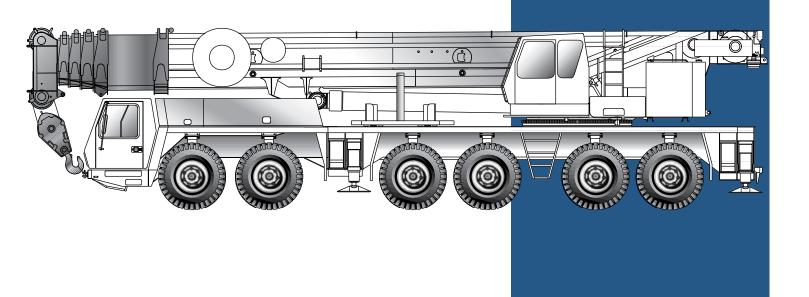
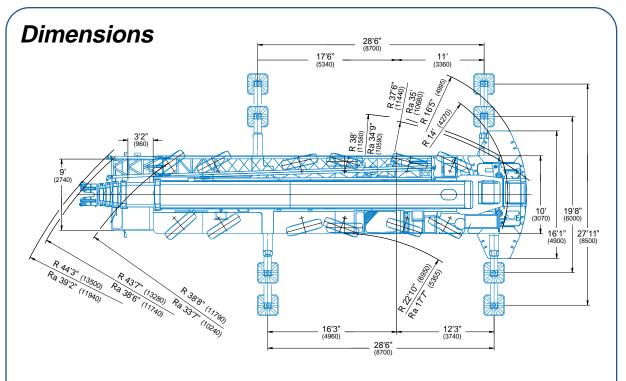
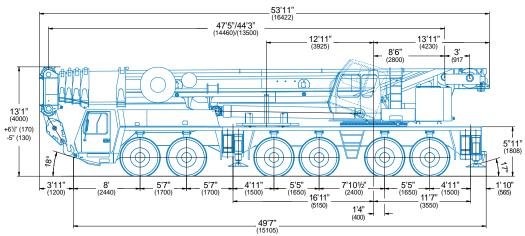




All Terrain Hydraulic Crane







Note: () Reference dimensions in mm

BASIC WEIGHTS (LBS.)	Axles 1& 2	<u>Axles 3 - 6</u>	<u>Total</u>
With Cummins Power, 20.5 R25 Tires	39,172	102,562	141,734
With Mercedes Power, 20.5 R25 Tires	38,810	102,218	141,028
Additions:			
Outrigger Pads	0	772	772
Auxiliary Hoist	-(3,283)	7,009	3,726
Additional Hydraulic Oil Cooler	-(55)	143	88
Brackets & Hydraulic Reeling Drum for Lattice Extension	397	110	507
Lattice Extension - 43/72 ft	3,704	1,587	5,291
Spare Tire - 14.00 R25	-(425)	1,010	584
Spare Tire - 16.00 R25	-(522)	1,239	717
Spare Tire - 20.5 R25	-(593)	1,402	809
Boom Removal Equipment	53	212	265
Removal:			
Front Outrigger Beams & Jacks	-(3,377)	-(1,980)	-(5,357)
Rear Outrigger Beams & Jacks	3,732	-(9,652)	-(5,919)
Boom Assembly (minus lift cylinder)*	-(20,102)	-(24,806)	-(44,908)
Lift Cylinder*	-(1,457)	-(3,018)	-(4,475)
16.00 R25 Tires in lieu	-(370)	-(741)	-(1,111)
14.00 R25 Tires in lieu	-(899)	-(1,799)	-(2,698)

*Reflects weights with superstructure facing forward

Working range





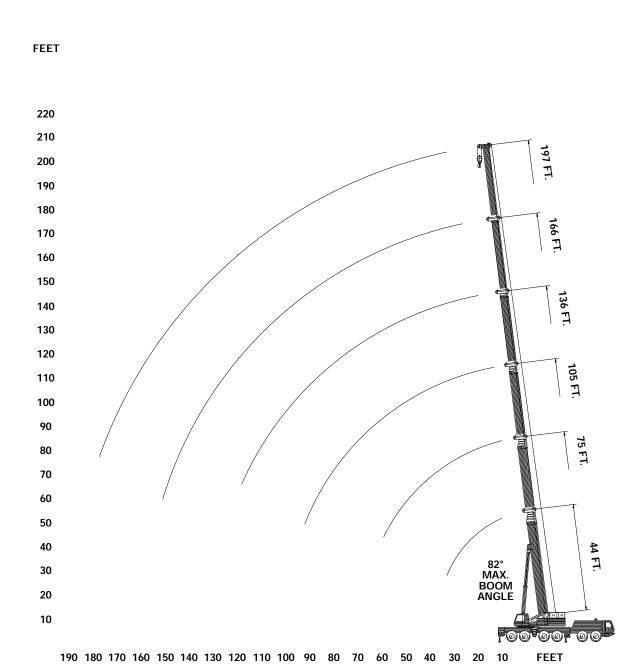




44 - 197 ft. (13.5 - 60 m)

138,800 lbs. (63,000 kg)

100%



AXIS OF ROTATION

Superstructure specifications

Boom

44 ft. - 197 ft. (13.5 m - 60 m) six section, full-power boom with patented "twin-lock" boom pinning system. Maximum tip height: 207 ft. (63 m).

Boom Elevation

Single lift cylinder with safety valve provides boom angle from -1.5° to +82°.

Lattice Extension

43 ft. - 72 ft. (13 m - 22 m) lattice swingaway extension. Hydraulically offsettable 5° - 40° with hydraulic luffing.

*Optional Lattice Jib Extension

Two 26 ft. (8 m) inserts for use with lattice swingaway extension to increase length up to 98 ft. (30 m) or 125 ft. (38 m). Hydraulically offsettable 5° - 40° with hydraulic luffing.

Load Moment & Anti-Two Block System

Load moment and anti-two block system with audio/visual warning and control lever lockout provides electronic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition.

Cab

All aluminum construction cab is tiltable (approximately 20°) and includes safety glass and adjustable operator's seat with hydraulic suspension. Other features include engine dependent hot water heater, armrest integrated crane controls, and ergonomically arranged instrumentation.

Swing

3 swing gears with axial piston fixed displacement motors provide swing speed of 0 - 1.7 RPM thru planetary gear box. Also provided is a spring applied, hydraulically released automatic swing brake with foot-operated release for free swing.

Counterweight

138,800 lbs. (63 000 kg) consisting of various sections with hydraulic installation/removal system (see counterweight configuration on page 12).

Engine

Cummins 6BTA5.9-C, diesel, 6 cylinders, water-cooled, turbocharged, 165 HP (123 kW) at 2000 rpm. Max. torque: 538 ft. lbs. (730 Nm) at 1500 rpm. Engine emission: EUROMOT/EPA/CARB (off highway).

Fuel Tank Capacity

53 gal. (200 L).

Hydraulic system

3 separate circuits, 2 axial piston variable displacement pumps, with electronic power limiting control and 1 axial piston variable displacement pump for swing. Standard thermostatically controlled oil cooler keeps oil at optimum operating temperature. Tank capacity: 259 gal. (980 L)

Control system

Full electronic control of all crane movements is accomplished using electrical control levers with automatic reset to zero. Controls are integrated with the LMI and engine management system by CAN-BUS.

Hoist

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

	<u>Main</u>	<u>Auxiliary</u>
Line length:	984 ft. (300 m)	755 ft. (230 m)
Rope diameter:	22 mm	22 mm
Line speed:	426 ft./min.	426 ft./min.
Line pull:	21,000 lbs. (93.4 kN)	21,000 lbs. (93.4 kN)

Electrical system

24 V system with three-phase alternator 28 V/80 A, 2 batteries 12 V/170 Ah.

*Optional equipment

- *Engine-independent hot water heater, with engine pre-heater
- *Second spotlight
- *Stereo/cassette player
- *Air Conditioning

^{*}Denotes optional equipment

Carrier specifications

Chassis

Box-type, torsion resistant frame is fabricated from high-strength steel.

