MAXIM
1-877-MAX-LIFT

TADANO

GR-1000XL-4

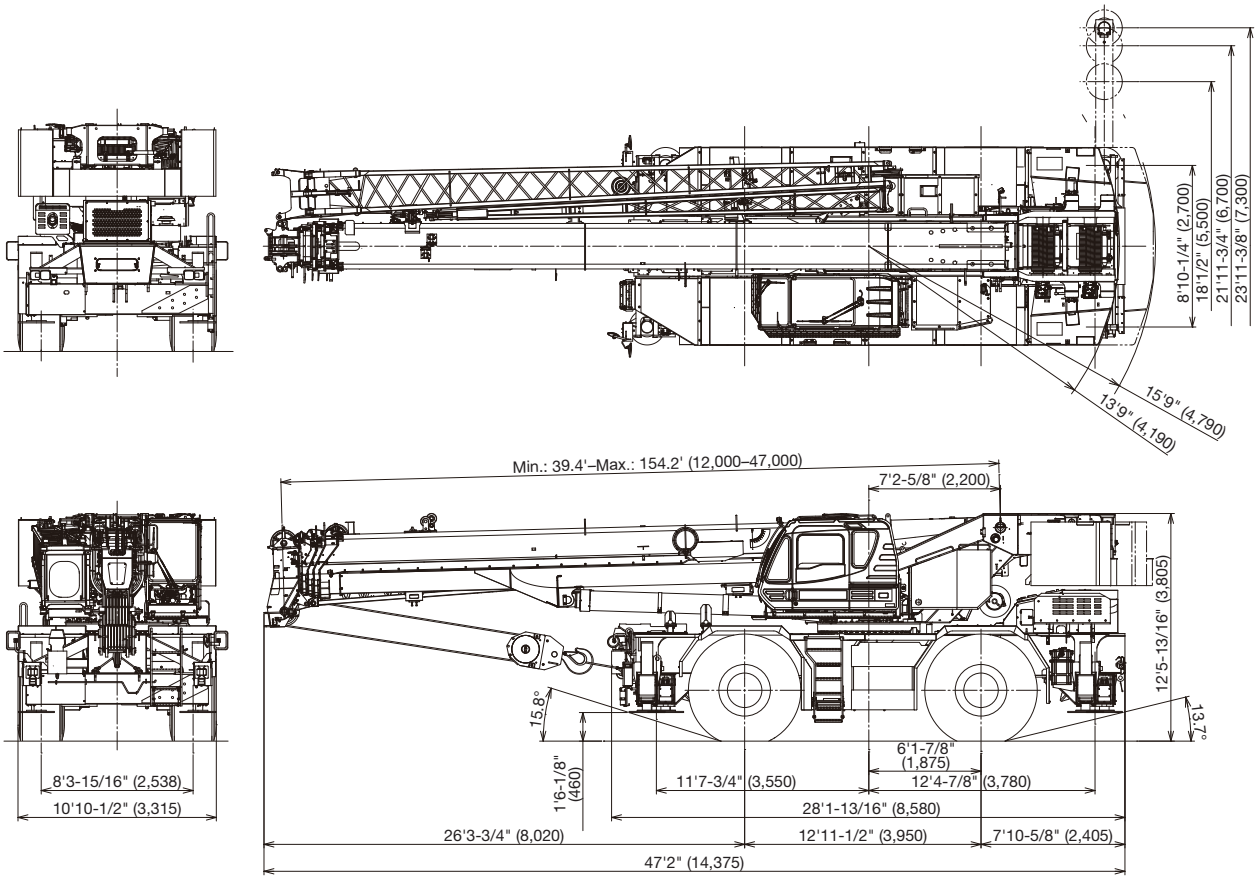
(Left-hand drive)

100 Ton (90.7 Metric Ton) Capacity

Form NO. GR-1000-4-00101/US-01

HYDRAULIC ROUGH TERRAIN CRANE

DIMENSIONS



Note: Dimension is with boom angle at -1.5 degree.
( ) Reference dimensions in mm.

GENERAL DIMENSIONS

	Feet	Meters
Turning radius (29.5–25 Tires)		
4 wheel steer	22' 4"	6.8
2 wheel steer	35' 9-3/32"	10.9

	Feet	Meters
Overall length	approx. 47' 2"	14.375
Overall width	approx. 10' 10-1/2"	3.315
Overall height	approx. 12' 5-13/16"	3.805

Specifications are subject to change without notice.

CRANE SPECIFICATIONS

BOOM
5 section full power synchronized telescoping boom, 39.4'–154.2' (12.0 m–47.0 m), of round box construction with 7 sheaves, 17-5/16" (0.44 m) root diameter, at boom head.
The synchronization system consists of 2 telescope cylinders, an extension cable and retraction cable. Hydraulic cylinder fitted with holding valve. 2 easily removable wire rope guards, rope dead end provided on both sides of boom head. Boom telescope sections are supported by wear pads both vertically and horizontally. Extension speed 114.8' in 155 seconds.

BOOM ELEVATION - By a double acting hydraulic cylinder with holding valve. Elevation -1.5º-80.5º, combination controls for hand or foot operation. Boom angle indicator.
Automatic speed reduction and slow stop function.
Boom raising speed 20º to 60º in 46 seconds.

JIB - 2 stage bi-fold lattice type, 3.5º, 25º or 45º offset (tilt type). Single sheave, 15-5/8" (0.396 m) root diameter, at the head of both jib sections. Stored alongside base boom section. Jib length is 33.2' (10.1 m) or 58.1' (17.7 m). Assistant cylinders for mounting and stowing, controlled at right side of superstructure. Self stowing jib mounting pins.

AUXILIARY LIFTING SHEAVE (SINGLE TOP)
Single sheave, 15-5/8" (0.396 m) root diameter. Mounted to main boom head for single line work (stowable).

ANTI-TWO BLOCK - Pendant type over-winding cut out device with audio-visual (FAILURE lamp/BUZZER) warning system.

SLEWING
Hydraulic axial piston motor through planetary slewing speed reducer. Continuous 360º full circle slewing on ball bearing turn table at 1.5 min^{-1} {rpm}. Equipped with manually locked/released slewing brake. A 360º positive slewing lock for pick and carry and travel modes, manually engaged in cab.
Twin slewing system: Free slewing or lock slewing controlled by selector switch on front console.

WINCH

MAIN WINCH - Variable speed type with grooved drum driven by hydraulic axial piston motor through speed reducer.
Power load lowering and raising. Equipped with automatic brake (neutral brake) and counterbalance valve. Controlled independently of auxiliary winch. Equipped with cable follower and drum rotation indicator.

DRUM - Grooved 14-1/4" (0.362 m) root diameter x 26-13/16" (0.681 m) wide. Wire rope: 830' of 3/4" diameter rope (253 m of 19 mm). Drum capacity: 1135' (346 m) 7 layers. Maximum single line pull:1st layer 20,000 lbs (9,090 kg). Maximum permissible line pull wire strength: 14,600 lbs (6,600 kg).

AUXILIARY WINCH - Variable speed type with grooved drum driven by hydraulic axial piston motor through speed reducer.
Power load lowering and raising. Equipped with automatic brake (neutral brake) and counterbalance valve. Controlled independently of main winch. Equipped with cable follower and drum rotation indicator.

DRUM - Grooved 14-1/4" (0.362 m) root diameter x 26-13/16" (0.681 m) wide. Wire rope: 456' of 3/4" diameter rope (139 m of 19 mm). Drum capacity: 1135' (346 m) 7 layers. Maximum single line pull: 1st layer 20,000 lbs (9,090 kg). Maximum permissible line pull wire strength: 14,600 lbs (6,600 kg).

WIRE ROPE - Non-rotating 3/4" (19 mm) P·S (19) + 39 x P·7
Breaking Strength 72,800 lbs (33,000 kg)

HOOK BLOCKS
100 ton (90.7 metric ton)-8 sheaves with swivel hook and safety latch, for 3/4" (19 mm) wire rope.
7.3 ton (6.6 metric ton) - Weighted hook with swivel and safety latch, for 3/4" (19 mm) wire rope.

COUNTERWEIGHT
Self-removable counterweight ..... 20,100 lbs (9,100 kg)

HYDRAULIC SYSTEM

PUMPS - 2 variable piston pumps for crane functions.
Tandem gear pump for steering, slewing and optional equipment. Powered by carrier engine. Pump disconnect for crane is engaged/ disengaged by rotary switch from operator's cab.

CONTROL VALVES - Multiple valves actuated by pilot pressure with integral pressure relief valves.

RESERVOIR - 210 gallon (795 lit.) capacity. External sight level gauge.

FILTRATION - BETA10=10 return filter, full flow with bypass protection, located inside of hydraulic reservoir. Accessible for easy replacement.

OIL COOLER - Air cooled fan type.

CAB AND CONTROLS

Both crane and drive operations can be performed from one cab mounted on rotating superstructure.

20º tilt, Left side, 1 man type, steel construction with sliding door access and safety glass windows opening at side. Door window is powered control. Windshield glass window and roof glass window are shatter-resistant. Tilt-telescoping steering wheel. Adjustable control lever stands for slewing, boom elevating, boom telescoping, auxiliary winch and main winch. Control lever stands can change neutral positions and tilt for easy access to cab. 3 way adjustable operator's seat with high back, headrest and armrest. Engine throttle knob. Foot operated controls: boom elevating boom telescoping, service brake and engine throttle. Hot water cab heater and air conditioning.

Dash-mounted Instrument panel, Multi Function Display, Starter switch (engine start/stop), 12 V power outlelet, USB port, drive selector switch, parking brake switch, steering mode select switch, power window switch, pump engaged/disengaged switch, slewing brake switch, telescoping/auxiliary winch select switch, outrigger controls, free slewing/lock slewing selector switch, air conditioning control switch.

Instruments panel - Torque converter oil temperature, engine water temperature, air pressure, fuel, speedometer, tachometer, hour meter and odometer/tripmeter.

Multi Function Display - DEF level gauge, Fuel consumption monitor.

Tadano electronic LOAD MOMENT INDICATOR system (AML-E2) including:

- Control lever lockout function with audible and visual pre-warning
- Number of parts of line
- Boom position indicator
- Outrigger state indicator
- Slewing angle
- Boom angle / boom length / jib offset angle / jib length / load radius / rated lifting capacities / actual loads read out
- Potential lifting height
- Ratio of actual load moment to rated load moment indication
- Automatic Speed reduction and slow stop function on boom elevation and slewing
- Working condition register switch
- Load radius / boom angle / tip height / slewing range preset function
- External warning lamp
- Tare function
- Main Hydraulic oil pressure
- Fuel consumption monitor
- Main winch / auxiliary winch select
- Drum rotation indicator (audible and visible type) main and auxiliary winch
- On rubber indicator

TADANO AML-E2 monitors outrigger extended length and automatically programs the corresponding "RATED LIFTING CAPACITIES" table.

Operator's right hand console includes transmission gear selector, slewing lock lever and sight level bubble.
Upper console includes,
roof washer and wiper switch,
emergency outrigger set up key switch,
jib equipped / removed select switch,
high speed winch (main / aux) switch, Cab tilt switch,
Pump disconnect enable switch and boom emergency telescoping switch (2nd and 3rd-top).

NOTE: Each crane motion speed is based on unladen conditions.

CARRIER SPECIFICATIONS

TYPE - Rear engine, left hand steering, driving axle 2-way selected type by manual switch, 4 x 2 front drive, 4 x 4 front and rear drive.

FRAME - High tensile steel, all welded mono-box construction.

TRANSMISSION - Electronically controlled full automatic transmission. Torque converter driving full powershift with driving axle selector. 6 forward and 2 reverse speeds, constant mesh.

3 speeds - high range - 2 wheel drive; 4 wheel drive
3 speeds - low range - 4 wheel drive

TRAVEL SPEED - 22 mph (36 km/h)

AXLE - Front: Full floating type, steering and driving axle with planetary reduction. Rear: Full floating type, steering and driving axle with planetary reduction and non-spin rear differential.

STEERING - Hydraulic power steering controlled by steering wheel. Four steering modes available: 2 wheel front, 2 wheel rear, 4 wheel coordinated and 4 wheel crab.

SUSPENSION - Front: Rigid mounted to frame. Rear: Pivot mounted with hydraulic lockout device.

BRAKE SYSTEMS - Service: Air over hydraulic disc brakes on all 4 wheels. Parking / Emergency: Spring applied-air released brake acting on input shaft of front axle. Auxiliary: Electro-pneumatic operated exhaust brake.

TIRES - 29.5-25 36PR (OR) Air pressure: 68 psi (470 kPa)
29.5-25 40PR (OR) Air pressure: 67 psi (465 kPa)

OUTRIGGERS- Four hydraulic, beam and jack outriggers. Vertical jack cylinders equipped with integral holding valve. Each outrigger beam and jack is controlled independently from cab. Beams extend to 23' 11-3/8" (7.3 m) center-line and retract to within 10' 10-1/2" (3.315 m) overall width with floats. Outrigger jack floats are attached thus eliminating the need of manually attaching and detaching them. Controls and sight bubble located in superstructure cab. Four outrigger extension lengths are provided with corresponding "RATED LIFTING CAPACITIES" for crane duty in confined areas.

