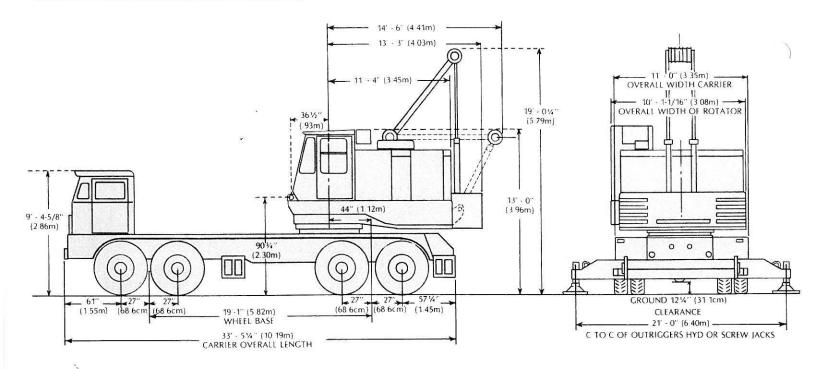
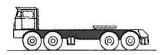


### **CLEARANCE AND DIMENSIONS**



# **WEIGHTS OF COMPONENT PARTS**





Total Weight of Carrier with Standard Diesel Engine and Hydraulic Outriggers 55,755 Lbs \* (25290kg)

**OUTRIGGER BOXES, BEAMS** 

AND FLOATS

HYDRAULIC OUTRIGGERS:

A-Outrigger Box (2)

RUMPER CWT.

[4,467kg]

C-Floats (4)

B-Outrigger Beams (4)

#### ROTATOR R-1



Total Weight of Rotating Assembly with Standard Diesel Engine with Torque Converter and Counterweight

47,005 Lbs \* (21,321kg)

For Third Drum (Add)

Telescopic Back-Hitch Gantry-1,975 Lbs

Basic Gantry - 760 Lbs (344kg)

(Add)

wPLL (Add)

**GANTRIES:** 

(895kg)

For Power Load Lowering

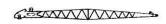
For Full Width Front Drum

880 Lbs (399kg)

325 Lbs (147kg)

1,065 Lbs (483kg)

#### CRANE ATTACHMENT A-2



Total Weight of Crane Attachment with 50' (15 2m) Tubular Boom, 4 Point Sheaves, 10 Part Crossover, Laggings, Swing Snubber Boom Stop, Boom Angle Indicator and Necessary Wire Ropes

7,980 Lbs.\* (3,619kg)

#### MISCELLANEOUS

Hook Block	1,325 Lbs (601kg)	
Boom Stop	615 Lbs (279kg)	
Ball & Hook (8.5 Ton)	340 Lbs (154kg)	
Crossover 10 Part Line 12 Part Line	580 Lbs (263kg) 610 Lbs (277 kg)	
Mid-Point Suspension 160' (48 8m) thru		
1004 (FA 0) D	460 the (200kg)	

180' (54 9m) Boom 190' (57 9m) & 200' (60 9m) Boom 460 Lbs (208kg) 525 Lbs. (238kg)

For Each Add. 10 Ft. (3.04m) Of Boom —Add Operating Wire Ropes Crane (Main Hoist) 620 Lbs (281kg) Crane (Aux Hoist) 20 lbs 120 Lbs ( 54kg) (9kg) 210 Lbs ( 95kg) 25 Lbs (11kg) Dragline

Clamshell 190 Lbs 20 Lbs ( 86kg) ( 9kg) Boom Hoist 410 Lbs (186kg) **Boom Hoist** 485 Lbs

A-3 Dragline Attachment (Less Bucket) Tubular Boom 6,195 Lbs (2,810kg) Deck mounted

745 Lbs. ( 337kg) Fairlead Additional Rotating Parts 660 Lbs. ( 299kg)

Total Attachment Weight 7,600 Lbs. (3,447kg)

Clamshell Attachment (Less Bucket)
Tubular Boom 6,285 Lbs. (2,850kg)
Tagline Winder 355 Lbs. (161kg) Tagline Winder Additional Rotating 660 Lbs ( 299kg) Parts Total Attachment Weight 7,300 Lbs. (3,311kg)

**BOOM & BOOM EXTENSIONS** 

30' ( 9 17m) Point	
Section	3,005 Lbs * (1362kg)
20' ( 6 09m) Base	
Section	1,995 Lbs * ( 904kg)
10' ( 3 04m) Extension	825 Lbs * ( 374kg)
20' ( 6 09m) Extension	1,285 Lbs * (582kg)
30' ( 9 14m) Extension	1,655 Lbs.* ( 750kg)
40' (12 19m) Extension	2,205 Lbs * (1000kg)
*Main Sheave and Guid	desheaves Included in
Point Section Weight.	

All Extension Weights, Include Pendants

#### JIB C II

20' (6 1m) Basic Jib 1,775 Lbs (805kg) Assembly 10' (3 04m) Extension 420 Lbs. (191kg) 20' (6 1m) Extension 690 Lbs (313kg)

### 29kg)

2,820 Lbs Ea.

