



TADANO

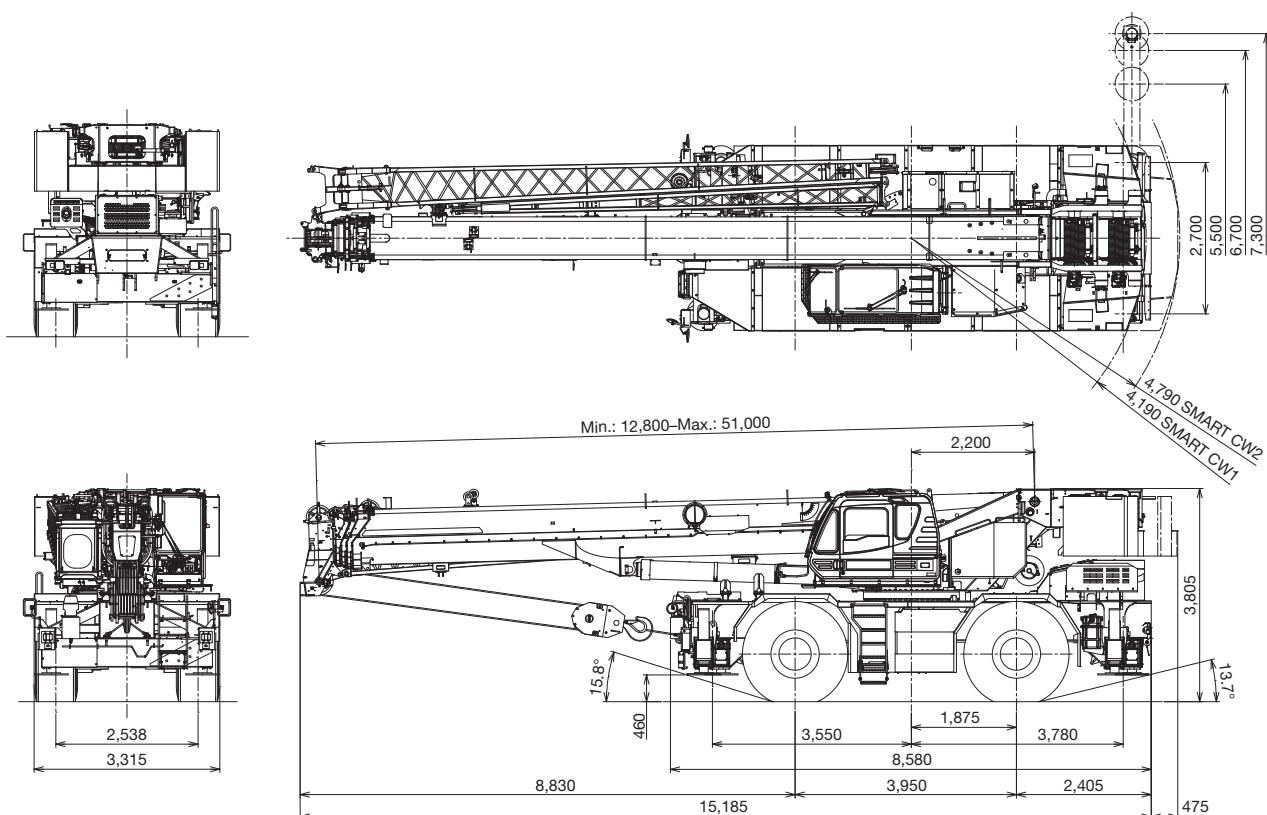
GR-1000EX-4

(Left-hand drive)
100 Ton Capacity

SPEC. SHEET NO. GR-1000E-4-00201/EU-03

HYDRAULIC ROUGH TERRAIN CRANE

DIMENSIONS



Note : Dimension is with boom angle at -1.5 degree.

GENERAL DIMENSIONS

Turning radius (29.5-25) 4 wheel steer 2 wheel steer	6.8 m 10.9 m	Overall length Overall width Overall height	approx. 15,185 mm approx. 3,315 mm approx. 3,805 mm
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CRANE SPECIFICATIONS

BOOM

5 section full power partially synchronized telescoping boom of round box construction with 7 sheaves at boom head. The synchronization system consists of 2 telescope cylinders, extension cables and retraction cables. 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.

Fully retracted length.....	12.8 m
Fully extended length	51.0 m
Extension speed.....	38.2 m in 170 s
Root diameter.....	0.44 m

BOOM ELEVATION

By a double acting hydraulic cylinder with holding valve. Combination controls for hand or foot operation. Boom angle indicator. Automatic speed reduction and slow stop function.

Boom angle	-1.5° - 80.5°
Boom raising speed	20° to 60° in 46 s

JIB

2 stage swing around boom extention with triple offset (tilt type). Single sheave at jib head. Stows alongside base boom section.

Length	10.1 m, 17.7 m
Offset.....	3.5°, 25°, 45°
Root diameter.....	0.396 m

AUXILIARY LIFTING SHEAVE (SINGLE TOP)

Single sheave mounted to main boom head for single line work(stowable).

Root diameter.....	0.396 m
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ANTI-TWO-BLOCK DEVICE

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

SLEWING

Hydraulic axial piston motor driven through planetary slewing speed reducer. Continuous 360° full circle slewing on ball bearing. Equipped with manually locked/released slewing brake. A 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.

Slewing speed	1.5 min ⁻¹ {rpm}
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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.

MAIN DRUM

Root diameter x wide	0.362 m x 0.681 m
Wire rope diameter x length	19 mm x 285 m
Drum capacity	346 m, 7 layers
Maximum single line pull (1st layer).....	89.1 kN (9,090 kgf)
Maximum permissible linepull wire strength.....	64.7 kN (6,600 kgf)

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.

AUXILIARY DRUM

Root diameter x wide	0.362 m x 0.681 m
Wire rope diameter x length	19 mm x 147 m
Drum capacity	346 m, 7 layers
Maximum single line pull (1st layer).....	89.1 kN (9,090 kgf)
Maximum permissible linepull wire strength.....	64.7 kN (6,600 kgf)

WIRE ROPE

Non-rotating wire (no-spin), extra improved plow steel, preformed, independent wire rope core, right regular lay.

Main & Auxiliary	19 mm
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HOOK BLOCKS

100 t (option)	7 sheaves with swivel hook and safety latch
50 t (option)	5 sheaves with swivel hook and safety latch
35 t (option)	3 sheaves with swivel hook and safety latch
6.6 t	Weighted hook with swivel and safety latch

COUNTERWEIGHT

Self-removable counterweight	11,200 kg
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HYDRAULIC SYSTEM

PUMPS

2 variable piston pumps for crane functions.
Tandem gear pump for steering, slewing and other hydraulic systems.

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.

HYDRAULIC OIL TANK

795 liters 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.

20° tilt, left side, 1 man type, steel construction with sliding door access and safety glass windows opening at side. Door window is power controlled. Windshield glass window and roof glass window are shatter-resistant. Wiper and washer (front windshield and roof window). Tinted safety glass and sun visor. 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. Foot operated controls: boom elevating, boom telescoping, service brake and engine throttle. 3 way adjustable operator's seat with high back, headrest and armrest. Cab floor mat. Engine throttle knob. Hot water cab heater and air conditioning.

Dash-mounted Instrument panel, Multifunction Display, Starter switch (engine start / stop), 12 V power outlet, USB port, drive selector switch, parking brake switch, steering mode select switch, power window switch, pump engaged/disengaged switch, slewing brake switch, boom telescoping/auxiliary winch select switch, outrigger control panel, free slewing/lock slewing selector switch and 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 - AdBlue level gauge, Fuel consumption monitor.

CRANE SPECIFICATIONS

TADANO Automatic Moment Limiter (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
- Permissible load
- 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 and buzzer
- Tare function
- Main hydraulic oil pressure

- Fuel consumption monitor
- Main winch / auxiliary winch select
- Drum rotation indicator (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 right console includes roof washer and wiper switch, emergency outrigger set up key switch, jib status switch, high speed winch (main / aux) switch, cab tilt switch, automatic pump disconnect enable switch, 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 drive, driving axle 2-way selected type by manual switch, 4x2 front drive, 4x4 front and rear drive.

FRAME

High tensile steel, all welded mono-box construction.