Outrigger System

Hydraulic two-stage outrigger beams are extended by a single hydraulic cylinder and two cables. Outriggers can adjust to two positions:

Fully extended (100%) - 27' 11" (8.5 m)
Partially extended (50%) - 19' 8 " (6 m)
Four 29.5 in. x 32 in. (750 mm x 810 mm), self
stowing, steel outrigger pads provide rigid lifting base.
Outrigger controls are located on both sides of the
carrier. An electronic level indicator is located next to
each outrigger control box.

Engine

Cummins N14-525 E+, diesel, 6 cylinders, water-cooled, turbocharged, 525 HP (392 kW) at 2100 rpm. Max. torque: 1850 ft. lbs. (2509 Nm) at 1200 rpm. Engine emission: EUROMOT/EPA/CARB (on highway).

Fuel Tank capacity

132 gal. (500 L).

Transmission

Allison automatic CLT 755, 5 forward and 1 reverse speed. Transfer case with 2 speeds and inter-axle differential lock.

Drive/Steer

12 x 8 x 12.

Axles

6 axles. 1, 2, 4 and 5 are drive/steer. Axles 3 and 6 are steer only.

Suspension

GMK6220 features the Grove exclusive MEGATRAK† suspension. This revolutionary design features an independent hydroneumatic system with hydraulic lockout acting on all wheels. The suspension can be raised 6-1/2" (170 mm) or lowered 5" (130 mm) both longitudinally and transversely and features an automatic leveling system for on-highway travel.

Tires

12 tires, 20.5 R25.

Steering

Dual circuit steering system is hydraulic power assisted with a transfer case mounted, ground driven, emergency steering pump. Axles 1, 2, 3, 5 and 6 steer on highway. Separate steering of the 4th, 5th and 6th axle for all wheel steer and crab-steer is controlled by an electric rocker switch.

Brakes

A dual circuit air system operates on all wheels with a spring-applied, air released parking brake acting on axles 2, 4, 5 and 6. An air dryer is fitted to remove moisture from the air system.

Auxiliary exhaust brake and constant throttle brake is standard.

Cab

Two-man, aluminum construction driver's cab includes the following features: safety glass; driver and passenger seats with hydraulic suspension, enginedependent hot water heater, complete instrumentation and driving controls.

Electrical system

24 V system with three-phase alternator 28 V/80 A, 2 batteries 12 V/170 Ah.

Maximum Speed

48 mph (77km/h) with 20.5 R25 tires.

Gradeability (theoretical)

46% with 20.5 R25 tires.

Miscellaneous standard equipment

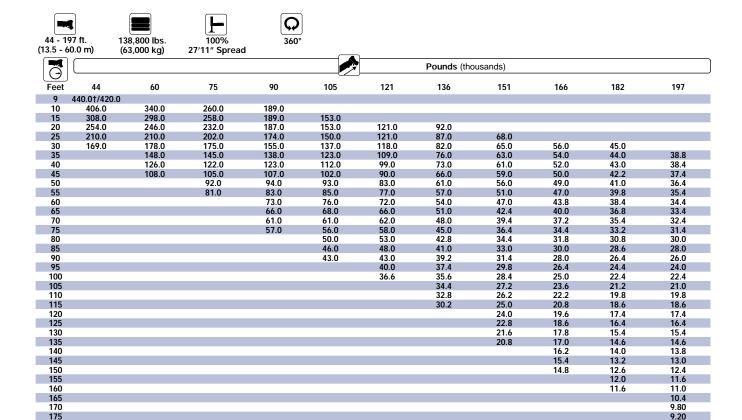
Boom removal kit; trailing boom kit (less dolly); additional hydraulic oil cooler; spare tire and wheel - 20.5 R25 with carry bracket; flashing amber warning light on carrier cab; working light; tool kit; fire extinguisher; rooster sheave; radio cassette in carrier cab.

* Optional equipment

- * Electric driveline retarder
- * 16.00 R25 tires (vehicle width 9 ft. 10 in. [3 m])
- * 14.00 R25 tires (vehicle width 9 ft. 9 in. [2.98 m])
- * Outrigger pressure measurement devices
- * Folding bunk bed in carrier cab
- * Engine-independent hot water heater, with engine pre-heater
- * Third seat
- * Trailing boom "boost" weight transfer kit
- * Air conditioning
- * Mercedes-Benz engines

^{*}Denotes optional equipment

 $[\]dagger$ "G MEGATRAK" (and design) is a trademark of Grove U.S. L.L.C.



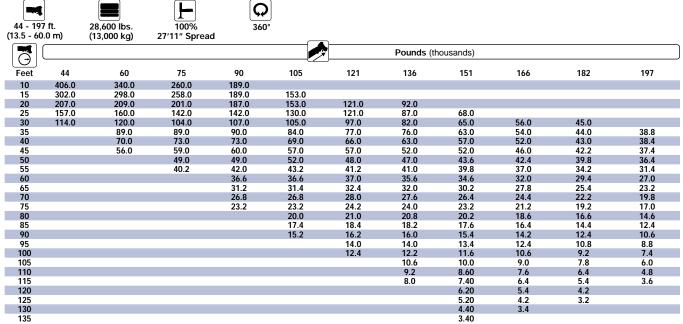
8.60

180

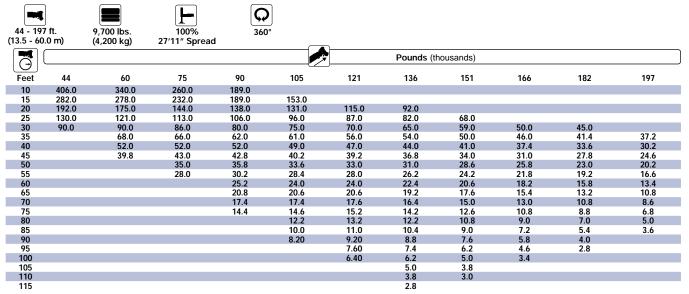
† 440,000 lbs is a Comparative Rating. Lifting capacities greater than 350,000 lbs require additional equipment. Note: Above chart also available with reduced outriggers.

44 - 19) 7 ft	94,700 lbs.	100%	(A)							
(13.5 - 60		(43,000 kg)	27'11" Spread	300							
							Pounds (the	usands)			
Θ											
Feet	44	60	75	90	105	121	136	151	166	182	197
	440.0†/420		0/0.0	400.0							
10	406.0	340.0	260.0	189.0	450.0						
15	308.0	298.0	258.0	189.0	153.0	121.0	02.0				
20	254.0	246.0	232.0 194.0	187.0	153.0	121.0	92.0	/0.0			
25 30	196.0 155.0	198.0 157.0	154.0	174.0 155.0	150.0 137.0	121.0 118.0	87.0 82.0	68.0 65.8	56.0	45.0	
35	155.0	130.0	127.0	129.0	123.0	109.0	76.0	63.0	54.0	45.0	38.8
40		111.0	107.0	109.0	111.0	99.0	71.0	61.0	52.0	43.0	38.4
45		96.0	91.0	93.0	96.0	90.0	65.0	59.0	50.0	42.2	37.4
50		70.0	77.0	79.0	82.0	83.0	61.0	56.0	49.0	41.0	36.4
55			65.0	67.0	70.0	72.0	57.0	51.0	47.0	39.8	35.4
60			03.0	62.0	64.0	63.0	54.0	47.0	43.8	38.4	34.4
65				57.0	57.0	56.0	51.0	42.4	40.0	36.8	33.4
70				52.0	51.0	49.0	48.0	39.4	37.2	35.4	32.4
75				46.0	46.0	44.0	45.0	36.4	34.4	33.2	31.4
80				40.0	41.0	39.4	41.4	34.4	31.8	30.8	30.0
85					36.8	37.4	37.2	33.0	30.0	28.6	28.0
90					33.2	35.2	33.6	31.4	28.0	26.4	26.0
95					00.2	32.0	30.4	29.8	26.4	24.4	24.0
100						29.2	27.6	28.4	25.0	22.4	22.4
105							25.0	26.0	23.6	21.2	21.0
110							23.2	23.8	22.2	19.8	19.8
115							22.0	21.8	20.8	18.6	18.6
120								20.0	19.6	17.2	17.4
125								18.2	18.6	16.2	16.4
130								16.8	17.0	15.4	15.4
135								15.4	15.6	14.6	14.0
140									14.4	13.8	12.8
145									13.2	12.6	11.6
150									12.0	11.6	10.4
155										10.4	9.4
160										9.60	8.4
165											7.6
170											6.8
175											6.0
180											5.2

† 440,000 lbs is a Comparative Rating. Lifting capacities greater than 350,000 lbs require additional equipment. Note: Above chart also available with reduced outriggers.



