

Grove Manitowoc National Crane Potain



## **Grove TMS800E Product Guide**



### **Features**

- 12,6 m 39 m (41 ft 128 ft) four-section full power MEGAFORM™ boom
- 10 m 17 m (33 ft 56 ft) manual offset bifold swingaway
- 2 x 20 ft intermediate lattice inserts
- 10 886 kg (24,000 lb) counterweight with hydraulic removal system
- Cummins ISM 450, six cylinder after cooled 336 kW (450 hp) engine
- Front and rear air ride suspension



## **Features**



### MEGAFORM™ boom

The Grove  $MEGAFORM^{m}$  boom shape eliminates weight and increases capacity compared to conventional shapes.



### Lattice extension

For improved up and over reach, a bifold lattice extension is available on the TMS800E and manually offsets from  $0^{\circ}$  to  $40^{\circ}$ .



### **Suspension system**

Standard front and rear air ride suspension provides a comfortable ride at maximum speed of 105 km/h (65 mph).



# Cummins diesel carrier engine

The electronically controlled Cummins ISM diesel engine provides plenty of power, on highway and at the jobsite.



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# **Specifications**

#### Superstructure



#### Boom

12,5 m - 39 m (41 ft - 128 ft) four section, full power MEGAFORM™ boom.

Maximum tip height: 41,1 m (135 ft).



#### **Boom nose**

Four nylatron sheaves, mounted on heavy duty tapered roller bearings with removable pin type rope guards. Quick reeve boom nose. Removable auxiliary boom nose with removable pin type rope guard.



### **Boom elevation**

Single lift cylinder with safety valve provides boom angle from  $-3^{\circ}$  to  $+78^{\circ}$ .



### Offsettable lattice extension

10 m - 17 m (33 ft - 56 ft) bifold lattice swingaway extension, manual offsettable at 0°, 20° and 40°. Maximum tip height: 58,2 m (191 ft)



### \* Optional lattice extension

Two 6,1 m (20 ft) inserts for use with lattice swingaway extension to increase length up to 23,2 m (76 ft) or 29,3 m (96 ft).

Maximum tip height: 70,1 m (230 ft)



### Load moment and anti-two block system

Standard "Graphics Display" load moment and anti-two block system with audio-visual warning and control lever lockout. These systems provide electronic display of boom angle, boom length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition. The standard "Work Area Definition **System**" allows the operator to pre-select and define safe working areas. If the crane approaches the pre-set limits, audio-visual warnings aid the operator in avoiding job-site obstructions.



#### Cab

All aluminum constructed cab with acoustical lining, hydraulically tiltable (0° to +20°). Includes tinted safety glass, adjustable operator's seat, sliding windows in side and rear, hinged skylight with wiper, skylight sunscreen. Other features include hot water heater/ defroster, armrest integrated dual axis crane controls, and ergonomically arranged instrumentation.



### Swing

Axial piston fixed displacement motor and planetary gear box. Infinitely variable to 1.7 rpm. Holding brake and service brake.



### Counterweight

3629 kg (8000 lb) consisting of various sections with hydraulic installation/removal system.

\*Optional "Heavy Lift" package consisting of (1) 1814 kg (4000 lb) and (1) 2722 kg (6000 lb) section, for a total of 8165 kg (18,000 lb).

\*Optional "XL" counterweight package consisting of (1) 2721 kg (6000 lb) slab, (1) 1814 kg (4000 lb) slab and (2) 1361 kg (3000 lb) wing weights in addition to standard; for a total of 10 886 kg (24,000 lb) of counterweight.



### Hydraulic system

1 piston and 3 gear type pumps with a total capacity of 678 l/m (179 gpm). Maximum operating pressure, 27,6 MPa (4000 psi).

Thermostatically controlled oil cooler keeps oil at optimum operating temperature.

Tank capacity: 693 L (183 gal)



### Hoist

Main and auxiliary hoist are powered by axial piston motor with planetary gear and brake. "Thumb-thumper" hoist drum rotation indicator alerts operator of hoist movement.

Single line pull: 1st layer: 9185 kg (20,250 lb)

3rd layer: 7716 kg (17,010 lb) 5th layer: 6650 kg (14,660 lb)



# **Specifications**

### Superstructure continued

Maximum line speed: 157 m/min (514 fpm)

Maximum permissible line pull:

7620 kg (16 800 lb) 6x36 rope 7620 kg (16 800 lb) 35x7 rope

Rope diameter: 19 mm (3/4 in)

Rope length: 183 m (600 ft) main hoist

185 m (607 ft) auxiliary hoist

Rope type: 6 x 36 EIPS IWRC, Special Flexible 35 x 7 Flex-x, Rotation Resistant

Maximum rope stowage: 256 m (841 ft)

#### Carrier



### Chassis

Triple box section, four-axle carrier, fabricated from high strength, low alloy steel with towing and tie-down lugs.



### **Outrigger system**

Four hydraulic telescoping, two-stage, double box beam outriggers with inverted jack and integral holding valves. Quick release type outrigger floats 610 mm (24 in) diameter. Three position setting with fully extended, intermediate (50%) extended and fully retracted capacities. Maximum outrigger pad load: 101,800 lb



### **Outrigger controls**

Located in the superstructure cab and on either side of the carrier. Crane level indicator (sight bubble).



### Engine

Cummins ISM 450 10.8 L diesel (On Highway EPA Certified) six cylinders, after cooled, 336 kW (450 bhp) (gross) @ 2000 rpm. Maximum torque 2102 Nm (1550 ft lb) @ 1200 rpm.

Equipped with engine compression brake, block heater, cold start aid (less canister) and audio-visual engine distress system.

Fuel Requirement - Maximum of 15 ppm sulfur content (Ultra Low Sulfur Diesel).

## •

### Engine (required for sale outside North America

Cummins QSM 402 10,8 L diesel (Off Highway EPA Certified) six cylinders, after cooled, 300 kW (402 bhp) (gross) @ 1800 RPM. Maximum torque 1898 Nm (1400 ft lb) @ 1400 RPM.

Equipped with engine compression brake, block heater, cold start aid (less canister) and audio-visual engine distress system.

Fuel Requirement - Maximum of 5000 ppm sulfur content



### Fuel tank capacity

379 L (100 gal).



### Transmission

Roadranger Ultra Shift 10 speeds forward, two speeds reverse. Two speed auxiliary transmission. Used with ISM450 "On Highway" engine.

Roadranger manual transmission with 11 speeds forward, three speeds reverse. Used with QSM 402 "Off Highway" engine.

#### I-●-I Drive

8 x 4 x 4.



### Steering

Front axles, single circuit, mechanical steering with hydraulic power assist. Turning radius: 45.1 ft.



### Axles

Front: (2) beam-type steering axles, 2,12 m (83.4 in) track

Rear: (2) single reduction drive axles, 1,89 m (74.5 in) track. Inter-axle differential locks.



### **Brakes**

S-cam, dual air split system operating on all wheels. Spring-applied, air released parking brake acting on rear axles. Air dryer.



### Suspension

Front: Walking beam with air bags and shock absorbers. Rear: Walking beam with air bags and shock absorbers.



# **Specifications**

#### Carrier continued



### **Tires**

Front: 445/65R 22.5 tubeless, mounted on aluminum disc wheels.

Rear: 315/80R 22.5 tubeless, mounted on aluminum disc wheels, inner steel.



### Lights

Full lighting package including turn indicators, head, tail, brake, and hazard warning lights.



#### Cab

One man design, aluminum fabricated with acoustical lining and tinted safety glass throughout. Deluxe fabric covered seat with air adjustment. Complete driving controls and engine instrumentation including tilt telescope steering wheel, tachometer, speedometer, voltmeter, water temp., oil pressure, fuel level, air pressure gauge with A/V warning and engine high temp./low oil pressure A/V warning. Other standard items include hot water heater/defroster, electric windshield wash/wipe, fire extinguisher, seat belt, door lock, air horn, and air conditioning.



### **Electrical system**

Two 12V – maintenance free batteries provides 12 V electrical system. Standard battery disconnect.



### Maximum speed

104 km/h (65 mph)



### Gradeability (theoretical)

70%

### Miscellaneous standard equipment

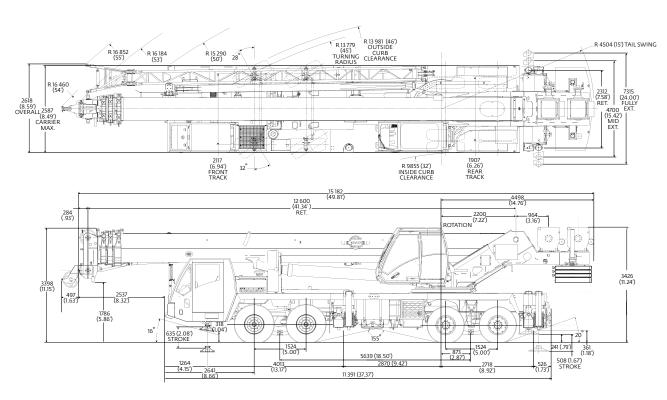
Aluminum fenders with rear storage compartments; dual rear view mirrors; electronic back-up alarm; sling/tool box; tire inflation kit; air cleaner restriction indicator; headache ball stowage; aluminum wheels, event recorder.