Min. Extension 8' 10-1/4" (2.7 m) center to center
Mid. Extension 18' 1/2" (5.5 m) center to center
Mid. Extension 21' 11-3/4" (6.7 m) center to center
Max. Extension 23' 11-3/8" (7.3 m) center to center

Float size (Diameter) 1' 11- 5/8" (0.6 m)

ENGINE

Model	Cummins B6.7
Type	Direct injection diesel
No. of cylinders	6
Combustion	4 cycle, turbo charged and after cooled
BoreXStroke, in. (mm)	4.212 X 4.882 (107 X 124)
Displacement, cu. in (liters)	409 (6.7)
Air inlet heater	24 volt preheat
Air cleaner	Dry type, replaceable element
Oil filter	Full flow with replaceable element
Fuel filter	Full flow with replaceable element
Fuel tank, gal. (liters)	79.2 (300), right side of carrier
Cooling	Liquid pressurized, recirculating by-pass

Radiator	Fin and tube core, thermostat controlled
Fan, in. (mm)	Suction type, 9-blade, 28 (711) dia.
Starting	24 volt
Charging	24 volt system, negative ground
Battery	2-120 amp. Hour
Compressor, air, CFM (l /min)	17.0 CFM (481) at 2,400 rpm
Output, Max. HP (kW)	Gross 280 (209) at 2,200 rpm
Torque, Max. ft-lb (Nm)	850 (1,152) at 1,500 rpm
Capacity, gal. (liters)	
Cooling water	2.7 (10)
Lubrication	4.0 (15)
Fuel	79.2 (300)
DEF/AdBlue	15.0 (57)

STANDARD EQUIPMENT

- 5 section full power partially synchronized boom 39.4'–154.2' (12.0 m–47.0 m)
- 33.2' or 58.1' (10.1 m or 17.7 m) bi-fold lattice jib (tilt type) with 3.5º, 25º or 45º pinned offsets and self storing pins.
- Quick reeving type bi-fold jib
- Anti-Two block device (overwind cutout)
- Winch drum camera with light
- LED work lights
- Variable speed main winch with grooved drum, cable follower, drum rotation indicator (audible,visible and thumper type) and 830' of 3/4" cable.
- Variable speed auxiliary winch with grooved drum, cable follower, drum rotation indicator (audible, visible and thumper type) and 456' of 3/4" cable.
- Auxiliary lifting sheave (single top) stowable
- 2-speed winch
- 100 ton (90.7 metric ton) hook block - 8 sheaves with swivel hook and safety latch for 3/4" (19 mm) wire rope
- 7.3 ton (6.6 metric ton) hook with swivel
- Tadano twin slewing system and 360º positive slewing lock
- Positive control
- Hydraulic oil cooler
- 3 way adjustable cloth seat with armrests, high back and seat belt
- Tilt-telescoping steering wheel
- Tinted safety glass and sun visor
- Front windshield wiper and washer
- Roof window wiper and washer
- Power window (cab door)
- 12V power outlet
- Ashtray
- Cab floor mat
- Pump disconnect in operator's cab
- Air conditioner (hot water heater and cooler)
- Full instrumentation package
- Self centering finger control levers with pilot control
- Control pedals for boom elevating and boom telescoping
- Low oil pressure / high water temp. warning device (visual)
- Air cleaner dust indicator
- Cup holder
- Battery disconnect
- USB port
- 20º tilt cab
- Emergency steering system
- Tadano electronic load moment indicator system (AML-E2)
- Boom angle indicator
- Outrigger extension length detector
- Electronic crane monitoring system
- Rear view camera
- Right front view camera
- Fenders
- Air dryer
- Complete highway light package
- Towing hooks-Front and rear
- Hook block tie down (front bumper)
- Weighted hook storage compartment
- Halogen head lamp
- Independently controlled outriggers
- Four outrigger extension positions
- Self-storing outrigger pads
- Electronic controlled automatic transmission driven by torque converter
- 4 X 4 X 4 drive / steer
- Non-spin rear differential
- Automatic rear axle oscillation lockout system
- 29.5-25 36 PR tires
- 29.5-25 40 PR tires
- Disc brakes
- Water separator with filter (high filtration)
- Back-up alarm
- 24 volt electric system
- Tool storage compartment
- Tire inflation kit
- Cummins B6.7 turbo charged after cooled engine (280 HP) with exhaust brake
- Engine over-run alarm
- Lifting eyes
- Telematics (machine data logging and monitoring system) with HELLO-NET via internet (availability depends on countries)
- Fuel consumption monitor
- Eco mode system
- Self-removable counterweight
- Radiator cover
- Clearance sonar (Rear side)
- Automatic pump disconnect
- Over unwinding prevention

HOISTING PERFORMANCE

LINE SPEEDS AND PULLS

Layer	Main or auxiliary hoist - 14'-1/4" (0.362 m) drum							
	Line speeds[1]				Line pulls Available[2]			
	Low		High		Low		High	
	F.P.M	m/min	F.P.M	m/min	Lbs.	kgf	Lbs.	kgf
1st	278	84	387	118	20,000	9,090	14,400	6,520
2nd	302	92	421	128	18,100	8,230	13,000	5,900
3rd	327	99	456	139	16,600	7,520	11,900	5,390
4th	352	107	491	149	15,300	6,920	10,900	4,960
5th	377	115	526	160	14,100	6,410	10,100	4,600
6th	402	122	560	170	13,200	5,970	9,400	4,280
7th[3]	427	130	595	181	12,300	5,590	8,800	4,010

- Maximum permissible line pull wire strength 14,600 lbs (6,600 kg).

[1] Line speeds based only on hook block, not loaded.
[2] Developed by machinery with each layer of wire rope, but not based on rope strength or other limitation in machinery or equipment.
[3] Seventh layer of wire rope are not recommended for hoisting operations.

DRUM WIRE ROPE CAPACITIES

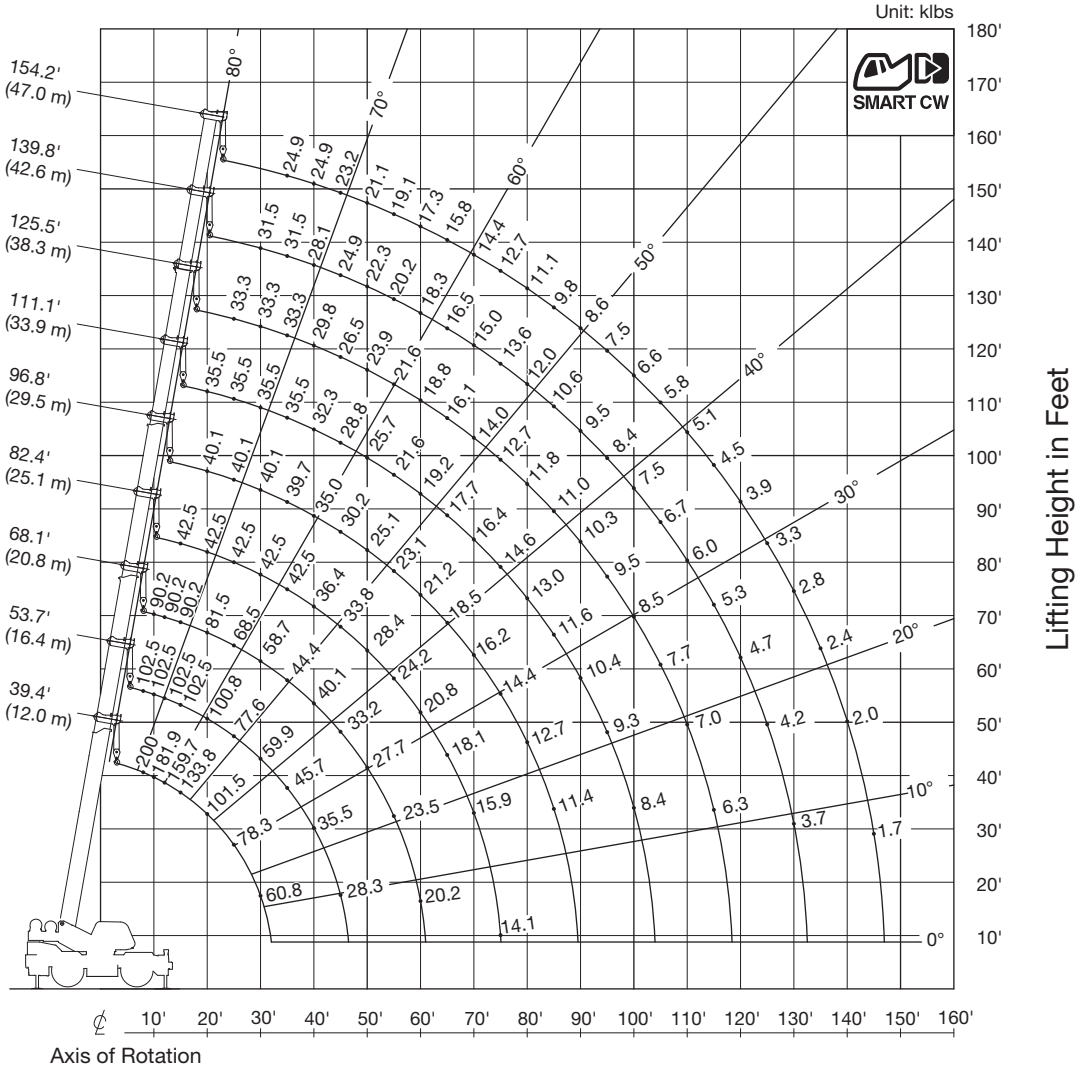
Wire rope layer	Main and auxiliary drum grooved lagging 3/4" (19 mm) wire rope			
	Rope per layer m		Total wire rope m	
	Feet	Meters	Feet	Meters
1	128.0	39.0	128.0	39.0
2	139.4	42.5	267.4	81.5
3	150.9	46.0	418.3	127.5
4	162.1	49.4	580.4	176.9
5	173.9	53.0	754.3	229.9
6	185.4	56.5	939.6	286.4
7	196.9	60.0	1,136.5	346.4

DRUM DIMENSIONS

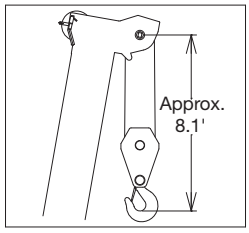
	Inch	mm
Root diameter	14-1/4"	362
Length Flange	26-13/16"	681
diameter	25-7/8"	657

GR-1000XL-4 WORKING RANGE CHART

SMART COUNTERWEIGHT
360° ROTATION



BOOM



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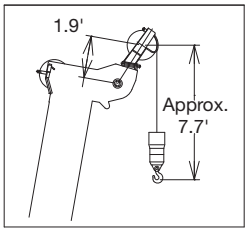
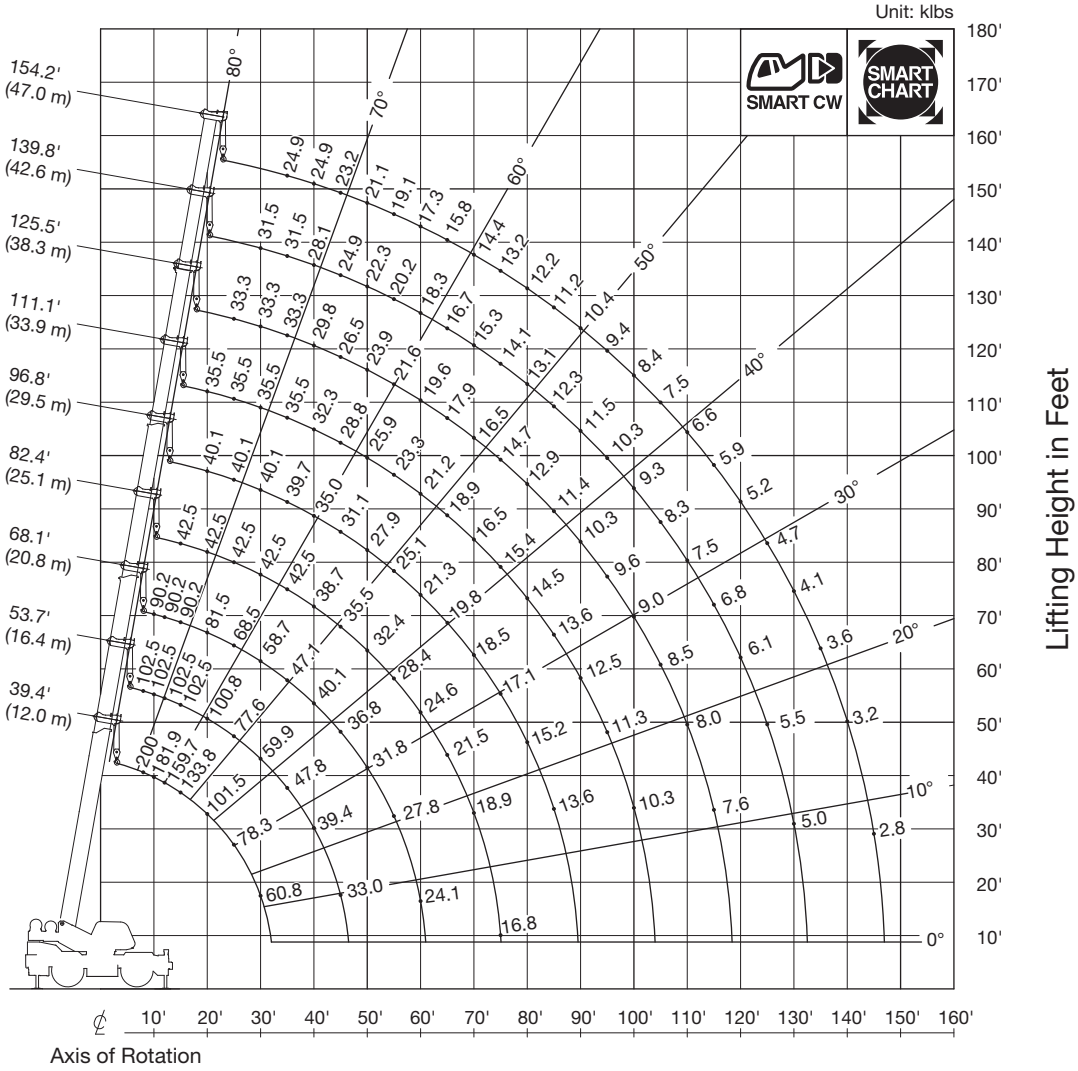


