	45.4	40,825	14,500	17,900	35'		132.6'	75.7	*55,350	19,300	23,625	
50'	43.7'	38.2	35,200	12,525	15,575	40'	131.2'		73.4	47,775	15,875	19,675		
60'	25.0'	17.8	* 26,975	9,625	12,175	45'	129.6'		71.1	40,125	13,300	16,675		
70'	20'	74.5'	75.8	*122,200	43,125	50,650	50'		127.8'	68.8	34,375	11,275	14,325	
	25'	73.0'	71.6	* 98,600	31,775	37,875	60'		123.4'	63.9	26,400	8,350	10,850	
	30'	71.1'	67.2	74,950	24,850	29,950	70'		117.9'	58.9	21,100	6,300	8,450	
	35'	68.8'	62.7	58,900	20,175	24,550	80'		111.3'	53.6	17,325	4,775	6,675	
	40'	66.0'	58.0	48,250	16,800	20,625	90'		103.1'	47.9	14,500	3,625	5,300	
	45'	62.5'	53.0	40,700	14,250	17,650	100'		93.0'	41.7	12,300	2,700	4,225	
	50'	58.4'	47.7	35,050	12,275	15,325	110'		80.3'	34.5	10,550	1,925	3,350	
60'	47.1'	35.3	27,175	9,375	11,925	120'	63.0'		25.7	9,125	1,725	2,600		
70'	26.5'	16.5	21,975	7,350	9,525	130'	33.8'		12.1	7,925	1,350	1,950		
80'	20'	84.8'	77.6	*122,100	43,075	50,600	140'		30'	144.0'	78.8	*63,725	23,900	28,925
	25'	83.5'	73.9	* 98,500	31,700	37,800		35'	142.9'	76.7	*55,325	19,125	23,450	
	30'	81.9'	70.2	74,925	24,775	29,850		40'	141.6'	74.6	47,650	15,700	19,500	
	35'	79.9'	66.3	58,875	20,075	24,450		45'	140.1'	72.5	39,975	13,125	16,500	
	40'	77.5'	62.4	48,225	16,700	20,525		50'	138.4'	70.3	34,250	11,100	14,125	
	45'	74.6'	58.2	40,650	14,150	17,550		60'	134.4'	65.9	26,250	8,150	10,675	
	50'	71.3'	53.9	35,000	12,175	15,225		70'	129.5'	61.4	20,925	6,100	8,250	
	60'	62.6'	44.4	27,100	9,250	11,800		80'	123.5'	56.6	17,150	4,600	6,475	
	70'	50.1'	33.0	21,875	7,250	9,425		90'	116.2'	51.5	14,325	3,425	5,100	
	80'	27.9'	15.4	18,150	5,750	7,650		100'	107.4'	46.1	12,125	2,525	4,025	
	90'	20'	95.0'	79.0	*122,000	43,000		50,500	150'	110'	96.7'	40.1	10,375	1,700
25'		93.8'	75.8	* 98,400	31,575	37,650	120'	83.3'		33.2	8,925	1,500	2,400	
30'		92.4'	72.5	74,900	24,600	29,675	130'	65.3'		24.8	7,750	1,300	1,725	
35'		90.7'	69.1	58,825	19,900	24,250	140'	34.8'		11.6	6,725	1,100	1,500	
40'		88.6'	65.6	48,125	16,500	20,300	160'	30'		154.1'	79.6	*63,700	23,725	28,750
45'		86.1'	62.1	40,525	13,950	17,325		35'		153.1'	77.6	*55,300	18,950	23,275
50'		83.3'	58.4	34,850	11,950	15,000		40'		151.9'	75.7	47,575	15,500	19,275
60'		76.2'	50.6	26,925	9,025	11,550		45'		150.6'	73.7	39,850	12,925	16,275
70'		66.6'	41.8	21,675	7,000	9,150		50'		149.0'	71.7	34,100	10,875	13,900
80'		53.0'	31.0	17,925	5,500	7,400		60'		145.3'	67.6	26,075	7,925	10,450
90'		29.2'	14.5	15,125	4,350	6,025		70'		140.8'	63.4	20,750	5,850	8,025
100'	25'	104.1'	77.2	* 89,875	31,425	37,475		80'	135.3'	59.1	16,950	4,350	6,225	
	30'	102.9'	74.3	* 74,100	24,450	29,500		90'	128.7'	54.5	14,100	3,175	4,850	
	35'	101.3'	71.3	58,750	19,725	24,075		100'	120.9'	49.7	11,900	2,225	3,775	
	40'	99.5'	68.2	48,025	16,325	20,125		110'	111.6'	44.4	10,150	1,700	2,875	
	45'	97.3'	65.1	40,400	13,775	17,150	120'	100.3'	38.7	8,700	1,400	2,100		
	50'	94.8'	61.9	34,700	11,775	14,800	130'	86.2'	32.1	7,500	1,200	1,700		
	60'	88.7'	55.2	26,775	8,825	11,375	140'	67.4'	23.9	6,475	1,000	1,400		
	70'	80.7'	47.8	21,525	6,800	8,975	150'	35.8'	11.2	* 5,225	800	1,100		
	80'	70.3'	39.5	17,775	5,300	7,200	160'	35'	163.4'	78.4	*90,350	34,000	41,500	
	90'	55.7'	29.4	14,950	4,150	5,850		40'	162.2'	76.6	*44,550	16,500	20,500	
	100'	30.4'	13.8	12,775	3,250	4,775		45'	161.0'	74.7	39,775	14,500	18,275	
110'	25'	114.4'	78.4	* 89,850	31,300	37,325		50'	159.5'	72.9	34,000	12,925	16,275	
	30'	113.2'	75.7	* 74,050	24,275	29,325		60'	156.1'	69.1	25,925	9,500	12,500	
	35'	111.8'	73.0	58,675	19,525	23,875		70'	151.9'	65.2	20,575	7,200	9,500	
	40'	110.2'	70.3	47,900	16,125	19,925		80'	146.8'	61.1	16,775	5,500	7,500	
	45'	108.2'	67.5	40,275	13,550	16,925		90'	140.8'	57.0	13,900	4,200	5,700	
	50'	106.0'	64.6	34,550	11,525	14,575		100'	133.8'	52.6	11,700	3,500	4,800	
	60'	100.6'	58.7	26,600	8,600	11,125		110'	125.5'	48.0	9,925	2,800	3,800	
	70'	93.8'	52.4	21,300	6,550	8,725		120'	115.6'	42.9	8,475	2,200	3,000	
	80'	85.0'	45.5	17,550	5,050	6,950	130'	103.8'	37.4	7,275	1,800	2,500		
	90'	73.8'	37.6	14,725	3,900	5,575	140'	89.1'	31.0	6,250	1,400	1,900		
	100'	58.3'	28.0	12,550	2,975	4,500	150'	69.5'	23.1	5,200	1,100	1,500		
110'	31.6'	13.1	10,800	2,250	3,625	160'	36.8'	10.9	* 4,200	700	1,000			