### \* Optional equipment

- Auxiliary Lighting and Convenience Package: Includes amber strobe for superstructure and carrier cabs, dual boom base mounted floodlights and LMI light bar.
- Hookblocks
- Pintle hook (rear)
- Cross axle differential locks
- Trailing Boom Package
- Aluminum outrigger pads
- Heavy Counterweight Package
- Tow cable
- Wind speed indicator
- Winterfront radiator cover



# **Dimensions**



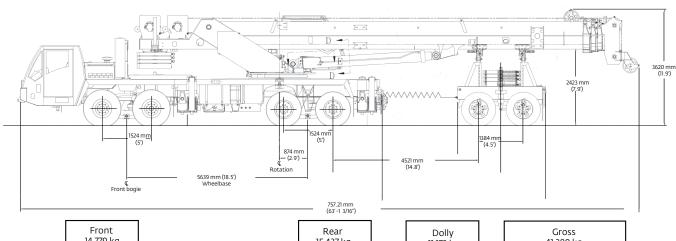
Note: Dimensions shown as mm (ft).

Unit configuration kg (lb)	Fr	ont	R	ear	Gr	oss
Basic machine including 128 ft main boom, 56 ft bifold swingaway, main and auxiliary hoists with cable, auxiliary boom nose, air conditioning in both cabs, 40 USt hookblock tied to bumper, 10 USt headache ball stowed, zero counterweight, 200 lb driver	19 933	(43,943)	18 509	(40,804)	38 441	(84,747)
Add 4000 lb counterweight pinned to superstructure	18 965	(41,809)	21 298	(46,954)	40 263	(88,763)
Add 10,000 lb counterweight (6000 lb on deck/4000 lb pinned to superstructure)	21 261	(46,872)	21 729	(47,904)	42 990	(94,776)
Add 14,000 lb counterweight (8000 lb on deck/6000 lb pinned to superstructure)	21 549	(47,506)	23 261	(51,280)	44 809	(98,786)
Add 18,000 lb counterweight (8000 lb on deck/10,000 lb pinned to superstructure)	20 581	(45,372)	26 050	(57,430)	46 631	(102,802)
Substitute:						
Aluminum outrigger pads	-3	(-6)	-30	(-66)	-33	(-72)
Remove:						
33 ft-56 ft bifold swingaway	-1365	(-3010)	166	(365)	-1200	(-2645)
40 USt hookblock	-602	(-1327)	229	(504)	-373	(-823)
10 USt headache ball	-380	(-838)	122	(270)	-258	(-568)
Auxiliary hoist with cable	84	(185)	-240	(-530)	-156	(-345)
Air conditioning - carrier	-36	(-80)	8	(17)	-29	(-63)
Air conditioning - superstructure	15	(32)	-102	(-225)	-88	(-193)
Effect per foot of extended boom:	-346	(762)	346	(-762)	0	(0)
Axle/tire allowable	22 317	(49,200)	27 216	(60,000)	49 533	(109,200)

Grove TMS800E



# Travel proposals



(32,582 lb)

15 437 kg (34,032 lb)

11 173 kg (24,633 lb)

Gross 41 389 kg (91,247 lb)

Unit Configuration:

12,5 m - 39 m (41 ft - 128 ft ) boom

10 m - 17 m (33 ft - 56 ft) stowed swingaway

Main and auxiliary hoists with cable

40 USt hook block hanging from boom nose

10 USt headache ball stowed in front tray

500 lb of rigging and cribbing

2 axle boom dolly [ 2722 kg (6,000 lb)]

No counterweight

Air conditioning, both cabs

Additions:

3629 kg (8000 lb) counterweight stowed on the chassis deck

4536 kg (10,000 lb) counterweight stowed on the boom dolly

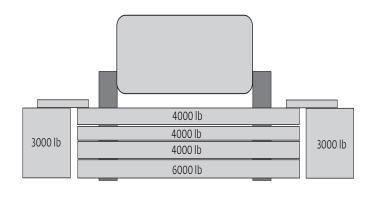
17 844 kg (39,339 lb)

Rear (35,301 lb)

Dolly 15 721 kg (34,659 lb)

Gross 49 577 kg (109,299 lb)

### Counterweight configurations

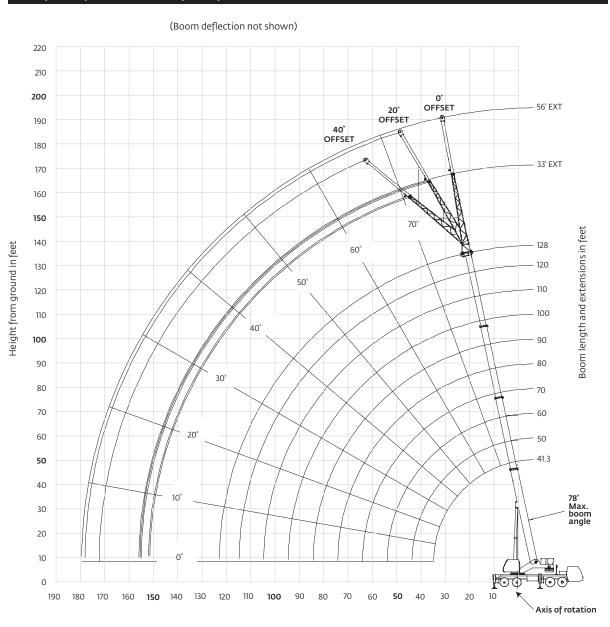


Load chart configurations									
	4000 lb	6000 lb	3000 lb						
8000 lb	2X								
10,000 lb	Χ	X							
12,000 lb	3X								
14,000 lb	2X	X							
18,000 lb	3X	X							
24,000 lb	3X	X	2X						

