

Hydraulic Crawler Crane

CK1100G

Max. Lifting Capacity : 110 US Tons

Max. Crane Boom Length : 200 ft

Max. Fixed Jib Combination : 190 ft + 60 ft



CK1100G

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CK1100G

SPECIFICATIONS

General Description



<i>Type</i>	Crawler mounted, Lattice boom, Hydraulic controlled
<i>Maximum lift capacity</i>	220,000 lbs (99,800 kg) @ 11' operating radius (40' boom)
<i>Basic boom length</i>	40' (12.2 m)
<i>Maximum boom length</i>	200' (61.0 m)
<i>Basic boom & jib length</i>	80' + 30' (24.4 m + 9.1 m)
<i>Maximum boom & jib length</i>	190' + 60' (57.9 m + 18.3 m)
<i>Working weight</i>	Approx. 198,500 lbs (90,020 kg)
<i>Ground bearing pressure</i>	Approx. 12.9 psi (101 kPa)
<i>Gradeability</i>	40%

Calculations to determine working weight, ground bearing pressure, and gradeability include the weight of the upper and lower works of the crane, counterweights, and carbody weights, 40' boom and hook block.

General Dimensions

<i>Height to top of gantry (lowered)</i>	10'10" (3.31 m)
<i>Width of upper machine w/operator's cab</i>	9'10" (2.99 m)*
<i>Radius of rear end (counterweights)</i>	15'5" (4.70 m)
<i>Counterweight ground clearance</i>	3'8" (1.12 m)
<i>Center of rotation to boom foot pin</i>	3'7" (1.10 m)
<i>Height from ground to boom foot pin</i>	5'10" (1.77 m)
<i>Height over gantry (raised)</i>	20'4" (6.19 m)
<i>Overall length of crawlers</i>	20'7" (6.28 m)
<i>Overall width of crawlers</i>	17'2" (5.24 m)
<i>Center to center, idler to sprocket</i>	17'10" (5.44 m)
<i>Shoe width</i>	36" (0.91 m)
<i>Ground clearance of body</i>	15" (0.39 m)

Working Speed

<i>Hoist line speed (front and rear drums)</i>	390 ~ 10 ft/min (120 ~ 3 m/min)
<i>Lowering line speed (front and rear drums)</i>	390 ~ 10 ft/min (120 ~ 3 m/min)
<i>Boom hoist line speed (front and rear drums)</i>	230 ~ 6.6 ft/min (70 ~ 2 m/min)
<i>Boom lowering line speed (front and rear drums)</i>	230 ~ 6.6 ft/min (70 ~ 2 m/min)
<i>Swing speed (max.)</i>	4.0 rpm
<i>Travel speed (high/low)</i>	1.07/0.71 mph (1.7/1.1 km/h)

Line speed based on single line, no load, and first layer of rope on the drum.

Upper Machinery

Power Plant:

<i>Diesel engine - make and model</i>	Hino J08E-UV (complies with Interim "Tier 4")
<i>No. of cylinders</i>	6
<i>Bore X stroke</i>	4-13/16" x 5-7/8" (122 mm x 150 mm)
<i>Cycles</i>	4
<i>Total displacement</i>	469 cu.in. (7.684 ℓ)
<i>Rated output SAE GROSS</i>	285 HP / 2,100 rpm (213 kW / 2,100 min ⁻¹)
<i>Maximum torque</i>	750 lbs-ft / 1,600 rpm (1,017 Nm / 1,600 min ⁻¹)
<i>Starter</i>	24 Volts / 5.0 kW
<i>Alternator</i>	24 Volts / 90 Amp
<i>Batteries</i>	Two 12 volt, 136 AH/5 HR capacity series connected.
<i>Radiator</i>	Corrugated type core, thermostatically controlled, with cleanout screen.
<i>Throttle</i>	Twist grip type hand throttle, electrically controlled, in conjunction with floor mounted pedal.
<i>Air cleaner</i>	Dry type with replaceable paper element.
<i>Fuel tank capacity</i>	106 US gal. (400 liters)
<i>Lube oil filters</i>	Full flow and by-pass type with element type.
<i>Fuel filter</i>	Replaceable paper element.



* - 10'5" wide with Catwalks on cab side only.
11' wide with Catwalks on both sides.



Self Lifting Device - Standard Equipment

Counterweight and Carbody weight

Counterweight Base	1 x 18,200 (8,310 kg)
Counterweight (R)	2 x 12,700 (5,750 kg)
Counterweight (L)	2 x 12,700 (5,750 kg)
Total Counterweight	69,000 (31,310 kg)

Carbody weight	2 x 15,900 (7,200 kg)
Total Carbody weight	31,800 (14,400 kg)

Hydraulic pumps:

Load hoist, boom hoist, and propel

2 piston pumps, max flow rate
67.3 US gal/min x 2 (255 ℓ/min x 2)

Swing

1 piston pump, max flow rate
46.7 US gal/min (177 ℓ/min)

Control system and auxiliary

2 Gear pumps, max flow rate
16.3 US gal/min + 10.6 US gal (61.6 ℓ/min + 40.5 ℓ/min)

Brake cooling system

2 gear pumps, max flow rate
19.4 US gal/min x 2 (73.5 ℓ/min x 2)

Gantry

This high folding type gantry is fitted with a sheave frame for boom reeving. Hydraulic lift is standard. It provides full up, full down positions with linkage.

Operators cab

Totally enclosed from weather, this full-vision cab has safety glass all around. The adjustable, high-backed seat with armrest is capable of adjustment with or without the control console. Auxiliary controls and instruments are on a side mounted console. A signal horn, windshield wipers, air conditioner/heater, and swing limiter are all standard features.

Controls

At the operator's right are console-mounted adjustable short levers for the front and rear drum and the boom hoist control. Fine inching control and free fall activation switches are built in to the levers. Beside the seat on the right are two short levers for propel control, plus individual speed dial controls for front, rear, and boom drums. At the left is the console mounted swing lever, an optional 3rd drum control, switches for the front, rear, and boom drum pawls, and the engine start/stop key. A swing brake control switch and signal horn button are on the swing lever.

Swing:

Swing unit

Hydraulic motor driving spur gears through planetary reducers to output swing pinion for 360 degree rotation.

Swing brake

Spring set hydraulically released multiple disk brake mounted on swing motor.

Swing circle

Single row ball bearing with an integral internally cut swing gear.

Swing lock

Manual, 4 position lock for transportation.



Hydraulic system

Maximum pressure rating
4,626 psi (31.9MPa)

Cooling

Oil to air heat exchanger

Filtration

Full flow filters with replaceable paper elements

Reservoir capacity

116.2 US gal. (440 liters)



Line pull:

Max. line pull (single line) - 46,800 lbf (208 kN)

Rated line pull - 25,200 lbf (112 kN)

Lower Machinery

Crawlers:

Crawler assemblies can be hydraulically extended or retracted for wide track operation or retracted for transportation. Crawler belt tension adjusted with hydraulic jack and maintained by shims between the idler block and frame.

Crawler drive:

The independent two speed hydraulic propel drive is built into each crawler side frame. Each drive consists of a hydraulic motor driving a propel sprocket through a planetary gear box. The hydraulic motor and gear box are built into the crawler side frame within the shoe width.

Crawler brakes:

Spring set, hydraulically released, multiple disk-type parking brakes are built into each propel drive.

Steering mechanism:

A hydraulic propel system provides both skid steering and counter rotating steering.

Crawler shoe:

66 shoes - 36" wide, each crawler.

Track rollers:

The track rollers are sealed for maintenance free operation.

Front drum:

Front and rear drums for load hoist powered by hydraulic variable plunger motors, driven through planetary reducers.

Negative brake

A spring-set, hydraulically released multiple disk brake is mounted on the hoist motor and operated through a counter-balance valve.

Drum lock External ratchet for locking drum

Drums:

Front drum -

614 mm P.C.D. x 617 mm Lg., grooved for 26 mm wire rope. Rope capacity is 771' (235 m) working length and 1,181' (360 m) storage length.

Rear drum -

614 mm P.C.D. x 617 mm Lg., grooved for 26 mm wire rope. Rope capacity is 525' (160 m) working length and 1,181' (360 m) storage length.

3rd drum (optional) -

550 mm P.C.D. x 545 mm Lg., grooved for 22 mm wire rope. Rope capacity is 476' (145 m) working length and 1,099' (335 m) storage length.



Crane Attachments

Boom:

The welded lattice construction uses tubular, high-tension steel chords with pin connections between sections.

<i>Maximum boom length</i>	200' (61.0 m)
<i>Basic boom length</i>	40' (12.2 m)
<i>Boom base section</i>	19'7" (5.97 m)
<i>Boom tip section</i>	22'8" (6.91 m)

Boom insert (optional):

Optional boom inserts are available to provide extension capabilities. They are robotic welded, laser aligned, lattice constructed with tubular, high-tension steel chords and pin connections.

<i>Boom insert</i>	10' (3.1 m), 20' (6.1 m), 40' (12.2 m)
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Jib (optional):

Jib inserts are available to provide extension capabilities. The optional jib employs welded lattice construction with tubular, high-tension steel chords with pin connections between sections.

<i>Maximum jib length</i>	60' (18.3 m)
<i>Basic jib length</i>	30' (9.1 m)
<i>Jib base section</i>	15'9" (4.8 m)
<i>Jib tip section</i>	16'5" (5.0 m)
<i>Jib insert</i>	10' (3.1 m), 20' (6.1 m)

Jib is useable on booms of 80' (24.4 m) through 190' (57.9 m)



Auxiliary sheave (optional):

Auxiliary sheave is extendible on booms of 40' (12.2 m) through 190' (57.9 m)

Boom hoist reeving:

Twelve (12) parts of 5/8" (16.0 mm) diameter high strength wire rope.