Maximum Counterweight: Outriggers Extended and set30,930 lbs.
 On rubber tires.....20,430 lbs.

Boom Length	Boom			Outriggers Extended And Set †Side/Rear	On Tires		Capacities Below Include Jib — See Jib Data			Capacities Below Include Jib — See Jib Data		
	Radius	Height	Angle		†Side	Rear	Boom Plus Jib		Outriggers Extended And Set †Side/Rear	Boom Plus Jib		Outriggers Extended And Set †Side/Rear
	Length	Load Radius	Length				Load Radius					
170'	35'	173.5'	79.1	*50,325			210' (190' + 20')	50'	26,000	230' (200' + 30')	60'	20,000
	40'	172.5'	77.4	*44,525				60'	25,075		70'	19,625
	45'	171.3'	75.7	39,600				70'	19,675		80'	15,700
	50'	169.9'	73.9	33,800				80'	15,850		90'	12,625
	60'	166.7'	70.4	25,700				90'	12,950		100'	10,325
	70'	162.8'	66.7	20,350				100'	10,600		110'	8,475
	80'	158.1'	63.0	16,525				110'	8,725		120'	6,950
	90'	152.6'	59.2	13,650				120'	7,200		130'	5,650
	100'	146.1'	55.2	11,425				130'	5,925		140'	4,575
	110'	138.6'	50.9	9,650				140'	4,850		150'	3,650
	120'	129.8'	46.5	8,200				150'	3,925		160'	2,775
	130'	119.5'	41.6	7,000				160'	3,100		170'	2,000
	140'	107.1'	36.2	5,975				170'	2,300			
	150'	91.8'	30.1	5,100				180'	1,625			
	160'	71.5'	22.4	4,175								
	170'	37.7'	10.6	* 3,125								
	180'	35'	183.7'	79.7	*50,300				220' (200' + 20')		50'	25,975
40'		182.7'	78.1	*44,500			60'	25,050		80'	14,000	
45'		181.6'	76.5	39,475			70'	19,650		90'	12,600	
50'		180.3'	74.8	33,650			80'	15,725		100'	10,300	
60'		177.3'	71.5	25,550			90'	12,700		110'	8,450	
70'		173.6'	68.1	20,175			100'	10,350		120'	6,925	
80'		169.3'	64.6	16,350			110'	8,500		130'	5,625	
90'		164.1'	61.1	13,475			120'	6,950		140'	4,550	
100'		158.2'	57.3	11,250			130'	5,675		150'	3,625	
110'		151.3'	53.5	9,450			140'	4,600		160'	2,750	
120'		143.3'	49.4	8,000			150'	3,675		170'	1,975	
130'		134.0'	45.1	6,800								
140'		123.2'	40.4	5,775								
150'		110.3'	35.2	4,900								
160'		94.4'	29.2	4,125								
170'		73.5'	21.8	3,100								
180'		38.7'	10.3	* 2,250								
190'	40'	192.9'	78.7	*42,425						250' (200' + 50')	70'	10,000
	45'	191.9'	77.2	*37,125				80'	10,000		90'	10,000
	50'	190.7'	75.6	*31,825				100'	10,000		110'	8,425
	60'	187.8'	72.5	25,375				120'	6,900		130'	5,600
	70'	184.4'	69.3	19,975				140'	4,525		150'	3,600
	80'	180.3'	66.1	16,125				160'	2,725		170'	1,950
	90'	175.5'	62.7	13,250								
	100'	169.9'	59.3	11,025								
	110'	163.5'	55.7	9,250								
	120'	156.2'	51.9	7,775								
	130'	147.8'	48.0	6,575								
	140'	138.1'	43.8	5,550								
	150'	126.8'	39.3	4,650								
	160'	113.4'	34.2	3,900								
	170'	97.0'	28.4	3,225								
	180'	75.4'	21.2	2,225								
	200'	40'	203.1'	79.3	*42,400							
45'		202.1'	77.8	*37,100								
50'		201.0'	76.4	*31,800								
60'		198.3'	73.4	25,100								
70'		195.0'	70.4	19,700								
80'		191.1'	67.3	15,875								
90'		186.6'	64.2	13,000								
100'		181.4'	61.0	10,775								
110'		175.5'	57.6	9,000								
120'		168.7'	54.2	7,525								
130'		161.0'	50.5	6,325								
140'		152.2'	46.7	5,300								
150'		142.1'	42.6	4,425								
160'		130.4'	38.2	3,650								
170'		116.5'	33.3	2,975								
180'		99.5'	27.7	2,200								

†-Indicates that side is the least stable charted direction.

DIAGRAMMATIC DEFINITION OF "SIDE", "REAR", OR "FRONT" AS USED ON CAPACITY CHARTS.



Capacities per SAE Code J765
 Class Designation per U.S. Department of Commerce Standards.

THIS CHART IS BASED UPON:

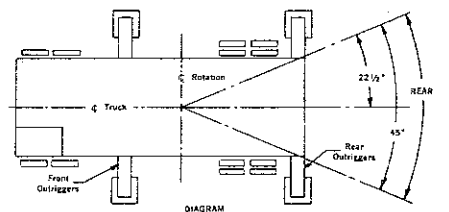
1. Loads marked by * are the maximum loads permitted by the structural strength of the parts and are not based upon the stability of the machine.
2. All other loads are based upon the stability of the machine, and do not exceed 85% of the tipping loads in the least stable direction.
3. Machine to be level on firm solid support; shock and side loads are to be prevented.
4. All hook blocks; lifting tackle, and jib attachments are considered a part of the load to be lifted.
5. Loads must not be lifted or handled over the front of the machine — See Diagram.
6. "On Tires" capacities are not recommended for traveling (Refer to Lima for travel load ratings).
7. Exceeding the capacities shown on this chart or altering the counterweight nullifies all warranties.
8. Jibs referred to on this chart must be equipped with a 9'-0" strut.
9. When the machine is equipped with the 30,930 lb. counterweight and resting on rubber tires, the counterweight must never be swung over side or rear of the machine — the centerline of the rotating unit and the centerline of the truck must be parallel.
10. The load ratings shown on this chart make no allowance for such factors as the effect of side loads, wind, ground conditions, inflation of rubber tires, and operating speeds. The operator shall therefore reduce load ratings to take these factors into account.

CRANE CAPACITY CHART
OVER THE REAR ON OUTRIGGERS WITH BUMPER COUNTERWEIGHT
CHART NO. 6012855

Maximum Counterweight:
 Main Counterweight — 30,930 Lbs.
 Bumper Counterweight — 13,000 Lbs.

