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RT35

RT35 PRODUCT GUIDE

Complies with ANSI B30.5

Rough Terrain Crane

35 metric ton (38.6 ton lift capacity)
31 m (102' main boom)
8 m - 14 m (26' - 46' jib)

RT35

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FEATURES

Formed boom made with high-yield steel which reduces the operating weight of the boom and maximizes performance.

AxleTech International

We chose the AxleTech brand axle because AxleTech offers the most reliable product on the market and has years of experience in manufacturing mobile crane axles.

Full vision operator cab is designed for maximum comfort and ease of operation.

The Dana transmission offers the latest technology for the diverse needs of off-road cranes.

The Cummins QSB 6.7 diesel engine is TIER-III compliant and is proven to have superior performance and durability.

GC GREER COMPANY

Greer RCI 777 LMI (load moment indicator) delivers the industry's most reliable electronic monitoring system available.

STANDARD EQUIPMENT

- Formed boom
- Offsettable jib 0° - 20° - 40°
- Auxiliary winch
- Cameras
- Auxiliary lifting sheave
- 35 ton hook block
- 5.5 ton hook ball
- Rotation resistant wire rope
- Deluxe tilt seat
- Air conditioner / Heater
- Work light package: boom, cab and super structure
- Revolving amber light
- AM/FM radio
- Battery disconnect switch
- Front and rear lift lugs

ANSI & CE certified

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KEY / SYMBOLS

	Engine	p4		Load Moment Indicator (LMI)	p5
	Transmission	p4		Max. boom length with jib ext.	p5
	Axles	p4		Main boom	p6
	Steering	p4		Main and auxiliary winches	p6
	Gradeability	p4		Cameras	p6
	Brakes	p4		Hook block	p6
	Tires and wheels	p4		Hook ball	p6
	Outrigger system (100%, 50%, 0% extended)	p4		Crane with counterweight	p7
	Hydraulic system	p5		Side stowed jib	p7
	Operator cab	p5		Distance from the hook to the head	p8
	Counterweight	p5		Tip height	p9
	Swing	p5		Working radius	p9

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TECHNICAL DESCRIPTION

ENGINE

Cummins QSB 6.7 ..... Inline 6 cylinder intercooled turbo diesel.
Horsepower Hp (kW) .....173 (129) @ 2500 rpm.
Peak torque ft. lb. (Nm) ..... 655 (888) @ 1500 rpm.
80 gallon (303 L) fuel tank capacity.

USA Federal EPA / California ARB / European EU / Tier III emission rating.

TRANSMISSION

Dana powershift transmission - 6 speeds forward and 3 speeds reverse.
Front axle disconnect offering both 4x4 and 4x2 operation.
Max. speed ..... 23 mph (37 km/hr).

AXLES

AxleTech front and rear steering axles with planetary reduction.
Front - Rigid mount.
Rear - Full floating rear axle. Automatic rear axle oscillating lock occurs when superstructure is swung 10° from centerline in either direction.

STEERING

Power steering with three independent modes.
Two-Wheel
Four-Wheel
Four-Wheel crab steer

GRADEABILITY

57% max. gradeability in 1st gear 4x4.
2.5% max. gradeability in 6th gear 4x2.

BRAKES

18.5 inches (470 mm) diameter disc brakes on all wheels hydraulically operated.

TIRES AND WHEELS

23.5 x 25 - 28 ply rating, earthmoving style tires. Steel disc wheels.

OUTRIGGER SYSTEM

Four independent horizontal beams and vertical jacks with integral holding valves, each independently controlled from operator cab.
100% - Fully extended outriggers
footprint .....498.4 sq. ft. (46.3 sq. m).
50% - Mid position outriggers
footprint .....351.9 sq. ft. (32.7 sq. m).
0% - Fully retracted outriggers
footprint ..... 205 sq. ft. (19 sq. m).
Light-weight steel, quick-release outrigger pontoons.
Floating ground bearing area ..... 23.6 in. (0.6 m) (418.5 sq. in.) (38.9 sq. m).
Outrigger span ..... Length 22.3 ft. (6.8 m).
Width 22.3 ft. (6.8 m).