NOTE: Boom geometry shown is for unloaded condition and
machine standing level on firm supporting surface.
Boom deflection and subsequent radius and boom angle change
must be accounted for when applying load to hook.
When boom length is same as telescoping mode 1 and 2, it show large load.

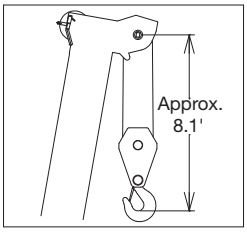
Form No. GR-1000-4-00101/US-01

GR-1000XL-4 WORKING RANGE CHART

SMART COUNTERWEIGHT
SMART CHART



BOOM



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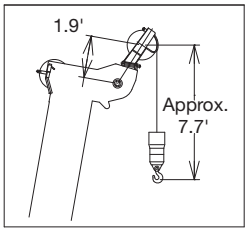

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Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.
When boom length is same as telescoping mode 1 and 2, it show large load.

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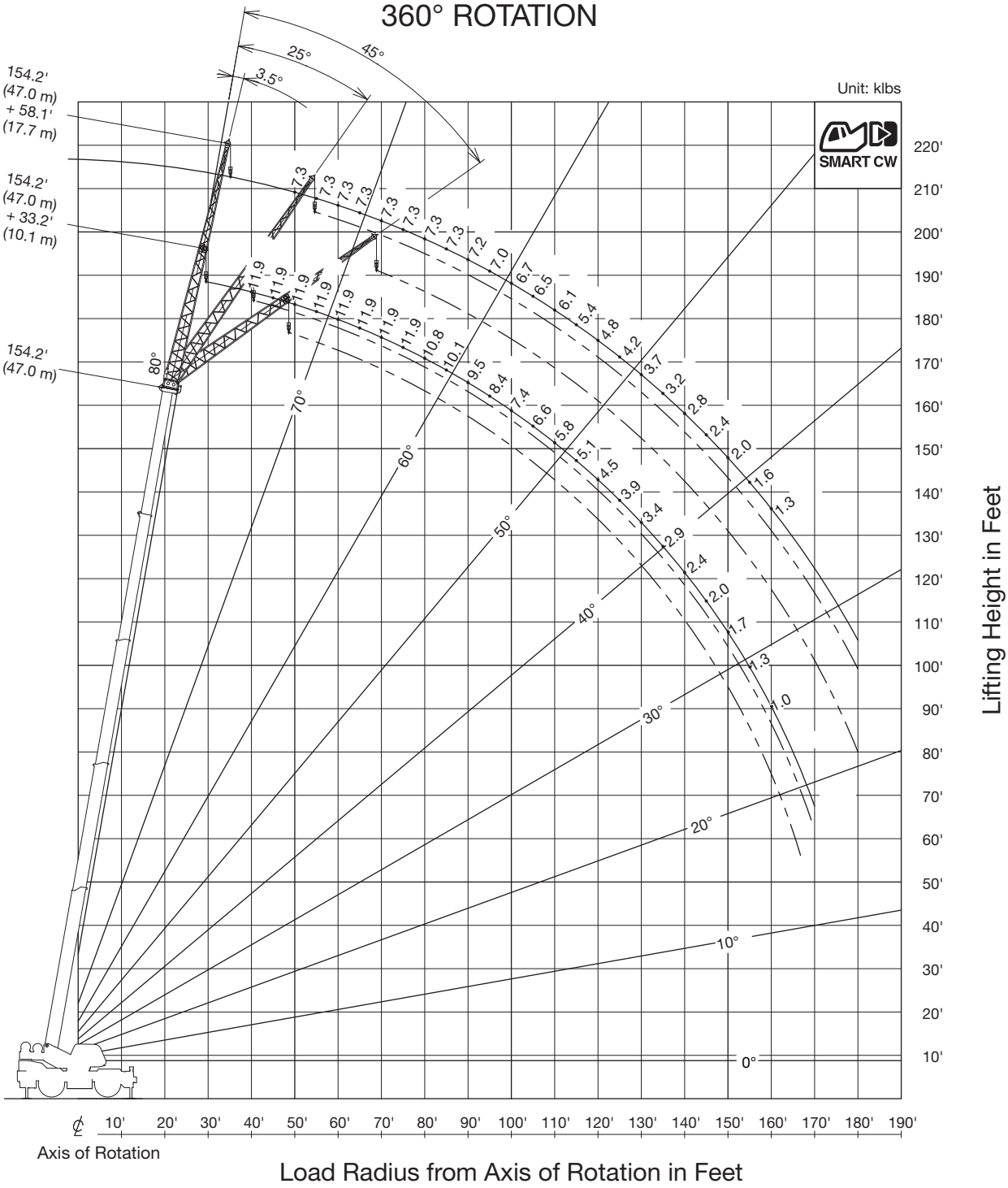
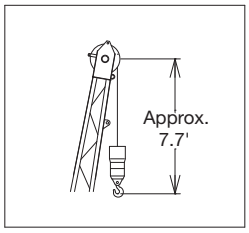
GR-1000XL-4 WORKING RANGE CHART

SMART COUNTERWEIGHT
360° ROTATION



NOTE: Jib geometry shown are for unloaded condition and machine standing level on firm supporting surface. Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.

JIB



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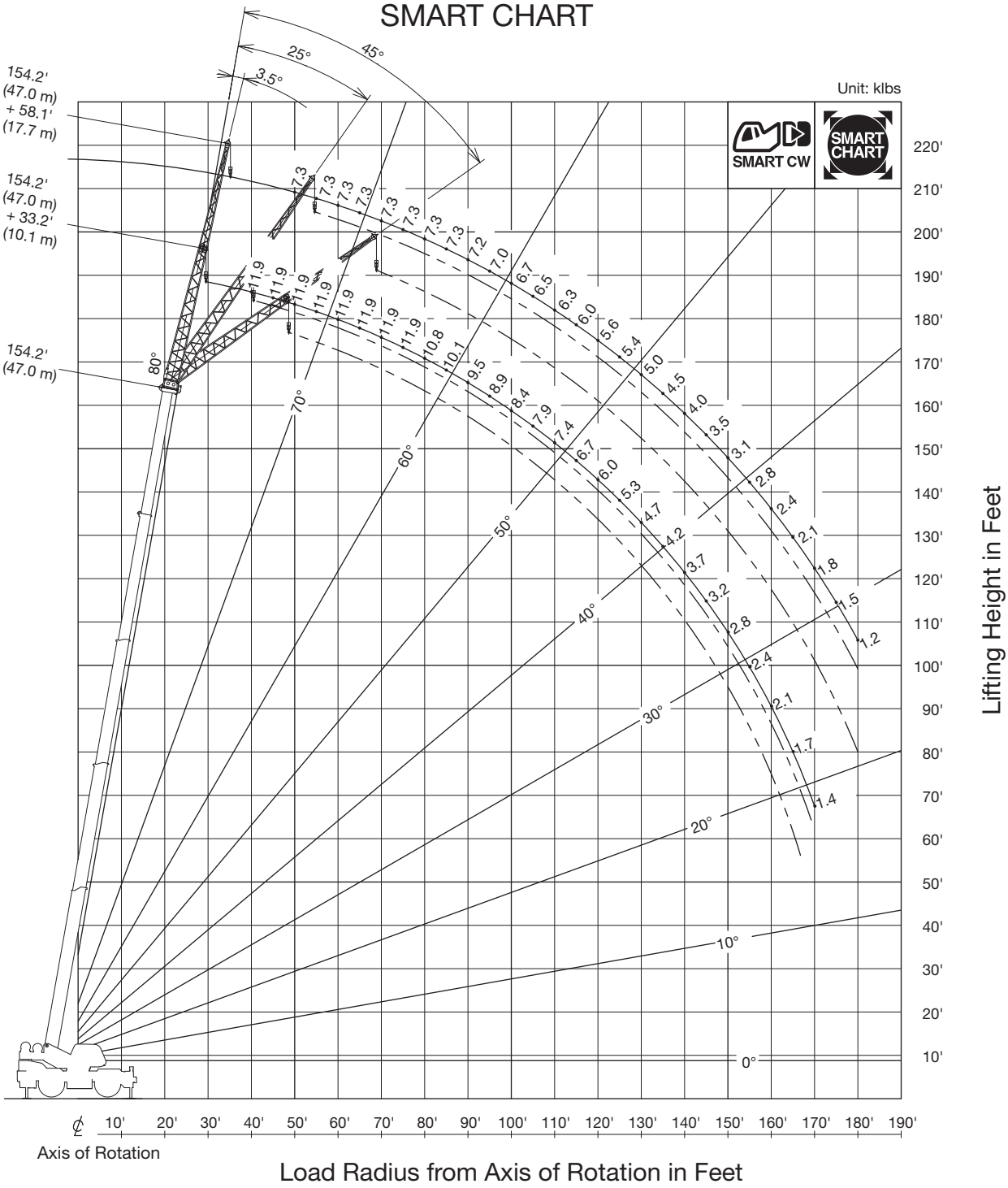
GR-1000XL-4 WORKING RANGE CHART

SMART COUNTERWEIGHT
SMART CHART



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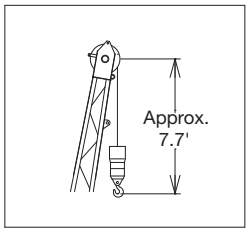
JIB



Form No. GR-1000-4-00101/US-01

GR-1000XL-4 RATED LIFTING CAPACITIES (IN POUNDS)

SMART CW

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS FULLY EXTENDED 23' 11-3/8" (7.3 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B \ A	39.4' (12 m)	53.7' (16.4 m)	68.1' (20.8 m)		82.4' (25.1 m)		96.8' (29.5 m)		111.1' (33.9 m)		125.5' (38.3 m)		139.8' (42.6 m)		154.2' (47 m)
8	200,000	102,500													
10	181,900	102,500	90,200	40,100											
12	159,700	102,500	90,200	40,100											
15	133,800	102,500	90,200	40,100	42,500	35,500									
20	101,500	100,800	81,500	40,100	42,500	35,500	40,100	33,300	35,500	32,200					
25	78,300	77,600	68,500	40,100	42,500	35,500	40,100	33,300	35,500	32,200	33,300	32,200			
30	60,800	59,900	58,700	40,100	42,500	35,500	40,100	33,300	35,500	32,200	33,300	28,800	31,500	28,900	
35		45,700	44,400	40,100	42,500	35,500	39,700	33,300	35,500	30,800	33,300	25,500	31,500	27,200	24,900
40		35,500	34,400	40,100	36,400	35,500	35,000	30,500	32,300	27,600	29,800	22,800	28,100	24,500	24,900
45		28,300	27,300	33,200	29,200	33,800	30,200	27,600	28,800	24,900	26,500	20,700	24,900	22,200	23,200
50			22,100	27,700	23,900	28,400	24,900	25,100	25,700	22,700	23,900	18,800	22,300	20,300	21,100
55			18,100	23,500	19,900	24,200	20,900	23,100	21,600	20,800	21,600	17,300	20,200	18,700	19,100
60			15,000	20,200	16,600	20,800	17,600	21,200	18,300	19,200	18,800	15,900	18,300	17,300	17,300
65					14,000	18,100	15,000	18,500	15,700	17,700	16,100	14,800	16,500	16,100	15,800
70					11,800	15,900	12,800	16,200	13,500	16,400	14,000	13,800	14,300	15,000	14,400
75					10,100	14,100	11,000	14,400	11,700	14,600	12,100	12,700	12,500	13,600	12,700
80							9,400	12,700	10,100	13,000	10,500	11,800	10,900	12,000	11,100
85							8,100	11,400	8,700	11,600	9,200	11,000	9,500	10,600	9,800
90									7,600	10,400	8,000	10,300	8,300	9,500	8,600
95									6,500	9,300	7,000	9,500	7,300	8,400	7,500
100									5,600	8,400	6,100	8,500	6,400	7,500	6,600
105											5,300	7,700	5,600	6,700	5,800
110											4,500	7,000	4,900	6,000	5,100
115											3,900	6,300	4,200	5,300	4,500
120													3,600	4,700	3,900
125													3,100	4,200	3,300
130													2,700	3,700	2,800
135															2,400
140															2,000
145															1,700
Telescoping mode	1,2	1	1	2	1	2	1	2	1	2	1	2	1	2	1, 2
2nd Boom	0	50	100	0	100	0	100	0	100	0	100	0	100	50	100
3rd Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100
4th Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100
Top Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100

A: Boom length in feet
B: Load radius in feet

NOTE: The lifting capacity data stored in the LOAD MOMENT INDICATOR (AML-E2) is based on the standard number of parts of line listed in the chart. Standard number of parts of line for each boom length should be according to the following table.