Boom				Outriggers Extended and Set Over Rear	Boom				Outriggers Extended and Set Over Rear	Boom				Outriggers Extended and Set Over Rear					
Length	Radius	Height	Angle		Length	Radius	Height	Angle		Length	Radius	Height	Angle						
50'	15'	55.1'	76.0	*180,000	120'	25'	124.6'	79.4	* 89,800	170'	35'	173.5'	79.1	* 50,325	190'	40'	192.9'	78.7	* 42,425
	20'	53.6'	70.0	*130,000		30'	123.5'	76.9	* 88,000		40'	172.5'	77.4	* 47,000		45'	191.9'	77.2	* 40,000
	25'	51.4'	63.7	*112,725		35'	122.2'	74.5	* 86,700		45'	171.3'	75.7	* 43,125		50'	190.7'	75.6	* 36,500
	30'	48.6'	57.2	* 84,400		40'	120.7'	72.0	* 84,975		50'	169.9'	73.9	* 39,400		60'	187.0'	72.5	* 30,000
	35'	44.9'	50.0	* 67,175		45'	119.0'	69.5	* 86,550		60'	166.7'	70.4	* 30,350		70'	184.4'	69.3	* 23,925
40'	40.1'	42.1	* 55,600	50'	117.0'	66.9	* 80,200	70'	162.8'	66.7	* 24,300	80'	180.3'	66.1	* 19,575				
45'	33.3'	33.6	* 47,275	55'	115.1'	64.6	* 73,275	80'	158.1'	63.0	* 19,975	90'	175.5'	62.7	* 16,325				
50'	23.3'	19.5	* 36,200	60'	106.1'	56.0	* 25,300	90'	152.6'	59.2	* 16,725	100'	169.9'	59.3	* 13,775				
60'	15'	65.4'	78.3	*170,000	65'	98.5'	50.0	* 21,025	100'	146.1'	55.2	* 14,175	110'	163.5'	55.7	* 11,725			
	20'	61.4'	73.4	*130,000	70'	89.1'	43.3	* 17,800	110'	138.6'	50.9	* 12,150	120'	156.2'	51.9	* 10,050			
	25'	62.4'	68.4	*112,700	75'	77.1'	36.0	* 15,300	120'	129.8'	46.3	* 10,300	130'	147.6'	48.0	* 8,675			
	30'	60.1'	63.1	* 84,375	80'	60.7'	26.8	* 13,300	130'	119.5'	41.6	* 9,100	140'	138.1'	43.8	* 7,475			
	35'	57.3'	57.6	* 67,105	85'	43.7'	12.6	* 9,900	140'	107.1'	36.2	* 7,925	150'	126.8'	45.8	* 6,475			
40'	53.7'	51.8	* 55,525	90'	26.8'	6.0	* 7,025	150'	91.8'	30.1	* 6,525	160'	113.4'	34.2	* 5,900				
45'	49.3'	45.4	* 47,200	95'	10.0'	2.6	* 5,100	160'	71.5'	22.4	* 5,650	170'	97.0'	28.4	* 4,825				
50'	43.7'	38.2	* 40,500	100'	3.0'	1.0	* 3,700	170'	37.7'	10.6	* 5,275	180'	75.4'	21.2	* 4,150				
60'	25.0'	17.8	* 29,975	105'	0.0'	0.0	* 2,600	180'	0.0'	0.0	* 3,700								
70'	20'	74.5'	75.8	*122,200	110'	133.8'	78.0	* 63,750	180'	35'	183.7'	79.7	* 50,300	40'	203.1'	79.3	* 42,400		
	25'	73.0'	71.6	*104,300	115'	132.6'	75.6	* 60,000	190'	35'	182.7'	78.1	* 46,500	45'	202.1'	77.8	* 39,000		
	30'	71.1'	67.2	* 84,325	120'	131.2'	73.4	* 57,250	200'	35'	181.6'	76.5	* 43,000	50'	201.0'	76.4	* 36,250		
	35'	68.8'	62.7	* 67,025	125'	117.9'	68.9	* 45,400	210'	35'	180.3'	74.8	* 39,250	60'	198.3'	73.4	* 29,725		
	40'	66.0'	58.0	* 55,000	130'	113.3'	63.9	* 31,100	220'	35'	177.3'	71.5	* 30,200	70'	195.0'	70.4	* 23,675		
45'	62.5'	53.0	* 47,050	135'	103.1'	47.9	* 17,600	230'	35'	173.6'	68.1	* 24,150	80'	191.1'	67.2	* 19,325			
50'	58.4'	47.7	* 40,775	140'	93.0'	41.7	* 15,075	240'	35'	169.3'	64.6	* 19,800	90'	186.6'	64.2	* 16,075			
60'	47.1'	35.3	* 31,925	145'	80.1'	34.5	* 13,075	250'	35'	164.1'	61.1	* 16,525	100'	181.4'	61.0	* 13,525			