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TECHNICAL DESCRIPTION

HYDRAULIC SYSTEM

Hydraulic pumps.
Gear pump for main and auxiliary winches, boom hoist and telescope cylinders.
Gear pump for steering.
Gear pump for outriggers and slewing.
185 gallon (700 L) hydraulic reservoir with external sight and temperature gauge.

Easily accessible (10 micron) cartridge style full flow filters with bypass protection.
Max. operating pressure: .....27MPa (3916 psi, 270 bar).

OPERATOR CAB

Full vision operator cab designed for max. comfort. All steel fabrication with acoustical lining and safety glass throughout. The cab has a sliding door on the left and a sliding window on the right side with a swing-up skylight with retractable shade and wiper motor. Fully adjustable deluxe seat with tilt. Foot controls for boom telescope, service brake and engine throttle. Tilt steering.

Temperature control is provided by a hydraulically driven air conditioning unit. Easy view dashboard with gauges for all engine sensors and rocker switch outrigger controls. Standard amenities also include bubble level, dome light, left side rearview mirror, seat belt, travel swing lock and signal horn.

COUNTERWEIGHT

Single 9,921 lb. (4500 kg) fixed counterweight.
Length ..... 9.7 ft. (2.9 m).
Width ..... 2.8 ft. (0.9 m).
Height ..... 2.8 ft. (0.9 m).

SWING

Bi-directional hydraulic swing drive with multi-disc wet brake and planetary reduction gearbox. Spring applied hydraulically released swing brake and 360° pneumatic positive swing lock.
Max. swing speed: ..... 2 rpm.

LOAD MOMENT INDICATOR (LMI)

GREER RCI 777 LMI control system. Microguard graphic display load moment and anti-two block system with audio-visual warning and function limiter.

System displays the following information: crane configuration, boom length, boom angle, load radius, allowed capacity, actual load, and load percentage of allowed capacity.

System includes settable work parameters: min./max. boom length, min./max. boom angle, defined swing area.

MAX. BOOM LENGTH WITH JIB EXTENSION

26-46 ft. (8-14 m) jib consisting of 26 ft. (8 m) lattice side stow jib and 19 ft. (6 m) manual pull out section. Main jib is offsettable at 0°, 20° and 40°.
Max. tip height with 26 ft. (8 m) jib erected is 136 ft. (41.5 m).
Max. tip height with 26 ft. (8 m) jib + 20 ft. (6 m) fixed pullout extension is 156 ft. (47.5 m).

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TECHNICAL DESCRIPTION

MAIN BOOM

Four section, full power, synchronized boom. Boom is constructed of high-yield steel. 5 sheave quick reeve boom tip with removable rope guards. Rope termination lugs on both sides of boom head. Auxiliary lifting sheave and manual angle indicator are included.

Fully extended boom length: ..... 102 ft. (31.1 m).
Fully retracted boom length: ..... 35 ft. (10.7 m).
Max. tip height, main boom: ..... 111 ft. (33.8 m).

Boom angle range (min./max.) ..... -3° / + 78°.
Boom raising / lowering time ..... 56 sec. / 63 sec.
Boom extension / retraction time ..... 100 sec. / 80 sec.

MAIN AND AUXILIARY WINCHES

Standard two speed main and auxiliary hoists, each with planetary reduction and spring applied multi-disk wet brake.
Each hoist features:
Grooved drum lagging.
Hoist drum cable followers.
Max. permissible line pull: ..... 15,432 lbs. (7000 kg).
Winch speed: ..... 0 - 518 fpm. (0 - 158 m/min).
Power up / power down.
Electronic drum rotation indicators.

Rope construction: ..... 0.67 in. (17 mm) rotation resistant compacted strand.

CAMERAS

The crane comes equipped with two cameras, a winch camera for viewing hoist operation and a rear camera for viewing the rear of the crane. The monitor is located in the cab, and one can easily toggle between both camera views.

HOOK BLOCK AND HOOK BALL

35 ton, 5 sheave (steel), standard reeve hook block with odd part pin-off and safety latch.
Hook block weight ..... 1157 lbs. (525 kg).
5.5 ton top swivel hook ball with safety latch.
Hook ball weight ..... 265 lbs. (120 kg).