Boom length in feet (meters)	39.4' (12 m)	39.4' to 68.1' (12 m to 20.8 m)		68.1' to 154.2' (20.8 m to 47 m)	Single top jib
Telescoping mode	1, 2	1	2	1, 2	1, 2
Number of parts of line	16	8	4	4	1

GR-1000XL-4 RATED LIFTING CAPACITIES (IN POUNDS)

SMART CW

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS FULLY EXTENDED 23' 11-3/8" (7.3 m) SPREAD
SMART CHART
SMART COUNTERWEIGHT

B \ A	39.4' (12 m)	53.7' (16.4 m)	68.1' (20.8 m)		82.4' (25.1 m)		96.8' (29.5 m)		111.1' (33.9 m)		125.5' (38.3 m)		139.8' (42.6 m)		154.2' (47 m)
8	200,000	102,500													
10	181,900	102,500	90,200	40,100											
12	159,700	102,500	90,200	40,100											
15	133,800	102,500	90,200	40,100	42,500	35,500									
20	101,500	100,800	81,500	40,100	42,500	35,500	40,100	33,300	35,500	32,200					
25	78,300	77,600	68,500	40,100	42,500	35,500	40,100	33,300	35,500	32,200	33,300	32,200			
30	60,800	59,900	58,700	40,100	42,500	35,500	40,100	33,300	35,500	32,200	33,300	28,800	31,500	28,900	
35		47,800	47,100	40,100	42,500	35,500	39,700	33,300	35,500	30,800	33,300	25,500	31,500	27,200	24,900
40		39,400	38,600	40,100	38,700	35,500	35,000	30,500	32,300	27,600	29,800	22,800	28,100	24,500	24,900
45		33,000	32,300	36,800	33,900	35,500	31,100	27,600	28,800	24,900	26,500	20,700	24,900	22,200	23,200
50			27,100	31,800	28,900	32,400	27,900	25,100	25,900	22,700	23,900	18,800	22,300	20,300	21,100
55			22,400	27,800	24,100	28,400	25,100	23,100	23,300	20,800	21,600	17,300	20,200	18,700	19,100
60			18,600	24,100	20,300	24,600	21,300	21,300	21,200	19,200	19,600	15,900	18,300	17,300	17,300
65					17,300	21,500	18,200	19,800	18,900	17,700	17,900	14,800	16,700	16,100	15,800
70					14,700	18,900	15,700	18,500	16,400	16,500	16,500	13,800	15,300	15,000	14,400
75					12,700	16,800	13,600	17,100	14,200	15,400	14,700	12,700	14,100	14,000	13,200
80							11,800	15,200	12,500	14,500	12,900	11,800	13,000	13,100	12,200
85							10,300	13,600	10,900	13,600	11,400	11,000	11,700	12,300	11,200
90									9,600	12,500	10,000	10,300	10,300	11,500	10,400
95									8,400	11,300	8,900	9,600	9,200	10,300	9,400
100									7,400	10,300	7,800	9,000	8,100	9,300	8,400
105											6,900	8,500	7,200	8,300	7,500
110											6,100	8,000	6,400	7,500	6,600
115											5,400	7,600	5,700	6,800	5,900
120													5,000	6,100	5,200
125													4,400	5,500	4,700
130													3,900	5,000	4,100
135															3,600
140															3,200
145															2,800
Telescoping mode	1,2	1	1	2	1	2	1	2	1	2	1	2	1	2	1, 2
2nd Boom	0	50	100	0	100	0	100	0	100	0	100	0	100	50	100
3rd Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100
4th Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100
Top Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100

A: Boom length in feet
B: Load radius in feet

NOTE: The lifting capacity data stored in the LOAD MOMENT INDICATOR (AML-E2) is based on the standard number of parts of line listed in the chart. Standard number of parts of line for each boom length should be according to the following table.

Boom length in feet (meters)	39.4' (12 m)	39.4' to 68.1' (12 m to 20.8 m)		68.1' to 154.2' (20.8 m to 47 m)	Single top jib
Telescoping mode	1, 2	1	2	1, 2	1, 2
Number of parts of line	16	8	4	4	1

GR-1000XL-4 RATED LIFTING CAPACITIES (IN POUNDS)

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS FULLY EXTENDED 23' 11-3/8" (7.3 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B	154.2' (47 m) Boom + 33.2 ' (10.1 m) JIB		
	3.5° Offset	25° Offset	45° Offset
40	11,900		
45	11,900		
50	11,900		
55	11,900	11,900	
60	11,900	11,900	10,000
65	11,900	11,900	9,800
70	11,900	11,100	9,600
75	11,900	10,400	9,400
80	10,800	9,800	9,300
85	10,100	9,200	8,800
90	9,500	8,700	8,300
95	8,400	8,200	7,900
100	7,400	7,800	7,500
105	6,600	7,400	7,200
110	5,800	6,500	6,800
115	5,100	5,800	6,200
120	4,500	5,100	5,400
125	3,900	4,400	4,800
130	3,400	3,900	4,100
135	2,900	3,300	3,600
140	2,400	2,800	3,000
145	2,000	2,400	
150	1,700	2,000	
155	1,300	1,600	
160	1,000	1,200	
165			
170			
Telescoping mode	1, 2	1, 2	1, 2

B	154.2' (47 m) Boom + 58.1 ' (17.7 m) JIB		
	3.5° Offset	25° Offset	45° Offset
40			
45			
50	7,300		
55	7,300		
60	7,300		
65	7,300		
70	7,300	6,200	
75	7,300	6,000	
80	7,300	5,900	5,100
85	7,300	5,700	5,000
90	7,200	5,600	4,900
95	7,000	5,400	4,800
100	6,700	5,300	4,800
105	6,500	5,200	4,700
110	6,100	5,100	4,600
115	5,400	5,000	4,500
120	4,800	4,900	4,500
125	4,200	4,800	4,400
130	3,700	4,700	4,400
135	3,200	4,100	4,300
140	2,800	3,600	4,200
145	2,400	3,200	3,700
150	2,000	2,700	3,200
155	1,600	2,300	2,700
160	1,300	1,900	2,300
165		1,600	1,900
170		1,200	
Telescoping mode	1, 2	1, 2	1, 2

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS FULLY EXTENDED 23' 11-3/8" (7.3 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B	139.8' (42.6 m) Boom + 33.2 ' (10.1 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
35	14,100	13,000				
40	14,100	13,000				
45	14,100	13,000				
50	14,100	13,000	13,400	13,000		
55	14,100	13,000	12,900	12,800	10,300	
60	14,100	13,000	12,400	12,200	10,000	10,000
65	14,100	12,500	12,000	11,400	9,800	9,700
70	14,100	11,600	11,600	10,600	9,600	9,500
75	13,600	10,800	11,300	9,900	9,400	9,400
80	12,200	10,000	10,900	9,300	9,200	8,900
85	10,800	9,400	10,600	8,800	9,100	8,400
90	9,500	8,800	10,300	8,200	8,900	8,000
95	8,400	8,300	9,300	7,800	8,800	7,500
100	7,500	7,800	8,200	7,400	8,700	7,100
105	6,600	7,300	7,300	7,000	7,700	6,800
110	5,800	6,700	6,500	6,600	6,800	6,500
115	5,100	6,000	5,700	6,300	6,000	6,200
120	4,500	5,400	5,000	5,800	5,300	5,900
125	3,900	4,800	4,400	5,200	4,600	5,400
130	3,400	4,200	3,800	4,600	4,000	4,800
135	2,900	3,700	3,300	4,100		
140	2,500	3,300	2,800	3,600		
145	2,100	2,900	2,300	3,100		
150	1,700	2,500	1,900	2,700		
155	1,300	2,200	1,500	2,300		
160	1,000	1,900				
165						
170						
175						
180						
Telescoping mode	1	2	1	2	1	2

B	139.8' (42.6 m) Boom + 58.1 ' (17.7 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
35						
40						
45	8,200					
50	8,200	7,700				
55	8,200	7,700				
60	8,200	7,700				
65	8,200	7,700	6,500			
70	8,200	7,700	6,300	6,200		
75	8,100	7,700	6,100	6,100		
80	7,800	7,700	6,000	5,900	5,100	5,100
85	7,500	7,400	5,800	5,700	5,000	5,000
90	7,300	7,100	5,600	5,600	5,000	4,900
95	7,000	6,900	5,500	5,400	4,900	4,800
100	6,800	6,700	5,400	5,300	4,800	4,800
105	6,600	6,300	5,200	5,200	4,700	4,700
110	6,400	5,900	5,100	5,100	4,600	4,600
115	5,700	5,600	5,000	5,000	4,500	4,500
120	5,000	5,200	4,900	4,900	4,400	4,400
125	4,400	5,000	4,800	4,700	4,400	4,300
130	3,900	4,700	4,700	4,500	4,300	4,300
135	3,400	4,300	4,300	4,300	4,200	4,200
140	3,000	3,800	3,800	4,100	4,200	4,200
145	2,600	3,400	3,300	3,900	3,600	4,000
150	2,200	3,000	2,800	3,500	3,200	3,800
155	1,800	2,600	2,400	3,100		
160	1,500	2,300	2,000	2,700		
165	1,200	2,000	1,700	2,400		
170		1,700	1,300	2,000		
175		1,500		1,700		
180		1,200		1,400		
Telescoping mode	1	2	1	2	1	2

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS FULLY EXTENDED 23' 11-3/8" (7.3 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B	125.5' (38.3 m) Boom + 33.2 ' (10.1 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
30	14,600	14,300				
35	14,600	14,300				
40	14,600	14,300				
45	14,600	14,300	13,900	13,700		
50	14,600	14,300	13,300	13,100	10,500	10,400
55	14,600	13,900	12,800	12,600	10,200	10,100
60	14,600	12,700	12,300	11,600	10,000	9,900
65	14,600	11,700	11,800	10,800	9,800	9,700
70	14,600	10,800	11,400	10,000	9,500	9,500
75	13,700	10,000	11,100	9,400	9,400	9,000
80	12,100	9,300	10,800	8,800	9,200	8,500
85	10,600	8,700	10,400	8,200	9,100	8,000
90	9,400	8,100	10,200	7,700	8,900	7,500
95	8,300	7,600	9,100	7,300	8,800	7,100
100	7,400	7,100	8,100	6,900	8,500	6,700
105	6,500	6,700	7,100	6,500	7,500	6,400
110	5,700	6,300	6,300	6,100	6,600	6,000
115	5,000	6,000	5,500	5,800	5,800	5,700
120	4,400	5,600	4,800	5,500		
125	3,800	5,300	4,200	5,200		
130	3,300	5,100	3,600	5,000		
135	2,800	4,700	3,100	4,700		
140	2,400	4,200	2,600	4,400		
145	2,000	3,800				
150		3,400				
155						
160						
165						
170						
Telescoping mode	1	2	1	2	1	2