Lifting capacities greater than 350,000 lbs require additional equipment Note: Above chart also available with reduced outriggers.



Lifting capacities greater than 350,000 lbs require additional equipment. Note: Above chart also available with reduced outriggers.

44 - 197 (13.5 - 60		0 lbs. (0 kg)	100% 27'11" Spread	360°							
							Pounds (th	ousands)			
Feet	44	60	75	90	105	121	136	151	166	182	197
10	406.0	340.0	260.0	189.0							
15	270.0	254.0	206.0	181.0	153.0						
20	171.0	155.0	123.0	128.0	113.0	99.0	92.0				
25	111.0	104.0	99.0	90.0	83.0	77.0	71.0	63.0			
30	75.0	74.0	71.0	68.0	64.0	60.0	56.0	51.0	46.0	41.0	
35		54.0	54.0	53.0	49.0	47.0	44.0	40.2	36.4	32.2	28.4
40		41.4	42.2	42.0	39.2	38.0	35.4	32.4	29.2	25.8	22.4
45		31.0	33.6	34.0	31.8	31.2	29.0	26.6	23.6	20.6	17.8
50			27.2	28.0	26.0	25.8	24.0	21.8	19.4	16.6	14.0
55			21.4	23.2	21.6	21.4	20.0	18.2	15.8	13.4	10.8
60				19.4	18.0	18.0	16.6	15.0	12.8	10.6	8.4
65				15.6	15.0	15.0	14.0	12.4	10.4	8.2	6.0
70				12.6	12.4	12.6	11.6	10.2	8.2	6.2	4.2
75				10.2	10.2	10.6	9.6	8.2	6.4	4.6	
80					8.2	8.8	7.8	6.6	4.8	3.0	
85					6.4	7.2	6.4	5.2	3.4		
90					4.8	5.8	5.0	3.8			
95						4.4	3.8	2.6			
100						3.2	2.8				

Lifting capacities greater than 350,000 lbs require additional equipment. Note: Above chart also available with reduced outriggers.

Working Range











121 - 197 ft. (36,8 - 60 m)

43 - 125 ft. (13 - 38 m)

138,800 lbs. (63,000 kg)

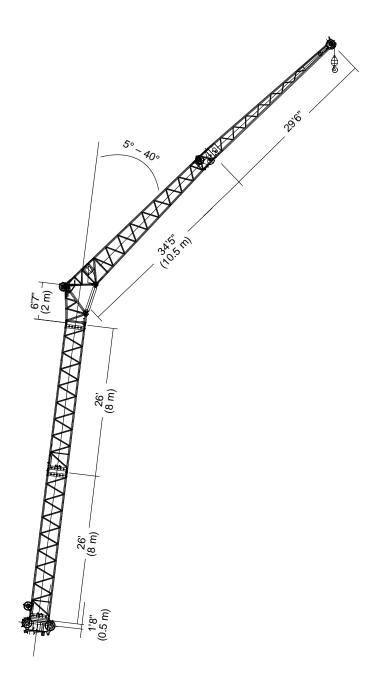
FEET +125 FT. 20° +72 FT. 182 FT. 166 FT. 151 FT. 136 FT. 121 FT. 197 FT. 82° MAX. BOOM **ANGLE**

250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 **FEET AXIS OF ROTATION**