70'	26.5'	16.5	* 22,775	150'	63.0'	25.7	* 11,425	260'	35'	158.2'	57.3	* 14,000	110'	175.3'	57.6	* 11,475			
80'	20'	84.8'	77.6	*122,100	155'	53.8'	12.1	* 8,425	270'	35'	151.3'	53.3	* 11,950	120'	168.7'	54.2	* 9,825		
	25'	83.5'	73.9	*104,250	160'	44.0'	7.8	* 6,3725	280'	35'	143.3'	49.4	* 10,300	130'	161.0'	50.5	* 8,425		
	30'	81.9'	70.2	* 84,300	165'	34.8'	5.6	* 5,000	290'	35'	134.0'	45.1	* 8,900	140'	152.2'	46.7	* 7,250		
	35'	79.9'	66.3	* 67,000	170'	24.8'	4.1	* 3,900	300'	35'	123.2'	40.2	* 7,725	150'	142.1'	42.6	* 6,225		
	40'	77.5'	62.4	* 55,350	175'	14.8'	2.9	* 2,925	310'	35'	110.3'	35.2	* 6,700	160'	130.4'	38.2	* 5,350		
45'	74.5'	58.2	* 47,000	180'	9.7'	2.0	* 2,100	320'	35'	94.4'	29.2	* 5,925	170'	116.5'	33.3	* 4,600			
50'	71.3'	53.9	* 40,700	185'	5.1'	1.4	* 1,500	330'	35'	73.5'	21.8	* 5,075	180'	99.5'	27.7	* 3,925			
60'	62.6'	44.4	* 31,825	190'	2.6'	0.9	* 1,000	340'	35'	58.7'	16.3	* 4,400							
70'	50.1'	33.0	* 25,900	195'	1.1'	0.4	* 700												
80'	27.9'	15.4	* 18,900	200'	0.0'	0.0	* 500												
90'	20'	95.0'	79.0	*122,000	205'	0.0'	0.0	* 300											
	25'	93.8'	75.6	*104,000	210'	0.0'	0.0	* 200											
	30'	92.4'	72.5	* 84,275	215'	0.0'	0.0	* 150											
	35'	90.7'	69.1	* 66,925	220'	0.0'	0.0	* 100											
	40'	88.6'	65.6	* 55,225	225'	0.0'	0.0	* 75											
45'	86.1'	62.1	* 46,350	230'	0.0'	0.0	* 50												
50'	83.3'	58.4	* 40,525	235'	0.0'	0.0	* 30												
60'	76.2'	50.6	* 31,650	240'	0.0'	0.0	* 15												
70'	66.6'	41.8	* 25,700	245'	0.0'	0.0	* 10												
80'	53.0'	31.0	* 21,425	250'	0.0'	0.0	* 5												
90'	29.2'	14.5	* 15,800	255'	0.0'	0.0	* 0												
100'	25'	104.1'	77.2	* 89,875	260'	0.0'	0.0	* 0											
	30'	102.9'	74.3	* 81,000	265'	0.0'	0.0	* 0											
	35'	101.3'	71.3	* 66,800	270'	0.0'	0.0	* 0											
	40'	99.5'	68.2	* 55,125	275'	0.0'	0.0	* 0											
	45'	97.3'	65.1	* 46,700	280'	0.0'	0.0	* 0											
50'	94.8'	61.9	* 40,375	285'	0.0'	0.0	* 0												
60'	88.7'	55.2	* 31,500	290'	0.0'	0.0	* 0												
70'	80.7'	47.8	* 25,525	295'	0.0'	0.0	* 0												
80'	70.3'	39.5	* 21,375	300'	0.0'	0.0	* 0												
90'	55.7'	29.4	* 18,050	305'	0.0'	0.0	* 0												
100'	30.4'	13.8	* 13,400	310'	0.0'	0.0	* 0												
110'	25'	114.4'	78.4	* 89,850	315'	0.0'	0.0	* 0											
	30'	113.2'	75.7	* 80,500	320'	0.0'	0.0	* 0											
	35'	111.8'	73.0	* 66,725	325'	0.0'	0.0	* 0											
	40'	110.2'	70.1	* 55,000	330'	0.0'	0.0	* 0											
	45'	108.2'	67.5	* 46,575	335'	0.0'	0.0	* 0											
50'	106.0'	64.6	* 40,225	340'	0.0'	0.0	* 0												
60'	100.6'	58.7	* 31,300	345'	0.0'	0.0	* 0												
70'	93.8'	52.4	* 25,325	350'	0.0'	0.0	* 0												
80'	85.0'	45.3	* 21,050	355'	0.0'	0.0	* 0												
90'	73.8'	37.6	* 17,825	360'	0.0'	0.0	* 0												
100'	58.5'	28.8	* 15,325																
110'	31.6'	13.1	* 11,375																