ENGINE

Model	Cummins B6.7 [EU Stage V]
Type	Direct injection diesel
No. of cylinders	6
Combustion	4 cycle, turbo charged and after cooled
Bore x Stroke, mm	107 x 124
Displacement, liters	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, liters	300, right side of carrier
Cooling	Liquid pressurized, recirculating by-pass
Radiator	Fin and tube core, thermostat controlled
Fan, mm	Suction type, 9-blade, 711 dia.
Starting	24 volt
Charging	24 volt system, negative ground
Battery	2-120 amp. Hour
Compressor, air, l/min	481 at 2,400 min ⁻¹
Output, Max. kW (HP)	Gross 209 (280) at 2,200 min ⁻¹
Torque, Max. N·m	1,152 at 1,500 min ⁻¹
Capacity, liters	
Cooling water	10
Lubrication	15
Fuel	300
AdBlue	57

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

- 18 km/h

GRADEABILITY ($\tan\theta$) - 84% (at stall), 57%*

* Machine should be operated within the limit of engine crankcase design (30°: Cummins B6.7)

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.
4 steering modes available: 2 wheel front, 2 wheel rear, 4 wheel coordinated and 4 wheel crab.

SUSPENSION

Front: Rigid mounted to the 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: 470 kPa
29.5-25 40PR (OR) Air pressure: 465 kPa

OUTRIGGERS

4 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 7.3 m center-line and retract to within 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. 4 outrigger extension lengths are provided with corresponding "RATED LIFTING CAPACITIES" for crane duty in confined areas.

Min. Extension	2.7 m center to center
Mid. Extension	5.5 m center to center
Mid. Extension	6.7 m center to center
Max. Extension	7.3 m center to center
Float size (Diameter)	0.6 m

STANDARD EQUIPMENT

- Telematics (machine data logging and monitoring system)
with - HELLO-NET via internet
(availability depends on countries)
- Eco mode system
- Positive control
- Over unwinding prevention
- Emergency steering system
- Transmission neutral position engine start
- Overshift prevention
- Parking braked travel warning
- Tilt-telescope steering wheel
- Halogen head lamp
- Fenders
- Battery disconnect
- 20° tilt cab
- Cup holder
- 12 V power outlet
- LED working lights
- USB port
- Air dryer
- Water separator with filter (high filtration)
- Air cleaner dust indicator
- Full instrumentation package
- Complete highway light package
- Tire inflation kit
- Towing hooks-Front and rear
- Lifting eyes
- Hook block tie down (front bumper)
- Weighted hook storage compartment
- Winch drum camera with light
- Rear view camera
- Right front view camera
- Clearance sonar (Rear side)
- Radiator cover
- Tool storage compartment
- Automatic pump disconnect
- Self-removable counterweight
- Hook block-6.6t capacity
(Weighted hook, swivel type with safety latch. Mass: approx. 165 kg)
- Outrigger control box (Both side of carrier)
- Emergency engine stop system
- Wind speed indicator

OPTIONAL EQUIPMENT

- Hook block-100 t capacity
(7 sheaves, swivel type with safty latch. Mass: approx. 750 kg)
- Hook block-50 t capacity
(5 sheaves, swivel type with safty latch. Mass: approx. 500 kg)
- Hook block-35 t capacity
(3 sheaves, swivel type with safty latch. Mass: approx. 450 kg)
- Heavy-duty lift device (used at lifting more than 82 t)
- Air craft warning light
- Beacon lamp

HOISTING PERFORMANCE

LINE SPEEDS AND PULLS

Layer	Main or auxiliary winch - 0.362 m drum			
	Line speeds ¹		Line pulls Available ²	
	m/min		kN (kgf)	
	Low	High	Low	High
1st	84	118	89.1 (9,090)	63.9 (6,520)
2nd	92	128	80.7 (8,230)	57.8 (5,900)
3rd	99	139	73.7 (7,520)	52.8 (5,390)
4th	107	149	67.8 (6,920)	48.6 (4,960)
5th	115	160	62.8 (6,410)	45.1 (4,600)
6th	122	170	58.5 (5,970)	41.9 (4,280)
7th ³	130	181	54.8 (5,590)	39.3 (4,010)

- Maximum permissible line pull wire strength.
Main & Auxiliary: 64.7 kN (6,600 kgf).

¹ Line speed 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 limitations in machinery or equipment.

³ Seventh layer of wire rope are not recommended for hoisting operations.

DRUM WIRE ROPE CAPACITIES

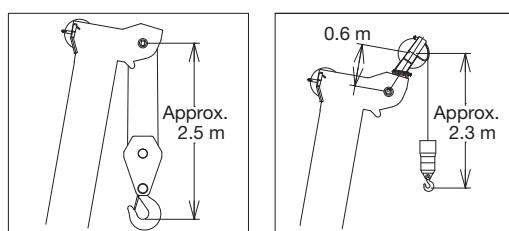
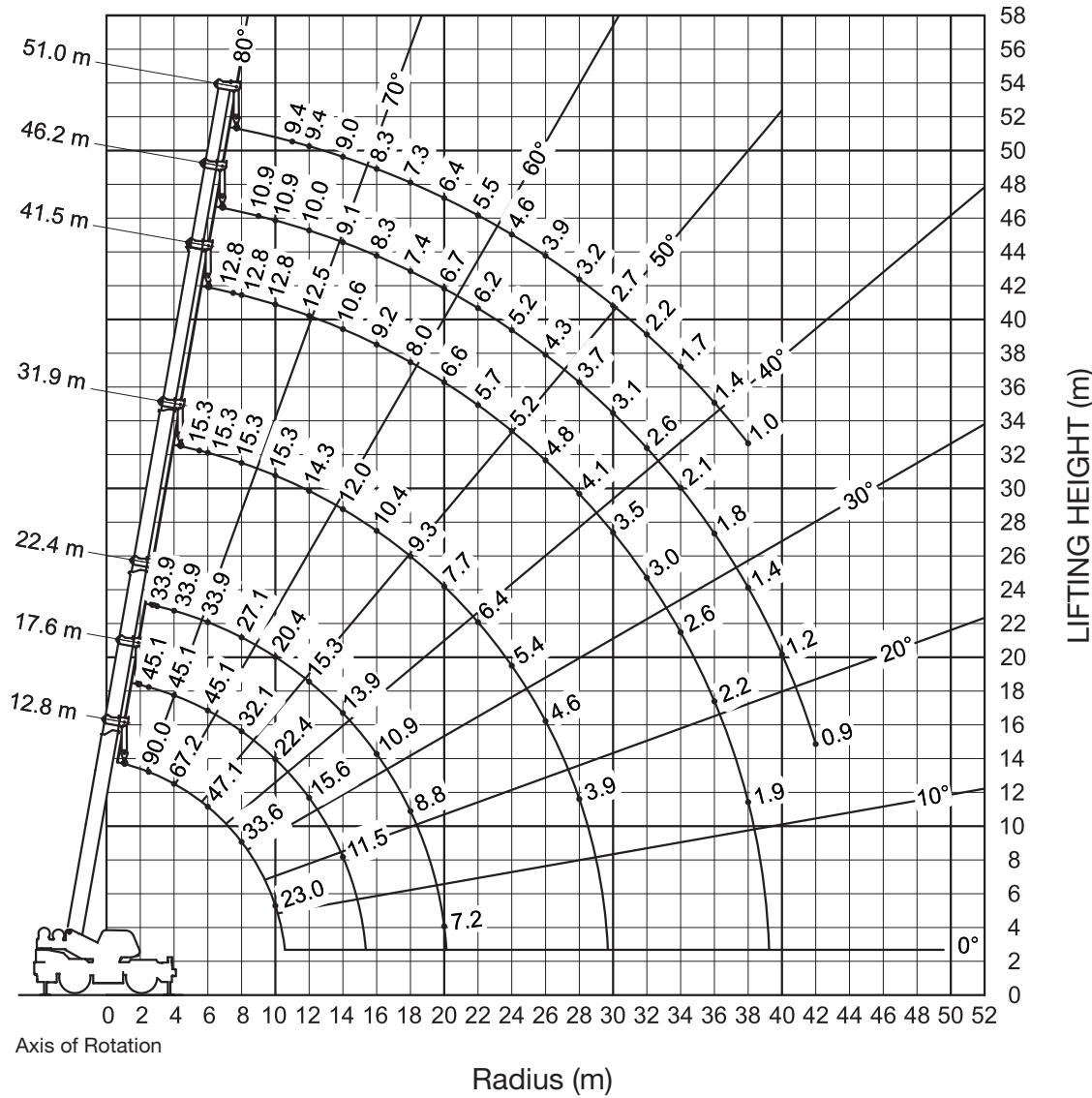
Wire rope layer	Main and auxiliary drum grooved lagging	
	19 mm wire rope	
	Rope per layer	Total wire rope
	m	m
1	39.0	39.0
2	42.5	81.5
3	46.0	127.5
4	49.4	176.9
5	53.0	229.9
6	56.5	286.4
7	60.0	346.4