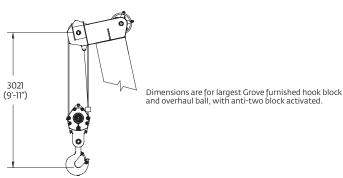


# Working range

### 41.3 ft - 128 ft main boom + 33 ft - 56 ft lattice extension

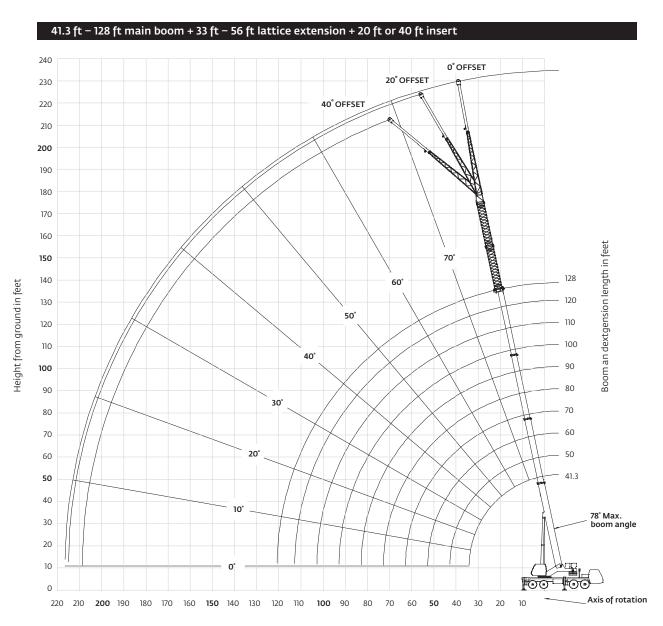


Operating radius in feet from axis of rotation

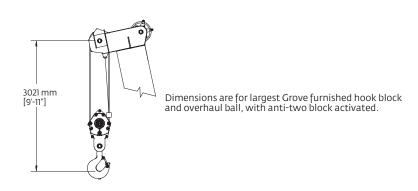




# Working range

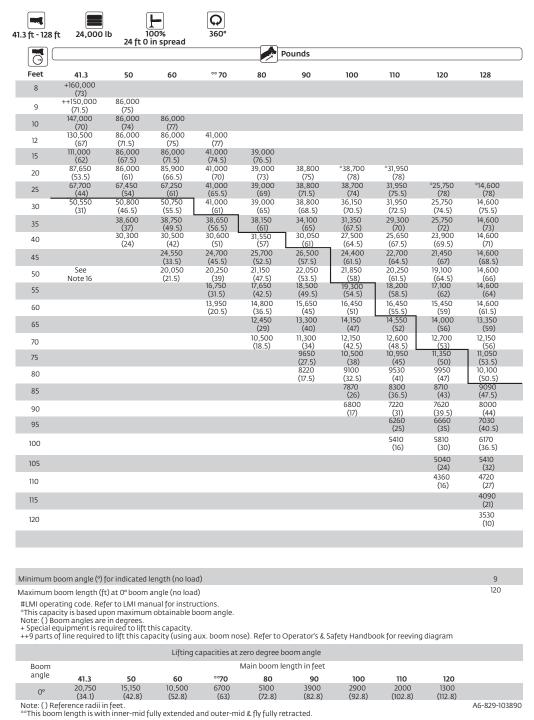


Operating radius in feet from axis of rotation

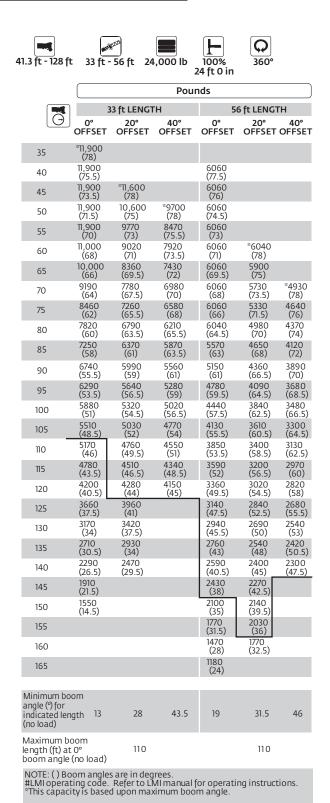


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- 1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2. The 33 ft extension length may be used with single or double part line lifting service. The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 33 ft or 56 ft extension erected, the outriggers must be fully extended or 50% extended (15 ft 5 in spread).





			Pounds						
	76 ft (56 ft LE	NGTH + 1	INSERT)	96 ft (56 f	96 ft (56 ft LENGTH + 2 INSERTS)				
$\Theta$	0° OFFSET	20° OFFSET	40° OFFSET	0° OFFSET	20° OFFSET	40° OFFSET			
50	4850 (77.5)								
55	4850 (76)			3520 (78)					
60	4850 (74.5)			3520 (77)					
65	4850 (73)	*5290 (78)		3520 (75.5)					
70	4850 (71.5)	4860 (76.5)		3520 (74)					
75	4850 (70)	4470 (75)		3520 (72.5)	3740 (77)				
80	4730 (68.5)	4110 (73.5)	4050 (77)	3520 (71.5)	3420 (75.5)				
85	4310 (67)	3790 (72)	3500 (75.5)	3300 (70)	3100 (74.5)	*3250 (78)			
90	3940	3500	3260	2970	2820	2720			
95	(65.5) 3610	(70) 3240	(73.5)	(68.5) 2660	(73) 2560	(76) 2490			
100	(63.5) 3310	(68.5)	(72) 2830	(67) 2390	(71.5) 2320	(74.5) 2270			
105	(62) 3040	(67) 2770	(70.5) 2630	(65.5) 2140	(70) 2100	(73) 2070			
	(60.5) 2790	(65) 2570	(68.5) 2450	(64) 1920	(68.5) 1900	(71.5) 1890			
110	(59) 2560	(63.5) 2370	(66.5) 2280	(62.5) 1710	(67) 1710	(70) 1710			
115	(57) 2350	(61.5) 2200	(65) 2120	(61) 1520	(65.5) 1540	(68.5) 1550			
120	(55.5) 2160	(60) 2030	(63) 1970	(59.5) 1350	(64) 1380	(66.5) 1390			
125	(53.5)	(58)	(61)	(58)	(62.5)	(65)			
130	1990 (52)	1880 (56.5)	1830 (59)	1190 (56.5)	1230 (60.5)	1250 (63.5)			
135	1820 (50)	1730 (54.5)	1700 (57)	1040 (55)	1080 (59)	1110 (61.5)			
140	1670 (48)	1590 (52.5)	1570 (55)						
145	1530 (46)	1470 (50.5)	1450 (52.5)						
150	1400 (43.5)	1340 (48)	1340 (50.5)						
155	1270 (41.5)	1230 (46)	1230 (48)						
160	1160 (39)	1120 (43.5)	1130 (45)						
165	1050 (36.5)	1020 (40.5)							
	,30.37	(.3.5)	•						
Minimun angle (°) f indicated length (n	for 35	39	43.5	53.5	58	60.5			
	e) at 0° gle (no load)	70			70				
#LMI ope	Boom angles erating code. R acity is based	lefer to LÑ	11 manual fo		instruction	IS.			

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#### NOTES:

1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.

- 2. The 33 ft extension length may be used with single or double part line lifting service. The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
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- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 33 ft or 56 ft extension erected, the outriggers must be fully extended or 50% extended (15 ft 5 in spread).

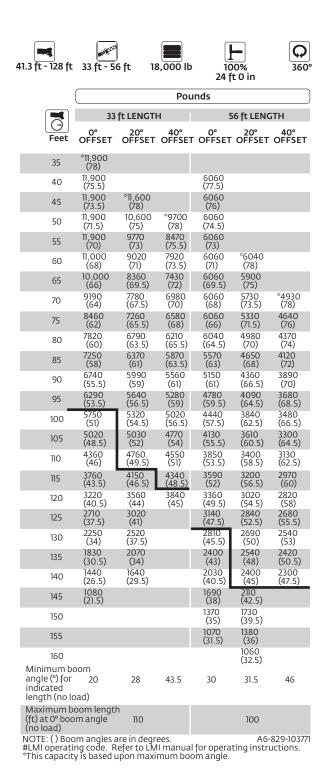


41.3 ft - 128 ft	18,000 lb	100 24 ft		<b>Q</b> 360°						
						ounds				
Feet	41.3	50	60	°° 70	Main boo 80	m length in fe 90	eet 100	110	120	128
8	+160,000 (73)									
9	++150,000 (71.5)	86,000 (75)								
10	147,000 (70)	86,000 (74)	86,000 (77)							
12	130,500 (67)	86,000 (71.5)	86,000 (75)	41,000 (77)						
15	111,000 (62)	86,000 (67.5)	86,000 (71.5)	41,000 (74.5)	39,000 (76.5)					
20	87,650 (53.5)	86,000 (61)	85,900 (66.5)	41,000 (70)	39,000 (73)	38,800 (75)	*38,700 (78)	*31,950 (78)		
25	63,700 (44)	63,750 (54)	63,300 (61)	41,000 (65.5)	39,000 (69)	38,800 (71.5)	38,700 (74)	31,950 (75.5)	*25,750 (78)	*14,600 (78)
30	45,450 (31)	45,650 (46.5)	45,600 (55.5)	41,000 (61)	39,000 (65)	38,800 (68.5)	36,150 (70.5)	31,950 (72.5)	25,750 (74.5)	14,600 (75.5)
35	(31)	34,450 (37)	34,550 (49.5)	34,500 (56.5)	35,450 (61)	34,100 (65)	31,350 (67.5)	29,300 (70)	25,750 (72)	14,600 (73)
40		26,800 (24)	27,000 (42)	27,100 (51)	28,050 (57)	28,950 (61)	27,500 (64.5)	25,650 (67.5)	23,900	14,600 (71)
45		(24)	21,550	21,700	22,650	23,500	24,350	22,700	(69.5) 21,450	14,600
50			(33.5) 17,450 (21.5)	(45.5) 17,600 (39)	(52.5) 18,550 (47.5)	(57.5) 19,450 (53.5)	(61.5) 20,200 (58)	(64.5) 20,250 (61.5)	(67) 19,100 (64.5)	(68.5) 14,600
55			(21.3)	14,400	15,300	16,150	16,950	17,300	17,100	(66) 14,600
60				(31.5) 11,800 (20.5)	(42.5) 12,700	(49.5) 13,500	(54.5) 14,350 (51)	(58.5) 14,750 (55.5)	(62) 15,100 (50)	(64) 14,600
65				(20.3)	(36.5) 10,550 (29)	(45) 11,350	12,200	12,600	(59) 13,000	(61.5) 13,350 (59)
70					8760	(40) 9550	(47) 10,400	(52) 10,850	(56) 11,250	11,600
75					(18.5)	(34) 8010 (37.5)	(42.5) 8890	(48.5) 9320 (45)	(53) 9740 (50)	(56) 10,100
80						(27.5) 6690	(38) 7580	(45) 8010	8430	(53.5) 8790
85						(17.5)	(32.5) 6450	(41) 6880	(47) 7290	(50.5) 7670
90							(26) 5460	(36.5) 5880	(43) 6290	(47.5) 6670
95							(17)	(31) 5000	(39.5) 5410	(44) 5780
100								(25) 4220	(35) 4620	(40.5) 4990
105								(16)	(30) 3920	(36.5) 4280
110									(24) 3280	(32) 3650
115									(16)	(27) 3080
120										(21) 2560
	om angle (°) for	indicated ler	ngth (no load	)						(10) 9
#LMI operati *This capacit Note: () Boor + Special equ	om length (ft) a ng code. Refer t y is based upon n angles are in o ipment is requii ine required to l	to LMI manua maximum o degrees. red to lift this	al for instruct btainable boo capacity. city (using au	iions. om angle. x. boom nose	). Refer to Ope ero degree bo		ty Handbook	for reeving dia	agram.	120
Boom angle					Main boom len					
0°	41.3 20,750 (34.1) rence radii in fe	<b>50</b> 15,150 (42.8)	60 10,500 (52.8)	** <b>70</b> 6700 (63)	<b>80</b> 5100 (72.8)	<b>90</b> 3900 (82.8)	100 2900 (92.8)	110 2000 (102.8)	120 1300 (112.8)	