1,755 Lbs. Ea ( 725kg)

65 Lbs Ea

(1120kg)

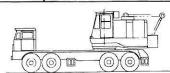
#### ROTATING REAR CWT. 20,260 Lbs (9,190kg)

Note Weight of Gantries Are Included In Rotating Assembly

# JIB

Note For Each Additional 10' (3.04m) of Boom Length Add 35 Lbs (16kg) to Jib Assembly

#### \*Per Current Price List Description



TOTAL WEIGHT OF T-1, R-1 & A-2 = 110,740 Lbs. (50,231kg) = 102,760 Lbs. (46,611kg) TOTAL WEIGHT OF T-1 & R-1

#### WORKING WEIGHTS (Approximate in pounds)

	HYDRAULIC OUTRIGGERS		
LIFTING CRANE 110,740 Lbs (50,231kg			
CLAMSHELL (Less Bucket) 110,060 Lbs (49,923)			
DRAGLINE (Less Bucket)	110,360 Lbs (50,059kg)		

### **AXLE LOADING AND WEIGHTS**

**EQUIPPED AS FOLLOWS:** 14.00 (35.6cm) x 20" (50.8cm) tires; hydraulic outriggers, 50 ft. (15.24m) tubular boom; Cummins NHF-240 power plant in truck; Cummins N855-P160 power plant with converter in rotating assembly. Includes lagging, boom stops and cables. Does not include third drum or power load lowering.

		With Hydraulic Outriggers & Floats					
Weight Combinations	Boom Position	Front	Rear	Total			
COMPLETE MACHINE (CRANE)	F	22,430 (10,174kg)	88,310 (40,057kg)	110,740 (50,231kg)			
COMPLETE MACHINE (CRANE)	R	43,870 (19,899kg)	66,870 (30,332kg)	110,740 (50,231kg)			
LA CHINE LESS COLINTED WEIGHT	F	31,270 (14,184kg)	59,210 (26,857kg)	90,480 (41,041kg)			
MACHINE LESS COUNTERWEIGHT	R	27,245 (12,358kg)	63,235 (28,683kg)	90,480 (41,041kg)			
MACHINE LESS COUNTERWEIGHT	F	28,710 (13,023kg)	48,850 (22,158kg)	77,560 (35,181kg)			
MACHINE LESS COUNTERWEIGHT, BOXES, BEAMS AND FLOATS	R	24,685 (11,197kg)	52,875 (23,984kg)	77,560 (35,181kg)			
MACHINE LESS COUNTERWEIGHT,	F	21,270 ( 9,648kg)	53,285 (24,170kg)	74,555 (33,818kg)			
BOXES, BEAMS, FLOATS, BOOM POINT SECTION	R	30,975 (14,050kg)	43,580 (19,768kg)	74,555 (33,818kg)			
MACHINE LESS COUNTERWEIGHT,	F	18,365 ( 8,330kg)	51,855 (23,521kg)	70,220 (31,851kg)			
BOXES, BEAMS, FLOATS, COMPLETE BOOM	R	32,215 (14,612kg)	38,005 (17,239kg)	70,220 (31,851kg)			

#### F-DENOTES BOOM EXTENDED FORWARD

R-DENOTES BOOM EXTENDED REARWARD

NOTE: Any deviation from the equipment listd 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.
	Cummins	NHF-240	Diesel	6	5½" (14.0cm) x 6" (15.2cm)	240 @ 2300
TRUCK	GM	6171N	Diesel	6	4¼" (10.8cm) x 5" (12.7cm)	244 @ 2300
CARRIER	Cummins	NTF-295	Diesel	6	5½" (14.0cm) x 6" (15.2cm)	295 @ 2300
	GM	8V-71	Diesel	8	4¼" (10.8cm) x 5" (12.7cm)	318 @ 2100

# PERFORMANCE DATA (CARRIER)

Number of Travel Speeds Standard — 15 Forward and 3 Reverse Turning Radius — 49 Ft. (14.93m) (On Center Outside Front Tire)

Engine	Carrier Equipped With 5 Speed Main & 3 Speed Auxiliary Trans.								
Make & Model		Low Range*	High Range**						
	Grade	Speed	Grade	Speed					
Cummings NHF-240	36.9	1.3 MPH (2.1KmPH)	0.8	42.1 MPH (67.7KmPH)					
GM 6-71	37.2	1.3 MPH (2.1KmPH)	0.9	42.1 MPH (67.7KmPH)					
Cummins NTF-295	37.0	1.7 MPH (2.7KmPH)	0.7	48.9 MPH (78.7KmPH)					
GM 8V-71	40.0	1.5 MPH (2.4KmPH)	1.5	44.7 MPH (71.9KmPH)					

NOTE: The above is based on a machine equipped with a 5 speed Fuller main transmission and a Spicer (3) speed auxiliary transmission and 14.00 (35.6cm) x 20 (50.8cm) tires.

<sup>\*\*</sup> Maximum engine torque & machine weighing 110,740# (50,231kg).

<sup>\*\*</sup>Maximum engine speed & machine weighing 70,220# (31,851kg)

### **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. (7031kg/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 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. (7031 kg/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.

**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, ratting 27,400# (12,428kg) 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) - 18 ply rating.