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CRANE AND COMPONENT WEIGHTS

CRANE OPERATING WEIGHTS						
	Gross Vehicle Weight		Front Axle Load		Rear Axle Load	
	lb	kg	lb	kg	lb	kg
Crane with ctwt.	70,402	32,001	32,960	14,950	37,588	17,249

DEDUCTIONS FOR LOAD HANDLING					
	lb	kg		lb	kg
Jib stowed aside boom	726	330	5 sheave 35 ton hook block	1,157	525
Auxiliary head	158	72	5.5 ton hook ball	265	120

TURNING RADIUS

	Imperial	Metric
Front Wheel (4x2) Steering	42 ft.	12.7 m
All Wheel (4x4) Steering Radius	24 ft.	7.5 m
Tail Swing	12 ft.	3.7 m

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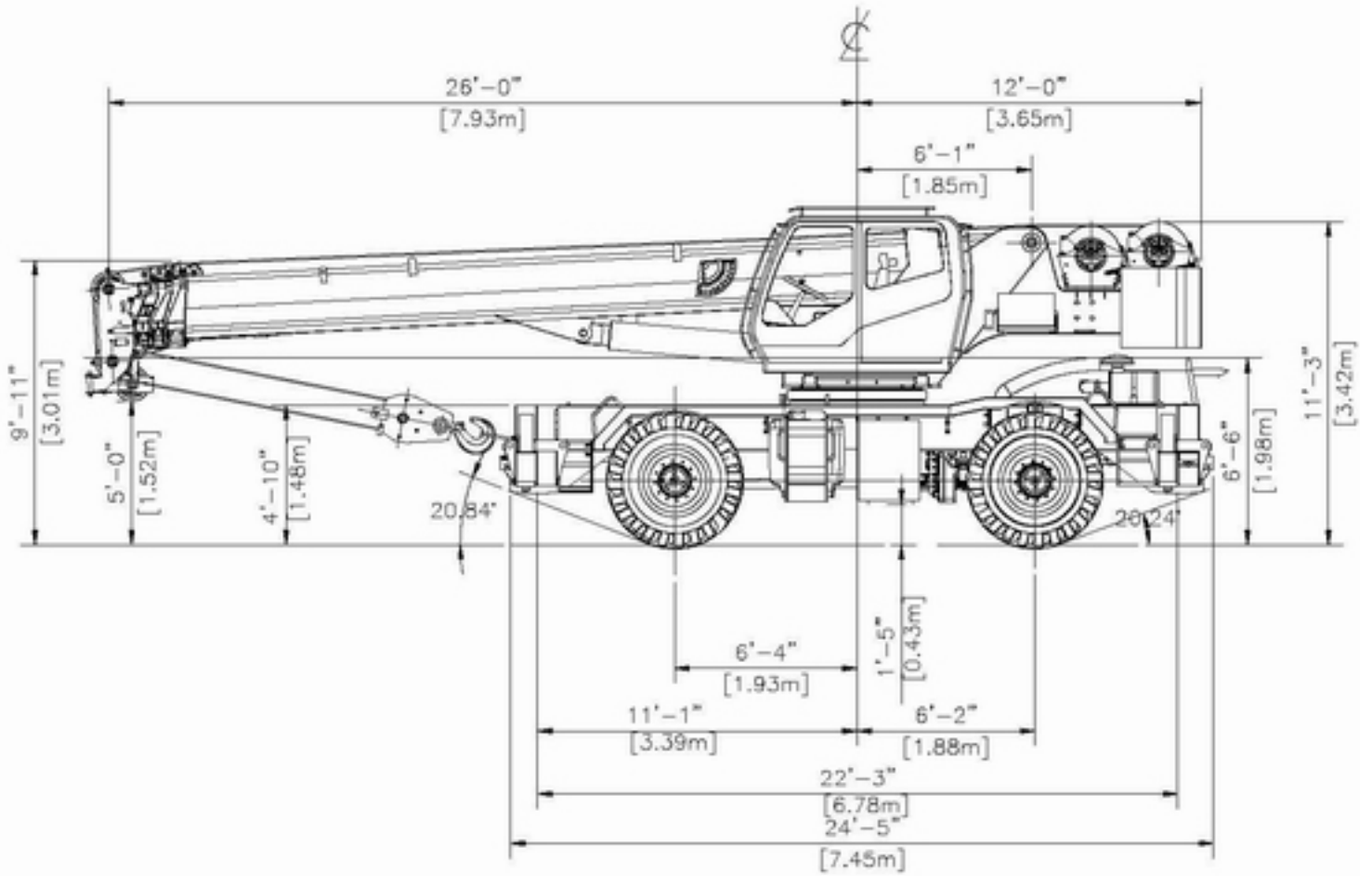
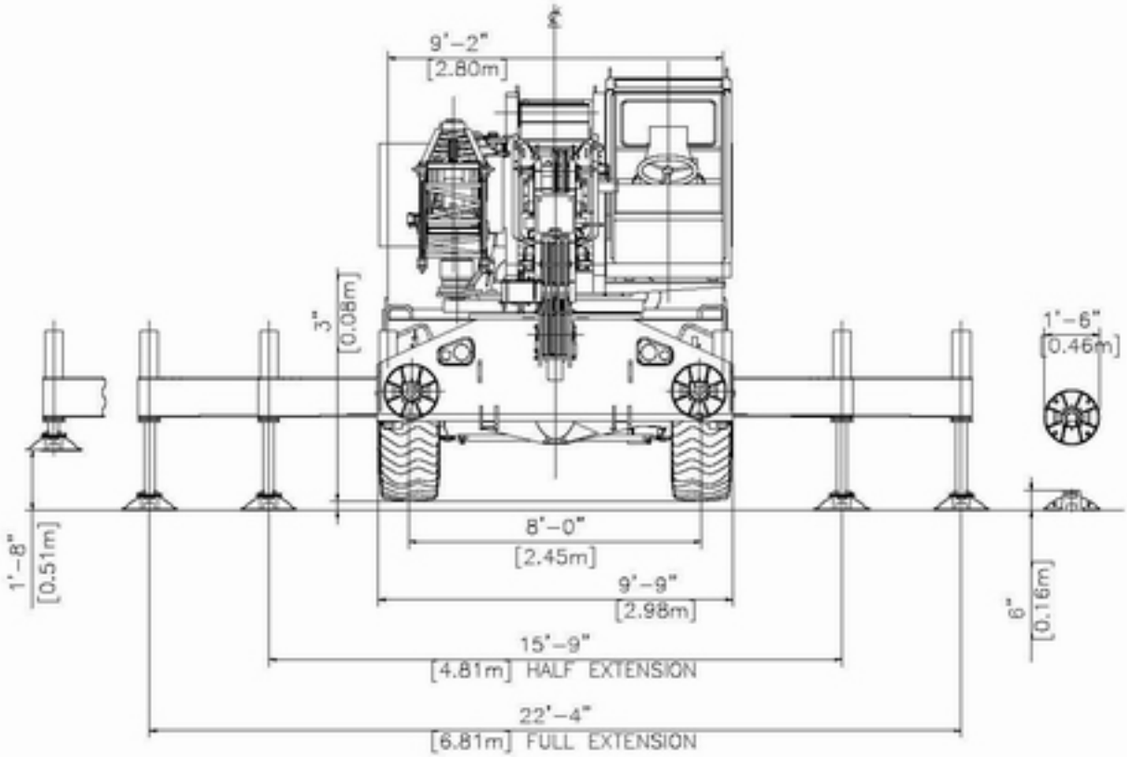
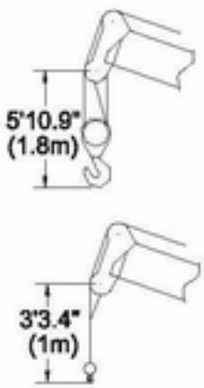
CRANE DIMENSIONS







DIMENSIONS ARE FOR THE STANDARD ZOOMLION FURNISHED HOOK BLOCK AND HOOK BALL.