197 ft. (60.0 m)	43-72-98- (13-22-30-			00% " Spread	360°						
					ALL KEEDES	Pou	ınds (thousa	nds)			
Feet	5° 20		5°	72 FT 20°	40°	5°	98 FT 20°	40°	5°	125 FT 20°	40°
40 45	18.6 18.6										
50	18.4 18.4 18	.6	12.2								
60	18.4 18. 18.2 18	.6	12.2 12.2			9.2 9.2			6.4 6.4		
70	18.2 18. 18.2 18	.4 18.0	12.2 12.2	11.0		9.2 9.2			6.4		
80	18.2 18.	.4 18.0	12.2	10.8		9.2			6.4		
90	18.0 18. 17.6 18.	.0 18.0	12.2 12.2	10.8 10.8		9.2 9.2	9.2		6.4	6.4	
100	17.4 17. 17.0 17.	.4 18.0	12.0 12.0	10.6 10.6	10.0 10.0	9.2 9.2	9.2 9.2	7.8	6.4 6.4	6.4 6.4	
	16.6 17. 16.2 16.	.6 16.6	12.0 11.8	10.6 10.4	10.0 10.0	9.2 9.2	9.2 9.2	7.8 7.8	6.4 6.4	6.4 6.4	6.4 6.4
	15.6 15. 14.6 15.		11.8 11.6	10.4 10.4	9.8 9.8	9.2 9.2	9.0 8.8	7.8 7.8	6.4 6.4	6.4 6.4	6.4 6.4
125	13.8 14 13.0 13	.0 14.4	11.6 11.6	10.4 10.4	9.8 9.6	9.2 9.2	8.6 8.6	7.8 7.8	6.4 6.4	6.2 6.2	6.2 6.2
135	12.4 12 11.6 12	.6 13.0	11.4 11.0	10.2 10.2	9.6 9.6	9.0 8.8	8.4 8.2	7.8 7.8	6.4	6.0	6.0 5.8
	11.0 11.	.2 11.8	10.4 10.0	10.0 9.8	9.4	8.6	8.0 8.0	7.6	6.2	5.8 5.8	5.8 5.6
155	10.4 10 9.6 10	.0 10.4	9.4	9.6	9.4 9.4	8.4 8.0	7.8	7.6 7.4	5.8	5.6	5.6
160 165	9.0 9.4 8.4 8.5	8 9.2	9.0 8.6	9.2 9.0	9.2 9.2	7.8 7.6	7.6 7.4	7.4 7.2	5.8 5.6	5.4 5.4	5.4 5.2
170 175	8.0 8 7.4 7.	8	8.0 7.6	8.6 8.0	8.8 8.4	7.2 6.8	7.2 6.8	7.0 6.8	5.4 5.2	5.2 5.2	5.2 5.0
180 185	7.0 7.3 6.6 6.5	8	7.2 6.8	7.6 7.2	8.0 7.6	6.6 6.2	6.6 6.4	6.8 6.6	5.0 5.0	5.0 5.0	5.0 4.8
190 195	6.0 6.3 5.6 5.5		6.2 5.8	6.8 6.4	7.2 7.0	5.8 5.4	6.0 5.8	6.4 6.2	4.8 4.6	4.8 4.6	4.8 4.6
200 205	5.2 5.4 4.8 5.4	4	5.4 5.0	6.0 5.6	6.4	5.0 4.8	5.4 5.2	6.0 5.6	4.4 4.0	4.4 4.2	4.6 4.4
210 215	4.4 4.0		4.8 4.4	5.2 4.8		4.4 4.0	4.8 4.4	5.2 4.8	3.8 3.4	4.0 3.8	4.2 4.0
220 225	4.0		4.0 3.6	4.4 4.0		3.6 3.4	4.0 3.6	4.0	3.2 2.8	3.6 3.2	3.8 3.6
230			3.2	3.6		3.0	3.4		2.6	3.0	3.4
235 240 245			3.0 2.6 2.4	3.2		2.6 2.4	3.0 2.8 2.4		2.4	2.8 2.4	3.2
									1		
197 ft. (60.0 m)	43-72-98- (13-22-30-		lbs. 1	00% " Spread	360°	Pou	ınds (thousa	nds)			
(60.0 m)	(13-22-30-	38 m) (63,000 l	 lbs. 1 kg) 27'11	" Spread 72 FT			ınds (thousai 98 FT	,	5°.	125 FT - 20° 20	0° - 40°
(60.0 m) Feet 55	(13-22-30- 43 5° - 20° 16.8	38 m) (63,000 l	lbs. 1	" Spread 72 FT	360° - 40°	Р оц 5° -	ınds (thousai 98 FT	nds) - 40 °	5° ·		0° - 40°
(60.0 m) Feet 55 60 65	(13-22-30- 43 5° - 20° 16.8 16.8 16.8	-38 m) (63,000 l	 lbs. 1 kg) 27'11	" Spread 72 FT			ınds (thousai 98 FT	,	5°)° - 40°
(60.0 m) Feet 55 60 65 70 75	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8	38 m) (63,000 l	lbs. 1 kg) 27'11 5° - 2	" Spread 72 FT 20° 20°			ınds (thousai 98 FT	,	5°		0° - 40°
(60.0 m) Feet 55 60 65 70 75 80 85	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8	38 m) (63,000 l	lbs. 1 kg) 27'11 5° - 2	" Spread 72 FT 20° 20°		5° -	inds (thousai 98 FT 20° 20°	,		- 20° 20)° - 40°
(60.0 m) Feet 55 60 65 70 75 80 85 90	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.8 16.8 16.8 16.6 16.4 16.4	16.4 16.4 16.4	1bs. 1 kg) 27'11 5° - 2	" Spread 72 FT 20° 20°		5° -	ınds (thousai 98 FT	,	5		0° - 40°
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100	16.8 16.8 16.8 16.8 16.8 16.8 16.6 16.4 16.5 16.4 16.5	16.4 16.4 16.4 16.4 16.4 16.4 16.4 16.2	lbs. 1 kg) 27'11 5° - 2 10.0 9.8 9.8 9.6 9.6	" Spread 72 FT 20° 20°	- 40°	5° -	98 FT 20° 20° 4 4 4	- 40°		- 20° 20 5.8 6.8	
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.4	16.4 16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2	10.1 10.1 10.1 10.1 10.1 10.1 10.1 10.1	" Spread 72 FT 20° 20°	- 40°	5° -	98 FT 20° 20°	- 40°	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	i.8 i.8 i.8 i.8 i.8	5.8 5.8
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.4 15.0 14.4 13.6	16.4 16.4 16.4 16.4 16.4 16.4 16.4 15.8 15.2 14.4 13.8	10.4 10.4 10.4 10.4 9.8 9.8 9.6 9.6 9.6 9.6 9.4 9.4	" Spread 72 FT 20° 20°	7.2 9.0 9.0 9.0 9.0	5° -	98 FT 20° 20° 4 4 7 4 7 4 7 7 2 7 0 7 0 7	- 40° - 0°	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	5.8 5.8 5.8 5.8 5.8 5.8	5.8 5.8 5.8 5.8
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.4 15.0 14.4 13.6 12.8 12.0	16.4 16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2 14.4 13.8 13.2 12.4	10.0 9.8 9.6 9.6 9.6 9.4 9.4 9.4	" Spread 72 FT 20° 20°	- 40° - 20° -	5° - 8 8 8 8 8 8 8 8 7 7 7 7	98 FT 20° 20° 4 4 7 4 7 4 7 2 7 0 7 8 7 8 7 8 7 8	- 40° - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0		i.8 i.8 i.8 i.8 i.8 i.8 i.8	5.8 5.8 5.8 5.8 5.8
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.4 15.0 14.4 13.6 12.8 12.0 11.4	16.4 16.4 16.4 16.4 16.4 16.4 16.4 15.2 15.8 15.2 14.4 13.8 13.2 12.4 11.8	10.1 10.1 10.1 9.8 9.8 9.6 9.6 9.6 9.4 9.4 9.4 9.4	"Spread 72 FT 20° 20°	- 40° - 20.0 - 0.	5° - 8. 8. 8. 8. 7. 7.	98 FT 20° 20° 4 4 4 7 4 7 4 7 8 7 8 7 8 7 4 7 4 7 8 7 4 7 7 8 7 8	- 40° - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	5.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.6 6.6	5.8 5.8 5.8 5.8 5.8 5.6 5.4
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145	(13-22-30- 5° - 20° 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.4 15.0 14.4 13.6 12.8 12.0 11.4 10.8 10.2 9.6	16.4 16.4 16.4 16.4 16.4 16.4 16.4 15.2 15.8 15.2 14.4 13.8 13.2 12.4 11.8 11.2	10.1 10.1 10.1 9.8 9.8 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4	" Spread 72 FT 20° 20° 0	- 40° - 40° - 20.0 - 0.0 -	5° - 8 8 8 8 8 8 7 7 7 7 7 7 7 7 7 7 7 7 7	98 FT 20° 20° 4 4 4 7 4 7 4 7 8 7 8 7 8 7 8 7 8 7 8 7	- 40° - 0.0		5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.6 5.6 5.4	5.8 5.8 5.8 5.8 5.6 5.4 5.4 5.4 5.2
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.4 15.0 14.4 13.6 12.8 12.0 11.4 10.8	16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2 14.4 13.8 13.8 13.2 12.4 11.8 11.2	10.0 9.8 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4	" Spread 72 FT 20° 20° 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 40° 2.2 2.0 2.0 2.0 2.0 2.0 3.8 3.8 3.6 3.6 3.6	5° - 8. 8. 8. 8. 8. 7. 7. 7. 7. 7.	98 FT 20° 20° 4 4 7 4 7 2 7 8 7 8 7 8 7 4 7 7 2 6 6 7 4 7 7 2 6 0 0 6 6 0 0 6 6	- 40° - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	5.8 5.8 5.8 5.8 5.8 5.8 6.8 6.6 6.6 6.6	5.8 5.8 5.8 5.8 5.6 5.4 5.4 5.2
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.4 15.0 14.4 13.6 12.8 12.0 11.4 10.8 10.2 9.6 9.2 8.6 8.0	16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2 14.4 13.8 13.2 12.4 11.8 11.2 10.6 10.0 9.4 8.8 8.4	10.1 5° - 2 10.1 9.8 9.8 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4	" Spread 72 FT 20° 20° 0	7.2 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° - 8 8 8 8 8 8 7 7 7 7 7 7 7 7 7 6 6	98 FT 20° 20° 4 4 4 7 4 7 4 7 7 8 7 7 6 6 7 4 7 2 6 0 6 0 6 8 6 6 8	- 40° - 0.0	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.6 6.6 6.4 5.2 5.2 5.0	5.8 5.8 5.8 5.6 5.4 5.4 5.2 5.2 5.2 5.0