Boom backstops:

Telescopic type with spring bumper

Standard Equipment

Lights:

- Two (2) front flood lights
- One (1) cab inside light

Gauges and warning display

Gauges

- One (1) tachometer
- One (1) hour meter
- One (1) fuel gauge
- One (1) water temperature

Warning display

- Battery charge
- Engine oil pressure
- Air cleaner
- Engine oil filter
- Control main pressure
- Hydraulic oil temperature
- DPF condition indicator

Others

- Air conditioner/heater
- Drum turn indicator (front/rear)
- Foot pedal / throttle
- Electric transfer pump
- Counterweight self-removal device
- KCross Telematics
- Free fall winches

Safety Service

- Function lock lever
- Swing Limiter
- Boom over hoist limit switch
- Signal horn
- Front/rear hoist drum lock
- Swing Limiter (Buzzer, lamps, or stops)
- Overload prevention device (LMI)
- Hook over hoist shut off (Anti-two-block)
- Boom angle indicator
- Travel alarm

Safety Service (cont)

- Level indicator
- Boom hoist drum lock
- Swing locks, anti drift, and mechanical
- Boom backstops
- Boom base catwalk
- Upper machinery catwalk, handrails and ladder

Tools and Accessories

A set of tools and accessories are furnished.

Optional Equipment

- Third drum
- Hook block
- Hook ball
- Auxiliary sheave
- Fixed jib
- Boom inserts
- Carbody erection cylinder

G-Mode

The G-modes are a standard exclusive energy and fuel saving system, with up to 30% in fuel savings. The G-Mode eliminates needless operations and engine functions allowing for reduced fuel consumption by using three basic modes that are all operator selectable.

Auto Idling Stop Mode (AIS):

An Industry First

The AIS mode can conserve fuel by stopping the engine, with an operator prompt, after 10 seconds of idling time. Restarting the engine is simple by just twisting the throttle.



G-Winch Mode:

An Industry First

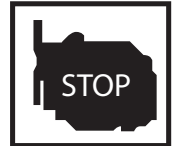
The G-winch mode can produce maximum winch line speed at a low engine RPM.



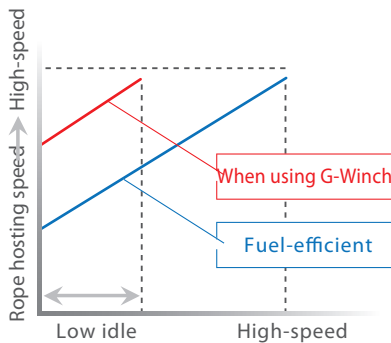
G-Engine



G-Winch



AIS



The high speed mode allows the line to be raised or lowered at maximum line speed without raising engine speed when lifting without a load.

G-Engine Mode:

An Industry First

The G-engine mode limits maximum engine speed to 1,750 RPM and controls the pumps to make engine operation in the most efficient condition.



Exhaust cleaning DPR:

The DPR (diesel particulate active reduction system) burns PM (particulate matter) collected by the DPF (diesel particulate filter) from the diesel exhaust gas, increasing the PM collection efficiency of the DPF, and recovering to purify the exhaust. This means that the exhaust gas from the diesel engine is cleaner, conforming with current EPA Interim Tier 4 regulations.



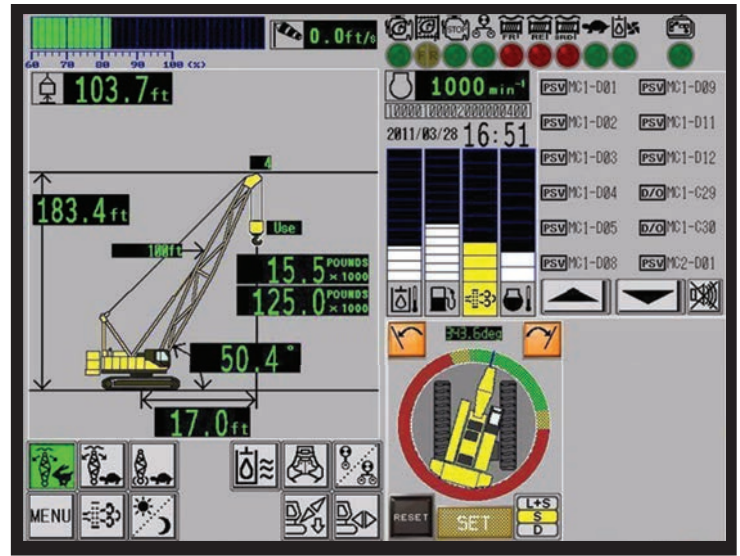
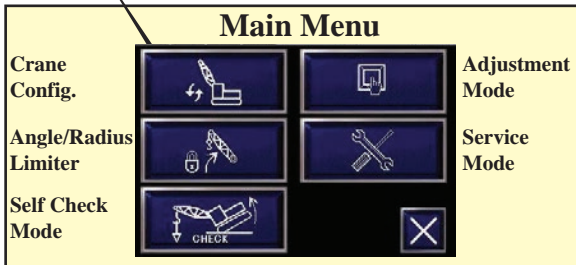
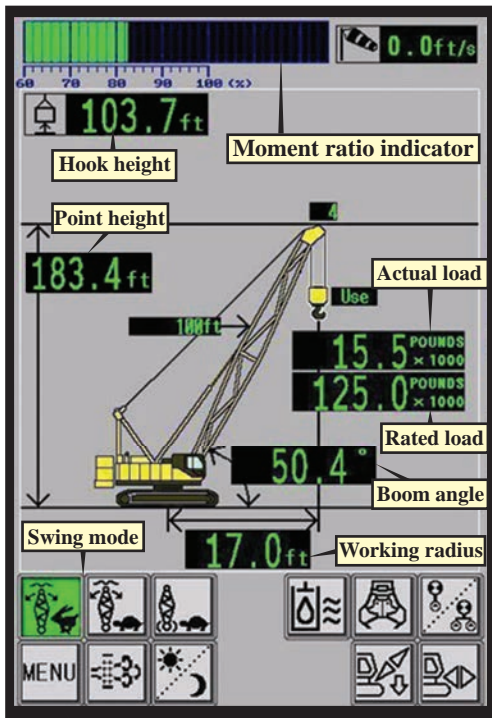
A new clean diesel system - although diesel engines consume less fuel and emit less CO₂ than gasoline engines, they also emit more harmful particulate matter and nitrogen oxide (NO_x). The "new clean energy system" engine utilizes a DPF to reduce particulate matter, which is also kept to a minimum using negative ions. This system requires the use of low sulfur diesel.

* Warning: High sulfur diesel will damage the engine.

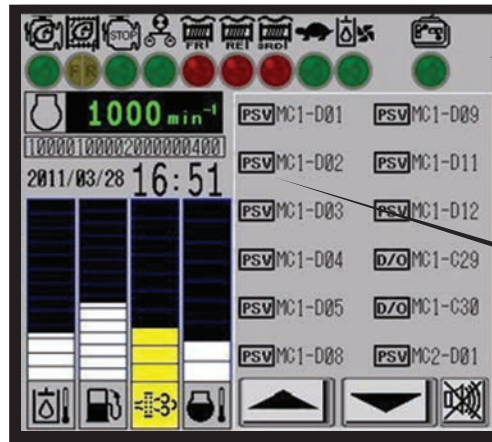
Load Moment Indicator (LMI)

The Kobelco newly designed 12" touch panel screen with sunshade and screen protector is an industry first. This intuitive and easy to understand new touch screen monitor gives the operator a full display of essential data. Universal pictograms are used providing easy visual recognition, making this new technology easy to read and understand the information. This new monitor includes: Hook Height, Engine Speed, Display Lamp of standard functions, Gauges, Over-Swing Prevention Device, Switches, and Error Messages.

Moment Limiter (Left Side)



Gauges (Right Side)

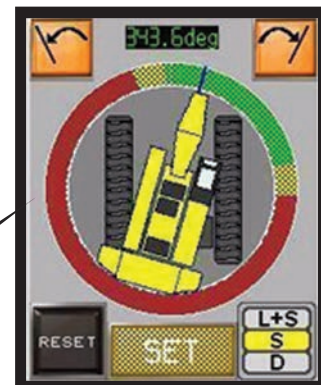


Display Lamp
 Display lamp Remote control connection
 G-Engine Oil cooler operation
 G-Winch Free fall (auxiliary)
 AIS operation Free fall (3rd)
 Slow speed state

Error Message
 Touch to display details in a pop-up window.

Gauges
 Hydraulic oil temperature
 Fuel gauge
 Diesel particulate filter gauge
 Coolant temperature
 * Figures for the above gauges are only shown when the bar is touched.

Over-Swing Prevention
 An over-swing preventative device is standard. It limits the swing of the crane. Configuration is simple and can be done from the touch panel.



Winch Performance Data

Note:

Line speed and line pull based on Hino J08E-UV at 2,100 rpm.

Line speed and line pull based on single line.

Max. line pull is based on referential performance, not wire rope strength.