DRUM DIMENSIONS

Root diameter	362 mm
Length	681 mm
Flange diameter	657 mm

GR-1000EX-4 WORKING RANGE CHART

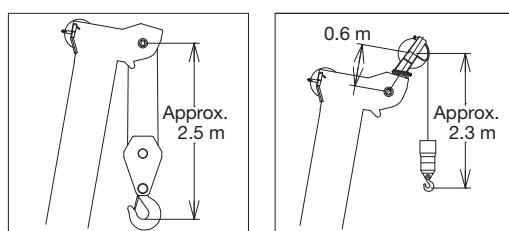
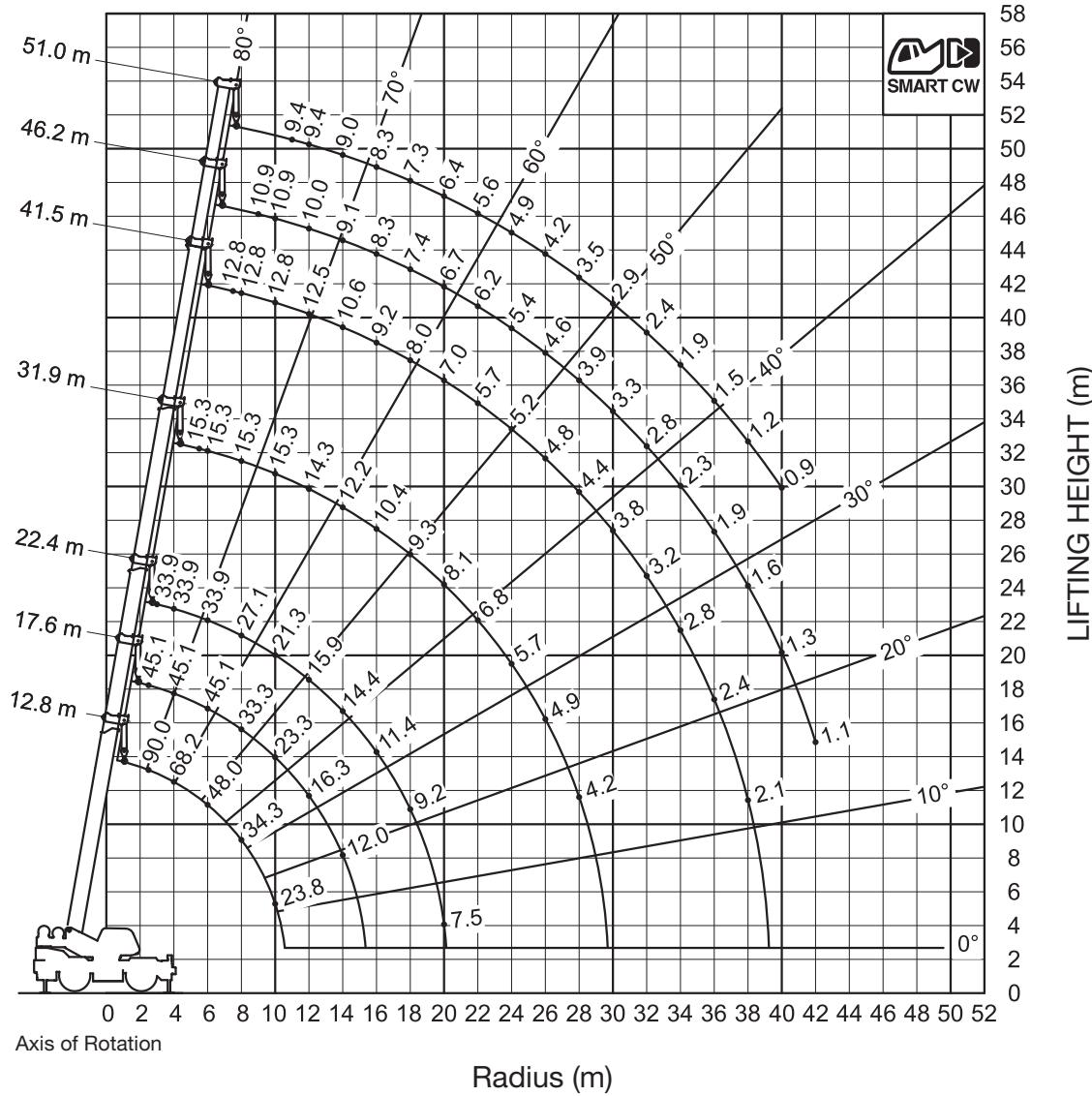
SMART CW1
360° ROTATION



NOTE: 1. 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.
2. When boom length is same as telescoping mode 1 and 2, it show large load.

GR-1000EX-4 WORKING RANGE CHART

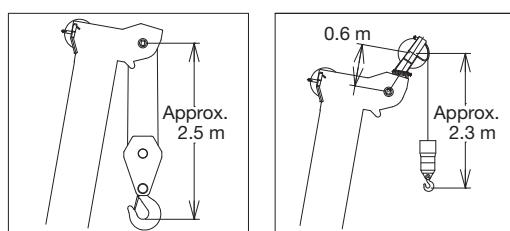
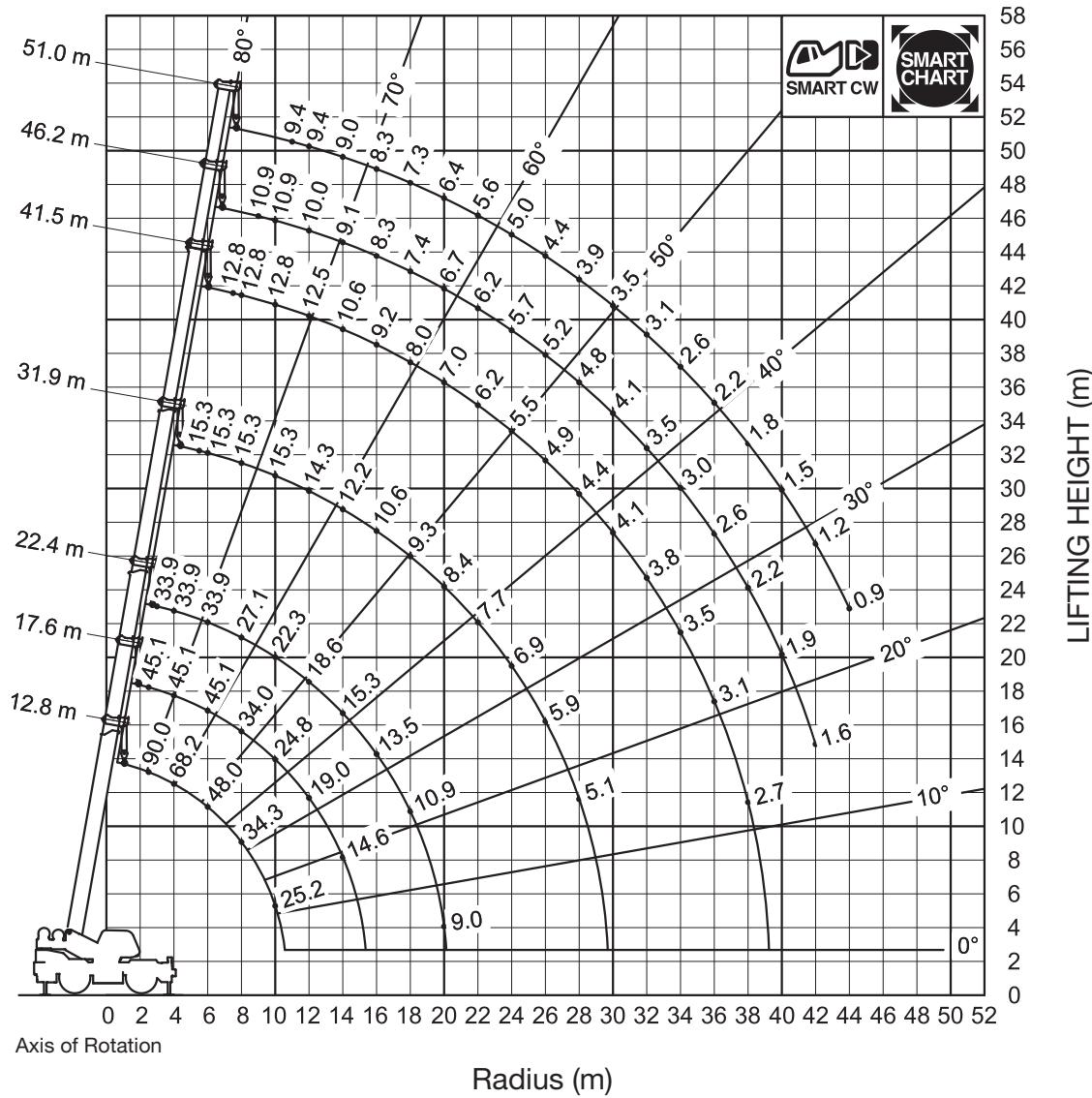
SMART CW2
360° ROTATION



NOTE: 1. 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.
2. When boom length is same as telescoping mode 1 and 2, it show large load.