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.4 15.0 14.4 13.6 12.8 12.0 11.4 10.8 10.2 9.6 9.2 8.6 8.0 7.6	16.4 16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2 14.4 13.8 13.2 12.4 11.8 11.2 10.6 10.0 9.4 8.8	10.1 10.1 10.1 10.1 9.8 9.8 9.6 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4	"Spread 72 FT 20° 20° 0 3 4 5 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	7.2 7.2 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° - 8. 8. 8. 8. 8. 7. 7. 7. 7. 7. 6. 6.	98 FT 20° 20° 4 4 7 4 7 7 4 7 7 8 7 8 7 8 7 4 7 7 4 7 7 4 7 7 7 8 7 8	- 40° - 40° - 0.0 -	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	5.8 5.8 5.8 5.8 5.8 5.8 5.6 6.6 6.6 6.4 5.2 5.2 5.2 6.0 8.8	5.8 5.8 5.8 5.8 5.6 5.4 5.4 5.2 5.2 5.0 4.8 4.8
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.0 14.4 13.6 12.8 12.0 11.4 10.8 10.2 9.6 9.2 8.6 8.0 7.6 7.0 6.6 6.2	16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2 14.4 13.8 13.2 12.4 11.8 11.2 10.6 10.0 9.4 8.8 8.4	10.4	"Spread 72 FT 20° 20° 0 1 1 1 1 1 1 1 1 1 1 1 1	7.2 2.2 2.0 2.0 2.0 2.0 2.0 3.8 3.8 3.6 3.6 3.6 3.4 3.4 3.4 3.0 7.6	5° - 88 88 88 77 77 77 77 76 66 66	4 4 7 4 7 4 7 7 8 7 8 7 8 7 8 7 8 7 8 7	- 40° - 0.0	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.6 5.6 5.4 5.2 5.2 5.2 5.2 5.2 5.2 5.4 5.4 5.4 5.4 5.4 5.4 5.4 5.4 5.4 5.4	5.8 5.8 5.8 5.8 5.6 5.4 5.4 5.2 5.2 5.0 5.0 4.8 4.8 4.6 4.6
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195	(13-22-30- 5° - 20° 16.8 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.4 15.0 14.4 13.6 12.8 12.0 11.4 10.2 9.6 9.2 8.6 8.0 7.6 7.0 6.6 6.2 5.6 5.2	16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2 14.4 13.8 13.2 12.4 11.8 11.2 10.6 10.0 9.4 8.8 8.4	10.0 9.8 9.8 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.5 8.8 9.6 9.6 9.6 9.6 9.6 9.6 9.6 9.6 9.6 9.6	"Spread" 72 FT 20° 20° 0 0 3 3 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	7.2 7.2 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° - 88 88 88 87 77 77 77 66 66 65 55	98 FT 20° 20° 4 4 4 7 4 7 4 7 7 8 8 7 8 7 8 6 7 4 7 4 7 7 2 6 6 0 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	- 40° - 0.0	E E E E E E E E E E E E E E E E E E E	5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.6 6.6 5.4 5.4 5.2 5.2 5.0 1.8 1.6 1.6 1.4 1.4	5.8 5.8 5.8 5.8 5.6 5.4 5.4 5.2 5.2 5.0 4.8 4.6 4.4 4.4
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.4 15.0 14.4 13.6 12.8 12.0 11.4 10.8 10.2 9.6 9.2 8.6 8.0 7.6 7.0 6.6 6.2 5.6	16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2 14.4 13.8 13.2 12.4 11.8 11.2 10.6 10.0 9.4 8.8 8.4	10.0 9.8 9.8 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.5 9.6 9.6 9.6 9.6	"Spread 72 FT 20° 20° 0 3 4 5 6 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	7.2 7.2 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° - 88 88 88 77 77 77 77 76 66 65 55	98 FT 20° 20° 44 4 7 4 7 4 7 7 8 8 7 8 7 8 6 7 4 7 4 7 7 2 6 6 0 6 6 6 6 6 6 6 6 6 6 6 6 5 5 2 5 0 5 5	- 40° - 40° - 0.0 - 0.	E E E E E E E E E E E E E E E E E E E	5.8 5.8 5.8 5.8 5.8 5.8 5.6 6.6 6.4 6.2 5.0 6.8 6.6 6.6 6.4 6.4 6.2 6.0 6.1 6.2 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	5.8 5.8 5.8 5.8 5.6 5.4 5.2 5.2 5.0 4.8 4.6 4.6 4.4 4.4 4.2 4.2
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.0 14.4 13.6 12.8 12.0 11.4 10.8 10.2 9.6 9.2 8.6 8.0 7.6 7.0 6.6 6.2 5.6 5.2 4.8	16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2 14.4 13.8 13.2 12.4 11.8 11.2 10.6 10.0 9.4 8.8 8.4	10.0 9.8 9.8 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.5 9.6 9.6 9.6 9.6 9.6 9.6 9.6 9.6 9.6 9.6	"Spread 72 FT 20° 20° 0 0 3 1 3 9 9 9 9 1 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	7.2 7.2 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° - 8 8 8 8 8 8 8 8 7 7 7 7 7 7 7 7 7 7 7	98 FT 20° 20° 4 4 4 7 4 7 7 4 7 7 8 8 7 7 8 8 7 7 8 8 6 6 6 6 6 6 6 6	- 40° - 40° - 0.0 -	E E E E E E E E E E E E E E E E E E E	i.8	5.8 5.8 5.8 5.8 5.6 5.4 5.4 5.2 5.2 5.0 4.8 4.6 4.4 4.4 4.4 4.2 4.2 4.2 4.3 8
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.0 14.4 13.6 12.8 12.0 11.4 10.8 10.2 9.6 9.2 8.6 8.0 7.6 7.0 6.6 6.2 5.6 5.2 4.8	16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2 14.4 13.8 13.2 12.4 11.8 11.2 10.6 10.0 9.4 8.8 8.4	10.0 9.8 9.8 9.6 9.6 9.6 9.6 9.6 9.6 9.6 9.6 9.6 9.6	"Spread 72 FT 20° 20° 0 0 3 1 3 9 9 9 9 9 1 9 1 8 8 8 8 8 8 8 8 8 8 8 8	7.2 7.2 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° - 8. 8. 8. 8. 8. 8. 7. 7. 7. 7. 6. 6. 6. 6. 5. 5. 5. 4. 4.	98 FT 20° 20° 4 4 4 7 4 7 7 4 7 7 8 7 8 7 8 6 7 4 7 7 2 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	- 40° - 40° - 0.0 - 0.	E E E E E E E E E E E E E E E E E E E	5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.6 6.6 6.6 6.4 5.2 5.0 6.8 6.6 6.6 6.1 6.1 6.1 6.1 6.1 6.1 6.1 6.1	5.8 5.8 5.8 5.8 5.6 5.4 5.2 5.2 5.0 4.8 4.6 4.6 4.4 4.4 4.2 4.2 4.2 4.0 3.8 3.6 3.4
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.0 14.4 13.6 12.8 12.0 11.4 10.8 10.2 9.6 9.2 8.6 8.0 7.6 7.0 6.6 6.2 5.6 5.2 4.8	16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2 14.4 13.8 13.2 12.4 11.8 11.2 10.6 10.0 9.4 8.8 8.4	10.1 10.1 9.8 9.8 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4	"Spread 72 FT 20° 20° 0 1 1 1 1 1 1 1 1 1 1 1 1	7.2 7.2 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° - 8 8 8 8 8 8 8 8 8 7 7 7 7 7 7 7 7 7 7	98 FT 20° 20° 4 4 4 7 4 7 4 7 7 4 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 7 9 9 9 9	- 40° - 40° - 0.0 -	E E E E E E E E E E E E E E E E E E E	5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8	5.8 5.8 5.8 5.6 5.4 5.4 5.2 5.2 5.0 5.0 4.8 4.8 4.6 4.4 4.4 4.2 4.2 4.0 3.8 3.6 3.4 3.2 3.2
(60.0 m) Feet 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 185 190 195 200 205 210 215 220 225	(13-22-30- 43 5° - 20° 16.8 16.8 16.8 16.8 16.8 16.6 16.4 16.2 15.8 15.0 14.4 13.6 12.8 12.0 11.4 10.8 10.2 9.6 9.2 8.6 8.0 7.6 7.0 6.6 6.2 5.6 5.2 4.8	16.4 16.4 16.4 16.4 16.4 16.4 16.2 15.8 15.2 14.4 13.8 13.2 12.4 11.8 11.2 10.6 10.0 9.4 8.8 8.4	10.0 9.8 9.8 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4	"Spread 72 FT 20° 20° 0 1 1 1 1 1 1 1 1 1 1 1 1	7.2 7.2 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° - 8 8 8 8 8 8 8 8 8 8 7 7 7 7 7 7 7 7 7	98 FT 20° 20° 4 4 4 7 4 7 7 4 7 7 8 8 7 8 7 8 6 7 6 6 7 6 8 6 6 6 6 6	- 40° - 40° - 0.0 -	E E E E E E E E E E E E E E E E E E E	i.8	5.8 5.8 5.8 5.8 5.6 5.4 5.4 5.2 5.2 5.0 4.8 4.6 4.4 4.4 4.2 4.2 4.2 4.2 3.8 3.6 3.4 3.2