NOTE: This chart is a supplement to the Standard Crane Chart. All instructions, restrictions, notes, and warnings on the Standard Crane Capacity Chart therefore apply to this chart. (See Note #7 on this chart for exceptions.)



- This Chart is Based Upon:
- 1 Loads marked with * are the maximum allowable loads permitted by the structural strength of the parts and are not based on the stability of the machine
 - 2 Machine shall be leveled on a firm solid support and all rubber tires shall be free of the ground
 - 3 Side and shock loads shall be prevented
 - 4 All hook blocks, lifting tackle, and job attachments shall be considered a part of the load to be lifted
 - 5 Exceeding the capacities shown on this chart or altering the counterweight nullifies all warranties
 - 6 Boom suspension pendants shall be 1-3/8" dia with a minimum breaking strength of 211,000 lbs
 - 7 Capacities on this chart apply to loads handled on the boom point only. When boom plus job combinations are used and loads are handled on the jib, the capacities on the standard "Over The Side and Rear" chart shall apply
 - 8 The capacities on this chart apply to "Over The Rear" as indicated by the boundary sector shown on the diagram
 - 9 The jibs referred to on this chart shall be equipped with a 90' strut

Rope Receiving For Hook Blocks			
Loads In Pounds	No. Part Line	Loads In Pounds	No. Part Line
To 16,800	1	Over 100,800	7
Over 16,800	2	Over 177,600	8
Over 33,600	3	Over 134,400	9
Over 50,400	4	Over 151,200	10
Over 67,200	5	Over 168,000	11
Over 84,000	6		

Based upon 1/2" dia. wire rope with a minimum breaking strength of 58,800 lbs

In accordance with our established policy of constantly improving our products, we reserve the right to change or modify our products or our product specifications at any time without notice.



Manufactured and Sold in Conformance with U.S. Department of Commerce Commercial Standard CS90-58.

LIMA, OHIO 45802