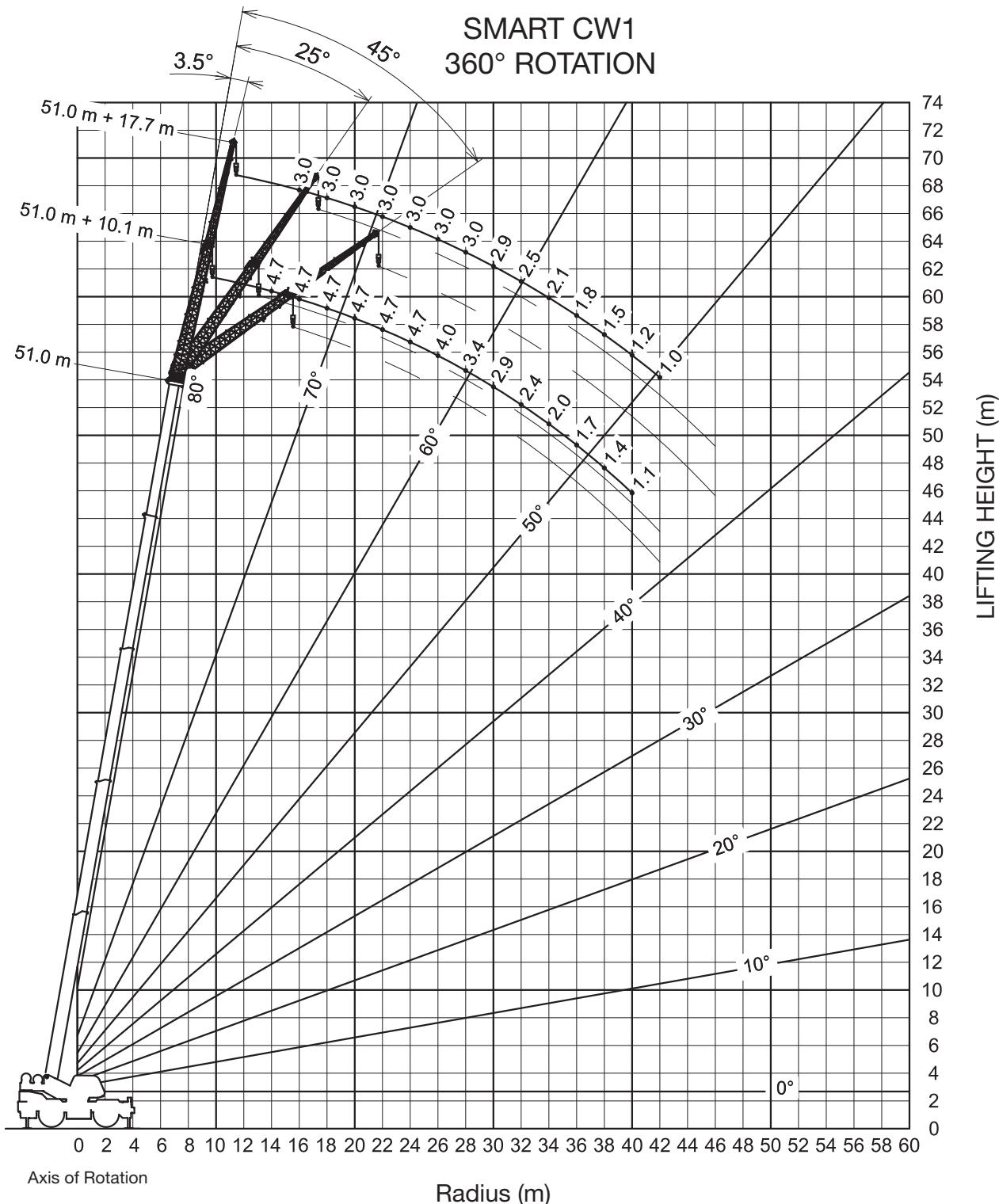
GR-1000EX-4 WORKING RANGE CHART

SMART CW2
SMART CHART

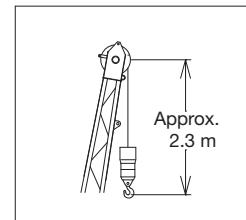


NOTE: 1. Boom geometry shown is for unloaded condition and machine standing level on firm supporting surface.
 Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.
 2. When boom length is same as telescoping mode 1 and 2, it show large load.

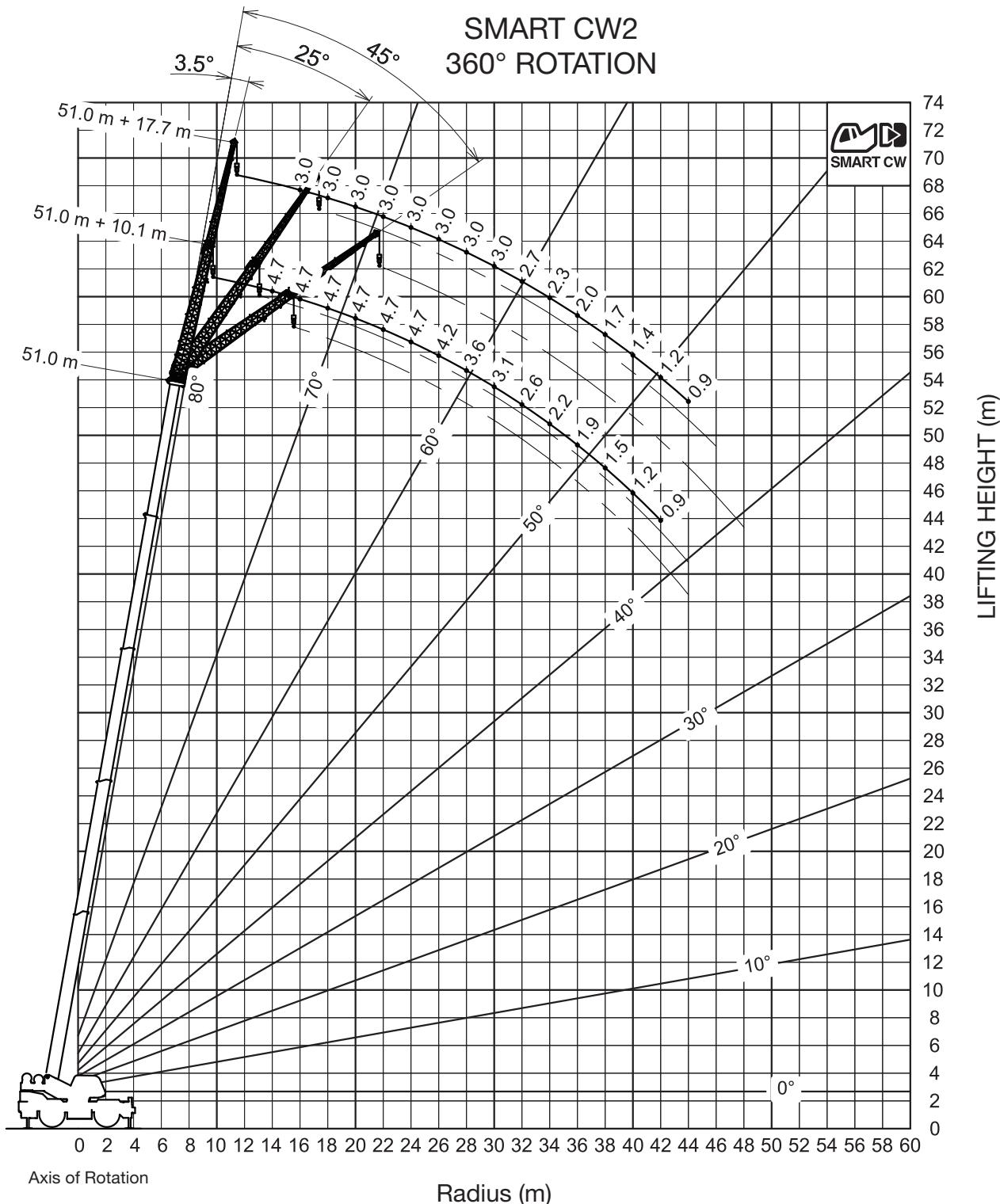
GR-1000EX-4 WORKING RANGE CHART



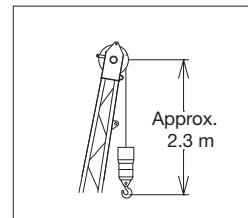
NOTE: 1.Jib geometry shown are for unloaded condition and machine standing level on firm supporting surface.
Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.