197 ft.		3-72-98-125 ft.	94,700 lbs		100%	360°						
60.0 m)	(1:	3-22-30-38 m)	(43,000 kg	j) 27'	11" Spread	MIN KAZA	Po	unds (thousa	nds)			
<u> </u>		43 FT			72 FT			98 FT	,		125 FT	
eet	5°	20°	40°	5°	20°	40°	5°	20°	40°	5°	20°	40°
40 45	18.6 18.6											
50	18.4 18.4	18.6		12.2								
55 60	18.4	18.6		12.2			9.2			6.4		
55 70	18.2	18.4	10.0	12.2			9.2			6.4		
75	18.2 18.2	18.4 18.4	18.0 18.0	12.2 12.2	11.0		9.2 9.2			6.4		
B O B5	18.2 18.0	18.4	18.0	12.2	10.8 10.8		9.2 9.2			6.4 6.4		
90	17.6	18.2 18.0	18.0 18.0	12.2 12.2	10.8		9.2	9.2		6.4	6.4	
95 00	17.4 17.0	17.8 17.4	18.0 18.0	12.0 12.0	10.6 10.6	10.0 10.0	9.2 9.2	9.2 9.2	7.8	6.4	6.4 6.4	
05	16.6	17.4	17.4	12.0	10.6	10.0	9.2	9.2	7.8	6.4	6.4	6.4
10 15	16.2 15.6	16.6	16.6	11.8 11.8	10.4 10.4	10.0 9.8	9.2 9.2	9.2 9.0	7.8 7.8	6.4	6.4 6.4	6.4
20	14.6	15.8 15.0	16.0 15.2	11.6	10.4	9.8 9.8	9.2	8.8	7.8	6.4 6.4	6.4	6.4
25 30	13.8	14.0	14.4 13.8	11.6 11.6	10.4 10.4	9.8 9.6	9.2 9.2	8.6 8.6	7.8	6.4	6.2 6.2	6.2 6.2
35	13.0 12.4	13.2 12.6	13.0	11.4	10.4	9.6	9.0	8.4	7.8 7.8	6.4	6.0	6.0
40 45	11.6 11.0	12.0 11.2	12.4 11.8	11.0 10.4	10.2 10.0	9.6 9.4	8.8 8.6	8.2 8.0	7.8 7.6	6.2 6.2	6.0 5.8	5.8 5.8
50	10.4	10.6	11.0	10.4	9.8	9.4	8.4	8.0	7.6	6.0	5.8	5.6
55 60	9.6 8.6	10.0 9.0	10.4 9.4	9.4 9.0	9.6 9.2	9.4 9.2	8.0 7.8	7.8 7.6	7.4 7.4	5.8 5.8	5.6 5.4	5.6 5.4
65	7.6	8.2	8.4	8.6	9.0	9.2	7.6	7.4	7.2	5.6	5.4	5.2
70 7 5	6.8	7.2 6.4	7.4	8.0 7.6	8.6 8.0	8.8 8.4	7.2 6.8	7.2 6.8	7.0 6.8	5.4 5.2	5.2 5.2	5.2 5.0
80	5.2	5.6		6.8	7.6	8.0	6.6	6.6	6.8	5.0	5.0	5.0
185 190	4.4 3.8	4.8 4.0		6.0 5.4	7.0 6.2	7.6 6.8	6.2 5.6	6.4 6.0	6.6 6.4	5.0 4.8	5.0 4.8	4.8
95	3.2	3.4		4.8	5.4	6.0	4.8	5.8	6.2	4.6	4.6	4.6
200 205	2.6	2.8		4.2 3.6	4.8 4.2	5.2	4.2 3.6	5.0 4.4	5.8 5.0	4.2 3.6	4.4 4.2	4.6 4.4
210				3.0	3.6		3.2	3.8	4.4	3.0	4.2	4.4
215								2 2	2 4	2 4	3.4	4.0
				2.4	3.0		2.6	3.2	3.6	2.6		4.0
20 25				2.4	2.4		2.6	2.6 2.2	3.0	2.0	2.8 2.2	3.4 2.8
220 225 230				2.4		Q	2.6	2.6	3.0	2.0	2.8	3.4
20 25 30 197 ft. (60.0 m)		3-72-98-125 ft. 3-22-30-38 m)	94,700 lbs (43,000 kg	·.	2.4 100% 11" Spread	Q 360°		2.6		2.0	2.8 2.2	3.4 2.8
220 225 330 197 ft. (60.0 m)	(1:		(43,000 kg	:.)) 27′	2.4 100% 11" Spread		Po	2.6 2.2 unds (thousa 98 FT			2.8 2.2	3.4 2.8
220 225 230 197 ft. (60.0 m) eet	(1: 5°	3-22-30-38 m) 43 FT - 20° 20° - 4	(43,000 kg	:.)) 27′	2.4 100% 11" Spread	360°	Po	2.6 2.2 unds (thousa 98 FT	nds)		2.8 2.2	3.4 2.8 2.2
220 225 230 197 ft. (60.0 m) eet	5°	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8	(43,000 kg	:.)) 27′	2.4 100% 11" Spread	360°	Po	2.6 2.2 unds (thousa 98 FT	nds)		2.8 2.2	3.4 2.8 2.2
220 225 230 197 ft. (60.0 m) eet 55 660 665 770	5°	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8	(43,000 kg	:.) 27′ 5°	2.4 100% 11" Spread 72 FT - 20° 20'	360°	Po	2.6 2.2 unds (thousa 98 FT	nds)		2.8 2.2	3.4 2.8 2.2
220 225 230 197 ft. (60.0 m) eet 55 60 65 70	5° 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.8 16.8 16.1	(43,000 kg	5. 27' 5°	2.4 100% 11" Spread 72 FT - 20° 20'	360°	Po	2.6 2.2 unds (thousa 98 FT	nds)		2.8 2.2	3.4 2.8 2.2
220 225 230 197 ft. (60.0 m) eet 55 60 65 77 75 880 885	5° 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.4 16.8 16.4 16.6 16.4	(43,000 kg	5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8	360°	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20°	nds)	5°	2.8 2.2 125 FT - 20° 20	3.4 2.8 2.2
220 225 230 197 ft. (60.0 m) eet 555 660 665 770 775 80 885 890	5° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.8 16.4 16.6 16.4 16.6 16.4	(43,000 kg	5. 27' 5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8	360°	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20°	nds)	5°	2.8 2.2 125 FT - 20° 20	3.4 2.8 2.2
220 225 330 197 ft. 60.0 m) eet 55 60 65 70 75 88 89 90 90 90	5° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.4 16.8 16.4 16.6 16.4 16.6 16.4 16.6 16.4	(43,000 kg	5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.8 9.6 9.6	360° - 40° 9.2 9.0	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20°	nds) - 40°	5° ·	2.8 2.2 125 FT - 20° 20	3.4 2.8 2.2
220 225 230 197 ft. (60.0 m) 665 670 775 880 885 990 995 100	5°	43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.8 16.8 16.6 16.4 16.6 16.4 16.6 16.4	(43,000 kg	5° 5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.8 9.6 9.6	360° - 40°	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20°	nds) - 40°	5°	125 FT - 20° 20	3.4 2.8 2.2
220 225 330 197 ft. (60.0 m) eet 555 600 65 770 775 885 890 995 900 005 110	5° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.4 16.8 16.4 16.6 16.4 16.4 16.4 16.5 16.4 15.8 16.2 15.4 15.8 15.0 15.2 14.4 14.4	(43,000 kg	5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.8 9.6 9.6 9.6 9.6 9.6	360° - 40° 9.2 9.0 9.0 9.0 9.0	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 7.3.4 7.3.2	nds) - 40° 7.0 7.0 7.0	5° ·	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8	3.4 2.8 2.2 0° - 40°
220 225 230 197 ft. (60.0 m) 660.0 m) 665 670 775 880 885 990 995 100 101 115 1220	5° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.4 16.8 16.4 16.6 16.4 16.6 16.4 16.6 16.4 15.8 16.2	(43,000 kg	5° 27′ 5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.8 9.8 9.6 9.6 9.6 9.6 9.6 9.4 9.4	360°	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 3.4 3.4 7 3.4 7 3.2 7	nds) - 40° 7.0 7.0 7.0	5°	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8	3.4 2.8 2.2 0° - 40°
220 225 330 197 ft. (60.0 m) eet 555 60 65 77 88 88 88 89 99 90 00 00 11 11 15 20 22 33 30	5° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.6 16.4 16.6 16.4 16.4 15.8 16.2 15.4 15.8 15.0 15.2 14.4 14.4 13.6 13.8 13.8 13.2	(43,000 kg	5° 5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.8 9.8 9.6 9.6 9.6 9.6 9.4 9.4	9.2 9.0 9.0 9.0 9.0 9.0 9.0 8.8 8.8	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 7.3 3.4 7.8 7.8	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° ·	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8 5.8	3.4 2.8 2.2 2.2 2.2 2.2 3.6 5.8 5.8 5.8 5.8 5.8
220 225 330 197 ft. (60.0 m) eet 555 660 65 770 775 80 885 899 995 000 005 110 115 120 225 330 335 440	5° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.4 16.8 16.4 16.5 16.4 15.8 16.4 15.1 15.4 15.8 16.2 15.4 15.8 15.0 15.2 14.4 14.4 13.6 13.8 12.8 13.2	(43,000 kg	5° 5°	2.4 100% 11" Spread 72 FT - 20" 0.0 9.8 9.8 9.6 9.6 9.6 9.4 9.4 9.4 9.4	9.2 9.0 9.0 9.0 9.0 9.0 9.0	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 3.4 7.3.4 7.8 7.8 7.8	nds) - 40° 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5°	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8 5.8	3.4 2.8 2.2 0° - 40° 5.8 5.8 5.8 5.8 5.8