FUEL CAPACITY: 85 gallons (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 171/4" (43.8cm) diameter x 4" (10.2 cm) wide. Rear brake shoes are 161/4" (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 three speeds giving 15 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)

ROTAL	ING ASSEMBLY					
MAKE	CUMMINS					
MODEL	N855-P160					
FUEL	Diesel					
CYL.	6					
BORE & STROKE	5½" (140mm) x 6" (152mm)					
GROSS RATED HP	160 @ - 1800					
TORQUE CONV. HP @ GOVERNED R.P.M.	135 @ 1800					

	LINE SPEED*					
LINE PULL	1st Layer on Drum 16" (40.6cm) Pitch Dia.	6th Layer On Drum 23 1/2" (59.7 cm) Pitch Dia				
16,800lbs (7,620kg)	205fpm ( 62mpm)	195fpm ( 59mpm)				
13,500lbs (6,124kg)	250(pm ( 76mpm)	250(pm ( 76mpm)				
10,000lbs (4,536kg)	296fpm ( 90mpm)	350fpm (107mpm)				
6,000lbs (2,722kg)	343fpm (105mpm)	458fpm (140mpm)				
2,000lbs (907kg)	383fpm (117mpm)	547fpm (167mpm)				

<sup>\*—</sup> Third Drum Speeds Are Approximately 88% of the speeds indicated in the Chart

# MISCELLANEOUS DATA (ROTATOR)

Swing Speed	3.1 RPM	Fuel Capacity 210 Gallons (795 Liters)
Simb spece	DESTRICTION SALES	ruer cupacity 210 Cameris (130 Eners)

# **CLUTCH AND BRAKE DATA**

FUNCTION			CLUTCHE	S	BRAKES				
	Туре	Width	Diameter	Area	Туре	Width	Diameter	Area	
Main Hoist	Band	5" (12.7cm)	24" (61.0cm)	337 Sq. In. (2,174 Sq. cm)	Band	4½" (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	4½" (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	41/2" (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	41/2" (11.4cm)	30" (76.2cm)	338 Sq. In. (2,181 Sq. cm)	
Boom Lowering	Band	41/2" (11.4cm) ·	20" (50.8cm)	248 Sq. In. (1,600 Sq. cm)	1				
Load Lowering	Band	4½" (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	4½" (11.4cm)	30" (76.2cm)	338 Sq. In. (2,181 Sq. cm)	
Swing	2 Shoe	4½" (11.4cm)	24" (61.0cm)	290 Sq. In. (1,871 Sq. cm)	Band	4½" (11.4cm)	30" (76.2cm)	338 Sq. In. (2,181 Sq. cm)	

<sup>\*</sup>Full width front drum with planetary load lowering

# LAGGING DATA

Lagging Location	Usage		gging .D.		gging Vidth	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-//	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)	9-20	3/4" (19.1mm)
R H Front	Clamshell Holding	16"	(40 6cm)	14-1/	2" (36 8cm)	Grooved	48' (14 6m)	<u> </u>	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) ln 6	3/4" (19.1mm)

Line pulls and speeds will vary, dependent on power plant applied

### **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 antifriction 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 antifriction 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 antifriction 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 an 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 10 or 12 parts of line or 10 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:** One piece cast iron 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

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)		
180' (54 9m) + 20' (6 1m)	200' (61.0m) + 20' (6.1m)	170' (51.8m) + 20' (6.1m)	180' (54.9m) + 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)	180' (54.9m) + 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)	170′ (51.8m) + 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' (48.8m)	170' (51.8m)	130' (39.6m)	140' (42.7m)		
120' (36.6m) + 20' (6.1m)	140' (42.7m) + 20' (6.1m)	110' (33.5m) + 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)	130' (39.6m) + 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) 120' (36.6m) + 60' (18.3m)		90'(27.4m) + 60'(18.3m)	90' (27.4m) + 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							
Type Service	Crane - Drag - Clamshell						
Suspension	Cross Over and Pendants						
Cantry	High Back Hitch (Telescoping Type)						
Quan Sheaves at Point Shaft	5						
Convertibility	Crane - Dragline - Clamshell						
Dia Point Sheaves	15 ¼"(40.0cm) P.D ¾" (19.1mm) Cable						
Basic Boom Length	50' (15.2m)						
Type Chords	3 ¼" (83mm) O.D. 100,000 P.S.I. (7,030kg/cm2) Steel						
Extensions	10' (3 05m), 20' (6 1m), 30' (9 1m) and 40' (12 2m)						
	straight 60¼" (153cm) x 65¼" (166cm) sec.						
Max Boom Length	Crane 200' (61 0m) Drag. & Clam 60' (18 3m)						

Jib, Tub	ular Pin Connected
Basic Length	20' (6.1m)
Max Length	60' (18.3m)
Chord Size	21/2" (64mm) O.D
Chord Material	100,000 P.S.I. (7,030kg/cm2) Yield
Quan Sheaves at Point	One (1)
P.D. Point Sheave	15 ¼" (40cm) P.D. [¾" (19.1mm) Cable]
Capacity — 20'-0" (6 1m)	13 Ton (11.8 Ton)
asic Length Aax Length hord Size hord Material Quan Sheaves at Point D Point Sheave apacity — 20'-0" (6 1m) 30'-0" (9 1m) 40'-0" (12 2m) 50'-0" (15 2m)	10 Ton ( 9.1 Ton)
40'-0" (12.2m)	7 Ton ( 6.4 Ton)
50'-0" (15 2m)	5 Ton ( 4.5 Ton)
60'-0" (18.3m)	4 Ton ( 3.6 Ton)