B	125.5' (38.3 m) Boom + 58.1 ' (17.7 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
30						
35						
40	9,300	8,400				
45	9,300	8,400				
50	9,300	8,400				
55	9,300	8,400				
60	9,300	8,400	6,800	6,700		
65	8,900	8,400	6,600	6,400		
70	8,500	8,200	6,400	6,200		
75	8,200	7,900	6,200	6,000	5,200	5,100
80	7,800	7,600	6,000	5,900	5,000	5,000
85	7,500	7,300	5,800	5,700	4,900	4,900
90	7,300	7,000	5,600	5,500	4,800	4,700
95	7,000	6,600	5,500	5,400	4,700	4,600
100	6,700	6,200	5,400	5,300	4,500	4,500
105	6,500	5,800	5,200	5,100	4,500	4,400
110	6,300	5,400	5,100	5,000	4,400	4,300
115	5,800	5,100	5,000	4,900	4,300	4,200
120	5,200	4,800	4,800	4,700	4,200	4,200
125	4,600	4,500	4,700	4,400	4,100	4,100
130	4,000	4,300	4,600	4,200	4,100	4,000
135	3,500	4,100	4,300	4,000	4,000	3,900
140	3,100	3,800	3,700	3,800	4,000	3,700
145	2,700	3,600	3,200	3,600		
150	2,300	3,400	2,800	3,400		
155	1,900	3,300	2,400	3,200		
160	1,600	3,100	2,000	3,100		
165	1,300	2,900	1,600	2,900		
170	1,000	2,600				
Telescoping mode	1	2	1	2	1	2

B: Load radius in feet

GR-1000XL-4 RATED LIFTING CAPACITIES (IN POUNDS)

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS FULLY EXTENDED 23' 11-3/8" (7.3 m) SPREAD
SMART CHART
SMART COUNTERWEIGHT

B	154.2' (47 m) Boom + 33.2 ' (10.1 m) JIB		
	3.5° Offset	25° Offset	45° Offset
40	11,900		
45	11,900		
50	11,900		
55	11,900	11,900	
60	11,900	11,900	10,000
65	11,900	11,900	9,800
70	11,900	11,100	9,600
75	11,900	10,400	9,400
80	10,800	9,800	9,300
85	10,100	9,200	8,800
90	9,500	8,700	8,300
95	8,900	8,200	7,900
100	8,400	7,800	7,500
105	7,900	7,400	7,200
110	7,400	7,100	6,800
115	6,700	6,700	6,500
120	6,000	6,400	6,200
125	5,300	5,900	6,000
130	4,700	5,200	5,400
135	4,200	4,600	4,800
140	3,700	4,100	4,300
145	3,200	3,600	
150	2,800	3,100	
155	2,400	2,700	
160	2,100	2,300	
165	1,700	1,900	
170	1,400		
175			
180			
Telescoping mode	1, 2	1, 2	1, 2

B	154.2' (47 m) Boom + 58.1 ' (17.7 m) JIB		
	3.5° Offset	25° Offset	45° Offset
40			
45			
50	7,300		
55	7,300		
60	7,300		
65	7,300		
70	7,300	6,200	
75	7,300	6,000	
80	7,300	5,900	5,100
85	7,300	5,700	5,000
90	7,200	5,600	4,900
95	7,000	5,400	4,800
100	6,700	5,300	4,800
105	6,500	5,200	4,700
110	6,300	5,100	4,600
115	6,000	5,000	4,500
120	5,600	4,900	4,500
125	5,400	4,800	4,400
130	5,000	4,700	4,400
135	4,500	4,500	4,300
140	4,000	4,300	4,300
145	3,500	4,100	4,300
150	3,100	3,900	4,200
155	2,800	3,400	3,800
160	2,400	3,000	3,400
165	2,100	2,600	2,900
170	1,800	2,200	
175	1,500	1,900	
180	1,200	1,600	
Telescoping mode	1, 2	1, 2	1, 2

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS FULLY EXTENDED 23' 11-3/8" (7.3 m) SPREAD
SMART CHART
SMART COUNTERWEIGHT

B	139.8' (42.6 m) Boom + 33.2 ' (10.1 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
35	14,100	13,000				
40	14,100	13,000				
45	14,100	13,000				
50	14,100	13,000	13,400	13,000		
55	14,100	13,000	12,900	12,800	10,300	
60	14,100	13,000	12,400	12,200	10,000	10,000
65	14,100	12,500	12,000	11,400	9,800	9,700
70	14,100	11,600	11,600	10,600	9,600	9,500
75	13,600	10,800	11,300	9,900	9,400	9,400
80	12,500	10,000	10,900	9,300	9,200	8,900
85	11,500	9,400	10,600	8,800	9,100	8,400
90	10,600	8,800	10,300	8,200	8,900	8,000
95	9,800	8,300	10,000	7,800	8,800	7,500
100	9,100	7,800	9,300	7,400	8,700	7,100
105	8,300	7,300	8,600	7,000	8,600	6,800
110	7,400	6,900	8,000	6,600	8,100	6,500
115	6,600	6,600	7,200	6,300	7,500	6,200
120	5,900	6,200	6,400	6,000	6,700	5,900
125	5,300	5,900	5,700	5,700	5,900	5,600
130	4,700	5,500	5,100	5,400	5,200	5,400
135	4,100	5,000	4,500	5,200		
140	3,600	4,500	3,900	4,800		
145	3,200	4,000	3,400	4,300		
150	2,800	3,600	3,000	3,800		
155	2,400	3,200	2,500	3,400		
160	2,000	2,800				
165						
170						
175						
180						
Telescoping mode	1	2	1	2	1	2

B	139.8' (42.6 m) Boom + 58.1 ' (17.7 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
35						
40						
45	8,200					
50	8,200	7,700				
55	8,200	7,700				
60	8,200	7,700				
65	8,200	7,700	6,500			
70	8,200	7,700	6,300	6,200		
75	8,100	7,700	6,100	6,100		
80	7,800	7,700	6,000	5,900	5,100	5,100
85	7,500	7,400	5,800	5,700	5,000	5,000
90	7,300	7,100	5,600	5,600	5,000	4,900
95	7,000	6,900	5,500	5,400	4,900	4,800
100	6,800	6,700	5,400	5,300	4,800	4,800
105	6,600	6,300	5,200	5,200	4,700	4,700
110	6,400	5,900	5,100	5,100	4,600	4,600
115	6,200	5,600	5,000	5,000	4,500	4,500
120	6,000	5,200	4,900	4,900	4,400	4,400
125	5,800	5,000	4,800	4,700	4,400	4,300
130	5,300	4,700	4,700	4,500	4,300	4,300
135	4,700	4,500	4,500	4,300	4,200	4,200
140	4,200	4,200	4,500	4,100	4,200	4,200
145	3,800	4,000	4,300	3,900	4,100	4,000
150	3,400	3,800	3,900	3,700	4,100	3,800
155	3,000	3,600	3,500	3,500		
160	2,600	3,300	3,100	3,400		
165	2,200	3,000	2,600	3,200		
170	1,900	2,600	2,300	3,000		
175	1,600	2,400	1,900	2,600		
180	1,300	2,100	1,500	2,200		
Telescoping mode	1	2	1	2	1	2

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS FULLY EXTENDED 23' 11-3/8" (7.3 m) SPREAD
SMART CHART
SMART COUNTERWEIGHT

B	125.5' (38.3 m) Boom + 33.2 ' (10.1 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
30	14,600	14,300				
35	14,600	14,300				
40	14,600	14,300				
45	14,600	14,300	13,900	13,700		
50	14,600	14,300	13,300	13,100	10,500	10,400
55	14,600	13,900	12,800	12,600	10,200	10,100
60	14,600	12,700	12,300	11,600	10,000	9,900
65	14,600	11,700	11,800	10,800	9,800	9,700
70	14,600	10,800	11,400	10,000	9,500	9,500
75	14,300	10,000	11,100	9,400	9,400	9,000
80	13,200	9,300	10,800	8,800	9,200	8,500
85	12,200	8,700	10,400	8,200	9,100	8,000
90	11,300	8,100	10,200	7,700	8,900	7,500
95	10,300	7,600	9,900	7,300	8,800	7,100
100	9,100	7,100	9,700	6,900	8,700	6,700
105	8,200	6,700	8,800	6,500	8,600	6,400
110	7,300	6,300	7,900	6,100	8,200	6,000
115	6,500	6,000	7,000	5,800	7,300	5,700
120	5,800	5,600	6,300	5,500		
125	5,200	5,300	5,600	5,200		
130	4,600	5,100	4,900	5,000		
135	4,000	4,800	4,300	4,700		
140	3,500	4,600	3,700	4,500		
145	3,100	4,400				
150		4,200				
155						
160						
165						
170						
Telescoping mode	1	2	1	2	1	2

B	125.5' (38.3 m) Boom + 58.1 ' (17.7 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
30						
35						
40	9,300	8,400				
45	9,300	8,400				
50	9,300	8,400				
55	9,300	8,400				
60	9,300	8,400	6,800	6,700		
65	8,900	8,400	6,600	6,400		
70	8,500	8,200	6,400	6,200		
75	8,200	7,900	6,200	6,000	5,200	5,100
80	7,800	7,600	6,000	5,900	5,000	5,000
85	7,500	7,300	5,800	5,700	4,900	4,900
90	7,300	7,000	5,600	5,500	4,800	4,700
95	7,000	6,600	5,500	5,400	4,700	4,600
100	6,700	6,200	5,400	5,300	4,500	4,500
105	6,500	5,800	5,200	5,100	4,500	4,400
110	6,300	5,400	5,100	5,000	4,400	4,300
115	6,100	5,100	5,000	4,900	4,300	4,200
120	5,900	4,800	4,800	4,700	4,200	4,200
125	5,800	4,500	4,700	4,400	4,100	4,100
130	5,300	4,300	4,600	4,200	4,100	4,000
135	4,800	4,100	4,500	4,000	4,000	3,900
140	4,300	3,800	4,400	3,800	4,000	3,700
145	3,800	3,600	4,300	3,600		
150	3,400	3,400	3,900	3,400		
155	3,000	3,300	3,400	3,200		
160	2,600	3,100	3,000	3,100		
165	2,300	3,000		2,900		
170	2,000	2,800				
Telescoping mode	1	2	1	2	1	2

B: Load radius in feet

GR-1000XL-4 RATED LIFTING CAPACITIES (IN POUNDS)

SMART CW

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS MIDDLE EXTENDED 21' 11-3/4" (6.7 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B \ A	39.4' (12 m)	53.7' (16.4 m)	68.1' (20.8 m)		82.4' (25.1 m)		96.8' (29.5 m)		111.1' (33.9 m)		125.5' (38.3 m)		139.8' (42.6 m)		154.2' (47 m)
8	200,000	102,500													
10	177,300	102,500	90,200	40,100											
12	155,100	102,500	90,200	40,100											
15	129,600	102,500	90,200	40,100	42,500	35,500									
20	99,700	99,200	81,500	40,100	42,500	35,500	40,100	33,300	35,500	32,200					
25	73,100	71,400	68,500	40,100	42,500	35,500	40,100	33,300	35,500	32,200	33,300	32,200			
30	50,900	49,500	48,100	40,100	42,500	35,500	40,100	33,300	35,500	32,200	33,300	28,800	31,500	28,900	
35		36,600	35,400	40,100	37,500	35,500	38,700	33,300	35,500	30,800	33,300	25,500	31,500	27,200	24,900
40		28,100	27,200	33,200	29,100	33,800	30,200	30,500	31,000	27,600	29,800	22,800	28,100	24,500	24,900
45		22,100	21,200	26,900	23,100	27,600	24,200	27,600	24,900	24,900	25,400	20,700	24,900	22,200	23,200
50			16,800	22,300	18,700	23,100	19,700	23,400	20,400	22,700	21,000	18,800	21,300	20,300	21,100
55			13,400	18,800	15,300	19,500	16,300	19,900	17,000	20,100	17,500	17,300	17,900	18,700	18,200
60			10,800	16,000	12,500	16,600	13,500	17,000	14,200	17,300	14,700	15,900	15,100	16,300	15,400
65					10,200	14,300	11,300	14,700	12,000	15,000	12,500	14,800	12,800	14,000	13,100
70					8,400	12,400	9,400	12,800	10,100	13,100	10,600	13,200	11,000	12,100	11,200
75					6,900	10,800	7,800	11,200	8,500	11,400	9,000	11,600	9,400	10,500	9,600
80							6,500	9,800	7,200	10,000	7,700	10,200	8,000	9,200	8,300
85							5,300	8,600	6,000	8,800	6,500	9,000	6,900	8,000	7,100
90									5,000	7,800	5,500	8,000	5,800	7,000	6,100
95									4,100	6,900	4,600	7,000	4,900	6,100	5,200
100									3,400	6,100	3,800	6,200	4,100	5,200	4,400
105											3,100	5,500	3,400	4,500	3,700
110											2,500	4,900	2,800	3,900	3,100
115											2,000	4,400	2,200	3,300	2,500
120													1,700	2,800	2,000
125													1,300	2,400	1,500
130														2,000	1,100
Telescoping mode	1,2	1	1	2	1	2	1	2	1	2	1	2	1	2	1, 2
2nd Boom	0	50	100	0	100	0	100	0	100	0	100	0	100	50	100
3rd Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100
4th Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100
Top Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100

A: Boom length in feet
B: Load radius in feet

NOTE: The lifting capacity data stored in the LOAD MOMENT INDICATOR (AML-E2) is based on the standard number of parts of line listed in the chart.
Standard number of parts of line for each boom length should be according to the following table.