220 225 230 197 ft. (60.0 m) eet 55 60 65 70 75 88 89 90 90 00 115 220 23 33 33 440	5° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.4 16.6 16.4 16.4 16.4 15.8 16.2 15.4 15.8 16.2 15.4 15.8 16.2 15.4 15.8 16.2 15.4 15.8 16.2 15.1 15.0 15.2 14.4 14.4 13.6 13.8 13.2 12.0 12.4 11.4 11.8 11.2	(43,000 kg	5° 5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.8 9.8 9.6 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4	9.2 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.8 8.8 8.6 8.6	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 7.3 3.0 7.8 7.8 7.8 7.4	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5°	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8	3.4 2.8 2.2 2.2 2.2 2.2 2.2 2.3 3.4 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.6 5.4 5.4 5.2
220 225 230	5° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.4 16.8 16.4 16.5 16.4 15.8 16.2 15.4 15.8 15.0 15.2 14.4 14.4 12.8 13.6 12.8 13.2 12.0 12.4 11.4 11.8	(43,000 kg	5° 5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.6 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.2 9.0 8.6	9.2 9.0 9.0 9.0 9.0 9.0 9.0 8.8 8.8 8.6 8.6	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 3.4 7.3 3.6 7.8 7.8 7.8 7.8 7.8 7.8	nds) - 40° -7.0 -7.0 -7.0 -7.0 -7.0 -7.0 -7.0 -7.0	5°	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8	3.4 2.8 2.2 2.2 2° - 40° 5.8 5.8 5.8 5.8 5.8 5.4 5.4
220 225 230 197 ft. (60.0 m) eet 55 60 65 70 75 88 89 90 90 00 115 220 23 33 33 44 40 44 45 55 60	5° 11 11 11 11 11 11 11 11 11 11 11 11 11	3-22-30-38 m) 43 FT - 20° - 4 16.8 16.8 16.8 16.8 16.4 16.6 16.4 16.4 16.4 16.4 15.8 16.2 15.4 15.8 15.0 15.2 14.4 14.4 13.6 13.8 13.2 12.0 12.4 11.4 11.8 10.9 10.8 11.2 10.9 10.8 11.2 10.8 11.2 10.9 10.8 11.8 10.9 10.8 11.8 10.9 10.8 11.8 10.9 10.8 11.8 10.9 10.8 10.9 10.8 10.9 10.8 10.9 10.8 10.9 10.8 10.9 10.8 10.9 10.8 10.9 10.8 10.9 10.8 10.9 10.8 10.9 10.8 10.9 10.8 10.9 10.9 10.8 10.9 10.9 10.9 10.9 10.9 10.9 10.9 10.9	(43,000 kg	5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.8 9.6 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4	9.2 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.8 8.6 8.6 8.6 8.6 8.6 8.4 8.4	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 7.3 3.0 7.8 7.8 7.8 7.6 7.7 7.2 6 7.0 6 7.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5°	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8	3.4 2.8 2.2 2.2 2.2 2.2 3.8 5.8 5.8 5.8 5.8 5.8 5.6 5.4 5.2 5.2 5.2 5.0 5.0
220 225 330 197 ft. (60.0 m) eet 555 660 665 770 775 880 885 890 995 005 110 115 1220 1225 330 340 445 550 555	5° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.8 16.4 16.6 16.4 16.5 16.4 15.8 16.2 15.8 16.2 15.4 15.8 15.0 15.2 14.4 14.4 14.4 12.8 13.6 12.0 12.4 11.8 10.8 11.2 10.8 11.2	(43,000 kg	5° 5°	2.4 100% 11" Spread 72 FT - 20" 0.0 9.8 9.8 9.6 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4	9.2 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.8 8.8 8.6 8.6 8.6 8.6 8.6	Po 5°	2.6 2.2 unds (thousal 98 FT - 20° 20° 3.4 3.4 3.4 3.4 7 3.4 7 7.8 7.8 7.8 7.8 7.8 7.9 7.9 7.9 7.9 7.9 7.9 7.9 7.9 7.9 7.9	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5°	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8	5.8 5.8 5.8 5.8 5.8 5.8 5.4 5.4 5.2 5.2 5.2
220 225 230 197 ft. (60.0 m) eet 55 60 65 77 75 88 88 89 90 90 90 90 115 220 23 33 33 44 40 45 55 60 60 66 60 60 60 60 60 60 60 60 60 60	5° 11 11 11 11 11 11 11 11 11 11 11 11 11	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.8 16.4 16.6 16.4 16.4 16.4 15.8 16.2 15.4 15.8 16.2 15.4 15.8 16.2 15.4 15.8 16.2 15.4 15.8 16.2 17.8 18.8 18.8 18.8 18.9 19.8 19.8 19.8 19	(43,000 kg	5° 5°	2.4 100% 11" Spread 72 FT - 20" 0.0 9.8 9.8 9.6 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4	9.2 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.8 8.6 8.6 8.6 8.6 8.6 8.6 8.7 8.4	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 7.3 3.0 7.8 7.8 7.6 7.4 7.4 7.0 7.0 6.8 6.6 6.6	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° ·	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8	3.4 2.8 2.2 2.2 2.2 2.2 3.8 5.8 5.8 5.8 5.8 5.8 5.4 5.4 5.2 5.2 5.0 4.8 4.8 4.6
220 (60.0 m) (60.0 m) (60.0 m) (60.0 m) (70.0 m)	5°	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.8 16.4 16.6 16.4 16.5 16.4 15.8 16.2 15.8 16.2 15.4 15.8 16.2 15.4 15.8 16.2 17.0 17.0 18.0 19.6 19.6 19.6 19.6 10.0 19.6 19.6 19.6 19.6 19.6 19.6 19.6 19.6	(43,000 kg	5° 5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.8 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.2 9.0 8.6 8.4 8.2 7.6 6.8 6.2 5.6	9.2 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.8 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 3.4 3.4 7.3 3.4 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6	nds) - 40° 7.0 -	5° ·	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8	5.8 5.8 5.8 5.8 5.8 5.6 5.4 5.2 5.0 5.0 4.8 4.8 4.6 4.4
220 225 230 197 ft. (60.0 m) eet 55 60 65 70 75 88 89 90 90 00 115 220 23 33 33 44 45 55 60 60 66 60 60 60 60 60 60 60 60 60 60	5°	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.8 16.4 16.6 16.4 16.4 16.4 15.8 16.2 15.4 15.8 16.2 15.4 15.8 16.2 15.4 15.8 16.2 15.4 15.8 16.2 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	(43,000 kg	5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.8 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4	9.2 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.8 8.6 8.6 8.6 8.6 8.6 8.6 8.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 3.4 3.4 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° ·	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8	5.8 5.8 5.8 5.8 5.8 5.8 5.6 5.4 5.2 5.2 5.0 4.8 4.8 4.6 4.4
220 225 330 197 ft. (60.0 m) eet 555 660 665 770 775 880 885 990 995 100 115 120 125 140 445 155 166 170 175 180 180 180 180 180 180 180 180 180 180	5° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20° 20° - 4 16.8 16.8 16.8 16.8 16.8 16.4 16.6 16.4 16.5 16.4 15.8 16.2 15.8 16.2 15.4 15.8 16.2 15.4 15.8 16.2 17.0 17.0 18.0 19.6 19.6 19.6 19.6 10.0 19.6 19.6 19.6 19.6 19.6 19.6 19.6 19.6	(43,000 kg	5° 5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.8 9.6 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4	9.2 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.8 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 3.4 3.4 7.3 3.0 7.8 7.8 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6	nds) - 40° - 40° - 7.0 -	5° ·	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8	5.8 5.8 5.8 5.8 5.8 5.4 5.2 5.0 5.0 4.8 4.6 4.6 4.4 4.4 4.2 4.2
220 225 330 197 ft. 660.0 m) eet 555 660 675 80 90 90 90 90 90 90 90 90 90 90 90 90 90	5° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-22-30-38 m) 43 FT - 20°	(43,000 kg	5°	2.4 100% 11" Spread 72 FT - 20° 20' 0.0 9.8 9.8 9.8 9.8 9.6 9.6 9.6 9.6 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4 9.4	360° 9.2 9.0 9.0 9.0 9.0 9.0 9.0 9.0	Po 5°	2.6 2.2 unds (thousa 98 FT - 20° 20° 3.4 3.4 3.4 7.3 3.0 7.8 7.6 7.7 7.2 6.6 6.6 6.6 6.6 6.6 6.6 6.0 6.6 6.0 6.6 6.0 6.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5° ·	2.8 2.2 125 FT - 20° 20 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8	3.4 2.8 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.3 2.3