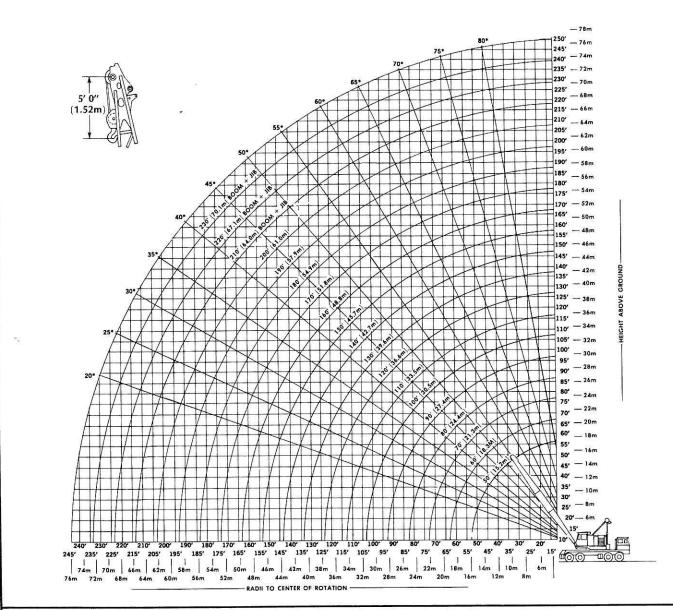
# **BOOM HOIST SUSPENSION DATA**

*Boom Length	Reeving Required	Mid-Point Suspension Location
Up thru 150' (45 7m)	10 or 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

<sup>\*</sup>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	to Raise	To Lower
Horizontal With 10 Part Boom Hoist Reeving	46 Sec	75 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								

Eased upon ¼" (19.1mm) dia, wire rope with a minimum breaking strength of 58,800 lbs (26,672 kg)