Front & Rear Drum

Wire Rope Diameter = 26 mm

Rated Line Pull = 25,200 lbf (112 kN)

Maximum Line Pull = 46,800 lbf (208 kN)

Total Storage Capacity = 1,185 ft (361.2 m)

		Line speed (ft/min)					
Layer		1	2	3	4	5	6
0		393	421	449	476	504	
5,000		393	421	449	476	504	
10,000		387	414	440	467	494	
Line Pull (lbs)	15,000	360	360	348	348	348	storage only
	20,000	270	270	261	261	261	
	25,200	214	214	199	187	173	
	30,000	166	149	140	138	136	
	35,000	120	118	114	109		
	40,000	100	95				
	Storage Capacity (ft)	139	149	159	169	179	

Third Drum (for Load hoist)

Wire Rope Diameter = 22 mm

Rated Line Pull = 17,000 lbf (78.5 kN)

Maximum Line Pull = 32,400 lbf (144 kN)

Total Storage Capacity = 1,099 ft (334.9 m)

		Line speed (ft/min)					
Layer		1	2	3	4	5	6
0		394	394	394	394	394	
5,000		394	394	394	394	394	
10,000		227	227	227	227	227	
Line Pull (lbs)	15,000	147	152	161	170	179	storage only
	17,000	142	151	160	169	178	
	20,000	140	149	158	167	176	
	25,000	138	147	155	164	172	
	30,000	136	144				
Storage Capacity (ft)	130	139	148	157	166	175	

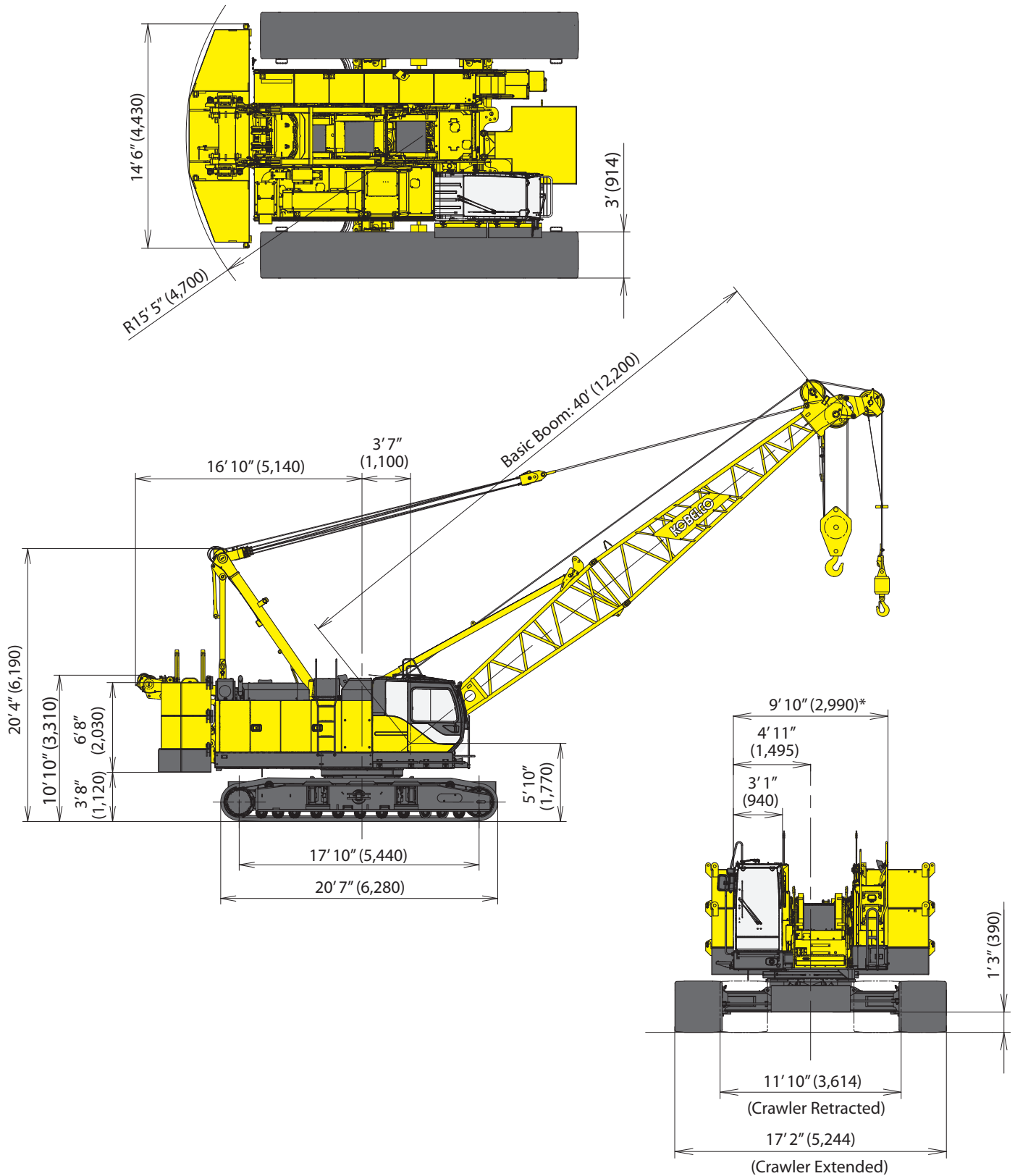
Wire Rope Specifications

Use	Construction	No load diameter	Length	Safety Factor	Required minimum breaking strength
Front drum	6 x 29 Filler IWRC Right hand lay, Regular lay	1.049" to 1.070" (26.65 mm to 27.17 mm)	771ft (235 m)	3.5: 1	120,048 lbf (534 kN)
Rear drum	6 x 29 Filler IWRC Right hand lay, Regular lay	1.049" to 1.070" (26.65 mm to 27.17 mm)	525ft (160 m)	3.5: 1	120,048 lbf (534 kN)
Boom drum	6 x 31 P Warrington seal Right hand lay, Regular lay	0.646" to 0.658" (16.40 mm to 16.72 mm)	492ft (150 m)	3.5: 1	47,210 lbf (210 kN)
Third drum (Optional)	6 x 29 Filler IWRC Right hand lay, Regular lay	0.888" to 0.905" (22.55 mm to 22.99 mm)	476ft (145 m)	3.5: 1	81,606 lbf (363 kN)

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SPECIFICATIONS

General Dimensions



* - 10'5" wide with Catwalks on cab side only.
11' wide with Catwalks on both sides.

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SPECIFICATIONS

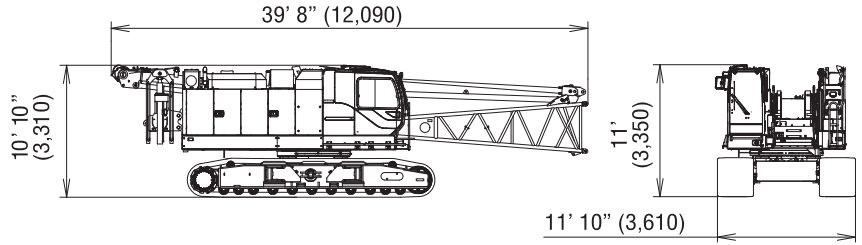
Dimensions and Weight

Dimensions: ft-in (mm) Weight: lbs (kg)

Base Machine - 1

Weight: 95,200 lbs (43,150 kg)

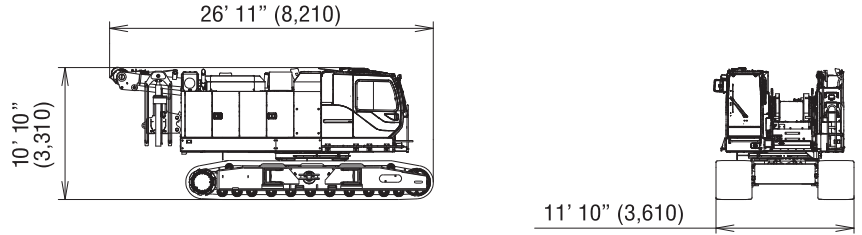
Boom base, gantry, crawlers, self removal unit, and wire ropes (front, rear, and boom hoist)



Base Machine - 2

Weight: 90,600 lbs (41,090 kg)

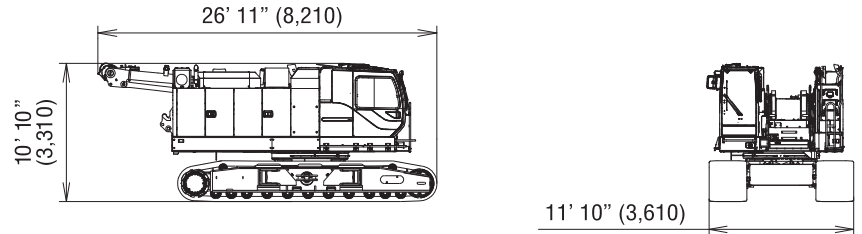
Gantry, crawlers, self removal unit, and wire ropes (front, rear, and boom hoist)



Base Machine - 3

Weight: 88,700 lbs (40,230 kg)

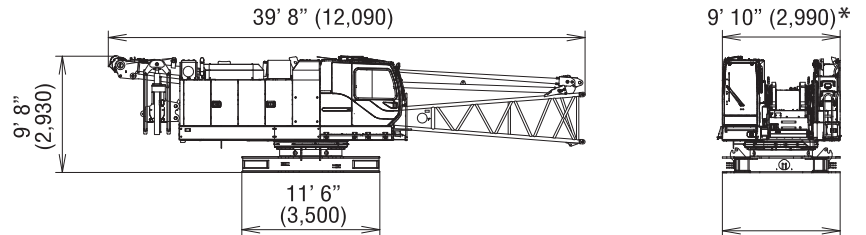
Gantry, crawlers, and wire ropes (front, rear, and boom hoist)



Base Machine - 4

Weight: 61,500 lbs (27,880 kg)

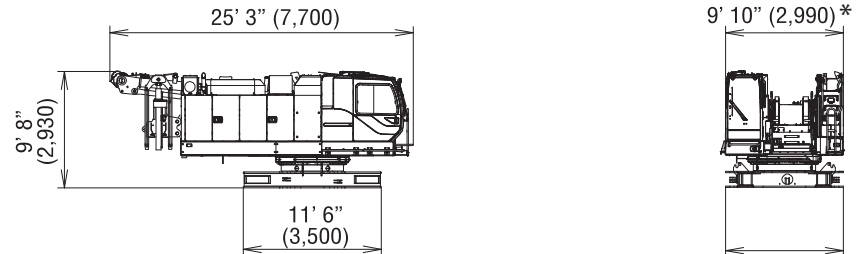
Boom base, gantry, self removal unit, and wire ropes (front, rear, and boom hoist)



Base Machine - 5

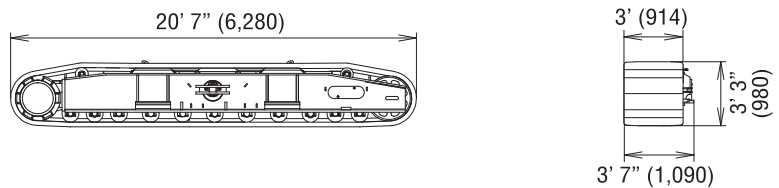
Weight: 56,900 lbs (25,820 kg)

Gantry, self removal unit, and wire ropes (front, rear, and boom hoist)



Crawler

Weight: 16,850 lbs (7,640 kg)



* - 10'5" wide with Catwalks on cab side only.
11' wide with Catwalks on both sides.