Note: ( ) Reference radii in feet.

\*\*This boom length is with inner-mid fully extended and outer-mid & fly fully retracted.





#### NOTES:

1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.

- 2.The 33 ft extension length may be used with single or double part line lifting service. The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 33 ft or 56 ft extension erected, the outriggers must be fully extended or 50% extended (15 ft 5 in spread).





			Pour	nds		
	76 ft (56 ft l	LENGTH +	1 INSERT)	96 ft (56 ft LE	NGTH+2	INSERTS)
Feet	0° OFFSET	20° OFFSET	40° OFFSET	0° OFFSET	20° OFFSET	40° OFFSET
50	4850 (77.5)					
55	4850 (76)			3520 (78)		
60	4850 (74.5)			3520 (77)		
65	4850 (73)	*5290 (78)		3520 (75.5)		
70	4850 (71.5)	4860 (76.5)		3520 (74)		
75	4850 (70)	4470 (75)		3520 (72.5)	3740 (77)	
80	4730 (68.5)	4110 (73.5)	4050 (77)	3520 (71.5)	3420 (75.5)	
85	4310 (67)	3790 (72)	3500 (75.5)	3300 (70)	3100 (74.5)	*3250 (78)
90	3940 (65.5)	3500 (70)	3260 (73.5)	2970 (68.5)	2820 (73)	2720 (76)
95	3610 (63.5)	3240 (68.5)	3030 (72)	2660 (67)	2560 (71.5)	2490 (74.5)
100	3310 (62)	3000 (67)	2830 (70.5)	2390 (65.5)	2320 (70)	2270 (73)
105	3040 (60.5)	2770 (65)	2630 (68.5)	2140 (64)	2100 (68.5)	2070 (71.5)
ПО	2790 (59)	2570 (63.5)	2450 (66.5)	1920 (62.5)	1900 (67)	1890 (70)
115	2560 (57)	2370 (61.5)	2280 (65)	1710 (61)	1710 (65.5)	1710 (68.5)
120	2350 (55.5)	2200 (60)	2120 (63)	1520 (59.5)	1540 (64)	1550 (66.5)
125	2160 (53.5)	2030 (58)	1970 (61)	1350 (58)	1380 (62.5)	1390 (65)
130	1990 (52)	1880 (56.5)	1830 (59)	1190 (56.5)	1230 (60.5)	1250 (63.5)
135	1820 (50)	1730 (54.5)	1700 (57)	1040 (55)	1080 (59)	1110 (61.5)
140	1670 (48)	1590 (52.5)	1570 (55)			
145	1530 (46)	1470 (50.5)	1450 (52.5)			
150	1400 (43.5)	1340 (48)	1340 (50.5)			
155	1160 (41.5)	1230 (46)	1230 (48)			
160		1120 (43.5)	1130 (45)			
Minimum bo angle (°) for indicated len (no load)		40.5	43.5	53.5	58	60.5
Maximum b length (ft) at boom angle	t 0°	70			70	

NOTE: () Boom angles are in degrees. A6-829-103785 #LMI operating code. Refer to LMI manual for operating instructions. \*This capacity is based upon maximum boom angle.

- 1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2. The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 56 ft extension erected and inserts, the outriggers must be fully extended and vertical jacks set.

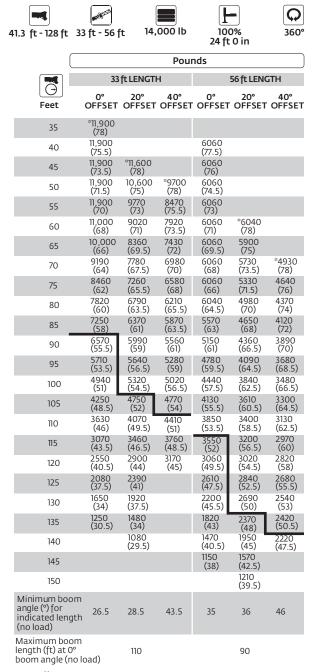


41.3 ft- 128 ft	14,000 lb		0%	<b>Q</b> 360°						
		24 [1	t 0 in		Pou	nds				
Feet	41.3	50	60	°°70	Main boom lei 80	ngth in feet 90	100	110	120	128
8	++150,000 (73)									
9	++150,000 (71.5)	86,000 (75)								
10	145,500 (70)	86,000 (74)	86,000 (77)							
12	129,000 (67)	86,000 (71.5)	86,000 (75)	41,000 (77)						
15	110,000 (62)	86,000 (67.5)	86,000 (71.5)	41,000 (74.5)	39,000 (76.5)					
20	85,200 (53.5)	84,900 (61)	84,650 (66.5)	41,000 (70)	39,000 (73)	38,800 (75)	*38,700 (78)	*31,950 (78)		
25	59,150 (44)	59,150 (54)	58,700 (61)	41,000 (65.5)	39,000 (69)	38,800 (71.5)	38,700 (74)	31,950 (75.5)	*25,750 (78)	*14,600 (78)
30	41,950 (31)	42,150 (46.5)	42,100 (55.5)	41,000 (61)	39,000 (65)	38,800 (68.5)	36,150 (70.5)	31,950 (72.5)	25,750 (74.5)	14,600 (75.5)
35		31,600 (37)	31,750 (49.5)	31,700 (56.5)	32,600 (61)	33,600 (65)	31,350 (67.5)	29,300 (70)	25,750 (72)	14,600 (73)
40		24,450 (24)	24,650 (42)	24,750 (51)	25,650 (57)	26,550 (61)	27,500 (64.5)	25,650 (67.5)	23,900 (69.5)	14,600 (71)
45			19,500 (33.5)	19,650 (45.5)	20,650 (52.5)	21,500 (57.5)	22,350 (61.5)	22,650 (64.5)	21,450 (67)	14,600 (68.5)
50			15,650 (21.5)	15,800 (39)	16,750 (47.5)	17,650 (53.5)	18,400 (58)	18,750 (61.5)	19,100 (64.5)	14,600 (66)
55				12,800 (31.5)	13,700 (42.5)	14,550 (49.5)	15,350 (54.5)	15,700 (58.5)	16,100 (62)	14,600 (64)
60				10,400 (20.5)	11,250 (36.5)	12,050 (45)	12,900 (51)	13,300 (55.5)	13,650 (59)	14,150 (61.5)
65				, , ,	9240 (29)	10,050 (40)	10,900 (47)	11,300 (52)	11,700 (56)	12,100 (59)
70					7550 (18.5)	8350 (34)	9220 (42.5)	9650 (48.5)	10,050 (53)	10,400 (56)
75						6900 (27.5)	7780 (38)	8210 (45)	8630 (50)	8980 (53.5)
80						5660 (17.5)	6550 (32.5)	6980 (41)	7390 (47)	7760 (50.5)
85							5490 (26)	5910 (36.5)	6320 (43)	6700 (47.5)
90							4560 (17)	4980 (31)	5380 (39.5)	5770 (44)
95								4150 (25)	4550 (35)	4930 (40.5)
100								3420 (16)	3810 (30)	4190 (36.5)
105									3150 (24)	3520 (32)
110									2560 (16)	2930 (27)
115										2390 (21)
120										1900 (10)
Maximum bo #LMI operati *This capacit Note: () Boor	om angle (°) fo om length (ft) ng code. Refer y is based upor n angles are in ine required to	at 0 deg. boo to LMI manu n maximum o degrees.	m angle (no lo al for instruct btainable boo city (using aux	oad) ions. om angle. c. boom nose	). Refer to Ope ero degree boo		y Handbook†	for reeving dia	igram.	120
Boom angle	43.5	F.C			Main boom len	J 1	100	7-0	122	
0°	<b>41.3</b> 20,750 (34.1)	50 15,150 (42.8)	60 10,500 (52.8)	** <b>70</b> 6700 (63)	<b>80</b> 5100 (72.8)	90 3900 (82.8)	100 2900 (92.8)	110 2000 (102.8)	120 1300 (112.8)	

A6-829-103750

Note: () Reference radii in feet.
\*\*This boom length is with inner-mid fully extended and outer-mid & fly fully retracted.