Boom length in feet (meters)	39.4' (12 m)	39.4' to 68.1' (12 m to 20.8 m)		68.1' to 154.2' (20.8 m to 47 m)	Single top jib
Telescoping mode	1, 2	1	2	1, 2	1, 2
Number of parts of line	16	8	4	4	1

GR-1000XL-4 RATED LIFTING CAPACITIES (IN POUNDS)

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS MIDDLE EXTENDED 21' 11-3/4" (6.7 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B	154.2' (47 m) Boom + 33.2 ' (10.1 m) JIB		
	3.5° Offset	25° Offset	45° Offset
40	11,900		
45	11,900		
50	11,900		
55	11,900	11,900	
60	11,900	11,900	10,000
65	11,900	11,900	9,800
70	11,900	11,100	9,600
75	10,800	10,400	9,400
80	9,300	9,800	9,300
85	8,100	9,100	8,800
90	7,000	8,000	8,300
95	6,100	6,900	7,500
100	5,300	6,000	6,500
105	4,500	5,200	5,700
110	3,800	4,500	4,900
115	3,200	3,900	4,200
120	2,700	3,200	3,500
125	2,200	2,700	3,000
130	1,700	2,200	2,400
135	1,300	1,700	1,900
140		1,300	1,500
145			
150			
155			
160			
Telescoping mode	1, 2	1, 2	1, 2

B	154.2' (47 m) Boom + 58.1 ' (17.7 m) JIB		
	3.5° Offset	25° Offset	45° Offset
40			
45			
50	7,300		
55	7,300		
60	7,300		
65	7,300		
70	7,300	6,200	
75	7,300	6,000	
80	7,300	5,900	5,100
85	7,300	5,700	5,000
90	7,200	5,600	4,900
95	6,700	5,400	4,800
100	5,900	5,300	4,800
105	5,100	5,200	4,700
110	4,400	5,100	4,600
115	3,800	4,900	4,500
120	3,200	4,300	4,500
125	2,700	3,700	4,400
130	2,300	3,200	3,800
135	1,900	2,700	3,200
140	1,500	2,200	2,700
145	1,100	1,800	2,200
150		1,400	1,800
155		1,100	1,400
160			1,000
Telescoping mode	1, 2	1, 2	1, 2

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS MIDDLE EXTENDED 21' 11-3/4" (6.7 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B	139.8' (42.6 m) Boom + 33.2 ' (10.1 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
35	14,100	13,000				
40	14,100	13,000				
45	14,100	13,000				
50	14,100	13,000	13,400	13,000		
55	14,100	13,000	12,900	12,800	10,300	
60	14,100	13,000	12,400	12,200	10,000	10,000
65	14,100	12,500	12,000	11,400	9,800	9,700
70	12,300	11,600	11,600	10,600	9,600	9,500
75	10,600	10,800	11,300	9,900	9,400	9,400
80	9,200	10,000	10,300	9,300	9,200	8,900
85	8,000	8,900	9,000	8,800	9,100	8,400
90	6,900	7,800	7,800	8,200	8,500	8,000
95	6,000	6,900	6,800	7,600	7,400	7,500
100	5,200	6,000	5,900	6,700	6,400	7,100
105	4,400	5,300	5,100	5,900	5,500	6,300
110	3,700	4,600	4,400	5,200	4,700	5,500
115	3,200	4,000	3,700	4,500	4,000	4,800
120	2,600	3,500	3,100	3,900	3,400	4,200
125	2,100	3,000	2,600	3,400	2,800	3,600
130	1,700	2,500	2,100	2,900	2,200	3,000
135	1,200	2,100	1,600	2,400		
140		1,700	1,200	2,000		
145		1,300		1,600		
150		1,000		1,200		
155						
160						
165						
Telescoping mode	1	2	1	2	1	2

B	139.8' (42.6 m) Boom + 58.1 ' (17.7 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
35						
40						
45	8,200					
50	8,200	7,700				
55	8,200	7,700				
60	8,200	7,700				
65	8,200	7,700	6,500			
70	8,200	7,700	6,300	6,200		
75	8,100	7,700	6,100	6,100		
80	7,800	7,700	6,000	5,900	5,100	5,100
85	7,500	7,400	5,800	5,700	5,000	5,000
90	7,300	7,100	5,600	5,600	5,000	4,900
95	6,700	6,900	5,500	5,400	4,900	4,800
100	5,900	6,600	5,400	5,300	4,800	4,800
105	5,100	5,900	5,200	5,200	4,700	4,700
110	4,400	5,200	5,100	5,100	4,600	4,600
115	3,800	4,600	4,900	5,000	4,500	4,500
120	3,300	4,000	4,300	4,900	4,400	4,400
125	2,800	3,500	3,700	4,300	4,300	4,300
130	2,300	3,000	3,100	3,800	3,700	4,300
135	1,900	2,600	2,600	3,300	3,100	3,700
140	1,500	2,200	2,200	2,900	2,600	3,200
145	1,100	1,900	1,800	2,400	2,100	2,800
150		1,500	1,400	2,100	1,700	2,300
155		1,200	1,000	1,700		
160				1,300		
165				1,000		
Telescoping mode	1	2	1	2	1	2

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS MIDDLE EXTENDED 21' 11-3/4" (6.7 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B	125.5' (38.3 m) Boom + 33.2 ' (10.1 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
30	14,600	14,300				
35	14,600	14,300				
40	14,600	14,300				
45	14,600	14,300	13,900	13,700		
50	14,600	14,300	13,300	13,100	10,500	10,400
55	14,600	13,900	12,800	12,600	10,200	10,100
60	14,600	12,700	12,300	11,600	10,000	9,900
65	14,200	11,700	11,800	10,800	9,800	9,700
70	12,200	10,800	11,400	10,000	9,500	9,500
75	10,500	10,000	11,100	9,400	9,400	9,000
80	9,100	9,300	10,200	8,800	9,200	8,500
85	7,900	8,700	8,900	8,200	9,100	8,000
90	6,800	8,100	7,700	7,700	8,300	7,500
95	5,900	7,600	6,700	7,300	7,200	7,100
100	5,000	7,000	5,800	6,900	6,200	6,700
105	4,300	6,200	5,000	6,500	5,300	6,400
110	3,600	5,500	4,200	6,000	4,500	6,000
115	3,000	4,900	3,500	5,300	3,800	5,500
120	2,500	4,400	3,000	4,700		
125	2,000	3,900	2,400	4,200		
130	1,500	3,400	1,900	3,700		
135	1,100	3,000	1,400	3,200		
140		2,600		2,800		
145		2,200				
150		1,900				
155						
160						
165						
170						
Telescoping mode	1	2	1	2	1	2

B	125.5' (38.3 m) Boom + 58.1 ' (17.7 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
30						
35						
40	9,300	8,400				
45	9,300	8,400				
50	9,300	8,400				
55	9,300	8,400				
60	9,300	8,400	6,800	6,700		
65	8,900	8,400	6,600	6,400		
70	8,500	8,200	6,400	6,200		
75	8,200	7,900	6,200	6,000	5,200	5,100
80	7,800	7,600	6,000	5,900	5,000	5,000
85	7,500	7,300	5,800	5,700	4,900	4,900
90	7,300	7,000	5,600	5,500	4,800	4,700
95	6,700	6,600	5,500	5,400	4,700	4,600
100	5,900	6,200	5,400	5,300	4,500	4,500
105	5,100	5,800	5,200	5,100	4,500	4,400
110	4,400	5,400	5,100	5,000	4,400	4,300
115	3,800	5,100	4,900	4,900	4,300	4,200
120	3,300	4,800	4,200	4,700	4,200	4,200
125	2,800	4,400	3,600	4,400	4,100	4,100
130	2,300	3,900	3,100	4,200	3,500	4,000
135	1,900	3,500	2,600	4,000	3,000	3,900
140	1,500	3,100	2,100	3,600	2,400	3,700
145	1,100	2,700	1,700	3,200		
150		2,400	1,300	2,800		
155		2,100		2,400		
160		1,800		2,000		
165		1,500		1,700		
170		1,300				
Telescoping mode	1	2	1	2	1	2

B: Load radius in feet

GR-1000XL-4 RATED LIFTING CAPACITIES (IN POUNDS)

SMART CW

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS MIDDLE EXTENDED 18' 1/2" (5.5 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B \ A	39.4' (12 m)	53.7' (16.4 m)	68.1' (20.8 m)		82.4' (25.1 m)		96.8' (29.5 m)		111.1' (33.9 m)		125.5' (38.3 m)		139.8' (42.6 m)		154.2' (47 m)
8	193,500	102,500													
10	165,800	102,500	90,200	40,100											
12	144,000	102,500	90,200	40,100											
15	119,400	102,500	90,200	40,100	42,500	35,500									
20	82,300	80,500	78,800	40,100	42,500	35,500	40,100	33,300	35,500	32,200					
25	52,900	51,600	50,200	40,100	42,500	35,500	40,100	33,300	35,500	32,200	33,300	32,200			
30	37,600	36,400	35,300	40,100	37,400	35,500	38,500	33,300	35,500	32,200	33,300	28,800	31,500	28,900	
35		26,900	26,000	32,000	27,900	32,600	29,000	32,900	29,800	30,800	30,400	25,500	30,800	27,200	24,900
40		20,500	19,700	25,300	21,600	26,000	22,600	26,400	23,300	26,600	23,900	22,800	24,300	24,500	24,600
45		15,900	15,100	20,500	17,000	21,200	18,000	21,600	18,700	21,800	19,200	20,700	19,600	20,900	19,900
50			11,600	16,900	13,400	17,600	14,500	18,000	15,200	18,200	15,700	18,400	16,100	17,300	16,400
55			9,000	14,100	10,700	14,700	11,800	15,200	12,500	15,400	12,900	15,600	13,300	14,500	13,600
60			6,900	11,900	8,500	12,500	9,500	12,900	10,200	13,200	10,700	13,300	11,100	12,200	11,400
65					6,700	10,600	7,700	11,000	8,400	11,300	8,900	11,500	9,300	10,400	9,500
70					5,200	9,100	6,200	9,400	6,900	9,700	7,400	9,900	7,700	8,900	8,000
75					3,900	7,800	4,900	8,100	5,600	8,400	6,100	8,600	6,500	7,600	6,700
80							3,800	7,000	4,500	7,200	4,900	7,400	5,300	6,400	5,600
85							2,800	6,000	3,500	6,300	4,000	6,400	4,300	5,400	4,600
90									2,600	5,400	3,100	5,600	3,500	4,600	3,800
95									1,900	4,700	2,400	4,800	2,800	3,800	3,000
100									1,300	4,000	1,700	4,100	2,100	3,200	2,400
105											1,200	3,500	1,500	2,600	1,800
110												3,000		2,100	
115												2,600		1,600	
120														1,200	
Telescoping mode	1, 2	1	1	2	1	2	1	2	1	2	1	2	1	2	1, 2
2nd Boom	0	50	100	0	100	0	100	0	100	0	100	0	100	50	100
3rd Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100
4th Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100
Top Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100

A: Boom length in feet
B: Load radius in feet

NOTE: The lifting capacity data stored in the LOAD MOMENT INDICATOR (AML-E2) is based on the standard number of parts of line listed in the chart. Standard number of parts of line for each boom length should be according to the following table.