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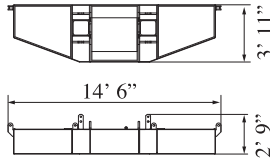
SPECIFICATIONS

Dimensions and Weight

Dimensions: ft-in (mm) Weight: lbs (kg)

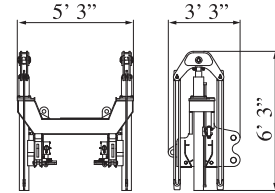
Counterweight Base

Weight: 18,200 lbs (8,310 kg)



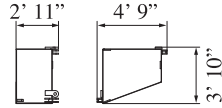
Self Removal Unit

Weight: 1,900 lbs (870 kg)



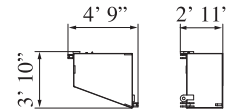
Counterweight (R)

Weight: 12,700 lbs (5,750 kg)



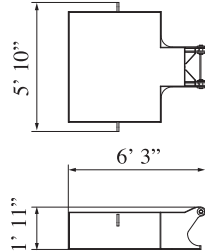
Counterweight (L)

Weight: 12,700 lbs (5,750 kg)



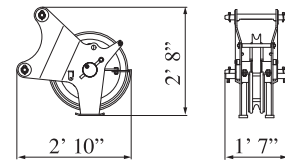
Carbody Weight

Weight: 15,900 lbs (7,200 kg)



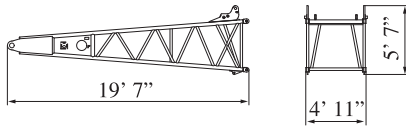
Auxiliary Sheave

Weight: 430 lbs (195 kg)



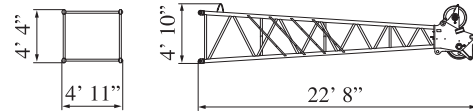
Boom Base

Weight: 3,400 lbs (1,517 kg)



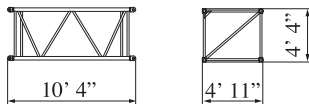
Boom Tip

Weight: 2,900 lbs (1,292 kg)
Includes cable roller and guy lines



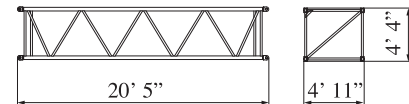
10 ft (3.0 m) Insert Boom

Weight: 800 lbs (364 kg)
Includes cable roller and guy lines



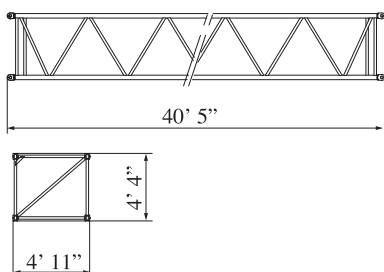
20 ft (6.1 m) Insert Boom

Weight: 1,400 lbs (613 kg)
Includes cable roller and guy lines



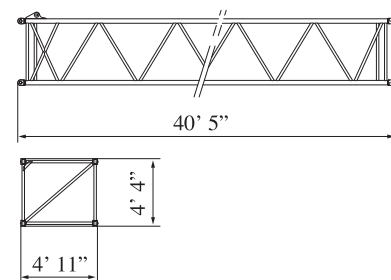
40 ft (12.2 m) Insert Boom

Weight: 2,400 lbs (1,098 kg)
Includes cable roller and guy lines



40 ft (12.2 m) Insert Boom (with lug)

Weight: 2,500 lbs (1,113 kg)
Includes cable roller and guy lines

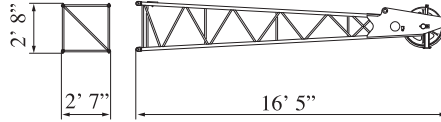


Dimensions and Weight

Dimensions: ft-in (mm) Weight: lbs (kg)

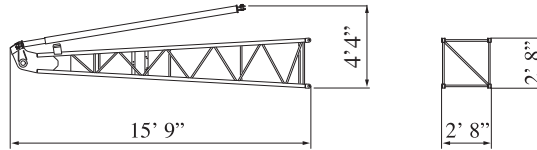
Jib Tip

Weight: 500 lbs (227 kg)
Includes cable roller.



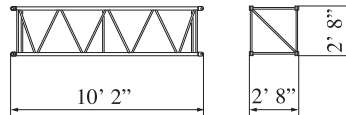
Jib Base and Strut

Weight: 1,400 lbs (637 kg)
Includes guy line.



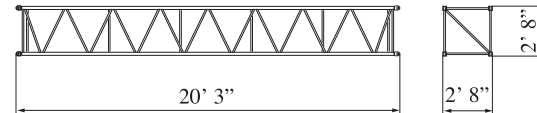
10 ft (3.0 m) Insert Jib

Weight: 280 lbs (128 kg)
Includes cable roller and guy line.



20 ft (6.1 m) Jib Insert

Weight: 480 lbs (218 kg)
Includes cable roller and guy line.



Transportation Plan

Refer to pages 10-12

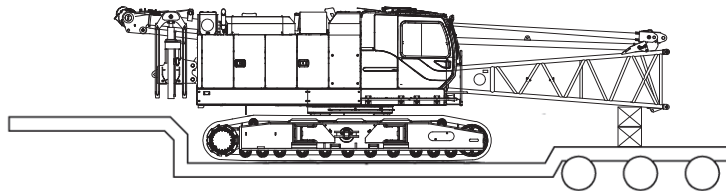
Shipping plan for 150 ft Boom

Description of Item	Weight		Trailer Loads			
	lbs	(kg)	#1	#2	#3	#4
Base Machine with Boom Base and Crawlers*	95,200	(43,150)	1			
Counterweight Base	18,200	(8,310)		1		
Counterweight (L)	12,700	(5,750)			2	
Counterweight (R)	12,700	(5,750)		1	1	
Carbody Weight	15,900	(7,200)				2
10 ft Insert Boom and Guy Line	800	(364)			1	
20 ft Insert Boom and Guy Line	1,400	(613)		1		
40 ft Insert Boom and Guy Line	2,400	(1,098)			1	
40 ft Insert Boom (w/ Lug) and Guy Line (A)	2,500	(1,113)				1
Boom Tip and Guy Line	2,900	(1,292)		1		
Jib Base and Guy Line	1,400	(637)				
10 ft Insert Jib and Guy Line	280	(128)				
20 ft Insert Jib and Guy Line	480	(218)				
Jib Tip	500	(227)				
75 Ton Block	3,000	(1,361)		1		
13 Ton Ball	800	(365)		1		
Ladder Assembly	90	(41)				1
Support Box	5,000	(2,268)				1
Approx. Total Shipping Weight	lbs		95,200	39,000	41,300	39,390
	(kg)		(43,150)	(17,691)	(18,712)	(17,822)

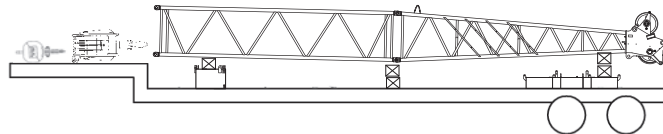
* Third drum is not included. Add 4,200 lbs if third drum is installed.

Loads for transportation were targeted at 45,000 lbs, 8' 6" wide, 48' long and 13' 6" high from ground, 48" step deck. This may vary depending on truck/trailer weight, style of trailer and state law.