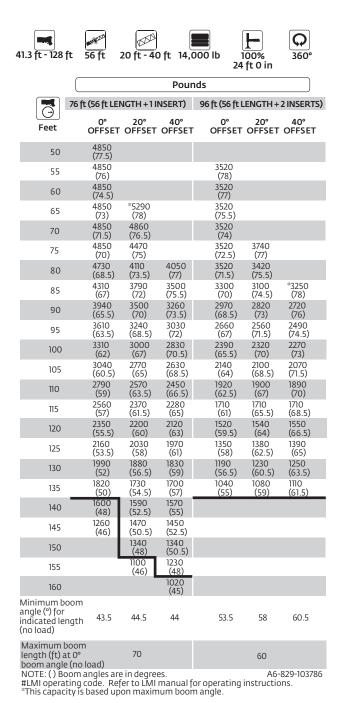




NOTE: () Boom angles are in degrees. A6-829-103772 #LMI operating code. Refer to LMI manual for operating instructions. \*This capacity is based upon maximum boom angle.

- 1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2.The 33 ft extension length may be used with single or double part line lifting service. The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 33 ft or 56 ft extension erected, the outriggers must be fully extended or 50% extended (15 ft 5 in spread).





- 1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2. The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft. with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
  6.Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 56 ft extension erected and inserts, the outriggers must be fully extended and vertical jacks set.

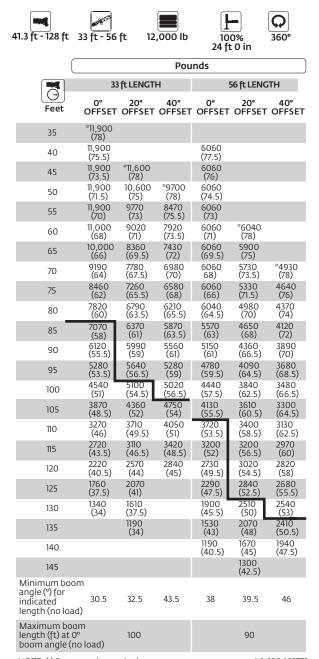


41.3 ft - 128 f	t 12,000 lb	<u> </u>	<b>-</b> 0%	<b>Q</b> 360°						
	- 12,000 10		t 0 in		Pour	nde				
Ö					Aain boom ler					
Feet	41.3	50	60	°°70	80	90	100	110	120	128
8	++150,000 (73)									
9	++150,000 (71.5)	86,000 (75)								
10	145,000 (70)	86,000 (74)	86,000 (77)							
12	128,500 (67)	86,000 (71.5)	86,000 (75)	41,000 (77)						
15	110,000 (62)	86,000 (67.5)	86,000 (71.5)	41,000 (74.5)	39,000 (76.5)					
20	83,950 (53.5)	83,650 (61)	83,450 (66.5)	41,000 (70)	39,000 (73)	38,800 (75)	*38,700 (78)	*31,950 (78)		
25	56,850 (44)	56,900 (54)	56,450 (61)	41,000 (65.5)	39,000 (69)	38,800 (71.5)	38,700 (74)	31,950 (75.5)	*25,750 (78)	*14,600 (78)
30	40,200 (31)	40,400 (46.5)	40,350 (55.5)	40,050 (61)	39,000 (65)	38,800 (68.5)	36,150 (70.5)	31,950 (72.5)	25,750 (74.5)	14,600 (75.5)
35	(10)	30,200 (37)	30,350 (49.5)	30,250 (56.5)	31,200 (61)	32,200 (65)	31,350 (67.5)	29,300 (70)	25,750 (72)	14,600 (73)
40		23,250	23,450	23,550	24,500	25,400	26,450	25,650	23,900	14,600
45		(24)	(42) 18,500	(51) 18,650	(57) 19,600	(61) 20,450	(64.5) 21,300	(67.5) 21,650	(69.5) 21,450	(71) 14,600
50			(33.5)	(45.5) 14,950	(52.5) 15,850	(57.5) 16,750	(61.5) 17,500	(64.5) 17,850	(67) 18,200	(68.5) 14,600
55			(21.5)	(39) 12,000	(47.5) 12,900	(53.5) 13,750	(58) 14,550	(61.5) 14,900	(64.5) 15,300	(66) 14,600
60				(31.5) 9680	(42.5) 10,500	(49.5) 11,350	(54.5) 12,200	(58.5) 12,550	(62) 12,950	(64) 13,450
65				(20.5)	(36.5) 8580	(45) 9400	(51) 10,250	(55.5) 10,650	(59) 11,050	(61.5) 11,450
70					(29) 6950	(40) 7750	(47) 8620	(52) 9050	(56) 9460	(59) 9810
75					(18.5)	(34) 6350	(42.5) 7230	(48.5) 7660	(53) 8080	(56) 8430
80						(27.5) 5140	(38) 6040	(45) 6460	(50) 6880	(53.5) 7240
						(17.5)	(32.5) 5010	(41) 5430	(47) 5840	(50.5) 6220
85							(26) 4110	(36.5) 4520	(43) 4930	(47.5) 5320
90							(17)	(31) 3730	(39.5) 4120	(44) 4510
95								(25) 3020	(35) 3410	(40.5) 3790
100								(16)	(30) 2770	(36.5) 3140
105									(24) 2190	(32) 2560
110									(16)	(27) 2040
115										(21) 1570
120	. (2)		.1. /							(10)
	oom angle (°) fo oom length (ft)		-							9
#LMI operat *This capaci	ing code. Refer ty is based upor om angles are in	to LMI manu n maximum o	al for instruct	ions.						i.E.U
.,		-	Lifting ca	apacities at z	ero degree bo	om angle				
Boom angle	41.3	50	60	۸ ** <b>70</b>	Aain boom len <b>80</b>	gth in feet <b>90</b>	100	110	120	
0°	20,750	15,150	10,500	6700	5100	3900	2900	2000	1300	
	(34.1)	(42.8)	(52.8)	(63)	(72.8)	(82.8)	(92.8)	(102.8)	(112.8)	-829-103751

Note: ( ) Reference radii in feet.
\*\*This boom length is with inner-mid fully extended and outer-mid & fly fully retracted.

A6-829-103751

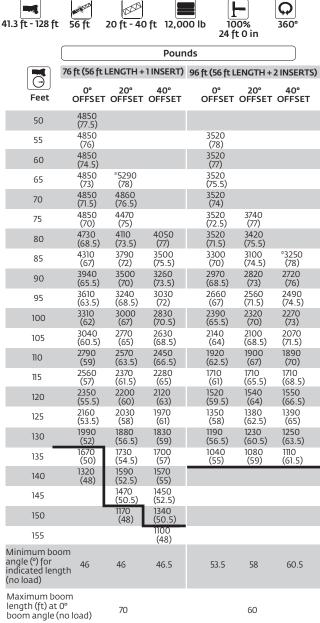




NOTE: ( ) Boom angles are in degrees. A6-829-103773 #LMI operating code. Refer to LMI manual for operating instructions. \*This capacity is based upon maximum boom angle.

- All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE I-765.
- 2. The 33 ft extension length may be used with single or double part line lifting service. The 56 ft extension length may be used for single line lifting service only.
- For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up.
   For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- When lifting over the main boom nose with 33 ft or 56 ft extension erected, the outriggers must be fully extended or 50% extended (15 ft 5 in spread).





NOTE: () Boom angles are in degrees.

#LMI operating code. Refer to LMI manual for operating instructions.