Boom length in feet (meters)	39.4' (12 m)	39.4' to 68.1' (12 m to 20.8 m)		68.1' to 154.2' (20.8 m to 47 m)	Single top jib
Telescoping mode	1, 2	1	2	1, 2	1, 2
Number of parts of line	16	8	4	4	1

GR-1000XL-4 RATED LIFTING CAPACITIES (IN POUNDS)

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS MIDDLE EXTENDED 18' 1/2" (5.5 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B	154.2' (47 m) Boom + 33.2 ' (10.1 m) JIB		
	3.5° Offset	25° Offset	45° Offset
40	11,900		
45	11,900		
50	11,900		
55	11,900	11,900	
60	11,900	11,900	10,000
65	10,700	11,900	9,800
70	9,100	10,400	9,600
75	7,700	8,900	9,400
80	6,600	7,600	8,400
85	5,600	6,500	7,200
90	4,700	5,600	6,200
95	3,900	4,700	5,300
100	3,200	3,900	4,500
105	2,600	3,300	3,700
110	2,000	2,600	3,000
115	1,500	2,100	2,400
120		1,600	1,900
125		1,100	1,400
130			
135			
Telescoping mode	1, 2	1, 2	1, 2

B	154.2' (47 m) Boom + 58.1 ' (17.7 m) JIB		
	3.5° Offset	25° Offset	45° Offset
40			
45			
50	7,300		
55	7,300		
60	7,300		
65	7,300		
70	7,300	6,200	
75	7,300	6,000	
80	7,200	5,900	5,100
85	6,200	5,700	5,000
90	5,300	5,600	4,900
95	4,500	5,400	4,800
100	3,800	5,100	4,800
105	3,100	4,400	4,700
110	2,600	3,700	4,600
115	2,100	3,200	3,900
120	1,600	2,600	3,300
125		2,100	2,800
130		1,700	2,200
135			1,700
Telescoping mode	1, 2	1, 2	1, 2

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS MIDDLE EXTENDED 18' 1/2" (5.5 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B	139.8' (42.6 m) Boom + 33.2 ' (10.1 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
35	14,100	13,000				
40	14,100	13,000				
45	14,100	13,000				
50	14,100	13,000	13,400	13,000		
55	14,100	13,000	12,900	12,800	10,300	
60	12,500	13,000	12,400	12,200	10,000	10,000
65	10,600	11,500	12,000	11,400	9,800	9,700
70	9,000	9,900	10,300	10,600	9,600	9,500
75	7,600	8,500	8,800	9,600	9,400	9,400
80	6,500	7,400	7,500	8,300	8,300	8,900
85	5,400	6,300	6,400	7,200	7,100	7,800
90	4,600	5,400	5,500	6,300	6,100	6,800
95	3,800	4,700	4,600	5,400	5,100	5,900
100	3,100	3,900	3,800	4,600	4,300	5,000
105	2,500	3,300	3,200	3,900	3,500	4,300
110	1,900	2,800	2,500	3,300	2,900	3,600
115	1,400	2,200	2,000	2,800	2,300	3,000
120		1,800	1,500	2,200	1,700	2,500
125		1,400	1,000	1,800	1,200	2,000
130		1,000		1,400		1,500
135						
140						
145						
150						
Telescoping mode	1	2	1	2	1	2

B	139.8' (42.6 m) Boom + 58.1 ' (17.7 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
35						
40						
45	8,200					
50	8,200	7,700				
55	8,200	7,700				
60	8,200	7,700				
65	8,200	7,700	6,500			
70	8,200	7,700	6,300	6,200		
75	8,100	7,700	6,100	6,100		
80	7,200	7,700	6,000	5,900	5,100	5,100
85	6,200	6,900	5,800	5,700	5,000	5,000
90	5,300	6,000	5,600	5,600	5,000	4,900
95	4,500	5,200	5,500	5,400	4,900	4,800
100	3,800	4,500	5,100	5,300	4,800	4,800
105	3,200	3,900	4,400	5,000	4,700	4,700
110	2,600	3,300	3,700	4,400	4,500	4,600
115	2,100	2,800	3,100	3,800	3,900	4,400
120	1,600	2,300	2,600	3,200	3,200	3,800
125	1,200	1,900	2,100	2,700	2,700	3,300
130		1,500	1,600	2,300	2,100	2,700
135		1,100	1,200	1,900	1,700	2,300
140				1,500	1,200	1,800
145				1,100		1,400
150						1,000
Telescoping mode	1	2	1	2	1	2

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS MIDDLE EXTENDED 18' 1/2" (5.5 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B	125.5' (38.3 m) Boom + 33.2 ' (10.1 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
30	14,600	14,300				
35	14,600	14,300				
40	14,600	14,300				
45	14,600	14,300	13,900	13,700		
50	14,600	14,300	13,300	13,100	10,500	10,400
55	14,600	13,900	12,800	12,600	10,200	10,100
60	12,400	12,700	12,300	11,600	10,000	9,900
65	10,500	11,700	11,800	10,800	9,800	9,700
70	8,900	10,800	10,100	10,000	9,500	9,500
75	7,500	9,400	8,700	9,400	9,400	9,000
80	6,300	8,300	7,400	8,800	8,100	8,500
85	5,300	7,200	6,300	8,000	6,900	8,000
90	4,500	6,300	5,300	7,000	5,900	7,500
95	3,700	5,600	4,500	6,200	4,900	6,500
100	3,000	4,900	3,700	5,400	4,100	5,700
105	2,400	4,200	3,000	4,700	3,400	5,000
110	1,800	3,700	2,400	4,100	2,700	4,300
115	1,300	3,200	1,800	3,500	2,000	3,700
120		2,700	1,300	3,000		
125		2,300		2,600		
130		1,900		2,100		
135		1,500		1,700		
140		1,200		1,400		
145						
150						
155						
Telescoping mode	1	2	1	2	1	2

B	125.5' (38.3 m) Boom + 58.1 ' (17.7 m) JIB					
	3.5° Offset		25° Offset		45° Offset	
30						
35						
40	9,300	8,400				
45	9,300	8,400				
50	9,300	8,400				
55	9,300	8,400				
60	9,300	8,400	6,800	6,700		
65	8,900	8,400	6,600	6,400		
70	8,500	8,200	6,400	6,200		
75	8,200	7,900	6,200	6,000	5,200	5,100
80	7,200	7,600	6,000	5,900	5,000	5,000
85	6,200	7,300	5,800	5,700	4,900	4,900
90	5,300	6,900	5,600	5,500	4,800	4,700
95	4,500	6,100	5,500	5,400	4,700	4,600
100	3,800	5,400	5,100	5,300	4,500	4,500
105	3,200	4,700	4,300	5,100	4,500	4,400
110	2,600	4,200	3,700	5,000	4,400	4,300
115	2,100	3,700	3,100	4,500	3,700	4,200
120	1,600	3,200	2,500	3,900	3,100	4,200
125	1,200	2,800	2,000	3,400	2,500	3,800
130		2,400	1,600	3,000	2,000	3,300
135		2,000	1,100	2,600	1,500	2,800
140		1,700		2,200	1,000	2,400
145		1,300		1,800		
150		1,100		1,500		
155				1,100		
Telescoping mode	1	2	1	2	1	2

B: Load radius in feet

GR-1000XL-4 RATED LIFTING CAPACITIES (IN POUNDS)

SMART CW

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON OUTRIGGERS MINNIMUM EXTENDED 8' 10-5/16" (2.7 m) SPREAD
360° ROTATION
SMART COUNTERWEIGHT

B \ A	39.4' (12 m)	53.7' (16.4 m)	68.1' (20.8 m)		82.4' (25.1 m)		96.8' (29.5 m)		111.1' (33.9 m)		125.5' (38.3 m)		139.8' (42.6 m)		154.2' (47 m)
8	143,100	102,500													
10	108,800	102,500	90,200	40,100											
12	77,200	75,500	73,900	40,100											
15	51,900	50,700	49,400	40,100	42,500	35,500									
20	31,300	30,400	29,300	35,500	31,400	35,500	32,500	33,300	33,300	32,200					
25	20,800	19,900	19,100	24,700	21,000	25,300	22,000	25,700	22,800	25,900	23,300	26,100			
30	14,500	13,500	12,700	18,100	14,700	18,800	15,600	19,100	16,300	19,400	16,800	19,500	17,200	18,400	
35		9,200	8,400	13,500	10,300	14,200	11,300	14,700	12,000	14,900	12,500	15,100	12,800	14,000	12,800
40		6,100	5,400	10,300	7,100	11,000	8,200	11,400	8,900	11,800	9,300	11,900	9,700	10,800	9,800
45		3,800	3,000	7,900	4,800	8,600	5,800	9,000	6,500	9,300	7,000	9,500	7,300	8,500	7,500
50				6,000	2,900	6,700	3,900	7,100	4,600	7,400	5,100	7,600	5,500	6,600	5,700
55				4,600		5,200	2,400	5,600	3,100	5,800	3,600	6,000	4,000	5,100	
60				3,400		3,900		4,300		4,600		4,800		3,900	
65						2,900		3,300		3,500		3,700			
70						2,100		2,400		2,700		2,800			
75						1,400		1,700		1,900		2,100			
80								1,100		1,300					
Telescoping mode	1, 2	1	1	2	1	2	1	2	1	2	1	2	1	2	1, 2
2nd Boom	0	50	100	0	100	0	100	0	100	0	100	0	100	50	100
3rd Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100
4th Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100
Top Boom	0	0	0	33	16	50	33	66	50	83	66	100	83	100	100

A: Boom length in feet
B: Load radius in feet

NOTE: The lifting capacity data stored in the LOAD MOMENT INDICATOR (AML-E2) is based on the standard number of parts of line listed in the chart.
Standard number of parts of line for each boom length should be according to the following table.

Boom length in feet (meters)	39.4' (12 m)	39.4' to 68.1' (12 m to 20.8 m)		68.1' to 154.2' (20.8 m to 47 m)	Single top jib
Telescoping mode	1, 2	1	2	1, 2	1, 2
Number of parts of line	16	8	4	4	1

WARNING AND OPERATING INSTRUCTIONS FOR LIFTING CAPACITIES

GENERAL

1. RATED LIFTING CAPACITIES apply only to the machine as originally manufactured and normally equipped by TADANO LTD. Modifications to the machine or use of optional equipment other than that specified can result in a reduction of capacity.
2. Hydraulic cranes can be hazardous if improperly operated or maintained. Operation and maintenance of this machine must be in compliance with information, in the Operation and Maintenance Manual supplied with the crane.If this manual is missing, order a replacement through the distributor.
3. The operator and other personnel associated with this machine shall fully acquaint themselves with the latest American National Standards Institute (ANSI) safety standards for cranes.

SET UP

1. Rated lifting capacities on the chart are the maximum allowable crane capacities and are based on the machine standing level on firm supporting surface under ideal job conditions. Depending on the nature of the supporting surface,it may be necessary to have structural supports under the outrigger floats or tires to spread the loads to a larger bearing surface.
2. For outrigger operation, outriggers shall be properly extended with tires free of supporting surface before operating crane.

OPERATION

1. Rated lifting capacities have been tested to and meet minimum requirements of SAE J1063-Cantilevered Boom Crane Structures Method of Test.
   Rated lifting capacities do not exceed 85% of the tipping load on outriggers fully extended as determined by SAE J765-Crane Stability Test Code.
2. Rated lifting capacities for partially extended outriggers are determined from the formula, Rated Lifting Capacities = (Tipping Load - 0.1 × Tip Reaction)/ 1.25.
3. Rated lifting capacities are based on actual load radius increased by boom deflection.
4. The weight of handling device such as hook blocks, slings, etc., must be considered as part of the load and must be deducted from the lifting capacities.
5. Rated lifting capacities are based on freely suspended loads and make no allowance for such factors as the effect of wind,sudden stopping of loads,supporting surface conditions, inflation of tires, operating speeds,side loads, etc. Side pull on boom or jib is extremely dangerous.
   Such action can damage the boom, jib or slewing mechanism, and lead to overturning of the crane.
6. Rated lifting capacities do not account for wind on lifted load or boom. We recommend against working under the condition that the load is out of control due to a strong wind. During boom lift,consider that the rated lifting capacity is reduced by 50% when the wind speed is 20 mph (9 m/s) to 27 mph (12 m/s); reduced by 70% when the wind speed is 27 mph (12 m/s) to 31 mph (14 m/s). If the wind speed is 31 mph (14 m/s) or over, stop operation. During jib lift, stop operation if the wind speed is 20 mph (9 m/s) or over.
7. Rated lifting capacities at load radius shall not be exceeded. Do not tip the crane to determine allowable loads.
8. Do not operate at boom lengths, radii,or boom angle, where no capacities are shown. Crane may overturn without any load on the hook.
9. When boom length is between values listed, refer to the rated lifting capacities of the next longer and next shorter booms for the same radius. The lesser of the two rated lifting capacities shall be used.
10. When making lifts at a load radius not shown, use the next longer radius to determine allowable capacity.
11. Load per line should not exceed 14,600 lbs. (6,600 kg) for main winch and auxiliary winch.
12. Check the actual number of parts of line with LOAD MOMENT INDICATOR (AML-E2) before operation. Maximum lifting capacity is restricted by the number of parts of line of LOAD MOMENT INDICATOR (AML-E2). Limited capacity is as determined from the formula, Single line pull for main winch 14,600 lbs. (6,600 kg) × number of parts of line.
13. The boom angle before loading should be greater to account for deflection. For rated lifting capacities,the loaded boom angle and the load radius is for reference only.
14. The 39.4' (12.0 m) boom length capacities are based on boom fully retracted. If not fully retracted [less than 53.7' (16.4 m) boom length], use the rated lifting capacities for the 53.7' (16.4 m) boom length.
15. Extension or retraction of the boom with loads may be attempted within the limits of the RATED LIFTING CAPACITIES.
    The ability to telescope loads is limited by hydraulic pressure, boom angle, boom length,crane maintenance, etc.
    For lifting capacity of single top, deduct the weight of the load handling equipment from the rated lifting capacity of the boom.
16. For the lifting capacity of single top, the net capacity shall not exceed 14,600 lbs. (6,600 kg) including the main boom hook mass attached to the boom.
17. When the base jib or top jib or both jibs are removed, set the jib state switch to the REMOVED position.
18. When erecting and stowing jib, be sure to retain it by hand or by other means to prevent its free movement.
19. Use ”ANTI-TWOBLOCK" disable switch when erecting and stowing jib and when stowing hook block. While the switch is pushed,the hoist does not stop,even when overwind condition occurs.
20. When lifting a load by using jib (aux. winch)and boom (main winch) simultaneously,do the following:
    ・Enter the operation status as jib operation, not as boom operation.
    ・Before starting operation,make sure that mass of load is within rated lifting capacity for jib.
21. Before telescoping the boom,set the telescoping mode selector switch to mode 1 or mode 2 fully retracted.
    A change of the telescoping mode is not permissible when the boom has been partially or fully extended.
22. Crane operation is prohibited without full counterweight 20,100 lbs. (9.1 ton) installed.Outriggers shall be extended 23' 11-3 / 8” (7.3 m) spread when installing or removing removable counterweight.