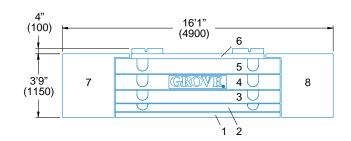
Boom extension configurations



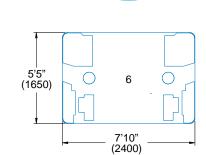
Length (ft.)	Intermediate section boom extension make-up						
	26′	6′7″	34′5″	29'6"			
	(8 m)	(2 m)	(10.5 m)	(9 m)			
43	_	1x	1x	_			
72	_	1x	1x	1x			
98	1x	1x	1x	1x			
125	2x	1x	1x	1x			

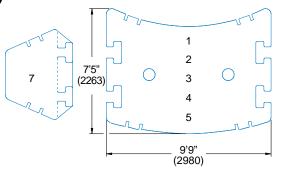
GMK6220 11

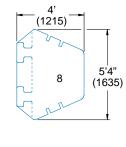
Counterweight configurations



- 1. 9,700 lbs. (4,400 kg)
- 2. 11,200 lbs. (5,100 kg)
- 3. 18,700 lbs. (8,500 kg)
- 4. 24,300 lbs. (11,000 kg)
- 5. 23,100 lbs. (10,500 kg)
- 6. 7,700 lbs. (3,500 kg)
- 7. 22,050 lbs. (10,000 kg)
- 8. 22,050 lbs. (10,000 kg)







Note: () Reference dimensions in mm

	1	2	3	4	5	6	7	8
9,700 lbs	х							
20,900 lbs.	Х	Х						
28,600 lbs.	Х	Х				Х		
47,300 lbs.	Х	Х	Х			Х		
71,600 lbs.	Х	Х	Х	Х		Х		
94,700 lbs.	Х	Х	Х	Х	Х	Х		
138,800 lbs.	Х	Х	Х	Х	Х	Х	Х	Х

Rated Lifting Capacities

IMPORTANT NOTES:

WARNING: THIS CHART IS ONLY A GUIDE.

The notes below are for illustration only and should not be relied upon to operate the crane. The individual crane's load chart, operating instructions and other instruction plates must be read and understood prior to operating the crane.

- 1. All rated loads up to 420,000 pounds meet ANSI/ASME B30.5, Mobile and Locomotive Cranes. Testing and development were performed to SAEJ1063, Cantilevered Boom Crane Structures Method of Test and SAEJ765 Crane Stability Test Code.
- 2. Capacities given do not include the weight of hook blocks, slings, auxiliary lifting equipment and load handling devices. Their weights must be added to the load to be lifted. When more than minimum required reeving is used, the additional rope weight shall be considered part of the load.
- 3. The machine shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger floats to spread the load to a larger bearing surface.
- 4. When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or next longer or shorter boom length shall be used.
- 5. For outrigger operation, outriggers shall be properly extended with tires raised off the ground before operating the boom or lifting loads.

† Comparative Rating

A rating designation based upon the premise that large capacity European cranes are typically purchased and used as long boom, high reach, long radius lift cranes not as heavy lift cranes.

To provide a GMK 6220 crane with the necessary equipment to achieve maximum lift capacity will drastically reduce long boom performance. Therefore, augmenting lifting equipment is required for buyers who require such capacities.

Symbols Glossary



Frame



Steering



Outriggers



Transmission



Outrigger Controls



Axles



Engine



Brakes



Fuel Tank Capacity



Tires



Electrical System



Suspension



Drive



Rotation



Lights



Boom Elevation



Cab



Swing



Boom



Counterweight



Fixed Swingaway



Oil



Tele-Swingaway



Hydraulic System



Lattice Extension (Luffing)



Hoist



Boom Nose



Radius



Boom Extension



Boom Length



Speed



Hookblock



Grade



Gear

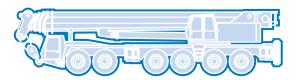


Lattice Extension



Luffing Jib















Grove Worldwide – World Headquarters

1565 Buchanan Trail East P.O. Box 21 Shady Grove, Pennsylvania 17256, U.S.A. Tel: [Int + 1] (717) 597-8121 Fax: [Int + 1] (717) 597-4062 Western Hemisphere, Asia/Pacific

Grove Europe Limited*

Sunderland SR4 6TT, England Tel: [Int + 44] 191 565-6281 Fax: [Int + 44] 191 564-0442 Europe, Africa, Middle East

Deutsche Grove GmbH

Sales and Service
Helmholtzstrasse 12, Postfach 5026
D-40750 Langenfeld, Germany
Tel: [Int + 49] (2173) 8909-0
Fax: [Int + 49] (2173) 8909-30

Wilhelmshaven Works

Industriegelande West, Postfach 1853 D-26358 Wilhelmshaven, Germany Tel: [Int + 49] (4421) 294-0 Fax: [Int + 49] (4421) 294-301

Grove Asia/Pacific - Regional Office

171 Chin Swee Road #10-09 San Centre Singapore 0316 Tel: [Int + 65] 536-6112 Fax: [Int + 65] 536-6119 *Asia/Pacific, Near East*

*Grove Europe Limited, Registered in England, Number 1845128, Registered office, Crown Works, Pallion, Sunderland, Tyne & Wear, England SR4 6TT

Grove China - Representative Office

Beijing Hotel Room 6074 No. 33 East Chang An Avenue Beijing, 100004, China Tel: [Int + 86] (10) 513-7766 Fax: [Int + 86] (10) 513-7307

Grove Middle East

P.O. Box 290 Dubai, United Arab Emirates Tel: (Int + 971) (4) 378400 Fax:(Int + 971) (4) 373660

Lifetime Customer Support

Western Hemisphere, Asia/Pacific 1086 Wayne Avenue Chambersburg, Pennsylvania USA Tel: [Int + 1] (717) 263-5100 Fax: [Int + 1] (717) 267-0404

Europe, Africa, Middle East Sunderland SR4 6TT, England Tel: [Int + 44] 191 565-6281 Parts Fax: [Int + 44] 191 510-9242 Service Fax: [Int + 44] 191 510-9560

http://www.groveworldwide.com

Constant improvement and engineering progress make it necessary that we reserve the right to make specification, equipment, and price changes without notice. Illustrations shown may include optional equipment and accessories and may not include all standard equipment.

		G	
Mi	EG	ATR	AK™

Distributed By:

Form No.: GMK6220 Part No.: 3-1310 699-10M Printed in U.S.A.