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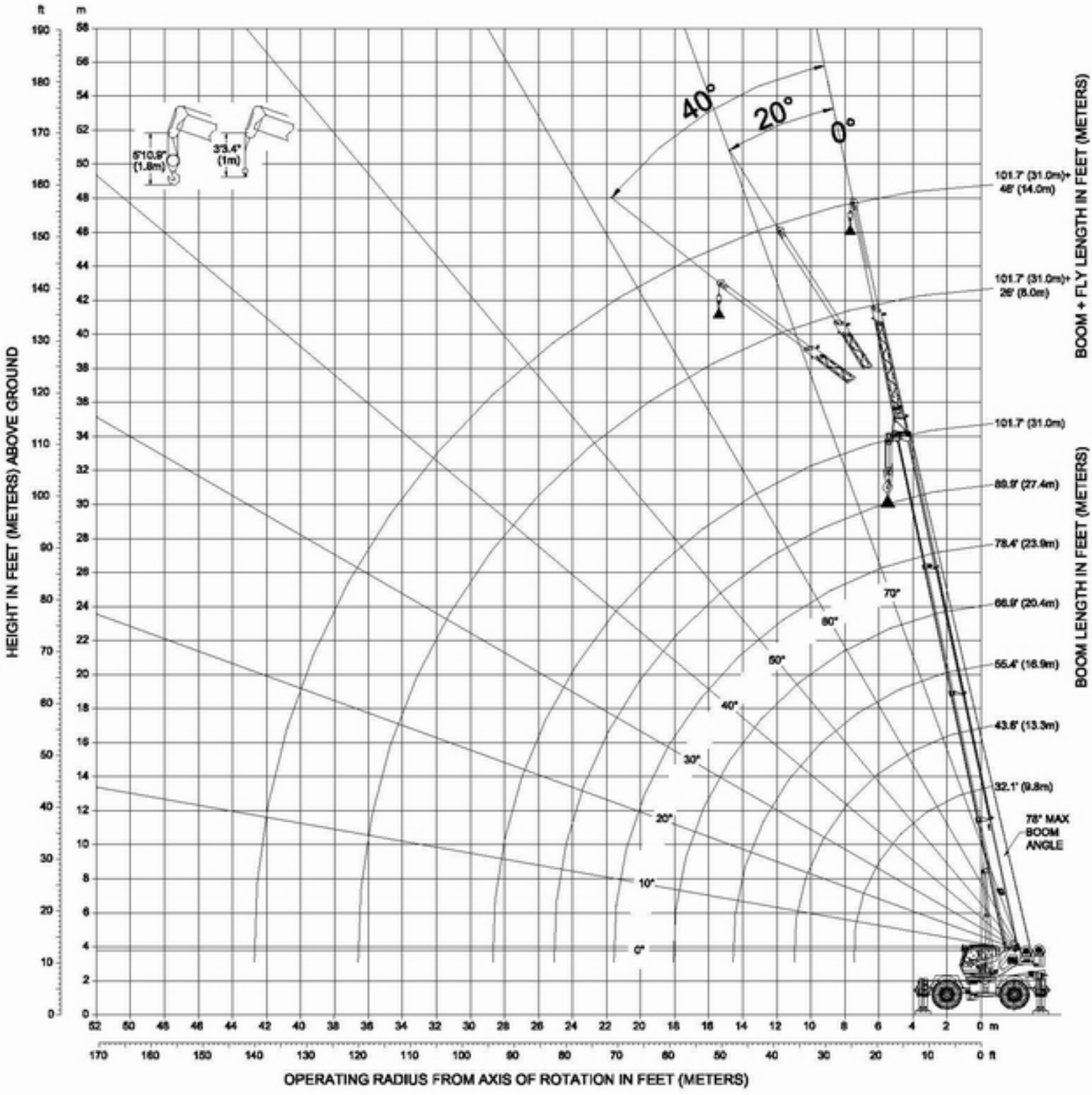
WORKING RANGE DIAGRAM