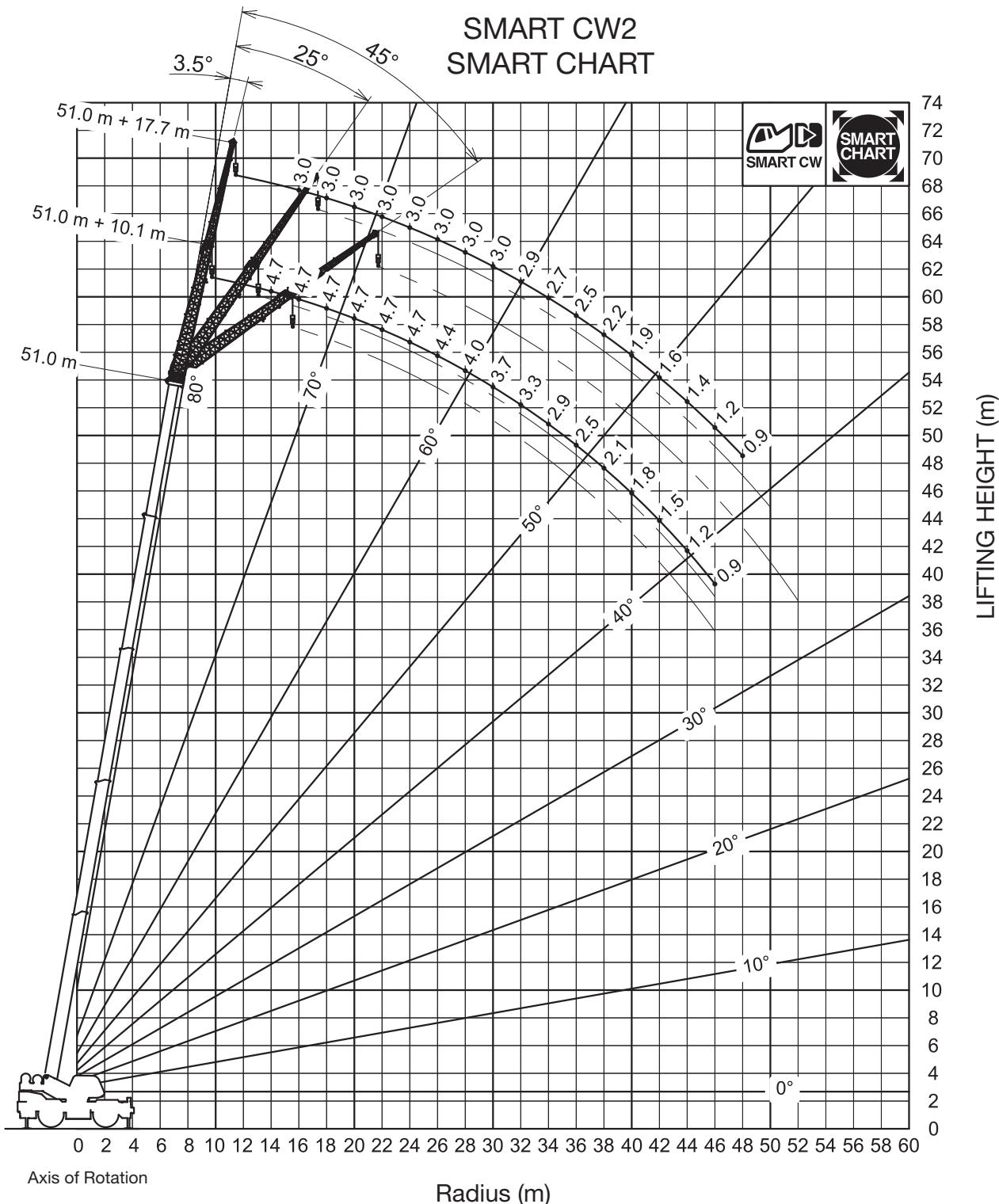
GR-1000EX-4 WORKING RANGE CHART



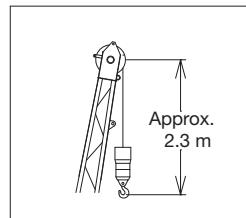
NOTE: 1.Jib geometry shown are for unloaded condition and machine standing level on firm supporting surface.
Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.



GR-1000EX-4 WORKING RANGE CHART



NOTE: 1.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.



GR-1000EX-4 RATED LIFTING CAPACITIES

COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD 360° ROTATION SMART CW1										(Unit: × 1,000 kg)		
B	A	12.8		17.6	22.4		31.9		41.5		46.2	51.0
		Over front	360°		B	B	B	B	B	B		
2.5	100.0 ★	90.0 ★		45.10								
3.0	83.00 ★			45.10	33.90	15.30						
3.5	74.40			45.10	33.90	15.30						
4.0	67.20			45.10	33.90	15.30						
4.5	61.10			45.10	33.90	15.30						
5.0	55.90			45.10	33.90	15.30						
5.5	51.30			45.10	33.90	15.30	15.30	12.50				
6.0	47.10			45.10	33.90	15.30	15.30	12.50				
6.5	42.90			42.60	32.00	15.30	15.30	12.50				
7.0	39.30			39.10	30.20	15.30	15.30	12.50				
7.5	36.30			35.60	28.60	15.30	15.30	12.50	12.80	12.40		
8.0	33.60			32.10	27.10	15.30	15.30	12.50	12.80	12.40		
9.0	28.20			26.60	24.10	15.30	15.30	12.50	12.80	11.90	10.90	
10.0	23.00			22.40	20.40	15.30	15.30	12.50	12.80	11.20	10.90	
11.0				18.60	17.50	15.30	15.30	12.50	12.80	10.60	10.50	9.40
12.0				15.60	15.20	15.30	14.30	12.50	12.50	9.90	10.00	9.40
14.0				11.50	11.10	13.90	12.00	11.70	10.60	8.60	9.10	9.00
16.0					8.20	10.90	9.70	10.40	9.20	7.70	8.30	8.30
18.0					6.20	8.80	7.60	9.30	8.00	6.90	7.40	7.30
20.0					4.70	7.20	6.10	7.70	6.60	6.20	6.70	6.40
22.0							4.80	6.40	5.40	5.70	6.20	5.50
24.0							3.80	5.40	4.40	5.20	5.20	4.60
26.0							3.00	4.60	3.60	4.80	4.30	3.90
28.0							2.40	3.90	2.90	4.10	3.70	3.20
30.0								2.40	3.50	3.10	2.70	
32.0								1.90	3.00	2.60	2.20	
34.0								1.40	2.60	2.10	1.70	
36.0								1.10	2.20	1.80	1.40	
38.0									1.90	1.40	1.00	
40.0										1.20		
42.0										0.90		
D				0°			12°	0°	21°	0°	21°	41°
TELESCOPING CONDITIONS (%)												
Telescoping mode	1, 2	1	1	2	1	2	1	2	2	2	1, 2	
2nd Boom	0	50	100	0	100	0	100	0	50	100		
3rd Boom	0	0	0	33	33	67	67	100	100	100		
4th Boom	0	0	0	33	33	67	67	100	100	100		
Top Boom	0	0	0	33	33	67	67	100	100	100		

COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD 360° ROTATION SMART CW1										(Unit: × 1,000 kg)		
C	A	12.8		17.6	22.4		22.4		31.9	41.5	B	B
		B	B		B	B	B	B				
0°	10.7	8.9	15.5	4.9	20.2	2.1	20.2	4.3	29.6	2.2	38.7	1.4
Telescoping mode	1, 2	1	1	1	2				2	2		

★ With attachment sheaves

A: Boom length (m)

B: Load radius (m)

C: Loaded boom angle (°)

D: Minimum boom angle (°) for indicated length (no load)