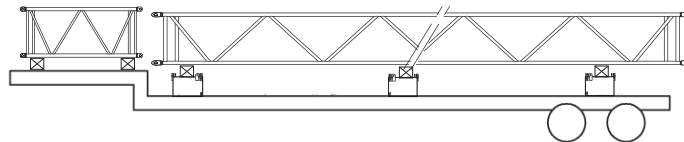
Trailer #1



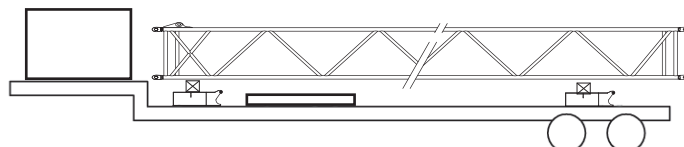
Trailer #2



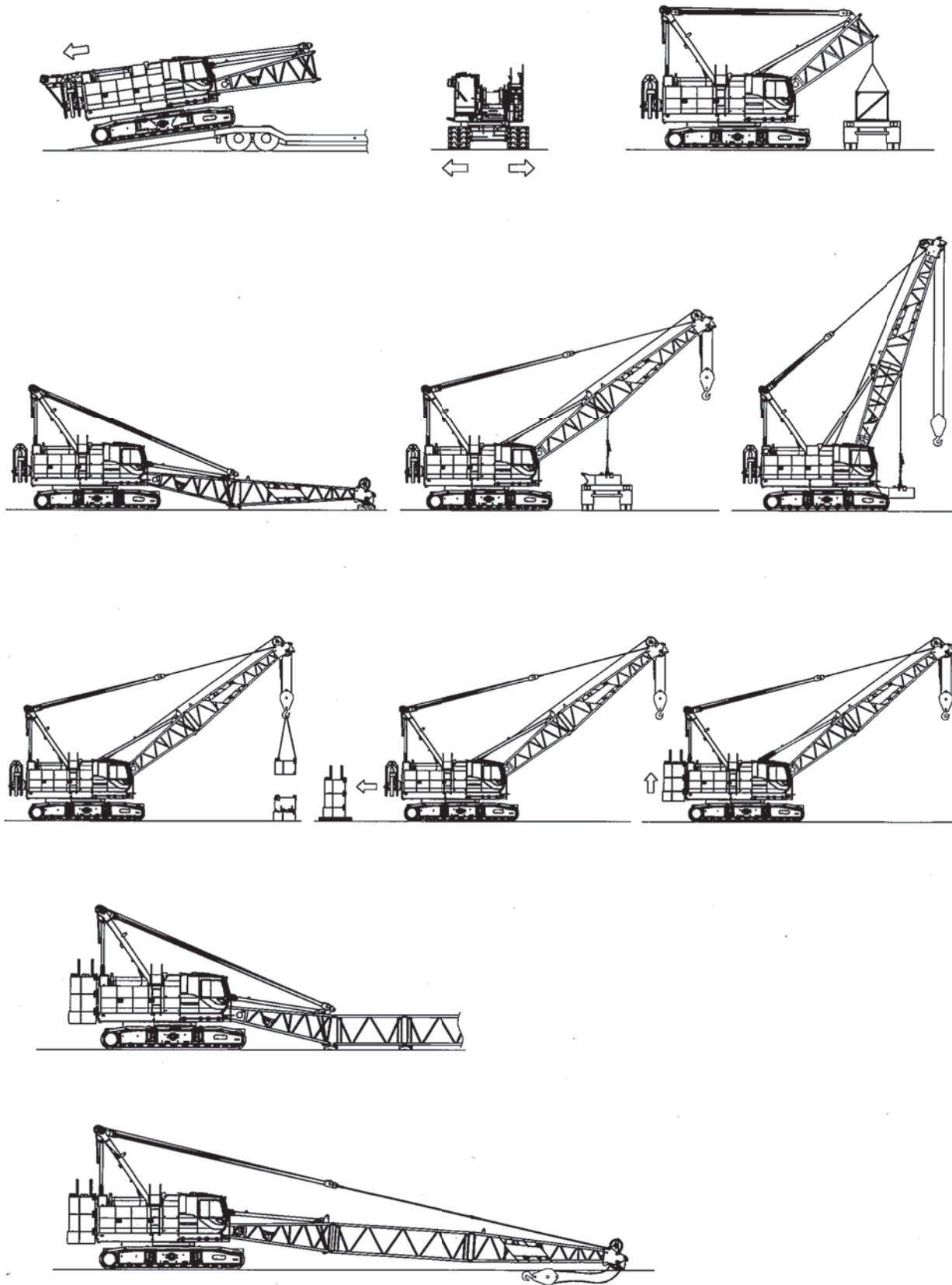
Trailer #3



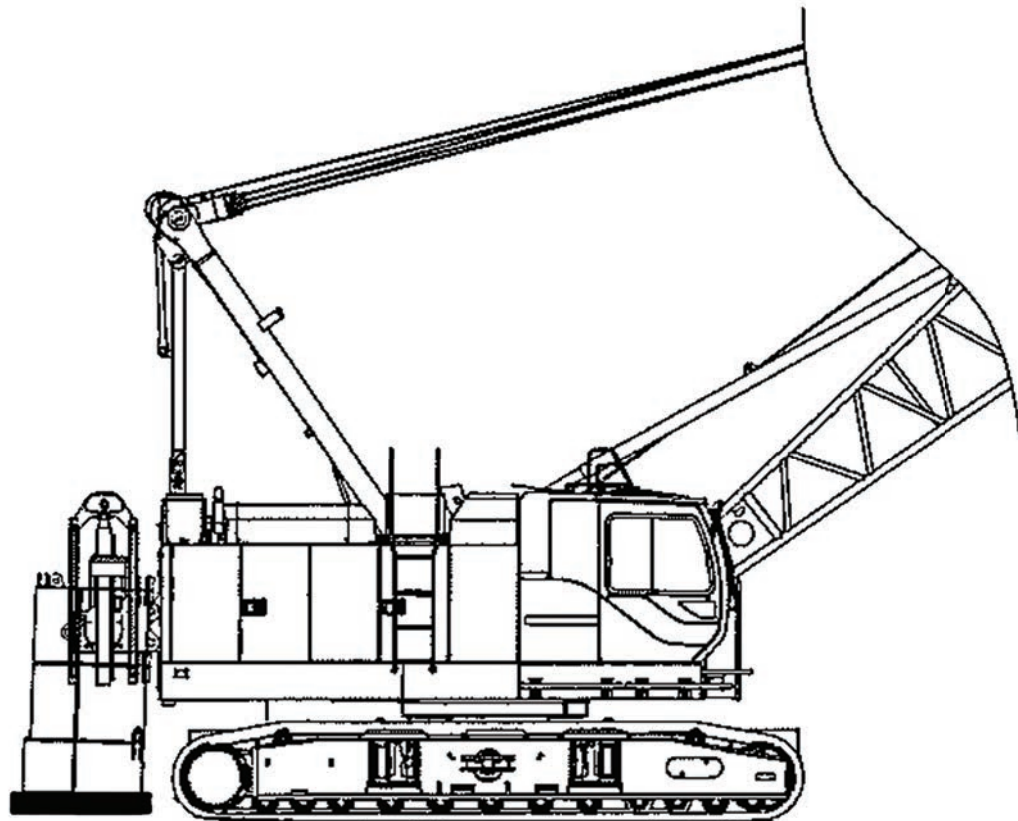
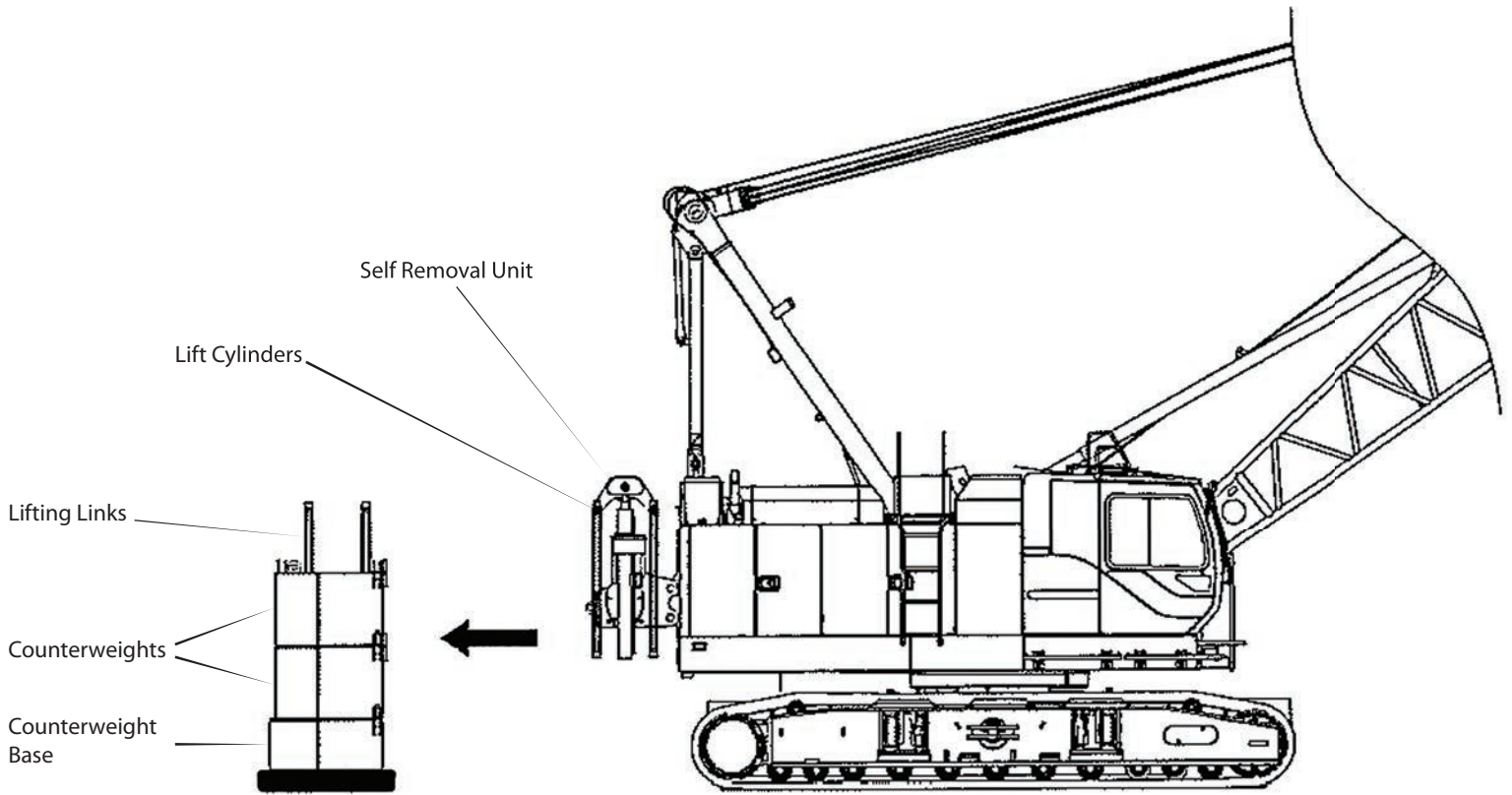
Trailer #4



Self-Assembly Procedure



Counterweight Self-Removal Device



Boom and Fixed Jib Arrangement

Boom Arrangement

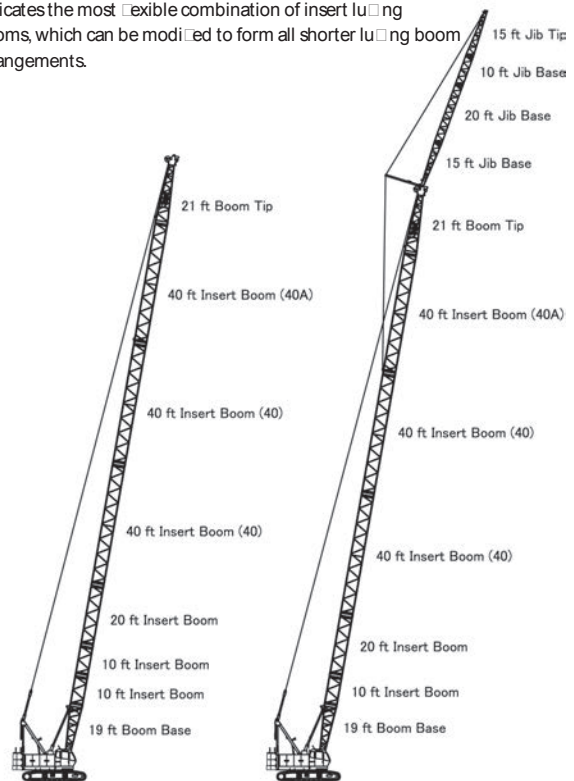
Boom length ft (m)	Boom arrangement
40 (12.2)	
50 (15.2)	
60 (18.3)	※
70 (21.3)	※
80 (24.4)	※
90 (27.4)	※
100 (30.5)	※
110 (33.5)	※
120 (36.6)	※
130 (39.6)	※
140 (42.7)	※

Boom length ft (m)	Boom arrangement
150 (45.7)	※
160 (48.8)	※
170 (51.8)	※
180 (54.9)	※
190 (57.9)	※
200 (61.0)	※

Symbol	Boom Length	Remarks
	20.0 ft (6.1 m)	Boom Base
	20.0 ft (6.1 m)	Boom Top
	10.0 ft (3.1 m)	Insert Boom
	20.0 ft (6.1 m)	Insert Boom
	40.0 ft (12.2 m)	Insert Boom
	40.0 ft (12.2 m)	Insert Boom with lug

↗ mark shows the guy line installing position when the jib is used.