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**

#### STANDARD BOOM

75 C	Ton lass 1	5.392					Liftin	g Capa	cities <b>85</b> % 1	Tip Loads	-			NUDA		T20,26	50#		
	Boom	J-J3L	Outriggers	Outrigg	ers Up		Boom		Outriggers	Outrigg	ers Up	-	Boom	l	Outriggers	Outrigg	ers Up		
Lgth.		Angle	Down Side/Rear	Side	Rear	Lgth.	Rad.	Angle	Down Side/Rear	Side	Rear	Lgth.	Rad.	Angle	Down Side/Rear	Side	Rear		
50'	15' 20' 25' 30' 35' 40' 45' 50'	76 70 64 57 50 42 33 20	150,000* 108,550* 82,650 60,750 47,775 39,200 33,100 28,550	59,850 40,050 29,775 23,450 19,200 16,125 13,800 12,000	64,925 44,800 33,900 27,050 22,350 18,950 16,350 14,300	120'	30' 35' 40' 45' 50' 60' 70' 80' 100'	77 75 77 70 67 62 56 50 44 328 14	60,125 46,925 38,200 32,025 27,400 20,950 16,675 11,325 9,550 8,150 7,050	22,075 17,750 14,650 12,300 10,475 7,7925 4,550 3,475 2,650 1,975	25,575 20,850 17,400 14,775 12,725 9,700 7,550 6,000 4,775 3,825 2,450	180′	50' 60' 70' 80' 90' 110' 120' 130' 150' 160'	75 71 68 64 61 53 49 44 40 329 22	26,300 19,775 15,7450 10,0550 6,8255 5,6575 3,850 3,1525				
60′	15' 20' 25' 30' 35' 40' 45' 50' 60'	79 74 69 63 58 52 46 39 18	145,600* 108,225* 82,625 60,700 47,675 39,075 32,950 28,400 22,025	59,800 39,925 29,600 23,250 18,975 15,900 13,575 11,750 9,075	64,800 44,625 33,700 26,825 22,125 18,700 16,100 14,050 11,025	130′	30' 35' 40' 45' 50' 60'		- 60.050 - 46.825 38.100 31,875 27.250 20,775 16,500 13,425 11,150 9,375 7,950	21,850 17,525 14,425 12,075 10,225 7,750 5,675 4,300 3,250	25,325 20,600 17,150 14,550 12,475 9,450 7,325 5,750	190′	170' 50' 60' 70' 80' 90' 100' 110' 120' 130' 140'	76 73 69 66 63 59 56 52 48	1,975 26,175 19,600 15,250 12,150 9,825 8,000 6,575 5,400 4,400				
	16' 20' 25' 30'	79 76 72 67	135,000* 107,825* 82,600 60,625 47,550	54,325 39,725 29,375 23,000 18,725	59,325 44,400 33,450 26,575 21,850 18,425		90' 100' 110' 120' 130'	64 59 54 48 42 35 26 12	9,375 7,950 6,800 5,825	2.425 1.750 — —	4,550 3,575 2,800 2,150		140' 150' 160' 170'	44 39 34 29	3,575 2,875 2,250 1,725				
70′	35' 40' 45' 50' 60' 70'	63 58 53 48 36 18	38,900 32,775 28,175 21,775 17,550	15,625 13,275 11,450 8,800 6,925	18,425 15,800 13,750 10,725 8,600		35' 40' 45' 50' 60' 70'	77 75 73 70 66	46,625 37,875 31,675 27,025 20,575 16,275	17,275 14,175 11,825 10,000 7,325 5,450 4,100	1 / 100	200'	60' 70' 80' 90' 100'	73 70 67 64 61 58	25,875 19,325 15,000 11,900 9,575 7,775 6,325				
80′	17' 20' 25' 30' 35' 40'	80 78 74 70 67 63	120,000* 107,600* 82,575 60,575 47,475 38,825	49,700 39,600 29,225 22,875 18,575 15,475 13,150	54,625 44,250 33,300 26,425 21,700 18,275 15,650		80' 90' 100' 110' 120' 130' 140'	61 57 52 46 40 33 25	37,875 31,875 27,025 20,575 16,275 13,225 10,950 9,175 7,750 6,600 5,625 4,800	4,100 3,025 2,200 1,525	4,325 3,375 2,600	4,325 3,375 2,600 1,950		54 51 47 43 38 33	5,150 4,175 3,350 2,650 2,025 1,500				
	45' 50' 60' 70' 80'	58 54 45 35 16	32,675 28,075 21,675 17,425 14,400	11,325 8,650 6,775 5,425	13,600 10,575 8,450 6,875		35′ 40′ 45′ 50′	78 76 74	46,500 37,725 31,500	17,025 13,925 11,575	1 1 C CEO			Capacit	AND THE PERSON NAMED IN	ow Incl. Jib (See Jib Da es Over Side or Rear			
	19' 20' 25' 30' 35' 40'	80 79 76 73 69	110,000* 105,000* 82,550 60,500 47,350 38,675	42,350 39,425 29,025 22,650 18,350 15,225 12,900	44.250	)	60' 70' 80' 90' 100'	68 63 59 55 49	26,850 20,375 16,050 13,000 10,700 8,925 7,500	11,575 9,755 7,050 5,175 3,800 2,750 1,925	4,050	Bo P	oom lus Jib gth.		Jib Rad.	Сара	city		
90′	45, 50, 60, 70, 80,	62 59	32,500 27,875 21,475 17,200 14,150 11,900	12,900 11,050 8,375 6,500 5,125 4,075	26,175 21,450 18,000 15,375 13,325 10,300 8,175 6,600 5,375		120' 130' 140' 150'	38 32 23 12	6,325 5,350 4,550 3,850	==	1,650	2	10′ .90′ 20′)		50' 60' 70' 80' 90'	25,850 19,300 14,950 11,675 9,225			
	20° 25° 30° 35° 40°	80 77 74 71	92.000* 82,525 60,375 47,200 38,500	39,225 28,825 22,450 18,125 15,025 12,675 10,850	43,850		40 45 50 60 70 80 90	75 73 69 65 61 57	77						100' 110' 120' 130' 140' 150'		25 75 50 75 25 25		
100′	45	65 62 55 49 30	32,325 27,700 21,275 17,000 13,950 11,675 9,925	12,675 10,850 8,150 6,275 4,900 3,850 3,025	15,175 13,100 10,075 7,950 6,375	5 160	100 110 120 130 140 150 160	42 37 30 23	8,725 7,275 6,125 5,150 4,325 3,625 3,000			(	20' 200' -20')		60' 70' 80' 90' 100'	19,2 14,9 11,6 9,2 7,3 5,8	925 550 200 300 300		
	25 30 35	, 79 , 76 , 73	82,450 60,150 46,950 38,225 32,050	28,479 22,100 17,77	20,07	2	45 50 60 70	74 70 67	31,125 26,450 19,925 15,600	E					120' 130' 140' 150'	3,5	550 525 550 900		
110	40 45 50	70 68 65 59 52 45 38 28	38,225 32,050 27,425 20,975 16,700 13,650 11,350 9,575 8,175	14,67 12,32 10,50 7,80 5,95 4,50 2,67 2,00	17,42 5 14,80 0 12,75 0 9,72 0 7,57 6,02 0 4,80	0 0 5 5 5 0 0 170	80 90 100 110 120 130 140 150 160 170	59 55 51 54 62 64 64 64 64 64 64 64 64 64 64 64 64 64	12,500 10,200 8,400 6,975 5,800 4,825 4,000 3,300 2,700 2,150			(	230′ 180′ -50′)		70' 80' 90' 100' 110' 120' 130' 140' 150'	7, 5, 4, 3,			

- nis capacity chart is based upon:

  1. Loads marked by fare the maximum allowable loads permitted by structural strength of the parts, and are not based on the stability of the machine.