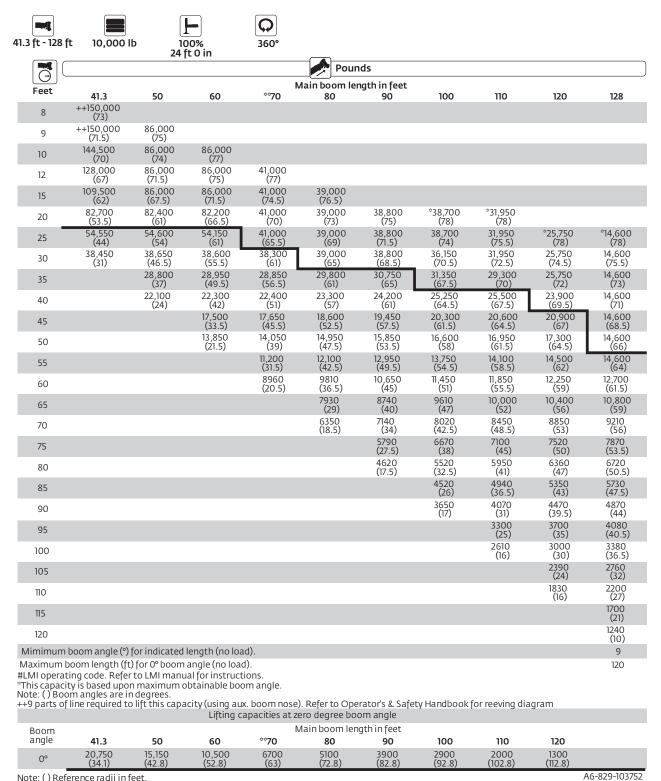
\*This capacity is based upon maximum boom angle.

NOTES:

1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.

- 2.The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 56 ft extension erected and inserts, the outriggers must be fully extended and vertical jacks set.

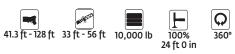




Note: ( ) Reference radii in feet. \*\*This boom length is with inner-mid fully extended and outer-mid & fly fully retracted.

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.





			Pou	nds		
	33	ft LENGTI	Н	5	6 ft LENG	ГН
Feet	0° OFFSET	20° OFFSET	40° OFFSET	0° r offset	20° OFFSET	40° OFFSET
35	*11,900 (78)					
40	11,900 (75.5)			6060 (77.5)		
45	11,900 (73.5)	*11,600 (78)		6060 (76)		
50	11,900 (71.5)	10,600 (75)	*9700 (78)	6060 (74.5)		
55	11,900 (70)	9770 (73)	8470 (75.5)	6060 (73)		
60	11,000 (68)	9020 (71)	7920 (73.5)	6060 (71)	*6040 (78)	
65	10,000 (66)	8360 (69.5)	7430 (72)	6060 (69.5)	5900 (75)	
70	9190 (64)	7780 (67.5)	6980 (70)	6060 (68)	5730 (73.5)	*4930 (78)
75	8460 (62)	7260 (65.5)	6580 (68)	6060 (66)	5330 (71.5)	4640 (76)
80	7630 (60)	6790 (63.5)	6210 (65.5)	6040 (64.5)	4980 (70)	4370 (74)
85	6590 (58)	6370 (61)	5870 (63.5)	5570 (63)	4650 (68)	4120 (72)
90	5670 (55.5)	5990 (59)	5560 (61)	5150 (61)	4360 (66.5)	3890 (70)
95	4850 (53.5)	5480 (56.5)	5280 (59)	4780 (59.5)	4090 (64.5)	3680 (68.5)
100	4130 (51)	4690 (54.5)	5020 (56.5)	4440 (57.5)	3840 (62.5)	3480 (66.5)
105	3480 (48.5)	3980 (52)	4360 (54)	3910 (55.5)	3610 (60.5)	3300 (64.5)
110	2900 (46)	3340 (49.5)	3690 (51)	3350 (53.5)	3400 (58.5)	3130 (62.5)
115	2370 (43.5)	2760 (46.5)	3070 (48.5)	2850 (52)	3200 (56.5)	2970 (60)
120	1890 (40.5)	2240 (44)	2510 (45)	2390 (49.5)	3020 (54.5)	2820 (58)
125	1450 (37.5)	1760 (41)		1970 (47.5)	2670 (52.5)	2680 (55.5)
130	1040 (34)	1310 (37.5)		1590 (45.5)	2210 (50)	2540 (53)
135				1240 (43)	1780 (48)	2110 (50.5)
140					1390 (45)	1660 (47.5)
145					1030 (42.5)	
Minimum b angle (°) for indicated le (no load)	33	34	43.5	40.5	41.5	46
Maximum b length (ft) at angle (no loa	t 0° boom	100			80	

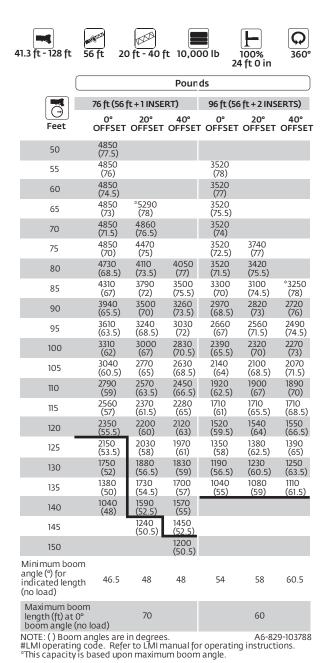
NOTE: () Boom angles are in degrees.

A6-829-103774
#LMI operating code. Refer to LMI manual for operating instructions.

This capacity is based upon maximum boom angle.

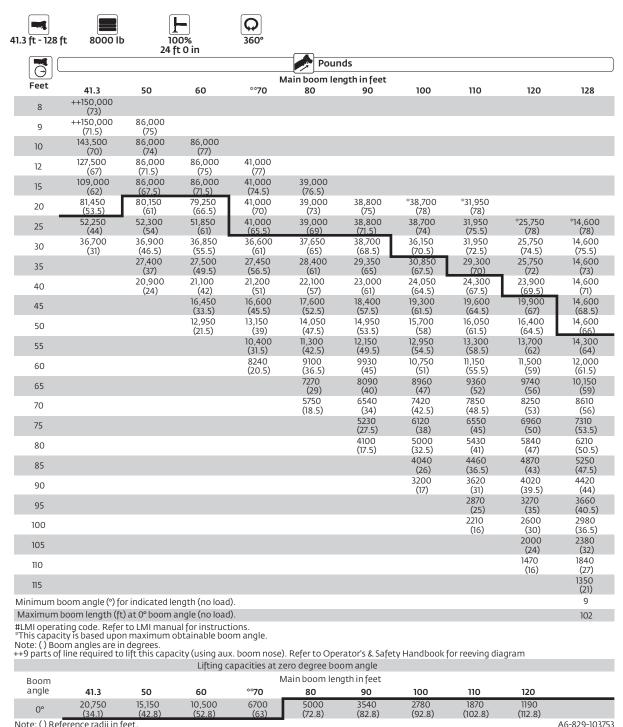
- 1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2.The 33 ft extension length may be used with single or double part line lifting service. The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 33 ft or 56 ft extension erected, the outriggers must be fully extended or 50% extended (15 ft 5 in spread).





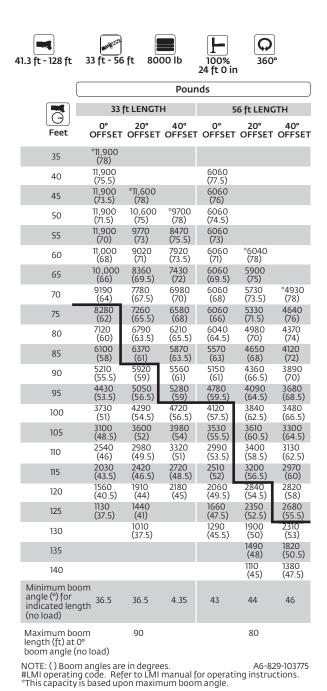
- 1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2.The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 56 ft extension erected and inserts, the outriggers must be fully extended and vertical jacks set.





Note: ( ) Reference radii in feet. \*\*This boom length is with inner-mid fully extended and outer-mid & fly fully retracted



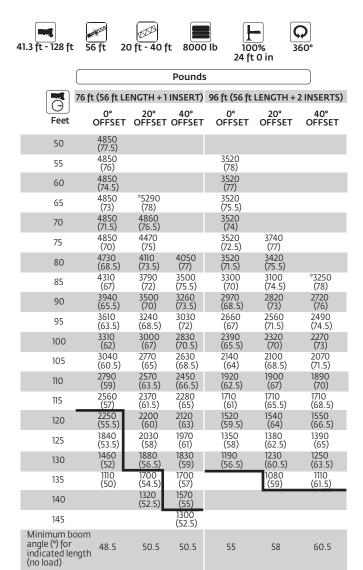


#### NOTES:

1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE I-765.

- 2.The 33 ft extension length may be used with single or double part line lifting service. The 56 ft extension length may be used for single line lifting service only.
- 3. For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of th next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 33 ft or 56 ft extension erected, the outriggers must be fully extended or 50% extended (15 ft 5 in spread).