※ indicates the most flexible combination of insert lugs booms, which can be modified to form all shorter lugging boom arrangements.



Main Boom - 200 ft (61.0 m)

Main Boom - 190 ft (57.9 m)
Fixed Jib - 60 ft (18.3 m)

Fixed Jib Arrangement

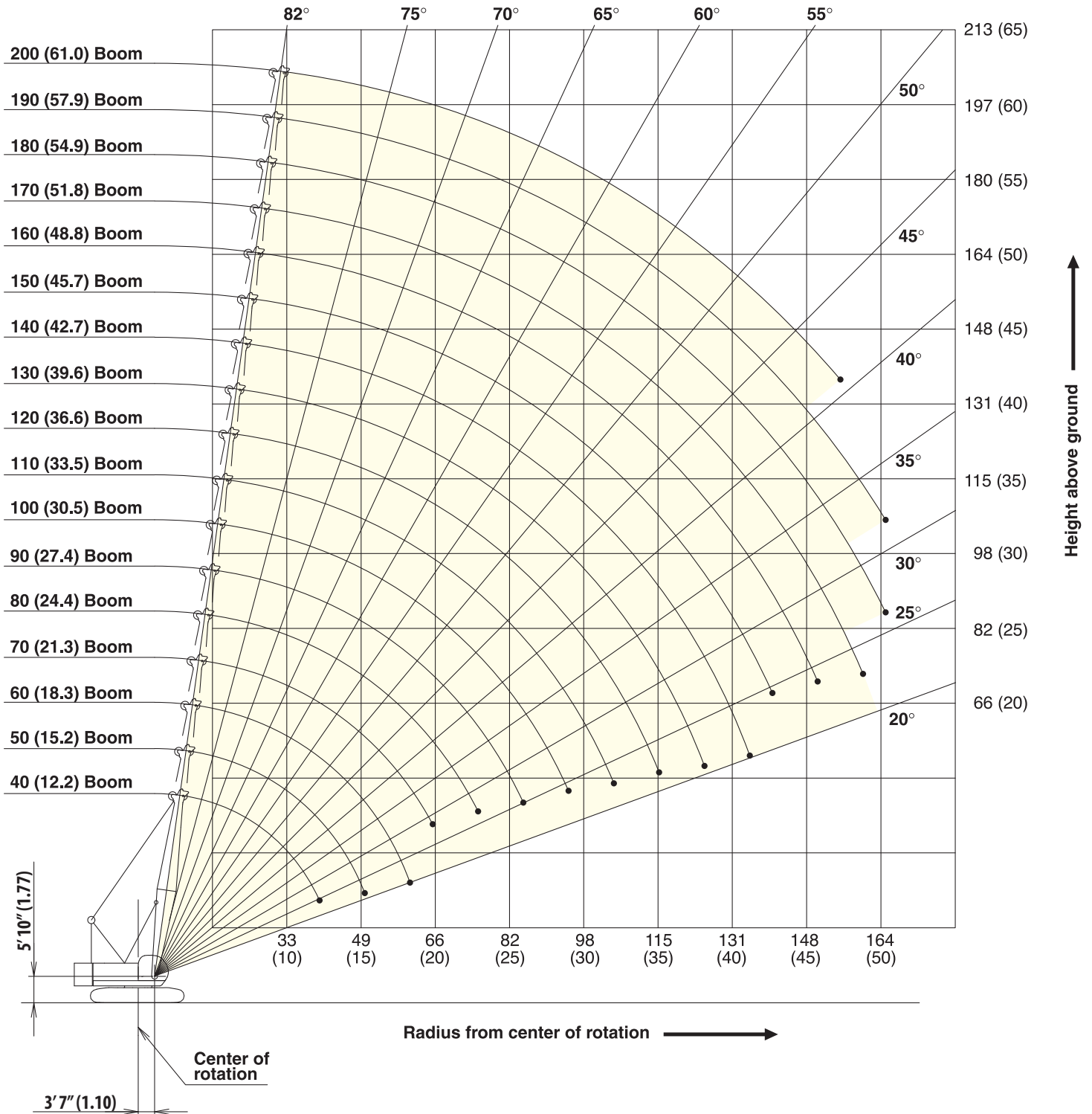
Crane boom length	Jib length ft (m)	Jib arrangement
80 ft (24.4 m)	30 (9.1)	
	40 (12.2)	
190 ft (57.9 m)	50 (15.2)	
	60 (18.3)	

Symbol	Jib Length	Remarks
	15 ft (4.6 m)	Jib Base
	15 ft (4.6 m)	Jib Top
	10 ft (3.0 m)	Insert Jib
	20 ft (6.1 m)	Insert Jib

Working Ranges

Main Boom

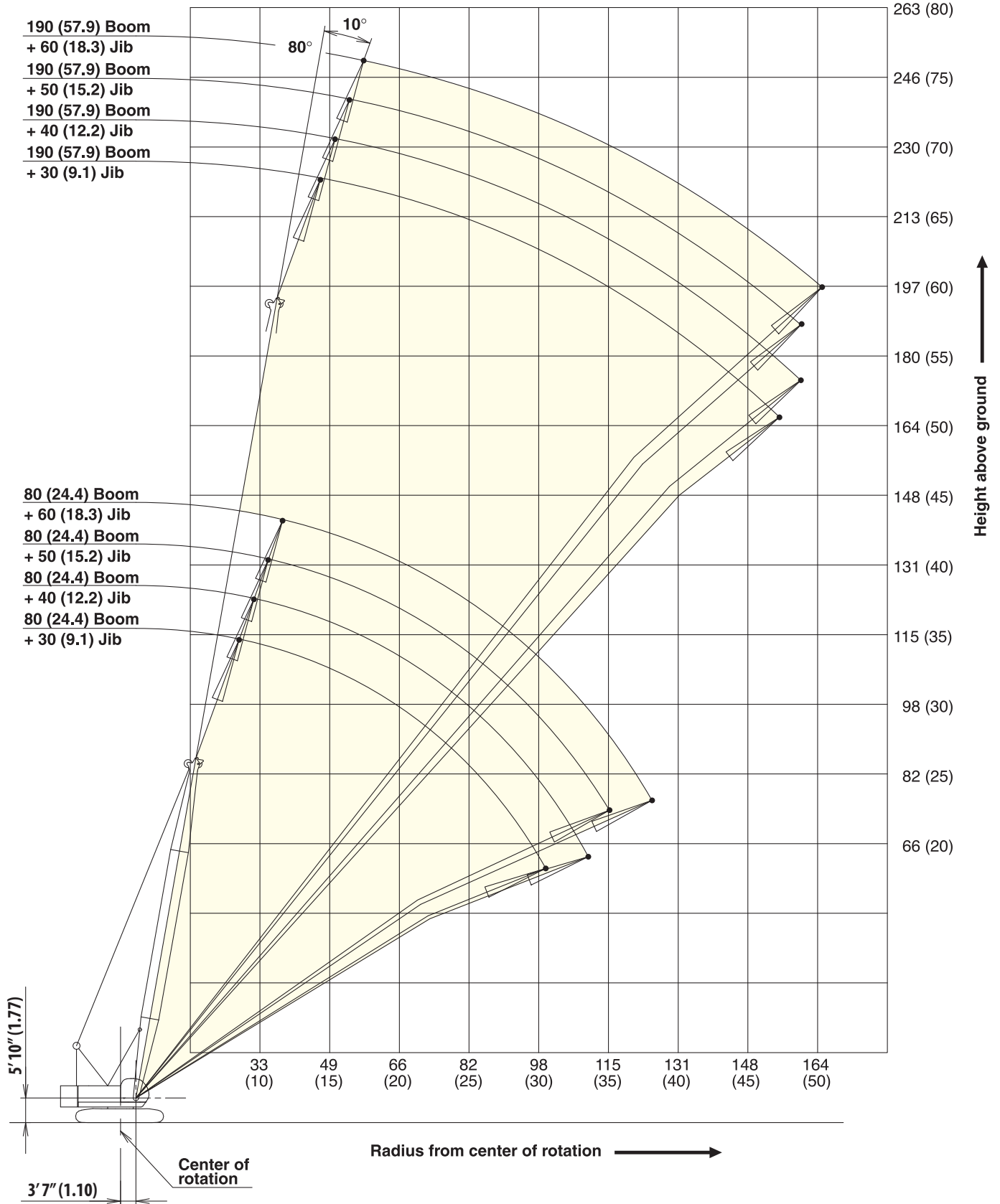
Unit : ft (m)