  2. All other loads are based on stability, and do not exceed 85% of tipping in the least stable direction.

  3. Machine to be leveled on firm solid support; shock and side loading are to be prevented.

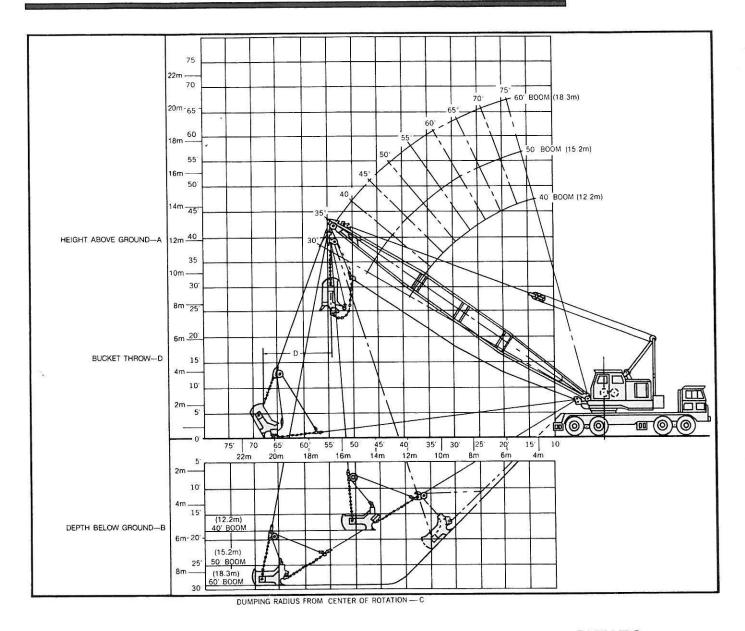
  4. Machine equipped with hydraulic outriggers.

- 4. Machine equipped with hydraulic outriggers.
  5. All hook blocks, lifting tackle, or jib attachments are considered a part of the load to be lifted.
  6. "Outriggers Down" capacities are based upon having all tires within boundary of outriggers free of ground and outriggers fully extended.
  7. "Outriggers Up" capacities are not recommended for traveling (refer to Lima for travel load rating).
  8. Exceeding these capacities, or altering the counterweight nullifies all warranties.
  9. Loads should not be handled over front of carrier.

- 10. Capacities above dotted line require a wire rope of length greater than furnished as standard with the machine Capacities per SAE Code J765

Class Designation per U.S. Department of Commerce Standards

### CLARK 700TC DRAGLINE AND CLAMSHELL WORKING RANGES



# DRAGLINE-CLAMSHELL-MAGNET CAPACITIES

MACHINE EQUIPPED WITH 20,260 LBS. (9190 kg.) CWT.

Load	Boom Length and Boom Angle												
Radius	50′	<u>/°</u>	60′	1 10									
20'	31,150	70	31,100	74									
25'	23,150	64	23,100	69									
30′	18,250	57	18,150	63									
35'	14,900	50	14,800	58									
40′	12,500	42	12,400	52									
45'	10,700	33	10,600	46									
50′	9,300	. 20	9,200	39									
55′			8,050	30									
60′		_	7,150	19									

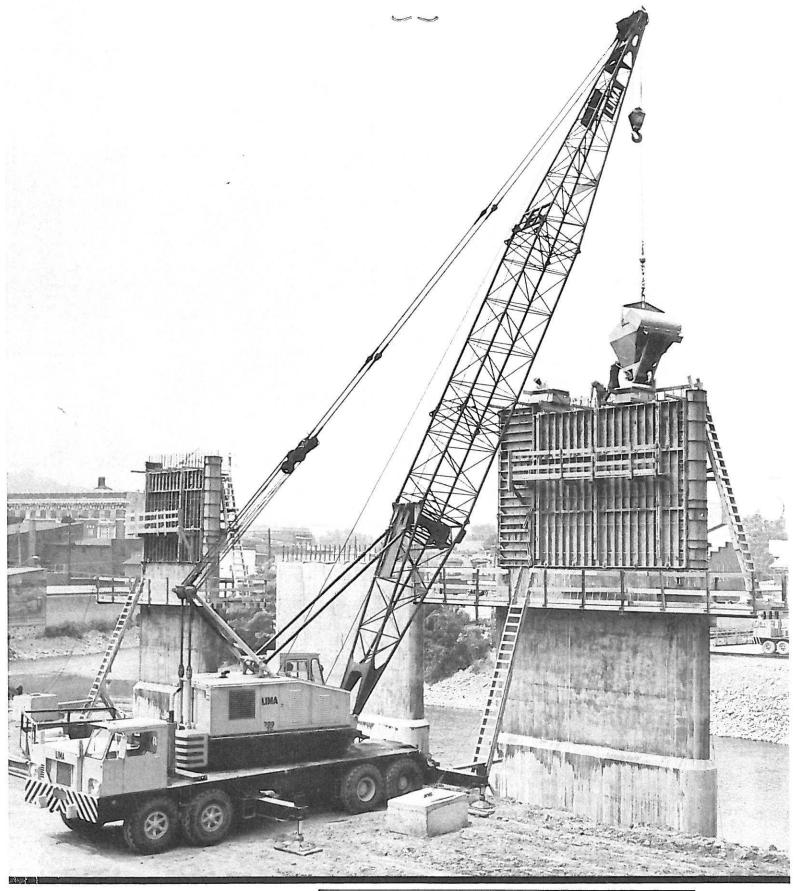
METRIC CHART (KILOGRAMS)