GR-1000EX-4 RATED LIFTING CAPACITIES

		COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD 360° ROTATION SMART CW2										(Unit: × 1,000 kg)			
B	A	12.8		17.6		22.4		31.9		41.5		46.2	51.0		
		Over front	360°												
2.5	100.0 ★	90.0 ★	45.10												
3.0	84.10 ★	45.10		33.90	15.30										
3.5	75.40	45.10		33.90	15.30										
4.0	68.20	45.10		33.90	15.30										
4.5	62.00	45.10		33.90	15.30										
5.0	56.70	45.10		33.90	15.30										
5.5	52.10	45.10		33.90	15.30										
6.0	48.00	45.10		33.90	15.30										
6.5	43.80	43.50		32.00	15.30										
7.0	40.10	39.80		30.20	15.30										
7.5	37.00	36.70		28.60	15.30										
8.0	34.30	33.30		27.10	15.30										
9.0	29.20	27.70		24.50	15.30										
10.0	23.80	23.30		21.30	15.30										
11.0		19.30		18.30	15.30										
12.0		16.30		15.90	15.30										
14.0		12.00		11.60	14.40										
16.0				8.70	11.40										
18.0				6.60	9.20										
20.0				5.10	7.50										
22.0															
24.0															
26.0															
28.0															
30.0															
32.0															
34.0															
36.0															
38.0															
40.0															
42.0															
D				0°				12°	0°			17°	0°	21°	38°
TELESCOPING CONDITIONS (%)															
Telescoping mode	1, 2	1	1	2	1	2	1	2	1	2	2	1, 2			
2nd Boom	0	50	100	0	100	0	100	0	0	50	100				
3rd Boom	0	0	0	33	33	67	67	67	100	100	100				
4th Boom	0	0	0	33	33	67	67	67	100	100	100				
Top Boom	0	0	0	33	33	67	67	67	100	100	100				

		COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD 360° ROTATION SMART CW2										(Unit: × 1,000 kg)	
C	A	12.8		17.6		22.4		22.4		31.9		41.5	
		B	B	B	B	B	B	B	B	B	B	B	
0°	10.7	8.9	15.5	4.9	20.2	2.1	20.2	4.3		29.6	2.2	38.7	1.5
Telescoping mode	1, 2	1	1	1	2				2		2		

★ With attachment sheaves

A: Boom length (m)

B: Load radius (m)

C: Loaded boom angle (°)

D: Minimum boom angle (°) for indicated length (no load)

GR-1000EX-4 RATED LIFTING CAPACITIES

		COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD SMART CHART SMART CW2										(Unit: × 1,000 kg)	
B	A	12.8		17.6	22.4		31.9		41.5		46.2	51.0	
		Over front	360°		B	B	B	B	B	B			
2.5	100.0 ★	90.0 ★		45.10									
3.0	84.10 ★	45.10		33.90	15.30								
3.5	75.40	45.10		33.90	15.30								
4.0	68.20	45.10		33.90	15.30								
4.5	62.00	45.10		33.90	15.30								
5.0	56.70	45.10		33.90	15.30								
5.5	52.10	45.10		33.90	15.30	15.30	12.50						
6.0	48.00	45.10		33.90	15.30	15.30	12.50						
6.5	43.80	43.50		32.00	15.30	15.30	12.50						
7.0	40.10	39.80		30.20	15.30	15.30	12.50						
7.5	37.00	36.70		28.60	15.30	15.30	12.50	12.80	12.40				
8.0	34.30	34.00		27.10	15.30	15.30	12.50	12.80	12.40				
9.0	29.30	28.90		24.50	15.30	15.30	12.50	12.80	11.90	10.90			
10.0	25.20	24.80		22.30	15.30	15.30	12.50	12.80	11.20	10.90			
11.0		21.60		20.50	15.30	15.30	12.50	12.80	10.60	10.50	9.40		
12.0		19.00		18.60	15.30	14.30	12.50	12.50	9.90	10.00	9.40		
14.0		14.60		14.20	15.30	12.20	11.70	10.60	8.60	9.10	9.00		
16.0				10.70	13.50	10.60	10.40	9.20	7.70	8.30	8.30		
18.0				8.30	10.90	9.30	9.30	8.00	6.90	7.40	7.30		
20.0				6.50	9.00	7.90	8.40	7.00	6.20	6.70	6.40		
22.0						6.40	7.70	6.20	5.70	6.20	5.60		
24.0						5.20	6.90	5.50	5.20	5.70	5.00		
26.0						4.30	5.90	4.90	4.80	5.20	4.40		
28.0						3.50	5.10	4.10	4.40	4.80	3.90		
30.0								3.40	4.10	4.10	3.50		
32.0								2.80	3.80	3.50	3.10		
34.0								2.30	3.50	3.00	2.60		
36.0								1.90	3.10	2.60	2.20		
38.0								1.50	2.70	2.20	1.80		
40.0										1.90	1.50		
42.0										1.60	1.20		
44.0											0.90		
D			0°			10°	0°	15°	0°	19°	29°		
TELESCOPING CONDITIONS (%)													
Telescoping mode	1, 2	1	1	2	1	2	1	2	2	2	1, 2		
2nd Boom	0	50	100	0	100	0	100	0	100	0	50	100	
3rd Boom	0	0	0	33	33	67	67	100	100	100	100	100	
4th Boom	0	0	0	33	33	67	67	100	100	100	100	100	
Top Boom	0	0	0	33	33	67	67	100	100	100	100	100	

COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD SMART CHART SMART CW2														(Unit: × 1,000 kg)			
C	A	12.8		17.6	22.4		22.4	31.9		41.5	B	B	B				
		B	B		B	B		B	B								
0°	10.7	8.9	15.5	4.9	20.2	2.1	20.2	4.3	29.6	2.2	38.6	1.8					
Telescoping mode	1, 2	1	1	1	2			2		2							

★ With attachment sheaves

A: Boom length (m)

B: Load radius (m)

C: Loaded boom angle (°)

D: Minimum boom angle (°) for indicated length (no load)

GR-1000EX-4 RATED LIFTING CAPACITIES

COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD 360° ROTATION SMART CW1							
B	51 m Boom + 10.1 m JIB						(Unit: × 1,000 kg)
	3.5° Offset	25° Offset	45° Offset				
14.0	4.70						
16.0	4.70						
18.0	4.70	4.70					
20.0	4.70	4.70	4.40				
22.0	4.70	4.70	4.30				
24.0	4.70	4.40	4.10				
26.0	4.00	4.00	3.80				
28.0	3.40	3.70	3.50				
30.0	2.90	3.30	3.30				
32.0	2.40	2.80	3.00				
34.0	2.00	2.40	2.60				
36.0	1.70	2.00	2.20				
38.0	1.40	1.60	1.80				
40.0	1.10	1.30	1.40				
42.0		1.00	1.10				
44.0							
46.0							
Telescoping mode	1, 2	1, 2	1, 2				

COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD 360° ROTATION SMART CW1							
B	46.2 m Boom + 10.1 m JIB						(Unit: × 1,000 kg)
	3.5° Offset	25° Offset	45° Offset				
12.0	5.20						
14.0	5.20						
16.0	5.20	5.20					
18.0	5.20	5.20	4.50				
20.0	5.20	4.90	4.40				
22.0	5.00	4.50	4.20				
24.0	4.70	4.10	3.90				
26.0	4.40	3.80	3.60				
28.0	3.70	3.50	3.40				
30.0	3.40	3.30	3.10				
32.0	2.90	3.00	2.90				
34.0	2.50	2.80	2.70				
36.0	2.10	2.30	2.50				
38.0	1.70	2.00	2.10				
40.0	1.40	1.60	1.70				
42.0	1.20	1.30	1.40				
44.0	0.90	1.10					
46.0							
48.0							
Telescoping mode	2	2	2				

COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD 360° ROTATION SMART CW1							
B	41.5 m Boom + 10.1 m JIB						(Unit: × 1,000 kg)
	3.5° Offset	25° Offset	45° Offset				
10.0	6.60						
11.0	6.60	5.70					
12.0	6.60	5.70					
14.0	6.60	5.70	6.20				
16.0	6.60	5.70	5.90	5.70	4.70		
18.0	6.60	5.70	5.60	5.20	4.50	4.50	
20.0	6.60	5.10	5.40	4.70	4.40	4.30	
22.0	5.80	4.60	5.10	4.30	4.30	4.10	
24.0	4.90	4.10	4.90	3.90	4.20	3.80	
26.0	4.20	3.80	4.70	3.60	4.10	3.50	
28.0	3.60	3.40	4.00	3.30	4.00	3.20	
30.0	3.00	3.20	3.30	3.00	3.60	3.00	
32.0	2.40	2.90	2.80	2.80	3.00	2.70	
34.0	2.00	2.70	2.30	2.60	2.40	2.60	
36.0	1.60	2.50	1.90	2.40	2.00	2.40	
38.0	1.30	2.20	1.50	2.20	1.60	2.20	
40.0	0.90	1.90	1.10	2.00			
42.0		1.60		1.70			
44.0		1.30		1.40			
46.0		1.10		1.20			
48.0		0.90					
50.0							
52.0							
Telescoping mode	1	2	1	2	1	2	