Working Ranges

Fixed Jib 10°

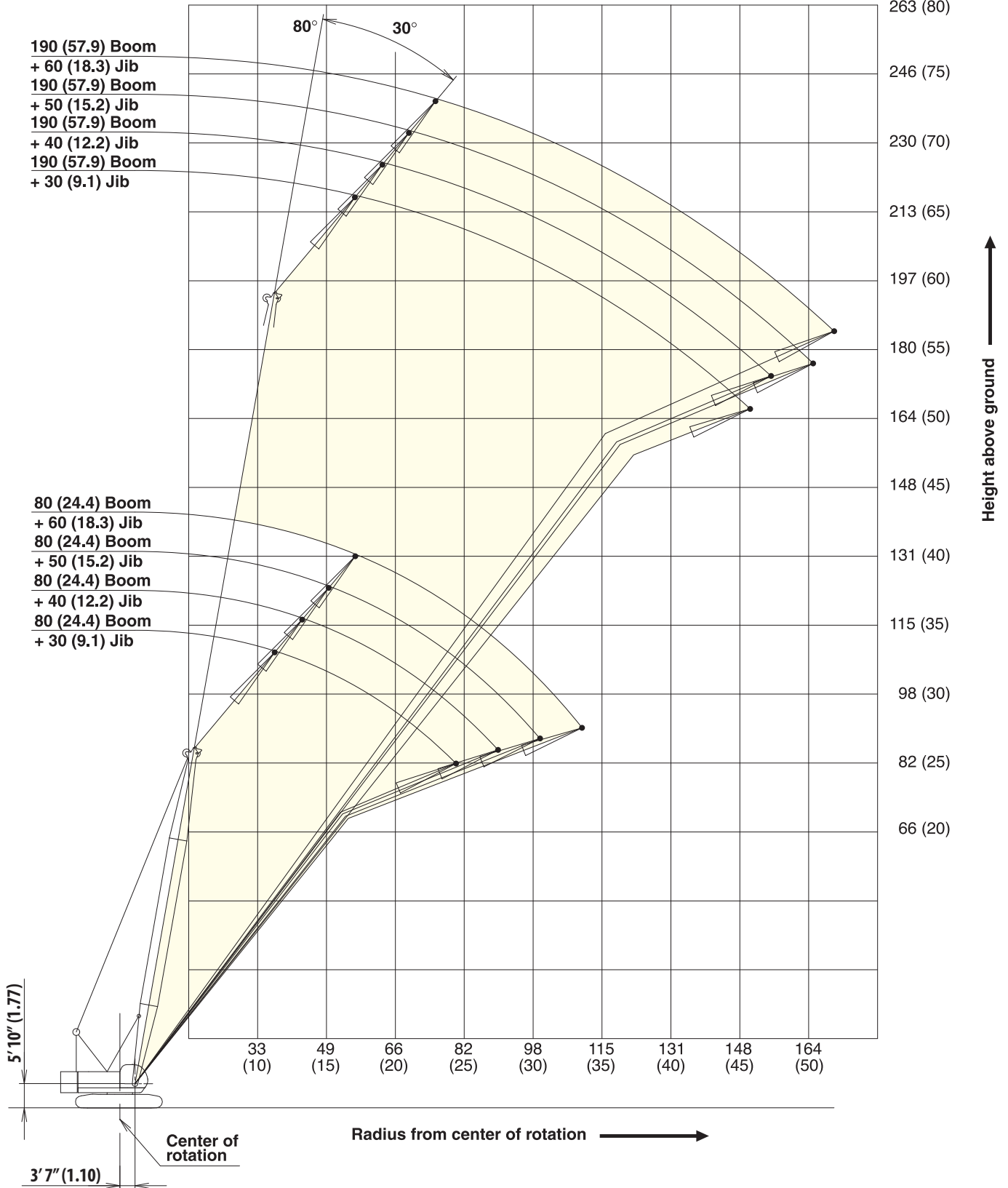
Unit : ft (m)



Working Ranges

Fixed Jib 30°

Unit : ft (m)



Supplemental Data

1. Rated loads included in the charts are the maximum allowable freely suspended loads at a given boom length, boom angle and load radius, and have been determined for the machine standing level on firm supporting surface under ideal operating conditions. The user must limit or de-rate rated loads to allow for adverse conditions (such as soft or uneven ground, out-of-level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, multiple machine lifts, and traveling with a load).
2. Rated loads do not exceed 75% of minimum tipping loads. Rated loads based on factors other than machine stability such as structural competence are shown by asterisk * in the charts.
3. The machine must be reeved and set-up as stated in the operation manual and all the instruction manuals if these manuals are missing, obtain replacements.
 - The crane must be leveled to within 1% on a firm supporting surface.
 - Boom backstops are required for all boom length.
 - Gantry must be fully raised position for all operations.
4. Do not attempt to lift where no radius on load is listed as crane may tip or collapse.
5. Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine rated loads.
6. Weight of hooks, hook blocks, slings and other lifting devices are a part of the total load. Their total weight must be subtracted from the rated load to obtain the weight that can be lifted.
7. When lifting over boom point with jib or auxiliary sheave, rated loads for the boom must be deducted as shown below.

Jib Length	Aux Sheave	30 ft	40 ft	50 ft	60 ft
Deduct (lbs)	430	2,500	3,700	5,100	6,700

8. The total load that can be lifted by jib is limited by rated jib loads.
9. Boom lengths for jib mounting are 80 ft (24.4 m) to 190 ft (57.9 m)
10. The total load that can be lifted by the auxiliary sheave is the value for 430 lbs deducted from rated load for the boom (without auxiliary sheave installed); however, the auxiliary sheave rated load should not exceed 24,000 lbs.

11. Boom lengths that can attach auxiliary sheave are from 40 ft (12.2 m) to 190 ft (57.9 m).
12. The boom should be erected over the front of the crawlers, not laterally. When lifting from or lowering to the ground the boom at length of 190 ft (57.9 m) with jib, the blocks for erections must be placed at the end of the crawlers.
13. Least stable position is over the side.
14. Maximum hoist load for number of reeving parts of line for hoist rope.

Maximum Load for Main Boom

No. of Parts of line	1	2	3	4	5
Maximum Loads (lbs)	25,200	50,400	75,600	100,800	126,000

No. of Parts of line	6	7	8
Maximum Loads (lbs)	151,200	176,400	220,000

Maximum Load for Fixed Jib

No. of Parts of line	1
Maximum Loads (lbs)	24,000

Maximum Load Auxiliary Sheave

No. of Parts of line	1
Maximum Loads (lbs)	24,000

15. Rated loads listed apply only to the machine as originally manufactured and designed by KOBELCO CRANES CO., LTD. Modifications to this machine or use of equipment other than that specified can reduce operating capacity.
16. Designed and rated to comply with ANSI Code B30.5.

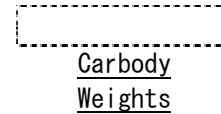
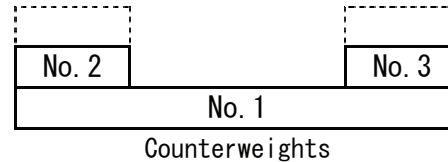
Supplemental Data - Clamshell

1. Rated loads included in the charts are the maximum allowable freely suspended loads at a given boom length, boom angle and load radius, and have been determined for the machine standing level on firm supporting surface under ideal operating conditions. The user must limit or de-rate rated loads to allow for adverse conditions (such as soft or uneven ground, out-of-level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, multiple machine lifts, and traveling with a load).
2. Rated loads do not exceed 66% of minimum tipping loads. Rated loads based on factors other than machine stability such as structural competence are shown by asterisk * in the charts.
3. The machine must be reeved and set-up as stated in the operation manual and all the instruction manuals if these manuals are missing, obtain replacements.
 - Machine shall be positively secured to prevent shifting.
 - Boom backstops are required for all boom length.
 - Gantry must be fully raised position for all operations.
 - Crawlers must be fully extended and be locked in position.
 - Must have 43,600 lbs (2) Counterweights installed, and without carbody weights.
4. Do not attempt to lift where no radius on load is listed as crane may tip or collapse.
5. Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine rated loads.
6. Weight of hooks, hook blocks, slings and other lifting devices are a part of the total load. Their total weight must be subtracted from the rated load to obtain the weight that can be lifted.
7. The boom should be erected over the front of the crawlers, not laterally.
8. Least stable position is over the side.
9. Maximum hoist load for number of reeving parts of line for hoist rope.

Maximum Load for Main Boom

No. of Parts of line	1
Maximum Loads (lbs)	22,000

10. Rated loads listed apply only to the machine as originally manufactured and designed by KOBELCO CRANES CO., LTD. Modifications to this machine or use of equipment other than that specified can reduce operating capacity.
11. Assembling the Counterweight
43,600 lbs counterweight (No. 1 ~ No. 3)
Without Carbody weights



Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

Clamshell

Boom:

Welded lattice construction using tubular, high-tensile steel chords with pin connections between each section.

Basic boom length: 40 ft (12.2 m)

Max. boom length: 120 ft (36.6 m)

Limit on clamshell bucket weight: 4,600 lbs (2,100 kg)

Optional tagline: Hydraulic operated type and spring type.

Boom Component Chart:

Boom length ft (m)	Boom arrangement
40 (12.2)	Base-Tip
50 (15.2)	Base-A-Tip
60 (18.3)	Base-A-A-Tip, Base-B-Tip
70 (21.3)	Base-A-B-Tip
80 (24.4)	Base-A-A-B-Tip, Base-B-B-Tip
90 (27.4)	Base-A-C-Tip
100 (30.5)	Base-A-A-B-B-Tip, Base-A-A-C-Tip
110 (33.5)	Base-A-B-C-Tip
120 (36.6)	Base-A-A-B-C-Tip, Base-B-B-C-Tip

Base = Boom Base

Insert: A = 10 ft (3.05 m)

B = 20 ft (6.10 m)

C = 40 ft (12.2 m)

Tip = Boom Tip

1. Figures represent maximum allowable capacity, and assume level, ground and ideal working conditions.
2. Capacities are calculated at 66% of the minimum tipping loads.
3. Capacities are maximum recommended by PCSA Standard #4. Allowances must be made by the user for such unfavorable conditions as a sort of uneven supporting surface, rapid cycle operations, or bucket.
4. The combined weight of the bucket and load must not exceed these capacities.