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FULLY EXTENDED OUTRIGGERS - MAIN BOOM CAPACITY 4,500 kg. ctwt. ANSI B30.5 85% 360°								
BOOM LENGTH IN METERS - CAPACITY LISTED IN KILOGRAMS								
RADIUS	10	13	17	20	24	27	31	RADIUS
M								M
3	36287	22900	20799					3
4	33199	23700	21200	20700				4
5	29099	25200	22000	21200	18800			5
6	23900	22700	21700	20000	16700	14800	12900	6
8	18800	18690	17868	16700	14100	12500	10900	8
9		13307	12971	12449	11759	10700	9400	9
11		10134	9997	9719	9309	8905	8200	11
12			8002	7851	7585	7335	6991	12
14			6574	6494	6321	6146	5917	14
15			5571	5458	5347	5228	5062	15
17				4650	4581	4494	4380	17
18				3947	3952	3908	3809	18
20					3439	3402	3335	20
21					3015	2977	2943	21
23						2619	2591	23
24						2314	2285	24
26							2022	26
27							1791	27
29							1593	29

LIFTING CAPACITY NOTES:

Rated lifting capacities shown do not exceed 85% of the tipping loads. The weight of the hook block, hook ball and any additional auxiliary lifting devices are not calculated into the rated lifting capacity and must be deducted prior to operation.

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MID POSITION OUTRIGGERS - MAIN BOOM CAPACITY

4,500 kg. ctwt. ANSI B30.5 85% 360°

BOOM LENGTH IN METERS - CAPACITY LISTED IN KILOGRAMS

RADIUS	10	13	17	20	24	27	31	RADIUS
M								M
3	34999	22900	20799					3
4	33199	23700	21200	20700				4
5	29099	25200	22000	21200	18800			5
6	16371	16252	15423	14312	13144	12016	10803	6
8	10894	11022	10722	10239	9637	9035	8351	8
9		8100	8027	7769	7428	7090	6661	9
11		6225	6261	6147	5916	5707	5437	11
12			4998	4959	4812	4688	4503	12
14			4060	4064	3978	3897	3779	14
15			3374	3367	3327	3273	3193	15
17				2811	2801	2767	2718	17
18				2364	2365	2354	2316	18
20					2001	1997	1978	20
21					1694	1695	1694	21
23						1436	1439	23
24						1212	1216	24
26							1022	26
27							849	27
29							689	29

LIFTING CAPACITY NOTES:

Rated lifting capacities shown do not exceed 85% of the tipping loads. The weight of the hook block, hook ball and any additional auxiliary lifting devices are not calculated into the rated lifting capacity and must be deducted prior to operation.

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FULLY RETRACTED OUTRIGGERS - MAIN BOOM CAPACITY

4,500 kg. ctwt. ANSI B30.5 85% 360°

BOOM LENGTH IN METERS - CAPACITY LISTED IN KILOGRAMS

RADIUS	10	13	17	20	24	27	31	RADIUS
M								M
3	26756	22900	20799					3
4	19013	18722	17668	16025				4
5	12870	12836	12259	11319	10206			5
6	7881	8082	7922	7526	6949	6471	5928	6
8	5315	5583	5592	5432	5135	4880	4573	8
9		4042	4125	4075	3918	3784	3597	9
11		2998	3116	3125	3048	2976	2867	11
12			2381	2424	2399	2362	2297	12
14			1823	1886	1899	1877	1845	14
15			1397	1457	1492	1492	1475	15
17				1108	1156	1173	1169	17
18							910	18

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	4,500 kg. ctwt.		ON TIRES BOOM CENTERED ANSI B30.5		75%		OVER FRONT	
BOOM LENGTH IN METERS - CAPACITY LISTED IN KILOGRAMS								
RADIUS	**10**	**13**	**17**	**20**	**24**	**27**	**31**	**RADIUS**
M								**M**
3	24600	24000	23300					3
4	21899	21400	20900	20400				4
5	18239	18063	17143	15774	13808			5
6	10776	10928	10683	10182	9361	8473	7507	6
8	7286	7518	7483	7271	6863	6385	5830	8
9		5521	5572	5487	5269	4996	4649	9
11		4211	4301	4285	4169	4009	3780	11
12			3396	3415	3360	3266	3109	12
14			2719	2758	2741	2689	2584	14
15			2214	2246	2253	2227	2160	15
17				1834	1857	1849	1813	17
18				1454	1530	1536	1516	18
20					1256	1271	1266	20
21					1023	1043	1048	21