NOTE: ( ) Boom angles are in degrees. A6-829-103789 #LMI operating code. Refer to LMI manual for operating instructions. \*This capacity is based upon maximum boom angle.

60

60

Maximum boom

length (ft) at 0° boom angle (no load)

- 1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE
- 2.The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 56 ft extension erected and inserts, the outriggers must be fully extended and vertical jacks set.



41.3 ft - 128 ft	4000 lb		<b>-</b> 0% : 0 in	<b>Q</b> 360°						
		2410			Pou	nds				
Feet	41.3	50	60	ν **70	Main boom le 80	ength in feet 90	100	110	120	128
8	++150,000 (73)									
9	++150,000 (71.5)	86,000 (75)								
10	142,500 (70)	86,000 (74)	86,000 (77)							
12	126,500 (67)	86,000 (71.5)	86,000 (75)	41,000 (77)						
15	108,000 (62)	86,000 (67.5)	86,000 (71.5)	41,000 (74.5)	39,000 (76.5)					
20	75,150 (53.5)	73,500 (61)	72,600 (66.5)	41,000 (70)	39,000 (73)	38,800 (75)	*38,700 (78)	*31,950 (78)		
25	47,700 (44)	47,750 (54)	47,300 (61)	41,000 (65.5)	39,000 (69)	38,800 (71.5)	38,700 (74)	31,950 (75.5)	*25,750 (78)	*14,600 (78)
30	33,200 (31)	33,400 (46.5)	33,400 (55.5)	33,100 (61)	34,150 (65)	35,250 (68.5)	36,150 (70.5)	31,950 (72.5)	25,750 (74.5)	14,600 (75.5)
35		24,550 (37)	24,700 (49.5)	24,650 (56.5)	25,550 (61)	26,550 (65)	28,050 (67.5)	28,100 (70)	25,750 (72)	14,600 (73)
40		18,550 (24)	18,750 (42)	18,850 (51)	19,750 (57)	20,650 (61)	21,700 (64.5)	21,950 (67.5)	22,150 (69.5)	14,600 (71)
45			14,450 (33.5)	14,550 (45.5)	15,550 (52.5)	16,400 (57.5)	17,250 (61.5)	17,550 (64.5)	17,850 (67)	14,600 (68.5)
50			11,150 (21.5)	11,350 (39)	12,250 (47.5)	13,150 (53.5)	13,900 (58)	14,250 (61.5)	14,600 (64.5)	14,600 (66)
55				8830 (31.5)	9720 (42.5)	10,550 (49.5)	11,350 (54.5)	11,700 (58.5)	12,100 (62)	12,700 (64)
60				6800 (20.5)	7650 (36.5)	8490 (45)	9320 (51)	9710 (55.5)	10,050 (59)	10,550 (61.5)
65					5960 (29)	6770 (40)	7660 (47)	8040 (52)	8430 (56)	8840 (59)
70					4540 (18.5)	5340 (34)	6220 (42.5)	6650 (48.5)	7050 (53)	7400 (56)
75						4120 (27.5)	5010 (38)	5440 (45)	5850 (50)	6200 (53.5)
80						3070 (17.5)	3970 (32.5)	4400 (41)	4810 (47)	5170 (50.5)
85							3080 (26)	3500 (36.5)	3910 (43)	4280 (47.5)
90							2300 (17)	2710 (31)	3110 (39.5)	3510 (44)
95								2020 (25)	2420 (35)	2810 (40.5)
100								1400 (16)	1790 (30)	2170 (36.5)
105									1240 (24)	1580 (32)
110										1050 (27)
	oom angle (°)								23	26
#LMI operat *This capaci Note: ( ) Boo	oom length (fing code. Refe ty is based upo om angles are line required t	er to LMI ma on maximur in degrees.	nual for instr n obtainable pacity (using	ructions. boom angle aux. boom r	nose). Refer to	o Operator's &	. Safety Han	dbook for ree		110
Boom			Lifting c	•	zero degree Nain boom le	3				
angle	41.3	50	60	**70	80	90	100	110		
0°	20,750 (34.1)	15,150 (42.8)	9680 (52.8)	5760 (63)	3850 (72.8)	2550 (82.8)	1900 (92.8)	1090 (102.8)		
Note: ( ) Refe	erence radii in length is with	i țeet. n inner-mid f	ully extended	l and outer-n	nid & flv fullv	retracted.			A	5-829-103754

Note: () Reference radii in feet. \*\*This boom length is with inner-mid fully extended and outer-mid & fly fully retracted.



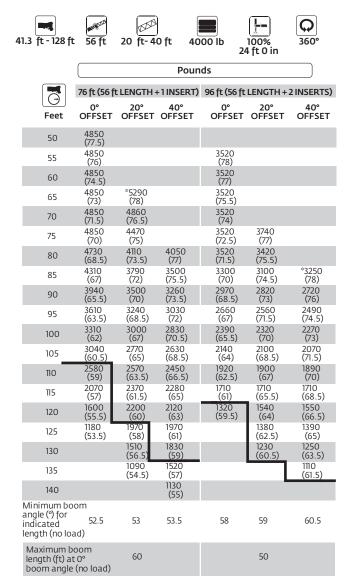


	Pounds								
	22	ft LENGTH			6 ft LENG				
Ö	0°	20°	40°	0°	20°	40°			
Feet	OFFSET	OFFSET			OFFSET				
35	*11,900 (78)								
40	11,900 (75.5)			6060 (77.5)					
45	11,900 (73.5)	*11,600 (78)		6060 (76)					
50	11,900 (71.5)	10,600 (75)	*9700 (78)	6060 (74.5)					
55	11,900 (70)	9770 (73)	8470 (75.5)	6060 (73)					
60	11,000 (68)	9020 (71)	7920 (73.5)	6060 (71)	*6040 (78)				
65	9930 (66)	8360 (69.5)	7430 (72)	6060 (69.5)	5900 (75)				
70	8440 (64)	7780 (67.5)	6980 (70)	6060 (68)	5730 (73.5)	*4930 (78)			
75	7170 (62)	7260 (65.5)	6580 (68)	6060 (66)	5330 (71.5)	4640 (76)			
80	6080 (60)	6790 (63.5)	6210 (65.5)	6040 (64.5)	4980 (70)	4370 (74)			
85	5140 (58)	5870 (61)	5870 (63.5)	5570 (63)	4650 (68)	4120 (72)			
90	4310 (55.5)	4970 (59)	5540 (61)	4900 (61)	4360 (66.5)	3890 (70)			
95	3570 (53.5)	4180 (56.5)	4680 (59)	4160 (59.5)	4090 (64.5)	3680 (68.5)			
100	2920 (51)	3480 (54.5)	3910 (56.5)	3470 (57.5)	3840 (62.5)	3480 (66.5)			
105	2340 (48.5)	2830 (52)	3220 (54)	2850 (55.5)	3610 (60.5)	3300 (64.5)			
110	1810 (46)	2250 (49.5)	2590 (51)	2300 (53.5)	3180 (58.5)	3130 (62.5)			
115	1330 (43.5)	1720 (46.5)	2030 (48.5)	1820 (52)	2640 (56.5)	2970 (60)			
120		1240 (44)	1520 (45)	1400 (49.5)	2150 (54.5)	2740 (58)			
125				1020 (47.5)	1710 (52.5)	2200 (55.5)			
130					1300 (50)	1700 (53)			
135						1240 (50.5)			
Minimum boo angle (°) for indicated length (no loa	40.5	42.5	43.5	46.5	48	49			
Maximum bo length (ft) at boom angle (	0°	80			70				

NOTE: () Boom angles are in degrees. A6-829-103776 #LMI operating code. Refer to LMI manual for operating instructions. \*This capacity is based upon maximum boom angle.

- 1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2.The 33 ft extension length may be used with ingle or double part line lifting service. The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of th next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 33 ft or 56 ft extension erected, the outriggers must be fully extended or 50% extended (15 ft 5 in spread).





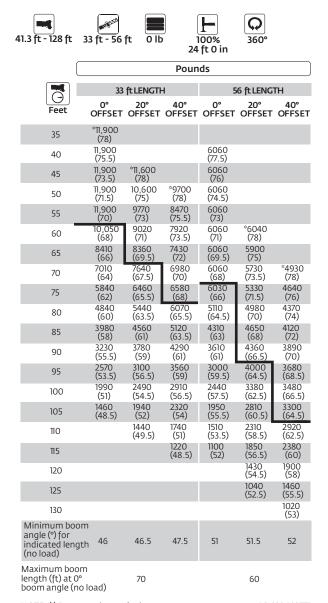
NOTE: () Boom angles are in degrees. A6-829-103790 #LMI operating code. Refer to LMI manual for operating instructions. \*This capacity is based upon maximum boom angle.