3 Counterweights (43,600 lbs) - Without Carbody weights - Crawlers in extended position.

40' Boom			50' Boom			60' Boom		
Load Radius (ft)	Boom Angle (deg.)	360° Rated Load (lbs)	Load Radius (ft)	Boom Angle (deg.)	360° Rated Load (lbs)	Load Radius (ft)	Boom Angle (deg.)	360° Rated Load (lbs)
22.0	63.7	22,000 *	26.0	64.3	22,000 *	30.0	64.6	22,000 *
24.0	60.5	22,000 *	28.0	61.7	22,000 *	32.0	62.5	22,000 *
26.0	57.1	22,000 *	30.0	59.0	22,000 *	34.0	60.3	21,400 *
28.0	53.5	22,000 *	32.0	56.3	22,000 *	36.0	58.1	20,200 *
30.0	49.8	22,000 *	34.0	53.5	21,400 *	38.0	55.8	19,200 *
32.0	45.9	22,000 *	36.0	50.5	20,200 *	40.0	53.4	18,200 *
34.0	41.7	21,400 *	38.0	47.4	19,200 *	42.0	51.0	17,300 *
36.0	37.0	20,200 *	40.0	44.2	18,200 *	44.0	48.4	16,500 *
38.0	31.8	19,200 *	42.0	40.7	17,300 *	46.0	45.8	15,800 *
40.0	25.7	18,200 *	44.0	37.0	16,500 *	48.0	43.0	15,200 *
			46.0	32.9	15,800 *	50.0	40.1	14,600 *
			48.0	28.3	15,200 *	52.0	37.0	14,000 *
						54.0	33.6	13,500 *
						56.0	29.9	13,000 *
						58.0	25.7	12,500 *

Refer to notes on page 29.

CK1100G

SPECIFICATIONS

Clamshell

3 Counterweights (43,600 lbs) - Without Carbody weights - Crawlers in extended position.

70' Boom			80' Boom			90' Boom		
Load Radius (ft)	Boom Angle (deg.)	360° Rated Load (lbs)	Load Radius (ft)	Boom Angle (deg.)	360° Rated Load (lbs)	Load Radius (ft)	Boom Angle (deg.)	360° Rated Load (lbs)
34.0	64.9	21,400 *	38.0	65.1	19,200 *	42.0	65.2	17,300 *
36.0	63.1	20,200 *	40.0	63.5	18,200 *	44.0	63.8	16,500 *
38.0	61.2	19,200 *	42.0	61.9	17,300 *	46.0	62.4	15,800 *
40.0	59.3	18,200 *	44.0	60.2	16,500 *	48.0	60.9	15,200 *
42.0	57.4	17,300 *	46.0	58.6	15,800 *	50.0	59.5	14,600 *
44.0	55.4	16,500 *	48.0	56.9	15,200 *	52.0	58.0	14,000 *
46.0	53.4	15,800 *	50.0	55.1	14,600 *	54.0	56.4	13,500 *
48.0	51.3	15,200 *	52.0	53.3	14,000 *	56.0	54.9	13,000 *
50.0	49.1	14,600 *	54.0	51.5	13,500 *	58.0	53.3	12,500 *
52.0	46.9	14,000 *	56.0	49.6	13,000 *	60.0	51.7	12,100 *
54.0	44.6	13,500 *	58.0	47.7	12,500 *	62.0	50.0	11,700 *
56.0	42.2	13,000 *	60.0	45.7	12,100 *	64.0	48.3	11,400 *
58.0	39.6	12,500 *	62.0	43.7	11,700 *	66.0	46.6	11,000 *
60.0	37.0	12,100 *	64.0	41.5	11,400 *	68.0	44.8	10,700 *
62.0	34.1	11,700 *	66.0	39.3	11,000 *	70.0	43.0	10,400 *
64.0	31.0	11,400 *	68.0	37.0	10,700 *	72.0	41.0	10,100 *
66.0	27.6	11,000 *	70.0	34.5	10,400 *	74.0	39.0	9,700
			72.0	31.8	10,100 *	76.0	36.9	9,200
			74.0	28.9	9,800 *	78.0	34.7	9,000
			76.0	25.7	9,400 *	80.0	32.4	8,500
						82.0	29.9	8,300
						84.0	27.2	7,900

100' Boom			110' Boom			120' Boom		
Load Radius (ft)	Boom Angle (deg.)	360° Rated Load (lbs)	Load Radius (ft)	Boom Angle (deg.)	360° Rated Load (lbs)	Load Radius (ft)	Boom Angle (deg.)	360° Rated Load (lbs)
46.0	65.4	15,800 *	56.0	62.0	11,900 *	56.0	64.5	11,400 *
48.0	64.1	15,200 *	58.0	60.8	11,700 *	58.0	63.4	11,300 *
50.0	62.8	14,600 *	60.0	59.6	11,600 *	60.0	62.3	11,200 *
52.0	61.5	14,000 *	62.0	58.3	11,300 *	62.0	61.3	11,000 *
54.0	60.2	13,500 *	64.0	57.1	11,100 *	64.0	60.2	10,800 *
56.0	58.8	13,000 *	66.0	55.8	10,800 *	66.0	59.0	10,600 *
58.0	57.5	12,500 *	68.0	54.6	10,400 *	68.0	57.9	10,200 *
60.0	56.1	12,100 *	70.0	53.3	10,100	70.0	56.8	9,900
62.0	54.7	11,700 *	72.0	52.0	9,700	72.0	55.6	9,500
64.0	53.3	11,400 *	74.0	50.6	9,300	74.0	54.5	9,100
66.0	51.8	11,000 *	76.0	49.2	8,900	76.0	53.3	8,800
68.0	50.4	10,700 *	78.0	47.8	8,500	78.0	52.1	8,400
70.0	48.8	10,300	80.0	46.4	8,200	80.0	50.8	8,100
72.0	47.3	9,900	82.0	45.0	7,900	82.0	49.6	7,700
74.0	45.7	9,400	84.0	43.4	7,500	84.0	48.3	7,400
76.0	44.1	9,000	86.0	41.9	7,200	86.0	47.0	7,100
78.0	42.4	8,800	88.0	40.3	7,000	88.0	45.7	6,800
80.0	40.6	8,300	90.0	38.6	6,800	90.0	44.3	6,600
82.0	38.8	8,100	92.0	36.9	6,600	92.0	42.9	6,400
84.0	36.9	7,700	94.0	35.1	6,400	94.0	41.5	6,200
86.0	35.0	7,400	96.0	33.3	6,200	96.0	40.0	6,000
88.0	32.9	7,200	98.0	31.3	5,900	98.0	38.5	5,700
90.0	30.7	7,000	100.0	29.2	5,700	100.0	36.9	5,500
92.0	28.3	6,800	102.0	27.0	5,500	102.0	35.3	5,300
94.0	25.8	6,600	104.0	24.5	5,300	104.0	33.6	5,100
						106.0	31.8	5,000

Refer to notes on page 29.

Supplemental Data - Barge

1. Rated loads included in the charts are the maximum allowable freely suspended loads at a given boom length, boom angle and load radius, and have been determined for the machine standing level on firm supporting surface under ideal operating conditions. The user must limit or de-rate rated loads to allow for adverse conditions (such as soft or uneven ground, out-of-level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, multiple machine lifts, and traveling with a load).
2. Rated loads do not exceed 75% of minimum tipping loads. Rated loads based on factors other than machine stability such as structural competence are shown by asterisk * in the charts.
3. The machine must be reeved and set-up as stated in the operation manual and all the instruction manuals if these manuals are missing, obtain replacements.
 - Machine shall be positively secured to prevent shifting.
 - Boom backstops are required for all boom length.
 - Gantry must be fully raised position for all operations.
 - Crawlers must be fully extended and be locked in position.
 - Must have 69,000 lbs (5) Counterweights fully installed.
 - Must have 31,700 lbs (2) Carbody weights fully installed.
4. Do not attempt to lift where no radius on load is listed as crane may tip or collapse.
5. Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine rated loads.
6. Weight of hooks, hook blocks, slings and other lifting devices are a part of the total load. Their total weight must be subtracted from the rated load to obtain the weight that can be lifted.
7. When lifting over boom point with jib or auxiliary sheave, rated loads for the boom must be deducted as shown below.

Jib Length	Aux Sheave	30 ft	40 ft	50 ft	60 ft
Deduct (lbs)	430	Not Applicable			

When auxiliary sheave is used for 8 or 7 reeving parts of line, it is not required to deduct 430 lbs from rated loads.

8. To install the jib is prohibited when the machine is on a barge.
9. The total load that can be lifted over an auxiliary sheave is the value for 430 lbs deducted from rated load for the boom without auxiliary sheave, but it should not exceed 24,000 lbs.

10. Boom lengths that can attach auxiliary sheave are from 40 ft (12.2 m) to 190 ft (57.9 m).
11. The boom should be erected over the front of the crawlers, not laterally.
12. Least stable position is over the side.
13. Maximum hoist load for number of reeving parts of line for hoist rope.

Maximum Load for Main Boom

No. of Parts of line	1	2	3	4	5
Maximum Loads (lbs)	25,200	50,400	75,600	100,800	126,000

No. of Parts of line	6	7	8
Maximum Loads (lbs)	151,200	176,400	220,000

Maximum Load for Auxiliary Sheave


No. of Parts of line	1
Maximum Loads (lbs)	24,000

14. Weight of recommended hook block.

Hook Block	110 t	77 t	55 t	39 t	12 t ball hook
Weight (lbs)	3,815	1,990	1,875	1,545	660

Warning: If the weight of the hook block to be used is light than the recommended weight, the jib may turn over backw or will be difficult to lower the empty hook block.

15. Rated loads listed apply only to the machine as originally manufactured and designed by KOBELCO CRANES CO., LTD. Modifications to this machine or use of equipment other than that specified can reduce operating capacity.
16. Designed and rated to comply with ANSI Code B30.5.



Note: This catalog may contain photographs of machines with specifications, attachments and optional equipment not certified for operation in your country. Please consult KOBELCO for those items you may require. Due to our policy of continual product improvements all designs and specifications are subject to change without advance notice.

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