B: Load radius (m)

GR-1000EX-4 RATED LIFTING CAPACITIES

<small>COUNTERWEIGHT 11,2 t ON OUTRIGGERS FULLY EXTENDED 7,3 m SPREAD 360° ROTATION SMART CW2</small>				(Unit: x 1,000 kg)			
B	51 m Boom + 10.1 m JIB			(Unit: x 1,000 kg)			
	3.5° Offset	25° Offset	45° Offset		3.5° Offset	25° Offset	45° Offset
14.0	4.70				14.0		
16.0	4.70				16.0	3.00	
18.0	4.70	4.70			18.0	3.00	
20.0	4.70	4.70	4.40		20.0	3.00	
22.0	4.70	4.70	4.30		22.0	3.00	2.80
24.0	4.70	4.40	4.10		24.0	3.00	2.70
26.0	4.20	4.00	3.80		26.0	3.00	2.60
28.0	3.60	3.70	3.50		28.0	3.00	2.50
30.0	3.10	3.50	3.30		30.0	3.00	2.50
32.0	2.60	3.00	3.10		32.0	2.70	2.40
34.0	2.20	2.60	2.80		34.0	2.30	2.30
36.0	1.90	2.20	2.40		36.0	2.00	2.30
38.0	1.50	1.80	2.00		38.0	1.70	2.10
40.0	1.20	1.50	1.60		40.0	1.40	1.80
42.0	0.90	1.10	1.30		42.0	1.20	1.50
44.0		0.90	1.00		44.0	0.90	1.30
46.0					46.0		1.00
48.0					48.0		1.00
Telescoping mode	1, 2	1, 2	1, 2		Telescoping mode	1, 2	1, 2

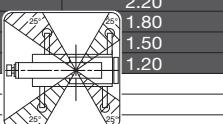
<small>COUNTERWEIGHT 11,2 t ON OUTRIGGERS FULLY EXTENDED 7,3 m SPREAD 360° ROTATION SMART CW2</small>				(Unit: x 1,000 kg)			
B	46.2 m Boom + 10.1 m JIB			(Unit: x 1,000 kg)			
	3.5° Offset	25° Offset	45° Offset		3.5° Offset	25° Offset	45° Offset
12.0	5.20				12.0		
14.0	5.20				14.0	3.20	
16.0	5.20	5.20			16.0	3.20	
18.0	5.20	5.20	4.50		18.0	3.20	
20.0	5.20	4.90	4.40		20.0	3.20	
22.0	5.00	4.50	4.20		22.0	3.20	2.80
24.0	4.70	4.10	3.90		24.0	3.20	2.70
26.0	4.40	3.80	3.60		26.0	3.20	2.60
28.0	3.70	3.50	3.40		28.0	3.20	2.60
30.0	3.40	3.30	3.10		30.0	3.00	2.50
32.0	3.10	3.00	2.90		32.0	2.70	2.40
34.0	2.70	2.80	2.70		34.0	2.50	2.30
36.0	2.30	2.50	2.60		36.0	2.30	1.90
38.0	1.90	2.10	2.20		38.0	2.20	2.00
40.0	1.60	1.80	1.90		40.0	1.80	1.90
42.0	1.30	1.50	1.50		42.0	1.50	1.80
44.0	1.00	1.20			44.0	1.30	1.60
46.0		0.90			46.0	1.00	1.30
48.0					48.0		1.10
50.0					50.0		0.90
Telescoping mode	2	2	2		Telescoping mode	2	2

<small>COUNTERWEIGHT 11,2 t ON OUTRIGGERS FULLY EXTENDED 7,3 m SPREAD 360° ROTATION SMART CW2</small>				(Unit: x 1,000 kg)			
B	41.5 m Boom + 10.1 m JIB			(Unit: x 1,000 kg)			
	3.5° Offset	25° Offset	45° Offset		3.5° Offset	25° Offset	45° Offset
10.0	6.60				10.0		
11.0	6.60	5.70			11.0		
12.0	6.60	5.70			12.0		
14.0	6.60	5.70	6.20		14.0	3.90	3.40
16.0	6.60	5.70	5.90	5.70	16.0	3.90	3.40
18.0	6.60	5.70	5.60	5.20	4.50		4.50
20.0	6.60	5.10	5.40	4.70	4.40		4.30
22.0	6.10	4.60	5.10	4.30	4.30		4.10
24.0	5.20	4.10	4.90	3.90	4.20		3.80
26.0	4.50	3.80	4.70	3.60	4.10		3.50
28.0	3.80	3.40	4.20	3.30	4.00		3.20
30.0	3.20	3.20	3.60	3.00	3.80		3.00
32.0	2.60	2.90	3.00	2.80	3.20		2.70
34.0	2.20	2.70	2.50	2.60	2.60		2.60
36.0	1.80	2.50	2.00	2.40	2.20		2.40
38.0	1.40	2.30	1.60	2.20	1.70		2.20
40.0	1.10	2.00	1.30	2.10			
42.0		1.70	1.00	1.90			
44.0		1.50		1.60			
46.0		1.20		1.30			
48.0		1.00					
50.0							
52.0							
Telescoping mode	1	2	1	2	1	2	2

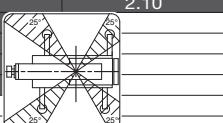
B: Load radius (m)

GR-1000EX-4 RATED LIFTING CAPACITIES

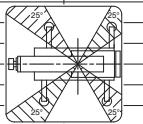
		COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD				
		SMART CHART SMART CW2				
B	51 m Boom + 10.1 m JIB			(Unit: x 1,000 kg)		
	3.5° Offset	25° Offset	45° Offset			
14.0	4.70					
16.0	4.70					
18.0	4.70	4.70				
20.0	4.70	4.70	4.40			
22.0	4.70	4.70	4.30			
24.0	4.70	4.40	4.10			
26.0	4.40	4.00	3.80			
28.0	4.00	3.70	3.50			
30.0	3.70	3.50	3.30			
32.0	3.30	3.20	3.10			
34.0	2.90	3.00	2.90			
36.0	2.50	2.70	2.70			
38.0	2.10	2.40	2.50			
40.0	1.80	2.00	2.20			
42.0	1.50	1.70	1.80			
44.0	1.20	1.40	1.50			
46.0	0.90	1.10	1.20			
48.0						
50.0						
52.0						
Telescoping mode	1, 2	1, 2	1, 2			



		COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD				
		SMART CHART SMART CW2				
B	46.2 m Boom + 10.1 m JIB			(Unit: x 1,000 kg)		
	3.5° Offset	25° Offset	45° Offset			
12.0	5.20					
14.0	5.20					
16.0	5.20	5.20				
18.0	5.20	5.20	4.50			
20.0	5.20	4.90	4.40			
22.0	5.00	4.50	4.20			
24.0	4.70	4.10	3.90			
26.0	4.40	3.80	3.60			
28.0	3.70	3.50	3.40			
30.0	3.40	3.30	3.10			
32.0	3.20	3.00	2.90			
34.0	2.90	2.80	2.70			
36.0	2.70	2.60	2.60			
38.0	2.50	2.50	2.40			
40.0	2.20	2.30	2.30			
42.0	1.80	2.00	2.10			
44.0	1.60	1.70				
46.0	1.30	1.40				
48.0	1.10	1.20				
50.0	0.90	0.90				
52.0						
54.0						
Telescoping mode	2	2	2			