- 1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2. The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 56 ft extension erected and inserts, the outriggers must be fully extended and vertical jacks set.



1.3 ft - 128 ft	o lb	100 24 ft		<b>Q</b> 360°						
		24   1	O III		Pou	nds				
Feet					Main boom le	ngth in feet				
8	<b>41.3</b> ++150,000	50	60	**70	80	90	100	110	120	128
	(73) ++150,000	86,000								
9	(71.5) 141,500	(75) 86,000	86,000							
10	(70) 125,500	(74) 86,000	(77) 86,000	41,000						
12	(67)	(71.5)	(75)	(77)	30.000					
15	105,500 (62)	86,000 (67.5)	86,000 (71.5)	41,000 (74.5)	39,000 (76.5)					
20	68,500 (53.5)	66,950 (61)	66,050 (66.5)	41,000 (70)	39,000 (73)	38,800 (75)	*38,700 (78)	*31,950 (78)		
25	43,100 (44)	43,150 (54)	42,700 (61)	41,000 (65.5)	39,000 (69)	38,800 (71.5)	38,700 (74)	31,950 (75.5)	*25,750 (78)	*14,600 (78)
30	29,700 (31)	29,950 (46.5)	29,900 (55.5)	29,600 (61)	30,650 (65)	31,750 (68.5)	34,200 (70.5)	31,950 (72.5)	25,750 (74.5)	14,600 (75.5)
35	, , , , , , , , , , , , , , , , , , ,	21,750 (37)	21,850 (49.5)	21,800 (56.5)	22,750 (61)	23,700 (65)	25,200 (67.5)	25,550 (70)	25,750 (72)	14,600 (73)
40		16,150 (24)	16,350 (42)	16,450 (51)	17,400 (57)	18,250 (61)	19,350 (64.5)	19,800 (67.5)	20,250 (69.5)	14,600 (71)
45		(24)	12,400	12,550	13,500	14,350	15,200	15,650	16,150	14,600
50			(33.5) 9390	(45.5) 9570	(52.5) 10,450	(57.5) 11,350	(61.5) 12,100	(64.5) 12,600	(67) 13,100	13,600
55			(21.5)	(39) 7230	(47.5) 8120	(53.5) 8990	(58) 9770	(61.5) 10,200	(64.5) 10,700	(66)
60				(31.5) 5360	(42.5) 6210	(49.5) 7050	(54.5) 7880	(58.5) 8330	(62) 8790	(64) 9130
				(20.5)	(36.5) 4640	(45) 5460	(51) 6340	(55.5) 6780	(59) 7210	(61.5) 7520
65					(29) 3330	(40) 4130	(47) 5020	(52) 5480	(56) 5900	(59) 6200
70					(18.5)	(34)	(42.5) 3900	(48.5) 4340	(53)	(56)
75						(27.5)	(38)	(45)	4760 (50)	5080 (53.5)
80						2030 (17.5)	2940 (32.5)	3370 (41)	3780 (47)	4110 (50.5)
85							2110 (26)	2520 (36.5)	2920 (43)	3260 (47.5)
90							1390 (17)	1780 (31)	2170 (39.5)	2510 (44)
95								1130 (25)	1500 (35)	1820 (40.5)
100								(==)	(==)	1220 (36.5)
Mimimum	boom angle (	(°) for indicat	ed length (r	no load).				24	29	35
LMI operati This capacit Iote: ( ) Boo	boom length ng code. Refe cy is based upo m angles are i line required to	r to LMI manu on maximum o n degrees.	al for instructobtainable books obtainable books ocity (using au	tions. oom angle. ux. boom ne	ose). Refer to O t zero degree b		ety Handboo	k for reeving o	100 diagram	
Boom angle	41.3	50	60	**70	Main boom le <b>80</b>	ngth in feet <b>90</b>	110			
0°	20,750 (34.1)	13,750 (42.8)	8000 (52.8)	4390 (63)	2690 (72.8)	1550 (82.8)	1030 (92.8)			
	rence radii in length is with		y extended ai	nd outer-m	id & fly fully retra	acted.			A6-	829-10375

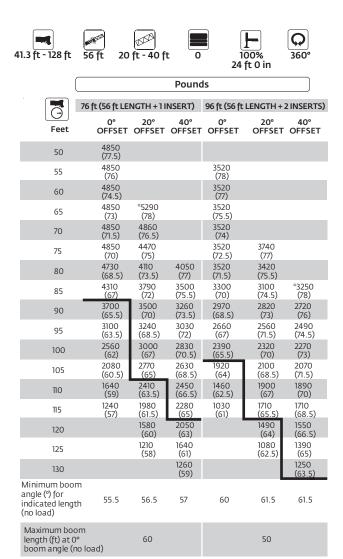




NOTE: ( ) Boom angles are in degrees. A6-829-103777 #LMI operating code. Refer to LMI manual for operating instructions. \*This capacity is based upon maximum boom angle.

- 1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2.The 33 ft extension length may be used with single or double part line lifting service. The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of th next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 33 ft or 56 ft extension erected, the outriggers must be fully extended or 50% extended (15 ft 5 in spread).





NOTE: ( ) Boom angles are in degrees. A6-829-103791 #LMI operating code. Refer to LMI manual for operating instructions. \*This capacity is based upon maximum boom angle.

- 1.All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2. The 56 ft extension length may be used for single line lifting service only.
- 3.For main boom lengths less than 128 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- 4. WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- 5.Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7.When lifting over the main boom nose with 56 ft extension erected and inserts, the outriggers must be fully extended and vertical jacks set.



# Load handling

#### Weight reductions for load handling devices

33 ft-56 ft folding boom extension	
*33 ft extension (erected)	5590 lb
*56 ft extension (erected)	13,060 lb
*76 ft extension (1 insert erected)	13,670 lb
*96 ft extension (2 inserts erected)	20,680 lb

\*Reduction of main boom capacities (no deduct required for stowed boom extension)

When lifting over swingaway and/or jib combinations, deduct total weight of all load handling devices reeved over main boom nose directly from swingaway or jib capacity.

A!liam. haans mass	12.C III-
Auxiliary boom nose	136 lb

#### Hookblocks and headache balls:

75 Ust, 4 sheave	1275 lb +
40 Ust, 3 sheave	823 lb +
10 Ust overhaul ball	568 lb +

+ Refer to rating plate for actual weight.

NOTE: All load handling devices and boom attachments are considered part of the load and suitable allowances MUST BE MADE for their combined weights. Weights are for Grove furnished equipment.

### Boom section vs. section extension percentages

Main boom length in feet										
	41.3	50	60	70	80	90	100	110	120	128
Boom sections: Percent extension										
Inner-mid	0	30	65	100	100	100	100	100	100	100
Outer-mid	0	0	0	0	7	34	52	69	86	100
Fly	0	0	0	0	17	34	52	69	86	100

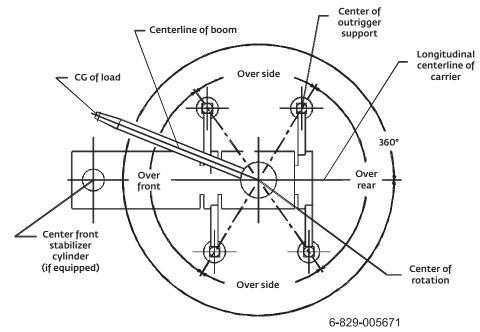
Line pulls and reeving information					
		Permissible			
Hoists	Cable/Specs.	Line pulls	Cable length		
	3/4 in (19 mm) 6x37 Class,				
Main	EIPS, IWRC Special Flexible	16,800 lb	600 ft		
N	lin. Breaking Strength 58,800	lb			
	19 mm (.75 in) Flex-X 35				
Main & Au	x Rotation resistant	16,800 lb	607 ft		
	(non-rotating)				
N	Min breaking strength 85,800	lb			

The approximate weight of 3/4 in wire rope is 1.5 lb/ft

Hoist performance							
Wire	Hoist line pulls		Drum rope				
Rope	Two speed hoist		Capacity (ft)				
Layer	Low	High					
	Available lb*	Available Ib*	Layer	Total			
1	20,250	9610	101	101			
2	18,490	8770	110	211			
3	17,010	8070	120	331			
4	15,750	7470	129	460			
5	14,660	6960	139	599			

\*Max. lifting capacity: 6x37 or 35x7 class = 17,160 lb

### Working area diagram



Bold lines determine the limiting position of any load for operation within working areas indicated.



Grove Manitowoc National Crane Potain



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