Load Radius	Boom Length and Boom Angle												
(In Meters)	15.24m	<u> 7</u> º	18.29m	<u> </u>									
6	14130	70.6	14105	73.9									
8	9945	62.3	9925	67.2									
10	7425	53.5	7375	60.3									
12	5805	43.4	5760	52.7									
14	4735	30.9	4690	44.4									
16	4200	8.5	4155	34.5									
18		_	3320	21.0									

✓ Indicates Boom Angle

NOTE: To maintain normal operating speeds the loaded bucket or magnet weight must not exceed 9,500 lbs. (4310kg.). Loads greater than 9,500 lbs. (4310kg.) require multiple reeving of the hoist line. Digging and footing conditions, together with skill of the operator, will determine whether or not the maximum loading conditions stated above can be used.

	METRIC SS 4,6-1														MAX.	cwt. –	9190 kg.	Capaci	ties Below I See Jib Da	
<u> </u>	Boom		Outriggers Extended	Outrigg	ers Up		Boom		Outriggers Extended and Set	Outrigg	ers Up		Boom		Outriggers Extended and Set	Outrigg	ers Up	Boom	Plus Jib	Outriggers Extended and Set
Lgth.	Rad.	Angle	and Set Side/Rear	Side	Rear	Lgth.	Rad.	Angle	Side/Rear	Side	Rear	Lgth.	Rad.	Angle	Side/Rear	Side	Rear	Lgth.	Load Rad.	Side/Rear
15,2	4,5 6 7 9 11 13	76,4 70,2 66,1 57,4 47,8 36,4	68,000* 50,425* 42,250* 28,250 20,675 16,200	27,150 18,550 15,100 10,850 8,375 6,725	29,450 20,725 17,075 12,500 9,750 7,925	39,6	9 11 13 15 18 21	78,1 75,0 72,0 68,9 64,0 59,0	27,225 20,225 15,675 12,650 9,650 7,650	10,125 7,600 5,925 4,750 3,525 2,650	11,725 8,950 7,100 5,800 4,400 3,400	and the second second	15 18 21 24 27 30	75,7 72,6 69,4 66,1 62,8 59,3	11,875 9,125 7,100 5,650 4,575 3,750			64,0 (57,9	15 18 21 24 27 30	11,775 9,025 7,000 5,475 4,325 3,450
18,3	15 4,5 6 7 9	20,3 78,7 73,6 70,3 63,4 56,0	13,250 66,000* 50,150* 42,200* 28,225 20,650	5,550 27,125 18,500 15,025 10,775 8,275	29,375 20,650 17,000 12,400 9,650		24 27 30 33 36 39	53,7 48,1 41,8 34,7 25,9 12,5	6,250 5,175 4,350 3,700 3,175 2,725	2,025 1,525 1,150 800	2,675 2,125 1,675 1,325 1,025 750	57,9	33 36 39 42 45 48	55,8 52,0 48,1 43,9 39,4 34,3	3,075 2,525 2,075 1,700 1,375 1,050			+6,1)	33 36 39 42 45	2,750 2,175 1,700 1,275 950
	13 15 18 4,9	47,9 38,6 18,5 79,3	16, 150 13, 175 10,200 61,000*	6,625 5,450 4,225 24,625	7,825 6,500 5,100 26,900		11 13 15 18 21	76,1 73,3 70,4 66,0 61,5	20,150 15,575 12,550 9,550 7,575	7,500 5,825 4,650 3,425 2,550	8,850 7,000 5,675 4,275 3,300		15 18 21 24	28,5 76,4 73,5 70,5 67,4	775 11,725 9,000 6,975 5,550			67,1 (61,0	21 24 27 30 33	6,975 5,450 4,300 3,425 2,725
21,3	6 7 9 11 13 15	76,0 73,2 67,4 61,3 54,9 47,9	49,875* 42,125* 28,200 20,575 16,050 13,075 10,100	18,425 14,925 10,650 8,150 6,500 5,325	20,550 16,875 12,300 9,525 7,675 6,375 4,975	42,7	24 27 30 33 36 39	56,7 51,6 46,2 40,2 33,4 25,0	6,150 5,100 4,275 3,625 3,075 2,625	1,925 1,425 1,050 700	2,575 2,025 1,575 1,225 900	61,0	27 30 ,0 33 36 39 42	64,2 61,0 57,7 54,2 50,6 46,8	1,0 3,625 7,7 2,975 4,2 2,425 0,6 1,975			+6,1)	36 39 42 45 21 24	2,150 1,675 1,250 925 4,525 4,525
24.4	5,2 6 7 9 11	35,6 17,1 79,9 77,8 75,3 70,3 65,2 59,8	54,300* -49,400* -42,075* 28,175 20,550 16,025	4,075 3,225 22,525 18,350 14,875 10,600 8,075 6,425	4,975 3,975 24,775 20,475 16,825 12,225 9,450 7,625		11 13 15 18 21 24	12,1 77,1 74,4 71,8 67,7 63,5 59,2	2,250 20,075 15,500 12,475 9,450 7,450 6,050	7,375 5,725 4,525 3,300 2,425 1,800	8,725 6,875 5,550 4,150 3,175 2,450		45 48	42,7 38,3	1,250 950			70,1 (54,9 +15,2)	27 30 33 36 39 42 45	4,275 3,400 2,700 2,125 1,650 1,225 900