		COUNTERWEIGHT 11.2 t ON OUTRIGGERS FULLY EXTENDED 7.3 m SPREAD				
		SMART CHART SMART CW2				
B	41.5 m Boom + 10.1 m JIB			(Unit: x 1,000 kg)		
	3.5° Offset	25° Offset	45° Offset			
10.0	6.60					
11.0	6.60	5.70				
12.0	6.60	5.70				
14.0	6.60	5.70	6.20			
16.0	6.60	5.70	5.90	5.70	4.70	
18.0	6.60	5.70	5.60	5.20	4.50	4.50
20.0	6.60	5.10	5.40	4.70	4.40	4.30
22.0	6.30	4.60	5.10	4.30	4.30	4.10
24.0	5.60	4.10	4.90	3.90	4.20	3.80
26.0	5.00	3.80	4.70	3.60	4.10	3.50
28.0	4.40	3.40	4.60	3.30	4.00	3.20
30.0	4.00	3.20	4.10	3.00	3.90	3.00
32.0	3.40	2.90	3.70	2.80	3.80	2.70
34.0	2.90	2.70	3.20	2.60	3.30	2.60
36.0	2.40	2.50	2.70	2.40	2.80	2.40
38.0	2.00	2.30	2.30	2.20	2.40	2.20
40.0	1.70	2.10	1.90	2.10		
42.0	1.40	2.00	1.50	2.00		
44.0	1.10	1.90	1.20	1.80		
46.0		1.70	0.90	1.70		
48.0		1.50				
50.0						
52.0						
54.0						
Telescoping mode	1	2	1	2	1	2



B: Load radius (m)

GR-1000EX-4 RATED LIFTING CAPACITIES

COUNTERWEIGHT 11.2 t ON RUBBER STATIONARY SMART CW1				
(Unit: × 1,000 kg)				
Over front				
B \ A	12.8	22.4	31.9	
4.0	27.40			
4.5	24.60			
5.0	22.30			
5.5	20.30			
6.0	18.60	15.30		
6.5	17.10	15.30		
7.0	15.70	15.30		
7.5	14.50	15.30	12.50	
8.0	13.40	14.30	12.50	
8.5	12.30	13.20	12.20	
9.0	11.00	12.20	11.40	
10.0		10.50	9.90	
11.0		8.90	8.70	
12.0		7.60	7.60	
14.0		5.70	6.00	
16.0		4.30	4.80	
18.0		3.20	3.70	
20.0		2.50	2.90	
22.0			2.20	
24.0			1.70	
26.0			1.30	
28.0			0.90	
D	0°		20°	
Telescoping mode	1, 2	2	2	
2nd Boom	0	0	0	
3rd Boom	0	33	67	
4th Boom	0	33	67	
Top Boom	0	33	67	

COUNTERWEIGHT 11.2 t ON RUBBER STATIONARY SMART CW1				
(Unit: × 1,000 kg)				
Over front				
C \ A	12.8	22.4		
0°	10.7	7.9	20.2	2.0

COUNTERWEIGHT 11.2 t ON RUBBER CREEP SMART CW1				
(Unit: × 1,000 kg)				
Over front				
B \ A	12.8	22.4	31.9	
4.0	21.10			
4.5	19.00			
5.0	17.10			
5.5	15.50			
6.0	14.00	15.30		
6.5	12.80	14.10		
7.0	11.70	13.00		
7.5	10.70	12.00	12.40	
8.0	9.80	11.10	11.60	
8.5	9.00	10.40	10.80	
9.0	8.30	9.60	10.00	
10.0		8.40	8.70	
11.0		7.30	7.60	
12.0		6.20	6.70	
14.0		4.60	5.00	
16.0		3.40	3.80	
18.0		2.60	3.00	
20.0		1.90	2.30	
22.0			1.70	
24.0			1.30	
26.0			0.90	
D	0°		29°	
Telescoping mode	1, 2	2	2	
2nd Boom	0	0	0	
3rd Boom	0	33	67	
4th Boom	0	33	67	
Top Boom	0	33	67	

COUNTERWEIGHT 11.2 t ON RUBBER CREEP SMART CW1				
(Unit: × 1,000 kg)				
Over front				
C \ A	12.8	22.4		
0°	10.7	6.1	20.2	1.4

A: Boom length (m)
B: Load radius (m)
C: Loaded boom angle (°)
D: Minimum boom angle (°) for indicated length (no load)

GR-1000EX-4 RATED LIFTING CAPACITIES

COUNTERWEIGHT 11.2 t ON RUBBER STATIONARY SMART CW2				(Unit: × 1,000 kg)
Over front				360° Rotation
B	A	12.8	22.4	31.9
4.0	28.50			
4.5	25.70			
5.0	23.30			
5.5	21.20			
6.0	19.50	15.30		
6.5	17.90	15.30	12.50	
7.0	16.50	15.30		
7.5	15.20	15.30	12.50	
8.0	14.10	15.30	12.50	
8.5	13.00	14.10	12.50	
9.0	11.80	13.00	12.10	
10.0		11.20	10.60	
11.0		9.50	9.30	
12.0		8.20	8.20	
14.0		6.10	6.50	
16.0		4.70	5.10	
18.0		3.60	4.00	
20.0		2.80	3.20	
22.0			2.50	
24.0			2.00	
26.0			1.50	
28.0			1.10	
D	0°		17°	
Telescoping mode	1, 2	2	2	
2nd Boom	0	0	0	
3rd Boom	0	33	67	
4th Boom	0	33	67	
Top Boom	0	33	67	

COUNTERWEIGHT 11.2 t ON RUBBER STATIONARY SMART CW2				(Unit: × 1,000 kg)
Over front				360° Rotation
C	A	12.8	22.4	
0°	10.7	8.3	20.2	2.2
D	0°			

COUNTERWEIGHT 11.2 t ON RUBBER CREEP SMART CW2				(Unit: × 1,000 kg)
Over front				360° Rotation
C	A	12.8	22.4	31.9
4.0	22.30			
4.5	20.00			
5.0	18.10			
5.5	16.40			
6.0	14.90	15.30		
6.5	13.60	14.90		
7.0	12.40	13.70		
7.5	11.40	12.70	12.50	
8.0	10.50	11.80	12.20	
8.5	9.70	11.00	11.40	
9.0	8.90	10.30	10.70	
10.0		8.90	9.40	
11.0		7.80	8.30	
12.0		6.80	7.10	
14.0		5.00	5.50	
16.0		3.80	4.20	
18.0		2.90	3.30	
20.0		2.20	2.60	
22.0			2.00	
24.0			1.50	
26.0			1.10	
D	0°		26°	
Telescoping mode	1, 2	2	2	
2nd Boom	0	0	0	
3rd Boom	0	33	67	
4th Boom	0	33	67	
Top Boom	0	33	67	

COUNTERWEIGHT 11.2 t ON RUBBER CREEP SMART CW2				(Unit: × 1,000 kg)
Over front				360° Rotation
C	A	12.8	22.4	
0°	10.7	6.6	20.2	1.7
D	0°			
C	A	12.8		

A: Boom length (m)

B: Load radius (m)

C: Loaded boom angle (°)

D: Minimum boom angle (°) for indicated length (no load)

NOTES TO LIFTING CAPACITY

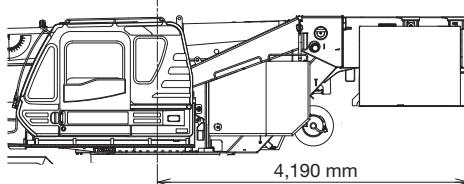
Ratings are in compliance with EN 13000. Weight of hook blocks and slings is part of the load, and is to be deducted from the capacity ratings. Consult operation manual for further details.

Notes: Data published herein is intended as a guide only and shall not be construed to warrant applicability for lifting purpose. Crane operation is subject to the computer charts (programmed in AML), load charts and operation manual supplied with the crane.

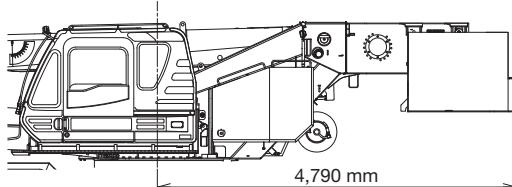
SMART COUNTERWEIGHT

You can increase the capacity by changing the mounting position of the counterweight.

SMART CW 1 status



SMART CW 2 status



- SMART CW 1: Counterweight is mounted at the front.
- SMART CW 2: Counterweight is mounted at the rear.

GR-1000EX-4 AXLE WEIGHT DISTRIBUTION CHART

		Kilograms		
		GVW	Front	Rear
Base machine		55,190	26,370	28,820
Add:	1. 100 ton hook block (7 sheaves)	750	1,386	-636
	2. 50 ton hook block (5 sheaves)	500	924	-424
	3. 35 ton hook block (3 sheaves)	450	832	-382
Remove:	1. 6.6 ton hook block	-165	-251	86
	2. Top jib	-336	-534	198
	3. Base jib	-867	-1,886	1,019
	4. Removable counterweight	-11,200	4,296	-15,496
Smart Counterweight (SMART CW2)		0	-1,700	1,700



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