DEFINITIONS

1. Load Radius: Horizontal distance from a projection of the axis of rotation to supporting surface before loading to the center of the vertical hoist line or tackle with load applied.
2. Loaded Boom Angle: The angle between the boom base section and the horizontal, after lifting the rated lifting capacity at the load radius.
3. Working Area: Area measured in a circular arc about the centerline of rotation.
4. Freely Suspended Load: Load hanging free with no direct external force applied except by the hoist line.
5. Side Load: Horizontal side force applied to the lifted load either on the ground or in the air.

GR-1000XL-4 RATED LIFTING CAPACITIES (IN POUNDS)

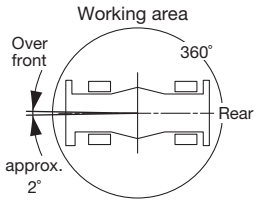
COUNTERWEIGHT 20,100 lbs (9.1 t)
ON RUBBER STATIONARY

Over front				
B \ A	39.4' (12 m)	53.7' (16.4 m)	82.4' (25.1 m)	96.8' (29.5 m)
12	64,300			
15	53,000			
20	40,000	35,000	28,400	
25	30,500	33,300	28,400	24,700
30	21,900	24,800	25,200	24,700
35		19,100	19,600	20,000
40		15,100	15,600	16,000
45		12,100	12,600	13,000
50		99,00	10,300	10,700
55		8,000	8,600	8,900
60		6,600	7,100	7,400
65			5,900	6,200
70			4,900	5,200
75			4,100	4,300
80				3,500
85				2,900
Telescoping mode	1, 2	2	2	2
2nd Boom	0	0	0	0
3rd Boom	0	33	50	66
4th Boom	0	33	50	66
Top Boom	0	33	50	66

360° Rotation				
B \ A	39.4' (12 m)	53.7' (16.4 m)	82.4' (25.1 m)	96.8' (29.5 m)
12	40,900			
15	31,700			
20	19,200	22,400	22,400	
25	12,500	15,400	16,000	16,400
30	8,200	11,000	11,600	12,000
35		8,000	8,600	8,900
40		5,800	6,400	6,700
45		4,200	4,700	5,000
50		2,900	3,400	3,700
55		1,900	2,400	2,700
60			1,500	1,800
65				
70				
75				
80				
85				
Telescoping mode	1, 2	2	2	2
2nd Boom	0	0	0	0
3rd Boom	0	33	50	66
4th Boom	0	33	50	66
Top Boom	0	33	50	66

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON RUBBER CREEP

Over front				
B \ A	39.4' (12 m)	53.7' (16.4 m)	82.4' (25.1 m)	96.8' (29.5 m)
12	49,800			
15	40,700			
20	30,200	32,200	28,400	
25	23,000	25,700	26,200	24,700
30	17,900	20,600	21,100	21,600
35		16,700	17,300	17,600
40		13,800	14,300	14,700
45		11,400	11,900	12,300
50		9,400	10,000	10,300
55		7,800	8,300	8,600
60		6,400	6,800	7,200
65			5,600	6,000
70			4,700	5,000
75			3,900	4,100
80				3,400
85				2,800
Telescoping mode	1, 2	2	2	2
2nd Boom	0	0	0	0
3rd Boom	0	33	50	66
4th Boom	0	33	50	66
Top Boom	0	33	50	66



A: Boom length in feet
B: Load radius in feet

NOTE: The lifting capacity data stored in the LOAD MOMENT INDICATOR (AML-E2) is based on the standard number of parts of line listed in the chart.
Standard number of parts of line for on-rubber operation should be according to the chart.

Boom length in feet (meters)	39.4' (12 m)	39.4' to 96.8' (12 m to 29.5 m)	Single top jib
Number of parts of line	6	4	1

GR-1000XL-4 RATED LIFTING CAPACITIES (IN POUNDS)

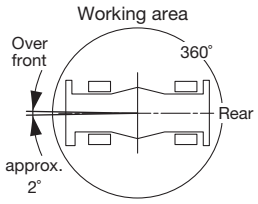
COUNTERWEIGHT 20,100 lbs (9.1 t)
ON RUBBER STATIONARY
SMART COUNTERWEIGHT

Over front				
B \ A	39.4' (12 m)	53.7' (16.4 m)	82.4' (25.1 m)	96.8' (29.5 m)
12	66,400			
15	54,900			
20	41,500	35,000	28,400	
25	32,200	34,900	28,400	24,700
30	23,300	26,200	26,600	24,700
35		20,200	20,700	21,000
40		16,000	16,600	16,900
45		12,900	13,500	13,800
50		10,600	11,100	11,400
55		8,700	9,200	9,500
60		7,200	7,700	8,000
65			6,400	6,700
70			5,400	5,700
75			4,500	4,800
80				4,000
85				3,300
Telescoping mode	1, 2	2	2	2
2nd Boom	0	0	0	0
3rd Boom	0	33	50	66
4th Boom	0	33	50	66
Top Boom	0	33	50	66

360° Rotation				
B \ A	39.4' (12 m)	53.7' (16.4 m)	82.4' (25.1 m)	96.8' (29.5 m)
12				
15				
20	21,000			
25	13,800	16,800		
30	9,300	12,100	12,700	12,700
35		9,000	9,500	9,900
40		6,700	7,200	7,500
45		4,900	5,400	5,800
50		3,500	4,100	4,400
55		2,400	3,000	3,300
60		1,600	2,000	2,400
65				
70				
75				
80				
85				
Telescoping mode	1, 2	2	2	2
2nd Boom	0	0	0	0
3rd Boom	0	33	50	66
4th Boom	0	33	50	66
Top Boom	0	33	50	66

COUNTERWEIGHT 20,100 lbs (9.1 t)
ON RUBBER CREEP
SMART COUNTERWEIGHT

Over front				
B \ A	39.4' (12 m)	53.7' (16.4 m)	82.4' (25.1 m)	96.8' (29.5 m)
12	51,900			
15	42,600			
20	31,600	32,200	28,400	
25	24,300	27,000	27,500	24,700
30	19,000	21,700	22,200	22,600
35		17,700	18,200	18,600
40		14,600	15,100	15,500
45		12,100	12,700	13,000
50		10,100	10,600	11,000
55		8,400	9,000	9,300
60		7,000	7,500	7,800
65			6,200	6,500
70			5,200	5,500
75			4,300	4,600
80				3,800
85				3,200
Telescoping mode	1, 2	2	2	2
2nd Boom	0	0	0	0
3rd Boom	0	33	50	66
4th Boom	0	33	50	66
Top Boom	0	33	50	66



A: Boom length in feet
B: Load radius in feet

NOTE: The lifting capacity data stored in the LOAD MOMENT INDICATOR (AML-E2) is based on the standard number of parts of line listed in the chart.
Standard number of parts of line for on-rubber operation should be according to the chart.

Boom length in feet (meters)	39.4' (12 m)	39.4' to 96.8' (12 m to 29.5 m)	Single top jib
Number of parts of line	6	4	1

WARNING AND OPERATING INSTRUCTIONS FOR ON RUBBER LIFTING CAPACITIES

1. Rated lifting capacities on-rubber are in pounds and do not exceed 75% of tipping loads as determined by SAE J765-Crane Stability Test Code.
2. Rated lifting capacities shown in the chart are based on condition that crane is set on firm level surfaces with suspension-lock applied. They are based on actual load radius increased by tire deformation and boom deflection.
3. If the suspension-lock cylinders contain air,the axle will not be locked completely and rated lifting capacities may not be obtainable. Bleed the cylinders according to the operation safety and maintenance manual.
4. Rated lifting capacities are based on proper tire inflation, capacity and condition. Damaged tires are hazardous to safe operation of crane.
5. Tires shall be inflated to correct air pressure.

Tires	Air Pressure
29.5–25 36PR	68 psi. (470 kPa)
29.5–25 40PR	67 psi. (465 kPa)

6. Over front operation shall be performed within 2 degrees in front of chassis.
7. On-rubber lifting with ”jib” is not permitted. Maximum permissible boom length is 96.8 ft. (29.5 m).
8. When making lift on-rubber stationary,set parking brake.
9. For creep operation,boom must be centered over front of machine,slewing lock engaged,and load restrained from slewing. Travel slowly and keep the lifted load as close to the ground as possible,and especially avoid any abrupt steering, accelerating or braking.
10. Do not operate the crane while carrying the load.
11. Creep is motion for crane not to travel more than 200 ft. (60 m) in any 30 minute period and to travel at the speed of less than 1 mph (1.6 km/h).
12. For creep operation,choose the drive mode and proper gear according to the road or working condition.

NOTES FOR LOAD MOMENT INDICATOR (AML-E2)

1. Set AML select keys in accordance with the actually operating crane conditions and don't fail to make sure, before crane operation, that the displays on front panel are correct.
2. When operating crane on outriggers:
   - Set "P.T.O." switch to ”ON”.
   - Press the outrigger state select key to register for the outrigger operation. If the display agrees with the actual state, press the set key to register. After the completion of the registration, the display returns to the crane operation stataus.
   - Press the lift state select key to register the lift state to be used (single top/jib/boom).
   - Each time the lift state select key is pressed, the display changes. If the display agrees with the actual state, press the set key to register. After the completion of the registration, the display returns to the crane operation stataus.
   - When erecting and stowing jib, select the status of jib set (Jib state indicative symbol lights up).
3. When operating crane on-rubber:
   - Set "P.T.O." switch to ”ON”.
   - Press the outrigger state select key to register for the on-rubber operation. Each time the outrigger state select key is pressed, the display changes. Select the creep operation, the on-rubber state indicator symbol lights up.
   - Press the lift state select key to register the lift state.

   However, pay attention to the following.

   (1) For stationary operation.
   - The front capacities are attainable only when the over front position symbol comes on.

     When the boom is more than 2 degrees from centered over front of chassis, 360° capacities are in effect.
   - When a load is lifted in the front position and then slewed to the side area, make sure the value of the LOAD MOMENT INDICATOR (AML-E2) is below the 360° lifting capacity.

   (2) For creep operation.
   - The creep capacities are attainable only when boom is in the straight forward position of chassis and the over front position symbol is on. If boom is not in the straight forward position of chassis, never lift load.
4. This machine is equipped with an automatic slewing stopping device. (For the details, see Operation and Maintenance Manual.) But, operate very carefully because the automatic slewing stop does not work in the following cases.
   - During on-rubber operation.
   - When the "P.T.O." switch is set to "OVERRIDE" and the "OVERRIDE" key switch outside the cab is on.
5. During crane operation, make sure that the displays on front panel are in accordance with actual operating conditions.
6. The displayed values of LOAD MOMENT INDICATOR (AML-E2) are based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, inflation of tire, operating speed, side loads, etc.
   For safe operation, it is recommended when extending and lowering boom or slewing, lifting loads shall be appropriately reduced.
7. LOAD MOMENT INDICATOR (AML-E2) is intended as an aid to the operator. Under no condition should it be relied upon to replace use of capacity charts and operating instruction. Sole reliance upon LOAD MOMENT INDICATOR (AML-E2) aids in place of good operating practice can cause an accident.
   The operator must exercise caution to assure safety.
8. The lifting capacity differs depending on the outrigger extension width and slewing position.
   Work with the capacity corresponding to the outrigger extension width and slewing position.
   For the relationship among the outrigger extension width, slewing position and lifting capacities, refer to the working area charts.

GR-1000XL-4 Axle Weight ditribution chart

		Pounds			Kilograms		
		GVW	Front	Rear	GVW	Front	Rear
Base machine		117,300	58,500	58,800	53,170	26,520	26,650
Remove:	1. 7.3 ton (6.6 metric ton) hook block	-400	-600	200	-165	-251	86
	2. 100 ton (90.7 metric ton) hook block	-1,900	-3,500	1,600	-850	-1,571	721
	3. Top jib	-700	-1,000	300	-336	-450	114
	4. Base jib	-2,000	-3,800	1,800	-867	-1,704	837
	5. Removable Counterweight	-20,100	7,700	-27,800	-9,100	3,490	-12,590

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