)	15 18 21 24 5,8 6	54,1 44,7 33,2 16,0 79,8 79,2	13,025 10,050 8,075 6,675 49,825* 48,325*	5,250 4,025 3,150 2,525 19,200 18,275	6,300 4,900 3,925 3,200 22,250 20,400	45,7	27 30 33 36 39 42 45	54,6 49,8 44,5 38,8 32,2 24,7 11,7	4,975 4,150 3,500 2,950 2,500 2,125 1,800	1,300 900	1,900 1,450 1,100 750	OR "FRONT" AS USED ON CAPACITY CHART								
27,4	7 9 11 13 15 18 21 24 27	77,0 72,6 68,1 63,4 58,6 50,8 42,0 31,3 15,1	41,575* 28,150 20,475 15,950 12,925 9,950 7,975 6,575 5,525	14,775 10,550 7,975 6,300 5.125 3,900 3,025 2,400 1,900	16,725 12,100 9,350 7,500 6,175 4,775 3,800 3,075 2,500	48,8	12 13 15 18 21 24 27 30	76,7 75,4 73,0 69,2 65,3 61,3 57,1 52,7	17,050 15,450 12,400 9,375 7,375 5,950 4,900 4,075				OTE:	"LESS	OUTRIGGE	RS"		HEN OU	MIAM MIAM MIAM MIAM MIAM MIAM MIAM MIAM	
30,5	6 7 9 11 13 15	80,3 78,3 74,4 70,4 66,3 62,0	41,725* 39,175* 28,100 20,425 15,850 12,850	18,200 14,675 10,400 7,875 6,200 5,025	12,025 9,250 7,400		33 36 39 42 45 48	48,1 43,1 37,5 31,2 23,3 11,3	3,400 2,875 2,425 2,025 1,700 1,425			A	ll len apaci	gths an ties per	are in kilo d radii are SAE Code tion per U.	in mete J765.		of Comn	nerce Star	ndards.
30,3	18 21 24 27 30	55,3 48,0 39,7 29,7 14,3	9,875 7,875 6,475 5,425 4,600	3,800 2,925 2,300 1,800 1,425	4,675 3,700 2,975 2,400 1,950		14 15 18 21 24 27	75,2 74,0 70,4 66,8 63,1 59,3	13,675 12,275 9,250 7,250 5,825 4,750			ī	1. L n tl	oads m nitted b ne stabi	chart is ba tarked by y structural lity of the	* are tl strengtl machin	ne max n of the e	parts, ar	nd are not	based or
33,5	21 24 27 30	79,4 75,8 72,2 68,5 64,8 58,8 52,5 45,6 37,8 28,2		14,550 10,250 7,725 6,050 4,875 3,625 2,775 2,125 1,650 1,250	11,850 9,075 7,225 5,925 4,500 3,525 2,800 2,250 1,800	51,8	30 33 36 39 42 45 48 51	55,3 51,0 46,6 41,7 36,4 30,2 22,6 10,9 74,9 71,6	3,925 3,250 2,725 2,275 1,900 1,575 1,275 1,025 11,925 9,200				3. A lo	f tippin Machine Dading II hook idered a Outrigg within b ully ext	r loads are g in the le to be leve are to be p c blocks, l a part of th ers Set" co oundary o ended ers Up" ca	ast stab eled on prevented ifting table ne load apacities outrigs	le directirm so d. ickle, o to be li are b gers fre	ction blid supp or jib att lifted. leased up e of gro	ort; shock tachments on having ound and	and side are con g all tire outrigger
36,0	33 9 11 13 15 18 6 21 24 27 30 33	13,6 77,0 73,8 70,4 67,0 61,7 56,1 50,1 43,6 36,1 27,0	27,275 20,275 15,725 12,700 9,700 7,725 6,300 5,250 4,425	950 10,225 7,700 6,025 4,850 3,600 2,750 2,100 1,625 1,225	11,825 9,050 7,200 5,900 4,475 0 3,500 2,775 5 2,225 5 1,775	54,9	21 24 27 30 33 36 39 42 45 48 51	68,2 64,7 61,1 57,4 53,6 49,5 45,2 40,5 35,3 29,3	7,175 5,750 4,675 3,850 3,200 2,650 2,200 1,825 1,500 1,200				8 L 9 C	refer to exceeding ullifies oads sl Diagram apacition reater to lass De	Lima for t g these o all warrant nould not	ravel lo capacitie ies. be hand lotted li ed as sta Code J7 er U.S.	ad ratin es or dled ov ine requandard v 765 Departn	ng). altering ver front uire a w with the	the cou of carri vire rope machine.	nterweigh er — Se of lengt





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.

